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Tulsa Community College
2008-2009 Catalog

## TC Tulsa Community College

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The regulations in this bulletin are based upon conditions and are subject to change without notice. The College reserves the right to modify any statement in accordance with unforeseen conditions.

Tulsa Community College May, 2008

## Greetings from the President

Thank you for choosing to learn more about Tulsa Community College. You will find in this college catalog a wealth of information about TCC ranging from general information about our four campuses to specific information about the more than 200 degree and certificate programs available and the hundreds of courses taught by outstanding faculty who specialize in teaching.

It might interest you to know that TCC serves more students in higher education in northeastern Oklahoma than any other public higher education instituition. More than 3,500 first-time freshmen begin their college experience at TCC each year.

Tulsa Community College is committed to facilitating student learning. We believe that we can best fulfill that commitment by providing a supportive learning-centered environment that focuses on the individual. Students tell us that they like the small
 class sizes and accessible faculty they find at TCC. The College's faculty and staff are second to none in providing quality education opportunities and services to our students and our community. Our faculty includes outstanding educators who have been honored by organizations including the Carnegie Foundation for the Advancement of Teaching, the Oklahoma Heritage Society, and numerous other professional educatonal organizations.

Let me encourage you to take some time to browse this catalog and discover all the options and opportunities that await you. On behalf of the Board of Regents, faculty, and staff, I invite you to make this your first step toward a rewarding college experience at TCC.


Dr. Thomas K. McKeon President \& CEO

## OUR VISION

TCC will excel as an inclusive, engaged center of life-long learning that transforms the world by empowering learners intellectually, culturally, and socially.

Learning - for students, faculty, staff, and community member - comprises the heart of our institutional mission, and our core values ensure the primacy of learning. An aspiration without end, learning must be undertaken with passion, tended with reason, and shared with integrity. A collaborative endeavor, learning reveals the possibilities of our world, thus making our lives more meaningful and more productive.

Accordingly, our priorities are as follows:
-TCC academic programs will be timely and timeless.
-TCC will foster a dynamic, collaborative intellectual environment wherein students are fully engaged in the learning process, thereby becoming independent, globally aware, life-long learners.
-TCC will nurture the development of the whole student.
-TCC will promote professional development among faculty and staff.
-TCC will enrich the community through active participation and dedicated leadership in the public sphere.
-TCC will secure the financial and human resources necessary to achieve our vision.

## CORE VALUES

As an educational institution charged with providing lifelong learning opportunities for its students and its community, Tulsa Community College identifies integrity and quality as the cornerstones upon which all other values rest - shaping both priorities and decision making throughout the institution.

Student Success is the reason TCC exists. We strive for all students to be successful in their educations and we strive for the education to effectively prepare students for their lives. Learning is the focus because it is the essence of an institution of learning.
Excellence drives us. We strive to provide excellent education to our students, excellent resources to our community, and excellent administration and management for our employees.

Stewardship guides our daily decision-making. We investigate community needs and expectations and then respond by providing quality education that is responsive, convenient and affordable.
Innovation sparks our creativity and ensures that the hearts and minds of our students, faculty, staff and administration are actively engaged in acquiring learning, increasing our knowledge, and leading the community forward.

Diversity is our common bond. Sincere appreciation for and cultivation of differences enriches our lives, the community, and the education we offer. It is a source of our pride and integral to our success.

## OUR MISSION

Tulsa Community College betters its community through the intellectual achievement, creative energy, and responsible citizenship of its students, faculty, and staff by their engagement in teaching, learning, and service opportunities that transform and enrich lives. Tulsa Community College commits to innovative, flexible, and affordable public higher education that responds to a dynamic global environment.


## OUR FUNCTION WITHIN OUR COMMUNITY

The mission of Tulsa Community College as defined by the Oklahoma State Regents for Higher Education is to:

- Provide general education for all students.
- Provide education in several basic fields of university-parallel study for those students who plan to transfer to a senior institution and complete a bachelor's degree.
- Provide one and two-year programs of workforce development education to prepare individuals to enter the labor market.
- Provide programs of remedial and developmental education for those whose previous education may not have prepared them for college.
- Provide both formal and informal programs of study especially designed for adults and out-of-school youth in order to serve the community generally with a continuing education opportunity.
- Carry out programs of institutional research designed to improve the institution's efficiency and effectiveness of operation.
- Participate in programs of economic development with comprehensive or regional universities toward the end that the needs of each institution's geographic service area are met.
The College is committed to excellence in instruction, student services, and programs relevant to the needs and interests of the greater Tulsa area. Tulsa Community College offers educational opportunities leading to Associate Degrees, Certificates of Achievement, and/or self-improvement in a supportive learning environment conducive to the development of the student's potential. Tulsa Community College will develop a globally and multi culturally competent citizenry to ensure the survival and well-being of our community.


## ACADEMIC CALENDAR 2008-2009

| ACTIVITY | FALL SEMESTER 2008 | SPRING SEMESTER 2009 | SUMMER SEMESTER 2009 |
| :---: | :---: | :---: | :---: |
| Pre-enrollment Schedule Adjustment and Fee Payment Deadline | March 31 - August 18 Monday- Monday | October 27 - January 12 Monday - Monday | March 30 - June 1 Monday - Monday |
| Classes Begin | August 18 <br> Monday | January 12 <br> Monday | June 1 <br> Monday |
| Late Enrollment, Add, Drop \& Fee Payments continues (Automated systems available through Sunday) | August 18-24 Monday - Sunday | January 12-18 Monday - Sunday | June 1-7 <br> Monday - Sunday |
| $100 \%$ Refund on Drop(s)* (see note below) | August 18-29 <br> Monday - Friday | January 12-23 Monday - Friday | June 1-5 Monday - Friday |
| Labor Day, Martin Luther King J. Day \& Memorial Day-No Classes | September $1^{* *}$ Monday | January 19 <br> Monday | May 25** <br> Monday |
| Deadline to file for Graduation | October 31 <br> Friday | March 27 <br> Friday | July 10 Friday |
| Last day to change from credit to audit \& last day to withdraw with ' W ' (Title IV Funds see note below) | November 7 <br> Friday | April 10 Friday | July 10 Friday |
| Thanksgiving, Spring Break \& Independence Day-no classes | November 26-30** <br> Wednesday - Sunday | March 16-22 <br> Monday - Sunday | July 3** Friday |
| Final Examinations | December 6-12 <br> Saturday - Friday | May 2-8 <br> Saturday - Friday | July 22-24 Wednesday - Friday |
| Graduation |  | May 8 Friday |  |
| Semester Closes | December 12 <br> Friday | May 8 Friday | July 24 <br> Friday |
| Winter Break** | December 24 - January 4 Wednesday - Sunday** |  |  |
| Fall Term* <br> First 8 -week session begins Lastday towithdawal andor changefoom ceedittoaudit First 8 -week session ends Second 8 -week session begins Lastday to withdrawal andor changefrom ceditito audit Second 8 -week session ends | August 18, Monday September 24,Wednesday October 8,Wednesday October 9,Thursday November 17,Monday December 4,Thursday |  |  |
| Spring Term* <br> First 8 -week session begins <br> Lastdayto withdawaw andor cr cangeffom ceedittoaudit <br> First 8 -week session ends <br> Second 8 -week session begins <br> Lastday to withdrawal andorcrchangeftom ceditito audit <br> Second 8 -week session ends |  | January 12, Monday February 18,Wednesday March 4, Wednesday <br> March 5,Thursday <br> April 17, Friday <br> May 1,Friday |  |
| Intersession Term* begins Lastday towithdawa landorchangeforom cedititoaudit Intersession Term* ends | July 28, Monday August 7,Thursday August 15, Friday |  | May 11, Monday May 21,Thursday May 29, Friday |

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## GENERAL INFORMATION

## College Overview

Tulsa Community College has served Tulsa and the surrounding communities since 1970. Since its inception,TCC has established a tradition of offering students a personal approach to higher education, an education that is designed to be practical and useful. When the College first opened its doors in September 1970, initial enrollment was 2,800 students. In the 38 years that the College has served the Greater Tulsa area, TCC has provided quality educational services to more than 450,000 people.

For the seventh consecutive year, TCC is ranked in the top two percent of more than 1,150 community colleges nationally in the number of associate degrees awarded in all disciplines. TCC serves more students in higher education in northeastern Oklahoma than any other public college or university. The College is regularly among the state's top three institutions in first-time college freshman enrollment.

The largest two-year college in Oklahoma, TCC serves approximately 27,000 students per semester in college credit and continuing education classes. Of the first-time freshmen enrolling in a public college or university within the Oklahoma State System for Higher Education in recent years, sixty-five percent (65\%) of the Tulsa County students begin their college education at Tulsa Community College.

TCC has four campuses in operation: the Metro Campus, located in the heart of downtown Tulsa; the Northeast Campus, located at Apache and North Harvard; the Southeast Campus, located at 81st and Highway 169; and the West Campus, at 7505 W. 41 st Street. In addition, the Education Outreach Center at 21st and Garnett provides a variety of services to students in that neighborhood.

Tulsa Community College is recognized as the leader in Oklahoma in the offering of distance learning classes, including telecourses, online courses of varying lengths from 1 to 16 weeks, and interactive television. The primary reasons for TCC's growth are:

- Wide variety of courses
- Qualified and dedicated faculty
- Emphasis on student learning
- Low cost
- Day, evening, and weekend classes
- Located close to home and/or work
- Career guidance and advisement program
- Job placement service
- Comprehensive services for part-time as well as for full-time students

The College provides programs of study for people who are:

- Preparing to transfer to the junior level at a four-year college or university
- Preparing for specific occupational careers
- Retraining or updating in specific career skills
- Seeking continuing education opportunities
- Needing developmental or remedial programs in basic skills

Tulsa Community College programs are designed to prepare students for advanced studies or careers in their chosen fields of interest. For many students, the College remains an ongoing source of continuing education.

## Why Should I Go To Tulsa Community College?

You don't have to leave home or friends to get a good college education. You can find it right here. Tulsa Community College, one of the largest and most comprehensive community colleges in the country, has a reputation for offering academic quality at a reasonable cost. Our faculty members dedicate themselves to teaching and offer students the individual attention needed in any academic pursuit. Our many choices in courses give you flexibility to explore your interests.

## How Much Does It Cost?

The combined tuition and fees for Oklahoma residents is only approximately $\$ 85.45^{*}$ per credit hour. Costs could range from approximately $\$ 85.45^{*}$ for a one-credit course to $\$ 2050.80^{*}$ for tuition and fees for a full-time student ( 12 credit hours a semester) for a full academic year. For example, if you enroll in a three-credit history course, the cost would be approximately \$256.35*.
*Tuition and fees are subject to change. Lab, ID fee, admission fee, international student fee, parking fees and book costs are not included.

## Can I Get Financial Aid?

Financial aid bridges the gap between your resources and the cost of attending Tulsa Community College. The Financial Aid and Scholarship Office offers many ways to assist students in financing their educational costs. Financial aid is made available through grants, scholarships, loans, and part-time employment from federal, state, institutional, and private sources. To apply for financial aid, you should obtain a Free Application for Federal Student Aid, a Financial Aid Application Form, a Tuition Waiver Application and/or Scholarship Application from any campus Financial Aid and Scholarship Office.

## What Degrees Are Offered?

Tulsa Community College awards three degrees: Associate in Arts, Associate in Science, and Associate in Applied Science. Each degree requires the completion of a program of study totaling a minimum of 60 credit hours. A full-time student can complete degree requirements in two years or less, but many of our students are employed and take longer. Certificate programs are designed for students who are not currently studying for an associate degree but who want certification that they have completed a program of study.

## Who Can Attend?

You are eligible to enroll at Tulsa Community College if you are a graduate of an accredited high school or at least 18 years of age and capable of benefiting from the courses offered. Admissions/Enrollment Services may grant special permission to others. Prior to registration, your official transcripts should be sent to any Admissions/Enrollment Service Office directly from the high school or college you previously attended. Also, CPT, ACT, SAT or a similar battery of tests should be taken before you enroll. Students meeting the criteria can enroll at TCC while in high school, as a high school concurrent student.

## What If I Enroll and Then Can't Attend?

Students who enroll at Tulsa Community College will be charged tuition unless they complete all formal withdrawal procedures during the applicable withdrawal period for their course(s).
See withdrawal procedures on page 23 and academic calendar on page 8.

## Will My Courses Transfer?

All state-supported four-year colleges and universities in Oklahoma have an articulation agreement with Tulsa Community College. This means that if you earn the Associate in Arts (A.A.) or Associate in Science (A.S.) degree at Tulsa Community College, you automatically satisfy the general education requirements of these four-year colleges or universities. The articulation agreement does not apply to out-of-state colleges/universities or to private Oklahoma colleges/universities. Any student who wants to be assured that a specific course, group of courses, or degree program will transfer for equivalent credit should work with a TCC academic advisor or contact the senior transfer institution fro academic advisement. Many courses in workforce development Certificate of Achievement or Associate in Applied Science (A.A.S.) degree programs will also transfer. Again, students who want to be assured that a specific course, group of courses, or workforce degree program will transfer for equivalent credit should work with a TCC academic advisor or contact the senior transfer institution for academic advisement.

## What About Student Activities?

Student Activities provide a multitude of programs in the areas of education, recreation, entertainment, discounts, and services. Students can participate in league sports, free movies, family events, lectures and discount theatre tickets - just to name a few. The Student Union on each campus provides a relaxed and enjoyable atmosphere. Students can also get involved in student government or join any of the student organizations offered on each campus. Most activities are free and designed to enhance the social, recreational, and educational aspects of your college life. Each campus has a WellnessFitness Center where students may take classes or engage in independent fitness activities.

## ACCREDITATION

Tulsa Community College is accredited by the Oklahoma State Regents for Higher Education (655 Research Parkway, Suite 200, Oklahoma City, OK 73104; 405-225-9100) and the Higher Learning Commission, (www.ncahigherlearningcommission.org or 1-312-263-7462). The College is a member of the American Association of Community Colleges, the North Central Council of TwoYear Colleges and is also approved by the federal government to offer education under the Veterans and Social Security laws. Some programs at TCC receive accreditation approval from additional organizations or agencies. These programs are listed below.
Tulsa Community College supports all accreditation processes for the purpose of program education and improvement in order to maximize student achievement. The College recognizes that participation in the rigorous and detailed self-study activities necessary for accreditation assures quality programs that will reflect the preparation necessary for our graduates to successfully transition to the workplace.

Tulsa Community College continuously strives to maintain good standing with each accrediting organization or agency by voluntarily complying with all accreditation criteria. This includes the timely submission of required fees and any documentation requested by the accrediting agency. Tulsa Community College will also notify the appropriate accrediting body of any changes in program leadership, administrative structure, significant decreases in resources available to the program, substantive changes in class size, curriculum pattern or the establishment of an expansion program.

| PROGRAM | NAME OF ACCREDITING GROUP | STATUS |
| :---: | :---: | :---: |
| Dental Hygiene | American Dental Association Commission on Dental Accreditation (800) 621-8099 211 E.Chicago Avenue Chicago, IL 60611 | Full Approval |
| Health Information Technology* | Associate Degree Program <br> commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) <br> (312) 233-1132 233 N. Michigan Ave.,Suite 2150 Chicago, IL 60601-5519 <br> Coding \& Reimbursement Specialist Certificate Program American Health Information Management Association <br> (800) 224-4621 233 N. Michigan Avenue, Suite 2150 Chicago, IL 60601-5519 | Full Approval |
| Medical Laboratory Technology | National Accrediting Agency for Clinical Laboratory Sciences (733) 714-8880 8140 W. Bryn Mawr, Suite 670 Chicago, IL 60631 | Full Approval |
| Medical Assistant | Commission on Accreditation of Allied Health Education Program (312) 553-9355 35 East Wacker Drive, Suite 1970 Chicago, IL 60601-2208 | Full Approval |
| Nursing | Oklahoma Board of Nursing (405) 962-1800 2915 N. Classen Blvd., Suite 524 Oklahoma City, OK 73106 National League for Nursing Accrediting Commission (212) 363-5555 61 Broadway New York, NY 10006 | Full Approval |
| Occupational Therapy Assistant | Accreditation Council for Occupational Therapy <br> (301) 652-2682 4720 Montgomery Lane Bethesda, Maryland 20814-3425 | Full Approval |
| Patient Care Technician | Oklahoma Board of Nursing <br> (405) 962-1800 2915 N. Classen Blvd., Suite 524 Oklahoma City, OK 73106 | Full Approved |
| Phlebotomy Certificate | National Accrediting Agency for Clinical Laboratory Sciences (733) 714-8880 8140 W. Bryn Mawr,Suite 670 Chicago,IL 60631 | Full Approval |
| Physical Therapist Assistant | Commission on Accreditation in Physical Therapy Education (703) 706-3245 1111 North Fairfax St. Alexandria,VA 22314 www.apta.org/CAPTE | Full Approval |
| Radiography | Joint Review Committee on Education in Radiologic Technology (312) 704-5300 20 N. Wacker Dr., Suite 900 Chicago, IL 60606 | Full Approval |
| Respiratory Care | Commission on Accreditation of Allied Health Education Programs (312) 553-9355 35 East Wacker Drive, Suite 1970 Chicago, IL 60601-2208 | Full Approval |
| Surgical Technology | Commission on Accreditation of Allied Health Education Programs (312) 553-9355 35 East Wacker Drive, Suite 1970 Chicago, IL 60601-2208 | Full Approval |
| Veterinary Technology | American VeterinaryMedicalAssocation/CommitteeonVet.Tech. Education\&Activities Headquarters: (800) 248-2862 Wash. D.C.: (847) 925-8070 <br> (202) 789-0007 193 N.Meacham Rd., Suite 100 Schaumburg, IL 60173-4360 | Full Approval |

## Day, Evening, and Weekend Classes

Tulsa Community College operates on a daytime, evening, and weekend schedule to serve both full- and part-time students from the Greater Tulsa Metropolitan Area. Currently, more than 80 percent of Tulsa Community College students work either full or part time, and the College's flexible schedule is designed to offer a wide range of courses at various times for students with different educational interests and work hours. Students can choose classes that are 16 weeks long (one semester), or more concentrated classes that meet 8 weeks, 4 weeks, or shorter. Courses are also available on weekends. In addition, more than 245 courses are offered online.

The wide variety of courses is offered not only for the benefit of those working toward a degree, but also for those who need courses to improve their employment opportunities, who are changing occupations, or who desire personal enrichment. Instruction is provided by the full-time faculty, as well as highly competent professionals from business, industry, and other professional areas. All College policies apply to day, evening, and weekend students.

## Summer Classes

The College offers a summer program in professional, occupational, and general education for: (1) current Tulsa Community College students; (2) high school graduates who plan to attend Tulsa Community College during the fall; (3) high school graduates who plan to attend another college or university during the fall; (4) Tulsa area students who are home from other colleges or universities for summer vacation; and (5) high school students ranked as juniors or seniors (see concurrent enrollment for high school students) who intend to accelerate their collegiate program to reduce their academic load during the fall and spring semesters. Students attending another college should coordinate these Tulsa Community College classes with their primary college.

The summer term consists of one eight-week session, day and evening, usually beginning during the first week of June, with each daytime class meeting two or four times a week (depending on the scheduled time), and evening classes meeting twice a week. Shorter courses are also available within the 8 -week summer term.

## Intersession Courses

May Intersession begins on the day after spring graduation and is completed the day prior to the start of summer classes. Intersession courses are also available in August, December, and January.

## Student Enrollment and Achievement Data

Enrollment in collegiate credit classes for Fall 2007 was 23,053. Student enrollment during the day was 57 percent and during the evening was 16 percent, with 33 percent enrolled both day and evening. More than 5,000 students enroll in distance learning courses each semester. Not all students enroll to pursue a degree objective. Approximately 2.5 percent of those enrolled in credit programs already had obtained baccalaureate or higher degrees. Student surveys indicate that many students complete their educational objective long before accumulating the required credit hours for an associate degree. Fifty percent of the students enrolled were between ages 22 and 41 , with the average age of all students being 27 years. Based upon a follow-up study of university-parallel students with 12 or more credit hours leaving Tulsa Community College and transferring to a university, the overall grade point average attained at the end of one university semester was nearly the same as the overall average of the same group at Tulsa Community College.


## ADMISSIONS AND REGISTRATION

The admission criteria set forth below are the minimum standards established by the Oklahoma State Regents for Higher Education. Although they provide for"open door"admission to the College, certain programs require additional standards to be met before a student is admitted. Selected workforce development programs require that a separate program application for admission be submitted prior to entry into specific courses.

The policies and procedures of Tulsa Community College have been formulated and adopted to assure the student of comprehensive services by the institution. They are designed to assure the institution of complete recognition and services from accrediting agencies, other institutions of higher education, employers, and funding agencies.

We believe student success is enhanced with assessment of basic skills, orientation to college, and placement in courses that will meet the individual's needs. Details on the assessment/orientation/placement policies for Tulsa Community College are available in the fall, spring, and summer class schedules and in this catalog.

## Qualifications for Admissions

Students may qualify for admission to Tulsa Community College in a variety of ways. The different types of admissions are as follows:

## I. Admission Directly from High School/GED

## A. For Students Seeking Admission to Associate Degree Programs.

Any individual who (a) is a graduate of an accredited high school or has achieved a high school equivalency certificate based on the GED (high school class must have graduated), and (b) has participated in the ACT, SAT, CPT or a similar acceptable battery of tests is eligible for admission. (If there is an enrollment limit, Oklahoma residents will be given priority.)
B. High School Curricular Requirements for Programs Leading to Associate in Arts, Associate in Science, and Baccalaureate Degrees:

## UNITS (YEARS) COURSE AREAS

| 4 | English (Grammar, Composition, Literature; should include an integrated writing component) |
| :---: | :--- |
| 2 | Lab Science (Biology, Chemistry, Physiss, or any lab science certified by school district; General Science with or with- <br> out a lab may not be used to meet this requirement) |
| 3 | Mathematics (from Algebra I, Algebra II,Geometry, Trigonometry, Mathematics Analysis, Calculus, Applied Math- <br> ematics with Algebra I \& II, Advanced Placement statistics) |
| 3 | History (including 1 unit of U.S. History) Citizenship skills, two additional units from: Economics, Geography, History, <br> Government and Non-Western Culture |
| 3 | Other (from any of the subjects listed above or selected from the following: Computer Science, Foreign Language, or <br> any Advanced Placement Course) |
| $\mathbf{1 5}$ Total |  |

In addition to the previous requirements, the following subjects are recommended for college preparation:

UNITS (YEARS) COURSE AREAS

| 2 | additional units: Fine Arts - music, art, drama, speech |
| :---: | :--- |
| 1 | additional units: Lab Science (as described previously) |
| 1 | additional units: Mathematics (as described previously) |
| $\mathbf{4}$ Total |  |

Basic skills courses: English, Science and Mathematics (deficiencies may be removed through testing.)
Guided electives: History, Citizenship, and others (deficiencies are removed by college level coursework). World History will count toward Non-Western Culture.

While these curricular requirements will normally be met by students in grades 9 through 12, advanced students who complete these courses in earlier grades will not be required to take additional courses for purposes of admission. The remainder of the units required by the State Board of Education for high school graduation may be selected from courses to meet students' individual needs and interests.

Students lacking curricular requirements in the basic skills courses (English, Mathematics and Science) are admissible into Associate in Science or Associate in Arts programs in the community colleges but must remove the deficiencies at the earliest possible time but within the first 24 hours attempted or have all subsequent enrollments restricted until the deficiencies are removed. In addition, students must remove curricular deficiencies in a discipline area before taking a collegiate level course in that discipline.
(See 1D) Guided electives must be completed prior to TCC graduation.

## C. High School Curricular Requirements for Admission to Other Degree or Certificate Programs

1. See 1.A.
2. Students entering Associate in Applied Science degree programs must meet high school curricular requirements before taking courses in the same discipline as part of this degree. Students admitted under this provision may transfer into an Associate in Arts, Associate in Science or baccalaureate program by meeting all the high school curricular requirements (See 1.B. and 1.D.)

## D. Removing High School Curricular Deficiencies

Zero-level courses do not count toward satisfaction of degree program requirements.
Deficiencies may be removed by the following options:

1. Successful completion (grade "C" or higher) of a zero-level course: English - ENG 0933; Lab Science - BI0 0123 or PSC 0123; Mathematics - MTH 0123 or MTH 0105.
2. Testing (ACT or CPT) at the appropriate proficiency levels may remove a curricular deficiency in the basic skills disciplines.
3. Scoring at the appropriate level on the standardized tests designated for high school equivalency courses. (Successfully passing the GED exam does not satisfy the curricular requirements.)
4. A history deficiency may be removed by successfully completing a three-credit-hour history course in addition to the three-credit-hour U.S. History needed for graduation.
Other guided electives may be met by enrolling in stated subject area as listed on page 16.

## II. Special Admission Programs

## A. Adult Admission

1. Students who are 21 years of age or older or on active military duty may be admitted based on criteria established at the campus level and submitted to and approved by the State Regents. For students admitted under the adult admission category, the campus must consider the probability of the academic success of the student. Related to the curricular requirements, students admitted under the adult admission category must demonstrate proficiency to the satisfaction of the admitting institution in the curricular area the student desires to pursue. Students should contact the Admissions/Enrollment Services on any campus for admissions processing. Institutions will be required to submit an annual report of those students admitted in this category to the State Regents.
2. Any student who (1) is not a high school graduate but whose high school class has graduated and (2) has participated in the ACT, CPT or similar battery of tests is eligible for admission to any of the two-year colleges in the State System. Remediation may be required depending on level of test score. Contact the Registrar for admissions processing. GED students not meeting the above criteria should contact any Admissions/Enrollment Services.

## B. Special Non-Degree-Seeking Student

Students who wish to enroll in courses without intending to pursue a degree may enroll without transcripts. Proficiency assessments and prerequisite verification may be required before enrolling in certain courses. Retention standards will be enforced for all students. Students must be degree seeking and provide all credentials to be eligible for financial aid. Contact the Admissions/Enrollment Services Office to request information on the non-degree objective.

## C. Home Study or Unaccredited High Schools

An individual who is a graduate of a private, parochial, or other non-public high school which is not accredited by a recognized accrediting agency is eligible for admission to an institution in the State System as follows:

1. The student must have participated in the American College Testing or Scholastic Aptitude Test program.
2. The student's high school class of his or her peers must have graduated.
3. The student must satisfy the high school curricular requirements for the institution to which he/she is applying, as certified by the school or, in the case of home study, the parent.
Note: Students under 17 years of age are not eligible for Federal Title IV funds. (Pell, SEOG, Loans)

## D. Concurrent Enrollment of High School Students

Admission \& Enrollment Requirements for students interested in enrolling concurrently at their high school and Tulsa Community College are as follows:

- Students must be juniors or seniors. Students who are home schooled or attending unaccredited high schools must be at least 16 years of age as a junior and 17 years of age as a senior.
- Students must have participated in the ACT and made the following composite scores: juniors 21 (ACT) and seniors 19 (ACT).
or
- Those who have participated and did not meet the score requirements may be considered for admission purposes based on their high school GPA. Juniors must have a 3.5 GPA and seniors must have a 3.0 GPA on a 4.0 scale and
- Juniors and seniors must score 19 (ACT) in the area in which they want to enroll.

Students must provide the following documents to the Director of Enrollment Services on the campus offering the class:

- Tulsa Community College Admission Application
- Concurrent Enrollment Application*
- Current official high school transcript
- Official ACT

All documents must be received in advance of intended enrollment to allow time for processing.
ACE Tuition Waiver Scholarships are awarded on a "First come-first serve basis" as funds are available. Students must be enrolled in a minimum of three (3) and a maximum of six (6) credit hours per semester and must follow the policy regulations. See Attend College Early (ACE) brochure for high school concurrent enrollment details.
High school students who have provided the appropriate documents and meet score requirements must follow the criteria below:

- Enrollment will not exceed 19 credit hours per long semester or 9 credit hours in the summer.
- Students may not enroll in zero-level courses designed to remove deficiencies.
- Re-enrollment is contingent upon the student achieving a 2.0 GPA at TCC.

All other students not qualified by grade level may be considered for enrollment under the Opportunity Admissions category. A detailed explanation of the Oklahoma State Regents' policy on concurrent enrollment is available from any TCC Admission/Enrollment Services Office.

Note: Questions regarding admissions or enrollment should be directed to the Registrar's Office on the campus the student plans to attend. Admission to the institution does not guarantee eligibility for course placement.
*The High School Concurrent Application may be obtained from your principal, counselor, or the Admissions/Enrollment Services Office on any TCC campus.

## E. Opportunity Admissions Category

Students who have not graduated from high school whose Composite Standard Score on the American College Test places them at the 99th percentile using Oklahoma norms or whose combined Verbal and Mathematical score on the Scholastic Aptitude Test places them at the 99th percentile using national norms may apply for full enrollment at a college or university of The Oklahoma State System of Higher Education. The college or university will determine admissibility based on test score, evaluation of the student's level of maturity and ability to function in the adult college environment, and whether the experience will be in the best interest of the student intellectually and socially. Proficiency assessments may be required before enrolling in certain courses.

## F. Cooperative Enrollment of Career Technology Center Students

- Eligible adult and high school students in approved cooperative programs may be co-enrolled and earn college credit for coursework taken at a Career Technology Center.
- Students must meet respective admission requirements for adult or high school students at both the Career Technology Center and the College. Students should contact any TCC Admissions/Enrollment Services Office for information on approved programs and eligibility requirements.


## G. Undocumented Eligible High School Graduates (HB 1804 Title 70, Section 3242 [2007])

Students with undocumented immigration status must meet the requirements set forth by law to be eligible for enrollment in an institution of the Oklahoma State System of Higher Education. Students should contact any Admissions/Enrollment Office for admissions criteria, procedures and the Affidavit of Intent form.

## H. Senior Citizens (Oklahoma Residents Age 65 or Older)

Tuition waivers are available for Oklahoma residents age 65 or older who wish to audit a course. Auditing of academic courses is contingent upon space available on the date the class begins. See section "Audit of Courses," in this same chapter for detailed procedures.

## I. International Student Admissions

Tulsa Community College recognizes the value of enrolling non-resident international students who could also benefit from the educational offerings of the College. In order to be considered for admission, nonresident students must have a local sponsor, demonstrate required proficiency in English, give evidence of sufficient financial resources, and meet equivalent academic performance standards as listed in Section I. International admission information is available from the International Student Services office located on the Northeast Campus, by telephone at (918) 595-7451 or online at www.tulsacc.edu/iss.

## J. Admission of Students for Whom English is a Second Language

All students, for whom English is a second language, shall be required to present evidence of proficiency in the English language prior to admission to a college or university of the State System, either as first-time students or by transfer from another college or university. The intent of this policy is to admit into an institution only those students who have a reasonable chance of success based on their ability to comprehend and use spoken and written English.

The following minimum standards shall be utilized by all State System institutions to determine English language proficiency:

1. Students must either demonstrate their competency in English through passing the test as described or demonstrate proficiency through successfully completing the State Regents' high school core requirements in an English-speaking school or graduate from an English-speaking high school and demonstrate competency through the "Remediation of High School Curricular Deficiency Policy" (I.D.).
2. Applicants for first-time admission at the undergraduate level must present evidence of English language proficiency. The Test of English as a Foreign Language (TOEFL) or the International English Language Testing

System (IELTS) are used to satisfy the requirement.
Applicants must attain at least a score of:

- 500 on the traditional TOEFL
- 173 on the computerized TOEFL version, or
- 61 on the Internet based TOEFL version, or
- a score of 6 on the IELTS.

Applicants who do not meet these requirements may be admitted to the English as Second Language program by meeting the following requirements:

- presenting a score of 460 or higher on the traditional TOEFL, or
- a score of 140 on the computerized TOEFL version, or
- a score of 48 on the Internet based version, or
- a score of 5 on the IELTS or
- immediately, after taking the TOEFL and prior to admission, successfully complete a program of 12 weeks of study at an approved English language center or program operated by an institution of higher learning or a private school approved by the State Regents.

System institutions with an approved program of English as a second language may admit students into this program, but no other courses without meeting the other requirements of this policy. Results of TOEFL tests administered at Institutional Testing Centers are not accepted by colleges and universities other than the administrating institution. Information about the TOEFL and a testing schedule is available from the Testing Center, located on the Northeast Campus, by telephone at (918) 595-7534 or online at www.tulsacc.edu/Testing.
3. Applicants seeking admission by transfer who have attended an accredited college or university for a minimum of 24 semester credit hours with passing grades shall be admitted on the same basis as other transfer students.
4. Students who do not have the 500 TOEFL score may study English as a Second Language after taking the ESL Placement test. This test measures the English language proficiency of non-native speakers. To schedule a free testing appointment, please call (918) 595-8411,Multicultural Language Center, Northeast Campus, www.tulsacc.edu/esl.

## III. Admission by Transfer from a State System Institution

An Oklahoma State System student who wishes to transfer to another State System institution may do so under the following conditions:

## A. Admission Requirements

1. Provide official transcripts from each college/university previously attended and high school transcript with graduation date or passing GED scores.
2. A student under 21 years of age must meet the high school curricular requirements as indicated in Section I of this policy and have a grade point average high enough to meet TCC's retention standards (see page 51, Policy for Continued Enrollment II B, in this catalog).

## B. Transfer Credit Policies

## 1. Transfer Credit Evaluation

a. Courses will be listed under the name of the transferring institution. Courses will be equated to TCC discipline and course numbers, credit hour and the grade assignment made by the transferring institution.
b. Courses evaluated as semi-equivalent or a general elective are accepted for transfer credit and may be applicable toward graduation requirements (as elective credits).
c. Courses evaluated with passing grades ( P or S ) will be accepted for credit.
d. Courses recognized as semi-equivalents are accepted, and the credit is given. However, TCC does not have a like equivalent for that course.
2. Academic Status of Transfer Students
a. Transfer students with a cumulative GPA of 2.0 or higher (as calculated by A, B, C, D, and F systems, 4.0 scale) will be admitted to Tulsa Community College in good standing.
b. Students with a cumulative GPA of less than 2.0 average will be admitted to their first enrollment at TCC on academic probation or academic notice and will be expected to meet the standards for continued enrollment.
c. Students returning to TCC after enrollment at another institution or institutions will be considered for admission based on academic records at all the college(s), including the grades earned at TCC.
3. Disciplinary Probation or Suspension - Students on disciplinary suspension or social probation from another institution will not be considered until the suspension or probation is removed by the enacting institution, or the student is accepted by the Admissions Committee.

## IV. Admission of Nonresidents of Oklahoma

A. Admission of First-time Entering Freshmen

In order to be eligible for admission to any institution in The Oklahoma State System of Higher Education, a nonresident of Oklahoma (a) must be a graduate of a high school accredited by the appropriate regional association or by an appropriate accrediting agency of his/her home state, (b) must have participated in the SAT, ACT, CPT or a similarly acceptable battery of tests, and must meet the high school curricular requirements outlined in Section I of this policy.

## B. Undergraduate Students Entering by Transfer From Out-of-State

Undergraduate students wishing to transfer from an out-of-state college or university to Tulsa Community College may do so as follows:

1. Transcripts of record from colleges or universities accredited by the Higher Learning Commission or other regional associations will be given full value.
a. Each nonresident applicant must be in good standing in the institution from which he/she plans to transfer.
b. Each nonresident applicant must have made satisfactory progress (an average grade of "C" or better or meets this policy's current retention standards, whichever is higher) in the institution from which he/she plans to transfer.
c. Each nonresident applicant must meet the high school curricular requirements outlined in the "Qualifications for Admissions" section.
2. Transcripts of record from institutions not accredited by a regional association may be reviewed for acceptance transfer when appropriate to the student's degree program and when the receiving institution has had an opportunity to validate the courses or programs.
a. Each nonresident undergraduate applicant must meet the conditions of 1-a, 1-b, and 1-c listed previously.
b. Each nonresident undergraduate applicant who meets IV B. 1-a, 1-b, and 1-c above also will be required to validate the transferred credit by making satisfactory progress (an average of "C" or better) for at least one semester.
3. Any student who does not meet the criteria stated above may petition the Admissions Committee for further consideration.
C. This school is authorized under Federal law to enroll non-immigrant alien students.

## Admission Procedures

## I. First Enrollment at Tulsa Community College

## A. Application for Admission

1. An application is required for admission and should be submitted prior to expected enrollment. All questions must be answered. Application information may be submitted initially by mail or fax, in person, or via TCC website at www.tulsacc.edu (click on Student Web). This information must be verified upon each registration at the College.
2. A twenty dollar (\$20) one-time, non-refundable processing fee will be assessed with the first semester's tuition and fees. The Social Security number is used by Tulsa Community College for identification purposes only and will not be given out to any individual or agency (unless required by law or as provided for in federal regulations), without the student's written permission. TCC will assign a student identification number, but will collect your Social Security number for business transactions and verification purposes. Omission or falsification of information on the application is grounds for rejection of the application and/or disciplinary action against an enrolled student. Students seeking Financial Aid must use their Social Security numbers.
3. High school transcript, ACT, SAT, CPT and/or college transcript should be sent to the Admissions/Enrollment Services Office on the campus of planned attendance prior to enrollment. (See "Qualifications for Admissions" section). Credentials submitted to the College will not be copied or returned.
4. First-time college students are encouraged to participate in the student orientation program and are required to be assessed for placement in courses. (See "Student Activities" and "Assessment Services" sections in this catalog for details.)

## II. Re-admission After One Regular Semester of Non-Enrollment

A. Application information is verified to update student information.
B. Re-entering Degree-seeking Students

Students must submit transcripts from each college attended since the last enrollment at Tulsa Community College, and any credentials not submitted previously. Previous attendance at TCC does not mean a student was officially admitted to the College.

## III. Admission After Suspension

A. Academic

Students who have been placed on suspension from Tulsa Community College may petition the Admissions
Committee for admission after a one-semester lapse in enrollment (not including summer). The student must:

1. Complete an admission application.
2. Write a letter which includes the reason(s) he/she would like to be admitted, his/her work schedule, proposed course load, educational goals and any other information the committee should consider in reviewing the request.
3. Provide official transcripts from all previous schools. (It is the student's responsibility to contact the Admissions and Records Office to verify all credentials are received.)

The request letter and all supporting credentials must be received 30 days before registration. Please mail all items to:

## Admissions Committee <br> Admissions and Records Office <br> Tulsa Community College <br> 10300 E.81st Street <br> Tulsa, Oklahoma 74133-4513

4. Upon receipt of the completed application, all credentials, and letter of petition, the request will be reviewed by the Admissions Committee and the student will be notified of the results. See "Policy for Continued Enrollment." Students suspended from another college or university may attend TCC immediately after suspension; contact the Admissions/Enrollment Services on any campus.

## B. Disciplinary Suspension <br> Students who have been placed on disciplinary suspension from Tulsa Community College must contact the Associate Vice President for Student Affairs for re-admission. All criteria outlined in the suspension letter must be met before a suspended student may apply for re-admission after disciplinary suspension.

## Admission to Continuing Education (non-credit)

Continuing Education (non-credit) classes and programs are scheduled throughout the academic year. Continuing Education students are not required to submit academic credentials such as transcripts. In addition, formal application for admission to the College and the application fee are not required for these classes. Enrollment forms for Continuing Education classes are available in the Admissions/Enrollment Services Office on each campus or on the TCC website at www.tulsacc.edu (click on Student Web System), and are also included in the Continuing Education class schedules which are distributed each semester.

## College Credit for Military Training Experience

In evaluating armed services credit, Tulsa Community College follows recommendations of the Guide to the Evaluation of Educational Experiences in the Armed Services, published by the American Council on Education. Credit for military service will be granted only for equivalent courses offered in the Tulsa Community College curriculum after the student has earned twelve (12) hours in residency at TCC. A maximum of 34 credits may be awarded for military training. Tulsa Community College may accept, modify, or reject military training credit depending upon the evaluation. Documents submitted by the student to the Admissions/Enrollment Services Office become a part of the student's official records and will be retained by the College.

## Credit by Advanced Standing

Students who believe they are qualified to establish college credit as a result of previous training or experience should inquire about advanced standing options. Credit is limited to existing TCC courses. Students who establish credit through advanced standing will be assigned a grade of "S" on their record to indicate successful completion. No more than one-half the hours presented for a certificate or an associate degree may be in advanced standing credit. All advanced standing credit must be validated by successful completion of twelve semester hours of resident academic work. Fees for advanced standing tests are listed in the Fees, Books and Refunds section of this publication. No refund of fees will be given for advanced standing examinations that are not passed. Credit for military training falls under the American Council on Education (ACE) guide as extra-institutional credit. TCC may recognize these credits as advanced standing. Questions relating to advanced standing testing should be directed to the Counseling and Testing Office. Credit may be established by several different methods. More information about advanced standing testing can be found in the Counseling and Testing Offices on each campus or online at www.tulsacc.edu/Testing.
I. Credit may be established in specific academic programs by the evaluation of documents indicating formal education, test scores, and/or transcripts relating directly to a specific course. These documents will be reviewed by the related academic division or designate and the ensuing recommendation will be considered final. Contact the Admissions/Enrollment Services Office for procedures.
II. Credit may be established by successfully completing an Advanced Standing Credit Examination in one of the following methods: (See III procedures)
III. In order to qualify for advanced standing credit or advanced standing examinations given at TCC, a student must 1) be or have been enrolled, 2) complete twelve semester hours of resident academic work, 3) complete the application for advanced standing credit and receive approval, 4) pay for the advanced standing exam, and 5) have not taken the examination within the last six months. Fees for the departmental examination are to be paid prior to the end of the fifth week of a regular semester (second week of a summer semester). Fees for the CLEP exams are paid on the testing date. The advanced standing examinations are administered during the ninth week of the semester (fifth week of the summer semester).

## A. College Level Examination Program (CLEP)

Tulsa Community College is a national test site for the College Board's College Level Examination Program (CLEP) examinations are administered in the Testing Center on the Northeast Campus. For a list of exams accepted at TCC or for minimum scores required for establishing credit through CLEP, contact Counseling, Testing, or Admissions/ Enrollment Services Office on each campus or online at www.tulsacc.edu/Testing.

## B. Departmental Examinations Offered by TCC

 Currently or previously enrolled students who feel they are qualified for advanced standing credit by examination in an area not offered or administered through the CLEP program may attempt to establish credit through a departmental examination. Students seeking these examinations should inquire through the campus Advisement Center and may be required to have approval for the examination by the associate dean of the division for that discipline. The departmental examinations are written and scored by TCC faculty and are intended to measure competence comparable to what would be required if the student took and received credit for that course at TCC. A score equivalent to a grade of " $C$ " shall be the cut-off score.
## C. Advanced Placement Program (APP)

This program enables high school students to take comprehensive examinations for credit at the college level. Inquiries concerning this program should be directed to the high school counselor and arrangements for taking the examination and scoring will be coordinated at the high school in which the student is enrolled. TCC does not administer the AP exam. TCC will award college credit with qualifying scores in specified subject areas that are determined by the academic division that administers the discipline of that course. Submit score sheets to the Admissions and Records Office.
D. Tulsa Community College Area Career and Technology Schools Articulation/Cooperative Agreements Students should contact any TCC Admissions and Records Office for specific procedures for requesting college credit. Aviation majors should contact the TCC Flight Center at the Riverside Campus at (918) 828-4270.

## E. Proficiency Certification of Foreign Languages

Language proficiency may be certified for the languages taught at TCC. Arrangements are made through the International Language Center. CLEP is accepted for Spanish, but the CLEP and the APP are not accepted for other foreign languages. Foreign language advanced standing credit follows a different procedure and timeline. Contact Global Education, 595-7851.
F. Extra-Institutional Learning

Advanced standing for credit awarded for military training schools, business and industry, labor union, governmental agencies and other non-collegiate learning shall not exceed the criteria or recommendations contained in publications of the American Council on Education. Contact the Admissions/Enrollment Services Office.

## G. International Baccalaureate

Advanced standing credit may be awarded to a student who has taken "higher level" courses in the International Baccalaureate program and has scored at least a four (on a seven-point scale) on the higher level course examination. Such credit shall be awarded on a course-by-course basis. Contact the Admissions and Records Office.


## Classification of Students

The classification of students is determined as follows:

1. Freshman: 0-30 earned semester credit hours.
2. Sophomore: 31 or more earned semester credit hours.
3. Full-time: students enrolled in 12 or more semester credit hours in a 16 -week semester term ( 6 or more semester credit hours in a summer academic term).
4. Part-time: students enrolled in 11 or fewer semester credit hours in a regular academic term ( 5 or fewer in a summer academic term).

## Academic Advisement

TCC, through its academic advising program, may assist students in selecting a program of study and the number of credit hours needed to enroll in the College. Such programs will be recommended to meet the needs and abilities of the student as demonstrated by previous academic record and evaluative examinations administered by the College.

## Proficiency Requirements

In compliance with the requirements of the Oklahoma State Regents for Higher Education (OSRHE), all TCC students must demonstrate proficiency in English, math, and science before enrolling in college-level courses in these disciplines Students should demonstrate college-level reading competency before enrolling in General Education courses. ACT scores, CPT scores, and college transcripts can be used to demonstrate proficiency. Students for whom English is a second language who do not meet proficiency requirements in English and Reading will be referred to the Testing Center on the Northeast Campus to take the Levels of English Proficiency (LOEP) examination. The LOEP measures the English language proficiency of non-native speakers. Information about the LOEP and a testing schedule is available from the Northeast Campus, Testing Center, by telephone at (918) 595-7534 or online at www.tulsacc.edu.

## Computer Proficiency Requirement

To receive an AA or AS degree from TCC, students must demonstrate computer proficiency, including a basic knowledge of operating systems, word processing, and the ethical use of Internet research capabilities, via one of the following options:

- Successful completion of CSC 1203 or a CSC/CIS course that lists CSC 1203 as a prerequisite
- Successful completion of an advanced standing exam for CSC 1203
- Successful completion of the TCC computer proficiency exam
- Documented work experience or other academic coursework involving the following competencies:
i. Proper use of common computer terms
ii. Saving, retrieving, and organizing data stored on a computer
iii. Using word processing, spreadsheets, and presentation software, as well as the Internet, to perform a task or solve a problem


## Smoking

TCC prohibits smoking or the use of other tobacco products within all College-owned or leased buildings.

## Standards of Conduct

The college student is considered a responsible adult. The student's admission indicates acceptance of those standards of conduct which appear in the Student Code of Conduct. The Student Code of Conduct is published on the TCC website at www.tulsacc.edu and is available in print form on all TCC campuses.

## Resident Classification

The definition of a legal resident of Oklahoma to be used in the assessment of fees at TCC is as follows:The legal residence of a dependent person is that of his/her father, mother or legal guardian(s) as defined by the Oklahoma State Regents for Higher Education. Proof (if requested) of residency may be defined as establishing domicile in Oklahoma and physical residence for the previous 12 months. Domicile is defined as having two components-residence and the intention to remain. If it is determined that an applicant entered the state with the express purpose of attending college, non-resident
status will be assigned. Other classification options may be available for full-time workers or military personnel or spouses and dependents. Contact the Admission and Records Office for details. A person holding permanent-resident or amnesty status, who has resided in Oklahoma for at least 12 consecutive months and who meets any other applicable criteria for establishment of domicile may file for resident classification. Contact the Director of Enrollment Services on any campus for clarification.

## Drop From the College During the Schedule Adjustment Period

Students who enroll at Tulsa Community College will be charged tuition and fees for courses not dropped during the applicable drop period for their courses. It is the student's responsibility to be sure unwanted courses are dropped by the scheduled deadline. Students may drop classes using the TCC Automated Systems: Touch-tone Phone 918-595-7373 or Student Web at www.tulsacc.edu and click on Student Web or in person by contacting any Admission and Records Office. See the academic calendar on page 8 for deadlines.

## Withdrawing From a Class After the Schedule Adjustment Period

The procedure for withdrawing from a class is as follows:

1. Obtain a withdrawal form in the Advisement Center at any TCC campus.
2. Print student identification number, name and course information on the form.
3. The Academic Advisement staff will check the form for accuracy and advise students with financial aid to talk with their Financial Aid counselor.
4. Student signs form and it is initialed in the Advisement Center.
5. Student keeps student copy of withdrawal form.
6. The deadline to withdraw shall not exceed three-fourths of the duration of any class. See the academic calendar on page 8 for deadlines.

## Complete Withdrawal from the College

If a student needs to completely withdraw from the College, the following steps should be followed.

1. Student must appear personally at any college Advisement Center and request the form used in processing a complete withdrawal.
a. If circumstances prohibit a personal appearance, the student should send a letter to a campus Advisement Center and include his/her name, I.D. number, class(es) to be withdrawn, reason for withdrawal and student signature.
b. The date of withdrawal by written correspondence will be the date the letter is received by the Advisement Center.
2. The student is expected to fulfill any outstanding financial obligations to the College. Any student receiving Federal Title IV Funds (Pell, SEOG, Loans) who completely withdraws from the College prior to the completion of $60 \%$ of a semester will be required to return any federal aid received that was in excess of the aid "earned" for the time period the student was enrolled. See the "Financial Aid and Scholarships" section of this catalog on page 29 for more information.
3. Special Notes:
a. Requests for withdrawal cannot be accepted by telephone.
b. Notifying your instructors of your intent to withdraw does not constitute an official withdrawal.
c. Withdrawal requests received after the deadline in the catalog will not be accepted and the official date of withdrawal in all cases is the date the request is received and approved in the Advisement Center.
4. The deadline to withdraw shall not exceed three-fourths of the duration of any class. See the academic calendar for withdrawal deadlines.

## Audit of a Course

## I. Regular Course Audit

The student must complete the "Audit Contract"for each class being audited. The student and appropriate instructor must sign the form and the request to audit must be completed prior to the close of the withdrawal period for the specific class. A student may revert from audit to credit only during the schedule adjustment period for the specific course. The auditing student must adhere to the instructor's class attendance and participation requirements. A student not adhering to the instructor's requirements may be withdrawn by the instructor for non-attendance. A grade of AU (audit) does not count in hours attempted or earned. Audited courses will not apply toward graduation requirements, or for financial aid or veteran's benefits. For other options, see II. Special Admission Programs, Audit Admission section on page 14 of this catalog.

## II. Audit for Oklahoma Residents Who Are Age 65 or Older and Desire a Tuition Waiver

The Oklahoma State Regents for Higher Education approved a policy authorizing institutions of the State System to waive the fees for Oklahoma residents who are sixty-five (65) years of age, or older, for auditing of academic courses - contingent upon space being available in the classrooms and laboratories housing such courses. Information relative to this program is as follows:
A. Enrollment is open on a space-available basis on the date the class begins. People will be allowed to enroll at TCC under this plan only after the regular enrollment period preceding each semester and at times designated by the College. Enrollment is allowed only if the normal class limit has not been met. No class overloads will be allowed. Students must meet any proficiency requirements or prerequisites prior to enrollment.
B. Students must meet Oklahoma residency requirements as defined by the Oklahoma State Regents, be age sixtyfive (65) or older, and must verify both residency and age (i.e., by presenting a valid birth certificate, driver's license, etc.).
C. A maximum of seven (7) semester credit hours per regular semester and four (4) semester credit hours in a summer term is allowed under this policy. If a student wishes to enroll in more than the maximum credit hours allowed, he/she must pay the regular fees for hours beyond the maximum.
D. Since audit is mandatory under the fee waiver, the Director of Enrollment Services signature will authorize the audit status in lieu of other College officials.


## TUITION AND FEES*

Fee amounts are approved by the State Regents for Higher Education and may be changed by direction of the State Regents. General enrollment fees and nonresident tuition and other fees for special educational services are due prior to the first day of class.


## Former Prisoners of War

Persons Missing in Action - Dependents. Any former prisoner of war or person missing in action, as defined by the provisions of O.S. Supp. 1991,Title 70, Section 2281, and any dependent of a prisoner of war or person missing in action, and neither yet returned to the United States or to control by its armed forces, upon being duly accepted for enrollment into Tulsa Community College shall be allowed to obtain an associate degree, or certificate of completion, for so long as he/she is eligible, free of general enrollment fees.

## Children of Peace Officers and Fire Fighters

No general enrollment fee or nonresident tuition shall be charged to the children of Oklahoma peace officers or fire fighters who have given their lives in the line of duty. TCC shall grant tuition waivers to eligible persons upon presentation of evidence that the deceased person was a duly appointed police or peace officer or fire fighter as defined in O.S. 1991, Section 3218.7. Such waivers shall be limited to a period of five years from the date of the first waiver.

## Special Course Supplies and Institutional Services

Students are expected to furnish expendable supplies in certain courses. The institution may furnish a portion of all these expendable supplies to the student at a fixed cost per course, and these materials will be available at the proper scheduled time. Certain other services may also be provided for the student by the College at a fixed cost. The price schedule is listed below:
Application Fee $\$ 20.00$ non-refundable (one-time charge)
Aviation Technology Service Fees Private Direct cost of service
Commercial with Instrument Rating Direct cost of service
Dental Hygiene Clinical Equipment Utilization Fee \$100.00 per semester
(3 semesters)
International Student Status Maintenance Fee
Fall, Spring \& Summer Terms \$50.00 per semester
Lab Fees
Accounting (Software Courses) \$7.00 per semester
Allied Health ..... $\$ 12.00$ per semester
Art. $\$ 12.00$ per semester
Child Development. $\$ 12.00$ per semester
Computer Integrated Manufacturing ..... $\$ 12.00$ per semester
Computer Information Systems
One Credit Hour Course .\$7.00 per course
Two Credit Hour Course ..... \$15.00 per course
Dental Hygiene. $\$ 20.00$ per course
Drafting $\$ 12.00$ per course
Electronics ..... $\$ 12.00$ per course
Engineering ..... $\$ 12.00$ per course
English Developmental Studies .....  $\$ 7.00$ per course
Health Information Technology ..... $\$ 12.00$ per course
Horticulture ..... $\$ 12.00$ per course
Interior Design ..... $\$ 12.00$ per course
Numerical Control/Machinist ..... $\$ 20.00$ per course
Nursing ..... $\$ 12.00$ per course
Paralegal ..... $\$ 12.00$ per course
Science (Lab Courses) ..... $\$ 12.00$ per course
Telecommunications .....  $\$ 12.00$ per course
Veterinary Technology $\$ 25.00$ per course
Legal Research Law Library Fee ..... \$30.00 per course
Private Music Lessons Fee ..... $\$ 50.00$ per course
Music 1 credit hour. ..... $\$ 50.00$ per course
Music 2 credit hour. ..... \$100.00 per year
Student Malpractice Insurance ..... \$13.00 per course
Special Instruction Fees
First Aid Fee .\$8.00 per course
Nursing Assessment Fee. .....  $\$ 60.00$ per course
Nursing Drug Screen Fee .....  $\$ 50.00$ per course
Veterinary Technology Vaccination Fee .....  $\$ 475.00$ per course

## REFUNDS

## Refund Procedure

When a student enrolls in a class at Tulsa Community College, he/she reserves a place which cannot be made available to another student until he/she officially withdraws from the class. Many students cannot enter Tulsa Community College each semester because classes are filled. Students processing a complete withdrawal prior to the first day of classes may receive a $100 \%$ refund, except for the application fee, ID fee, and/or international student status maintenance fee,TOP fees and Deferred payment service fees. Refunds will not be honored unless all financial obligations to Tulsa Community College have been cleared.

## Refund Policy

## I. Complete Withdrawal from the Institution

A. $\mathbf{1 0 0 \%}$ Refund for dropping all classes during the first 2 weeks of a regular semester, first week of a summer or 8week mini-term or before the second class session of a course that is less than 8 weeks in length. Internet classes of less than 8 weeks duration must be dropped on the first day of class for refund.
B. $\mathbf{0 \%}$ Refund for students withdrawing after the second week of a regular semester, after the first week of a summer or 8-week mini-term, after the start of the second class session of a class that is less than 8 weeks in length, or after first day of class for an Internet course of less than 8 weeks duration.
NOTE: Financial aid recipients who complete a full withdrawal from the institution should refer to the Return of Title IV funds policy in the "Financial Aid Probation and Suspension"section of this catalog; refer to page 44.

## II. Schedule Adjustments (DROP)

A. 100\% Refund for dropping class(es) during the first two weeks of a regular semester, during the first week of the summer or eight-week mini-term or prior to the second class meeting of a class less than 8 weeks in length. Internet classes of less than 8 weeks duration must be dropped on the first day of class for a refund.
B. 0\% Refund for withdrawing from a class after the first two weeks of a regular semester, after the first week of a summer or 8 -week mini-term or after the start of the second class session of the class that is less than 8 weeks in length, or after first day of class for an Internet course of less than 8 weeks duration.
All tuition and fees will be refunded if a class is cancelled due to insufficient enrollment. Refunds may require 30 days to process.

## III. Refund Policy for Continuing Education (non-credit classes)

$100 \%$ refund will be given if a written, telephone, faxed, or in-person request is made to the Continuing Education office $\mathbf{2}$ full business days (M-F) before the first scheduled class meeting. Refunds cannot be issued for nonattendance. All fees will be refunded if class is cancelled due to insufficient enrollment. Refunds require up to 30 days to process. The Continuing Education Department reserves the right to amend this policy for specialized events and programs.

## IV. Refund Policy for Students Entering Military Service

If a student enters military service during the term in which he/she is enrolled and he/she has not completed sufficient work for receiving his/her grades, but is in good standing academically, Tulsa Community College will refund to the student the full amount of his/her fees paid. If a student enters military service during the term and is not in good academic standing at the time, the regular fee refund policy would apply. The student must forward a copy of the induction orders with a written request for a refund directed to the Refund of Tuition and Fees for Students with Hardship Circumstances Committee. See address on the back of this catalog.

## Fees Applicable Only Current Semester

Fees are applicable only for the current semester or term. If a student withdraws and is entitled to a refund, the amount of the refund cannot be carried forward as a credit to a subsequent session.

## BOOKS

## Campus Store Refund Policy

For College credit and non-credit classes, coursebooks and supplies will be available for student purchase two weeks before classes begin.
Books are eligible for refunds:

1. First TWO WEEKS of a 16 -week semester
2. FIRST WEEK of an 8 -week semester
3. Until the first class meeting of a course lasting less than 8 weeks

The Campus Stores will only grant coursebook refunds to students with a current-semester cash register receipt. Books must also meet the following conditions.

1. A one-hundred percent (100\%) refund will be given on a new coursebook that is clear of any marks or erasures and is in new condition.
2. If a new coursebook has been marked or is not in new condition, it will be refunded at seventy-five percent ( $75 \%$ ) of the new coursebook price.
3. Used books still in saleable condition will be refunded at one hundred percent (100\%) of the price paid at the time of purchase.
Refunds will be given on defective class supplies and materials.

## Campus Store Coursebook Buy-Back Policy

The Campus Stores will conduct a Coursebook Buy-Back on each campus at the end of each semester.The Buy-Back is presented as a service to the TCC student. It is an opportunity afforded to the student to reap some benefit from the sale of those coursebooks no longer wanted or needed.
Buy-Back Policy is as follows:

1. The Buy-Back will be held the last five days of finals during the fall and spring semesters and the last two days of finals during the summer semester.
2. The student will receive up to fifty percent ( $50 \%$ ) of the established TCC new book price for any book the College Stores need.
3. Books not needed by the TCC Campus Stores that are of marketable value may be sold at a price established by the Wholesale Book Company.


## FINANCIAL AID AND SCHOLARSHIPS

The Financial Aid and Scholarship Office at Tulsa Community College is available to assist qualified students to meet the costs of their education. Financial aid is designed to supplement the financial resources of the student and student's parent(s).

Financial aid is available through grants, scholarships, loans, and part-time employment from federal, state, institutional and private sources. Grants and scholarships are financial aid that students do not have to pay back. Loans are borrowed money that must be repaid with interest. Work-study allows students to work and earn money for school expenses. The types and amounts of aid awarded are determined by financial need, availability of funds, student classification, and academic performance.

The Higher Education Act of 1965, as amended, requires that each recipient of funds under the Federal Pell Grant, Academic Competitiveness Grant, Federal Supplemental Educational Opportunity Grant, Federal Work-Study, Oklahoma Tuition Aid Grant (OTAG), Stafford Student Loans, or Plus programs maintain satisfactory progress in his/her course of study. The following policy does not preclude a recipient from continuing to enroll as a student or to receive other types of financial aid. The applicant must have a high school diploma, GED, or demonstrate the "ability to benefit" in order to receive financial aid at the institution to which he/she is applying according to the guidelines set forth by the Department of Education.
Some additional requirements for financial aid are:

- Students must maintain a cumulative 1.70 grade point average (GPA) for the first 30 credit hours attempted; and a cumulative 2.00 GPA for all hours attempted thereafter.
- Students must successfully complete at least $70 \%$ of all attempted course hours, regardless of whether financial aid has been received for those hours. Withdrawals, I,F, and other unsatisfactory grades are examples of grades that will be counted against this completion rate.
- Audit grades do not qualify for financial aid. Should a student receive financial aid for any classes, or hours, that are later changed to audit, the student will be required to repay any applicable financial aid funds.
- Students attempting 95 or more college hours will be required to justify the applicability of all coursework by submitting a Request For Continued Financial Aid Form and an evaluated degree audit, which will be presented to the Financial Aid Advisor for determination of continued financial aid. If the plan of study is approved, Financial Aid may only be used to pay for those courses on the degree audit. Financial aid will not pay for repeat or remedial courses once the student reaches "excessive hours status."
- Any student who completely withdraws, drops out, is dismissed or takes a leave of absence prior to completion of 60\% of a semester will be subject to the return of Title IV funds. The student will be required to return to the federal aid program the amount of aid received that is in excess of aid "earned" for the time period the student remained enrolled. Students who receive any Title IV funds (Pell, SEOG, and Stafford Loans) should consult with their financial aid counselor before completing a full withdrawal.
- Any student operating "under appeal" will be suspended from financial aid their next entering semester, if they receive a D, F, AW, W, WP, WF, I, U, or N.


## Financial Aid Programs Requiring the Free Application for Federal Student Aid (FAFSA)

There are a number of financial aid programs available at Tulsa Community College. Some scholarships are need based and require FAFSA application. The FAFSA application is used to apply for the following programs:

\author{

- Federal Pell Grant <br> - Federal Work Study <br> - Federal SEOG <br> - Oklahoma Tuition Aid Grant
}
- Federal Unsubsidized Stafford Loan
- Need Based State Regents Tuition Waiver
- Need Based Grants (Tribal, Voc-Rehab, etc.)
- Academic Competitiveness Grant

Other programs available through TCC Financial Aid and Scholarship Office that require a separate application:

\author{

- State Regents Tuition Waiver <br> - State Regents Leadership Scholarships <br> - TCC Provost Scholarship
}


# - Federal Parent Loan (PLUS) <br> - TCC Foundation \& Trust Scholarships <br> - TCC Honors Scholar Tuition Waiver 

If a student qualifies for financial aid, awards from a combination of programs may be packaged by the TCC Financial Aid and Scholarship Office. Some programs are need based. Need is the difference between expected educational expenses and available family financial resources. The student and parent(s) should be prepared to verify information reported on the FAFSA. Documentation may be required to verify income, federal income tax paid, household size, dependent or independent status, citizenship, Social Security, veterans' benefits, etc. Failure to provide the requested documentation may result in a delay, or the termination of the financial aid application process. When the awards are determined, an award notification letter is sent to the student. This awards notification letter must be signed and returned to the student's home campus before any aid can be disbursed. To ensure that financial aid will be available by start of the semester, students MUST have their FAFSA application completed, Financial Aid Notification Letter signed, and entrance counseling completed on or before the financial aid priority deadline. Financial Aid priority deadlines are June 1st for Fall semester, November 1st for Spring semester and April 1st for Summer semester. Early application is encouraged as some funds are limited.

## GRANTS

## Federal Pell Grant

The Federal Pell Grant, unlike a loan, does not have to be repaid. The Pell Grant is intended to be the "floor" of a financial aid package. An undergraduate student who has not received a bachelor's degree and is a U.S. citizen, or eligible non-citizen, is eligible to apply. Eligibility to receive a Federal Pell Grant is determined by the U. S. Department of Education based upon a standard formula, established by Congress, using family financial information submitted on the FAFSA and reported on the SAR. The formula produces an Expected Family Contribution (EFC) number. Your Student Aid Report (SAR) contains this number. Students must be degree-seeking, enrolled, and making reasonable satisfactory progress toward the completion of their course of study.

## Academic Competitiveness Grant (ACG)

The ACG is available for students who are eligible for a Pell Grant, enrolled full-time, have remaining financial need, and graduated from high school completing a rigorous high school program as identified by the U.S. Department of Education. A student must be a recent high school graduate and may only receive a maximum of two disbursements per academic year for the first two years of a program. Students in certificate programs are not eligible.

## Oklahoma Tuition Aid Grant (OTAG)

OTAG is grant based on need for up to $75 \%$ of tuition and fees to Oklahoma resident students making reasonable satisfactory academic progress. To apply, submit the FAFSA by April 15 for best consideration, as funds are limited. This program is administered by the Oklahoma State Regents for Higher Education.

## Federal Supplemental Educational Opportunity Grant

The FSEOG provides grants to students with the greatest financial need as determined from the SAR analysis and on the availability of funds. The grant may not exceed $\$ 4,000$ a year. Students must be enrolled in at least half-time status and be making reasonable satisfactory academic progress.

## Tribal Grants

For Native American students. Application procedures are initiated in the appropriate Tribal Education Office and by submitting the FAFSA.

## SCHOLARSHIPS

Tulsa Community College offers many scholarships to students with scholastic achievement and/or economic need. Students may apply for scholarships of varying amounts which are generally for specific educational costs. A current descriptive list is available in any TCC campus Financial Aid and Scholarship Office. Recipients are selected by the TCC Scholarship Committee during the spring term for the following academic year. To apply, submit the TCC Scholarship Application to the Financial Aid and Scholarship Office by the announced deadline(s). New scholarship opportunities become available throughout every semester. Check the Scholarship Opportunities Bulletin Board at any Financial Aid and Scholarship Office and the TCC Connection for new scholarships.

## TUITION WAIVERS

## TCC State Regents Tuition Waiver

Tulsa Community College offers a waiver of tuition of 3 to 12 credit hours per semester, for Oklahoma resident students with a 3.00 cumulative grade point average. Recipients are determined by their GPA and completion rate, with $50 \%$ of the scholarships awarded to students with financial need. Students who are awarded based on financial need are required to have only a 2.50 cumulative grade point average. To apply, submit the appropriate application to any Financial Aid and Scholarship Office by April 3 to receive priority consideration. Application is required each academic year. Students are required to complete 3 credit hours in the Fall to maintain eligibility in the Spring.

## TCC Honors Scholar State Regents Tuition Waiver

Tulsa Community College offers a waiver of tuition of 3 to 18 credit hours per semester for students who are TCC Honors Scholars in good standing. To apply, submit the TCC Honors Scholar application to any TCC campus Honors Office. To remain eligible for the waiver, students are required to maintain a TCC grade point average of at least 3.5 and complete a minimum of 3 credit hours each semester, including (until minimum Honors Scholar requirements are fulfilled) at least one Honors course each semester.

## TCC State Regents Leadership Scholarship

Tulsa Community College offers a waiver of tuition only of 3 to 18 credit hours per academic year for Oklahoma High School Valedictorian, Salutatorian, and some Honor students. To apply, have your high school counselor submit a Leadership Scholarship Application by April 3 to any TCC Financial Aid and Scholarship Office. Students are required to complete 3 credit hours in the Fall to maintain eligibility in the Spring.

## TCC Provost Scholarship

Each year campus Provosts will nominate up to ten (10) students from their campus for the Provost Scholarship. This award waives up to 18 credit hours of tuition each semester. This award is based on scholarship, leadership, and community service involvement. Students should contact the campus Dean of Student Services Office for criteria and application information. Students are required to complete 6 credit hours in the Fall to maintain eligibility in the Spring.

## TCC State Regents Tuition Waivers

TCC State Regents Tuition Waivers are also available for Oklahoma residents who are 65 years of age or older; former POW/ MIA; dependents (children) of POW/MIA; and, dependents of Oklahoma peace officers and firefighters who have given their lives in the line of duty. Students should contact campus Director of Enrollment Services for more information.

## TCC ACE Tuition Waiver Scholarships

Concurrently enrolled students who take 3 to 6 credit hours per semester may be eligible for ACE Tuition Waiver Scholarship. ACE is Attend College Early and ACE Tuition Waiver Scholarships are awarded on a first-come, first-serve basis as funds are available. Concurrently enrolled students should contact the Admissions and Records Office for more information about the ACE Tuition Waiver Scholarship.

## LOANS

## Federal Family Education Loan Program (FFEL)

The FFEL program offers subsidized, unsubsidized and PLUS loans through commercial lenders for students enrolled at least half-time in an eligible program. Dependent undergraduate students can borrow up to $\$ 3,500$ if they are firstyear students enrolled in a program of study that is at least a full academic year, and $\$ 4,500$ if they have completed their first year of study and the remainder of their program is at least a full academic year. The maximum for an independent undergraduate student loan is up to $\$ 7,500$ for the first year and up to $\$ 8,500$ for the second year. A student completing prerequisites for an approved program of study may receive up to $\$ 2,625$ for one academic year.

The aggregate amount a student will qualify for is $\$ 23,000$ for a dependent undergraduate and $\$ 46,000$ for an independent undergraduate (only $\$ 23,000$ of this amount may be in subsidized loans). Regardless of the type of loan students borrow, they must receive entrance counseling before they can be given their first loan disbursement, and they must complete exit counseling upon dropping below half-time status, such as withdrawal, graduation or transfer. These counseling sessions are available online at www.mapping-your-future.org and provide student borrowers with important information about their loan, borrower rights, and repayment.

According to federal guidelines, all student loans must come in two (2) disbursements per loan period, and delivery to TCC for first year, first time borrowers must be delayed for thirty (30) days.

## Stafford Loans

A subsidized loan is awarded on the basis of financial need. Student borrowers will not be charged any interest before they begin repayment or during authorized periods of deferments. The federal government "subsidizes" the interest during these periods.

An unsubsidized loan is not awarded on the basis of need. Interest is charged from the time the loan is disbursed until it is paid in full. If interest is allowed to accumulate, it will be capitalized-that is, the interest will be added to the principal amount of the loan and additional interest will be based upon the higher amount.

Both a subsidized loan and an unsubsidized loan may be received for the same enrollment period.

## PLUS Loan

PLUS loans enable parents with good credit histories to borrow to pay the education expenses of each child who is a dependent undergraduate student enrolled at least halftime. The yearly limit on a PLUS Loan is equal to the student's cost of attendance at TCC minus any other financial aid he or she receives. Interest is charged on the loan from the date the first disbursement is made until the loan is paid in full. Parents will be notified by lender or service provider of interest rate changes throughout the life of their loan. Loan funds are sent to TCC by the lender in two installments.

## Federal Work Study

Students may earn up to $\$ 7.92$ an hour, depending on the position, for up to 20 hours a week during the academic year, which includes semester breaks. Placement may be either on or off campus with public or private non-profit agencies. Maximum earnings are determined from the estimated family contribution as determined by the FAFSA and the availability of funds. Applicants must be enrolled at least half-time, complete a TCC work- study employment application, and be interviewed for placement. Students seeking Federal work-study employment should visit the TCC FWS website for more information at: www.tulsacc.edu/federalworkstudy.

## Financial Aid Application Procedure and Process

The 2008-2009 FAFSA is for the Fall 2008, Spring 2009 and Summer 2009 terms. To apply for Summer 2007, financial aid students must also submit a Summer 2007 TCC Financial Aid Application that will be available from any Financial Aid and Scholarship Office by March 2007.

1. After January 1 and after completing the 2007 federal income tax return, submit the Free Application for Federal Student Aid (FAFSA).
2. Instead of mailing the FAFSA, students may wish to file their FAFSA electronically. We suggest students complete the paper FAFSA in preparation for electronic filing to have all required information available. Students may access "FAFSA on the Web" at http://www.fafsa.ed.gov. Be sure to use the 2008-2009 FAFSA on the Web.
3. After the FAFSA application is sent to the federal processor, the student will receive a Student Aid Report (SAR) approximately 1 to 6 weeks from the U.S. Department of Education. The student must carefully review the instructions on the SAR. If the SAR is incorrect, refer to the instructions on the SAR for correction information. The Financial Aid and Scholarship Office will notify the student by mail or email of any additional information needed or students may monitor the progress of their Financial Aid application by logging on to the Student Web using their SID and pin number http://sis.tulsa.cc.ok.us. If no additional information is needed and the student meets all the aid eligibility requirements, Financial Aid and Scholarship Office will mail the student an award notification letter listing the types and amounts of financial aid, approximately 4 to 8 weeks from the file complete date (the date on which all required documents have been submitted). Detailed information about financial aid awards and disbursements is included with the award notification letter, which must be signed and returned to the Financial Aid and Scholarship Office.
4. Submit other applications for financial aid, including BIA or Tribal Grants, outside agency scholarships, or Vocational Rehabilitation by their application deadline. Each agency will have its own application forms and deadlines. Follow the instructions carefully, as funds are limited.
5. Submit the TCC Application for Admission to the Admissions and Records Office. To receive financial aid, a student must be admitted as a degree-seeking student in an eligible degree or certificate program.
6. Request official academic transcripts from previously attended high schools, post-secondary schools, colleges, and universities. All transcripts must be on file to receive financial aid.
7. Respond quickly to requests for additional information by all TCC offices to avoid delays. To ensure that financial aid funds will be available by start of the semester , students MUST have their FAFSA application completed, Financial Aid Notification Letter signed, and entrance counseling completed on or before the financial aid priority deadline. Financial Aid priority deadlines are June 1st for Fall semester, November 1st for Spring semester and April 1st for Summer semester.
8. All first-time student loan borrowers at TCC are required to participate in Entrance Counseling regarding their student loan before loan funds may be delivered. Online entrance counseling may be completed at www.mapping-your-future.org.
9. According to federal guidelines, student loans must always come in two (2) disbursements per loan period, and delivery to first-year, first-time borrowers must be delayed for at least thirty (30) days.
Additional information is available on our website: www.tulsacc.edu/finaid/

## FINANCIAL AID REASONABLE ACADEMIC PROGRESS POLICY

Federal regulations (CRF 668.16) require that a student maintain reasonable academic progress in the course of study being pursued, according to the standards and practices of the institution in which he/she is enrolled, in order to receive aid under the Higher Education Act.These programs at TCC include Federal Pell Grant, Academic Competitiveness Grant, Federal WorkStudy, Federal Supplemental Educational Opportunity Grant, Oklahoma Tuition Aid Grant, FFEL Stafford Loans (subsidized and unsubsidized) and the Federal PLUS Loan Program.

The student is encouraged to become familiar with this reasonable academic progress policy and any policy that may govern outside sources of financial aid for which the student may have qualified for such as: Vocational Rehabilitation, JTPA, Department of Veterans Affairs Educational Benefits, etc.

## I. Qualitative and Quantitative Requirements

Both qualitative and quantitative standards for reasonable academic progress shall be applied uniformly to ALL students whether or not the student has previously participated in a Title IV program. In order to satisfy both qualitative and quantitative requirements, ALL students must satisfy the minimum standards as described below:

| Hours Attempted | $1-30$ credit hours | 31 or more credit hours |
| :--- | :--- | :--- |
| Cumulative GPA | 1.70 | 2.00 |
| $\%$ of total hours | $70 \%$ successful completion | $70 \%$ successful completion |

For financial aid purposes, grades of $\mathrm{F}, \mathrm{W}, \mathrm{AW}, \mathrm{WP}, \mathrm{WF}, \mathrm{I}, \mathrm{U}$, etc. shall be considered hours attempted. However, these are NOT considered hours satisfactorily completed. Audit grades do not qualify for financial aid. Should a student receive financial aid for any classes, or hours that are later changed to audit, the student will be required to repay any applicable financial aid funds. Cumulative grade point average (calculated by College Directors of Enrollment Services), and hours attempted (calculated by the Financial Aid and Scholarships), shall be used to determine a student's eligibility to participate in the Title IV programs.

## II. Transfer and Continuing Students

ALL transfer students entering Tulsa Community College and ALL continuing TCC students who apply for financial aid must have an official high school transcript and official academic transcripts from all previously attended institutions on file at the TCC Registrar Office. Continuing students must meet the minimum qualitative and quantitative requirements described above in order to receive federal aid. Transfer students who do not meet minimum requirements may be placed on probation for the current entering TCC semester. Progress will be reviewed upon completion of the semester to update the student's reasonable academic progress status accordingly. Credit from an institution without recognized accreditation will not be used to calculate a student's academic progress; however, students who have a bachelor's degree - even from an unaccredited institution - may not receive Pell or SEOG funds.

## III. Evaluation Increment Period

ALL students participating in the Title IV programs may be evaluated at the end of EACH semester if necessary (summer school included, if applicable) to determine if reasonable satisfactory academic progress is being maintained.

## IV. Financial Aid Probation and Suspension

In the event a student fails to meet minimum requirements, as described in the table above, the student will be placed on probation for the subsequent semester, during which time the student may continue to receive Title IV aid. At the end of the probationary semester, if the student fails to meet minimum criteria, the student will be suspended from participating in ALL Title IV programs and must attend WITHOUT benefit of the Title IV assistance until such time as eligibility is reestablished. Students who receive Title IV financial aid and complete a full withdrawal, drop out, or are dismissed prior to completion of the semester will be immediately suspended from financial aid and will be subject to the Department of Education Return of Title IV policy.

## V. Re-Establishing Eligibility

A student may re-establish eligibility to participate in the Title IV programs by completing sufficient hours to meet both qualitative and quantitative standards in the applicable category as described in the table above.

## VI. Appeal of Financial Aid Suspension

Students who are denied financial aid may appeal the decision, if there are extenuating circumstances. EXTENUATING CIRCUMSTANCES INCLUDE, BUT ARE NOT LIMITED TO: DEATH IN THE FAMILY, ILLNESS AND HOSPITALIZATION. The appeal letter must be submitted in written form no later than noon on the Wednesday before the appeal committee meeting to your home campus Financial Aid and Scholarship office explaining the extenuating circumstances. The student is advised to provide supporting documentation. The Appeal Committee may request specific documentation of the reason(s) stated in the student appeal. The student will be notified, in writing, of the Appeal Committee's decision. The decision of the Appeal Committee is final. Any student whose suspension status has been appealed and previously approved must follow the terms and conditions of that appeal to continue receiving Title IV financial aid. Any student unable to adhere to the requirements of the approval appeal will be suspended.

## VII. Limitation of Student Eligibility

All students enrolled in an eligible degree program may receive Title IV aid up to $150 \%$ of the hours required to pursuit of a degree or certificate. The total number of hours allowed at Tulsa Community College to receive Title IV aid is ninetyfour (94). It is the option of the Financial Aid Appeal Committee and/or Financial Aid office to grant an extension to the $150 \%$ maximum hours allowed. Reasons for approval include, but are not limited to, change of major, transfer between institutions, or new degree program. Students who have exceeded the maximum time frame for degree completion because they have not completed a sufficient percentage of coursework or are putting off completion to continue to receive aid, will not be approved. Students with a prior bachelor's degree are prohibited by regulation from receiving Pell Grants or SEOG. If approved, students who have exceeded the $150 \%$ maximum will be pay only for the course required to complete the degree. Financial aid will not pay for repeat or developmental courses once the student reaches "excessive hours status".
STUDENTS ARE RESPONSIBLE FOR KNOWING THEIR ELIGIBILITY STATUS AT THE END OF EACH SEMESTER. IF IN NEED OF ASSISTANCE OR CLARIFICATION, STUDENTS ARE ENCOURAGED TO COME TO ANY CAMPUS FINANCIAL AID AND SCHOLARSHIP OFFICE FOR VERIFICATION OF ELIGIBILITY.


## Student Record and Financial Aid Holds

According to federal guidelines it is the option of the College to place a hold on the release of a student's record for failure to comply with a requirement or meet an obligation of the offices of Admission and Records, Bursar, Learning Resource Center, Counseling and Testing, Student Activities, and Financial Aid and Scholarship Office.

It is part of the regular office procedure of the Financial Aid and Scholarship Office to place a hold on a student's academic record for various reasons. Examples for a hold being placed on an academic record include, but are not limited to, an institutional, state, or federal financial aid overpayment due by the student, a student's failure to comply with a student loan Exit Interview as required by federal guidelines, or receipt of notice of a student's student loan delinquency or default.

Resolution of the infraction must occur before release of the academic records. A student may make a written request to the Financial Aid and Scholarship Office for release of an unofficial record prior to resolution.

## Default Management Plan

There are consequences for schools with official cohort default rates that exceed certain thresholds and in some cases an institution may be ineligible to participate in financial aid programs. As required by The Department of Education, Tulsa Community College has implemented and practices a strict Default Management Plan. In part, this Default Management Plan includes requiring an Entrance Interview for all student borrowers, Exit Interviews for students in less than halftime enrollment whether due to withdrawal or graduation, and in some cases placing a hold on a student's academic record. Examples of a hold being placed on an academic record include, but are not limited to, an institutional, state, or federal financial aid overpayment due by the student, a student's failure to comply with a student loan Exit Interview as required by Federal guidelines, or receipt of notice of a student's student loan delinquency or default.

Resolution of the infraction must occur before release of the academic record can occur. A student may make a written request to the Financial Aid and Scholarship Office for release of an unofficial record prior to resolution. Contact the Financial Aid and Scholarship Office for more information on TCC's Default Management Plan or for questions regarding a hold.

## Misrepresentation, Forgery, Fraud and Abuse

The TCC Financial Aid Office is required to report any suspected fraud or misrepresentation to the Inspector General's Office. Whenever a staff member becomes aware that a student and/or a student's parent or spouse may have allegedly misrepresented facts relevant to the student's financial aid application, or have committed forgery or fraud, the staff member must report this promptly to the Director of the Financial Aid and Scholarship Office for appropriate follow-up. The Director will contact the student to attempt to determine if the misrepresentation was unintentional and to explain the consequences of the action. Should resolution not occur, the case would be referred to the Inspector General's Office for appropriate resolution. A hold will be placed on the student's record and financial aid until resolution has occurred.

## VETERANS SERVICES

Tulsa Community College maintains a full-time office of Veterans Services at Metro Campus for the convenience of veterans and their dependents attending school and receiving educational benefits under the following chapters of Title 38 United States Code.

## Entitlement Programs

1. Chapter 30,Title 38, U.S.C.- Montgomery GI Bill
2. Chapter 31,Title 38, U.S.C.- Disabled Veterans, Vocational Rehabilitation Program
3. Chapter 32,Title 38, U.S.C. - Veterans Educational Assistance Program (VEAP)
4. Chapter 35 , Title 38, U.S.C.
a. Spouse of $100 \%$ and Permanently and Totally Disabled Veteran
b. Spouse of a Deceased Veteran (Service Connected)
c. Spouse of Deceased 100\% and Permanently Disabled Veteran
d. Children of $a, b$, or $c$
5. Chapter 1606, Title 38, U.S.C.- Selected Reserve Educational Assistance Program Policies


The Department of Veterans Affairs (DVA) requires all veterans to abide by the policies and regulations of the College concerning academic standing and progress, class attendance, and conduct. The TCC Veterans Services Office will monitor compliance with these policies and is required to report any deviations to the DVA. All school policies are stated elsewhere in this catalog. Concurrent with school policies, the DVA requires the following.
A. Academic program. A recipient of DVA benefits must select and designate the academic program under which he or she will be receiving educational benefits. Any change of academic program must be acceptable to the DVA.
B. Course work. Educational benefits will be paid only on courses applicable toward the academic program. Any course substitution, i.e., course outside the catalog listing for a particular program, must be verified as an approved substitution. The DVA will not award educational benefits for repeated courses in which a passing grade has already been received or for courses in which an incomplete "l" is earned.
C. Previous or transfer credit. Applicants for benefits having earned college credit at another institution must submit transcripts from each institution he or she has attended before the TCC Veterans Services Office can certify enrollment to the DVA.
D. Class attendance. The DVA requires the institution to report all excessive absences from classes. Failure to attend classes while receiving benefits will result in an overpayment and the student is liable for repayment to the DVA.

## Procedures

A. Apply for admission to the College in the Admission and Records Office, or online at www.tulsacc.edu.
B. First time veteran students at TCC need to contact the Advisement Center and acquire a Program Curriculum Plan. Take a copy to the Veterans Services Office at Metro Campus. Returning students may verify applicability of courses toward graduation by reviewing their Program Curriculum Plan on file in the Advisement Center or the Veterans Services Office.
C. Register for classes.
D. After the registration for classes is completed, go to the TCC Veterans Services Office at Metro Campus and request certification for benefits. The following documents must be presented by veterans enrolling under the Veterans Educational program for the first time.

1. Chapter 30 and 32. Verification of service on VA form 22-1990V, or copy \#4 or certified true copy of DD-214 (Report of Separation).
2. Chapter 31. Approved VA Form 22-1905 from DVA Vocational Rehabilitation counselor.
3. Chapter 35. Disabled veteran's claim number.
4. Chapter 1606. Approved DD Form 2384, Notice of Basic Eligibility (NOBE) from reserve unit. And, if eligible, a copy of the kicker contract.
E. All campuses' certifications for veterans benefits will be processed through the Veterans Services Office on the Metro Campus. Students taking courses at locations other than the four principal campuses must contact the Metro Campus Veterans Services Office for information and certification.
F. Veterans pursuing concurrent enrollment at more than one college or university may do so, but must coordinate with Veterans Services Office at both institutions to insure proper certification. All courses taught by TCC, regardless of campus, are approved by the same college and are not concurrent enrollments.

## ACADEMIC POLICIES AND PROCEDURES

## Grade and Record Policies

I. Final grades for each term are recorded and preserved.
II. Grade points are earned and recorded as follows:

| Grades | Definition | Grade points |
| :--- | :--- | :--- |
| A | Excellent | 4 |
| B | Good | 3 |
| C | Average | 2 |
| D | Below Average | 1 |
| F | Failure | 0 |
| I | Incomplete Grade | GPA Neutral |
| AU | Audit Status | GPA Neutral |
| W | Withdrawal | GPA Neutral |
| AW | Administrative Withdrawal | GPA Neutral |
| *S-U | Satisfactory-Unsatisfactory | GPA Neutral |
| N | Semester grade not reported | GPA Neutral |

*Courses must be specifically approved in order to use this definition
NOTE: Zero-level courses are not included in any GPA calculation
III. "I" grades may be assigned provided the student is passing the course and has completed a substantial portion of the coursework for the semester. The instructor and student complete and sign an "I Grade Completion Form" and agree on the work to be performed and a deadline for completion. The " $I$ " is changed by the instructor through the grade change procedure. An"I" grade not changed by the end of the next long (fall or spring - 16 week) semester will remain a permanent "I" and will become grade point neutral.
IV. "W" - A grade of "W" is assigned when a student completes the withdrawal process by the published withdrawal deadline. The deadline to withdraw shall not exceed three-fourths of the duration of any semester/term. See catalog calendar or contact any Admission/Enrollment Services Office.
V. An "AW" is assigned when a student is administratively withdrawn from a course. The reason for such a withdrawal could be financial, disciplinary, non-attendence/non-participation, inadequate attendance/inadequate participation, or extenuating circumstances (see Class Attendance/Participation on page 40). During the last quarter of the regular semester, the assignment of the AW is the responsibility of the instructor of the class; however, in emergency situations, the AW may be assigned by the appropriate Associate Dean.

The time during which a student may be administratively withdrawn extends from the end of the schedule adjustment period through the last day of classes. This policy will be adjusted proportionately to fit any other semester or term.
VI. AU - Audit status is used for students not seeking to obtain course credit. Students must meet curricular and proficiency requirements and must obtain the instructor's approval by completing the Audit Form and submitting it to the Admissions/Enrollment Services Office. The time in which a student may change from credit to audit is the same as the student withdrawal period. A student may change from audit to credit only during the schedule adjustment period. A student may change from audit to credit only during the schedule adjustment period for the semester or eight-week term. This option is not available to Financial Aid students.

## See Audit of a Course on page 24.

VII. Academic Forgiveness: Students may be granted academic forgiveness in three circumstances: (1) For pedagogical reasons, a student will be allowed to repeat a course and, (2) When a student has performed poorly in an entire enrollment due to extraordinary circumstances, all courses and grades will be reflected on a student's transcript with the cumulative GPA, but those courses that are forgiven will not be used in calculating the student's retention and graduation GPAs. (3) A student may be returning to college after an extended absence and/or under circumstances that warrant a fresh academic start.
A. Repeated Courses: Students can retake courses and have only the second grade earned count in the retention/ graduation GPA calculation up to a maximum of four (4) courses, not to exceed 18 hours, in courses in which the original grade earned was a "D" or "F." Forgiveness applies to the first four courses repeated.
B. Academic Reprieve: A student may request an academic reprieve of up to two consecutive semesters if he/she can demonstrate to the appropriate institutional officials extraordinary circumstances which contributed to or caused the student to do poorly. Guidelines for reprieves include but are not limited to (1) at least 3 years must elapse between the time grades were earned and the reprieve request; (2) prior to requesting the reprieve, the student must have earned a GPA of 2.00 or higher with no grade lower than a "C" in all regularly graded course work (minimum of 12 hours) excluding activity or performance courses; (3) a student must petition for a reprieve according to institution policy; and (4) a student cannot receive more than one reprieve in his/her academic career.
C. Academic Renewal: The student may request to be considered for academic renewal (1) if at least five years has elapsed between the last semester being renewed and the renewal request; (2) the student must have earned a GPA of 2.00 or higher with no grade lower than a "C" in all regularly graded course work (minimum of 12 hours) excluding activity or performance courses; (3) it will include all of the courses completed before the date specified in the request for renewal; (4) the student must petition for academic renewal according to institutional policy; (5) neither the content nor credit hours of forgiven renewal coursework may be used to fulfill any degree or graduation requirements.

All courses remain on the student's transcript, but are not calculated in the student's retention and graduation GPA. All forgiven courses will still be calculated in the student's cumulative GPA and will appear on the student's transcript. Academic reprieve and renewal once granted may or may not be recognized by other colleges and universities.

For further details or to petition to be considered for forgiveness contact any Admissions/Enrollment Services Office.

## Policy for Continued Enrollment

## I. Retention GPA Requirements for Continued Enrollment

A student will be placed on academic notice or probation if he/she fails to meet the following requirements:

| Credit Hours | Retention GPA Requirement |
| :--- | :---: |
| 0 through 30 semester credit hours | 1.7 |
| Greater than 30 semester credit hours | 2.0 |

Freshman students, 30 or fewer credit hours, with a GPA of 1.7 to less than 2.0 will be placed on academic notice.
All courses in which a student has a recorded grade will be counted in the calculation of the grade point average for retention purposes excluding any courses repeated or reprieved, any zero-level course and any physical education activity and performance course as detailed in the State Regents' Grading Policy. Any student not maintaining the required progress as indicated in the chart will be placed on probation for one semester. At the end of that semester, he/she must have a semester GPA of 2.0 in regularly graded course work, not to include activity or performance courses, or meet the minimum retention GPA standard required to continue as a student. Students not meeting either of these criteria will be suspended and may not be reinstated until one regular semester (fall or spring) has elapsed.

## II. Re-admission of Suspended Students

A. Students who are academically suspended by an institution will not be allowed to reenter the suspending institution for at least one regular semester (fall or spring). Suspended students may be admitted only one time Students re-admitted on probationary status must maintain a 2.0 grade point average each semester attempted while on probation, not to include activity or performance courses, or raise their retention GPA to the designated level. Should a reinstated student be suspended a second time, he/she cannot return to the suspending school until such time as he/she has demonstrated, by attending another institution, the ability to succeed academically by raising his/her retention GPA to a 2.0 or higher.
B. Students suspended from other institutions may transfer without the lapse of one semester. Such admissions would be at the discretion of the receiving institution and such admission would be probationary.

## Academic Notice, Probation and Suspension Definitions

A. Academic Notice: Freshman students, 30 or fewer credit hours, with a cumulative GPA of 1.7 to less than 2.0 will be placed on academic notice.
B. Academic Probation: Any student whose retention GPA falls below those designated in the chart on page 39 at the end of a given semester is on academic probation.
C. Academic Suspension: Any student who was on academic probation and fails to raise his/her GPA to the required retention level or to achieve a 2.0 in regularly graded course work, not to include activity or performance courses, in any semester following academic probation, will be suspended from the institution.
D. Good Standing: Eligible for re-enrollment.

## Recommended Academic Load

Students who are in academic good standing may enroll in up to eighteen (18) semester hours in a regular sixteen (16) week semester. In an eight (8) week or shorter term of enrollment, the maximum number of hours of enrollment is proportionate to the sixteen (16) week term. Students may enroll in up to nine (9) semester hours in a regular eightweek summer term. Exceptions to course credit hour limits per term may be considered and granted by permission of an authorized counselor.
Students who are employed while being enrolled are encouraged to use the following guide to course load during any academic semester or term:Work 40 hours per week, carry 3 to 6 semester hours; work 30 hours per week, carry 6 to 9 semester hours; work 20 hours per week, carry 9 to 12 semester hours; work 15 hours per week, carry 12 to 15 semester hours.

## Class Attendance/Participation

Students are expected to regularly attend and participate in all classes in which they are enrolled. Class attendance/ participation is the responsibility of the student. It is also the responsibility of the student to consult with the Instructor when an absence must be excused. Instructors have the responsibility of determining whether an absence is excused or unexcused and may initiate an administrative withdrawal (AW) for non-attendance/non-participation. Students receiving benefits from government agencies must adhere to attendance policies stipulated by the specific agency.

## Student Grades and Transcripts

- Grades are available to each student once grades are posted by the instructor via the TCC website at www.tulsacc.edu (click on Student Web) or via the Student Touch Tone system 918-595-7373 (listen for the grade option). Current semester grades will not appear on an official TCC Transcript until the end of the semester.
- The Registrar's office will send an official TCC transcript upon the student's signed request to any college or agency named.
- Transcripts will be withheld if the student has not paid financial obligations to the College.


## Grade Changes

Questions regarding the student's grades assigned must be directed to the student's instructor. This procedure must be initiated by the end of the fourth week of the semester/term immediately following the semester/term in which the grade was assigned. Students must follow the grade appeal process outlined in the Student Handbook and Code of Conduct. The appropriate Associate Dean, or designate, must approve any change to this record. Once the grade change has been processed, students may request an official transcript reflecting the change.

## Student Grades and Transcripts from Tulsa Community College

The Admissions/Enrollment Services Office will send an official transcript upon the student's signed request to any college or agency named. Grades are available to each student at the end of each semester via the TCC website at www.tulsacc.edu (click on Student Web) or via the Student Touch-tone system 918-595-7373 (listen for the grade option). Transcripts will be withheld if the student has not paid financial obligations to the College.


## Access to Student Records

Student records at Tulsa Community College are maintained in compliance with the Family Educational Rights and Privacy Act of 1974 as Amended in 1995. The Act affords students certain rights with respect to their educational records. These rights include the right of students to request access to their personal records and also the right to request the amendment of the student's education records that the student believes are inaccurate. The student must submit in writing a request precisely noting the record for review. Additionally, students have the right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. Upon request, the College discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

The Act affords students the right to file a compliant with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA. The name and address of the Office that administers FERPA:

## Family Policy Compliance Office, U. S. Department of Education 400 Maryland Avenue, SW Washington, DC 20202-4605

## Directory Information

The Family Educational Rights and Privacy Act (FERPA) further provides that certain portions of a student record may be deemed directory information and be released to a third party without the written consent of the student. TCC designates student name, degrees or certificates earned, major, last semester of attendance, and honor awards as directory information. The College does not release a student's directory information without the written release of the student unless allowed by FERPA. The College is authorized to obtain or provide educational records as allowed by law. A directory is printed each semester listing student name, city, and state, to comply with the Oklahoma Records Act. A student may request the College not to release directory information. The request must be in writing, signed by the student, and submitted to the Admissions/Enrollment Services Office prior to the end of the fourth week of a semester or the end of the second week of a summer term. Students registering after this deadline may sign an information withholding request at the time

## Annual Notification of Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act

Tulsa Community College, through the Department of Public Safety/Campus Police complies with the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act by publishing an annual campus security report in the Student Handbook. The report is a compilation of crime statistics, as well as procedures and programs for preventing and dealing with incidents of sexual assault, sexual harassment, and substance abuse. The report also contains security policy statements regarding timely notification of criminal activity, including sexual assault policies which assure basic victim's rights, details about the law enforcement authority of campus security officers and where students should go to report crimes. Paper copies are made available through the Campus Police office, Admissions/Enrollment Services Office, and the Office of Student Activities on each campus.
This report is available on the Web at http://www.tulsacc.edu/campuspolice.

## Right to Know Graduation/Completion Rates

Graduation/completion rates are available in any TCC Admissions/Enrollment Services Office.This information is available to be in compliance with the Student Right-To-Know Act of 1990. (Public Law 101-542)

## High Scholastic Achievement

Tulsa Community College has numerous ways of recognizing superior scholastic achievement. They include the President's Honor Roll, the Dean's Honor Roll, the Honors Scholar program, and Phi Theta Kappa, the international honor society for two-year colleges.

## A. Honor Roll

1. The President's Honor Roll includes the names of students who have the semester grade point average of 4.0.
2. The Dean's Honor Roll includes the names of students who have a semester grade point average of 3.0 to 3.99 .
B. Graduation

The College recognizes scholastic achievement at the annual commencement for students achieving a cumulative grade point average of 3.5 or higher at the end of their last completed semester.

1. "Honors" - Graduating with a 3.5-3.99 cumulative grade point average.
2. "Highest Honors" - Graduating with a 4.0 cumulative grade point average.

Recognition for"Honors" or"Highest Honors" does not appear on the official transcript or diploma.
Students who successfully complete the Honors Scholar program receive the designation "Honors Scholar" on their official transcripts and wear pewter medallions at commencement.

## GRADUATION AND DEGREES

## GRADUATION

Tulsa Community College recognizes the successful completion of program requirements by awarding an associate degree or a certificate of achievement. The associate degree is granted in programs requiring at least 60 academic credit hours and the certificate of achievement is granted in programs requiring less than 60 academic credit hours.

## General Policies

- Specific course requirements in a degree or certificate program must be completed.
- To meet residency requirements, one-fourth of the total credit hour requirements must be earned at Tulsa Community College. Advanced standing, zero-level courses, correspondence, and/or extension may not be used toward the TCC resident credit-hour requirements.
- A 2.0 grade point average on all credits is required to meet graduation requirements (see specific degree requirements for AA/AS degree and AAS degree). Effective January 1992, zero-level courses are not included in any GPA calculation.
- Physical education "activity" and any reprieved or repeated courses may not be utilized for credit toward the credit hour requirement of any program. Physical education lecture or theory courses may be used in completing the degree requirements for the PE majors.
- An associate degree for a different major may be granted by accumulating an additional 15 credit hours earned in residence at Tulsa Community College.
- An additional option to an associate degree may be granted by completing the required courses in the option in residence at Tulsa Community College.
Reprieved or repeated courses are defined in the Academic Policies and Procedures section (Grade and Record Policies) elsewhere in this catalog.


## Program Plan Procedures

Degree-seeking students should follow the major curriculum plan listed in the catalog in effect at the time of entry or re-entry. The program requirements remain in effect as long as uninterrupted enrollment is maintained with the exception of summer terms. A re-entering student should file a program plan specified by the current academic year catalog. A final graduation checklist must be filed in the Advisement Center prior to declaring candidacy for graduation.

Students should request assistance from the Advisement Center in planning their programs of study, particularly if planning to transfer to a four-year college or university. Close, early coordination between TCC academic advisors and advisors from selected four-year institutions can streamline the transfer process.
The Advisement Center should be notified if a change of major is made. After meeting with an advisor, the student should follow the curriculum plan for the new major as listed in the catalog in effect at the time of the change of major.

Any substitution of course requirements listed for the associate degree should be requested through the Advisement Center.

## Graduation Candidacy Procedure

Students seeking a certificate or a degree should prepare for graduation as follows:

- Final official transcripts from all schools attended must be on file at TCC before an official program plan can be prepared.
- Students are expected to have an official program plan filed in the Advisement Center prior to declaring for graduation.
- A final graduation check should be made in the Advisement Center at the time of enrollment for the last semester of attendance.
- Students admitted to the Honors Scholar program should also complete a graduation check in the Honors Office at the beginning of their final Fall or Spring semester.
-The Advisement Center will advise and refer the student to declare for graduation in the Admissions/Enrollment Services Office.
- All declared candidates will be contacted by the Admission/Enrollment Services Office and the College graduation marshal with information about the graduation.
- Once grades are recorded for final semester of enrollment, a final review will take place and students contacted as to their status.
- Degree notes are recorded on the graduate's TCC transcript, and diplomas and certificates of completion are issued by the Admissions/Enrollment Services Office.

Formal graduation will be scheduled at the end of the second semester of each academic year. Students meeting requirements at the end of any semester in that academic year should arrange to participate in the graduation ceremonies unless a written request for graduation in absentia is received and approved by the Dean of Student Services of his/her resident campus.

## DEGREES

Degrees awarded to students planning to continue to a bachelor's degree program are the Associate in Arts or the Associate in Science. The degree awarded to a student completing a workforce development program is the Associate in Applied Science.

The degrees awarded to students with specific major fields are listed with each program description in this catalog.

## I. Associate in Arts/Science

A. Students recommended for the Associate in Arts or Associate in Science degrees must achieve a grade point average of 2.0 as a minimum on all course work attempted (a minimum of 60 hours) excluding any courses repeated or reprieved as detailed in the State Regents' Grading Policy and excluding physical education activity courses.
B. General Education Core Courses

1. English Composition: A minimum of six credit hours that must include ENG 1113 and ENG 1213.
2. U.S. History and U.S. Government: A minimum of six credit hours that must include HIS 1483 or 1493 and POS 1113.
3. Science: A minimum of six credit hours. At least one course must be a laboratory science.
4. Humanities: A minimum of six credit hours chosen from non-performance courses defined as humanities.
5. Mathematics: A minimum of three credit hours.

Courses used to fulfill general education requirements at TCC are listed in the Catalog section titled GENERAL EDUCATION REQUIREMENTS. A code letter preceding a course title designates the general education category for which the course may be used, as follows:

## - A: Analytical and Quantitative Thought

- L: Scientific Investigation (Lab)


## - H: Humanities

## - S: Social and Behavioral Sciences

## - I: International or Non-Western Dimension

## - D: Diversity component of domestic, not international scope

C. Required Electives: One three-hour course from one of the following disciplines: psychology, social sciences, foreign language, fine arts (music, art, theatre).
D. Additional liberal arts and science courses needed to meet the minimum total of 37 credits. See section titled, "Associate Arts/Science Degree General Education Requirements" in this catalog.
E. As required by State Regents policy, to receive an A.A. or A.S. degree from TCC, students must demonstrate computer proficiency, including a basic knowledge of operating systems, word processing, and the ethical use of Internet research capabilities. Please see page 29 for complete requirements.
F. The remaining minimum of 23 semester credit hours of academic work shall be applicable to the student's major objective, including any prerequisite courses necessary for his/her anticipated upper-division program. A majority of such student credit hours should be taken in courses classified as liberal arts and sciences. Requirements are listed in specific degree patterns.
G. Curriculum patterns for these majors are designed to meet the above requirements and are provided for each student in the catalog. Students and advisors should consult the designated bachelor's degree institutions to make the specific course selections to meet the aforementioned requirements and transfer requirements.

## II. Associate in Applied Science

A minimum of 60 credit hours and completion of all specific courses listed in the curriculum pattern for the major and a minimum 2.0 ("C") grade point average on all work submitted for a degree (excludes PE activity courses).

## III. Certificate of Achievement

Completion of the required courses in a specified area and a 2.0 (" C ") grade point average on all work submitted.


## STUDENT SERVICES

## Academic Advisement

Advisement services on each campus are integral parts of the Counseling and Testing Offices. These services are designed to help students determine their educational objectives. Academic Advisors are available for the purpose of guiding students in their college careers and in the enrollment process each semester. For specific information about advisement/enrollment programs and procedures, contact the Counseling and Testing Center on any campus. Upon request, advisors will formulate a degree plan for a student. This is helpful to students transferring credits into TCC, to anyone changing majors, and to those students wanting to take the minimum number of courses necessary to complete their degree or certificate program.
For graduating students, a final graduation checklist must be completed through the Counseling and Testing Offices during the semester they intend to graduate. Transfer guides, degree requirements, and catalogs from institutions of higher education throughout Oklahoma are available in the Counseling Offices on each campus. Those available include publications from Langston University, Northeastern State University, Oklahoma State University, The University of Oklahoma, The University of Tulsa and Oral Roberts University. TCC catalogs are also available in the Centers. The Counseling and Testing Centers coordinate university visits. University representatives from major universities meet with TCC students oncampus to assist them in planning for transfer while completing requirements for a degree at TCC.

## New Student Advisement

The Counseling staff are available to provide one-to-one personal assistance to first-time enrolling TCC students. This session begins an individualized orientation to TCC admissions and enrollment procedures, academic programs, and student services. New student advisement is designed to help ease the transition into college and is provided in the Counseling Offices on each campus.

## Assessment Services

The Counseling staff administers and interprets a wide variety of tests which can help students in numerous ways. A student can be tested for achievement, aptitude, or interest. Some of the testing programs available through the Counseling Offices include:

## ACT Assessment

ACT Assessment results may be used by TCC Academic Advisors to place students in courses appropriate to their skill level. Also, certain programs at TCC require the ACT as part of their application process. The National ACT Assessment is administered on specific dates, open to anyone, and the scores can be reported to other colleges other than Tulsa Community College. The Residual ACT Test is administered on-campus for enrolled and admitted TCC students who were unable to test on a national test date. Results are reported only to TCC. Information about the ACT and a testing schedule is available from the Northeast Campus, Testing Center, by telephone at (918) 595-7534 or online at www.tulsacc.edu/ Testing.

## Advanced Standing Credit by Exam

Students who believe they are qualified to earn college credit as a result of previous training or experience may do so by taking either the College-Level Examination Program (CLEP) subject exams or TCC departmental exams. CLEP may not be used for foreign language except Spanish. Additional information is stated in this catalog under the heading of Credit by Advanced Standing.

## Accuplacer Computerized Placement Tests (CPT) or COMPASS Placement Tests

Selected exams are administered through the Assessment Centers for admission purposes and/or to determine the appropriate courses for student enrollment. Those exams are normally administered throughout each semester.

## ESL Placement Examination

Students for whom English is a second language and who do not meet the required TOEFL scores, may study English as a Second Language after taking the TCC ESL Placement test. To schedule a free testing appointment, please call (918) 595-8411,Multi-Cultural Language Center, Northeast Campus, www.tulsacc.edu/esl.

## General Educational Development Test (GED)

The GED is administered at the Northeast Campus to provide Certificates of High School Equivalency.

## Test of English as a Foreign Language (TOEFL)

The TOEFL is administered at the Testing Center on the Northeast Campus at the beginning of each semester to meet state guidelines for the admission of students for whom English is a second language. Information about the TOEFL and a testing schedule is available from the Testing Center, located on the Northeast Campus, by telephone at (918) 595-7534 or online at www.tulsacc.edu/Testing.

## Campus Store

Each of the four Tulsa Community College campuses has its own Campus Store. Students may purchase their coursebooks for classes in which they are enrolled as well as supplies and materials such as notebooks, pens and pencils. Available also in the Campus Stores is a variety of merchandise which includes computer software, greeting cards, snacks, backpacks, and an assortment of gift items. Various clothing items bearing the TCC monogram are available for student selection as well.The Campus Store distributes caps and gowns for commencement and coordinates orders for graduation announcements, rings, and class pins.


## Campus Information

There are many ways in which the student can keep abreast of the various programs and activities on campus. They include announcements made by faculty members in class, information on bulletin boards scattered throughout each of the campuses, and the TCC Connection newspaper. In addition, the Student Handbook and Activities Calendar are posted on the TCC web site (www.tulsacc.edu). Monthly activities calendars are available in the Student Activities Office on each campus.

## Career Services

Whether you are choosing a major, exploring occupations, or needing help with the job search process, Career Services can help! We have a wide variety of resources available free of charge to current TCC students or graduates. The Career Exploration Program is a popular career planning tool to assist you in making a better informed career decision. You will have the opportunity to explore your interests, abilities, and work-related values in addition to gathering information on hundreds of different occupations. If you need assistance with any part of the job search process, including resumes, interviewing skills, cover letters, etc., our staff is here to help. Career Services, located on each campus, include a variety of resources and opportunities for assistance in obtaining career and employment information. Information about Career Services is available online at www.tulsacc.edu/careerservices.

## Career Exploration

The Career Exploration program is an opportunity for self-discovery, whether choosing a career, changing majors, or setting goals. This service is free to all currently enrolled TCC students or as a one-credit-hour course. Career Exploration is customized to meet individual needs, and appointments are made at the convenience of the participant.

## Student Email Account (mytcc.tulsa.edu)

This email address and account must be used for all college academic and business written correspondence, including applications, enrollment, financial aid, etc. All correspondence with students about TCC and classroom assignments will be via your MyTCC account.

## Education Outreach Center

TCC has opened the Education Outreach Center at 21st and Garnett to serve as a convenient, neighborhood bridge to college for anyone wishing to pursue higher education. At the center, students can apply at TCC, complete college placement testing, enroll in TCC classes and learn about financial aid.

## Student Employment

The Student Employment program is a free service designed to assist students, TCC graduates, and employers with their employment needs. Student Employment services are located on each campus. More information is available online at www.tulsacc.edu/careerservices.

## New Student Orientation

Various programs have been designed to orient new students to TCC. Emphasis is placed on familiarizing students with College facilities and services, academic information, and other general information which will help students feel comfortable in a new environment.

Any student new to TCC is encouraged to attend the orientation program. Contact the Counseling Office or Student Activities Office for more information about orientation programs on each campus.

## Tutorial Assistance

Any student needing academic assistance outside the classroom may inquire in the Counseling and Testing Center or instructional labs on each campus.

## Workshops and Seminars

Special workshops and interest sessions are periodically offered throughout the semester.These activities are coordinated through the various Student Services offices. They include such topics as "Study Skills,""Test-Taking Techniques,""Stress Management," and other areas of student interests.

## Department of Public Safety/Campus Police

The Department of Public Safety/Campus Police functions primarily to protect life and property of TCC students and staff and provides numerous services to students as a routine part of the College operation. Included in these services are personal escorts to the student's vehicle. The Campus "Lost and Found" is located in the Department of Public Safety/ Campus Police Office. Campus Police makes its annual Campus Security Report available in the Student Code of Conduct and Policy Handbook. This report is a compilation of crime statistics, as well as procedures and programs for preventing and dealing with incidents of sexual harassment, assault, and substance abuse. The codebook and aforementioned procedures and programs are provided annually to all current students and staff via the Dean of Student Services Office or computer network in compliance with the Higher Education Amendments of 1998 and the Jeanne Clery Disclosures of Campus Security Policy and Crime Statistics Act (20USC1092f). To receive your own copy of the report, stop by any TCC Campus Police Office or view the posting electronically on the web at www.tulsacc.edu/campuspolice.

## Services for Students with Disabilities

Tulsa Community College provides accommodations for qualifying students in compliance with the Americans with Disabilities Act. For more information students should contact the disABLED Student Resources Center 918-595-7115 or the Resource Center for the Deaf and Hard of Hearing 918-595-7428V, 918-595-7434TTY.

## disABLED Student Resource Center (dSRC)

The disABLED Student Resource Center (dSRC) is located at the Metro Campus. The purpose of the Center is to extend, reinforce, and supplement the learning experience of the student with documented disabilities in classes and college-related activities. The Center serves all campuses of the College. Each campus has a dSRC liaison for students to coordinate services where they are attending class(es). The Center's staff works with other areas of the College to provide an opportunity for students to attempt to meet the challenges of a college career. The student registration process is initiated in the dSRC and serves as an aid in providing accurate academic support services. Specialized equipment including computer-assisted instruction, videotapes, tape recorders, a variety of specially modified computers and other assisting technology is available for use by students in the Center and the classroom. Students may register with the dSRC on their own, or be referred by their parents, TCC administrators, counselors, instructors, nurses, and community agencies. Students may utilize this Center for studying, tutoring, and for additional academic support services.

## The Resource Center for the Deaf and Hard of Hearing

The Resource Center is located on the Northeast Campus. The purpose of the Resource Center is to extend, reinforce, and supplement the learning experiences of the deaf or hard of hearing student for classes and college-related activities on all four campuses. The Center's staff works with instructors and students to facilitate classroom accommodations such as notetakers, listening devices, captionists and interpreters. Students may be referred by instructors or counselors, or they may refer themselves. The Center is open for studying, tutoring and/or social interaction with other deaf or hard of hearing students. Courses are offered to assist students in achieving the skills necessary to proceed through the Developmental Studies Program and/or through a planned college program. Students should contact the Resource Center for the Deaf and Hard of Hearing to apply for accommodations provided under the Americans With Disabilities Act.

## Fitness Centers

The Fitness Centers at Tulsa Community College, located inside the Student Unions at Metro, Northeast, Southeast, and West campuses, are available to all TCC students, full-time faculty, and staff. Currently enrolled credit students on all campuses may participate at any site at no charge.
Fitness Centers are open Monday through Saturday, early morning to evening (although they will be closed when the College is closed). These centers feature basketball/volleyball courts, an indoor track, an aerobics room, a free weight room, as well as cardio and strength exercise areas. Operating hours are reduced between semesters.
Professional staff members are dedicated to assisting users as they work toward personal fitness goals. A wide variety of course offerings and activities through credit enrollment, continuing education, student activities, and fitness center staff will be available to all users. For additional information, contact the Metro Fitness Center at 595-7FIT (595-7348), Northeast Campus Fitness Center at 595-8GYM (595-8496), Southeast Campus Fitness Center at 595-8640 and West Campus Fitness Center 595-8225.


## Food Services

Tulsa Community College offers a variety of food services for the convenience of TCC students and employees. Food and drink vending machines are also available in various locations on each campus.

## Housing

Tulsa Community College does not operate residence halls or maintain listings of available housing for students. Students who do not reside in the area must make their own arrangements for housing.

## International Student Services

International Student Services, located on Northeast Campus, provides information, programs and services that help to make the international student's U.S. experience productive and positive. Services provided include admission processing, academic advising, immigration assistance, and cultural activities. The staff helps in creating an international educational environment at Tulsa Community College for all students, faculty, and staff. Contact International Student Services at (918) 595-7478 or www.tulsacc.edu/iss.

## Parking

Tulsa Community College attempts to provide adequate parking facilities for all of its students and staff. Parking is provided on each campus and is generally accessible during normal operating hours of the College. Parking is available for currently enrolled students for a nominal parking fee which is assessed on the basis of the number of credit hours in which a student is enrolled during a given semester. Parking on any TCC lot is available on a first-come, first-served basis and is intended for use by the student or staff member only while he/she is attending class or conducting college-related business on campus. Students are required to display a valid parking decal. Information about parking services and regulations is available in the Department of Public Safety/Campus Police Office located on each campus. Public transportation is also available for student use in most cases.

## Student Activities

The Student Activities program is designed to provide each student the opportunity to participate in significant activities planned to complement educational pursuits. Opportunities are available for students to develop leadership, responsibility, and social skills through participation in numerous activities at the College. The students, faculty, and staff are kept aware of these activities through student activities calendars and notices on bulletin boards. Information concerning student activities is available in the Student Activities Office on each campus.

## Educational and Entertaining Activities

A variety of activities such as films, music presentations, various entertainers, lectures, exhibits, trips, contests, discussions, workshops, and family-oriented programs are presented throughout the year by the Student Activities Office. They are scheduled with input from both students and faculty members. Anyone wishing to suggest programs should contact the Student Activities Office on any campus.

## Recreational Activities

The recreational program is designed to meet the needs of TCC students regardless of age, skill or ability. It offers students the opportunity to participate in team and individual sports and enjoy the benefits of physical activity, group cooperation, and spirit. Intramural sports offered during the year include basketball, flag football, soccer, softball, volleyball, tennis, pool, table tennis, and others, as interest dictates. Both intramural leagues and tournaments are planned in these various sports. Dates, times, locations, and entry requirement information is available in any Student Activities Office. Questions concerning the recreational program should be referred to the Student Activities Office at the Metro, Northeast, Southeast, or West Campus.

## Discounts and Services

A variety of discounts and services is available in the Student Activities Office on each campus. Although not all items are available on all campuses, items offered include discount tickets for area movie theatres, athletic event tickets, MTTA bus passes, area theme park tickets, and memberships to the Philbrook Museum of Art.

## Sponsored Programs

## Educational Opportunity Center

The Tulsa Community College Educational Opportunity Center is funded through the United States Department of Education and is a sponsored program also identified as a TRIO program. The EOC was first funded at Tulsa Community College in September 2002. The purpose of the program is to promote postsecondary education by providing information and assistance on educational and career opportunities and available financial aid options to eligible adults in a three-county area.
The EOC staff works out of a central campus-based office and satellite offices in the surrounding counties. The staff helps adults, who wish to continue their education, select and apply to schools suited to their abilities and career interests. They also provide assistance with identifying grants and loans to help pay for educational expenses, and help with the completion of admissions and financial aid applications. Additional information may be obtained from the program director or by visiting the program website: www.tulsacc.edu/eoc.

## RISE Student Support Service Program

RISE is a Student Support Service program committed to the academic success of students that are first generation (neither parent has earned a four year baccalaureate degree), economically disadvantaged (as determined by federal guidelines) or have a documented disability and attend TCC. The acronym RISE stands for Reflective, Integrated, Scholarly, Excellent.
Students interested in the RISE program can pick up an application in the Metro Campus Career and Assessment Center, First Stop Enrollment Center, disABLED Student Resource Center, or you can stop by the RISE Program office, Metro Campus, Room 1003.
Students must complete the RISE application and submit a copy of last year's tax return (1040, 1040A) for income documentation purposes. They will then have an opportunity to meet with one of the professional staff persons in the

RISE office to review their eligibility requirements and get a more in-depth look at the services that are available through the program.
Some of the support services that will be offered to program participants are:

- Detailed orientation
- Frequent academic advising
- Financial aid application assistance
- Provision of supplemental PELL grant aid to reduce loan burden
- Cultural Activities
- Workshops on study skills
- Career exploration
- Supplemental instruction that provides additional
"class" time with professional tutors
- Tutoring and mentoring


## Student Government Association

Each student who enrolls at TCC, full time or part time in credit courses, automatically becomes a member of the student body. This entitles a student to vote in student elections and to take part in student activities. The representative governing group of the student body is the Student Government Association (SGA). All students enrolled in at least 6 credit hours who are in good standing with the College are eligible for SGA membership. The SGA represents the students at TCC in matters related to student campus life. The SGA also coordinates various activities for the student body. All students are encouraged to take an active part in the student government and activities program. Questions concerning SGA activities or elections should be referred to the campus Student Activities Office.

## Student Unions

The Student Union on each campus meets a variety of student needs. The Campus Store, dining facility ("Campus Cafe"), and Student Activities Office in each Union are available along with student lounges, game rooms, and meeting areas Students may also call the Student Activities Information line for up-to-the-minute activities updates: Metro Campus, 918-595-7280; Northeast Campus, 918-595-7593; Southeast Campus, 918-595-7793;West Campus, 918-595-8228.

## Student Health Services

Student Health Services offices are available on each campus to provide health care and health education to students and staff. Each is staffed by a registered nurse who will evaluate and treat injuries and advise treatment for illness Students with health concerns are referred to their personal physicians or to agencies in the Tulsa area. Supplemental literature and student health insurance information is available in the pamphlet racks in the hallway adjacent to the Health Center or from the nurse.

Each semester a variety of health related workshops or programs is presented allowing individuals a chance to participate A few topics include:chemical dependency, holiday blues, coping with stress, and physical fitness. Student Health Services also sponsors a Red Cross Blood Drive each semester. Blood pressure, diabetes, hearing, vision, cholesterol, and triglyceride screenings are done periodically or by appointment. Temporary parking permits for temporarily disabled students and staff may be obtained from the Student Health Services office. Information and applications for permanent state handicap parking decals are available.



## Student Organizations

Student organizations provide opportunities for students to broaden their experiences, to develop leadership abilities, to provide a sense of responsibility, and to give service to the College and community. Individuals interested in starting a student organization should contact the Student Activities Office on any campus.

## METRO CAMPUS

African American Student Association • Arabic Language Association • Chinese Language Association • French Language Association • Future Medical Laboratory Technologist's Club • Hispanic Student Association • Japanese Language Association • Journalism \& Mass Communications Student Organization (JMCSO) • Medical Assistant Student Association • New Horizons • Organization for Christian Fellowship • Phi Theta Kappa (Omega Alpha Chapter) • RISE Student Association • Science Club • Student American Dental Hygienist's Association•Student Art Association • Student Association of Respiratory Therapy • Student Association of Legal Assistants • Student Government Association - Student Nurse Association • Student Nurse Christian Fellowship • Students of Occupational Therapy Assistant Club - Students of Physical Therapy Assistant Club • Student Radiologic Technologist Association • TCC Pharmacy Club

## NORTHEAST CAMPUS

Amateur Radio Club • American PublicWorks Association • African American Student Association • Baptist Collegiate Ministry • Behavioral Science Association • Engineering \& Science Association • Fire Protection Association • Horticulture Association • International Association • Italian Association • Modeling \& Design Club • Phi Beta Lambda • PhiTheta Kappa (AlphaZeta Alpha Chapter) • Sign Language Club • SilentFriends Club • Speech/Forensics Club •T.A.C.K.L.E. • Student Government Association

## SOUTHEAST CAMPUS

Adults in Career Transition • African American Student Alliance • Baptist Collegiate Ministry • Chess Club • Club of Medical \& Natural Sciences • Feminist Majority Leadership Alliance • Forensics Club • Future Medical Technologist's Club • German Club - Interior Design Club • International Student Support Club • Muslim Student Association • People to People International - Phi Theta Lambda • Phi Theta Kappa (Alpha Mu lota Chapter) • Rock Climbing Club • Sexuality Alliance for Equality - Spanish Club • Student Firm Association•Student Government Association•Student Music Association•Student Nurse's Association • Student Nurse Christian Fellowship • Student Theatre Association • Weight Lifting Club • Writers'Bloc

## WEST CAMPUS

M.A.D. (Making a Difference) Scientist Club • Native American Student Association • P.A.C.E. (Professional Association of Childhood Educators) • Phi Beta Lambda • Phi Theta Kappa (Beta Theta Epsilon Chapter) - Student Government Association • Students for Christ • Veterinary Technology Student Association

## ACADEMIC SUPPORT SERVICES

## Communications Centers

Students may find immediate help with reading, writing, and study skills by visiting the Communications Centers Individual tutoring and a wide range of materials in a friendly, personalized setting make the Centers a popular place with students. Open both day and evening hours, the Centers assist students with a particular class assignment or with an entire skill development program. Many students also enjoy the Centers' atmosphere for studying between classes.

## Computer Instructional Labs

The Computer Instructional Labs are designed to provide many services to students. These services include microcomputers to support courses where microcomputer technology is used, computer-aided instruction packages to supplement classroom work for certain courses, assistance for students with programming problems, instructional assistance for equipment and software usage and a centralized workspace for students. The labs are staffed with personnel to assist in these areas.

## Computer Lab

Each campus has a variety of computer labs, many of which are open for general use. Staff in the open labs provide free assistance to students in using computers and software.

## Dental Hygiene Clinic

Dental hygiene care is provided by dental hygiene students under the supervision of licensed faculty. This service consists of cleaning, fluoride treatment, oral health education, $x$-rays and sealants. Fillings, extractions and prosthetic appliances are not available through the Clinic. Appointments can be made by calling (918) 595-7022. The Dental Hygiene Clinic is located in the Metro Philips Building, Room MP300.

## Developmental Programs for the Deaf and Hard of Hearing

The Resource Center for the Deaf and Hard of Hearing's developmental courses are designed to assist students with a hearing loss to improve basic English, reading, math, study, sign language, computer science and personal development skills. The courses enable students with a hearing loss to achieve the skills necessary to proceed through the Developmental Studies Program and on through a planned college program. The specific courses offered through the Resource Center for the Deaf and Hard of Hearing are:

| CAR | 0811 | Orientation to College for the Deaf and Hard of Hearing |
| :--- | :--- | :--- | :--- |
| CSC | 0802 | Computer Concepts for the Deaf and Hard of Hearing |
| CSC | 0811 | Computer Exploration for the Deaf and Hard of Hearing |
| ENG | 0801 | Study Skills for the Deaf and Hard of Hearing |
| ENG | 0813 | Reading and Vocabulary Skills for the Deaf and Hard of Hearing |
| ENG | 0823 | Writing Skills for the Deaf and Hard of Hearing |
| INT | 0612 | Conversational Sign Language for the Deaf and Hard of Hearing I |
| INT | 0622 | Conversational Sign Language for the Deaf and Hard of Hearing II |
| INT | 0802 | Sign Language for the Deaf and Hard of Hearing I |
| INT | 0812 | Sign Language for the Deaf and Hard of Hearing II |
| MTH | 0803 | Mathematics Skills for the Deaf and Hard of Hearing |
| MTH | 0822 | Consumer Math for the Deaf and Hard of Hearing |
| SOC | 0613 | Deaf Studies for the Deaf and Hard of Hearing |

For more detailed information on each course, please refer to the course descriptions in the back of this catalog. Each course is listed within its own discipline heading and course prefix number. For more information on the Resource Center for the Deaf and Hard of Hearing, please see the "Services for Students with Disabilities" listing in this catalog.

## Developmental Studies Program

The Tulsa Community College Developmental Studies Program is designed to help students improve in reading, writing, mathematics, and study skills. The courses enable students, especially those who have been out of school for a period of time, to achieve skills necessary to do well in a planned college program. Specific courses in the Developmental Studies Program include:

| Mathematics |  |  |
| :--- | :--- | :--- |
| MTH | 0003 | Basic Mathematics |
| MTH | 0013 | Beginning Algebra |
| MTH | 0055 | Basic Mathematics \& Beginning Algebra |
| MTH | 0123 | Intermediate Algebra |
| MTH | 0105 | Beginning \& Intermediate Algebra |


| Reading |  |  |
| :--- | :--- | :--- |
| ENG | 0903 | Reading 1 |
| ENG | 0913 | Reading 2 |
| ENG | 0753 | Computer-Enhanced Reading |
|  |  |  |


|  | Student Success |  |
| :--- | :--- | :--- |
| ENG | 0963 | College Survival |
| ENG | 1003 | Strategies for Academic Success |
| ENG | 1091 | College Orientation |


| Writing |  |  |
| :--- | :--- | :--- |
| ENG | 0923 | Writing 1 |
| ENG | 0933 | Writing 2 |
| ENG | 0990 | Selected Topics in Developmental English |

Self-Paced Developmental Studies Courses

| ENG | 0601 | Basic Grammar | ENG | 0651 | Study Skills |
| :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 0611 | Sentence Improvement | ENG | 0661 | Writing Skills |
| ENG | 0621 | Punctuation | ENG | 0681 | Reading Comprehension |
| ENG | 0631 | Spelling | ENG | 0711 | Essay Writing |
| ENG | 0641 | Basic Vocabulary | ENG | 0731 | Research Paper |

Additional developmental courses in specific areas are described under English course descriptions.
The reading classes are highly individualized. Primary emphasis is placed on developing interest in reading, improving comprehension of coursebook materials, identifying main ideas, and building vocabulary. Students begin at their own reading levels and move at their own rates of speed.
The writing classes are designed to help students improve skills in sentence, paragraph and essay writing so that they may proceed successfully through a planned college program. Students gain practical skills they can apply in all their academic, business, and personal writing. These courses include individualized practice in sentence structure, punctuation, grammar, spelling, and diction.
The Succeeding in College course is an integral component of the Developmental Studies Program. This course is designed to assist students in successfully completing their college classes. The curriculum emphasizes study skills strategies and familiarizes students with college resource areas such as the Career Center, the Learning Resource Center, and the Reading, Writing, and Mathematics labs. Concurrent enrollment in College Orientation ENG 1091 is required to further ensure the student's success.

The Mathematics courses are designed for students who need further development in basic mathematical skills. The basic course covers the four fundamental operations: addition, subtraction, multiplication, and division of whole numbers, fractions, and decimal fractions. The course also covers percentage, interest, and simple equations. The beginning algebra course provides a basic review of algebra.
Contact the Advisement Centers for additional information concerning the Developmental Studies Program. The Oklahoma State Regents for Higher Education requirements state that credits and grades earned in classes with a course number beginning with " 0 " cannot be used for purposes of admission, retention, or graduation.

## DISTANCE LEARNING

## Internet/Online Courses

Tulsa Community College offers students the flexibility to take classes anytime day or night - 7 days a week through Internet or online courses. Internet courses offered via Distance Learning include a variety of disciplines and may require some on-campus orientations or exams. Other Internet courses are offered totally online ( $100 \%$ ) and have no on-campus requirements.
Online classes are recommended for students who are highly self-motivated and disciplined. The rewards are flexibility of schedule and availability of course materials anywhere at anytime via the Internet. For more information about internet courses and how to enroll, please visit the Tulsa Community College website at: http://tulsacc.edu/dl. Please check the Tulsa Community College website for degrees offered online.

## Interactive TV Courses (ITV)

Tulsa Community College has state of the art Interactive Television classrooms at each campus location which allow for two-way video conferencing to several locations around the world. This highly interactive and visual medium is great for group discussions, presentations and traditional lecture format classes. Many colleges and high schools throughout Oklahoma have ITV classrooms that allow each institution the ability to offer and receive unique classes that may not be available on their campus.

ITV is also a great tool to cut down on travel nationally and internationally. TCC has hosted many conference meetings between local groups and international groups. For more information about scheduling a conference meeting or to discuss hosting or receiving an ITV class, please contact the Office of Distance Learning at 918-595-7143.

## Telecourses

A student can earn college credit through Tulsa Community College telecourses at home via cable television. Telecourses are comparable in content and rigor to on-campus courses. The student should have high self-motivation and discipline to be successful in taking a telecourse.

Telecourses are currently available via Cox Cable channel 21 each semester. Students may also rent the video tapes from RMI for the semester or view the programs online via streaming video (Broadband Internet access recommended).
Programs are also available on the Metro Campus to view or review in room MC523C during the college's regular hours of operation.
For more information and a schedule of airing times, call the Office of Distance Learning at 918-595-7282. You can also view the current telecourse offerings and broadcast schedule online at http://tulsacc.edu/dl.

## English as a Second Language

(See Course Descriptions English as a Second Language, ESL). Please call (918) 595-8411 for more information.


## Fast Track Program

The Fast Track Program provides courses for day and evening students in four-week blocks. The opportunity to begin a class every four weeks allows students flexibility in managing work, home and educational commitments. The four-week format also allows a student to focus on one or two subjects at a time rather than four or five subjects with conflicting deadlines. Credit earned in the Fast Track Program format will apply to any degree plan. Students may enroll in one or two courses per block. Those taking two courses each four-week block will complete an associate degree in liberal arts or business in approximately one year. Students taking one course each block will complete the degree in approximately two academic years. Students can obtain a degree even sooner by supplementing the blocks with other options available (i.e., telecourse, Internet, May Intersession, other short courses, CLEP or Advanced Standing Credit).

The Fast Track program is attractive to goal-oriented day and evening students who wish to earn a degree in a short period of time, whether their goal is job promotion or a four-year degree. Some students may want only a few accelerated courses, but not the liberal arts associate degree. Those students may take Fast Track general education requirements in order to reach their goals more quickly. The Fast Track courses have been designed to transfer to most four-year colleges and universities as well as meet the general education requirements for workforce development degrees. Those students who have already begun their degree programs will find the accelerated pace of the Fast Track classes allows them to finish their degree sooner than through the traditional semester format. Whether students take only Fast Track courses or take Fast Track courses in combination with other classes, they will be able to build a schedule convenient for them.

## Honors Program

The Honors Program at TCC offers academically motivated students an exciting and stimulating option to satisfy their graduation requirements. All interested students, both full-time and part-time, regardless of age or previous educational background, are welcome to take Honors classes. No formal application process is required; however, a 3.0 grade point average is expected.
Participants in Honors courses enjoy lively interaction in small class settings, as each class is limited to 20 enrollments. Faculty are able to take a more creative approach to the design of class curriculum, often including greater depth of investigation into the subject matter, wider breadth of reading, and stronger emphasis upon critical thinking, discussion, and writing. Students may also have opportunities to pursue topics of special interest and work closely with faculty. The purpose of all Honors classes is to allow students to be more active participants in their own learning.
Qualified students may be interested in applying to become TCC Honors Scholars. Applications are available from the Honors coordinator on any TCC campus. Once accepted, the Scholar proceeds through a curriculum of 24 credit hours of Honors classes (or 21 Honors credit hours with an approved, student-proposed project). Successful completion of the program with a grade point average of at least 3.5 leads to the designation of Honors Scholar on the student's TCC transcript. Special scholarship opportunities, such as the TCC Honors Scholar State Regents Tuition Waiver, are among the benefits available to TCC Honors Scholars.
Honors offerings include courses in the sciences, mathematics, liberal arts, and business. Because the Honors schedule changes each semester, students should check for class titles preceded by the letters "HON," for example, HON/COMP I or HON/SPEECH COM. This same designation appears on student transcripts once the class is completed. For more information about specific courses or the Honors Scholar Program, contact the Honors Program at 918-595-7378.

## International Campus

A major component of the International Studies program, the International Campus allows students to earn credit for TCC coursework taught in a foreign country by TCC faculty. It promotes an awareness of global issues, languages, and cultures.

## International Language Center

Presently fourteen languages are available to students: Arabic, Chinese, ESL, French, German, Greek, Italian, Hebrew, Japanese, Latin, Portuguese, Russian, and Spanish, as well as American Sign Language. The associate degree, applied science degree, and certificate programs include languages and cultures. Electronic computerized laboratories are an
important component of the International Language Center on each campus. Available to day and evening students, these labs provide video as well as audio samples to facilitate language learning. The labs are also used for proficiency and placement examinations for persons with previously learned language skills. Special maps, international clocks, foreign periodicals, foreign language videos, and foreign language music are available to students.

## International Studies

The programs (Associate in Applied Science Degree and Certificate of Achievement) in International Language Studies or International Business are designed to prepare future workers for the international marketplace. Also, the Associate in Arts/Science Degrees in Business, Liberal Arts, and Science (International Emphasis) increase awareness of the 21st century's global interdependence. The International Studies Associate in Arts Degree provides concentration in one of five areas: Asia, the Americas, Europe, Africa, or Middle East.

## Internet/Online

See Distance Learning, page 55

## Learning Resources Center

The Learning Resources Centers on each campus serve students in many ways. They house growing book and periodical collections, including supportive materials for course work, and a variety of titles for leisure reading. The Media Department is a vital part of each Learning Resources Center. Software, such as records, colored slides, filmstrips, etc., and the necessary equipment for their utilization are found in these areas. The Learning Resources Centers are equipped with tables, carrels, and chairs for study and leisure reading. A staff of professionals is available to assist students in locating LRC information on each campus.


## Mathematics Laboratories

The campus Mathematics Laboratories offer complete mathematical assistance to any TCC student. The purposes of the labs are 1) to continue the learning process that begins in the classroom by providing individual instruction, computer tutorial software, and videotape tutorials, and 2) to provide a relaxing, friendly, and encouraging atmosphere in which to help students learn and understand mathematics. Additionally, the labs provide informal counseling and advisement on the sequence of mathematical studies. All services are free to TCC students.

## Reading Laboratories

See Communications Centers, page 53

## Telecourses

See Distance Learning, page 55

## Writing Laboratories

See Communications Centers, page 53

## AIR FORCE ROTC at TCC

By agreement with the United States Air Force, eligible full-time students at Tulsa Community College may participate in Air Force ROTC and receive an officer's commission in the Air Force upon completion of a baccalaureate degree. They enroll in the Air Force ROTC program at OSU-Tulsa but they remain students at TCC until ready for upper division classes.

## Eligibility

TCC students in any academic major may participate. A cadet must be a full-time student, a U.S. citizen, less than age 34 in the year of commissioning (some exceptions apply), have a cumulative GPA of at least 2.00, and not be a single parent (some exceptions apply). Other eligibility requirements apply and are subject to change.

## Scholarships

TCC students may be eligible for AFROTC scholarships providing money for tuition and fees, a book allowance and a monthly tax-free allowance. Some scholarships are targeted toward specific majors but others are available to students in any major. Juniors, seniors, and graduate students not on AFROTC scholarship who meet eligibility criteria receive a monthly tax-free allowance.

## Obligation

In most cases, students may take the freshman or sophomore AFROTC courses without obligation. Students who successfully complete the ROTC program become second lieutenants in the U.S. Air Force with a four-year active duty service obligation. Those selected for pilot or navigator training incur a longer commitment.

## The Air Force ROTC Curriculum

Air Force ROTC courses are listed in the OSU catalog as Aerospace Studies (AERO). Freshman and sophomore AFROTC classes are one credit hour. Junior and senior AFROTC classes are three credit hours. All require the cadet to enroll in and attend a weekly Leadership Laboratory.
To learn more call the Air Force ROTC unit toll free at 888-ROTC-OSU, send an e-mail to afrotc@okstate.edu or visit web sites afrotc.okstate.edu or www.afrotc.com for more details.

## TCC DUAL ADMISSION AGREEMENTS

The Dual Admission program will allow students who are fully admissible to Langston University or Oklahoma State University, either as high school seniors or as transfers, to gain admission to Tulsa Community College and either selected institution at the same time. Dually admitted students are able to take full advantage of academic and student development programs and resources at TCC and on all campuses of the selected educational partner. Admission to the dual enrollment program is contingent upon meeting the admission requirements of LU or OSU. Applications are available though the Office of Admissions and Recruitment at LU Langston or Tulsa, Office of Undergraduate Admissions at OSU Stillwater or Tulsa, at the Admissions and Enrolllment Services Office on any Tulsa Community College campus, or via institutional website.

## ARTICULATION AND TRANSFER

A principal function of Tulsa Community College is to provide general education courses, associate degrees for university transfer, and workforce development programs for students who want direct entry into the workforce. TCC has made "articulation agreements" with both public and private, (in-state and out-of-state) institutions to provide many transfer options for TCC students. These agreements include both on-campus and Internet courses and programs. Students are cautioned to work closely with an academic advisor to ensure transferability of their courses, as requirements often differ among four-year institutions.
Some of the institutions with which TCC has developed articulated transfer agreements are: Oklahoma State University, the University of Oklahoma, Langston University, Northeastern State University, Southern Nazarene University, The University of Tulsa, Oral Roberts University, Emporia State University (KS), Northwest Missouri State University, the University of Phoenix, and Oklahoma City University.

## COOPERATIVE ALLIANCE AND PROGRAM AGREEMENTS

Linking career and technology education with higher education in the Tulsa area, Tulsa Community College and Tulsa Technology Center have become members of a Cooperative Alliance that represents a joint vision of a collaborative partnership designed to benefit students and enhance the technical workforce in Northeastern Oklahoma. Through this alliance, TCC works with a number of institutions to develop cooperative academic program agreements that provide special opportunities for students. These agreements address issues such as the transferability of credit and earning a college degree. Approved cooperative program agreements allow students to receive credits toward an associate degree or a certificate awarded by TCC. Eligible co-enrolled high school and adult students in approved Cooperative Alliance programs can have college credit transcribed when it is earned at the technology center.

Tulsa Community College has cooperative program agreements with:Tulsa Technology Center, Central Technology Center, and Tri County Technology Center. Students should contact any TCC Registrar's Office for information on approved programs and eligibility requirements.

## CONTINUING EDUCATION "No grades. Just growth!"

(Non-Credit Classes/Programs)
With interested faculty, small classes, short time commitments, and lots of hands-on experiences, Continuing Education can make your life richer and more meaningful. Three avenues are available for students:

Business and Industry - Open enrollment classes focusing on business skills and contract training.
Youth and Academic Enrichment - Classes to prepare students academically; enrichment classes for youth in grades K-12.
Personal Enrichment - Opportunities to gain knowledge, sample a hobby or develop a skill.
Classes depend on enrollment fees to be self-supporting. Most classes have no enrollment requirements and no grades.
Business \& Industry
918-595-8930

- Business \& Office Skills •Communications •Computer Classes •Contract Training •Customer Focus
- Supervisory \& Management Development •Health, Safety \& Certification • Human Resources Certifications
- Payroll \& Accounting Fundamentals •Personal \& Small Business • Professional Development/Careers


## Personal Enrichment

918-595-7766
-Fine Arts \& Crafts •Flight Classes • Health, Fitness \& Recreation • Home \& Garden •Language \& Travel

- Music, Dance \& Theater •Personal Development/Careers • Personal Financial Management
- Photography


## Youth \& Academic Enrichment

918-595-7566

[^1]For further information, contact a Continuing Education Office or visit www.tulsacc.edu/ce

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rec Tusa Community College
Degree \& Certificate Programs

## GENERAL EDUCATION GOALS FOR ALL DISCIPLINES AND PROGRAMS

General education is at the core of the academic curriculum for all degree-seeking students. The general education goals of the College are met by combining the general education course requirements with the coursework for each major or program as listed in the curriculum patterns found in the College catalog. Together, courses taken for the general education requirements and those taken for specific degrees will ensure that graduates of Tulsa Community College have the skills, knowledge, and attitudes to carry them successfully through their work and their personal lives. Tulsa Community College students will be able to demonstrate:

## Goal \#1: Critical Thinking

Critical thinking is the ability to use reasoning skills or strategies to analyze, evaluate and integrate information.
Students who have developed critical thinking skills will be able to demonstrate at least one of the following:

- comprehend complex ideas, data, and concepts
- make inferences based on careful observation
- make judgments based on specific and appropriate criteria
- solve problems using specific processes and techniques
- recognize relationships among the arts, culture, and society
- develop new ideas by synthesizing related and/or fragmented information
- apply knowledge and understanding to different contexts, situations, and/or specific endeavors
- recognize the need to acquire new information

Goal \#2: Effective Communication
Effective communication is the ability to develop organized, coherent, unified written and oral presentations for various audiences and situations.
Students who have developed effective communication skills will be able to demonstrate at least one of the following:

- organized, coherent and unified written presentations (in the language of your discipline) for various audiences and situations
- organized, coherent and unified oral presentations (in the language of your discipline) for various audiences and situations


## Goal \#3: Engaged Learning

Engaged Learning is meaningful participation in civic, scholarly and cultural activities.
Students who are engaged learners will be able to demonstrate at least one of the following:

- involvement in any collegiate or civic organization or a social action project
- participation in a campus, municipal, state and/or national campaign
- participation in an event or service-learning activity designed to increase awareness of another culture, a current issue, and/or an academic discipline
- an understanding of significant social, political, economic and/or historical concepts related to the United States
- knowledge of the geography, history, culture, values and/or language of another country
- an understanding of the impact of economic, political, and/or technological changes on diverse cultures

Goal \#4 Technological Proficiency
Technological proficiency includes knowledge of productivity and communication application tools, electronic research capability, and discipline-related technologies. Students who have developed technological proficiency will be able to accomplish at least one of the following:

- complete an assignment using an appropriate application software
- use Blackboard for course related assignments and information
- search for and use information electronically
- demonstrate the usage of instrumentation related to a specific discipline


## ARTICULATION \& TRANSFER

A principle function of Tulsa Community College is to provide general education courses, associate degrees for university transfer, and workforce development programs for students who want direct entry into the workforce. TCC has made "articulation agreements" with both public and private, (in-state and out-of-state) institutions to provide many transfer options for TCC students. These agreements include both on-campus and Internet courses and programs. Students are cautioned to work closely with an academic advisor to ensure transferability of their courses, as requirements often differ among four-year institutions in Oklahoma and in other states.
Some institutions with which TCC has developed articulated transfer agreements are: Oklahoma State University, the University of Oklahoma, Langston University, Northeastern State University, Southern Nazarene University, The University of Tulsa, Oral Roberts University, Emporia State University (KS), Northwest Missouri State University, the University of Phoenix, and Oklahoma City University.

## PROGRAMS DESIGNED TO TRANSFER TO SENIOR COLLEGES \& UNIVERSITIES

Students may take freshman and sophomore level courses at Tulsa Community College which lead to a baccalaureate degree or professional degree in practically any field of study. To determine whether all courses in a degree program will transfer for degree credit at the receiving institution, in Oklahoma or another state, work closely with a transfer counselor. Some of these fields of study are:

Accounting
American Studies
Art
Aviation
Biology
Biotechnology
Business Administration
Business Education
Chemistry
Child Development
Communications Disorders
Computer Science
Criminal Justice
Dentistry
Early Childhood Education
Economics
Education
Education (Elementary)
Education (Secondary)
Electronics Engineering Technology
Engineering
English
Environmental Science\&Natural Resources
Fire and Emergency Services

French
Geography
Geology
German
Health and Human Performance
Health Sciences-Pre-Nursing
History
Horticulture
Hospitality and Gaming Operations
Humanities
Human Services
International Business
Interpreter Education
Italian
Japanese
Journalism and Mass Communications
Liberal Arts
Management
Marketing
Mathematics
Medicine
Music
Optometry
Paralegal

Pharmacy
Philosophy
Physical Education
Physics
Political Science
Psychology
Quality Control Technology
Religious Studies
Russian
*Social Work
Sociology
Spanish
Speech
Theatre
**Therapeutic Recreation
Veterinary Medicine

Students may complete many of the freshman and sophomore prerequisite courses at TCC. Since students cannot earn an associate degree in the fields listed below, they should visit with their advisor in a Counseling and Testing Center to determine the appropriate TCC major/degree plan that will transfer to the university of their choice.

Agriculture Science
Architecture
Astronomy
Ecology
Forestry
Health Education

Interior Design
Law
Library Science
Oceanography
Physical Science
Physical Therapy

If you do not find your field of study listed, our Counseling staff will help you match TCC courses to your area of interest.
*Social Work - See Human Services Pre-Social Work in the Community Services section
**Therapeutic Recreation - See Human Services Therapeutic Recreation in the Community Services section
***Pending approval by the Oklahoma State Regents for Higher Education
Courses used to fulfill general education requirements at TCC are listed on page 69. A code letter preceding a course title designates the general education category for which the courses may be used, as follows:

A: Analytical \& Quantitative Thought
H:Humanities
I: International or Non-Western Dimension

## L: Laboratory Science

S: Social \& Behavioral Sciences
D: Diversity component of domestic, not international, scope

## WORKFORCE DEVELOPMENT PROGRAMS by CAMPUS

These degree and certificate programs are designed to prepare students for direct entry into the workforce. They may advance students within their current career positions or open doors to new career opportunities. Coursework may apply towards a degree at a four-year university; check with an advisor for further information. The number of hours that apply to a degree will vary from one university to another.

## A: ASSOCIATE IN APPLIED SCIENCE DEGREE <br> C: CERTIFICATE OF ACHIEVEMENT

| Arts \& Communications | Metro Campus | Northeast Campus | Southeast Campus | West Campus |
| :---: | :---: | :---: | :---: | :---: |
| Digital Media option |  |  |  |  |
| Adobe Master Design Specialist | A/C |  |  |  |
| Broadcast Production Specialist | A/C |  |  |  |
| Digital Media Specialist | A/C |  |  |  |
| Print \& Online Reporting Specialist | A/C |  |  |  |
| Web Design option | A/C |  |  |  |
| Graphics \& Imaging Technology |  |  |  | C |
| International Language Skills |  |  |  |  |
| Chinese | C | C | C | C |
| French | C | C | C | C |
| German | C | C | C | C |
| Italian | C | C | C | C |
| Japanese | C | C | C | C |
| Russian | C | C | C | C |
| Spanish | C | C | C | C |
| Spanish Interpreting Skills | C |  |  |  |
| Spanish Translating Skills | C | C |  |  |
| Stage Production Technology |  |  | A |  |
| Costume |  |  | C |  |
| Entertainment Construction |  |  | C |  |
| Lighting |  |  | C |  |
| Rigging |  |  | C |  |
| Sound |  |  | C |  |
| Stage Management |  |  | C |  |


| Business | Metro Campus | Northeast Campus | Southeast Campus | West Campus |
| :---: | :---: | :---: | :---: | :---: |
| Accounting |  |  |  |  |
| Accounting Assistant | C | C | C | C |
| Accounting Associate | A/C | A/C | A/C | A/C |
| Microcomputer Accounting option | C | C | C | C |
| Payroll Administration option | C |  |  |  |
| Business | A/C | A/C | A/C | A/C |
| Business, Administrative Careers | A |  |  | C |
| Administrative Careers, General | C |  |  |  |
| Administrative Careers, Legal | C |  |  |  |
| Administrative Careers, Medical | C |  |  |  |
| Customer Account Representative | A/C |  |  |  |
| Healthcare Business Operations | A/C |  |  |  |
| Healthcare Business Operations/Accounting | C |  |  |  |
| Hospitality \& Tourism |  |  |  |  |
| Hospitality \& Gaming Operations |  |  |  | A |
| Hospitality Certificate |  |  |  | C |
| Gaming/Operations/Protection Certificate |  |  |  | C |
| Restaurant Management Certificate |  |  |  | C |
| Human Resources |  |  | A/C |  |
| Information Technology |  |  |  |  |
| Computer Information Systems options: |  |  |  |  |
| Business Applications Professional/Specialist | A/C | A/C | A/C | A/C |
| Computer User | C | C | C | C |
| Information Assurance \& Forensics, OSU-Okmulgee option |  | A |  |  |
| Networking |  | A/C | A/C |  |
| Programming | A/C | A/C | A/C | A/C |
| System Support Technician |  | A/C | A/C |  |
| UNIX | A/C | A/C |  |  |
| Web Development |  |  | A/C |  |
| Web-site Management |  |  | A/C |  |
| Information Technologies Convergence options: |  |  |  |  |
| ITC Basics |  | C |  |  |
| ITC Essentials |  | C |  |  |
| ITC General |  | A |  |  |
| CIsco Routing Basics |  | C |  |  |
| Cisco Routing |  | A/C |  |  |
| Information Security Essentials |  | C |  |  |
| Information Security |  | A/C |  |  |


| Business | Metro Campus | Northeast Campus | Southeast Campus | West Campus |
| :---: | :---: | :---: | :---: | :---: |
| System Support |  | A/C |  |  |
| ITC Management |  | A/C |  |  |
| International Business | C | C | C | C |
| Interior Design |  |  | A/C |  |
| Management |  |  |  |  |
| Management options: |  |  |  |  |
| General Management |  | A/C | A/C |  |
| International Management |  | A/C | A/C | C |
| Management Internship |  | A/C | A/C |  |
| Management Leadership Certificate |  | C |  |  |
| Marketing |  |  | A/C |  |
| Customer Service |  |  | C |  |
| Disney Internship |  |  | A |  |
| E-Business |  |  | A/C |  |
| Paralegal | A |  |  |  |


| Community Service | Metro Campus | Northeast Campus | Southeast Campus | West Campus |
| :---: | :---: | :---: | :---: | :---: |
| Child Development |  |  |  |  |
| Child Development option in: |  |  |  |  |
| Center Director |  |  |  | A |
| Child Development Cert. of Mastery |  |  |  | C |
| Child Development Credential Preparation (CDA) |  |  |  | C |
| Early Childhood |  |  |  | A |
| Head Start Credential |  |  |  | C |
| Infant/Toddler |  |  |  | A |
| Infant/Toddler Cert. of Mastery |  |  |  | C |
| Middle Childhood |  |  |  | A |
| Residential \& Youth Professional |  |  |  | C |
| School Age Certificate |  |  |  | C |
| School Age Cert. of Mastery |  |  |  | C |
| Teacher Assistant |  |  |  | A |
| Emergency Medical Technology |  | A |  |  |
| Fire \& Medical Services |  | C |  |  |
| Emergency \& Community Preparedness option |  | C |  |  |
| Human Services, options in: |  | A/C |  |  |
| Chemical \& Alcohol Dependency Counseling |  | A |  |  |
| Community Services Management |  | A |  |  |


| Community Service | Metro Campus | Northeast Campus |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Human Services options in: |  |  |  |  |
| Corrections |  |  | A |  |
| Developmental Disabilities |  |  | A |  |
| Direct Support Professional I |  |  | C |  |
| Family Studies |  | A |  |  |
| Gerontology |  |  | A |  |
| Interpreter Education |  |  | $\mathrm{A} / \mathrm{C}$ |  |
| Law Enforcement |  | A |  |  |
| Collegiate Officer option |  |  | A |  |


| Health Sciences | Metro Campus | Northeast Campus | Southeast Campus Campus |  |
| :---: | :---: | :--- | :---: | :---: |
| Allied Health | A |  |  |  |
| Dental Assisting | A |  |  |  |
| Dental Hygiene |  |  |  |  |
| Medical Laboratory Technician |  |  | C |  |
| Phlebotomy | A |  |  |  |
| Occupational Therapy Assistant | C |  |  |  |
| Pharmacy Technology | A |  |  |  |
| Physical Therapist Assistant | A |  |  |  |
| Radiography | A |  |  |  |
| Respiratory Care |  |  |  |  |
| Medical Office Support | A |  |  |  |
| Health Information Technology: | C |  |  |  |
| Medical Records |  |  |  |  |
| Coding \& Reimbursement Specialist | C |  |  |  |
| Medical Assistant | C |  |  |  |
| Clinical Administrative |  |  |  |  |
| Transcription | A |  |  |  |
| Nursing | C |  |  |  |
| Nursing | C |  |  |  |
| Geriatric Technician | A |  |  |  |
| Patient Care Technician |  |  |  |  |
| Surgical Technology |  |  |  |  |


| MANUFACTURING | Metro Campus | Northeast Campus | Southeast Campus | West Campus |
| :---: | :---: | :---: | :---: | :---: |
| Manufacturing Engineering Technology |  | A |  |  |
| Numerical Control/Machinist Technology |  | A |  |  |
| Computer Aided Technology option |  | C |  |  |
| Machine Operator option |  | C |  |  |
| Craftsman option |  | A |  |  |
| Process Technology |  | A/C |  |  |
| Quality Control |  | A/C |  |  |


| SCIENCE,TECHNOLOGY,ENGINEERING \& MATH | Metro Campus | Northeast Campus | Southeast Campus | West Campus |
| :---: | :---: | :---: | :---: | :---: |
| Biotechnology |  |  | A/C |  |
| Chemical Laboratory Technology |  |  | A |  |
| Civil Engineering/Surveying Technology |  | A/C |  |  |
| Construction option |  | A |  |  |
| Drafting \& Design Engineering |  | A |  |  |
| Drafting \& Computer Aided Design |  | C |  |  |
| Electronics Technology |  | A/C |  |  |
| Alternative Energy |  | A/C |  |  |
| Biomedical Equipment Technology |  | A/C |  |  |
| Electromechanical Manufacturing Technology |  | A |  |  |
| Nanotechnology |  | A/C |  |  |
| ELE US Navy Option |  | A |  |  |
| Horticulture Technology |  |  |  |  |
| General Horticulture |  | A/C |  |  |
| Golf \& Sports Turf |  | A/C |  |  |
| Greenhouse \& Nursery Production |  | A/C |  |  |
| Floral Design \& Interiorscape |  | A/C |  |  |
| Landscape Design \& Construction |  | A/C |  |  |
| Landscape Maintenance |  | A/C |  |  |
| Interior Plant Care Specialist |  | A/C |  |  |
| Landscape Specialist |  | A/C |  |  |
| Veterinary Technology |  |  |  | A |


| TRANSPORTATION, DISTRIBUTION \& LOGISTICS Metro Campus | Northeast Campus | Southeast Campus West Campus |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Aviation Sciences Technology, options in: |  | A |  |  |
| Flight Simulator Specialist Technician |  | A |  |  |
| Aviation Maintenance Technology |  | A |  |  |
| Avionics |  | A |  |  |
| Management |  | A |  |  |
| Professional Pilot | A |  |  |  |

## General Education Requirements



## Required Electives

## Recommended Electives

CSC 1203 Computer Concepts and Applications - To receive an Associate in Arts or Associate in Science degree from TCC , students must demonstrate computer proficiency, including basic knowledge of operating systems, word processing, and the ethical use of internet research capabilities. Please see page 22 for complete requirements.
SPE 1113 Speech Communications I, one course designated "I" for international or non-western dimensions, and additional hours of Humanities and/or Science courses as needed to meet minimum total of 37 credit hours.
*Course has prerequisite (see course description section of catalog).
**9-15 hours required for International Business Degree.
+Course transfers to NSU as a Science course.
Reading proficiency is required for all General Education courses.


## Arts \& Communications Areas of Study <br> AA: Associate in Arts, university transfer degree • AS: Associate in Science, university transfer degree AAS: Associate in Applied Science, workforce degree - CER: Certificate of Achievement

University transfer degree programs include TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.
Workforce development degree and certificate programs are specifically designed to prepare students for direct entry into the workforce. They may advance students within their current career or open doors to new career opportunities. Traditionally these programs were not designed for transfer;however, varying amounts of coursework - and in some cases entire degrees - may now apply towards a degree at a four-year institution; the number of applicable transfer hours will vary from one university to another. Check with an advisor for further information. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.


## Communication Arts

Communications Sciences \& Disorders, AA
English, AA
(Interpreter Education, AA/AAS/CER see Community Services, Education \& Training)
Journalism \& Mass Communication, AA
Speech, AA
Graphic Arts
Digital Media, AAS/CER
Graphics \& Imaging Technology, AAS
International Language Arts
Chinese, CER
French, AA/CER
German, AA/CER
Italian, AA/CER
Japanese, AA/CER
Russian, AA/CER
Spanish, AA/CER
Spanish, NSU option, AA
Spanish Interpreting Skills, CER
Spanish Translating Skills, CER

## Liberal Arts \& Social Sciences

American Studies, AA
(Criminal Justice - see Community Service, Law, Public Safety \& Corrections) (Geography, AS - see Science, Technology, Engineering \& Mathematics)
History, AA
Humanities, AA
Liberal Arts, General AA
Liberal Arts, International AA
Liberal Arts, Film AA
Liberal Arts, Native American Studies, AA
Philosophy, AA
Political Science, AA
Psychology, AA
Religious Studies, AA
Sociology, AA
Visual \& Performing Arts
Art, AA
(Interior Design, AAS/CER see Business Areas of Study)
Music, AA
Theatre, AA
Stage Production Technology, AAS
Stage Production Technology, CER:
Costume, Entertainment Construction, Lighting, Rigging, Sound \& Stage Management

## ARTS \& COMMUNICATIONS: COMMUNICATION ARTS

## COMMUNICATION SCIENCES \& DISORDERS <br> Oklahoma State University Transfer

## Program Description:

This curriculum plan includes TCC degree requirements and prerequisite courses for the Communication Services Disorders major at Oklahoma State University-Tulsa. This program has been specifically designed to provide a seamless transition, and students may use their associate degree from TCC as the first two years of the baccalaureate degree at Oklahoma State University.

## Degree Awarded: Associate in Arts

## For More Information Contact:

Communication Services Division
Metro: (918) 595-7064
Liberal Arts/Community Service Division
Northeast: (918) 595-7494
Counseling Center
Metro: (918) 595-7151 • Northeast: (918) 595-7451

## General Education Requirements Credit Hours: 38

## English 6 hours

*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

## Humanities 6 hours

See the General Education Requirements for complete list.

## Mathematics 6 hours

*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics

## Science 8 hours

BIO 1224 Introduction to Biology for Majors
*BIO 2134 Human Anatomy

## Social Science 6 hours

POS 1113 American Federal Government and select 3 credit hours from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

## Required Electives 6 hours

## Social and Behavioral Sciences

PSY 1113 Introduction to Psychology
and select 3 credit hours from the following:
SOC 1113 Introduction to Sociology
HS 2023 Lifespan Development

## Specialized Course Requirements Credit Hours: 22-34

## Chemistry 5 hours

*CHE 1315 General Chemistry I
Interpreter Preparation 3 hours
INT 1363 American Sign Language I

## Speech 6 hours

SPE 1113 Speech Communications I
*SPE 2203 Phonetics

Recommended Electives 5-8 hours
*BIO 2154 General Physiology
SPE 1151 Effective Communications
and 0-3 hours necessary to complete 60 credit hours
(Students must have minimum of 60 credit hours to receive a degree)
Language 0-12 hours
Two years of high school foreign language or 12 credit hours in the same language or equivalent proficiency, which may include the courses listed below:
*INT 1374 American Sign Language II
*INT 2414 American Sign Language III
*INT 2524 American Sign Language IV

## Total Credit Hours: 60-69

*Course has prerequisite (See course description section of catalog) To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## ENGLISH

## Program Description:

Students who are interested in pursuing a course of study leading to a baccalaureate degree in English may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalogs of the universities where the four-year degree is offered and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at the university of their choice.

## Degree Awarded: Associate in Arts <br> For More Information Contact: <br> Communication Services Division <br> Metro: (918) 595-7064 • Northeast: (918) 595-7494 <br> Counseling Centers <br> Metro: (918) 595-7151 • Northeast: (918) 595-7451 <br> Southeast: (918) 595-7651 • West: (918) 595-8176

General Education Requirements Credit Hours: 37
See the General Education Requirements for complete list.

## Specialized Course Requirements Credit Hours: 15

## English 15 hours

*ENG 2413 Introduction to Literature
*ENG 2543 Survey of British Literature to 1800
*ENG 2653 Survey of British Literature from 1800
*ENG 2773 Survey of American Literature to 1865
*ENG 2883 Survey of American Literature from 1865

## Recommended Electives Credit Hours: 9

ART 1053 Art History Survey I
ART 1063 Art History Survey II
ART 1113 Art Appreciation
ECO 2013 Principles of Macroeconomics
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications
FRE 1103 French I

## ARTS \& COMMUNICATIONS: COMMUNICATION ARTS

*FRE 1213 French II
*FRE 1313 French III
*FRE 1413 French IV
HIS 1033 History of Oklahoma
HIS 1053 Ancient and Medieval Western Civilization
HIS 1063 Modern Western Civilization
HIS 1083 Survey of English History to 1688
HIS 1093 Survey of English History 1688-Present
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
HUM 2113 Humanities I
JMC 1013 Introduction to Mass Communications
*JMC 1123 News Writing and Reporting
MUS 1113 Music Appreciation
PHI 1113 Introduction to Philosophy
PHI 2113 Logic
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology
SPA 1103 Spanish I
*SPA 1213 Spanish II
SPE 1113 Speech Communication I
THE 1093 Introduction to Theatre

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog) To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## INTERPRETER EDUCATION, AA/AAS/CER <br> See Community Services, Education \& Training.

## JOURNALISM \& MASS COMMUNICATIONS

**100 D/B

## Program Description:

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

## Degree Awarded: Associate in Arts

## For More Information Contact:

Communications Services Division
Metro: (918) 595-7064
Counseling Center: Metro
(918) 595-7151

General Education Requirements Credit Hours: 34 See the General Education Requirements for complete list. Remaining General Education Requirements are satisfied in the Specialized Course Requirements.

## Specialized Course Requirements Credit Hours: 24

## English 3 hours

ENG 1083 Grammar and Mechanics of Writing

## Journalism 9 hours

JMC 1013 Introduction to Mass Communications
*JMC 1113 Writing for the Mass Media
*JMC 1123 News Writing and Reporting

## Speech 3 hours

SPE 1113 Speech Communication I

## Select one of the following specialized options: 9 hours

Television Broadcasting OPTION **100 D
JMC 1103 Introduction to Broadcasting
*JMC 2263 Digital Video I/Final Cut Pro
*JMC 2173 Advanced Broadcasting
or
*JMC 2273 Digital Video II/Final Cut Pro

## Public Relations/Advertising OPTION **100 B

*JMC 2013 Principles of Advertising
*JMC 2183 Principles of Public Relations
MKT 2423 Principles of Marketing

## Controlled Electives 3 Hours:

*CIS 2673 Adobe Illustrator
*CIS 2683 Adobe InDesign
*ENG 2343 Business Communications
HIS 2043 Contemporary Affairs
JMC 1143 Reporting Across Cultures
*JMC 2013 Principles of Advertising
*JMC 2143 Studio Production
JMC 2153 International Communication and Global Media
*JMC 2173 Advanced Broadcasting
*JMC 2183 Principles of Public Relations
*JMC 2263 Digital Video I/Final Cut Pro
*JMC 2273 Digital Video II/Final Cut Pro
*JMC 2373 Broadcast Laboratory
*JMC 2433 Field Production
JMC 2853 Photography
*JMC 2863 Photojournalism
*JMC 2973 Journalism and Mass Communications Internship I
*JMC 2983 Journalism and Mass Communications Internship II
MKT 2423 Principles of Marketing
*SPE 2093 Business and Professional Speech
SPE 2313 Voice and Diction I
*THE 2453 Script Writing

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## ARTS \& COMMUNICATIONS: COMMUNICATION ARTS

## SPEECH

## Speech 15 hours

SPE 1013 Fundamentals of Listening **SPE 1113 Speech Communication I SPE 2053 Intercultural Communication SPE 2073 Oral Interpretation *SPE 2093 Business and Professional Speech SPE 2103 Interpersonal Communication SPE 2313 Voice and Diction I
*SPE 2323 Voice and Diction II

## Recommended Electives Credit Hours: 9

*ENG 2773 Survey of American Literature to 1865 JMC 1013 Introduction to Mass Communication PHI 2113 Logic
PHI 2133 Introduction to Ethical Thinking
PSY 1113 Introduction to Psychology
PSY 1313 Human Relations
SPE 2333 Forensics
SPE 2343 Forensics Performance Competition
SPE 2351 Forensics Competition Practicum

## Total Credit Hours: 61

*Course has prerequisite (See course description of catalog).
**This course required as part of the 15 hour program requirements. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.


## ARTS \& COMMUNICATIONS: GRAPHIC ARTS

## DIGITAL MEDIA

1) Adobe Master Design Specialist 598A
2) Broadcast Production Specialist 598B
3) Digital Media Specialist 598C
4) Print and Online Reporting Specialist 598D
5) Web Design Specialist 598E

## Program Description:

Digital Media is an interdisciplinary area of study combining computer science, art, video, music, journalism/mass communications, and design. Through the Center for Creativity, digital media specialists prepare for careers in graphic design, advertising, print media, digital photography, animation, digital character development, virtual cinematography, digital video, special effects, print and online reporting, television broadcast production, interactive media, web site development, online instructional technologies and business related to digital arts and entertainment.

## Degree Awarded: Associate in Applied Science

## For More Information Contact:

Business and Information Technology Division
Metro (918) 595-7039
Communications Division
Metro: (918) 595-7064
Counseling Centers
Metro: (918) 595-7151

## General Education Requirements Credit Hours: 18-19

## English 6 hours

*ENG 1113 Freshman Composition I select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/ Professional Writing
*ENG 2343 Business Communications

## Mathematics 3-4 hours

*MTH 1454 Technical Mathematics
*MTH 1513 College Algebra

## Social Science 6 hours

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 US History Civil War Era to Present

## Speech 3 hours

SPE 1113 Speech Communication I
SPE 2103 Business Communications

## Specialized Course Requirements Credit Hours: 47-49

## Art 9 hours

ART 1013 Fundamentals of Art I
ART 1123 Drawing I
and select one of the following:
ART/JMC 2853 Photography
CIS 2763 Digital Photography

Computer Information Systems 16 hours
*CIS 1033 Adobe Photoshop
*CIS 1043 Adobe Acrobat
*CIS 1073 Advanced Photoshop
CIS 1211 Introduction to Mac OS
CSC 1203 Computer Concepts and Applications
and select one course from the following:
*CSC 2973 Digital Media Internship
*JMC 2973 Journalism and Mass Communication Internship I
Specialized Course Requirements Credit Hours: 22-24
Select from one of the following five (5) options

1) Adobe Master Design Specialist 598A
2) Broadcast Production Specialist 598B
3) Digital Media Specialist 598C
4) Print and Online Reporting Specialist 598D
5) Web Design Specialist 598E

## Adobe Master Design Specialist 598A

*ART 2413 Typography I
*CIS 2573/JMC 1303 Fundamentals of Videography
*CIS 2673 Adobe Illustrator
*CIS 2683 Adobe InDesign
*CIS 2713 Adobe Premiere
*CIS 2733 Adobe Soundbooth
*CIS 2753 Adobe AfterEffects
*CIS 1153 Adobe Dreamweaver

## Broadcast Production Specialist 598B

*CIS 2573/JMC 1303 Fundamentals of Videography
*CSC/JMC 2263 Digital Video I Final Cut Pro
*CSC/JMC 2273 Digital Video II Final Cut Pro
*JMC 1103 Introduction to Broadcasting
*JMC 2173 Advanced Broadcasting
*JMC 2433 Field Production
*JMC 2143 Studio Production
*JMC 2373 Broadcast Laboratory

## Digital Media Specialist 598C

*CIS2573/JMC 1303 Fundamentals of Videography
*CIS 2733 Adobe Soundbooth
*CSC 1123 3D Graphics Using Lightwave
*CSC 1283 Adobe Flash
*CSC 1293 3D Animation Using Lightwave
*CSC/JMC 2263 Digital Video I / Final Cut Pro
*CSC/JMC 2273 Digital Video II / Final Cut Pro
*CIS 2753 Adobe AfterEffects
Print and Online Reporting Specialist 598D
*CIS 1153 Adobe Dreamweaver
*CIS 2683 Adobe InDesign
*JMC 1113 Writing for Mass Media
*JMC 1123 News Writing and Reporting
JMC 1143 Reporting Across Cultures
JMC 1151 Reporting in the Digital Age
JMC 2163 Editing
*JMC 2863 Photojournalism

## ARTS \& COMMUNICATIONS: GRAPHIC ARTS

Web Design Specialist 598E
*CIS 1013 XHTML
*CIS 1153 Adobe Dreamweaver
*CIS 2033 Scripting
*CIS 2463 PHP Programming
*CIS 2733 Adobe Soundbooth
*CSC 1123 3D Graphics Using Lightwave
*CSC 1283 Adobe Flash
*CSC 1293 3D Animation Using Lightwave

## Total Credit Hours: 65-68

*Course has prerequisite (see course description section of catalog).

## DIGITAL MEDIA CERTIFICATE

1) Adobe Master Design Specialist 598A
2) Broadcast Production Specialist 598B
3) Digital Media Specialist 598C
4) Print and Online Reporting Specialist 598D
5) Web Design Specialist 598E

## Program Description:

Digital Media is an interdisciplinary area of study combining computer science, art, video, music, journalism/mass communications, and design. Through the Center for Creativity, digital media specialists prepare for careers in graphic design, advertising, print media, digital photography, animation, digital character development, virtual cinematography, digital video, special effects, print and online reporting, television broadcast production, interactive media, web site development, online instructional technologies and business related to digital arts and entertainment.

## Degree Awarded: Certificate of Achievement

## For More information Contact:

Business and Information Technology Division
Metro: (918) 595-7039
Communications Division
Metro (918) 595-7064
Counseling Centers
Metro: (918) 595-7151

## Certificate Requirements Credit Hours: 35-37

## Computer Information Systems 13 hours

*CIS 1033 Adobe Photoshop
*CIS 1043 Adobe Acrobat
*CIS 1073 Advanced Photoshop
CIS 1211 Introduction to Mac OS
CSC 1203 Computer Concepts and Applications
Specialized Course Requirements Credit Hours 22-24
select from on of the following five (5) options

1) Adobe Master Design Specialist 598A
2) Broadcast Production Specialist 598B
3) Digital Media Specialist 598C
4) Print and Online Reporting Specialist 598D
5) Web Design Specialist 598E

Adobe Master Design Specialist 598A
ART 2143 Typography
*CIS 1041 Adobe Acrobat
*CIS 2573/JMC 1303 Fundamentals of Videography
*CIS 1153 Adobe Dreamweaver
*CIS 2673 Adobe Illustrator
*CIS 2683 Adobe InDesign
*CIS 2713 Adobe Premiere
*CIS 2733 Adobe Soundbooth
*CIS 2753 Adobe AfterEffects
Broadcast Production Specialist 598B
*CIS 2573/JMC 1303 Fundamentals of Videography
*CSC/JMC 2263 Digital Video I / Final Cut Pro
*CSC/JMC 2273 Digital Video II / Final Cut Pro
*JMC 1103 Introduction to Broadcasting
*JMC 2143 Studio Production
*JMC 2173 Advanced Broadcasting
*JMC 2373 Broadcast Laboratory
*JMC 2433 Field Production
Digital Media Specialist 598C
*CIS 2573/JMC 1303 Fundamentals of Videography
*CIS 2733 Adobe Soundboth
*CIS 2753 Adobe AfterEffects
*CSC 1123 3D Graphics using Lightwave
*CSC 1283 Adobe Flash
*CSC 1293 3D Animation using Lightwave
*CSC/JMC 2263 Digital Video I / Final Cut Pro
*CSC/JMC 2273 Digital Video II / Final Cut Pro
Print and Online Reporting Specialist 598D
*CIS 1153 Adobe Dreamweaver
*CIS 2683 Adobe InDesign
*JMC 1113 Writing for Mass Media
*JMC 1123 News Writing and Reporting
JMC 1143 Reporting Across Cultures
JMC 1151 Reporting in the Digital Age
*JMC 2163 Editing
*JMC 2863 Photojournalism
Web Design Specialists 598E
*CIS 1013 XHTML
*CIS 1153 Adobe Dreamweaver
*CIS 2033 Scripting
*CIS 2463 PHP Programming
*CIS 2733 Adobe Soundbooth
*CSC 1123 3D Graphics using Lightwave
*CSC 1283 Adobe Flash
*CSC 1293 3D Animation Using Lightwave

## Total Credit Hours: 35-37

*Course has prerequisite (See course description section of catalog).

## ARTS \& COMMUNICATIONS: GRAPHIC ARTS

## GRAPHICS AND IMAGING TECHNOLOGY <br> 631

## Program Description:

This program is developed jointly by Tulsa Community College and Tulsa Technology Center. Printing is the process of manufacturing visual products intended for communicating a message through permanent graphic images. Production of printed materials involves work in a wide variety of graphic arts occupations and skill levels. This program offers training in the process of printing from plates produced by photographic negatives for both offset and flexographic printing. During the first year, the student will experience basic training in total production procedures including electronic imaging (desktop publishing) use Apple Macintosh computers and QuarkXpress page layout software, camera and darkroom, negative stripping, platemaking process, offset press operation, flexographic press operations, and binding/finishing. Emphasis during the second year is on mechanical and quality control. Advanced training is given in bindery procedures, press operations, prepress operation, and electronic imaging using Photoshop and Illustrator software. Successful completion will qualify TCC's Graphics and Imaging Technology students for national certification by the Graphics Art Education Council and the Printing Industries of America. Students who attain a state competency certificate(s) will be placed on the Printing Industries of Americas National Employment Registry, 100 Daingerfield Rd., Alexandria, VA. 22314-2888, Phone: 703-519-8100. Course Location: Graphics and Imaging Technology courses will be taken at Tulsa Technology Center-Lemley Campus. General education courses will be offered by Tulsa Community College.

## Degree Awarded: Associate in Applied Science

## For More Information Contact:

Tulsa Community College Business and Information Technology Division at West Campus:
(918) 595-8033

Tulsa Technology Center Career Resources Center Department: (918) 828-5151

## Procedures for Application:

1. Obtain an admission packet from Tulsa Technology Center. Packets are located at all Tulsa Tech campuses in the Adult Education Office.
2. An admission test is required for full-time programs at Tulsa Technology Center (see admission packet for details).
3. Submit completed program application form and required documents to the Career Services Center, Tulsa Technology Center, 3420 S. Memorial Dr.,Tulsa OK 74145. Please call (918) 828-5200 for application deadlines.
4. All prospective Graphics and Imaging Technology students must complete an application for enrollment to Tulsa Community College and submit their high school transcripts, GED scores, ACT/SAT scores, college transcripts and any previous training and/or education to any TCC campus registrar.
5. Acceptance to TCC does not guarantee admission to Graphics and Imaging Technology Associate of Applied Science degree.

Chemistry 4-5 hours
CHE 1034 Practical Chemistry
*CHE 1114 Principles of Chemistry
*CHE 1315 General Chemistry I
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

## Psychology/Philosophy 3 hours

 select one $\mathbf{3}$ credit hour course from the following:PSY 1113 Introduction to Psychology PSY 1313 Human Relations
PHI/BUS 1143 Introduction to Ethics: Business Issues

## Social Science 6 hours

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

## Speech 3 hours

select one 3 credit hour course from the following:
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication
SPE/BUS 2053 Intercultural Communication

## Specialized Course Requirements Credit Hours: 32

## Graphics and Imaging Technology 32 hours

GT 1011 Graphics Imaging Technologies Introduction
GT 1143 Reproduction Photography
GT 1223 Image Assembly/Platemaking
GT 1333 Basic Press Operation
GT 1413 Basic Electronic Imaging
GT 1443 Finishing/Bindery
\#GT 2014 Advanced Electronic Imaging I
GT 2064 Advanced Electronic Imaging II
\#\#GT 2124 Advanced Press Operations I
GT 2224 Advanced Press Operations II

## Recommended Electives Credit Hours: 6

BUS 1053 Introduction to Business
BUS/PHI 1143 Introduction to Ethics: Business Issues
BUS/SPE 2053 Intercultural Communication
HIS 1033 History of Oklahoma
MGT 1353 Management Essentials
MGT 2123 Leadership Development
MGT 2363 Principles of Management
*MTH 1454 Technical Mathematics
QCT 1313 Introduction to Quality Control

## Total Credit Hours: 60-61

*Course has prerequisite (See course description section of catalog). \# Upon completion of Advanced Electronic Imaging I, the student may continue to Advanced Electronics Imaging II or move to Advanced Press Operations I.
\#\# Upon completion of Advanced Press Operations 1, the student may continue to Advanced Press Operations II or move to Advanced Electronics Imaging I.

## ARTS \& COMMUNICATIONS: INTERNATIONAL LANGUAGE ARTS

## International Language Arts

AA: Associate in Arts, university transfer degree
AS: Associate in Science, university transfer degree
AAS: Associate in Applied Science, workforce degree
CER: Certificate of Achievement

## Foreign Language

Transfer degrees with pre-majors in:

- French
- German
- Italian
- Japanese
- Russian
- Spanish
- Spanish NSU option


## Associate in Arts Program Description:

The growing need for multi language skills has reached a crisis point. More and more degrees and career paths require applicants with sufficient competency to communicate with a native speaker of the designated language. This program is designed for students who wish to acquire oral and written language proficiency, an awareness of the chosen language's-speaking culture, and who have plans to transfer to a four-year university. TCC instructional methods infuse technology into the learning process. Students should consult the catalog of the selected university and choose the TCC language courses that will meet the requirements for both the TCC associate degree and the baccalaureate degree at the university.

## International Language Studies

Certificate options in:

- Chinese
- French
- German
- Italian
- Japanese
- Russian
- Spanish
- Spanish Interpreting Skills
- Spanish Translating Skills


## Certificate Program Description:

This program provides an in-depth study of the spoken and written language and prepares students to use the chosen language as a career skill. The courses are designed to emphasize acquisition of competency sufficient to communicate orally and in writing with a native speaker of the target language on a professional or work-related basis. TCC instructional methods infuse technology into the learning process, which increases access to resources for the language. Graduates find a variety of positions with government or social organizations and firms involved with speakers of the target language (translating, interpreting, investments, accounting, banking, education, publishing, manufacturing, sales, service, and travel).

## For More Information Contact:

Dean of Global Education: 918-595-7451
Counseling Centers:

## ARTS \& COMMUNICATIONS: INTERNATIONAL LANGUAGE ARTS

## INTERNATIONAL LANGUAGE STUDIES <br> Chinese Certificate Option

## Degree Awarded: Certificate of Achievement

## Certificate Requirements Credit Hours: 20

Chinese 12 hours
CHI 1103 Chinese I
*CHI 1213 Chinese II
*CHI 1313 Chinese III
*CHI 1413 Chinese IV

## Controlled Electives Credit Hours: 8

CHI 1001 Chinese for Communication I
CHI 1031 Chinese Pronunciation
*CHI 1201 Chinese for Communication II
CHI 2033 Chinese Literature in Translation
CHI 2041 Chinese-Introduction to the Arts
CHI 2071 Chinese History and Geography Introduction
*CHI 2113 Intermediate Chinese I
*CHI 2121 Intermediate Chinese Communication
CHI 2143 Asian Civilization and Culture

* CHI 2213 Intermediate Chinese II
*CHI 2331-3 Chinese International Seminar and/or Field Studies CHI 2421 Chinese Culture Comparisons
ASN 1103 Asian Philosophy and Culture
ASN 2693 Asian Literature in Translation
One additional Asian language, 1-5 Credit Hours


## Total Credit Hours: 20

*Course has prerequisite (See course description section of catalog)

## FRENCH

081
Degree Awarded: Associate in Arts

## General Education Requirements Credit Hours: 37

Foreign Language (3 hours Required Elective) and International (6 hours Recommended Elective) may be satisfied with 9 hours of additional French Language courses. See the General Education Requirements for the complete list.
Foreign Language requirement is satisfied in Specialized Course Requirements.

## Specialized Course Requirements Credit Hours: 23

## French 18 hours

FRE 1103 French I
*FRE 1213 French II
*FRE 1313 French III
*FRE 1413 French IV
*FRE 2113 Intermediate French I
*FRE 2213 Intermediate French II

## French 5 hours

*FRE 1001 French for Communication I
*FRE 1031 French Pronunciation
*FRE 1201 French for Communication II
*FRE 1301 French for Communication III
*FRE 1401 French for Communication IV
FRE 2033 French Literature in Translation
FRE 2041 French - Introduction to the Arts
FRE 2071 French History and Geography Introduction
*FRE 2121 Intermediate French Communication
*FRE 2143 French Civilization and Culture
*FRE 2263 Intermediate French Literature
*FRE 2320 International Work and/or Study Seminar
*FRE 2330 French International Seminar and/or Field Studies
*FRE 2413 French Translating
FRE 2421 French Culture Comparisons
*FRE 2433 French Cinema and Conversation
*FRE 2523 Intermediate French Grammar and Composition
*FRE 2533 Advanced French Conversation

## Total Credit Hours: 60

*Course has prerequisite (See course description section of catalog).
A native speaker of French (high school courses conducted principally in French) cannot earn Associate of Arts degree credit toward graduation for French courses below the 2000 level.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## INTERNATIONAL LANGUAGE STUDIES French Certificate Option <br> Degree Awarded: Certificate of Achievement <br> Certificate Requirements Credit Hours: 25

## French 18 hours

FRE 1103 French I
*FRE 1213 French II
*FRE 1313 French III
*FRE 1413 French IV
*FRE 2113 Intermediate French I
*FRE 2213 Intermediate French II

## Controlled Electives Credit Hours: 7

*FRE 1001 French for Communication I
*FRE 1031 French Pronunciation
*FRE 1201 French for Communication II
*FRE 1301 French for Communication III
*FRE 1401 French for Communication IV
FRE 2033 French Literature in Translation
FRE 2041 French - Introduction to the Arts
FRE 2071 French History and Geography Introduction
*FRE 2121 Intermediate French Communication
*FRE 2143 French Civilization and Culture
*FRE 2263 Intermediate French Literature
*FRE 2320 International Work and/or Study Seminar
*FRE 2330 International Seminar and/or Field Studies
*FRE 2413 French Translating
FRE 2421 French Culture Comparisons
*FRE 2433 French Cinema and Conversations
*FRE 2523 Intermediate French Grammar and Composition
*FRE 2533 Advanced French Conversation

## ARTS \& COMMUNICATIONS: INTERNATIONAL LANGUAGE ARTS

## One additional language, 1-3 Credit Hours

(May be Arabic, Chinese, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, Spanish, or Language Instructional Technology.)

## Total Credit Hours: 25

*Course has prerequisite (See course description section of catalog).

## GERMAN

084

## Degree Awarded: Associate in Arts

General Education Requirements Credit Hours: 37
Foreign Language (3 hours Required Elective) and International (6 hours Recommended Elective) may be satisfied with 9 hours of additional German Language courses. See the General Education Requirements for the complete list. Foreign Language requirement is satisfied in Specialized Course Requirements.

## Specialized Course Requirements Credit Hours: 23

## German 18 hours

GER 1103 German I
*GER 1213 German II
*GER 1313 German III
*GER 1413 German IV
*GER 2113 Intermediate German I
*GER 2213 Intermediate German II

## German 5 hours

*GER 1001 German for Communication I
*GER 1031 German Pronunciation
*GER 1201 German for Communication II
*GER 1301 German for Communication III
*GER 1401 German for Communication IV
GER 2033 German Literature in Translation
GER 2041 German - Introduction to the Arts
GER 2071 German History and Geography Introduction
*GER 2121 Intermediate German Communication
*GER 2143 German Civilization and Culture
*GER 2263 Intermediate German Literature
*GER 2320 International Work and/or Study Seminar
*GER 2330 German International Seminar and/or Field Studies
*GER 2413 German Translating
GER 2421 German Culture Comparisons
*GER 2523 Intermediate German Grammar and Composition
*GER 2533 Advanced German Conversation

## Total Credit Hours: 60

*Course has prerequisite (See course description section of catalog). A native speaker of German (high school courses conducted principally in German) cannot earn Associate of Arts degree credit toward graduation for German courses below the 2000 level.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## INTERNATIONAL LANGUAGE STUDIES <br> German Certificate Option

## Degree Awarded: Certificate of Achievement

## Certificate Requirements Credit Hours: 25

## German 18 hours

GER 1103 German I
*GER 1213 German II
*GER 1313 German III
*GER 1413 German IV
*GER 2113 Intermediate German I
*GER 2213 Intermediate German II

## Controlled Electives Credit Hours: 7

*GER 1001 German for Communication I
*GER 1031 German Pronunciation
*GER 1201 German for Communication II
*GER 1301 German for Communication III
*GER 1401 German for Communication IV
GER 2033 German Literature in Translation
GER 2041 German - Introduction to the Arts
GER 2071 German History and Geography Introduction
*GER 2121 Intermediate German Communication
*GER 2143 German Civilization and Culture
*GER 2263 Intermediate German Literature
*GER 2320 International Work and/or Study Seminar
*GER 2330 German International Seminar and/or Field Studies
*GER 2413 German Translating
GER 2421 German Culture Comparisons
*GER 2523 Intermediate German Grammar and Composition
*GER 2533 Advanced German Conversation
One additional language, 1-3 Credit Hours
(May be Arabic, Chinese, French, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, Spanish, or Language Instructional Technology.)

## Total Credit Hours: 25

*Course has prerequisite (See course description section of catalog).

## ITALIAN

098

## Degree Awarded: Associate in Arts

General Education Requirements Credit Hours: 37
See the General Education Requirements for the complete list.

## Specialized Course Requirements Credit Hours: 23

## Italian 18 hours

ITA 1103 Italian I
*ITA 1213 Italian II
*ITA 1313 Italian III
*ITA 1413 Italian IV
*ITA 2113 Intermediate Italian I
*ITA 2213 Intermediate Italian II

## ARTS \& COMMUNICATIONS: INTERNATIONAL LANGUAGE ARTS

## Italian 5 hours

*ITA 1001 Italian for Communication I *ITA 1201 Italian for Communication II *ITA 1301 Italian for Communication III *ITA 1401 Italian for Communication IV ITA 2033 Italian Literature in Translation ITA 2041 Italian - Introduction to the Arts ITA 2071 Italian History and Geography Introduction
*ITA 2121 Intermediate Italian Communication
*ITA 2143 Italian Civilization and Culture
*ITA 2263 Intermediate Italian Literature
*ITA 2320 International Work and/or Study Seminar
*ITA 2330 Italian International Seminar and/or Field Studies
*ITA 2413 Italian Translating
ITA 2421 Italian Culture Comparisons
ITA 2433 Italian Film/Literature
*ITA 2523 Intermediate Italian Grammar and Composition
*ITA 2533 Advanced Italian Conversation

## Total Credit Hours: 60

*Course has prerequisite (See course description section of catalog). A native speaker of Italian (high school courses conducted principally in Italian) cannot earn Associate of Arts degree credit toward graduation for Italian courses below the 2000 level.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## INTERNATIONAL LANGUAGE STUDIES <br> Italian Certificate Option <br> 673C

Degree Awarded: Certificate of Achievement
Certificate Requirements Credit Hours: 20
Italian 15 hours
ITA 1103 Italian I
*ITA 1213 Italian II
*ITA 1313 Italian III
*ITA 1413 Italian IV
*ITA 2113 Intermediate Italian I

## Controlled Electives Credit Hours: 5

*ITA 1001 Italian for Communication I *ITA 1201 Italian for Communication II *ITA 1301 Italian for Communication III *ITA 1401 Italian for Communication IV ITA 2033 Italian Literature in Translation ITA 2041 Italian - Introduction to the Arts ITA 2071 Italian History and Geography Introduction
*ITA 2121 Intermediate Italian Communication
*ITA 2143 Italian Civilization and Culture
*ITA 2213 Intermediate Italian II
*ITA 2263 Intermediate Italian Literature
*ITA 2320 International Work and/or Study Seminar
*ITA 2330 Italian International Seminar and/or Field Studies
*ITA 2413 Italian Translating
ITA 2421 Italian Culture Comparisons
*ITA 2433 Italian Film/Literature
*ITA 2523 Intermediate Italian Grammar and Composition
*ITA 2533 Advanced Italian Conversation

One additional language, 1-3 Credit Hours
(May be Arabic, Chinese, French, German, Greek, Hebrew, Japanese, Latin, Portuguese, Russian, Spanish, or Language Instructional Technology.)

## Total Credit Hours: 20

*Course has prerequisite (See course description section of catalog).

## JAPANESE

099

## Degree Awarded: Associate in Arts

General Education Requirements Credit Hours: 37
See the General Education Requirements for the complete list.
**Foreign Language ( 3 hours Required Elective) and International ( 6 hours Recommended Elective) may be satisfied with 9 hours of additional Japanese Language.

## Specialized Course Requirements Credit Hours: 23

## Japanese 15 hours

JPN 1103 Japanese I
*JPN 1213 Japanese II
*JPN 1313 Japanese III
*JPN 1413 Japanese IV
*JPN 2113 Intermediate Japanese

## Japanese 8 hours

*JPN 1001 Japanese for Communication I *JPN 1201 Japanese for Communication II *JPN 1301 Japanese for Communication III *JPN 1401 Japanese for Communication IV JPN 2033 Japanese Literature in Translation JPN 2041 Japanese - Introduction to the Arts JPN 2071 Japanese History and Geography Introduction
*JPN 2121 Intermediate Japanese Communications
*JPN 2143 Japanese Civilization and Culture
*JPN 2213 Intermediate Japanese II
*JPN 2320 International Work and/or Study Seminar
*JPN 2413 Japanese Translating I
JPN 2421 Japanese Culture Comparisons

## Total Credit Hours: 60

*Course has prerequisite (See course description section of catalog).
A native speaker of Japanese (high school courses conducted principally in Japanese) cannot earn Associate of Arts degree credit toward graduation for Japanese courses below the 2000 level.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## ARTS \& COMMUNICATIONS: INTERNATIONAL LANGUAGE ARTS

## INTERNATIONAL LANGUAGE STUDIES

Japanese Certificate Option

## 673D

Degree Awarded: Certificate of Achievement
Certificate Requirements Credit Hours: 20
Japanese 15 hours
JPN 1103 Japanese I
*JPN 1213 Japanese II
*JPN 1313 Japanese III
*JPN 1413 Japanese IV
*JPN 2113 Intermediate Japanese I

## Controlled Electives Credit Hours: 5

*JPN 1001 Japanese for Communication I
*JPN 1201 Japanese for Communication II
*JPN 1301 Japanese for Communication III
*JPN 1401 Japanese for Communication IV
JPN 2033 Japanese Literature in Translation
JPN 2041 Japanese - Introduction to the Arts
JPN 2071 Japanese History and Geography
*JPN 2121 Intermediate Japanese
*JPN 2143 Japanese Civilization and Culture
*JPN 2213 Intermediate Japanese II
*JPN 2320 International Work and/or Study Seminar
*JPN 2413 Japanese Translating
JPN 2421 Japanese Culture Comparisons
One additional language, 1-3 Credit Hours
(May be Arabic, Chinese, French, German, Greek, Hebrew, Italian, Latin, Portuguese, Russian, Spanish, or Language Instructional Technology.)

## Total Credit Hours: 20

*Course has prerequisite (See course description section of catalog).

## RUSSIAN

Degree Awarded: Associate in Arts

## General Education Requirements Credit Hours: 37

See the General Education Requirements for the complete list. Foreign Language (3 hours required elective) and International (6 hours recommended elective) may be satisfied with 9 hours of additional Russian Language courses.

## Specialized Course Requirements Credit Hours: 23

## Russian 15 hours

RUS 1103 Russian I
*RUS 1213 Russian II
*RUS 1313 Russian III
*RUS 1413 Russian IV
*RUS 2113 Intermediate Russian I

## Russian 8 hours

*RUS 1001 Russian for Communication I
RUS 1031 Russian Pronunciation
RUS 1061 Russian for Biblical Study
*RUS 1201 Russian for Communication II
*RUS 1301 Russian for Communication III
*RUS 1401 Russian for Communication IV

RUS 2033 Russian Literature in Translation
RUS 2041 Russian - Introduction to the Arts
RUS 2071 Russian History and Geography Introduction
*RUS 2143 Russian Civilization and Culture
*RUS 2213 Intermediate Russian II
*RUS 2320 International Work and/or Study Seminar
*RUS 2413 Russian Translating
RUS 2421 Russian Culture Comparisons
*RUS 2523 Intermediate Russian Grammar and Composition

## Total Credit Hours: 60

*Course has prerequisite (See course description section of catalog). A native speaker of Russian (high school courses conducted principally in Russian) cannot earn Associate of Arts degree credit toward graduation for Russian courses below the 2000 level.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## INTERNATIONAL LANGUAGE STUDIES <br> Russian Certificate Option

## Degree Awarded: Certificate of Achievement

## Certificate Requirements Credit Hours: 20

## Russian 15 hours

RUS 1103 Russian I
*RUS 1213 Russian II
*RUS 1313 Russian III
*RUS 1413 Russian IV
*RUS 2113 Intermediate Russian I

## Controlled Electives Credit Hours: 5

*RUS 1001 Russian for Communication I
RUS 1031 Russian Pronunciation
RUS 1061 Russian for Biblical Study
*RUS 1201 Russian for Communication II
*RUS 1301 Russian for Communication III
*RUS 1401 Russian for Communication IV
RUS 2033 Russian Literature in Translation
RUS 2041 Russian - Introduction to the Arts
RUS 2071 Russian History and Geography Introduction
*RUS 2143 Russian Civilization and Culture
*RUS 2213 Intermediate Russian II
*RUS 2320 International Work and/or Study Seminar
*RUS 2413 Russian Translating
RUS 2421 Russian Culture Comparisons
*RUS 2523 Intermediate Russian Grammar and Composition
One additional language, 1-3 Credit Hours
(May be Arabic, Chinese, French, German, Greek, Hebrew, Japanese, Latin, Portuguese, Spanish, or Language Instructional Technology.)

## Total Credit Hours: 20

*Course has prerequisite (See course description section of catalog).

## ARTS \& COMMUNICATIONS: INTERNATIONAL LANGUAGE ARTS

## SPANISH

## Degree Awarded: Associate in Arts

## General Education Requirements Credit Hours: 37

See the General Education Requirements for the complete list. Foreign Language ( 3 hours required elective) and International (6 hours Recommended Elective) may be satisfied with 9 hours of additional Spanish Language courses.

## Specialized Course Requirements Credit Hours: 23

## Spanish 18 hours

SPA 1103 Spanish I
*SPA 1213 Spanish II
*SPA 1313 Spanish III
*SPA 1413 Spanish IV
*SPA 2113 Intermediate Spanish
*SPA 2213 Intermediate Spanish II
or
*SPA 2523 International Spanish Grammar and Composition

## Spanish 5 hours

*SPA 1001 Spanish for Communication I
SPA 1061 Spanish for Biblical Study
*SPA 1201 Spanish for Communication II
*SPA 1301 Spanish for Communication III
*SPA 1401 Spanish for Communication IV
SPA 2033 Spanish Literature in Translation
SPA 2041 Spanish-Introduction to the Arts
SPA 2071 Spanish-Mexican History and Geography Introduction
*SPA 2121 Intermediate Spanish Communication
*SPA 2143 Latin American Civilization and Culture
*SPA 2263 Intermediate Spanish Literature
*SPA 2320 International Work and/or Study Seminar
*SPA 2330 Spanish International Seminar and/or Field Studies
*SPA 2413 Translating Spanish to English
SPA 2421 Spanish Culture Comparisons
*SPA 2443 Interpreting Spanish to English
*SPA 2453 Interpreting English to Spanish
*SPA 2463 Courtroom Interpreting Skills Introduction
*SPA 2473 Medical Interpreting Skills Introduction
*SPA 2523 Intermediate Spanish Grammar and Composition
*SPA 2533 Advanced Spanish Conversation
*SPA 2543 Translating English to Spanish
*SPA 2663 Spanish Service Learning

## Total Credit Hours: 60

*Course has prerequisite (See course description section of catalog). A native speaker of Spanish (high school courses conducted principally in Spanish) cannot earn Associate Arts degree credit toward graduation for Spanish courses below the 2000 level.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 27 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## SPANISH

Northeastern State University-Tahlequah Transfer Option 232A

## Program Description:

This program is designed for students who wish to acquire oral and written language proficiency, an awareness of the Spanishspeaking culture, and who have plans to transfer to a Northeastern State University- Tahlequah to complete a baccalaureate degree in Spanish or in Spanish Education.

## Degree Awarded: Associate in Arts

General Education Requirements Credit Hours: 34
See the General Education Requirements for the complete list. General Education required electives are met in specialized course requirements.

## Specialized Course Requirements Credit Hours: 21

## Spanish 15 hours

^SPA 1103 Spanish I
*^SPA 1213 Spanish II
*SPA 1313 Spanish III
*SPA 1413 Spanish IV
and select one from the following
*SPA 2113 Intermediate Spanish
*SPA 2213 Intermediate Spanish II
*SPA 2523 International Spanish Grammar and Composition

## International Languages $\mathbf{3}$ hours

ARA 1103 Arabic I
CHI 1103 Chinese I
FRE 1103 French I
GER 1103 German I
GRE 1103 Greek I
ITA 1103 Italian I
JPN 1103 Japanese I
LAT 1103 Latin I
NAS 1013 Cherokee Language I
POR 1103 Portuguese I
RUS 1103 Russian I

## Psychology 3 hours

**PSY 1113 Introduction to Psychology

## Controlled Electives Credit Hours: 6

*SPA 2113 Intermediate Spanish
*SPA 2143 Latin American Civilization and Culture
*SPA 2213 Intermediate Spanish II
*SPA 2263 Intermediate Spanish Literature
*SPA 2413 Translating Spanish to English
*SPA 2443 Interpreting Spanish to English
*SPA 2453 Interpreting English to Spanish
*SPA 2463 Courtroom Interpreting Skills Introduction
*SPA 2473 Medical Interpreting Skills Introduction
*SPA 2523 Intermediate Spanish Grammar and Composition
*SPA 2533 Advanced Spanish Conversation
*SPA 2543 Translating English to Spanish
*SPA 2660 Spanish Service Learning
*SPA 2773 Spanish for Native Speakers

## ARTS \& COMMUNICATIONS: INTERNATIONAL LANGUAGE ARTS

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog).
** Students transferring to the B.A.Ed. in Spanish Education must take PSY 1113, students who will be majoring in Spanish at NSU are advised to see a counselor regarding optional substitutions for this course that meet the criteria of "required electives" for general education.
$\wedge$ A maximum of 18 credit hours in Spanish will transfer toward the major requirements at NSU. SPA 1103 and 1213 will transfer as lower level electives under this agreement.
A native speaker of Spanish (high school courses conducted principally in Spanish) cannot earn Associate Arts degree credit toward graduation for Spanish courses below the 2000 level.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

## INTERNATIONAL LANGUAGE STUDIES

Spanish Certificate Option
673F

## Program Description:

This program provides an in-depth study of the spoken and written language and prepares students to use the Spanish language as a career skill. The courses are designed to emphasize acquisition of competency sufficient to communicate orally and in writing with a native speaker of the target language on a professional or work-related basis. TCC instructional methods infuse technology into the learning process, which increases access to resources for the language. Graduates find a variety of positions with government or social organizations and firms involved with speakers of the target language (translating, interpreting, investments, accounting, banking, education, publishing, manufacturing, sales, service, and travel). Courses may also be transferred to an Associate of Arts or Associate of Applied Science Degree.

## Degree Awarded: Certificate of Achievement <br> Certificate Requirements Credit Hours: 25

## Spanish 18 hours

SPA 1103 Spanish I
*SPA 1213 Spanish II
*SPA 1313 Spanish III
*SPA 1413 Spanish IV
*SPA 2113 Intermediate Spanish I
*SPA 2213 Intermediate Spanish II
or
*SPA 2523 Intermediate Spanish Grammar and Composition

## Controlled Electives Credit Hours: 7

*SPA 1001 Spanish for Communication I
SPA 1031 Spanish Pronunciation
SPA 1061 Spanish for Biblical Study
*SPA 1201 Spanish for Communication II
*SPA 1301 Spanish for Communication III
*SPA 1401 Spanish for Communication IV
SPA 2033 Spanish Literature in Translation
SPA 2041 Spanish - Introduction to the Arts
SPA 2071 Spanish-Mexican History and Geography Introduction
*SPA 2121 Intermediate Spanish Communication
*SPA 2143 Latin American Civilization and Culture
*SPA 2263 Intermediate Spanish Literature
*SPA 2320 International Work and/or Study Seminar
*SPA 2330 Spanish International Seminar and/or Field Studies
*SPA 2413 Translating Spanish to English SPA 2421 Spanish Culture Comparisons
*SPA 2443 Interpreting Spanish to English
*SPA 2453 Interpreting English to Spanish
*SPA 2523 Intermediate Spanish Grammar and Composition
*SPA 2533 Advanced Spanish Conversation
*SPA 2543 Translating English to Spanish
One additional language, 1-3 Credit Hours
(May be Arabic, Chinese, French, German, Greek, Hebrew, Japanese, Latin, Portuguese, or Language Instructional Technology.)

## Total Credit Hours: 25

*Course has prerequisite (See course description section of catalog).

## INTERNATIONAL LANGUAGE STUDIES <br> Spanish Translating Skills-Certificate Option <br> 673H

## Program Description:

This program provides an introduction to interpreting skills for the courtroom or medical areas. Courses are designed to emphasize acquisition of speaking competency sufficient to communicate fluently (Spanish to English and English to Spanish) and to provide communication assistance between non-Spanish speaking medical personnel and non-English speaking patients with legal or medical groups.

## Degree Awarded: Certificate of Achievement Certificate Requirements Credit Hours: 21

## Spanish Credit Hours: 18

*SPA 1313 Spanish III
*SPA 1413 Spanish IV
*SPA 2443 Interpreting Spanish to English
*SPA 2453 Interpreting English to Spanish and select one of the following:
*SPA 2113 Intermediate Spanish I
*SPA 2213 Intermediate Spanish II
*SPA 2523 Spanish Grammar and Composition and select one of the following:
*SPA 2463 Courtroom Interpreting Skills Introduction
*SPA 2473 Medical Interpreting Skills Introduction

## Controlled Electives Credit Hours: 3

*SPA 2121 Intermediate Spanish Communication
*SPA 2143 Latin America Civilization and Culture
*SPA 2421 Spanish Culture Comparisons
*SPA 2533 Advanced Spanish Conversation
-SPA 2661-3 Spanish Service Learning

## Total Credit Hours: 21

*Course has prerequisite (See course description section of catalog)

## INTERNATIONAL LANGUAGE STUDIES <br> Spanish Translating Skills-Certificate Option

## Program Description:

This program provides an introduction to translating skills. Courses are designed to emphasize usage of language competency for written translation purposes (Spanish to English and English to Spanish). Holders of the certificate find a variety of opportunities in business and industry and social service areas.

## Degree Awarded: Certificate of Achievement

## ARTS \& COMMUNICATIONS: LIBERAL ARTS \& SOCIAL SCIENCES

Certificate Requirements Credit Hours: 21<br>Spanish Credit Hours: 18<br>*SPA 1313 Spanish III<br>*SPA 1413 Spanish IV<br>*SPA 2113 Intermediate Spanish I<br>*SPA 2413 Translating Spanish to English<br>*SPA 2543 Translating English to Spanish<br>and select one of the following:<br>*SPA 2213 Intermediate Spanish II<br>*SPA 2523 Spanish Grammar and Composition<br>\section*{Controlled Electives Credit Hours: 3}<br>*SPA 2321-3 International Work and/or Study Seminar<br>*SPA 2331-3 Spanish International Seminar and/or Field Studies<br>*SPA 2143 Latin American Civilization and Culture

Total Credit Hours: 21
*Course has prerequisite (See course description section of catalog)

```
For More Information Contact:
Dean of Global Education
918-595-7851
Counseling Centers
Metro:918-595-7151 • Northeast: 918-595-7451
```


## AMERICAN STUDIES

## Program Description:

Students who are interested in pursuing a course of study leading to a baccalaureate degree in American Studies may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalogs of the universities where the four-year degree is offered and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at the university of their choice.

## Degree Awarded: Associate in Arts

## General Education Requirements Credit Hours: 25

Additional general education requirements met in specialized course requirements.

## English 6 hours

*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

## Humanities 3 hours

HUM 2553 American Humanities

## Mathematics 3 hours

*MTH 1513 College Algebra

## Social Sciences 6 hours

POS 1113 American Federal Government
and select one course from the following:
HIS 1483 U.S. 1492 to Civil War Era
HIS 1493 U.S. Civil War Era to Present

## Science 7 hours

Seven credit hours of science (one course must be a laboratory science) from the General Education Requirements list.

Specialized Course Requirements Credit Hours: 21
*ENG 2773 Survey of American Literature to 1865
*ENG 2883 Survey of American Literature from 1865
REL 2233 Religion in America
and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War
HIS 1493 U.S. History Civil War to Present
Select one of the following courses on minorities in America:
*ENG 2893 Minority Literature
HIS 2333 African-American History
HIS 2343 Native American History
(Same course as NAS 2343 Native American Histories)
SOC 2143 Minorities in America
Select one of the following courses on American society:
HIS 2043 Contemporary Affairs
SOC 2113 Social Problems in America
PHI 2143 Introduction to Social and Political Philosophy POS 2023 Introduction to American Politics
*SOC 2013 Marriage and Family
NAS 2513 Introduction to Native American Law
Note: Courses in Native American Studies have not yet been approved for transfer as part of the $2+2$ program with Oklahoma State University.
Select one of the following courses on American culture:
HUM 2443 Art of Film
HUM 2663 Hollywood's America
HUM 2773 American Popular Culture
HUM 2883 Art and Identity: Cultural Encounters In Am.
NAS 2113 Introduction to Native American Cultures
NAS 2213 Introduction to Native American Spiritualities
NAS 2313 Introduction to Native American Literature/Drama/Film
Note: Courses in Native American Studies have not yet been approved for transfer as part of the $2+2$ program with Oklahoma State University.

## Required Electives Credit Hours: 9

Any course not taken from the list of specialized course requirements may be taken as a required elective) Foreign Language through Level IV. Spanish is recommended. (Students planning to transfer to OSU should meet the language requirement in the associate degree program.)
HIS 1033 Oklahoma History
HIS 1073 Twentieth Century World History
HIS 2533 American Frontier
NAS 2990 Selected Topics in Native American Studies
Note: Courses in Native American Studies have not yet been approved for transfer as part of the $2+2$ program with Oklahoma State University.

## Recommended Electives Credit Hours: 6

(Any course not taken from the list of required electives may be taken as a recommended elective.)
HIS 1063 Modem Western Civilization
HUM 2223 Humanities II
REL 1223 Religions of the World:The Western Tradition

## Total Hours: 61

*Course has prerequisite (See course description section of catalog). Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.
To receive an A. A. or A. S. degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

Tulsa Community College

## ARTS \& COMMUNICATIONS: LIBERAL ARTS \& SOCIAL SCIENCES

## HISTORY

## Program Description:

To function in a particular society or in an international setting, it is crucial to gain an accurate historical understanding of a present situation or past event through the study of history. The study of history involves verifying events and ideas, exploring the causes and effects of events and ideas, reconciling various interpretations of them, and making informed judgments about how to utilize differing views to assert a conclusion. In addition, it is essential that the historical reasoning process be expressed in a clear and effective style of written communication.

## Degree Awarded: Associate in Arts

General Education Requirements Credit Hours: 37
See the General Education Requirements for the complete list.

## Specialized Course Requirements Credit Hours: 12

## History 12 hours

HIS 1033 History of Oklahoma
HIS 1044 Oklahoma History plus Research
HIS 1053 Ancient and Medieval Western Civilization
HIS 1063 Modern Western Civilization
HIS 1073 Twentieth Century World History
HIS 1083 Survey of English History to 1688
HIS 1093 Survey of English History 1688 to Present
HIS 1483 U.S. History 1492 to Civil War Era or
HIS 1493 U.S. History Civil War Era to Present
HIS 2023 Modern Eastern Civilization
HIS 2043 Contemporary Affairs
HIS 2163 Introduction to the History and Philosophy of Science HIS 2223 Modern Latin American History

HIS 2333 African-American History
HIS 2343 Native American History HIS 2533 Survey of the American Frontier

## Recommended Electives Credit Hours: 12

Choose from at least three disciplines:
ECO 2013 Principles of Macroeconomics
*ENG 2413 Introduction to Literature
*ENG 2543 Survey of British Literature to 1800
*ENG 2653 Survey of British Literature from 1800
*ENG 2773 Survey of American Literature to 1865
*ENG 2883 Survey of American Literature from 1865
GEO 1014 Geography (Physical)
PHI 1113 Introduction to Philosophy
PHI 2163 Introduction to the History and Philosophy of Science
POS 1023 Introduction to State and Local Government
*POS 2013 Introduction to Comparative Governments
*POS 2023 Introduction to American Politics
*POS 2033 Introduction to Political Thought
*POS 2133 Introduction to Public Administration
*POS 2153 Introduction to the Constitution and Judicial Process
*POS 2203 Introduction to International Relations
PSY 1113 Introduction to Psychology
*PSY 2053 Social Psychology
REL 2233 Religion in America
SOC 1113 Introduction to Sociology
SOC 2123 Introduction to Cultural Anthropology
Total Credit Hours: 61
*Course has prerequisite (See course description section of catalog). Proficiency in a foreign language is recommended. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.


## ARTS \& COMMUNICATIONS: LIBERAL ARTS \& SOCIAL SCIENCES

## HUMANITIES

097

## Program Description:

According to Socrates,"the unexamined life is not worth living." By studying the humanities, students will have the opportunity to examine the diverse expressions of human experience. The humanities can be understood as the systematic study of the human artistic/creative response to the circumstances of existence. Human creativity in all cultures has manifested itself in a variety of forms including, but not limited to the academic disciplines of: painting, sculpture, architecture, literature, poetry, drama, philosophy, music, dance, and film. Humanities courses approach this subject matter in a manner that encourages the cultivation of diverse cultural and analytical perspectives in an attempt to carefully reflect upon the wider implications of being human.

## Degree Awarded: Associate in Arts

## General Education Requirements Credit Hours: 31

See the General Education Requirements for complete list. Humanities requirements are met in Specialized Course Requirements.

## Specialized Course Requirements Credit Hours: 21

## Humanities 9 hours

HUM 2113 Humanities I
HUM 2223 Humanities II
HUM 2553 American Humanities
Select 9 credit hours from the following:
HUM 2333 Humanities: Literature and Film
HUM 2443 Art of Film
HUM 2663 Hollywood's America
HUM 2773 Popular Culture
HUM 2883 Culture and Identity
Select 3 credit hours from the following:
HUM 2613 International Film
GEO 1043 Introduction to Cultural Geography
ASN 2103 Survey of Asian Civilizations
AFR 2713 Survey of African Civilizations
HIS 2223 Modern Latin American History
NAS 2113 Native American Culture
NAS 2213 Spiritualities of Native America
NAS 2313 Introduction to Native American Literature, Drama, and Film
REL/PHI 1213 Religions of the World: Eastern Tradition
REL/PHI 1223 Religions of the World:Western Tradition

## Controlled Electives Credit Hours: 6

Select any 6 credit hours from the following courses
ART 1053 Art History Survey I
ART 1063 Art History Survey II
ART 2053 Art History Survey IV
*ENG 2543 Survey of British Literature to 1800
*ENG 2653 Survey of British Literature from 1800
*ENG 2673 World Literature to 1700
*ENG 2683 World Literature from 1700
*ENG 2773 Survey of American Literature to 1865
*ENG 2883 Survey of American Literature from 1865
HIS 1053 Ancient and Medieval Western Civilization

HIS 1063 Modern Western Civilization
MUS 1113 Music Appreciation
PHI 1113 Introduction to Philosophy
PHI 2163 Introduction to the History and Philosophy of Science
REL 1113 Introduction to Religious Studies
REL 2243 Christian Ethics and Social Thought
REL 2313 Religion in Film
SOC 2123 Introduction to Cultural Anthropology
THE 1093 Introduction to Theatre
Recommended Electives Credit Hours: 3
Select any additional 3 credit hours
Foreign Languages strongly suggested
Total Credit Hours: 61
*Course has prerequisite (See course description section of catalog). Proficiency in foreign language is recommended.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## LIBERAL ARTS

General Emphasis

## Program Description:

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

## Degree Awarded: Associate in Arts

General Education Requirements Credit Hours: 31
See the General Education Requirements for the complete list. Recommended electives are satisfied in specialized course requirements.

## Specialized Course Requirements Credit Hours: 29

HUM 2113 Humanities I
HUM 2223 Humanities II
Choose from at least four different disciplines for the remaining 23 credit hours
Total Credit Hours: 60
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## LIBERAL ARTS <br> Film Emphasis

115 C
Program Description:
This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.
Degree Awarded: Associate in Arts

Tulsa Community College

## ARTS \& COMMUNICATIONS: LIBERAL ARTS \& SOCIAL SCIENCES

## General Education Requirements Credit Hours: 31

See the General Education Requirements for the complete list. Recommended electives are satisfied in specialized course requirements.

## Specialized Course Requirements Credit Hours: 33

## Art 3 hours

ART 1113 Art Appreciation
or
ART 1063 Art History Survey II

## Computer Sciences 3 hours

CSC 1203 Computer Concepts and Applications

## Filmmaking 9 hours

ART 2813 Filmmaking I
*ART 2823 Film Internship, Filmmaking II
ART 2913 Film/Video History Analysis I

## Humanities 9 hours

HUM 2333 Film and Literature
HUM 2443 Art of Film
HUM 2663 Hollywood's America
Theatre 6 hours
THE 1053 Acting I
THE 2453 Scriptwriting
Recommended Electives Credit Hours: 3
*ART 1123 Drawing I
ART 2853 Photography
HUM 2613 International Film
REL 2313 Religion in Film
Any Foreign Language

## Total Credit Hours: 64

*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## LIBERAL ARTS

International Emphasis

## 115 A

## Program Description:

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

## Degree Awarded: Associate in Arts

## For More Information Contact:

Liberal Arts Divisions: Metro: (918) 595-7118 Northeast: (918) 595-7494 Southeast: (918) 595-7780 West: (918) 595-8079
Counseling Centers: Metro: (918) 595-7151 Northeast: (918) 5957451 Southeast: (918) 595-7651 West: (918) 595-8176 General Education Requirements Credit Hours: 31 Recommended electives are satisfied in specialized course requirements.

## English 6 hours

*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

## Humanities 6 hours

HUM 2113 Humanities I
HUM 2223 Humanities II

## Mathematics 3 hours

*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry
*MTH 1715 College Algebra and Trigonometry
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II

## Science 7 hours

One course must be a laboratory science
BIO 1114 General Biology for Non-Majors
BIO 1383 Nutrition
*BIO 1404 General Botany
*BIO 1604 Zoology
*BIO 2154 Human Physiology
*BIO 2164 Microbiology
*CHE 1114 Principles of Chemistry
GEL 1014 General Geology (Physical)
GEL 1024 General Geology (Historical)
GEO 1014 Geography (Physical)
GEO 2013 Meteorology
*PHY 1114 General Physics I
*PSC 1114 General Physical Science

## Social Science 6 hours

HIS 1493 U.S. History Civil War Era to Present
POS 1113 American Federal Government

## Required Electives Credit Hours: 3

Art 1113 Art Appreciation
MUS 1113 Music Appreciation
SOC 2123 Introduction to Cultural Anthropology

## Specialized Course Requirements Credit Hours: 30

## Economics 3 hours

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics
ECO 2123 International Economic Issues

## Foreign Language 6 hours

**(Same language)

## Geography 3 hours

GEO 1023 World Geography (Economic)
GEO 1043 Introduction to Cultural Geography
GEO 2033 World Regional Geography

## History 3 hours

HIS 1063 Modern Western Civilization HIS 1073 Twentieth Century World History HIS 2023 Modern Eastern Civilization HIS 2043 Contemporary Affairs HIS 2223 Modern Latin American History HIS 2333 African American History

## ARTS \& COMMUNICATIONS: LIBERAL ARTS \& SOCIAL SCIENCES

## Philosophy/Religion 3 hours

PHI/REL 1213 Religions of the World:The Eastern Tradition PHI/REL 1223 Religions of the World:The Western Tradition

## Political Science 3 hours

*POS 2013 Introduction to Comparative Governments
*POS 2203 Introduction to International Relations

## Controlled Electives 9 hours

select one from the following:
CSC 1203 Computer Concepts and Applications
*ENG 2673 Survey of World Literature to 1700
*ENG 2683 Survey of World Literature from 1700
SPE 2053 Intercultural Communication
and select two from the following:
AFR 2713 Survey of African Civilization
ASN 1103 Asian Philosophy and Culture
BIO 2123 Human Ecology
HUM 2163 International Film
NAS 2113 Native American Cultures

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog). ${ }^{* *}$ Check catalog for advanced credit. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## LIBERAL ARTS

Native American Emphasis
115 D

## Program Description:

This emphasis is designed to meet the educational needs of both Native American and non-Native American students. Native American Studies (NAS) courses focus upon the diverse world-views expressed in Native American cultures, spiritualities, histories, oral traditions, and literatures. The suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

## Degree Awarded: Associate in Arts

## For More Information Contact:

Humanities/Native American Studies Program (918) 595-8210 Liberal Arts Division:West (918) 595-8079
Counseling Center:West (918) 595-8176

## General Education Requirements Credit Hours: 28 <br> English 6 hours

*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

## Humanities 6 hours

GEO 1043 Introduction to Cultural Geography
and select one of the following:
HUM 2113 Humanities I
HUM 2223 Humanities II

## Mathematics 3 hours

*MTH 1513 College Algebra
*MTH 1473 Mathematics for Critical Thinking

## Science 7 hours

See the General Education Requirements page for complete list (one course must be a laboratory science).

## Social Science 6 hours

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Additional 9 credit hours required and recommended electives are satisfied in specialized course requirements.

## Specialized Course Requirements Credit Hours: 24

## Select four courses in Native American Studies:

NAS 1013 Cherokee Language I
NAS 1023 Cherokee Language II
NAS 2013 Images of Indians in American Culture
NAS 2113 Native American Cultures
NAS 2213 Native American Spiritualities
NAS 2313 Native American Literature/Drama/Film
NAS/HIS 2343 Native American History
NAS 2513 Native American Law
NAS 2613 Native American Art

## Select four courses on American society:

(Any course not taken from the list of Native American Studies courses may be substituted for a course on American society.) HIS 1033 Oklahoma History
HIS 1483 U.S. History 1492 to Civil War Era
or
HIS 1493 U.S. History Civil War Era to Present
HIS 2533 American Frontier
HUM 2553 American Humanities
HUM 2663 Hollywood's America
HUM 2773 American Popular Culture
HUM 2883 Art and Identity: Cultural Encounters in America
REL 2233 Religion in America
SOC 2113 Social Problems In America
SOC 2143 Minorities in America

## Recommended Electives Credit Hours: 9

(Any course not taken from the list of General Education Requirements or the lists of Specialized Course Requirements may be taken as an elective.)
ART 1113 Art Appreciation
CSC 1203 Computer Concepts and Applications
GEO 2153 Human Ecology
HT 1303 Principles of Horticulture
HT 1343 Plant Identification
HUM 2113 Humanities I or
HUM 2223 Humanities II
REL 1113 Introduction to Religious Studies
REL/SOC 2173 Religion and Society
SOC 2123 Introduction to Cultural Anthropology
SPE 2053 Intercultural Communication

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

## ARTS \& COMMUNICATIONS: LIBERAL ARTS \& SOCIAL SCIENCES

PARALEGAL, AA and AAS<br>See Community Services, Law, Public Safety \& Corrections

## PHILOSOPHY

## Program Description:

Philosophy seeks answers to fundamental questions such as: How do I know this to be true? What kind of life should a human being live? Is there such a thing as religious or scientific truth? What is the world ultimately like? Philosophy attempts to develop and use critical methods; that is, to develop standards of logical thinking as opposed to emotional reaction Philosophy, then, seeks to develop analytical skills that will be useful in every aspect of life as well as enriching and fulfilling to the individual.

## Degree Awarded: Associate in Arts

## General Education Requirements Credit Hours: 31

See the General Education Requirements for the complete list. Humanities requirement is satisfied in Specialized Course Requirements.

## Specialized Course Requirements Credit Hours: 15

## Philosophy 15 hours

PHI 1113 Introduction to Philosophy
PHI 1133 Philosophy in Literature
PHI 1143 Introduction to Ethics: Business Issues
PHI 1213 Religions of the World:The Eastern Tradition
PHI 1223 Religions of the World:The Western Tradition
PHI 2113 Logic
PHI 2133 Introduction to Ethical Thinking
PHI 2143 Introduction to Social and Political Philosophy
PHI 2153 Medical Ethics
PHI 2163 Introduction to the History and Philosophy of Science
PHI 2173 Introduction to the Philosophy of Religion
PHI 2203 Symbolic Logic

## Recommended Electives Credit Hours: 15

*ENG 2413 Introduction to Literature
HIS 1053 Ancient and Medieval Western Civilization
*POS 2033 Introduction to American Politics
PSY 1023 Psychology of Personal Adjustment
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America
SOC 2123 Introduction to Cultural Anthropology

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog). Proficiency in a foreign language is recommended.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## POLITICAL SCIENCE

190

## Program Description:

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Political Science may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalogs of the universities where the four-year degree is offered and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at the university of their choice.

## Degree Awarded: Associate in Arts

## General Education Requirements Credit Hours: 37

See the General Education Requirements for the complete list.
Specialized Course Requirements Credit Hours: 12
*POS 2013 Introduction to Comparative Governments
*POS 2023 Introduction to American Politics
*POS 2033 Introduction to Political Thought
*POS 2103 Introduction to State and Local Government
*POS 2133 Introduction to Public Administration
*POS 2153 Introduction to the Constitution and Judicial Process
*POS 2203 Introduction to International Relations
Recommended Electives Credit Hours: 12
Choose from at least three different disciplines.
CSC 1203 Computer Concepts and Applications
ECO 2013 Principles of Macroeconomics
GEO 1023 World Geography (Economic)
HIS 1033 History of Oklahoma
HIS 1053 Ancient and Medieval Western Civilization
HIS 1063 Modern Western Civilization
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
HIS 2043 Contemporary Affairs
PHI 1113 Introduction to Philosophy
PHI 2163 Introduction to the History and Philosophy of Science
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America
*SOC 2223 Behavioral Statistics

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog) Proficiency in a foreign language is recommended.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## ARTS \& COMMUNICATIONS: LIBERAL ARTS \& SOCIAL SCIENCES

## PSYCHOLOGY

## 195

## Program Description:

Psychology is the science of behavior and mental processes. Students investigate such topics as personality theories, social psychology, psychological disorders, motivation, learning, physiology, memory and cognition. Through this program, students will explore the complexity of the human experience through all stages of human development.

## Degree Awarded: Associate in Arts

General Education Requirements Credit Hours: 37
See the General Education Requirements for the complete list.
Specialized Course Requirements Credit Hours: 15

## Psychology 15 hours

PSY 1113 Introduction to Psychology
PSY 1313 Human Relations
*PSY 2023 Developmental Psychology
*PSY 2053 Social Psychology
PSY 2123 Leadership Development
PSY 2143 Guided Activities in Service Learning
*PSY 2193 Personality Theories
*PSY 2203 Mind and Behavior
*PSY 2213 Brain and Behavior
*PSY 2223 Behavioral Statistics
PSY 2313 Psychology and Law
*PSY 2323 Conflict Resolution
PSY 2523 Child Psychology
*PSY 2533 Adolescent Psychology
*PSY 2613 Adult Psychology
*PSY 2633 Industrial and Organizational Psychology
*PSY 2713 Aging and Behavior
*PSY 2813 Human Sexuality
Recommended Electives Credit Hours: 9
CSC 1203 Computer Concepts and Applications
*MTH 1513 College Algebra
PHI 1113 Introduction to Philosophy
PHI 2163 Introduction to the History and Philosophy of Science
*PSY 2130 Crisis Intervention and Experience
SOC 1113 Introduction to Sociology
*SOC 2013 Marriage and Family

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog). Proficiency in a foreign language is recommended.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## RELIGIOUS STUDIES

## Program Description:

Religion is one of the primary social activities of humankind. Its study involves a comparative understanding of the various ways different peoples, across time and space, have developed their religious ideas, values, systems, beliefs, rituals, and traditions in response to fundamental questions of human existence. Religious Studies offers a rigorous, systematic, and objective intellectual inquiry into various aspects of religions,
their adherents and world views, their goals and expressions. It employs a wide variety of approaches and methods in order to understand the role of religion in human experience and thought. Courses in Religious Studies are for majors and for those meeting Humanities credit requirements. They are designed to be non-technical and to appeal to a broad range of interests.

## Degree Awarded: Associate in Arts

## General Education Requirements Credit Hours: 31

See the General Education Requirements for the complete list. Humanities requirement is satisfied in Specialized Course Requirements.

## Course Requirements Credit Hours: 24

## Religious Studies 12 hours

REL 1113 Introduction to Religious Studies
and any three of the following:
REL 1213 Religions of the World:The Eastern Tradition
REL 1223 Religions of the World:The Western Tradition
REL 2113 Old Testament
REL 2123 New Testament

## Required Electives 12 hours

Any course not selected from above
PHI 2173 Introduction to the Philosophy of Religion
REL/SOC 2173 Religion and Society
REL 2233 Religion in America
REL 2243 Christian Ethics and Social Thought
REL 2313 Religion in Film

## Recommended Electives Credit Hours: 6

## General Emphasis

*ENG 2543 Survey of British Literature to 1800
*ENG 2773 Survey of American Literature to 1865
HIS 1053 Ancient and Medieval Western Civilization
HIS 1063 Modern Western Civilization
HUM 2113 Humanities I
HUM 2223 Humanities II
PHI 1113 Introduction to Philosophy
PHI 1133 Philosophy in Literature
PHI 2133 Introduction to Ethical Thinking
PSY 1113 Introduction to Psychology
REL 2330 Field Studies in Religion
SOC 1113 Introduction to Sociology
SOC 2123 Introduction to Cultural Anthropology
or
International Studies Emphasis
GRE 1023 Biblical Greek I
*GRE 1223 Biblical Greek II
HEB 1023 Biblical Hebrew I
*HEB 1223 Biblical Hebrew II
LAT 1103 Latin I
*LAT 1213 Latin II

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## ARTS \& COMMUNICATIONS: LIBERAL ARTS \& SOCIAL SCIENCES

## SOCIOLOGY

223

## Program Description:

Sociology is the study of social life, social change, and the social causes and consequences of human behavior. Sociologists investigate the structure of groups, organizations, and societies, and how people interact within these contexts. Since all human behavior is social, the subject matter of sociology ranges from the intimate family to the hostile mob, from organized crime to religious cults, from the divisions of race, gender and social class to the shared beliefs of a common culture, and from the sociology of work to the sociology of sports. Because sociology addresses the most challenging issues of our time, it is a rapidly expanding field whose potential is increasingly tapped by those who craft policies and create programs.

## Degree Awarded: Associate in Arts

## General Education Requirements Credit Hours: 37

See the General Education Requirements for the complete list.

## Specialized Course Requirements Credit Hours: 15

## Required 6 hours

SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America
Choose at least three courses 9 hours
*SOC 2013 Marriage and Family
*SOC 2043 Juvenile Delinquency
*SOC 2053 Social Psychology
*SOC 2123 Introduction to Cultural Anthropology
*SOC 2133 Introduction to Deviant Behavior
*SOC 2143 Minorities in America
SOC/REL 2173 Religion and Society
*SOC 2223 Behavioral Statistics
*SOC 2713 Aging and Behavior
*SOC 2813 Human Sexuality

## Recommended Electives Credit Hours: 9

*CSC 1203 Computer Concepts and Applications ECO 2013 Principles of Macroeconomics
*ENG 2883 Survey of American Literature from 1865
HIS 2043 Contemporary Affairs
HUM 2223 Humanities II
PHI 1113 Introduction to Philosophy
PHI 2113 Logic
PHI 2133 Introduction to Ethical Thinking
PHI 2163 Introduction to the History and Philosophy of Science
*POS 2033 Introduction to Political Thought
PSY 1023 Psychology of Personal Adjustment
PSY 1113 Introduction to Psychology
PSY 1313 Human Relations
*SOC 1073 Human Service Techniques
*SOC 1130 Crisis Intervention and Experience
*SOC 2243 Introduction to Social Work
SPE 1013 Fundamentals of Listening

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog).
Proficiency in a foreign language is recommended.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.


## ARTS \& COMMUNICATIONS: VISUAL \& PERFORMING ARTS



## ART

*ART 1123 Drawing I
*ART 1133 Drawing II
*ART 2063 Watercolor I
*ART 2073 Watercolor II
*ART 2083 Sculpture I
*ART 2093 Sculpture II
*ART 2143 Figure Drawing I
*ART 2153 Figure Drawing II
*ART 2223 Printmaking I
*ART 2233 Printmaking II
*ART 2243 Serigraphy I
*ART 2253 Serigraphy II
*ART 2263 Introduction to Ceramics
*ART 2313 Jewelry I
*ART 2323 Jewelry II
*ART 2403 Illustration I
*ART 2413 Typography I
*ART 2423 Graphic Design I
ART 2853 Photography
Recommended Electives Credit Hours: 3
*ART 2530 Field Studies in Art
HIS 1053 Ancient and Medieval Western Civilization
HUM 2113 Humanities I
HUM 2223 Humanities II
MUS 1113 Music Appreciation
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology
SOC 2123 Introduction to Cultural Anthropology
THE 1093 Introduction to Theatre

## Total Credit Hours: 61

*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## INTERIOR DESIGN, AAS \& CER <br> See Business Area of Study

## ARTS \& COMMUNICATIONS: VISUAL \& PERFORMING ARTS

## MUSIC

## Program Description:

This program is designed to create a solid musical foundation in our students enabling them to transfer into four-year colleges and universities to pursue a baccalaureate degree in music.
The program is also an appropriate course of study for individuals preparing for one of the many careers in music which do not require a baccalaureate degree. Skill enhancement and depth are provided by course work in applied music performance ensembles, music theory, music literature, keyboard, computer techniques, and private lessons. Students have the opportunity to broaden the scope of their classroom education by participation in performance groups including the Concert Choir, Show Choir, Concert Band, Jazz Band Orchestra, and chamber ensembles. The music degree program is supported by a substantial performing arts facility which includes a music recording studio, practice rooms, a MIDI keyboard laboratory, and choral and instrumental rehearsal halls. Most music programs are presented at the state-of-the-art VanTrease Performing Arts Center for Education.

## Degree Awarded: Associate in Arts

## For More Information Contact:

Performing Arts Division: Southeast: (918) 595-7752
TCC Theatre Office: Southeast: (918) 595-7733
Counseling Center: Southeast: (918) 595-7651

## General Education Requirements Credit Hours: 28

See the General Education Requirements for the complete list.
Recommended electives and required electives are satisfied in the Specialized course Requirements.

## Specialized Course Requirements Credit Hours: 37-45

## Performance 4 hours

A music major must enroll in at least one of these each semester. Substitutions may be made only with Associate Dean's approval.
*MUS 1541 Orchestra
*MUS 1551 Concert Choir
*MUS 1651 Concert Band

## Applied Music Lessons 8 hours

*** MUS 1200-1490 Private Lessons
*** MUS 2200-2240 Private Lessons

## Piano 0-8 hours

A music major must be proficient in or enrolled in:
MUS 1612 Class Piano I
*MUS 1622 Class Piano II
*MUS 1632 Class Piano III
*MUS 1642 Class Piano IV

## Theory \& History 23 hours

*MUS 1013 Music Theory I
*MUS 1023 Music Theory II
*MUS 1062 Aural Theory I
*MUS 1072 Aural Theory II
*MUS 2013 Music Theory III
*MUS 2023 Music Theory IV
*MUS 2062 Aural Theory III
*MUS 2072 Aural Theory IV
*MUS 2133 Introduction to History and Literature of Music

## Recommended Electives 2 hours

MUS 1002 Fundamentals of Music
MUS 1053 Recording Studio Techniques I
*MUS 1142 Computer Music Techniques I
MUS 1512 Voice Class
*MUS 1562 Musical Theatre
*MUS 1661 Jazz Band
*MUS 1701 String Orchestra
*MUS 1711 Brass Ensemble
*MUS 1721 Woodwind Ensemble
*MUS 1761 String Quartet
*MUS 1781 Chamber Ensemble
*MUS 1771 Percussion Ensemble
*MUS 1801 Jazz Lab
MUS 2122 Percussion Class
MUS 2161 Cello Choir
MUS 2171 Beginning Guitar
*MUS 2181 Show Choir
*MUS 2223 Recording Studio Techniques II
*MUS 2333 Music Internship

## Total Credit Hours: 65-73

*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
${ }^{* * *}$ Music majors at four-year colleges/universities are required to take 2 credit hours of private instruction per semester.
Scholarships may be available. Please contact the music office at 595-8698.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

## STAGE PRODUCTION TECHNOLOGY

## Program Description:

This program is designed to prepare students for a career in Stage Production Technology. It also is designed for those students presently employed in the Stage Production field who desire advancement.

## Degree Awarded: Associate in Applied Science

## For More Information Contact:

Performing Arts Division: Southeast: (918) 595-7752
TCC Theatre Office: Southeast: (918) 595-7733
Counseling Center: Southeast: (918) 595-7651

## General Education Requirements Credit Hours: 19

## English 6 hours

*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

## Mathematics 4 hours

*MTH 1454 Technical Mathematics

## Psychology 3 hours

*PSY 1313 Human Relations
PSY 1113 Introduction to Psychology

## ARTS \& COMMUNICATIONS: VISUAL \& PERFORMING ARTS

## Social Science 6 hours

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

## Specialized Course Requirements Credit Hours: 42

## Computer Information Systems 3 hours

Select 3 credit hours from any Computer Information Systems (CIS/CSC) courses.

## Theatre 39 hours

THE 1033 Stagecraft I
*THE 1043 Stagecraft II
THE 1073 Entertainment Electrical Fundamentals
THE 1093 Introduction to Theatre
THE 1113 Theatre Graphics
THE 1123 Introduction to Sound Reinforcement
THE 1133 Costume Techniques I
THE 1143 Introduction to Rigging \& Fly Systems
THE 2063 Fundamentals of Stage Lighting
THE 2073 Introduction to Production Design
THE 2233 Entertainment - Computer Aided Design
THE 2253 Stage Management
*THE 2273 Stage Production Technology Internship

## Recommended Electives Credit Hours: 3

ART 1013 Fundamentals of Art I
ART 1083 Fundamentals of Art II
THE 2013 Makeup I
*THE 2133 Advanced Lighting for the Stage
*THE 2153 Advanced Sound Reinforcement
THE 2343 Introduction to Costume Design
Total Credit Hours: 64
*Course has prerequisite (See course description section of catalog).

## STAGE PRODUCTION TECHNOLOGY Costume Certificate

## Program Description:

This program is designed to prepare students for a career in Stage Production Technology. It is also designed for those students presently employed in the Stage Production field who desire advancement.

Degree Awarded: Certificate of Achievement
Certificate Requirements Credit Hours: 33

## Art 3 hours

ART 1013 Fundamentals of Art

## Theatre $\mathbf{3 0}$ hours

THE 1093 Introduction to Theatre
THE 1113 Theatre Graphics
THE 1133 Costume Techniques I
THE 2013 Makeup I
*THE 2043 Costume History
*THE 2093 Makeup II
*THE 2143 Costume Techniques II
*THE 2233 Entertainment Computer Aided Design
*THE 2273 Stage Production Technology Internship
THE 2343 Introduction to Costume Design

## Total Credit Hours: 33

*Course has prerequisite (See course description section of catalog).

## STAGE PRODUCTION TECHNOLOGY <br> Entertainment Construction Certificate

## Program Description:

This program is designed to prepare students for a career in Stage Production Technology. It is also designed for those students presently employed in the Stage Production field who desire advancement.

## Degree Awarded: Certificate of Achievement

Certificate Requirements Credit Hours: 22

## Mathematics 4 hours

*MTH 1454 Technical Mathematics

## Theatre $\mathbf{1 8}$ hours

THE 1033 Stagecraft I
THE 1043 Stagecraft II
THE 1093 Introduction to Theatre
THE 1113 Theatre Graphics
THE 1143 Introduction to Rigging Fly Systems
*THE 2273 Stage Production Technology Internship

## Total Credit Hours: 22

*Course has prerequisite (See course description section of catalog).

## ARTS \& COMMUNICATIONS: VISUAL \& PERFORMING ARTS

## STAGE PRODUCTION TECHNOLOGY Lighting Certificate <br> 927C

## Program Description:

This program is designed to prepare students for a career in Stage Production Technology. It is also designed for those students presently employed in the Stage Production field who desire advancement.

## Degree Awarded: Certificate of Achievement

Certificate Requirements Credit Hours: 28

## Mathematics 4 hours

*MTH 1454 Technical Mathematics

## Theatre $\mathbf{2 4}$ hours

THE 1073 Entertainment Electrical Fundamentals THE 1093 Introduction to Theatre
THE 1113 Theatre Graphics
THE 1143 Introduction to Rigging Fly Systems
THE 2063 Fundamentals of Stage Lighting
*THE 2133 Advanced Lighting for the Stage
*THE 2233 Entertainment Computer Aided Design
*THE 2273 Stage Production Technology Internship

## Total Credit Hours: 28

*Course has prerequisite (See course description section of catalog).

## STAGE PRODUCTION TECHNOLOGY Rigging Certificate

## Program Description:

This program is designed to prepare students for a career in Stage Production Technology. It is also designed for those students presently employed in the Stage Production field who desire advancement.

## Degree Awarded: Certificate of Achievement

## For More Information Contact:

Performing Arts Division: Southeast: (918) 595-7752
TCC Theatre Office: Southeast: (918) 595-7733
Counseling Center: Southeast: (918) 595-7651

## Certificate Requirements Credit Hours: 27

## Theatre 27 hours

THE 1033 Stagecraft I
THE 1073 Entertainment Electrical Fundamentals
THE 1093 Introduction to Theatre
THE 1113 Theatre Graphics
THE 1143 Introduction to Rigging Fly Systems
THE 2063 Fundamentals of Stage Lighting
*THE 2173 Arena Rigging
THE 2233 Entertainment Computer Aided Design
*THE 2273 Stage Production Technology Internship

## Total Credit Hours: 27

*Course has prerequisite (See course description section of catalog).

## STAGE PRODUCTION TECHNOLOGY <br> Sound Certificate <br> 927E

## Program Description:

This program is designed to prepare students for a career in Stage Production Technology. It is also designed for those students presently employed in the Stage Production field who desire advancement.

## Degree Awarded: Certificate of Achievement

Requirements Credit Hours: 28

## Mathematics 4 hours

*MTH 1454 Technical Mathematics

## Theatre 24 hours

MUS 1053 Recording Studio Techniques
THE 1073 Entertainment electrical Fundamentals
THE 1093 Introduction to Theatre
THE 1113 Theatre Graphics
THE 1123 Introduction to Sound Reinforcement
THE 1143 Introduction to Rigging Fly Systems
*THE 2153 Advanced Sound Reinforcement
*THE 2273 Stage Production Technology Internship

## Total Credit Hours: 28

*Course has prerequisite (See course description section of catalog).

## STAGE PRODUCTION TECHNOLOGY <br> Stage Management Certificate <br> 927F

## Program Description:

This program is designed to prepare students for a career in Stage Production Technology. It is also designed for those students presently employed in the Stage Production field who desire advancement.

## Degree Awarded: Certificate of Achievement

Certificate Requirements Credit Hours: 27

## Business 3 hours

BUS 2363 Supervisory Management

## Psychology 3 hours

PSY 1313 Human Relations

## Speech 3 hours

SPE 1113 Speech Communication I

## Theatre 18 hours

THE 1033 Stagecraft I
THE 1053 Acting I
THE 1093 Introduction to Theatre
THE 1113 Theatre Graphics
THE 2253 Stage Management
*THE 2273 Stage Production Technology Internship

## Total Credit Hours: 27

*Course has prerequisite (See course description section of catalog).

## ARTS \& COMMUNICATIONS: VISUAL \& PERFORMING ARTS

## THEATRE

## Program Description:

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

## Degree Awarded: Associate in Arts

## For More Information Contact:

Performing Arts Division: Southeast: (918) 595-7752
TCC Theatre Office: (918) 595-7733
Counseling Center: Southeast: (918) 595-7651
General Education Requirements Credit Hours: 37
See the General Education Requirements for the complete list.

## Specialized Course Requirements Credit Hours: 21

Theatre 21 hours
THE 1033 Stagecraft I
*THE 1043 Stagecraft II
THE 1053 Acting I
THE 1093 Introduction to Theatre
THE 1081 Theatre Practice I
THE 1343 Stage Movement I
THE 2013 Make-Up I
THE 2043 Costume History
*THE 2053 Acting II
*THE 2063 Fundamentals of Stage Lighting
*THE 2073 Introduction to Production Design
*THE 2081 Theatre Practice II
THE 2213 Summer Theatre
THE 2313 Voice and Diction I
THE 2333 Improvisation for the Theatre
*THE 2393 Introduction to Drama
THE 2453 Creative Writing: Scriptwriting

## Recommended Electives 3 Hours

*ENG 2543 Survey of British Literature to 1800
*ENG 2653 Survey of British Literature from 1800
*ENG 2773 Survey of American Literature to 1865
*ENG 2883 Survey of American Literature from 1865
HIS 1053 Ancient and Medieval Western Civilization
HIS 1083 Survey of English History to 1688
HIS 1093 Survey of English History from 1688 to Present
HUM 2113 Humanities I
HUM 2223 Humanities II
*THE 1562 Musical Theatre
*THE 2093 Make-up II

## Total Credit Hours: 61

*Course has prerequisite (See course description of catalog).
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.


## Business Areas of Study

AA: Associate in Arts, university transfer degree • AS: Associate in Science, university transfer degree AAS: Associate in Applied Science, workforce degree - CER: Certificate of Achievement
University transfer degree programs include TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.
Workforce development degree and certificate programs are specifically designed to prepare students for direct entry into the workforce. They may advance students within their current career or open doors to new career opportunities. Traditionally these programs were not designed for transfer;however, varying amounts of coursework - and in some cases entire degrees - may now apply towards a degree at a four-year institution; the number of applicable transfer hours will vary from one university to another. Check with an advisor for further information. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.

## Accounting

Also see Business related fields AS degree
Accounting, NSU option, AS
Accounting Assistant, CER
Accounting Associate, AAS/CER
Payroll Administrative option, CER

## Business Fields

Business Related Fields of Concentration:
Accounting, AS
Business Administration, AS
Business Education, AS
Economics, AS
Management, AS
Business Related Fields of Concentration Langston option:
Accounting, AS
Business Administration, AS
Economics, AS
Management, AS
Business, OSU option, AS
Business, AAS
Business, Administrative Careers, AAS/CER
General Administrative Careers, CER
Legal Administrative Careers, CER
Medical Administrative Careers, CER
Customer Account Representative (City of Tulsa option), AAS/CER
Business, Healthcare Business Operations, AAS/CER
Business, Healthcare Business Operations/Accounting, CER
Human Resources, AAS/CER
International Business, AS/CER
Interior Design
Management Information Systems, LU, AS
Management Information Systems, OSU, AS
(Paralegal, AA/AAS see: Community Services:Law, Public Safety and Corrections)
Technology, AAS

## Hospitality \& fourism

Business, Hospitality \& Gaming Operations, AS/AAS
Hospitality \& Gaming Operations Certificates:
Hospitality
Gaming Operations/Protection
Restaurant Management

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Technology
    www.careerclusters.com
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## Information Technology

```
Computer Information Systems (CIS)
CIS, Langston University option, AS
CIS, Northeastern State University option, AS
CIS, Oklahoma State University option, AS
CIS, Information Assurance \& Foresnics, OSU-Okmulgee option, AAS
CIS, Business Application Professional, AAS/CER
CIS, Networking, AAS/CER
CIS, Programming, AAS/CER
CIS, System Support Technician, AAS/CER
CIS,Unix, AAS/CER
CIS, Web Development, AAS/CER
CIS, Computer User, CER
CIS, MCSE Windows 2000, CER
(Digital Media options, AAS/CER see Arts \& Communications, Graphic Arts)
Information Technologies Convergence (ITC)
ITC, Basics, CER
ITC, Essentials, CER
ITC, General, CER
ITC, Cisco Routing, AAS/CER
ITC, Information Security Essentials, CER
ITC, Information Security, AAS/CER
ITC, System Support, AAS/CER
ITC, Management, AAS/CER
(Management Information Systems see Business)

\section*{Management}
```

Also see Business related fields AS degree
Management with options in:
General Management, AAS/CER
International Management, AAS/CER
Management Internship, AAS/CER
Management Leadership Certificate

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\section*{Marketing}
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Marketing, NSU, AS
Marketing, OSU, AS
Marketing, Apparel Design \& Merchandising, OSU, AS
Marketing, AAS
Marketing, Disney Internship, AAS
Marketing, E-Business, AAS
Marketing, Customer Service, CER
Marketing, E-Business, CER

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\section*{BUSINESS: ACCOUNTING}

\title{
ACCOUNTING \\ For additional Transfer Programs also see Business Related Fields of Concentration,Transfer Programs
}

\section*{ACCOUNTING}

Northeastern State University Transfer Option

\section*{005 B}

\section*{Program Description}

This program is designed to provide the student with fundamental skills, attitudes, and experience in Accounting: Financial, Managerial, Accounting Information System, and Payroll. Graduates of the program will be prepared to continue coursework toward a baccalaureate degree in any of the options within the Accounting program at Northeastern State University.

\section*{Degree Awarded: Associate in Science}

For More Information Contact:
Business and Information Technology Divisions: Metro (918) 595-7039, Northeast (918) 595-7439, Southeast (918) 595-7639, West (918) 595-8033
Counseling Centers:
Metro: (918) 595-7151, Northeast: (918) 595-7451,
Southeast: (918) 595-7651,West: (918) 595-8176

\section*{General Education Requirements Credit Hours:37-38}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Social Science 9 hours}

GEO 1043 Introduction to Cultural Geography
POS 1113 American Federal Government
And select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Science 7-8 hours}

Select one course from each of the following groups. At least one course must be a laboratory science.
*PSC 1114 General Physical Science
*CHE 1114 Principles of Chemistry
GEL 1014 General Geology (Physical)
and
BIO 1114 General Biology for Non-Majors
*BIO 1604 Zoology
HT 1303 Principles of Horticulture Technology

\section*{Humanities 6 hours}

Select one course from each of the following groups.
HUM 2113 Humanities I
HUM 2223 Humanities II
PHI 1113 Introduction to Philosophy
HIS 1053 Ancient Medieval Western History and
Art 1113 Art Appreciation
MUS 1113 Music Appreciation

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Required Electives 6 hours}

Select one course from at least two of the following disciplines: Psychology, Social Science, Foreign Language, Fine Arts. .

\section*{Specialized Course Requirements Credit hours: 27}

\section*{Accounting 12 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
*ACC 2393 Accounting Information Systems
*ACC 2243 Payroll Administration

\section*{Economics 6 hours}

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{Computer Science 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
Marketing 3 hours
MKT 2423 Principles of Marketing

\section*{Total Credit Hours: 64-65}
*Course has prerequisite (see course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{ACCOUNTING ASSISTANT CERTIFICATE} 530

\section*{Program Description:}

This program provides the student with a basic knowledge of Generally Accepted Accounting Principles (GAAP) and their application. The student will gain knowledge and skills for entrylevel positions in various business related fields. The certificate provides training in accounting software and Excel to enhance skills necessary in the business world. This certificate requires a total of 30 credit hours of which 12 are in accounting.

\section*{Degree Awarded: Certificate of Achievement \\ Certificate Requirements Credit Hours: 30}

\section*{Accounting 12 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
*ACC 2233 Financial Accounting Applications
*ACC 2523 Microcomputer Accounting Applications
Business/Computer Information Systems 9 hours
CSC 1203 Computer Concepts and Applications
*CSC 2033 Excel
and select from the following:
BUS 1123 Keyboarding I
Choose any one-hour Computer Information Systems
(CSC/CIS) courses.
Business or Psychology 3 hours
BUS 1313 Employee/Employer Relations
*BUS 2213 Small Business Management
PSY 1313 Human Relations

\section*{BUSINESS:ACCOUNTING}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Total Credit Hours: 30}
*Course has prerequisite (See course description section of catalog).
**Recommended to be taken during the first semester.

\section*{ACCOUNTING ASSOCIATE}

\section*{706}

\section*{Program Description:}

This program is designed to provide the student with an effective working knowledge of the various accounting principles and accounting practices. The student will develop the skills necessary to communicate in a business environment utilizing Generally Accepted Accounting Principles (GAAP), double entry accounting, accounts receivable and accounts payable management, reconciling, budgeting, cost accounting, and compiling and analyzing reports. This program also provides training for those people who need accounting for effective and efficient business operations such as owners, managers, or employees. The degree requires a total of 63 credit hours of which 21 are in accounting.

\section*{Degree Awarded: Associate in Applied Science}

\section*{General Education Requirements Credit Hours: 21}

\section*{Economics 6 hours}

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Mathematics 3 hours}
***MTH 1513 College Algebra

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

Specialized Course Requirements Credit Hours:36

\section*{Accounting 21 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
*ACC 2233 Financial Accounting Applications
*ACC 2313 Intermediate Accounting I
*ACC 2323 Intermediate Accounting II
*ACC 2333 Cost Accounting
*ACC 2523 Microcomputer Accounting Applications

\section*{Business 6 hours}

BUS 2313 Business Law I
*BUS 2213 Small Business Management

\section*{Computer Information Systems 9 hours}

CSC 1203 Computer Concepts and Applications
*CSC 2033 Excel
*CSC 1641 Windows
and *select 2 one credit hour Computer Information Systems (CSC/CIS) courses.
or
*CSC 2163 Windows Operating Systems
Controlled Electives Credit Hours: 6
*ACC 2243 Payroll Administration
*ACC 2303 Analyzing Financial Statements
*ACC 2363 Income Tax I
*ACC 2383 Governmental Accounting
*ACC 2393 Accounting Information Systems
*ACC 2403 Income Tax II
*ACC 2443 Auditing
*ACC 2463 - Fraud Examination
PHI/BUS 1143 Introduction to Ethics: Business Issues
*BUS 2323 Business Law II
*BUS 2333 Principles of Finance
BUS 2363 Supervisory Management
*ECO 2123 International Economic Issues
*MGT 2103 Workforce Development Internship
MGT 2363 Principles of Management
or select one of the following:
BUS 1313 Employee/Employer Relations
PSY 1313 Human Relations

\section*{Total Credit Hours: 63}
*Course has prerequisite (See course description section of catalog).
**Recommended to be taken during first semester.


\section*{BUSINESS: ACCOUNTING}

\section*{ACCOUNTING ASSOCIATE \\ Certificate \\ Program Description: \\ This program is designed to develop the marketable skills necessary to function in a variety of positions in the field of accounting. The program provides upgrade training for those people already employed in the area of accounting who desire advancement. This certificate requires a total of 30 credit hours of which 21 are in accounting.}

\section*{Degree Awarded: Certificate of Achievement}

Certificate Requirements Credit Hours: 30

\section*{Accounting 21 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
*ACC 2233 Financial Accounting Applications
*ACC 2313 Intermediate Accounting I
*ACC 2323 Intermediate Accounting II
*ACC 2333 Cost Accounting
*ACC 2523 Microcomputer Accounting Applications

\section*{Computer Science 9 hours}

CSC 1203 Computer Concepts and Applications
*CSC 2033 Excel
*CSC 1641 Windows
and *select 2 one credit hour Computer Information Sys-
tems (CSC/CIS) courses.
or
*CSC 2163 Windows Operating Systems
Total Credit Hours: 30
*Course has prerequisite (See course description section of catalog).

\section*{ACCOUN'TING ASSOCIATE \\ Microcomputer Accounting Certificate}

706A

\section*{Program Description:}

This program is designed to provide the individual with an accounting overview and a working knowledge in accountingrelated software currently used by a wide range of businesses. The program will provide the skills necessary for any owner, manager, or employee to become efficient in the application of Generally Accepted Accounting Principles (GAAP) and fundamental tax issues using general ledger software, Excel, and tax software. This certificate is designed to be a guide in the computer related accounting field for individuals working with small businesses. This certificate requires a total of 30 credit hours of which 19 are in accounting.
Degree Awarded: Certificate of Achievement
Certificate Requirements Credit Hours: 30

\section*{Accounting 19 hours}

ACC 1211 Taxes for the Individual
ACC 1221 Taxes for the Small Business
ACC 1231 Pro Series Turbo Tax
ACC 1241 Tax Research on the Internet
ACC 1251 Payroll and Human Resources Applications
*ACC 1411 Quickbooks Pro
*ACC 1621 Introduction to Using Access Accounting
ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
*ACC 2393 Accounting Information Systems
*ACC 2523 Microcomputer Accounting Applications
Computer Information Systems 11 hours
CSC 1203 Computer Concepts and Applications
*CSC 2033 Excel
*CSC 2163 Windows Operating Systems
and select 1 credit hour each from the following groups:
*CSC 1551 Introduction to Word
or
*CSC 1561 Advanced Word
*CSC 1571 Introduction to Access
or
*CSC 1581 Advanced Database

\section*{Total Credit Hours: 30}
*Course has prerequisite (See course description section of the catalog).

\section*{ACCOUNTING ASSOCIATE \\ Payroll Administration Certificate \\ 706B}

\section*{Program Description:}

This program is designed to provide the student with the business skills required for employment as a payroll specialist and to introduce the student to the requirements for becoming a Certified Payroll Professional (CPP). The program is directed toward students who are preparing for employment in a small business as a full charge bookkeeper or accounting clerk and for those who are preparing for employment in the payroll department of a medium to large organization. This program is also directed toward students who have already received on-the-job training in the area of accounting for payroll, but would like to receive more formal instruction. This certificate requires a total of 18 credit hours of which 12 hours are in accounting.

\section*{Degree Awarded: Certificate of Achievement}

Certificate Requirements Credit Hours: 18

\section*{Accounting 12 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
*ACC 2243 Payroll Administration
*ACC 2523 Microcomputer Accounting Applications

\section*{Computer Information Systems 6 hours}
*CSC 2033 Excel
and select three credit hours from the following:
CSC 1203 Computer Concepts and Applications
or any CIS/CSC courses.

\section*{Total Credit Hours: 18}
*Course has prerequisite (See course description section of the catalog).

\section*{BUSINESS: BUSINESS FIELDS}

\section*{BUSINESS RELATED FIELDS \\ OF CONCENTRATION}

Accounting 005, Business Administration 035, Business, Education 040, Economics 052, and Management 123

\section*{Program Description:}

This program is designed for students planning to transfer to senior colleges and universities with a business related field of concentration. The suggested curriculum for this program includes TCC degree requirements and courses generally completed in the first two years of a four-year business related curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Business and Information Technology Divisions:
Metro: (918) 595-7039, Northeast: (918) 595-7439,
Southeast: (918) 595-7639, West: (918)595-8033
Counseling Centers:
Metro (918) 595-7151, Northeast: (918) 595-7451,
Southeast: (918) 595-7651,West: (918)595-8176
General Education Requirements Credit Hours: 37
See the General Education Requirements list for complete list.

\section*{Specialized Course Requirements Credit Hours: 24-27 \\ Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Business 3 hours}
**BUS 2313 Business Law I

\section*{Computer Information Systems 3 hours}
select one course from the following:
*CIS 2073 MS Office
CSC 1203 Computer Concepts and Applications

\section*{Economics 6 hours}

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{Management 3 hours}
**MGT 2363 Principles of Management

\section*{Mathematics 3-6 hours}
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry
*MTH 2193 Elementary Statistics
*MTH 2513 Finite Mathematics
*MTH 2523 Calculus for Business, Life, and Social Sciences

\section*{Total Credit Hours: 61-64}
*Course has prerequisite (See course description section of catalog).
**Business Law I and Principles of Management may not transfer to some universities. Check with the Counseling Center before enrolling. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{BUSINESS RELATED FIELDS \\ OF CONCENTRATION \\ Langston University Transfer Option \\ Accounting 005 C, Business Administration 035C, Economics \\ 052B, and Management 123 B,}

\section*{Program Description:}

This program is designed for students planning to transfer to Langston University-Tulsa with a business related field of concentration. The suggested curriculum for this program includes TCC degree requirements and courses generally completed in the first two years of a four-year business related curriculum. Students should consult the catalog of Langston UniversityTulsa and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

\section*{General Education Requirements Credit Hours: 34}

See the General Education Requirements list for complete list. Mathematics general education requirements met in specialized course requirements.

\section*{Specialized Course Requirements Credit Hours:27**}

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Business 3 hours}

BUS 2313 Business Law I

\author{
Computer Information Systems 3 hours \\ select one course from the following: \\ *CIS 2073 MS Office \\ CSC 1203 Computer Concepts and Applications
}

\section*{Economics 6 hours}

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{Management 3 hours}

MGT 2363 Principles of Management

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra and select one course from the following
*MTH 2513 Finite Mathematics
*MTH 2523 Calculus for Business, Life, and Social Sciences

\section*{Total Credit Hours: 61}
*Course has prerequisite (See course description section of catalog).
\({ }^{* *}\) All specialized courses require a letter grade of" \(C\) " or better. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

BUSINESS: BUSINESS FIELDS

BUSINESS
Oklahoma State University-Tulsa Transfer Option

\section*{Program Description:}

This degree plan is for students planning to attend Oklahoma State University-Tulsa to complete a baccalaureate degree in business. Articulation agreements between Tulsa Community College and OSU-Tulsa provide for seamless transition toward a baccalaureate degree in the College of Business. The suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the OSU catalog for Undergraduate Programs \& Requirements and carefully select courses that will meet the requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Business and information technology Division:
Metro: (918) 595-7039 Northeast: (918) 595-7439
Southeast: (918) 595-7639 West: (918) 595-8033
Counseling Centers:
Metro: (918) 595-7151 Northeast: (918) 595-7451
Southeast: (918) 595-7651 West: (918) 595-8176

\section*{General Education Requirements Credit Hours:37}

See the General Education Requirements for the complete list. Recommend one course designated (I) as part of humanities requirement.

\section*{Specialized Course Requirements Credit Hours: 24}

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Economics 6 hours}

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{Math 6 hours}
*MTH 2193 Elementary Statistics
*MTH 2523 Calculus for Business, Life and Social Sciences

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications

\section*{Total Credit Hours: 61}
*Course has prerequisite (see course description section of catalog). International Business majors must satisfy language proficiency equivalent to at least two full years of college level study as evidenced by:
a. 15 hours of study of a single modern foreign language with a minimum grade of "C," or
b. 5 hours of intermediate or advanced modern foreign language courses with a minimum grade of " C ," or
c. Passing an approved Oklahoma State University examination.

To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{BUSINESS}

\section*{Program Description}

This program provides exposure to a wide variety of businessrelated fields. It is designed for students who desire an overview of the field of business rather than an in-depth specialization in any one particular field. In addition, students should develop an appreciation for the social, political an economic environment in which business operates.

\section*{Degree Awarded: Associate in Applied Science \\ General Education Requirements Credit Hours: 21}

\section*{Economics 6 hours}

ECO 1353 Personal Finance
ECO 2013 Principles of Macroeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select 3 credit hours from the following courses:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications
Philosophy/Psychology 3 hours
**PHI/BUS 1143 Introduction to Ethics: Business Issues PSY 1313 Human Relations

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 30

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Business 12 hours}

BUS 1053 Introduction to Business
*BUS 2213 Small Business Management
BUS 2313 Business Law I
and select 3 credit hours from the following:
BUS 1353 Business Mathematics
*MTH 1513 College Algebra

\section*{Computer Information Systems 6 hours}

Select 6 hours from any of the Computer Information Systems (CSC/CIS) courses.

\section*{Management/Business 3 hours}

BUS 2363 Supervisory Management
MGT 2363 Principles of Management
MGT 2123 Leadership Development
Marketing 3 hours
MKT 2423 Principles of Marketing

\section*{BUSINESS: BUSINESS FIELDS}

\section*{Controlled Electives Credit Hours: 9}

BUS 1153 Intro to Hospitality Operations-Hotels,Restaurants,andTourism BUS/SPE 2053 Intercultural Communication
*BUS 2333 Principles of Finance
BUS 2343 Investments in Stocks and Bonds
CIS 2563 Enterprise Security
*ECO 2023 Principles of Microeconomics
*ECO 2123 International Economic Issues
MKT 2343 Customer Service
*MGT 2353 Business Policy

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). **Students can enroll in either PHI or BUS if this option is chosen.

\section*{BUSINESS \\ Administrative Careers option}

525L

\section*{Program Description:}

The Administrative Career degree course of study develops a wide variety of knowledge and skills necessary for today's general, legal, and medical careers. Developing skills sets in accounting, business computers and digital media as well as general education classes will prepare the student for today's workforce. Students may elect to earn the Administrative Career Associate in Applied Science degree entirely via electronic delivery. Courses available via electronic delivery, (telecourse, interactive television, and online) are designated as such in the TCC schedule and on the Distance Learning page at TCC's website.
Degree Awarded: Associate in Applied Science
General Education Requirements Credit Hours: 21
Economics 6 hours
ECO 1353 Personal Finance
**ECO 2013 Principles of Macroeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 2343 Business Communication

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Psychology 3 hours
PSY 1313 Human Relations
Specialized Course Requirements Credit Hours: 27

\section*{Accounting 6 hours}

ACC 1003 Introduction to Accounting
ACC 2213 Financial Accounting
Business 15 hours
**BUS 1053 Introduction to Business
**BUS 1353 Business Mathematics
*BUS 2173 Skillbuilding and Document Processing
*BUS 2183 Word Processing for Administrative Careers
*BUS 2643 Procedures for Administrative Careers
Computer Information Systems 6 hours
**CSC 1203 Computer Concepts and Applications *CSC 2033 Excel

Choose one (1) area of Focus
General Administrative Career Focus 12 Hours
BUS 2313 Business Law I
*BUS 2683 Administrative Careers internship
*CIS 1153 Adobe Dreamweaver
*CIS 2683 Adobe InDesign
Legal Administrative Career Focus 12 Hours
*CIS 1153 Adobe Dreamweaver
*PLG 1213 Introduction to the Legal System
*PLG 2373 Computers in the Law
*PLG 2813 Internship
Medical Administrative Career Focus 12 Hours
AH 1323 Medical Terminology
*BUS 2683 Administrative Career Internship
*CIS 1153 Adobe Dreamweaver
*MA 2243 Medical Office Finance and Management

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of the catalog).
** Students who have earned the CPS rating may apply for Advanced Standing Credit in these approved courses. Application must be made in the Metro Campus Admissions Office with payment of advance standing credit hourly fees.

\section*{BUSINESS, ADMINISTRATIVE CAREIER OPTION General Administrative Career Certificate 525M}

\section*{Program Description:}

This certificate is designed to prepare students for an entrylevel position in a business or professional establishment.

\section*{Degree Awarded:Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Division:
Metro: (918)595-7039
Counseling Center: Metro: (918)595-7151

\section*{Certificate Requirements Credit Hours: 12}

Business 9 hours
**BUS 1353 Business Mathematics
*BUS 2173 Skillbuilding and Document Processing
*BUS 2183 Word for the Administrative Professional

\section*{Computer Information Systems Hours: 3}
*CIS 2073 MS Office

\section*{Total Credit Hours: 12}
*Course has prerequisite (See course description section of the catalog).
**Students who have earned the CPS rating may apply for advanced standing credit in these approved courses. Application must be made in the Metro Campus Admissions Office with payment of advance standing credit hourly fees.

BUSINESS: BUSINESS FIELDS

\section*{BUSINESS, ADMINISTRATIVE CAREIERSOPTION \\ Legal Administrative Career Certificate \\ 525 N}

\section*{Program Description:}

This certificate is designed to prepare students for position in a legal office.

\section*{Degree Awarded: Certificate of Achievement}

\section*{Certificate Requirements Credit Hours: 18}

\section*{Business 3 hours}

BUS 1353 Business Mathematics

\section*{Paralegal 9 hours}
*PLG 1213 Introduction to the Legal System
*PLG 2373 Computers in the Law
*PLG 2813 Internship

\section*{Computer Information Systems 6 hours}
*CIS 2073 MS Office
*CIS 1153 Adobe Dreamweaver

\section*{Total Credit Hours: 18}
*Course has prerequisite (see course section of the catalog)

\section*{BUSINESS,ADMINISTRATIVECAREIERSOPTION \\ Medical Administrative Career Certificate}

\section*{Program Description:}

This certificate is designed to prepare students for a position in a medical office.

\section*{Degree Awarded: Certificate of Achievement Certificate Requirements Credit Hours: 17}

\section*{Allied Health 3 hours}

AH 1323 Medical Terminology

\section*{Business 6 Hours}
**BUS 1353 Business Mathematics
*BUS 2683 Administrative Careers Internship
Computer Information Systems 5 hours
CIS 1022 MS Word for the Medical Documents *CIS 2073 MS Office

\section*{Medical Assistant 3 hours}
*MA 2243 Medical Office Finance and Management

\section*{Total Credit Hours: 17}
*Course has prerequisite (See course description section of the catalog). **Students who have earned the CPS rating may apply for advanced standing credit in these approved courses. Application must be made in the Metro Campus Admissions Office with payment of advanced standing credit hourly fees.

\section*{BUSINESS}

Customer Service Representative (City of Tulsa Option)
525B

\section*{Program Description:}

This program has been designed to give City of Tulsa employees an opportunity to increase their knowledge and skills, become more productive, have opportunities for advancement within the organization and work toward completion of a college degree.

\section*{Degree Awarded: Associate in Applied Science \\ For More Information Contact: \\ Business Services Division: Metro: (918) 595-7039 \\ Counseling Center: Metro: (918) 595-7151 \\ General Education Requirements Credit Hours: 18}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2343 Business Communication

\section*{Social Sciences 9 hours}

POS 1113 American Federal Government *POS 2043 Introduction to City Government and select 3 credit hours from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 40}

Accounting 3 hours
ACC 2213 Financial Accounting

\section*{Business 31 hours}

BUS 1021 Working in Teams/Workplace Diversity
BUS 1353 Business Mathematics
BUS 2003 Credit Internship
BUS 2023 Customer Support Internship
BUS 2033 Customer Service/Personal Internship
BUS 2043 Customer Service/Phone Center Internship
BUS 2063 New Accounts-Taps Internship
BUS 2103 Apportionment Billing
BUS 2123 Billing
BUS 2133 Stormwater
BUS 2153 Systems Support
Computer Information Systems 3 hours
*CIS 2073 MS Office
Marketing 3 hours
MKT 2343 Customer Service
Recommended Electives 6 hours
HUM 2113 Humanities I
HUM 2223 Humanities II

\section*{Total Credit Hours: 64}
*Course has prerequisite (See course description section of the catalog).

\section*{BUSINESS: BUSINESS FIELDS}

\section*{BUSINESS}

Customer Service Representative (City of Tulsa Option)

\section*{Customer Account Representative Certificate}

\section*{Program Description:}

This certificate has been designed to give City of Tulsa employees an opportunity to increase their knowledge and skills, become more productive and have opportunities for advancement within the organization.

\section*{Degree Awarded: Certificate of Achievement}

\section*{Business 10 hours}

BUS 1021 Working in Teams/Workplace Diversity and any three of the following:
BUS 2003 Credit Internship
BUS 2013 Commercial Billing Internship
BUS 2023 Customer Service Internship
BUS 2033 Customer Service/Personal Internship
BUS 2043 Customer Service/Phone Center Internship
BUS 2063 New Accounts-Taps Internship
BUS 2073 General Internship
BUS 2083 Computer Orientation Internship
BUS 2093 Non-Commercial Billing Internship
Computer Information Systems 2 hours
*CSC 1551 Introduction to Word
*CSC 1641 Windows

\section*{English 3 hours}
*ENG 1113 Freshman Composition I
Marketing 3 hours
MKT 2343 Customer Service
Speech 3 hours
SPE 2103 Interpersonal Communications

\section*{Total Credit Hours: 21}
*Course has prerequisite (See course description section of the catalog).

\section*{BUSINESS}

CustomerService Representative Certificatell
525B

\section*{Program Description:}

This certificate has been designed to give City of Tulsa employees an opportunity to increase their knowledge and skills, become more productive and have opportunities for advancement within the organization.

\section*{Degree Awarded: Certificate of Achievement}

\section*{Business 12 hours}

Any four of the following (Not completed in Certificate I):
BUS 1353 Business Mathematics
BUS 2003 Credit Internship
BUS 2013 Commercial Billing Internship
BUS 2023 Customer Service Internship
BUS 2033 Customer Service/Personal Internship
BUS 2043 Customer Service/Phone Center Internship
BUS 2063 New Accounts-Taps Internship
BUS 2073 General Internship

BUS 2083 Computer Orientation Internship
BUS 2093 Noncommercial Billing Internship
Computer Information Systems 2 hours
*CSC 1531 Introduction to Excel
*CSC 1561 Advanced Word

\section*{English 3 hours}
*ENG 2363 Advanced Business Communication

\section*{Social Sciences 3 hours}
*POS 2043 Introduction to City Government

\section*{Total Credit Hours: 20}
*Course has prerequisite (See course description section of the catalog).

\section*{BUSINESS}

HEALTH CARE BUSINESS OPERATIONS OPTION

\section*{525P}

\section*{Program Description:}

This program is designed to prepare students for careers in heath care business operations found in physician's offices, managed practices, health insurance companies, hospitals, geriatric care facilities, public health entities, clinics, as well as many other heath care-related organizations. Students will acquire the knowledge and skills necessary for employment and career building within the health care industry. Emphasis will be on health care business skills and accounting.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For more Information contact:}

Business and Information Technology Division:
Metro: (918) 595-7039
Counseling Center:Metro: (918) 595-7151

\section*{General Education Requirements Credit Hours: 21}

\section*{Economics 6 hours}

ECO 1353 Personal Finance
ECO 2013 Principles of Macroeconomics

\section*{English 6 hours}

ENG 1113 Freshman Composition I
*ENG 2343 Business Communications

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
*SPE 2093 Business and Professional Speech

\section*{Specialized Course Requirements Credit Hours: 39}

\section*{Accounting 9 Hours}

ACC 2213 Financial Accounting
and select 6 credit hours from the following:
ACC 2533 Fundamentals of Health Care Accounting
*ACC 2543 Management Accounting for Health Care Organizations
*ACC 2553 Essentials of Cost Accounting in Heath Care Organizations

\section*{BUSINESS: BUSINESS FIELDS}

\section*{Allied Health 3 Hours}

AH 1323 Medical Terminology

\section*{Business 15 Hours}

BUS 1053 Introduction to Business
BUS 1143 Introduction to Ethics-Business Issues
BUS 1173 Introduction to Heath Care Business Operations
BUS 1353 Business Mathematics
*BUS 2483 Health Care Law
BUS 2313 Business Law I
Computer Information Systems 9 Hours
CIS 1022 MS Word for Medical Professionals
CSC 1171 Introduction to Web Page Design
*CSC 2033 Excel
and select one course from the following
\(\wedge^{*}\) CIS 2073 MS Office
CSC 1203 Computer Concepts and Applications

\section*{Controlled Electives 3 hours}

BUS 2492 Health Care Business Operations Internship
*MA 2243 Medical Office Finance and Management
MKT 2343 Customer Service
MKT 2423 Principles of Marketing
PSY 1313 Human Relations

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of the catalog). \(\wedge\) CIS 2073 recommended if student had Advanced Standings or has met Computer Proficiency Requirements.

\section*{BUSINESS}

Health Care Business Operations Certificate
526A

\section*{Degree Awarded: Certificate of Achievement}

\section*{For more Information Contact:}

Business and Information Technology Division:
Metro: (918) 595-7039
Counseling Center: Metro: (918) 595-7151

\section*{Allied Health \(\mathbf{3}\) hours}

AH 1323 Medical Terminology

\section*{Business 9 hours}

BUS 1173 Introduction to Health Care Business Operations
BUS 1353 Business Mathematics
*BUS 2483 Health Care Law
Computer Information Systems 5 hours
CSC 1203 Computer Concepts and Applications
CIS 1022 MS Word for Medical Documents
Economics 3 hours
ECO 1353 Personal Finance
Total Credit Hours: 20
*Course has prerequisite. (See course description section of catalog)

\section*{BUSINESS \\ Health Care Business Operations / Accounting Certificate 526B}

\section*{Program Description:}

This certificate is designed to provide the graduate with basic accounting skills necessary to begin a career in health care organization accounting departments.

\section*{Accounting 9 hours}

ACC 2213 Financial Accounting and select 6 credit hours from the following: ACC 2533 Fundamentals of Health Care Accounting
*ACC 2543 Management Accounting for Health Care Organizations
*ACC 2553 Cost Accounting for Health Care Organizations

\section*{Business 9 hours}

BUS 1353 Business Mathematics
BUS 1173 introduction to Health Care Business Operations *BUS 2483 Health Care Law

\section*{Economics 6 hours}

ECO 1353 Personal Finance
ECO 2013 Principles of Macroeconomics

\section*{Total Credit Hours: 24}
*Course has prerequisite. (See course description section of the catalog)

\section*{HUMAN RESOURCES}

795

\section*{Program Description:}

This program is designed to prepare students for a career in the human resources profession. Due to the fact that nearly all corporations have a human resources department, solid growth in this profession is predicted over the next ten years. This program is designed for both individuals starting out in human resources and those currently employed in human resources. Students gain a comprehensive knowledge in human resources along with the people skills greatly desired in today's business world.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and Information Technology Division:
Southeast: (918) 595-7639
Counseling Center: Southeast: (918)595-7651

\section*{General Education Requirements Credit Hours: 18}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2343 Business Communication

\section*{Psychology 6 hours}

PSY 1113 Introduction to Psychology
*PSY 1313 Human Relations

\section*{BUSINESS: BUSINESS FIELDS}

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 42

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Business 6 hours}

BUS 1053 Introduction to Business and select 3 credit hours from the following:
BUS 2363 Supervisory Management
MGT 2363 Principles of Management
Computer Information Systems 3 hours
**Select 3 hours from any of the Computer Information Systems (CIS/CSC).

\section*{Human Resources 24 hours}

HR 1313 Principles of Human Resources
*HR 1333 Benefits Management
*HR 1343 Compensation Management
*HR 2313 Human Resource Law I
*HR 2323 Employment and Evaluation Techniques
*HR 2333 Employee and Labor Relations
*HR 2343 Training and Development
*HR 2353 Human Resource Law II

\section*{Controlled Electives 3 hours}
*BUS/PSY 2633 Industrial and Organizational Psychology *CSC 2033 Excel
*ECO 2123 International Economic Issues
HS 1213 Basic Counseling Skills
*MGT 2103 Workforce Development Internship
SPE 1013 Fundamentals of Listening
SPE 1113 Speech Communication I
SPE 2053 Intercultural Communication
SPE 2103 Interpersonal Communication

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog).
**Spreadsheet experience is highly recommended.
NOTE: A student may substitute PHR (Professional in Human Resources) or SPHR (Senior Professional in Human Resources) certification for the course HR 1313 Principles of Human Resources, if the student is current in the PHR or SPHR period of certification. (PHR or SPHR exams will not substitute for any other HR courses). NOTE:MGT 2013 Workforce Development Internship is highly recommended for those with no experience in a Human Resources Department.

\section*{HUMAN RESOURCES}

Certificate Option

\section*{Program Description:}

This program is designed to prepare students for a career in the human resources profession. Due to the solid growth in the human resources profession, this program is designed for both individuals wanting to enter the human resources profession, and those currently employed in human resources who desire advancement.

\section*{Degree Awarded: Certificate of Achievement \\ Certificate Requirements Credit Hours: 30 \\ Computer Information Systems \(\mathbf{3}\) hours}
** Select 3 credit hours from any of the Computer Information Systems courses.

\section*{Human Resources 24 hours}

HR 1313 Principles of Human Resources
*HR 1333 Benefits Management
*HR 1343 Compensation Management
*HR 2313 Human Resource Law I
*HR 2323 Employment and Evaluation Techniques
*HR 2333 Employee and Labor Relations
*HR 2343 Training and Development
*HR 2353 Human Resource Law II
Controlled Electives Credit Hours: 3
*BUS/PSY 2633 Industrial and Organizational Psychology
*ECO 2123 International Economic Issues
*ENG 2343 Business Communication
*HS 1213 Basic Counseling Skills
*CSC 2033 Excel
*MGT 2103 Workforce Development Internship
PE 2212 First Aid
SPE 1013 Fundamentals of Listening
SPE 1113 Speech Communication I
SPE 2053 Intercultural Communication
SPE 2103 Interpersonal Communication

\section*{Total Credit Hours: 30}
*Course has prerequisite (See course description section of catalog).
**Spreadsheet experience is highly recommended.
NOTE: A student may substitute PHR (Professional in Human Resources) or SPHR (Senior Professional in Human Resources) certification for the course HR 1313 Principles of Human Resources, if the student is current in the PHR or SPHR period of certification. (PHR or SPHR exams will not substitute for any other HR courses).
NOTE: MGT 2013 Workforce Development Internship is highly recommended for those with no employment in a Human Resources Department.

\section*{BUSINESS: BUSINESS FIELDS}

\section*{INTERIOR DESIGN}

654

\section*{Program Description:}

Upon completion of the program the student will have skills in the following areas: cost estimating, purchase orders, display, drafting for interiors including floor plans, space planning, elevations, isometrics, one and two point perspective sketching, delineation techniques, historic periods of design, knowledge of fire, life safety and handicap codes, knowledge of lighting, textiles computer-aided design, and sales representation.These skills combined with field internships, market field trips, and customer service prepare student to enter the interior design field and combine their education with work experience. Degree Awarded: Associate in Applied Science

\section*{For More Information Contact:}

Business and Information Technology Division:
Southeast: (918) 595-7639
Counseling Center: Southeast: (918) 595-7651
Semester plan available through faculty advisement.
General Education Requirements Credit Hours: 18

\section*{Art 3 hours}

ART 1063 Survey of Art History II

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
Psychology 3 hours
PSY 1313 Human Relations

\section*{Social Science 6 hours}

POS 1113 American Federal Government
and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

Specialized Course Requirements Credit Hours: 42

\section*{Interior Design 36 hours}

ID 1313 Interior Design Orientation
*ID 1333 Design I : Color
*ID 1343 Drawing and Mechanical Drafting
*ID 1353 Design II : Presentation
*ID 1373 Color Graphics for Interior Designers
*ID 1383 Lighting Concepts
ID 1413 History of Interiors
*ID 2313 Professional Practice
*ID 2323 Design III
*ID 2333 Design IV
*ID 2383 Introduction to CAD for Interior Design
*ID 2413 Advanced CAD for Interior Design

\section*{Controlled Electives Credit Hours: 3}
*BUS 2213 Small Business Management
*** *ID 2343 Field Application
**ID 2403 Market Field Trip
MKT 2343 Customer Service
*MKT 2363 Consumer Behavior
SPE 1113 Speech Communication I

\section*{Total Credit Hours: 63}
\({ }^{*}\) Course has prerequisite (See course description section of catalog).
**Course may be taken twice.
***These courses are highly recommended for students not employed in the field.

\section*{INTERIOR DESIGN}

Certificate

\section*{Program Description:}

Upon completion of the Certificate of Achievement program the student will have skills in the following areas: cost estimating, purchase orders, floor plans, space planning, one and two point perspective sketching, delineation techniques, life safety and handicap codes, historic periods of design, lighting techniques, and sales presentation. These skills combined with work related experience will prepare the student for a career in interior design.

\section*{Degree Awarded: Certificate of Achievement}

Certificate Requirements Credit Hours: 36

\section*{Interior Design 27 hours}

ID 1313 Interior Design Orientation
*ID 1333 Design I : Color
*ID 1343 Drawing and Mechanical Drafting
*ID 1383 Lighting Concepts
ID 1413 History of Interiors
*ID 2313 Professional Practice
*ID 2323 Design III
*ID 2333 Design IV
*ID 2383 Introduction to CAD for Interior Design

\section*{Marketing 3 hours}

MKT 1313 Sales and Negotiations
Controlled Electives Credit Hours: 6
*ID 1353 Design II Presentation
*ID 1373 Color Graphics for Interior Designers
*** *ID 2343 Field Application
**ID 2403 Market Field Trip
MKT 2423 Principles of Marketing

\section*{Total Credit Hours: 36}
*Course has prerequisite (See course description section of catalog).
**Course may be taken twice.
***These courses are highly recommended for students not employed in the field.

\section*{Marketing 6 hours}

MKT 1313 Sales and Negotiations
MKT 2423 Principles of Marketing

\section*{BUSINESS: BUSINESS FIELDS}

\section*{INTERNATIONAL BUSINESS}

\section*{086}

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Students should consult the catalog for the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Business and Information Technology Divisions: Metro: (918) 595-7039, Northeast: (918) 595-7439, Southeast: (918) 595-7639, West: (918) 595-8033
Counseling Centers: Metro: (918) 595-7151,
Northeast: (918) 595-7451, Southeast: (918) 595-7651, West: (918) 595-8176

\section*{General Education Requirements Credit Hours: 28}

See the General Education Requirements for the complete list. Required Electives and Recommended Electives are included in the Foreign Language requirement.

\section*{Foreign Language** Credit Hours: 9-15}

Note: Nine of the foreign language hours may be counted in the General Education Requirements under Required Electives (3 hours) and Recommended Electives (6 hours)

\section*{Specialized Course Requirements Credit Hours: 21}

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications

\section*{Economics 9 hours}

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics
*ECO 2123 International Economic Issues

\section*{Speech 3 hours}
***SPE/BUS 2053 Intercultural Communication

\section*{Recommended Electives Credit Hours: 0-6}

BUS 1053 Introduction to Business
*BUS 2253 International Business Seminar/Field Study
CIS 2563 Enterprise Security
GEO 1023 World Geography (Economics)
GEO 1043 Introduction to Cultural Geography
MGT 2123 Leadership Development
MGT 2363 Principles of Management
MKT 2423 Principles of Marketing
*MKT 2813 International Marketing
*MTH 2193 Elementary Statistics
MTH 2523 Calculus for Business, Life, and Social Studies
*POS 2013 Introduction to Comparative Governments
*POS 2203 Introduction to International Relations

\section*{Total Credit Hours: 64-67}
*Course has prerequisites (See course description section of catalog).
\({ }^{* *}\) All foreign languages must be from one language. Check catalog pages \(25-26\) for Proficiency Certification and Foreign Language advanced standing credit options.
***Students can enroll in either SPE or BUS.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{INTERNATIONAL BUSINESS}

Certificate

\section*{Program Description:}

This program is designed to provide the student with the business skills required for employment by a company with international operations. Competency in a modern international language is a program option. The program is directed toward students who are preparing for employment by a multinational organization, those who are presently employed in a company with international relations, and students who need assistance in preparing for travel abroad to conduct business. This program allows students the option of developing a competency in a foreign language of choice or of selecting elective business support courses that are related to the student's occupational goal. Either option will provide the student with an increased knowledge and awareness of international business concepts and cultural practices.

\section*{Degree Awarded: Certificate of Achievement}

\section*{Certificate Requirements Credit Hours: 30}

\section*{Computer Information Systems 3 hours}

CSC 1203 Computer Concepts and Applications
Select three hours from any CIS/CSC courses.
Economics 6 hours
ECO 2013 Principles of Macroeconomics
*ECO 2123 International Economic Issues

\section*{English 6 hours}

ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications
*ENG 1213 Freshman Composition II

\section*{Geography 3 hours}

GEO 1023 World Geography (Economics)
GEO 1043 Introduction to Cultural Geography

\section*{Speech 3 hours}
**SPE/BUS 2053 Intercultural Communication
Select 9 hours from either:
(1) Foreign Language 9 hours

Select 9 credit hours from one foreign language discipline or
(2) Business 9 hours

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
BUS 1053 Introduction to Business
BUS/PHI 1143 Introduction to Ethics: Business Issues

\section*{BUSINESS: BUSINESS FIELDS}
*BUS 2213 Small Business Management
*BUS 2253 International Business Seminar/Field Study
BUS 2313 Business Law I
CIS 2563 Enterprise Security
*ECO 2023 Principles of Microeconomics
MGT 2123 Leadership Development
MGT 2363 Principles of Management
MKT 2423 Principles of Marketing

\section*{Total Credit Hours: 30}
*Course has prerequisites (See course description section of catalog). \({ }^{* *}\) Course can serve as either a SPE or BUS credit.
Students should choose either the SPE or BUS discipline when enrolling.
(1) Recommended for students with no foreign language proficiency.
(2) Recommended for students with foreign language proficiency.

\section*{MANAGEMENT INFORMATION SYSTEMS Langston University - Tulsa Transfer Option}

\section*{Program Description:}

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Management Information Systems at Langston University-Tulsa may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalog and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at Langston University-Tulsa.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Business and Information Technology Divisions:
Metro (918) 595-7039, Northeast (918) 595-7439,
Southeast, (918) 595-7639, West (918)595-8033
Counseling Centers: Metro (918) 595-7151,
Northeast (918) 595-7451, Southeast (918) 5957651,
West (918)595-8176
General Education Requirements Credit Hours: 36
One credit hour general education elective included in specialized course requirements

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

See the General Education Requirements page for complete list.

\section*{Mathematics 7 hours}
*MTH 1513 College Algebra
*MTH 2114 Analytic Geometry and Calculus I

\section*{Science 8 hours}

BIO 1114 General Biology for Non-Majors
*PSC 1114 General Physical Science

\section*{Social Science 6 hours}

POS 1113 American Federal Government
and select one of the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Required Electives 3 hours}

Select one 3-credit hour course from one of the following disciplines: Psychology, Social Sciences, Foreign Language, Fine Arts (art, music, theatre)
Specialized Course Requirements Credit Hours: 24

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Computer Information Systems 12 hours}
*CIS 1203 Introduction to Computer Programming
CSC 1203 Computer Concepts and Applications
CSC 2333 Systems Analysis and Design
*CSC 2473 C Language
Economics 6 hours
ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). To receive an A. A. or A.S. Degree, students must demonstrate computer proficiency. See page 22 for complete requirements.

\section*{MANAGEMENT INFORMATION SYSTEMS \\ Oklahoma State University Transfer Option \\ 046 C}

\section*{Program Description:}

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Management Information Systems may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalogs of the universities where the four-year degree is offered and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at the university of their choice.

\section*{Degree Awarded: Associate in Science}

General Education Requirements Credit Hours: 37

\section*{Mathematics 9 hours}
*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics
*MTH 2523 Calculus for Business, Life, and Social Sciences

\section*{Speech 3 hours}

SPE 1113 Speech Communications I

\section*{Specialized Course Requirements Credit Hours: 24}

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Computer Information Systems 13 hours}

CIS 1203 Introduction to Programming
CSC 1203 Computer Concepts and Applications
** *CSC 2133 Introduction to Java
*CSC 2473 C Language

\section*{Economics 6 hours}

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{BUSINESS: BUSINESS FIELDS}

\section*{Total Credit Hours: 62}
*Course has prerequisite (See course description section of catalog).
**When selecting a course prerequisite consult with a TCC advisor regarding courses for transfer.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
\begin{tabular}{|l|}
\hline PARALEGAL, AA and AAS \\
See: Community Services area of study:Law, Public Safety \\
end Corrections
\end{tabular}

\section*{TECHNOLOGY}

\section*{939}

\section*{Program Description:}

This degree is designed for students entering TCC with a technical specialty acquired through completion of Oklahoma Department of Career Technical Education programs, through areas of study that have been evaluated by the American Council on Education, or through industry certification.

Students with prior training or career experience in an area offered as a degree program by TCC must meet with a TCC advisor to determine if credit can be awarded and to create their degree plan.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and Information Technology Division, Northeast (918) 595-7439;
Science, Mathematics, and Engineering and Division, Northeast (918) 595-7542
Alliance Coordinator/Counselor: (918) 595-7970
Counseling Center Metro: (918) 595-7151
Northeast: (918) 595-7451 Southeast: (918) 595-7651
West: (918) 595-8176

\section*{General Education Requirements Credit Hours: 18}

\section*{Computer Information Systems 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical /Professional Writing
*ENG 2343 Business Communications

\section*{Humanities 3 hours}

Choose any humanities course from the general education requirements page.
The following courses are recommended:
BUS / PHI 1143 Introduction to Ethics: Business Issues
BUS / SPE 2053 Intercultural Communication

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 42-43

\section*{Management 9 hours}

MGT 1353 Management Essentials
*MGT 1373 Human Resources Management
MGT 2123 Leadership Development

\section*{Mathematics 3-4 hours}
select one course from the following:
*MTH 1454 Technical Mathematics
*MTH 1473 Mathematics for Critical Thinking
*MTH 1513 College Algebra

\section*{Speech 3 hours}
select one course from the following:
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Technical Support Course Work 6-18 hours Advance Standing}

Up to 18 (APP) Credit hours in the technical specialty may be awarded for advanced standing credit.
APP 1306 Apprenticeship I-6 hours
*APP 1346 Apprenticeship II - 6 hours
*APP 2306 Apprenticeship III - 6 hours

\section*{Controlled Electives 15-18 hours}
select one course from the following:
EGR 1313 Manufacturing Processes
EGR/SUR 2262 Professional EGR/SUR Ethics
MGT 1393 Industrial Management
and select remaining coursework for a minimum of \(\mathbf{6 0}\) total credit hours from one of the following options:
1) Business and Information Technologies

See advisor to select from the following academic disciplines to compliment area of specialty: Accounting Business, Computer Information Systems, Economics, Marketing, Finance, Management
2) Science, Engineering and Mathematics Technologies

See advisor to select from the following academic disciplines to compliment area of specialty: Civil Engineering / Surveying Technology, Drafting and Engineering, Horticulture Technology, Numerical Control /Machinist Technology, Manufacturing Engineering Technology, Quality Control Technology.

\section*{Total Credit Hours: 60-61}
*Course has prerequisite (See course description section of catalog).


\section*{BUSINESS: HOSPITALITY \& TOURISM}

\section*{BUSINESS \\ Hospitality and Gaming Operations Option \\ 101 \\ This program has been articulated to transfer to Northeastern State University Hospitality \& Tourism degree. \\ Program Description: \\ This program is designed for students planning to transfer to senior colleges and universities in business with a hospitality emphasis. The suggested curriculum for this program includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.}

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Business and Information Technology Division:
West (918) 595-8033
Counseling Centers:West (918) 595-8176
General Education Requirements Credit Hours: 25
See the General Education Requirements page for the complete list. General Education Math, Required, and Recommended Elective fulfilled in Specialized Course Requirements of this degree. NSU requires that ENG 1113, ENG 1213 and MTH 1513 must be completed with a letter grade of " \(C\) " or better.

\section*{Humanities}

See General Education Requirement page for complete list.
The following courses are recommended:
NAS 2113 Native American Cultures
**BUS/PHI 1143 Introduction to Ethics, Business Issues
Specialized Course Requirements Credit Hours: 36-39

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Business 6 hours}
***BUS 1153 Introto HospitalityOperations-Hotels,Restaurants andTourism ***BUS 2813 Legal Issues in Hospitality Management

\section*{Computer Information Systems 3 hours}

Select 3 credit hours from the following courses:
CSC 1203 Computer Concepts and Applications
*CIS 2553 InformationTechnology Services,Hospitality and GamingEmphasis

\section*{Economics 6 hours}

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{Management 3 hours}
***MGT 1383 Human Resources Management for the Hospitality Industry

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics

Select one option from the clusters below:

\section*{Hospitality 6 hours}

BUS 2203 Supervision and Leadership-Hospitality Industry BUS 2403 Guest Relations and Customer Service

\section*{Gaming Operations 9 hours}

BUS 2203 Supervision and Leadership-Hospitality Industry
GAM 1113 Basic Room and Basic Game Operations
GAM 1213 Gaming Management and Protection

\section*{Total Credit Hours: 61-64}
*Course has prerequisite (See course description section of catalog).
** Students can enroll in either PHI or BUS if this option is chosen
***Course transfer to some universities. For transfer to other than Northeastern State University, check with the Counseling Center before enrolling.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{BUSINESS}

HOSPITALITY \& GAMING OPERATIONS OPTION

\section*{Program Description:}

This program provides exposure to a wide variety of businessrelated fields. It is designed for students desiring an entry - level supervisory or management position in the field of hospitality, restaurant, and gaming operations. In addition, students develop an appreciation for the social, political and economic environment in which business operates. Many of the courses in the workforce development degree program may transfer into a bachelor's degree program. Please consult with an advisor at TCC and / or the university you plan to attend.

\section*{Degree Awarded: Associate in Applied Science}

General Education Requirements Credit Hours: 21

\section*{Economics 6 hours}

ECO 1353 Personal Finance
ECO 2013 Principles of Macroeconomics

\section*{English 6 hours}

ENG 1113 Freshman Composition I and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical / Professional Writing
*ENG 2343 Business Communications
Philosophy / Psychology 3 hours and select one course from the following: NAS 2213 Native American Spiritualities PSY 1313 Human Relations

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 42

\section*{BUSINESS: HOSPITALITY \& TOURISM}

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Business 15 hours}

BUS 1053 Introduction to Business
**BUS/PHI 1143 Introduction to Ethics, Business Issues
BUS 1153 Introduction to Hospitality Operations - Hotels, Restaurants and Tourism
BUS 2313 Business Law I
and select 3 credit hours from the following courses:
BUS 1353 Business Mathematics
*MTH 1513 College Algebra

\section*{Computer Information Systems 3 hours}

Select 3 credit hours from the following courses:
*CIS 2553 Information Technology Services, Hospitality and Gaming Emphasis
CSC 1203 Computer Concepts and Applications

\section*{Management 3 hours}

MGT 1383 Human Resources Management for the Hospitality Industry

\section*{Marketing 3 hours}

MKT 2423 Principles of Marketing
Controlled Electives Credit Hours: 12
Select courses from one of the following four clusters:

\section*{Business Cluster 12 Hours}
***BUS/SPE 2053 Intercultural Communication
*BUS 2333 Principles of Finance
BUS 2403 Guest Relations and Customer Service
BUS 2813 Legal Issues in Hospitality Management
*CIS 2553 Information Technology Services, Hospitality and Gaming Emphasis
*ECO 2023 Principles of Microeconomics
NAS 2013 Images of Indians in American Cultures
NAS 2113 Native American Cultures
NAS 2213 Native American Spiritualities
NAS 2343 Native American Histories
NAS 2513 Native American Law
or

\section*{Hospitality Cluster 12 hours}

BUS 2203 Supervision and Leadership - Hospitality Industry BUS 2403 Guest Relations and Customer Service BUS 2813 Legal Issues in Hospitality Management *CIS 2553 Information Technology Services, Hospitality and Gaming Emphasis

Gaming Operations / Protection Cluster 12 Hours
BUS 2203 Supervision \& Leadership Hospitality Industry
BUS 2403 Guest Relations and Customer Service GAM 1113 Basic Room \& Basic Game Operations *GAM 1213 Gaming Management \& Protection
or
Restaurant Management Cluster 12 Hours
BUS 2203 Supervision \& Leadership - Hospitality Industry Operation
BUS 2403 Guest Relations and Customer Service HFS 1413 Labor and Food Cost Management HFS 2021 Quality Control Procedures for Hospitality HFS 2312 Off-Premise Service Management

\section*{Total Credit Hours: 63}
*Course has a prerequisite (See course description section of catalog)
**Students can enroll in either PHI or BUS if this option is chosen.
***Students can enroll in either SPE or BUS if this option is chosen.

\section*{HOSPITALITY AND GAMING OPERATIONS CERTIFICATES}

These certificates are designed for individuals whose objective is to become qualified for employment in the hospitality industry.

\section*{HOSPITALITY AND GAMING OPERATIONS Hospitality Certificate}

\section*{Program description:}

This certificate is designed for individuals whose objective is to become qualified for employment in the hospitality industry. The certificate will also provide a means for mid level managers lacking experience in the hospitality industry to become more familiar with and employable in Hospitality.

\section*{Degree Awarded: Certificate of Achievement}

\section*{Certificate Requirement Credit Hours: 18}

BUS 1153 Introduction to Hospitality Operations - Hotels, Restaurants and Tourism
BUS 2203 Supervision \& Leadership - Hospitality Industry
BUS 2403 Guest Relations and Customer Service
BUS 2813 Legal Issues in Hospitality Management
*CIS 2553 Information Technology Services, Hospitality and Gaming Emphasis
CSC 1203 Computer Concepts and Applications

\section*{Total Credit Hours: 18}
*Course has a prerequisite (see course description section of catalog).
or

\section*{BUSINESS: HOSPITALITY \& TOURISM}

\section*{HOSPITALITY AND GAMING OPERATIONS \\ Gaming Operations/Protection Certificate 646A}

\section*{Program Description:}

This certificate is designed for individuals whose objective is to become qualified for employment in the gaming operations / protection industry.

\section*{Degree Awarded: Certificate of Achievement}

\section*{Gaming Operations / Protection: 18}

BUS 1153 Introduction to Hospitality Operations - Hotels, Restaurant and Tourism
BUS 2203 Supervision \& Leadership - Hospitality Industry
BUS 2403 Guest Relations and Customer Service
CSC 1203 Computer Concepts and Applications
GAM 1113 Basic Room \& Basic Game Operations
*GAM 1213 Gaming Management and Protection
Total Credit Hours: 18
*Course has a prerequisite (See course description section of catalog).

HOSPITALITY AND GAMING OPERATIONS
Restaurant Management Certificate
646B

\section*{Program Description:}

This certificate is designed for individuals whose objective is to become qualified for employment in the restaurant management field.

\section*{Degree Awarded: Certificate of Achievement}

\section*{Restaurant Management Hours: 18}

BUS 1153 Introduction to Hospitality Operations - Hotels, Restaurant and Tourism
BUS 2203 Supervision \& Leadership - Hospitality Industry
BUS 2403 Guest Relations and Customer Service
CSC 1203 Computer Concepts and Applications
HFS 1413 Labor and Food Cost Management
HFS 2021 Quality Control Procedures
HFS 2312 Off-Premise Service Management
Total Credit Hours: 18


\section*{COMPUTER INFORMATION SYSTEMS}

Langston University - Tulsa Transfer Option
193 C

\section*{Program Description:}

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Computer Information Sciences at Langston University-Tulsa may complete the freshman and sophomore general education and prerequisite courses at TCC.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Business and Information Technology Divisions:
Metro (918) 595-7039, Northeast (918) 595-7439,
Southeast, (918) 595-7639,West (918)595-8033
Counseling Centers:Metro (918)595-7151,Northeast (918) 595-7451,
Southeast (918) 5957651,West (918)595-8176

\section*{General Education Requirements Credit Hours: 38}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

See general education requirements to select 6 hours of Humanities.

\section*{Mathematics 6 hours}
^*MTH 1513 College Algebra
^*MTH 1613 Plane Trigonometry

\section*{Science 8 hours}

BIO 1114 General Biology for Non-Majors
*PSC 1114 General Physical Science

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one of the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Required Electives 3 hours}

Select one 3-credit hour course from one of the following disciplines: Psychology, Social Sciences, Foreign Language, Fine Arts (art, music, theatre)

\section*{Recommended Electives 3 hours}

See General Education Requirement page for complete list.

\section*{Specialized Course Requirements Credit Hours: 23}

Computer Information Systems 12 hours
\(\wedge^{*}\) CIS 1203 Introduction to Computer Programming
\(\wedge\) CSC 1203 Computer Concepts and Applications
\(\wedge^{*}\) CSC 2473 C Language
\(\wedge^{*}\) CSC 2683 Data Structures
Mathematics 11 hours
\(\wedge *\) MTH 2114 Analytic Geometry and Calculus I
\(\wedge^{*}\) MTH 2124 Analytic Geometry and Calculus II
\(\wedge *\) MTH 2193 Elementary Statistics

\section*{Total Credit Hours: 61}
*Course has prerequisite (See course description section of catalog).
\(\wedge\) Course requires a letter grade of " \(C\) " or better.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{COMPUTER INFORMATION SYSTEMS}

Northeastern State University Transfer Option
193 D

\section*{Program Description:}

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Computer Science at NSU may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalog and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree.
General Education Requirements Credit Hours: 37
See the General Education Requirements list for complete list.

\section*{Specialized Course Requirements Credit Hours: 27}

\section*{Computer Information Systems 24 hours}
*CIS 1203 Introduction to Computer Programming
CSC 1203 Computer Concepts and Applications
*CSC 2133 Introduction to Java
*CSC 2473 C Language
*CSC 2843 C++Programming Language
*CSC 2683 Data Structures
and select 6 credit hours from the following
*CIS 1013 XHTML
*CIS 2413 Advanced Java
*CSC 1483 Introduction to UNIX (Linux)
* CSC 2283 Visual Basic

English 3 hours
*ENG 2333 Technical/Professional Writing

\section*{Total Credit Hours: 64}
*Course has prerequisite (see course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{COMPUTER INFORMATION SYSTIEMS Oklahoma State University Transfer Option}

\section*{193 E}

\section*{Program Description:}

This degree plan is for students planning to attend Oklahoma State University-Tulsa to complete a baccalaureate degree in Computer Science in the College of Arts and Sciences. The suggested degree curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Students should visit with a TCC counseling office to consult the OSU catalog for Undergraduate Programs Requirements and carefully select courses that will meet the requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

General Education Requirements Credit Hours: 36-37
Remaining General Education Requirements met in Specialized Course
Requirements

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{BUSINESS: INFORMATION TECHNOLOGY}

\section*{History 3 hours}

HIS 1483 U.S. History 1492- Civil War Era
or
HIS 1493 U.S. History Civil War Era to Present

\section*{U.S. Government 3 hours}

POS 1113 American Federal Government

\section*{Humanities 6 hours}

Any courses designated H. Recommend one course designated I. See the General Education Requirements list for complete list.

\section*{Mathematics 5-6 hours}
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry
*MTH 1715 College Algebra and Trigonometry

\section*{Science 7 hours}

See the General Education Requirements page for the complete list (must have one lab).

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Required Elective: 3 hours}

At least one \(\mathbf{3}\) hour course from the following disciplines: Psychology, Social Science, Foreign Language or Fine Arts (Art, Music and Theatre). An additional hour of General Education Requirement is satisfied in Specialized Course requirements.

\section*{Specialized Course Requirements Credit Hours: 21}

\section*{Mathematics: 12 hours}
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II
*MTH 2134 Analytic Geometry and Calculus III
Computer Science: 9 hours
** *CSC 2473 C Language
*CSC 2683 Data Structures
*CSC 2843 C++ Programming Language
Recommended Electives: 2-3 hours
Any courses designated H. Recommend one course designated I.
See the General Education Requirements page for complete list.
\({ }^{* *}\) CSC 1203 Computer Concepts and Applications
*CSC 1403 BASIC Language or
*CSC 2303 PASCAL or
*CSC 1901 Beginning (Linux) Unix
*CSC 2283 Visual Basic
*CSC 2843 C++ Programming Language
Foreign Language Requirement: OSU requires that students complete 1413 course level in a language or test at that level or \(\mathbf{2}\) years of the same language in high school.

\section*{Total Credit Hours: 60}
*Course has prerequisite (see course description section of catalog). \({ }^{* *}\) CSC 1203 may be needed to provide the prerequisite skills for CSC 2473 , students are advised to see a counselor before enrolling.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

COMPUTER INFORMATION SYSTEMS
Business Application Professional

\section*{Program Description:}

This program is designed to provide graduates with the diversity of computer technology and applications software skills needed to: Effectively use application software in a business setting, and prepare for the Microsoft Specialist exams in Word, Excel, Access, Outlook, Windows,, and PowerPoint (MCAS) and the Application Professional certification (MCAP). This option is for degree seeking students who desire the foundations and competencies to use desktop applications with a management focus.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and Information Technology Divisions:
Metro: (918) 595-7039, Northeast: (918) 595-7439,
Southeast: (918) 595-7639, West: (918) 595-8033
Counseling Centers: Metro: (918) 595-7151,
Northeast: (918) 595-7451, Southeast: (918) 595-7651, West: (918) 595-8176

\section*{General Education Requirements Credit Hours: 18}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I

\section*{select 3 credit hours from the following:}
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communication

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra
BUS 1353 Business Mathematics

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication
Specialized Course Requirements Credit Hours: 33
Accounting/Business/Mathematics 12 hours
ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
BUS 1053 Introduction to Business
MGT 2363 Principles of Management
*MTH 2193 Elementary Statistics

\section*{Computer Information Systems 21 hours}
*CIS 2343 Visual Basic for Applications
CSC 1203 Computer Concepts and Applications
*CSC 2013 Word
*CSC 2033 Excel
*CSC 2043 Access
*CSC 2163 Windows Operating Systems
*CSC 2483 PowerPoint/Multimedia

\section*{BUSINESS: INFORMATION TECHNOLOGY}

\section*{Controlled Electives Credit hours: 9 \\ Any 2000 level CIS/CSC course may be used as a controlled elective. \\ *CIS 2323 Outlook is Recommended \\ Total Credit Hours: 60 \\ *Courses has prerequisite (See our course description section of catalog).}

\section*{COMPUTER INFORMATION SYSTEMS Business Application Specialist Certificate}

\section*{585T}

\section*{Program Description:}

This program is designed to provide graduates with the diversity of computer technology and applications software skills needed to: (1) effectively use application software in a business setting, and prepare for the Microsoft Application Specialist exams in Word, Excel, Access, Outlook and PowerPoint (MCAS).. This option is for students who desire the skills to use desktop applications in the workplace .

\section*{Degree Awarded: Certificate of Achievement}

Certificate Requirements Credit Hours: 15
Computer Information Systems 15 hours
*CSC 2013 Word
*CSC 2033 Excel
*CSC 2043 Access
*CSC 2483 PowerPoint/Multimedia
and select one course from the following:
*CIS 2323 Outlook
*CIS 2343 Visual Basic for Applications
*CSC 2163 Windows Operating Systems
Total Credit Hours: 15
*Course has prerequisite (See course description section of catalog).

\section*{COMPUTER INFORMATION SYSTEMS \\ Computer User Certificate}

585S

\section*{Program Description:}

This program has been designed to produce a knowledgeable and proficient computer user upon completion of all 5 classes.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Division:
West Campus: (918) 595-8033
Counseling Center:West (918) 595-8176
Certificate Requirements Credit Hours: 7
CSC 1203 Computer Concepts and Applications
* CSC 1641 Windows
* CSC 1161 Introduction to the Internet
*CSC 1541 Advanced Excel
*CSC 1561 Advanced Word
Total Credit Hours: 7
*Course has prerequisite (See course description section of catalog).

\section*{COMPUTER INFORMATION SYSTEMS \\ Information Assurance and Forensics \\ OSU - Okmulgee Transfer Option \\ 585N \\ Program Description: \\ This program marks a partnership between Tulsa Community College and Oklahoma State University-Okmulgee, and has been designed to facilitate seamless transition from TCC to OSU-Okmulgee.Under this partnership,TCC students may use this associate degree as the first four semesters of the OSU-Okmulgee Bachelor of Technology in Information Assurance and Forensic degree.}

\section*{Degree Awarded: Associate in Applied Science}

For More Information Contact:
Business/Information Technology Division:
Northeast Campus: (918)595-7439
Counseling Northeast Campus: (918) 595-7451
General Education Requirements Credit Hours: 30

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

PHI 2113 Logic
PHI 2133 Introduction to Ethical Thinking

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one of the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication
Controlled Electives Credit Hours: 6 hours
At least three credit hours must be in social science, foreign language or fine arts
BUS 1053 Intro to Business
CSC 1203 Computer Concepts and Applications
Specialized Course Requirements: \(\mathbf{3 0}\) hours
Technical Core 15 hours
select four 3-credit hour courses from the following:
*CIS 1013 XHTML
*CIS 2413 Advanced JAVA
*CSC 1263 Network Fundamentals
*CSC 2133 Introduction to JAVA
*CSC 2143 A+ IT Technician
Information Assurance \& Forensics 12 hours
ITC 2003 CCNA Routing \& Switching
ITC 2033 Broadband/CCENT
*CIS 2493 Principles of Information Assurance
*CIS 2563 Enterprise Security
Required Elective Credit Hours: 3 hours
*ITC 2023 Wireless Networking
Total Credit Hours: 60
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{BUSINESS: INFORMATION TECHNOLOGY}

COMPUTER INFORMATION SYSTEMS
Networking

\section*{Program Description:}

The CIS Networking program is designed to provide graduates with the depth and diversity of skills needed to apply computer technology to business needs.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and information Technology Divisions:
Metro: (918) 595-7039 Northeast (918) 595-7439
Southeast: (918) 595-7639
Counseling Centers:
Metro: (918) 595-7151 Northeast: (918) 595-7451
Southeast: (918) 595-7639

\section*{General Education Requirements Credit Hours: 18}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select one \(\mathbf{3}\) credit hour course from following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Speech 3 hours
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication
Specialized Course Requirements Credit Hours: 30
Accounting/Business/Mathematics \(\mathbf{1 2}\) hours
ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
BUS 1053 Introduction to Business
MGT 2363 Principles of Management
*MTH 2193 Elementary Statistics
*MTH 2513 Finite Mathematics
Computer Information Systems 18 hours
CSC 1203 Computer Concepts and Applications
*CSC 1263 Network Fundamentals
and select one 3 credit hour course from following:
*CSC 2053 Novell Network Administration
*CIS 2053 Windows Network Administration
*CIS 2063 Microsoft Windows 2000 Series Server
*CSC 2803 UNIX Networking (Linux)
and select one 3 credit hour course from following:
*CSC 2203 Data Communication
*CSC 2143 A+ IT Technician
*ITC 2203 CCNA Routing and Switching
and select one 3 credit hour course from following:
*CIS 2083 Windows 2000 Series Network Infrastructure *CSC 2103 Networking Technologies
and select one 3 credit hour course from following:
*CIS 2493 Principles of Information Assurance
*CSC 2243 Network Design and Troubleshooting

\section*{Controlled Elective Credit Hours: 12}

Select 12 hours from the Computer Information Systems Electives.

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of the catalog. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{COMPUTER INFORMATION SYSTEMS \\ Certificate, Networking}

\section*{Program Description:}

The CIS Networking certificate program is designed to provide graduates with the depth and diversity of skills needed to apply computer technology to business needs.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Divisions:
Metro: (918) 595-7039 Northeast: (918) 595-7439
Southeast: (918) 595-7639
Counseling Centers: Metro: (918) 595-7151
Northeast: (918) 595-7451 Southeast: (918) 595-7651
Specialized Course Requirements Credit Hours: 18
CSC 1203 Computer Concepts and Applications
*CSC 1263 Network Fundamentals
and select one 3 credit hour course from following:
*CSC 2053 Novell Network Administration
*CIS 2053 Windows Network Administration
*CIS 2063 Microsoft Windows 2000 Series Server
*CSC 2803 UNIX Networking (Linux)
and select one 3 credit hour course from following:
*CSC 2203 Data Communication
*CSC 2143 A+ IT Technician
*ITC 2203 CCNA Routing and Switching
and select one 3 credit hour course from following:
*CIS 2083 Windows 2000 Series Network Infrastructure
*CSC 2103 Networking Technologies
and select one 3 credit hour course from following:
*CIS 2493 Principles of Information Assurance
*CSC 2243 Network Design and Troubleshooting
Total Credit Hours: 18
*Course has prerequisite (See course description section of the catalog).

\section*{BUSINESS: INFORMATION TECHNOLOGY}

COMPUTER INFORMATION SYSTEMS
Programming
581L

\section*{Program Description:}

The CIS Programming program is designed to provide graduates with the depth and diversity of skills needed to apply computer technology to business needs.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and Information Technology Divisions:Metro:(918) 595-7039,
Northeast:(918) 595-7439, Southeast:(918) 595-7639
Counseling Centers:Metro:(918) 595-7151,
Northeast:(918) 595-7451,Southeast:(918) 595-7651
General Education Requirements Credit Hours: 18
English 6 hours
*ENG 1113 Freshman Composition I
Select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 30}

\section*{Accounting/Business/Mathematics 12 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
BUS 1053 Introduction to Business
MGT 2363 Principles of Management
*MTH 2193 Elementary Statistics
*MTH 2513 Finite Mathematics

\section*{Computer Information Systems 18}
*CIS 1203 Introduction to Computer Programming
CSC 1203 Computer Concepts and Applications
*CSC 2473 C Language
and select one 3 credit hour course from each of the 3 following groups:

\section*{Group 1}
*CSC 1483 Introduction to UNIX (Linux)
*CSC 2163 Windows Operating Systems

\section*{Group 2}
*CSC 2133 Introduction to JAVA
*CSC 2283 Visual Basic
*CSC 2683 Data Structures
*CSC 2843 C++ Programming Language

\section*{Group 3}
*CIS 2413 Advanced JAVA
*CSC 2873 Advanced C++
*CSC 2893 Advanced Visual Basic

\section*{Controlled Elective Credit Hours: 12}

Select 12 hours from the Computer Information Systems Elective.
Total Credit Hours: 60
*Course has prerequisite (See course description section of the catalog. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{COMPUTER INFORMATION SYSTEMS \\ Certificate, Programming}

581L

\section*{Program Description:}

The CIS Programming Certificate is designed to provide graduates with the depth and diversity of skills needed to apply computer technology to business needs.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Divisions:
Metro: (918) 595-7039, Northeast: (918) 595-7439, Southeast: (918) 595-7639
Counseling Centers: Metro: (918) 595-7151,
Northeast: (918) 595-7451, Southeast: (918) 595-7651

\section*{Specialized Course Requirements Credit Hours: 18}

\section*{Computer Information Systems 18 hours}
*CIS 1203 Introduction to Computer Programming
CSC 1203 Computer Concepts and Applications
*CSC 2473 C Language
and select one 3 credit hour course from each of the 3 fol-
lowing groups:

\section*{Group 1}
*CSC 1483 Introduction to UNIX (Linux)
*CSC 2163 Windows Operating Systems
Group 2
*CSC 2133 Introduction to JAVA
*CSC 2283 Visual Basic
*CSC 2683 Data Structures
*CSC 2843 C++ Programming Language

\section*{Group 3}
*CIS 2413 Advanced JAVA
*CSC 2873 Advanced C++
*CSC 2893 Advanced Visual Basic

\section*{Total Credit Hours: 18}
*Course has prerequisite (See course description section of the catalog.

\section*{BUSINESS: INFORMATION TECHNOLOGY}

\section*{COMPUTER INFORMATION SYSTEMS}

Systems Support Technician
585R

\section*{Program Description:}

This program is designed to provide graduates with the diversity of skills needed to troubleshoot and implement a course of action necessary to solve customer hardware, software, and networking problems.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and Information Technology Divisions:
Northeast: (918) 595-7439
Counseling Centers: Northeast: (918) 595-7451
General Education Requirements Credit Hours: 21

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and
select one 3 credit hour course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communication

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Speech 3 hours}

SPE 2103 Introduction to Interpersonal Communication

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Psychology/Sociology 3 hours
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology
Specialized Course Requirements Credit Hours: 39
Business 3 hours
BUS 1053 Introduction to Business
Computer Information Systems 21 hours
CIS 2023 A+ Essentials
*CIS 2493 Principles of Information Assurance
CSC 1203 Computer Concepts and Applications
*CSC 1263 Network Fundamentals
*CSC 1273 Customer Support
*CSC 1483 Introduction to UNIX (Linux)
*CSC 2143 A+ IT Technician
Controlled Electives Credit hours: 15
** Select 15 Credit hours from any 2000 levels CIS/CSC or ITC Courses
Total Credit Hours: 60
*Course has prerequisite (See course description section of catalog).

COMPUTER INFORMATION SYSTEMS
Systems Support Technician Certificate 585R

\section*{Program Description:}

This program is designed for students who wish to acquire knowledge and skills needed to trouble shoot and implement a course of action necessary to solve customer hardware, software, and networking problems. Entry competencies include: basic knowledge of PCs and familiarity with the Windows operating system. On completion of coursework, students may sit for certification exams from CompTIA and Microsoft.
Degree Awarded: Certificate of Achievement
Certificate Requirements Credit Hours: 15
*CIS 2023 A+ Essentials
*CIS 2493 Principles of Information Assurance
*CSC 1263 Network Fundamentals
*CSC 1273 Customer Support
*CSC 2143 A+ IT Technician

\section*{Total Credit Hours: 15}
*Course has prerequisites (See course description section of catalog).

\section*{COMPUTER INFORMATION SYSTEMS UNIX \\ 581M}

\section*{Program Description:}

The CIS UNIX program is designed to provide graduates with the depth and diversity of skills needed to apply computer technology to business needs.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and Information Technology Divisions:
Metro: (918) 595-7039, Northeast: (918) 595-7439,
Southeast: (918) 595-7639
Counseling Centers:Metro: (918) 595-7151,
Northeast: (918) 595-7451, Southeast: (918) 595-7651

\section*{General Education Requirements Credit Hours: 18}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
Select 3 credit hours from the following courses:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I SPE 2103 Interpersonal Communication

\section*{BUSINESS: INFORMATION TECHNOLOGY}

Specialized Course Requirements Credit Hours: 30

\section*{Accounting/Business/Mathematics \(\mathbf{1 2}\) hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
BUS 1053 Introduction to Business
MGT 2363 Principles of Management
*MTH 2193 Elementary Statistics
*MTH 2513 Finite Mathematics
Computer Information Systems 18 hours
CSC 1203 Computer Concepts and Applications
*CSC 1483 Introduction to UNIX (Linux)
*CSC 2473 C Language
*CSC 2783 Advanced UNIX (Linux)
*CSC 2793 UNIX Programming (Linux)
*CSC 2803 UNIX Networking (Linux)

\section*{Controlled Elective Hours: 12}

Select 12 hours from the Computer Information Electives.

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog).

\section*{COMPUTER INFORMATION SYSTEMS}

\section*{Certificate, UNIX}

\section*{581M}

\section*{Program Description:}

The CIS UNIX Certificate is designed to provide graduates with the depth and diversity of skills needed to apply computer technology to business needs.

\section*{Degree Awarded: Certificate of Achievement}

\section*{Specialized Course Requirements Credit Hours: 18}

CSC 1203 Computer Concepts and Applications
*CSC 1483 Introduction to UNIX (Linux)
*CSC 2473 C Language
*CSC 2783 Advanced UNIX (Linux)
*CSC 2793 UNIX Programming (Linux)
*CSC 2803 UNIX Networking (Linux)

\section*{Total Credit Hours: 18}
*Course has prerequisite (See course description section of the catalog).

\section*{COMPUTER INFORMATION SYSTEM} Web Development

\section*{Program Description:}

This program is designed to provide graduates with the knowledge required to assume the role of a web developer. Completion of this program will allow a student to operate in a Microsoft, Java, or Macromedia environment, creating the back end programming required by today's dynamic database driven websites and web distributed applications.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and Information Technology Division:
Metro Campus: (918) 595-7039, Southeast (918) 595-7639
Counseling Centers: Metro Campus (918) 595-7151,
Southeast (918) 595-7651

General Education Requirements Credit hours 18

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communication

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication
Specialized Course Requirements 45 hours
Business/Mathematics 6 hours
BUS 1053 Introduction to Business
*MTH 2513 Finite Mathematics
Computer Information Systems 33 hours
*CIS 1203 Introduction to Computer Programming
*CIS 1013 XHTML
*CIS 2413 Advanced Java
*CIS 2473 ColdFusion
*CIS 2503 ASP .NET
CSC 1203 Computer Concepts and Applications
*CSC 1263 Network Fundamentals
*CSC 2133 Introduction to Java
*CSC 2473 C Programming
and select one 3 credit hour course from the following:
*CIS 1153 Adobe Dreamweaver
*CIS/MKT 1393 Web Design and Marketing and select one 3 credit hour course from the following:
*CIS 2033 Scripting
*CIS 2153 Advanced XHTML Technologies
Controlled Electives 6 hours
*CIS 1233 XML
*CIS 1283 Macromedia Flash Animation
*CIS 2153 Advanced XHTML Technologies
*CIS 2463 PHP Programming
*CIS 2533 Java Server Pages (JSP)
*CIS 2643 Database Design on MS SQL Server or CIS 1133 Oracle: Introduction to SQL \& PL/SQL
Total Credit Hours 63
*Course has prerequisites (See course description section of catalog).

\section*{BUSINESS: INFORMATION TECHNOLOGY}

\section*{COMPUTER INFORMATION SYSTEM \\ Certificate, Web Development}

\section*{Program Description:}

This program is designed to provide graduates with the knowledge required to assume the role of a web developer. Completion of this program will allow a student to operate in a Microsoft, Java, or Macromedia environment, creating the server-side programming required by today's dynamic database driven websites and web distributed applications.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Division Metro Campus:
(918) 595-7039 Southeast (918) 595-7639

Counseling Centers: Metro Campus (918) 595-7151 Southeast (918) 595-7651

\section*{Specialized Course Requirements 33 hours}
*CIS 1013 XHTML
*CIS 1203 Introduction to Computer Programming
*CIS 2033 Scripting
*CIS 2413 Advanced Java
*CIS 2473 ColdFusion
*CIS 2503 ASP.NET
CSC 1203 Computer Concepts and Applications
CSC 1263 Network Fundamentals
*CSC Introduction to Java Programming
*CSC 2473 C Programming
and select one from the following:
*CIS 1153 Adobe Dreamweaver
*CIS/MKT 1393 Web Design and Marketing
It is strongly recommended that students take the following additional courses.
*CIS 1233 XML
*CIS 1283 Macromedia Flash Animation
*CIS 2153 Advance XHTML Technologies
*CIS 2463 PHP Programming
*CIS 2533 Java Server Pages (JSP)
Select one from the following:
*CIS 2643 Database Design on MS SQL Server
*CIS 1133 Oracle: Introduction to SQL \& PL/SQL

\section*{Total Credit Hours: 33}

Course has prerequisite (See course description section of catalog).

\section*{COMPUTER INFORMATION SYSTEMS}

Web-Site Management

\section*{Program Description:}

The CIS Web-Site Management program is designed to provide graduates with the depth and diversity of skills needed to apply computer technology to business needs.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and Information Technology Division:Southeast:(918) 595-7639 Counseling Center: Southeast: (918) 595-7651

General Education Requirements Credit Hours: 18
English 6 hours
*ENG 1113 Freshman Composition I
Select 3 credit hours from the following courses:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 42}

Accounting/Business/Mathematics 12 hours
ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
BUS 1053 Introduction to Business
MGT 2363 Principles of Management
*MTH 2193 Elementary Statistics
*MTH 2513 Finite Mathematics
MKT 2423 Principles of Marketing
Computer Information Systems 18
*CIS 1013 XHTML
*CIS 1033 Adobe Photoshop
*CIS 1393/MKT 1393 Web Design and Marketing
*CSC 1263 Network Fundamentals
and select one \(\mathbf{3}\) credit hour course from the following:
CIS 1203 Introduction to Computer Programming
CSC 1203 Computer Concepts and Applications
and select one \(\mathbf{3}\) credit hour course from the following:
*CIS 2013 Web-Site Administration
*CSC 2783 Advanced UNIX (Linux)
*CSC 2803 UNIX (Linux) Networking

\section*{Controlled Elective Credit Hours: 12}

Select four 3-credit hour courses from the following:
CIS 1443 Electronic Commerce
CIS 2023 A+ Essentials
CIS 2033 Scripting
CIS 2153 Advanced XHTML Technologies
CSC 1483 Introduction to UNIX (Linux)
CSC 2243 Networking Design and Troubleshooting
*CIS 2013 Web-Site Administration
*CIS 2783 Advanced UNIX (Linux)
*CSC 2803 UNIX (Linux) Networking
Total Credit Hours: 60
*Course has prerequisite (See course description section of the catalog.

\section*{BUSINESS: INFORMATION TECHNOLOGY}

\section*{COMPUTER INFORMATION SYSTEMS \\ Certificate, Web-Site Management \\ 581P}

\section*{Program Description:}

The CIS Web-Site Management Certificate is designed to provide graduates with the depth and diversity of skills needed to apply computer technology to business needs.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Division:
Southeast: (918) 595-7639
Counseling Center:Southeast: (918) 595-7651

\section*{Specialized Course Requirements Credit Hours: 18}
*CIS 1013 XHTML
*CIS 1033 Adobe Photoshop
*CIS/MKT 1393 Web Design and Marketing
*CSC 1263 Network Fundamentals
and select one 3 credit hour course from the following:
CIS 1203 Introduction to Computer Programming
CSC 1203 Computer Concepts and Applications
and select one 3 credit hour course from the following:
*CIS 2013 Web-Site Administration
*CSC 2783 Advanced UNIX (Linux)
*CSC 2803 UNIX (Linux) Networking

\section*{Total Credit Hours: 18}
*Course has prerequisite (See course description section of the catalog).

\section*{COMPUTER INFORMATION SYSTEMS}

Certificate, Windows 2000 (MCSE Preparation)
585H

\section*{Program Description:}

This advanced certificate program is designed for students who have earned college credit in computer science/networking and other Information Systems' disciplines, have at least one year of computer network related experience, and wish to prepare themselves for MCSE certification exams.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Division:
Northeast: (918) 595-7439
Counseling Centers:Metro: (918) 595-7151,
Northeast: (918) 595-7451, Southeast: (918) 595-7651

\section*{Certificate Requirements Credit Hours: 21}

Computer Information Systems 15 hours
*CIS 2043 Microsoft Windows 2000 Professional
*CIS 2063 MS Windows 2000 Series Server
*CIS 2083 MS Windows 2000 Series Network Infrastructure
*CIS 2093 Implementing Microsoft Windows 2000 Series Directory Services Infrastructure
and choose one of the following:
*~CIS 2103 Designing MS Windows 2000 Series Network Infrastructure
*~CIS 2113 Designing Security in a MS Windows 2000 Network
*~CIS 2133 Designing MS Windows 2000 Series
Directory Services Infrastructure

Computer Information Systems 6 hours
*~CIS 2103 Designing MS Windows 2000 Network Infrastructure
*~CIS 2113 Designing Security in a MS Windows 2000 Series Network
*~CIS 2133 Designing MS Windows 2000 Series Directory Services Infrastructure
*CIS 2433 Microsoft Exchange Server
*CIS 2443 Systems Network Architecture (SNA) Server
*CIS 2633 Systems Management Server
*CIS 2643 Database Design on MS SQL Server
*CIS 2653 System Administrator for MS SQL Server

\section*{Total Credit Hours: 21}
*Course has prerequisite (See course description section of catalog).
*~Can be used as elective but not the one chosen for 3 hours of requirements.

\section*{COMPUTER INFORMATION SYSTEMS}

\section*{Electives}

A Partial List of Controlled Electives for Computer Information Systems follows.
Other courses, numbered 2003 or above may be substituted. Select courses from this list to fulfill elective requirements as stated in the Computer Information Systems degree and certificate patterns listed on the preceding pages.
NOTE: A Business Services Associate Dean must approve substitution of courses at the 1000 level not included in this section.

\section*{1000 level courses:}
*CIS 1013 XHTML
*CIS 1033 Adobe Photoshop
*CIS 1133 Oracle: Introduction to SQL
*CIS 1203 Introduction to Computer Programming
*CIS 1233 XML
*CIS 1153 Adobe Dreamweaver
*CIS 1393 Web Design and Marketing
*CIS 1443 Electronic Commerce
*CSC 1123 3D Graphics Using Lightwave
*CSC 1263 Network Fundamentals
*CSC 1283 Adobe Flash
*CSC 1293 3D Animation Using Lightwave
*CSC 1403 BASIC Language
*CSC 1483 Introduction to UNIX (Linux)
2000 level courses:
Any 2000 level CIS/CSC/ITC courses may be used as a controlled elective.
*Course has prerequisite (See course description section of catalog).
DIGITAL MEDIA OPTIONS, AAS/CER
See Arts \& Communications area of study:Graphic Arts

DRAFTING \& DESIGN ENGINEERING, AAS DRAFTING \& COMPUTER AIDED DESIGN, CER See Science Technology Engineering and Mathematics area of study:Technology

\section*{BUSINESS: INFORMATION TECHNOLOGY}

INFORMATION TECHNOLOGIES CONVERGENCE

\section*{946 B,C,D}

\section*{Program Description:}

This program is designed to help students develop or upgrade skills needed to function in today's changing information technologies environment. Voice data, and video networks are rapidly converging into a single, flexible communications network consisting of both wired and wireless components. Students will acquire skills in designing, installation, configuring, and maintaining voice, data, and video products and services in converged networks. To complete an AAS degree, students must also select from one of three options - Information Security, System Support, or Cisco Routing. Many of the courses in this program are designed to help students prepare to take industry certification exams from Microsoft, CompTIA, Cisco, and TIA.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business Services Division, Northeast: (918) 595-7439
Counseling Office, Northeast: (918) 595-7451

\section*{General Education Requirements Credit Hours: 18}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical /Professional Writing
*ENG 2343 Business Communication

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communications

\section*{Specialized Course Requirements Credit Hours: 42}

Computer Information Systems 15 hours
***CIS 2063 MS Windows 2000 Series Server
***CIS 2493 Principles of Information Assurance
CSC 1203 Computer Concepts and Applications
*CSC 1263 Networking Fundamentals
*CSC 1483 Introduction to UNIX (Linux)
Information Technologies Convergence 15 hours
*ITC 1033 Introduction to Voice Communications and Convergence
*ITC 2023 Wireless Networking
*ITC 2033 Broadband Networking/CCENT
*ITC 2063 VoIP \& Convergence Technologies
***ITC 2203 CCNA Routing and Switching

Plus one of the three following options of specialization:
Cisco Routing Specialization 12 hours 946B
*ITC 2233 CCNP Routing
*ITC 2253 CCNP Switching
*ITC 2263 CCNP Secure Converged WANs
*ITC 2283 CCNP Optimizing Converged Cisco Networks
Information Security Specialization 12 hours 946C
*CIS 2523 Secure Electronic Commerce
*CIS 2543 Network Security
CIS 2563 Enterprise Security
*CIS 2583 Cyber Forensics
System Support Specialization 12 hours 946D
*CIS 2023 A+Essentials**
*CSC 1273 Customer Support
*CSC 2143 A+ IT Technician**
and select any 3 credit hour 2000 level CIS, CSC, or ITC course

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog).
**Credit may be obtained through coursework at any Certified Cisco Academy or presentation of Cisco, Microsoft, or COMPTIA Certification.

\section*{INFORMATION TECHNOLOGIES \\ CONVERGENCE Basics Certificate}

\section*{Program Description:}

This program is designed to help students develop or upgrade skills needed to function in today's rapidly changing information technology environment. Voice, data, and video networks are rapidly converging into a single, flexible communications network consisting of both wired and wireless components. Students will acquire skill in designing, installation, configuring, and maintaining voice, data, and video products and services in converged networks. After achieving this Certificate, students can acquire an ITC Essentials Certificate by taking 2 additional classes.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Division:
Northeast (918) 595-7439
Counseling Office: Northeast: (918) 595-7451

\section*{Certificate Requirements Credit Hours: 15}

Computer Information Systems 6 hours
CSC 1203 Computer Concepts and Applications
*CSC 1263 Networking Fundamentals
Information Technologies Convergence 9 hours
*ITC 1033 Introduction to Voice Communications and Convergence
*ITC 2023 Wireless Networking
*ITC 2063 VoIP \& Convergence Technologies

\section*{Total Credit Hours: 15}
*Course has prerequisite (See course description section of catalog).

\section*{INFORMATION TECHNOLOGIES \\ CONVERGENCE Essentials Certificate}

\section*{Program Description:}

This program is designed to help students develop or upgrade skills needed to function in today's rapidly changing information technologies environment.Voice, data, and video networks are rapidly converging into a single, flexible communications network consisting of both wired and wireless components. Students will acquire skills in designing, installation, configuring, and maintaining voice, data, and video products and services in converged networks. After achieving this certificate, students can acquire the ITC certificate by taking 3 additional classes.

\section*{Certificate Requirements Credit Hours: 21}

Computer Information Systems 6 hours
CSC 1203 Computer Concepts and Applications
*CSC 1263 Networking Fundamentals

\section*{Information Technologies Convergence 15 hours}
*ITC 1033 Introduction to Voice Communications and Convergence
*ITC 2023 Wireless Networking
*ITC 2033 Broadband Networking/CCENT
*ITC 2063 VoIP \& Convergence Technologies
** *ITC 2203 CCNA Routing and Switching

\section*{Total Credit Hours: 21}
*Course has prerequisite (see course description section of catalog).
**Credit may be obtained through coursework at any Certified Cisco
Academy or presentation or Cisco, Microsoft, or COMPTIA Certification

\section*{INFORMATION TECHNOLOGIES \\ CONVERGENCE Certificate}

\section*{Program Description:}

This program is designed to help students develop or upgrade skills needed to function in today's rapidly changing information technologies environment. Voice, data, and video networks are rapidly converging into a single, flexible communications network consisting of both wired and wireless components. Students will acquire skills in designing, installation, configuring, and maintaining voice, data, and video products and services in converged networks.

\section*{Degree Awarded: Certificate of Achievement}

Certificate Requirements Credit Hours: 30
Computer Information Systems 15 hours
** *CIS 2063 MS Windows 2000 Series Server
** * CIS 2493 Principles of Information Assurance
*CSC 1483 Introduction to UNIX (Linux)
CSC 1203 Computer Concepts and Applications
*CSC 1263 Networking Fundamentals
Information Technologies Convergence 15 hours
*ITC 1033 Introduction to Voice Communications and Convergence
*ITC 2023 Wireless Networking
*ITC 2033 Broadband Networking/CCENT
*ITC 2063 VoIP \& Convergence Technologies
** *ITC 2203 CCNA Routing and Switching

\section*{Total Credit Hours: 30}
*Course has prerequisite (See course description section of catalog). ** Credit may be obtained through coursework at any Certified Cisco Academy or presentation of Cisco, Microsoft, or COMPTIA Certification.

\section*{INFORMATION TECHNOLOGIES \\ CONVERGENCE Cisco Routing Basics Certificate 952}

\section*{Program Description:}

This certificate program is designed to help systems and network administrators or engineers who have previous or current experience with Cisco routers and switches to upgrade skills necessary for wide area network configuration and maintenance in today's rapidly changing voice, data, and video IT environment. These classes are also designed to help prepare students to take Cisco certification exams. Students should have solid skills using TCP/IP protocols, IP addressing and subnetting, and should have experience in the WAN environment, or check with an ITC faculty member regarding preparedness.

\section*{Degree Awarded: Certificate of Achievement}

\section*{Certificate Requirements Credit Hours: 15}

\section*{Information Technologies Convergence 15 hours}
** *ITC 2203 CCNA Routing and Switching
** *ITC 2233 CCNP Routing
** *ITC 2253 CCNP Switching
** *ITC 2263 CCNP Secure Converged WANS
** *ITC 2283 CCNP Optimizing Converged Network

\section*{Total Credit Hours: 15}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
** Credit may be obtained through coursework at a Certified Cisco Academy or Presentation of a Cisco Certification.

\section*{INFORMATION TECHNOLOGIES CONVERGENCE Cisco Routing Certificate}

\section*{Program Description:}

This program is designed for students who wish to acquire skills necessary for employment as Convergence/ WAN Systems Analysts or Network Administrators.

\section*{Degree Awarded: Certificate of Achievement \\ Certificate Requirements Credit Hours: 30}

Computer Information Systems 3 hours
*CSC 1263 Networking Fundamentals
Information Technologies Convergence 27 hours
*ITC 1033 Introduction to Voice Communications and Convergence
*ITC 2203 CCNA Routing and Switching
*ITC 2233 CCNP Routing
*ITC 2253 CCNP Switching
*ITC 2263 CCNP Secure Converged WANS
*ITC 2283 CCNP Optimized Converged Cisco Networks
*ITC 2023 Wireless Networking
*ITC 2023 Broadband Networking/CCENT
*ITC 2063 VoIP \& Convergence Technologies

\section*{Total Credit Hours: 30}
*Course has prerequisite (See course description section of catalog). See program advisor to determine if credit may be obtained through coursework at a Certified Cisco Academy or presentation of Cisco Certification.
** Credit may be obtained through coursework at any Certified Cisco Academy or presentation of Cisco,Microsoft, or COMPTIA Certification.

\section*{BUSINESS: INFORMATION TECHNOLOGY}

\section*{INFORMATION TECHNOLOGIES CONVERGENCE \\ Information Security Essentials Certificate}

\section*{Program Description:}

This program is designed for students who wish to acquire skills necessary for specializing in convergence/Information Security. Students will be admitted to the program based upon meeting the program's admission criteria, but may enroll in CIS 2493 and CIS 2563 before acceptance into the program. After achieving this certificate, students can acquire the Information Security certificate by taking 2 additional classes.

\section*{Degree Awarded: Certificate of Achievement For More Information Contact:}

Business Services division: Northeast (918) 595-7439
Counseling Office: Northeast (918) 595-7451

\section*{Certificate Requirements Credit Hours: 24}

Computer information System 18 hours
*CIS 2493 Principles of Information Assurance
*CIS 2523 Secure Electronic Commerce
*CIS 2543 Network Security
*CIS 2563 Enterprise Security
*CIS 2583 Cyber Forensics
*CSC 1263 Networking Fundamentals

\section*{Information Technologies Convergence 6 hours}
*ITC 2023 Wireless Networking
*ITC 2063 VoIP \& Convergence Technologies

\section*{Total Credit Hours: 24}
*Courses has prerequisite (see course description section of catalog).

\section*{INFORMATION TECHNOLOGIES CONVERGENCE \\ Information Security Certificate 946C}

\section*{Program Description:}

This program is designed for students who wish to acquire skills necessary for specializing in converged network security. Students will be admitted to the program based upon meeting the program's admission criteria, but may take CIS 2493 and CIS 2563 before acceptance into the program.
Degree Awarded: Certificate of Achievement
Certificate Requirements Credit Hours: 30
Computer information Systems 18 hours
*CIS 2493 Principles of Information Assurance
*CIS 2523 Secure Electronic Commerce
*CIS 2543 Network Security
*CIS 2563 Enterprise Security
*CIS 2583 Cyber Forensics
*CSC 1263 Networking Fundamentals
Information Technologies Convergence 12 hours
*ITC 1033 Introduction to Voice Communications and Convergence
*ITC 2023 Wireless Networking
*ITC 2023 Broadband Networking/CCENT
*ITC 2063 VoIP \& Convergence Technologies
Total Credit Hours: 30
*Course has prerequisite (See course description section of catalog).

INFORMATION TECHNOLOGIES CONVERGENCE
Systems Support Certificate

\section*{Program Description:}

This program is designed for students who wish to acquire skills necessary for employment as Network Administrators or Computer Support Technicians.

\section*{Degree Awarded: Certificate of Achievement}

For More Information Contact:
Business Services Division, Northeast Campus: (918) 595-7439
Northeast Counseling Center: (918) 595-7451
Certificate Requirements Credit Hours: 30
Computer Information Systems 18 hours
*CIS 2023 A+ Essentials
*CIS 2063 MS Windows 2000 Series Server
*CSC 1263 Networking Fundamentals
*CSC 2053 Novell Administrator
*CSC 2143 A+ IT Technician
*CSC 2243 Network Design and Troubleshooting
Information Technologies Convergence 12 hours
*ITC 1033 Introduction to Voice Communications and Convergence *ITC 2023 Wireless Networking
*ITC 2023 Broadband Networking/CCENT
*ITC 2063 VoIP \& Convergence Technologies
Total Credit Hours: 30
*Course has prerequisite (See course description section of catalog).

\section*{INFORMATION TECHNOLOGIES CONVERGENCE Management}

\section*{Program Description:}

This program is designed to help students develop skills needed to function in areas of management in today's rapidly changing information technologies environment. Voice, data, and video networks are rapidly converging into a single, flexible communications network consisting of both wired and wireless components. Students will acquire training in management, economics, and finance, as well as technical training in convergence technologies. Additionally, this degree may help students purse an undergraduate degree in technology related fields.

\section*{Degree Awarded: Associate of Applied Science \\ General Education Requirements: Credit Hours: 24 \\ English 6 Hours}
*ENG 1113 Freshmen Composition I
*ENG 1213 Freshmen Composition II

\section*{Social Sciences 9 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present and select one course from the following:
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology

\section*{BUSINESS: INFORMATION TECHNOLOGY}

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Communications 3 hours}
select one course from the following:
SPE 1113 Speech Communication I or
SPE 2103 Interpersonal Communication

\section*{Humanities 3 hours}

HUM 2113 Humanities I

\section*{Specialized Course Requirements Credit Hours: 36}

\section*{Business 9 hours}

ACC 2213 Financial Accounting
BUS 1053 Introduction to Business
ECO 2013 Principles of Macroeconomics
Computer Information Systems 9 hours
CSC 1203 Computer Concepts and Applications
*CIS 2563 Enterprise Security
*CSC 1263 Networking Fundamentals
Information Technologies Convergence 12 hours
*ITC 1033 Introduction to Voice Communications and Convergence *ITC 2023 Wireless Networking
*ITC 2033 Broadband Networking/CCENT
*ITC 2063 VoIP \& Convergence Technologies

\section*{Management 6 Hours}
*MGT 1373 Human Resources management and select one course from the following
MGT 1353 Management Essentials
MGT 2363 Principles of Management
Total Credit Hours: 60
*Course has prerequisite (See course Description section of catalog) .

\section*{INFORMATION TECHNOLOGIES \\ CONVERGENCE Management Certificate \\ 946E}

\section*{Program Description:}

This program is designed to help students develop skills needed to function in areas of management in today's rapidly changing information technologies environment. Voice, data, and video networks are rapidly converging into a single, flexible communications network consisting of both wired and wireless components. Students will acquire training in management, economics, and finance, as well as technical training in convergence technologies. Students who have achieved this certificate can take additional courses to earn an Associate of Convergence Management.

\section*{Degree Awarded: Certificate of Achievement Certificate Requirements Credit Hours: 24}

\section*{Business 3 hours}

BUS 1053 Introduction to Business

\section*{Computer Information Systems 9 hours}
*CIS 2563 Enterprise Security
CSC 1203 Computer Concepts and Applications
*CSC 1263 Networking Fundamentals

\section*{Information Technologies Convergence 9 hours}
*ITC 1033 Introduction to Voice Communications and Convergence Fundamentals
*ITC 2023 Wireless Networking
*ITC 2063 VoIP \& Convergence Technologies

\section*{Management 3 hours}

MGT 1353 Management Essentials or
MGT 2363 Principles of Management
Total Credit Hours: 24
*Course has prerequisite (See course description section of catalog).


\section*{BUSINESS: MANAGEMENT}


\section*{MANAGEMENT \\ General Management}

\section*{Program Description:}

The General Management option will prepare students for a wide range of management positions. For managers already in the business world, this option will equip them with the additional management skills they need, and hone the skills they already possess. This option will help managers succeed in their current positions and prepare them for further career advancement. Major focus of this option is on improving decision-making processes, learning how to motivate members of a team, and developing new techniques to resolve conflicts.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and Information Technology Divisions:
Northeast: (918) 595-7439, Southeast: (918) 595-7639
Counseling Centers: Northeast: (918) 595-7451,
Southeast: (918) 595-7651
This program is offered at the Northeast Campus, the
Southeast Campus, and on-site at corporations and organi-
zations in the greater Tulsa area.

\section*{General Education Requirements Credit Hours: 18}

Economics 3 hours
ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Speech 3 hours
SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 27}

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Computer Information Systems 3 hours}

CSC 1203 Computer Concepts and Applications or
CSC 1011 Introduction to Microcomputers and select two one credit hour software courses.

Management 18 hours
MGT 2323 Organizational Behavior
*MGT 2353 Business Policy
and select one course from the following:
MGT 1353 Management Essentials
MGT 2363 Principles of Management
and select one course from the following:
*MGT 1373 Human Resources Management
*MGT 2413 Global Management
*MGT 2423 Entrepreneurship Management
and select an additional 6 credit hours of Management courses.
MGT 1233 Health Care Management
*MGT 2103 Workforce Development Internship
MGT 2123 Leadership Development
*MGT 2403 Critical Thinking for Results

\section*{Controlled Electives Credit Hours: 15}

Electives must be chosen in relation to the student's occupational/educational goal and approved by the program instructor.
Total Credit Hours: 60
*Course has prerequisite (See course description section of catalog).

\section*{MANAGEMENT}

General Management Certificate
Program Description:
The General Management option will prepare students for a wide range of management positions. For managers already in the business world, this option will equip them with the additional management skills they need, and hone the skills they already possess. This option will help managers succeed in their current positions and prepare them for further career advancement. Major focus of this option is on improving decision-making processes, learning how to motivate members of a team, and developing new techniques to resolve conflicts.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Divisions:
Northeast: (918) 595-7439, Southeast: (918) 595-7639
Counseling Centers: Northeast: (918) 595-7451,
Southeast: (918) 595-7651
This program is offered at the Northeast Campus, Southeast Campus, corporations, and organizations in the greater Tulsa area.

\section*{Certificate Requirements Credit Hours: 30}

\section*{Accounting 3 hours}

ACC 2213 Financial Accounting
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications
or
CSC 1011 Introduction to Microcomputers
and select two one credit hour software courses.
English 6 hours
*ENG 1113 Freshman Composition I

\section*{BUSINESS: MANAGEMENT}
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications
Management 18 hours
*MGT 2323 Organizational Behavior
*MGT 2353 Business Policy
and select one course from the following:
MGT 1353 Management Essentials
MGT 2363 Principles of Management
and select one course from the following:
*MGT 1373 Human Resources Management
*MGT 2413 Global Management
*MGT 2423 Entrepreneurship Management and select an additional 6 credit hours of Management courses.
MGT 1233 Health Care Management
*MGT 2103 Workforce Development Internship
MGT 2123 Leadership Development
*MGT 2403 Critical Thinking for Results
Total Credit Hours: 30
*Course has prerequisite (See course description section of catalog).

\section*{MANAGEMENT}

International Management
774D

\section*{Program Description:}

If you are employed by a Tulsa company with global operations, the International Management option is just what you need for a successful career. This option concentrates on general business and management practices that are critical for companies competing in the international marketplace. Areas of emphasis include critical thinking, communications, decision-making, motivational techniques and conflict resolution. Special emphasis is also placed on expanding cultural knowledge and helping to develop the language skills needed to communicate with those of other cultures.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and information Technology Divisions: Northeast: (918) 595-7439, Southeast: (918) 595-7639
Counseling Centers: Northeast: (918) 595-7451,
Southeast: (918) 595-7651
This program is offered at the Northeast Campus, the Southeast Campus, and on-site at corporations and organizations in the greater Tulsa area.
General Education Requirements Credit Hours: 15
Economics 3 hours

ECO 2013 Principles of Macroeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 33}

\section*{Accounting 3 hours}

ACC 2213 Financial Accounting

\section*{Business 6 hours}
**BUS/SPE 2053 Intercultural Communication
*ECO 2123 International Economic Issues

\section*{Computer Information Systems 3 hours}

CSC 1203 Computer Concepts and Applications
or
CSC 1011 Introduction to Microcomputers and select two one credit hour software courses.

\section*{Foreign Language 6 hours}

Select a total of 6 credit hours from one foreign language discipline.

\section*{Management 12 hours}
*MGT 2323 Organizational Behavior
*MGT 2353 Business Policy
*MGT 2413 Global Management
and select one 3 credit hour course from the following:
MGT 2363 Principles of Management
MGT 2403 Critical Thinking for Results
Marketing 3 hours
*MKT 2813 International Marketing

\section*{Controlled Electives Credit Hours: 12}

Electives must be chosen in relation to the student's occupational/educational goal and approved by the instructor. It is advised that elective courses be related to an international topic.

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog).
\({ }^{* *}\) Course can serve as either a BUS or SPE Credit. Students should choose either the BUS or SPE Discipline when enrolling.

\section*{BUSINESS: MANAGEMENT}

\section*{MANAGEMENT}

International Management Certificate
774D

\section*{Program Description:}

If you are employed by a Tulsa company with global operations, the International Management option is just what you need for a successful career. This option concentrates on general business and management practices that are critical for companies competing in the international marketplace. Areas of emphasis include critical thinking, communications, decision-making, motivational techniques and conflict resolution. Special emphasis is also placed on expanding cultural knowledge and helping to develop the language skills needed to communicate with those of other cultures.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and information Technology Divisions:
Northeast: (918) 595-7439, Southeast: (918) 595-7639
Counseling Centers: Northeast: (918) 595-7451,
Southeast: (918) 595-7651
This program is offered at the Northeast Campus, the Southeast Campus, and on-site at corporations and organizations in the greater Tulsa area.

\section*{Certificate Requirements Credit Hours: 33}

Business 6 hours
**BUS/SPE 2053 Intercultural Communication
ECO 2123 International Economic Issues

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Foreign Language 6 hours}

Select a total of 6 credit hours from one foreign language discipline.

\section*{Management 12 hours}
*MGT 2323 Organizational Behavior
*MGT 2353 Business Policy
*MGT 2413 Global Management
and select one 3 credit hour course from the following:
MGT 2363 Principles of Management
MGT 2403 Critical Thinking for Results
Marketing 3 hours
*MKT 2813 International Marketing
Total Credit Hours: 33
*Course has prerequisite (See course description section of catalog).
\({ }^{* *}\) Course can serve as either a BUS or SPE Credit. Students should choose either the BUS or SPE Discipline when enrolling.

\section*{MANAGEMENT \\ Internship \\ 774A}

\section*{Program Description:}

Learning to do, doing to learn. That's the essence of the Management Internship option, designed not only to help students develop the managerial skills they must have to prosper in today's business world, but also to practice those skills in their own business setting. This option combines formal classroom study with a student-internship project at the student's place of employment. This option is recommended for current managers who wish to advance and need additional management training, those recently promoted to managerial positions, or those who have been identified by their employer as having managerial potential.

\section*{Degree Awarded: Associate in Applied Science}

This program is offered at the Northeast Campus, the Southeast Campus, and on-site at corporations and organizations in the greater Tulsa area.

Admission to the Program:
Fulfill all admission requirements to Tulsa Community College. Arrange an advisement meeting with a program instructor and discuss the requirements for the internship classes.

\section*{General Education Requirements Credit Hours: 18}

\section*{Economics 3 hours}

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
Specialized Course Requirements Credit Hours: 30

\section*{Accounting 3 hours}

ACC 2213 Financial Accounting
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications or
CSC 1011 Introduction to Microcomputers and select two 1 credit hour software courses.

\section*{Management 24 hours}
**MGT 1343 Management Internship I
**MGT 1363 Management Internship II
**MGT 2303 Management Internship III
*MGT 2323 Organizational Behavior
**MGT 2343 Management Internship IV
*MGT 2353 Business Policy

\section*{BUSINESS: MANAGEMENT}
and select one course from the following:
MGT 1353 Management Essentials
MGT 2363 Principles of Management
and select one course from the following:
MGT 1373 Human Resources Management
*MGT 2413 Global Management
*MGT 2423 Entrepreneurship Management
Controlled Electives Credit Hours: 12
*MGT 2403 Critical Thinking for Results
Nine hours of additional electives must be chosen in relation to the student's occupation/educational goal and approved by the program instructor.

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). **All students in this program must contact a Management Program instructor prior to enrolling in one of the Management Internship courses.

\section*{MANAGEMENT \\ Internship Certificate}

774A

\section*{Program Description:}

Learning to do, doing to learn. That's the essence of the Management Internship option, designed not only to help students develop the managerial skills they must have to prosper in today's business world, but also to practice those skills in their own business setting. This option combines formal classroom study with a student-internship project at the student's place of employment. This option is recommended for current managers who wish to advance and need additional management training, those recently promoted to managerial positions, or those who have been identified by their employer as having managerial potential.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and information Technology Divisions:
Northeast: (918) 595-7439, Southeast: (918) 595-7639
Counseling Centers: Northeast: (918) 595-7451,
Southeast: (918) 595-7651
This program is offered at the Northeast Campus, the
Southeast Campus, and on-site at corporations and organi-
zations in the greater Tulsa area.

\section*{Certificate Requirements Credit Hours: 30}

English 6 hours
*ENG 1113 Freshman Composition I
and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Management 24 hours}
**MGT 1343 Management Internship I
**MGT 1363 Management Internship II
**MGT 2303 Management Internship III
*MGT 2323 Organizational Behavior
**MGT 2343 Management Internship IV
*MGT 2353 Business Policy

MGT 1353 Management Essentials
MGT 2363 Principles of Management
and select one course from the following:
*MGT 1373 Human Resources Management
*MGT 2413 Global Management
*MGT 2423 Entrepreneurship Management
Total Credit Hours: 30
*Course has prerequisite (See course description section of catalog).
**All students in this program must contact a Management Program instructor prior to enrolling in one of the Management Internship courses.

\section*{MANAGEMENT \\ Management Leadership Certificate}

\section*{Program Description:}

The Management Leadership option will prepare students for a wide range management and leadership positions. For students already in the workforce, this option will equip them with the necessary skills for success in the business world, and help perfect the skills they already possess. This option will help managers and leaders succeed in their current positions, and prepare them for further career advancement. This option is designed to provide the human, practical, and conceptual skills necessary to successfully manage and lead organizations in the 21st Century.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Divisions: Northeast: (918) 595-7439, Southeast (918) 595-7639
Counseling Centers: Northeast: (918) 595-7451,
Southeast (918) 595-7651
This program is offered at the Northeast Campus, Southeast Campus, corporations, and organizations in the Greater Tulsa area.

\section*{Certificate Requirements Credit Hours: 15}

\section*{Management 15 hours}
*MGT 1373 Human Resources Management and select one course from the following:
MGT 1233 Health Care Management
MGT 1353 Management Essentials
MGT 2363 Principles of Management
and select one course from the following:
MGT 2123 Leadership Development
*MGT 2323 Organizational Behavior
and select two additional courses from the following:
MGT 1343 Management Internship
MGT 2103 Workforce Development Internship
MGT 2123 Leadership Development
*MGT 2353 Business Policy
MGT 2403 Critical Thinking for Results
Total Credit Hours: 15
*Course has prerequisite (See course description selection of catalog).

\section*{BUSINESS: MARKETING}

\section*{MARKETING}

Northeastern State University Transfer Option

\section*{124 A}

\section*{Program Description:}

This program is designed to provide the student with fundamental skills, attitudes, and experience in Marketing, Communication, Customer Service, Consumer Behavior and Sales. The curriculum includes core courses that students are required to complete in the first two years of marketing study. Students will be provided with the necessary skills to obtain employment in a marketing position. Graduates of this program will be prepared to continue course work toward a baccalaureate degree in any of the options within the Marketing program at Northeastern State University.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information:}

Business and Information Technology Division:
Southeast: (918) 595-7639
Counseling Center: (918) 595-7651

\section*{General Education Requirements Credit Hours:37-38}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

HUM 2113 Humanities I
or
HUM 2223 Humanities II
and select one of the following courses
PHI 1113 Introduction to Philosophy
HIS 1053 Ancient Medieval Western History
Art 1113 Art Appreciation
MUS 1113 Music Appreciation

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Science 7-8 hours}

Select one course from each of the following groups. At least one course must be a laboratory science.
*BIO 1604 Zoology
*CHE 1114 Principles of Chemistry
GEL 1014 General Geology (Physical)
and
BIO 1114 General Biology for Non-Majors
HT 1303 Principles of Horticulture Technology
*PSC 1114 General Physical Science

\section*{Social Sciences 9 hours}

GEO 1043 Introduction to Cultural Geography
POS 1113 American Federal Government
and select one from the following:
HIS 1483 U.S. History 1492 to Civil War
HIS 1493 U.S. History Civil War to Present

\section*{Specialized Course Requirements Credit Hours: 30}

Accounting 6 hours
ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
Computer Science 3 hours
CSC 1203 Computer Concepts and Applications

\section*{Economics 6 hours}

ECO 2013 Principles of Macroeconomics
*ECO 2023 Principles of Microeconomics

\section*{Marketing 12 hours}

MKT 1313 Sales and Negotiations
*MKT 2363 Consumer Behavior
MKT 2423 Principles of Marketing
and select one course from the following:
MKT 2343 Customer Service
*MKT 2393 Advertising and Promotion Management
Speech 3 hours
SPE 1113 Speech Communication I

\section*{Total Credit Hours: 67-68}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S.Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{MARKETING \\ Oklahoma State University - Transfer Option}

\section*{Program Description:}

This program is designed to provide the student with fundamental skills, attitudes, and experience in Marketing, Communication, Customer Service, and Sales. Graduates of the program will be prepared to continue coursework toward a baccalaureate degree in any of the options within the Marketing program at Oklahoma State University.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information:}

Business and Information Technology Division:
Southeast: (918) 595-7639
Counseling Center: (918) 595-7651

\section*{General Education Requirements Credit Hours: 37}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II
Science 7 hours
Select one 4-hour course from the following:
*PSC 1114 General Physical Science
*CHE 1114 Principles of Chemistry
GEL 1014 General Geology
BIO 1114 General Biology for Non-Majors
*BIO 1604 Zoology
and any 3 hours of General Education courses designated as science

\section*{Required Electives 6 hours}

Select two courses from the following disciplines:
Psychology, Social Science, Foreign Language, Fine Arts

\section*{BUSINESS: MARKETING}

\section*{Social Sciences 9 hours}

GEO 1043 Introduction to Cultural Geography
POS 1113 American Federal Government and select one from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Humanities 6 hours}

Select one of the following:
HUM 2113 Humanities I
HUM 2223 Humanities II
and select one of the following:
PHI 1113 Introduction to Philosophy
HIS 1053 Ancient Medieval Western History
Art 1113 Art Appreciation
MUS 1113 Music Appreciation
Mathematics 6 hours
*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics

\section*{Required Electives 3 hours}

Select one course Social / Behavioral Science

\section*{Specialized Course Requirements Credit hours: 27}

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting

\section*{Economics 6 hours}

ECO 2103 Introduction to Macroeconomics
*ECO 2023 Introduction to Microeconomics
Computer Science 3 hours
CSC 1203 Computer Concepts and Applications

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Marketing 9 hours}

MKT 1313 Sales \& Negotiations
MKT 2343 Customer Service
*MKT 2393 Advertising and Promotion

\section*{Total Credit Hours: 64}
*Course has prerequisite (see course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{MARKETING}

Apparel Design and Merchandising
OSU - Stillwater Transfer Option

\section*{Program Description:}

Apparel Design and Merchandising degrees include the study of Marketing Principles, Drawing, Fashion Innovation Design, and Product Development. Further study of Human Development, Psychology, Sociology and Leadership are included. The curriculum includes courses generally completed in the first two years in a four-year curriculum. This program curriculum is designed to prepare students to transfer to Oklahoma State University to complete a baccalaureate degree in Apparel Design or Merchandising.

\section*{Degree Awarded: Associate in Science}

General Education Requirements Credit Hours:37-38

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II
Humanities 6 hours
6 hours designated as humanities in the General Education Requirements.
Mathematics 6 hours
*MTH 1513 College Algebra
and
**3 hours designated as math in the General Education Requirements.
Psychology 3 hours
PSY 1113 Introduction to Psychology
Science 7-8 hours
Select one of the following laboratory science courses.
CHE 1034 Practical Chemistry
*CHE 1114 Principles of Chemistry
*CHE 1315 General Chemistry I
and
**3 hours designated as science in the General Education Requirements.
Social Science 6 hours
POS 1113 American Federal Government
and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Speech 3 hours
SPE 1113 Speech Communication I
Specialized Course Requirements Credit Hours: 27
Art 3 hours
ART 1013 Fundamentals of Art I
Economics 3 hours
ECO 2013 Principles of Macroeconomics
Human Development 3 hours
CHD 2003 Child Development in the Lifespan
HS 2023 Lifespan Development
*PSY 2023 Developmental Psychology
Marketing 9 hours
MKT 1333 Fashion Innovation and Marketing
MKT 2423 Principles of Marketing
MKT 2433 Product Development
Sociology 3 hours
SOC 1113 Introduction to Sociology
Select One Option from either Apparel Design or
Apparel Merchandising 6 hours
Apparel Design
*ART 1123 Drawing I
MGT 2123 Leadership Development
Apparel Merchandising

\section*{BUSINESS: MARKETING}

ACC 2213 Financial Accounting
and select one of the following:
MKT 1313 Sales and Negotiations
MKT 2343 Customer Service

\section*{Total Credit Hours: 64-65}
\({ }^{*}\) Course has a prerequisite (See course description section of the catalog). **Students are encourage to take MTH 2193 Elementary Statistics. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{MARKETING}

\section*{731}

\section*{Program Description:}

This program is designed to provide students the opportunity to engage in a hands-on approach to marketing. Participants of this program learn the essentials of marketing, how to create professional sales presentations, develop advertising campaigns, write press releases, develop marketing websites, conduct market research and much more. This program is designed to prepare the student for successful employment in a marketing position. The marketing job market remains strong with high salary potential. Graduates of the program qualify for many marketing career opportunities including assistant buyer, customer service consultant, data analyst, event coordinator, marketing assistant, project manager, sales representative, and telemarketing representative. The program also allows for marketing internship opportunities.

\section*{Degree Awarded: Associate in Applied Science}

For More Information Contact:
Business and Information Technology Division:
Southeast: (918) 595-7639
Counseling Center: Southeast: (918) 595-7651
General Education Requirements Credit Hours: 18

\section*{Economics 3 hours}
select one course from the following:
ECO 1353 Personal Finance
ECO 2013 Principles of Macroeconomics
English 6 hours
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2343 Business Communications

\section*{Mathematics 3 hours}

Select one course from the following:
*MTH 1513 College Algebra
BUS 1353 Business Mathematics

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 30}

\section*{Accounting 3 hours}

ACC 2213 Financial Accounting
Business and Management 9 hours
BUS 1053 Introduction to Business
MGT 2123 Leadership Development
MGT 2363 Principles of Management
Computer Information Systems 3 hours
Select 3 credit hours from any Computer Information Systems (CIS/CSC) courses.

\section*{Marketing 15 hours}

MKT 1313 Sales and Negotiations
MKT 2343 Customer Service
*MKT 2363 Consumer Behavior
*MKT 2393 Advertising and Promotion Management
MKT 2423 Principles of Marketing

\section*{Controlled Electives Credit Hours: 12}

APP 1203 Apprenticeship
APP 1306 Apprenticeship I
*ACC 2223 Managerial Accounting
BUS 1143 Introduction to Ethics: Business Issues
*CIS 1033 Adobe Photoshop
*CSC 1711 Introduction to PowerPoint
*MGT 2103 Workforce Development Internship
MKT 1333 Fashion Innovation and Marketing
MKT 1371 Introduction to Customer Service
MKT 1381 Marketing on the Internet
***MKT/CIS 1393 Web Design \& Marketing
MKT 1403 Marketing Internship I
MKT/CIS 1443 Electronic Commerce
MKT 2433 Product Development
*MKT 2813 International Marketing

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog).
** Course can serve as either a MKT or CIS Credit. Students should
choose either the MKT or CIS Discipline when enrolling.

\section*{BUSINESS: MARKETING}

\section*{MARKETING}

Customer Service Certificate

\section*{Program Description:}

This program provides students with an overall understanding of multiple marketing elements. Students will have the opportunity to expand their understanding of customer service, professional sales, consumer behavior, and advertising. This program gives students the necessary skills to gain employment in a marketing position and to excel in this dynamic aspect of business.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Business and Information Technology Division:
Southeast: (918) 595-7639
Counseling Center: Southeast: (918) 595-7651

\section*{Certificate Requirements Credit Hours: 30}

\section*{Business 3 hours}

BUS 1053 Introduction to Business

\section*{Computer Information Systems 3 hours}

Select 3 credit hours from any Computer Information Systems (CSC/CIS) courses.

\section*{English 3 hours}

Select one course from the following:
*ENG 1113 Freshman Composition I
*BUS 2343 Business Communications

\section*{Management 6 hours}

MGT 2123 Leadership Development
MGT 2363 Principles of Management
Marketing 15 hours
MKT 1313 Sales and Negotiations
MKT 2343 Customer Service
*MKT 2363 Consumer Behavior
*MKT 2393 Advertising and Promotional Management
MKT 2423 Principles of Marketing
Total Credit Hours: 30
*Course has prerequisite (See course description section of catalog.

\section*{MARKETING \\ Disney Internship Option}

\section*{731H}

\section*{Program Description:}

This program is designed to develop fundamental skills, knowledge, attitudes, and experiences needed to function in industrial, retailing, hospitality, international, or customer service marketing positions. This option allows students the opportunity to participate for one semester in the Disney internship program in Orlando, Florida. Students must meet all the requirements to be accepted into the Disney program. Students must also meet with a full-time Marketing instructor to gain up to 9 hours credit for their internship experience.

\section*{Degree Awarded: Associate in Applied Science}

\section*{General Education Requirements Credit Hours: 18}

Economics 3 hours
Select one course from the following
ECO 1353 Personal Finance
ECO 2013 Principles of Macroeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2343 Business Communications

\section*{Mathematics 3 hours}

Select one course from the following:
*MTH 1513 College Algebra
BUS 1353 Business Mathematics

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 42}

\section*{Accounting 3 hours}

ACC 2213 Financial Accounting
Business 3 hours
BUS 1053 Introduction to Business
Computer Information Systems 3 hours
Select 3 credit hours from any Computer Information Systems (CIS/CSC) courses.

\section*{Management 6 hours}

MGT 2123 Leadership Development
MGT 2363 Principles of Management

\section*{Marketing 24 hours}

MKT 1313 Sales and Negotiations
MKT 2343 Customer Service
*MKT 2363 Consumer Behavior
*MKT 2393 Advertising and Promotion Management
MKT 2423 Principles of Marketing
**MKT 1403 Marketing Internship I
**MKT 1423 Marketing Internship II
**MKT 1433 Marketing Internship III

\section*{Controlled Electives 3 hours}

MKT 1333 Fashion Innovation and Marketing
*MKT 1393 Web Design and Marketing
MKT 1443 Electronic Commerce
MKT 2433 Product Development
*MKT 2813 International Marketing
Total Credit Hours: 60
** \({ }^{*}\). urse has prerequisite (See course description section of catalog). ** Students should work with a full-time Marketing instructor to plan their course of study.

\section*{For More Information Contact:}

Business and Information Technology Division:
Southeast: (918) 595-7639
Counseling Center:Southeast: (918) 595-7651

\section*{BUSINESS: MARKETING}

\section*{MARKETING}

E-Business
732

\section*{Program Description:}

E-Business Marketing is a fast growing element of the business world. This program is designed to develop fundamental principles of marketing, sales, advertising, customer service, and Internet marketing. This curriculum includes the traditional elements of marketing as well as preparing the student to conduct marketing on the Internet. The course of study includes multiple elements of Computer Information Systems and E-Business Marketing.This program is designed for the student who wants to learn the marketing skills related to E-Business, develop marketing websites, or enhance an existing business with an Internet element. Students could qualify for employment in marketing or website design, or as a web master.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Business and Information Technology Division:
Southeast: (918) 595-7639
Counseling Center: Southeast: (918) 595-7651
General Education Requirements Credit Hours: 15

\section*{Economics 3 hours}

ECO 2013 Principles of Macroeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2343 Business Communications

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 45}

\section*{Business 3 hours}

BUS 1053 Introduction to Business
Computer Information Systems 6 hours
*CIS 1033 Adobe Photoshop
CSC 1203 Computer Concepts and Applications
Marketing \& Computer Information Systems 6 hours
*MKT/CIS 1393 Web Design \& Marketing
*MKT/CIS 1443 Electronic Commerce
Marketing 12 hours
MKT 1313 Sales and Negotiations
MKT 2343 Customer Service
*MKT 2393 Advertising and Promotion Management
MKT 2423 Principles of Marketing
Management 6 hours
MGT 2123 Leadership Development
MGT 2363 Principles of Management

Controlled Electives 12 hours
Select 12 hours from the following:
ACC 2213 Financial Accounting
*ACC 2223 Managerial Accounting
*CIS 1013 XHTML
*CIS 2153 Advanced XHTML Technologies
*CSC 2163 Windows Operating Systems
*CSC 2483 PowerPoint/ Multimedia
MKT 1403 Marketing Internship I
*MKT 2363 Consumer Behavior
*MGT 2423 Entrepreneurship Management
MKT 2433 Product Development
*MKT 2813 International Marketing
Total Credit Hours: 60
*Course has prerequisite (See course description section of catalog).

\section*{MARKETING}

E-Business Certificate

\section*{Program Description:}

This certificate program includes all the fundamental elements of marketing as well as multiple elements of Computer Information Systems. Students will develop skills in customer service, professional sales, consumer behavior, advertising, and marketing principles. Students will develop skills in web-based application and website administration as well as learning some programming languages. This program provides students with fundamental marketing skills as well as the tools necessary to create marketing websites on the Internet. Students will gain the skills to be eligible for employment in a marketing or website development position.

\section*{Degree Awarded: Certificate of Achievement}

For More Information Contact:
Business and Information Technology Division:
Southeast: (918) 595-7639
Counseling Center:Southeast: (918) 595-7651

\section*{Certificate Requirements Credit Hours: 30}

\section*{Marketing 12 hours}

MKT 1313 Sales and Negotiations
MKT 2343 Customer Service
*MKT 2393 Advertising and Promotion Management MKT 2423 Principles of Marketing
Computer Information Systems 6 hours
*CIS 1033 Adobe Photoshop
CSC 1203 Computer Concepts and Applications

\section*{Management 6 hours}

MGT 2123 Leadership Development
MGT 2363 Principles of Management

\section*{Marketing/Computer Information Systems 6 hours}
*MKT 1393 Web Design \& Marketing
*MKT 1443 Electronic Commerce
Total Credit Hours: 30
*Course has prerequisite (See course description section of catalog).

\section*{Community Services Area of Study}

\section*{AA: Associate in Arts, university transfer degree • AS: Associate in Science, university transfer degree AAS: Associate in Applied Science, workforce degree - CER: Certificate of Achievement}

University transfer degree programs include TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.
Workforce development degree and certificate programs are specifically designed to prepare students for direct entry into the workforce. They may advance students within their current career or open doors to new career opportunities. Traditionally these programs were not designed for transfer;however, varying amounts of coursework- and in some cases entire degrees - may now apply towards a degree at a four-year institution;the number of applicable transfer hours will vary from one university to another. Check with an advisor for further information. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.

\section*{Child Development and Early Childhood Education}

Child Development, Child Care Administration OSU option, AS
Early Childhood Education Langston option, AS
Early Childhood Education OSU option, AS
Early Childhood Education NSU option, AS
Early Childhood Education OU option, AS
Child Development options in:
Center Director, AAS
Child \& Family Services, OSU option, AS
Child Development Certificate of Mastery, CER
Child Development Credential Preparatión (CDA), CER
Early Childhood, AAS
Head Start Credential, CER
Infant Toddler, AAS
Infant/Toddller Certificate of Mastery, CER
Middle Childhood, AAS
Residential Child and Youth Professional, CER
School Age Certificate, CER
School Age Certificate of Mastery, CER
Teacher Assistant, AAS

Education
Education, AA:
Elementary Education, AA / Secondary Education, AA / Elementary Education LU option, AA
Health \& Human Performance, AS
Health \& Human Performance OSU option, AS
Interpreter Education, UALR option, AS
Interpreter Education, AAS/CER
Physical Education, AS

\(\operatorname{man}\) Services
www.careerclusters.com
Human services
Human Services, AS/AAS/CER
Child \& Family Services OSU option, AS
Human Development St. Gregory option, AS
Human Relations OU option, AS
Pre-Social Work NSU/ORU/OU option, AS
Therapeutic Recreation OSU option, AS
Chemical \& Alcohol Dependency Counseling, AAS
Community Services Management, AAS
Corrections, AAS
Developmental Disabilities, AAS
Direct Support Professional, CER
Family Studies SNU option,'AAS
Gerontology, AAS
www.careerclusters.com
Law, Public Administration and Safety and Corrections
Criminal Justice, AA
Emergency Medical Technology, AAS
Fire \& Emergency Services, AS/CER
FES Emergency \& Community Preparedness, CER
Law Enforcement, AAS
Law Enforcement Collegiate Officer, AAS
Paralegal, AA/AAS (Political Science see Arts \& Communications, Liberal Arts \& Social Sciences)

\title{
COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLYCHILDHOODEDUCATION
}

CHILD DEVELOPMENT
Child Care Administration, OSU Transfer Option

\section*{Program Description:}

This curriculum includes degree requirements and courses generally completed in the first two years of a four-year degree plan. This degree is for students wanting a professional career in child care. The course of study combines instruction in child development and family services, business, management, and accounting to provide students a solid education in child care.

NOTE: Students who intend to follow this degree plan must complete a one-page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office at West Campus. Students are responsible for the \(\$ 15\) fee and returning their Criminal Background reports to the appropriate TCC office. Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division Office will notify student that he/ she may enroll in Child Development laboratory courses. (A) Students in this degree option who plan to transfer to OSU-Tulsa and who have a CDA certificate of achievement from TCC with a letter grade of "C" or better in each of the certificate courses, should check with the academic advisor at OSU-Tulsa for potential transfer credit of 8 hours toward the Child Care Administration Bachelor of Science degree at Oklahoma State University.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:,}

Liberal Arts Division, Child Development Academic Program: West Campus: (918) 595-8079
Counseling Center,West Campus: (918) 595-8176
General Education Requirements Credit Hours: 31
Recommended electives satisfied in specialized course requirements.

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

See General Education Requirement page for complete list.

\section*{Mathematics 3 hours}

Select three credit hours from the following:
*MTH 1473 Mathematics for Critical Thinking
*MTH 1483 Mathematical Functions and their Uses
*MTH 1513 College Algebra

\section*{Science 7 hours}

\section*{BIO 1383 Nutrition}

See the General Education Requirements to select a lab science course.

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 29}

\section*{Accounting 3 hours}

ACC 1003 Introduction to Accounting
ACC 2213 Financial Accounting
Child Development 21 hours
^CHD 2003 Child Development in the Lifespan
\(\wedge *\) CHD 2103 Child Guidance
\(\wedge *\) CHD 2113 Child Care Center Management I
^* CHD 2223 Early Childhood Foundations
\(\wedge *\) CHD 2233 Physical Development and Creative Expression:

\section*{Early Childhood}
\(\wedge^{*}\) CHD 2313 Child Care Center Management II
^*CHD 2513 Programming for Infants and Toddlers

\section*{Mathematics 3 hours}
*MTH 2193 Elementary Statistics

\section*{Recommended Electives 2-3 hours}

CHD 2023 Child Development \& Parenting CHD 2203 Child and Family in the Community
CHD 2213 Children with Special Needs
CHD 2341 Brain Development
CHD 2421 Children \& Trauma
CHD 2701 Child Abuse \& Neglect

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of TCC catalog).
**Students should consult the Family Relations and Child Development counselor at the OSU-Tulsa Campus to select electives that will meet requirements for the baccalaureate degree tracks in Child and Family Services at Oklahoma State University.
\(\wedge\) Course must be completed with a "C" or better.
Students should be aware that any violation in this degree plan might result in hours that will not transfer to Oklahoma State University. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do no count toward the associate degree requirements in this curriculum at TCC.

\section*{CHILD DEVELOPMENT \\ Child Development, NSU Transfer Option}

\section*{Program Description:}

This curriculum includes degree requirements and courses generally completed in the first two years of a four-year curriculum plan in Family and Consumer Sciences at Northeastern State University. This degree is for students wanting a professional career working in community agencies and programs providing services to children, youth, and families. Career options include Head Start programs, childcare, university extension agents, middle and high school teachers, parent educators, as well as other choices. Students should consult the Northeastern State University transfer catalog and carefully select courses that will meet the requirements for both the baccalaureate and associate degree programs. Suggested courses are listed in this curriculum plan.

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLYCHILDHOODEDUCATION}

NOTE: Students who intend to follow this degree plan must complete a one-page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office L-144 at TCC West Campus. Students are responsible for the \(\$ 15\) fee and for returning their Criminal Background reports to the appropriate TCC office. Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division Office will notify the student that he/she may enroll in (CHD 2223) Child Development laboratory courses. Those individuals seeking teacher certification should immediately consult with the NSU College of Education for additional requirements.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program: West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176
General Education Requirements Credit Hours: 41-42

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Geography 3 hours}

GEO 1043 Introduction to Cultural Geography

\section*{Humanities 6 hours}

See the General Education Requirements to select 6 hours of Humanities.

\section*{Mathematics 3 hours}

See General Education Requirement page for complete list.

\section*{Science 11-12 hours}

BIO 1114 General Biology for Non-Majors
BIO 1383 Nutrition
and select one course from the following:
*PSC 1114 General Physical Science
*CHE 1315 General Chemistry
AST 1104 General Astronomy
*PHY 1114 General Physics I

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Speech 3 hours
SPE 1113 Speech Communication I

\section*{Computer Science 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{Specialized Course Requirements Credit Hours: 21}

\section*{Child Development}
^CHD 2003 Child Development in the Lifespan
\(\wedge 18\) Additional hours (select any course with CHD in the prefix)

\section*{Controlled Electives Credit Hours: 3}

ID 1313 Interior Design Orientation
or
*ID 2313 Materials and Methods

\section*{Total Credit Hours: 65-66}
*Course has prerequisite (See course description section of TCC catalog). ^Course must be completed with a "C" or better.
Students should be aware that any variation in this degree plan might result in hours that will not transfer to NSU.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{CHILD DEVELOPMENT \\ Child and Family, OSU Transfer Option}

\section*{Program Description:}

This curriculum includes degree requirements and courses generally completed in the first two years of a four-year curriculum. This degree is for students wanting a professional career working in community agencies and programs providing services to children and families. Career paths include child life specialist, family life educator, pre medicine, pre-law, child policy and advocacy and other options. Students should consult the Oklahoma State University transfer catalog and carefully select courses that will meet the requirements for both the baccalaureate and associate degree programs. Suggested courses for Oklahoma State University are listed in the curriculum. Students should consult the Family Relations and Child Development counselor at the OSU-Tulsa Campus to select electives that will meet requirements for the baccalaureate degree tracks in the College of Human Environmental Sciences at Oklahoma State University.

NOTE: Students in this degree option who plan to transfer to OSU-Tulsa and who have a CDA certificate of achievement from TCC with a letter grade of " \(C\) " or better in each of the certificate courses, should check with the academic advisor at OSU-Tulsa for potential transfer credit of 8 hours toward the Child and Family Services Bachelor of Science degree.

NOTE: Students who intend to follow this degree plan must complete a one-page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office at West Campus. Students are responsible for the \(\$ 15\) fee and for returning their Criminal Background reports to the appropriate TCC office. Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division Office will notify the student that he/she may enroll in Child Development laboratory courses.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176
General Education Requirements Credit Hours: 37

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLYCHILDHOODEDUCATION}

\author{
Humanities 6 hours \\ See General Education Requirement page for complete list.
}

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics

\section*{Science 7 hours}

\section*{BIO 1383 Nutrition}

See the General Education Requirements to select a lab science course.

\section*{Social and Behavioral Sciences 3 hours}

SOC 1113 Introduction to Sociology
PSY 1113 Introduction to Psychology
Any course designated as a social science in the OSU Transfer Guide.

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 15}

\section*{Child Development}
^CHD 2003 Child Development in the Lifespan
^CHD 2023 Child Development and Parenting
\({ }^{\wedge}\) * CHD 2103 Child Guidance
^CHD 2203 Child and Family in the Community
^CHD 2213 Children with Special Needs
**Recommended Electives Credit Hours: 8
CSC 1203 Computer Concepts and Applications
PSY Select any courses
SOC Select any courses
See Note (A) under Program Description

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of TCC catalog).
**Students should consult the Family Relations and Child Development counselor at the OSU-Tulsa Campus to select electives that will meet requirements for the baccalaureate degree tracks in Child and Family Services at Oklahoma State University.
\(\wedge\) Course must be completed with a "C" or better.
Students should be aware that any variation in this degree plan might result in hours that will not transfer to Oklahoma State University.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\begin{abstract}
CHILD DEVELOPMENT
Early Childhood Education Programs

\section*{NOTE:}
(A) All Teacher Education majors are required to take the OGET (Oklahoma General Education Test) prior to admission to professional education programs at the university. Please visit the Counseling Center at any campus for information about the OGET.
(B) Students who intend to follow this degree plan must complete a one-page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office at West Campus. Students are responsible for the \$15 fee and for returning their Criminal Background reports to the appropriate TCC office. Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division Office will notify that student that he/she may enroll in Child Development laboratory courses.
(C) National Council for Accreditation of Teacher Education (NCATE) is the national accrediting program for teacher education. The council requires that students in teacher education programs at 4-year colleges complete a portfolio. Students in Child Development or Education degree programs at Tulsa Community College should save all assignments from those courses for possible inclusion in the portfolio. Contact the college where you plan to transfer for specific portfolio requirements.
(D) Prior to graduation from a 4-year college or university, students must complete (with a grade of " C " or higher) a minimum of:
12 hours of Communication Arts
12 hours of Social Science
12 hours of Math
12 hours of Science
Demonstrate Proficiency in a language other than English.
(E) Students should be aware that any variation in this degree plan might result in hours that will not transfer to named university.
(F) To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
\end{abstract}

\section*{CHILD DEVELOPMENT}

Early Childhood Education - LU Transfer Option

\section*{044 J}

\section*{Program Description:}

This curriculum includes degree requirements and courses generally completed in the first two years of a four-year curriculum. The degree is for students who want to receive Oklahoma Teacher Certification and teach at the early childhood level. Students should work with an academic counselor at Tulsa Community College West Campus to carefully select courses that will meet the Langston baccalaureate and the TCC associate degree programs. Students in this degree should plan to take the Oklahoma General Education Test during the last semester at TCC. Upon completion of the four-year curriculum at Langston, a student will be prepared to apply for an Oklahoma Teacher Certificate in

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLYCHILDHOODEDUCATION}

Early Childhood Education. A grade of "C" or better is required in the coursework for this curriculum and students must maintain a 2.5 GPA to graduate from Langston University.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176
General Education Requirements Credit Hours: 35
Two (2) additional credit hours of General Education Requirements are satisfied in specialized course requirements.

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

See General Education Requirement page for complete list.

\section*{Mathematics 3 hours}

See General Education Requirement page for complete list.

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Science 8 hours}
*PSC 1114 General Physical Science BIO 1114 General Biology for Non-Majors
(Courses in Physics, Chemistry, Zoology may be substituted. One of the courses must have a lab.)

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select 1 of the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 16}
^CHD 2003 Child Development in the Lifespan
^CHD 2031 Early Field Experience
\(\wedge^{*}\) CHD 2103 Child Guidance
^CHD 2133 Middle Childhood Foundations
\(\wedge^{*}\) CHD 2173 Historical \& Philosophical Foundations of Schools
\(\wedge^{*}\) CHD 2223 Early Childhood Foundations

\section*{Recommended Electives Credit Hours 9}

Select 9 hours from the following:
CSC 1203 Computer Concepts and Applications
ENG 1003 Strategies for Academic Success
GEO 1043 Introduction to Cultural Geography
MTH 2423 Mathematics Concepts for Educators
*MTH 2553 Geometry and Measurement
SPE 2103 Interpersonal Communication

\section*{Foreign Language 0-6 hours}

Students must meet the university requirement of two college-level courses in a single foreign language or successful
completion of 2 years of foreign language in high school and pass a proficiency test.

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). \(\wedge\) Course must be completed with a "C" or better.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Note: Prior to graduation from a 4-year college or university, students majoring in Early Childhood, Elementary Education or Special Education must complete (With a grade of "C" or higher) a minimum of:
12 hours in Communication Arts
12 hours in Social Science
12 hours in Math
12 hours in Science
Demonstrate Proficiency in a language other than English

\section*{CHILD DEVELOPMENT \\ Early Childhood Education - NSU Transfer Option 044 F}

\section*{Program Description:}

This curriculum includes degree requirements and courses generally completed in the first two years of a four-year curriculum. This degree is for those students who want to teach preschool through third grade children. Students should consult the Northeastern State University transfer catalog and carefully select courses that will meet the requirements for both the baccalaureate and associate degree programs. Suggested courses for Northeastern State University are listed in the curriculum. Students in this degree plan should plan to take the Oklahoma General Education Test during the last semester at TCC. Upon completion of the four-year curriculum at NSU, students will be prepared to apply for an Oklahoma Teacher's Certificate in Early Childhood Education. A grade of " C " or better is required in the coursework for this curriculum and students must maintain a 2.5 GPA to graduate from Northeastern State University.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176

\section*{General Education Requirements Credit Hours 41}

\section*{Computer Science 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{English 6 Hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Foreign Language 3 hours}
select one course from the following:
INT 1363 American Sign Language I
SPA 1103 Spanish II
GER 1103 German I
FRE 1103 French I

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLYCHILDHOODEDUCATION}

\section*{Geography 3 hours \\ GEO 1043 Introduction to Cultural Geography}

\section*{Humanities 6 Hours}

See General Education Requirement page for complete list.
and select one course from the following:
SPE 2053 Intercultural Communication
*ENG 2393 Introduction to Drama
*ENG 2413 Introduction to Literature
*ENG 2543 Survey of British Literature to 1800
*ENG 2653 Survey of British Literature from 1800
* **ENG 2673 Survey of World Literature to 1700
* **ENG 2683 Survey of World Literature from 1700
*ENG 2773 Survey of American Literature to 1865
*ENG 2883 Survey of American Literature from 1865

\section*{Mathematics 3 Hours}
select one course from the following:
*MTH 1513 College Algebra
*MTH 1473 Mathematics for Critical Thinking

\section*{Science 8 Hours}

BIO 1114 General Biology for Non-Majors
*PSC 1114 General Physical Science

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483- U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit hours 12}

\section*{Child Development}
^CHD 2003 Human Child Development in the Lifespan
\(\wedge^{*}\) CHD 2103 Child Guidance
\(\wedge^{*}\) CHD 2223 Early Childhood Foundations
\(\wedge *\) CHD 2233 Physical Development and Creative Expression: Early Childhood

\section*{Recommended Electives Credit hours 7}
*ENG 2333 Technical/Professional Writing
*MTH 2553 Geometry and Measurement
and select one credit hour from the following:
BIO, GEL, PSC disciplines
or select one course from the following:
PSC 2111 Science Project I: Project Wild
PSC 2121 Science Project II: Project Learning Tree
PSC 2131 Science Project III: Project Wet

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of TCC catalog).
**Transfers to NSU for English and Humanities credit.
\(\wedge\) Course must be completed with a "C" or better.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

CHILD DEVELOPMENT
Early Childhood Education - OSU Transfer Option

\section*{Program Description:}

This curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. This degree is for those students who want to teach preschool and primary grade children. Students should consult the Oklahoma State University transfer guide and carefully select courses that will meet the requirements for both the baccalaureate and associate degree programs. Suggested courses for Oklahoma State University are listed in the curriculum. Upon completion of the four-year degree at OSU, students will be prepared to apply for an Oklahoma Teacher's Certificate in Early Childhood Education.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176

\section*{General Education Requirements Credit Hours: 50}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Foreign Language 9 hours}

\section*{Select 9 hours from one language:}

CHI, FRE, GER, JPN, RUS, SPA, INT

\section*{Geography 3 hours}
select 3 credit hours from the following:
GEO 2033 World Regional Geography
GEO 1043 Introduction to Cultural Geography

\section*{Humanities 6 hours}
*ENG 2413 Introduction to Literature
and one of the following
HUM 2113 Humanities I
HUM 2223 Humanities II
Art 1113 Art Appreciation
MUS 1113 Music Appreciation
Mathematics 6 hours
*MTH 1513 College Algebra
and one of the following
*MTH 2193 Elementary Statistics
*MTH 1473 Mathematics for Critical Thinking
*MTH 1483 Mathematics Functions and Their Uses
*MTH 1613 Plane Trigonometry
*MTH 2193 Elementary Statistics
*MTH 2523 Calculus for Business, Life, and Social Sciences

\section*{Science 11 hours}

BIO 1114 General Biology for Non-Majors
BIO 1383 Nutrition
*PSC 1114 General Physical Science

\section*{Social Science 6 hours}

POS 1113 American Federal Government

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLY CHILDHOODEDUCATION}
and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 13}

\section*{Child Development}
\(\wedge\) CHD 2003 Child Development in the Lifespan
^CHD 2031 Early Field Experience
\(\wedge^{*}\) CHD 2223 Early Childhood Foundations
\(\wedge *\) CHD 2233 Physical Development and Creative Expression:
Early Childhood
\(\wedge^{*}\) CHD 2513 Programming for Infants and Toddlers

\section*{Total Credit Hours: 63}
*Course has prerequisite (See course description section of TCC catalog). \(\wedge\) Course must be completed with a " \(C\) " or better.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{CHILD DEVELOPMENT}

Early Childhood Education - OU Transfer Option

\section*{Program Description:}

This curriculum includes degree requirements and courses generally completed in the first two years of a four-year curriculum. This degree is for students who want to teach infants through third grade children. Students should consult the University of Oklahoma transfer catalog and work with an academic counselor at TCC or OU to carefully select courses that will meet the baccalaureate and associate degree programs. Students in this degree plan should plan to take the Oklahoma General Education Test during the last semester at TCC. Upon completion of the four-year curriculum at OU, students will be prepared to apply for an Oklahoma Teacher's Certificate in Early Childcare. A grade of "C" or better is required in the coursework for this curriculum and students must maintain a 2.75 GPA to graduate from the University of Oklahoma.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program: West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176

\section*{General Education Requirements Credit Hours:48-49}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}
*ENG 2413 Introduction to Literature
and select one course from the following:
PHI 1113 Introduction to Philosophy
PHI 1223 Religions of the World:The Western Tradition
PHI 2133 Introduction to Ethical Thinking

\section*{Mathematics 12 hours}
*MTH 1473 Mathematics for Critical Thinking
*MTH 2423 Mathematics Concepts for Educators
*MTH 2553 Geometry and Measurement
and select one course from the following
*MTH 1483 Mathematics Functions and their uses
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry

\section*{Science 12-13 hours}

BIO 1114 General Biology for Non-Majors
*PSC 1114 General Physical Science
Any 2000 level (4-5 hour) Science course from the General
Education List, or:
BIO 1383 Nutrition
and
PSC 2151 The Nature of Science

\section*{Social Science 6 hours}

POS 1113 American Federal Government
and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Sociology 3 hours}

SOC 1113 Introduction to Sociology

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 12}

Child Development 10 hours
+^CHD 2003 Child Development in the Lifespan
+++^CHD 2031 Early Field Experience
\(\wedge^{*}++\) CHD 2233 Physical Development and Creative Expression:
Early Childhood
\(\wedge^{*}+\) CHD 2513 Programming for Infants and Toddlers

\section*{Physical Education 2 hours}

PE 2212 First Aid

\section*{Recommended Electives Credit Hours: 0-6}

\section*{Foreign Language 0-6 hours}

Students must meet the university requirement of two college-level courses in a single foreign language or successful completion of 2 years of foreign language in high school and pass a proficiency exam at OU, Norman.

\section*{Total Credit Hours: 66-67}
*Course has prerequisite (See course description section of TCC catalog).
^Course must be completed with a "C" or better.
+CHD 2513 and CHD 2003 for OU EDEC 3413
++CHD 2233 for OU EDEC 2203
+++ CHD 2031 for 1 hour Elective Credit at OU
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLYCHILDHOODEDUCATION}

\section*{CHILD DEVELOPMEN'T \\ Center Director Option \\ 550D}

\section*{Program Description:}

This degree is for individuals who want to become a director of a child care center. It is also for those who are already employed as a director and who want to upgrade their knowledge and skills to perform their duties more effectively or to advance to a position of more responsibility. The course of study combines instruction in child development, business, management, and accounting to provide students the diverse training and preparation needed to be a center director. Students should check with the Oklahoma Department of Human Services Child Care Licensing Unit prior to enrollment in the program to see if they have the necessary work experience to qualify as a candidate for director of a small or large child care center.
NOTE: Students who intend to follow this degree plan must complete a one-page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office at West Campus. Students are responsible for \(\$ 15\) fee and returning their Criminal Background reports to the appropriate TCC office. Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division Office will notify that student that he/she may enroll in Child Development laboratory courses. NOTE: Employment in child care requires CPR Certification. Students may meet this requirement by taking PE 2212 under controlled electives.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176
General Education Requirements Credit Hours: 21

\section*{Biology 3 hours}

BIO 1383 Nutrition

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following
*ENG 1213 Freshman Composition II
*ENG 2333 Technical Professional Writing

\section*{Physical Education 3 hours}

PE 1113 Personal, School, and Community Health

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 30}

\section*{Accounting 3 hours}

ACC 1003 Introduction to Accounting
ACC 2213 Financial Accounting

Child Development and Family Relations 21 hours
^CHD 2003 Child Development in the Lifespan
\(\wedge^{*}\) CHD 2103 Child Guidance
^CHD 2113 Child Care Center Management I
^CHD 2203 Child and Family in the Community
^*CHD 2223 Early Childhood Foundations
\(\wedge^{*}\) CHD 2253 Child Development Practicum
\(\wedge *\) CHD 2313 Child Care Center Management II
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications

\section*{Management 3 hours}

MGT 2363 Principles of Management
Controlled Electives Credit Hours: 9
CHD Select Any Courses
CSC Select Any Courses
SPA Select Any Courses
BUS 2313 Business Law I
HS 1113 Principles of Human Services
HS 1213 Basic Counseling Services
HUM 2113 Humanities I
HUM 2223 Humanities II
INT 1363 American Sign Language I
INT 1413 Deaf Culture
MUS 1002 Fundamentals of Music
MUS 1113 Music Appreciation
PE 2212 First Aid
PSY 1113 Introduction to Psychology
PSY 1313 Human Relations
*PSY 2023 Developmental Psychology
*PSY 2523 Child Psychology
SOC 1113 Introduction to Sociology
*SOC 2013 Marriage and Family
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog).
^Course must be completed with a "C" or better.
Students who have completed CHD 1102, CHD 1202, CHD 1302, and CHD 1402 with a grade of "C" or better may apply these credits toward any TCC Child Development Associate in Applied Science degree as controlled electives.
Students who have earned a CDA credential may apply 9 hours controlled elective credit toward any TCC Child Development Associate in Applied Science degree. Students may contact the West Campus Registrar's Office. Students wanting to transfer to a four-year college or university should contact a counselor in the West Campus Counseling Center

\section*{CHILD DEVELOPMENT}

Certificate of Mastery
550L

\section*{Program Description:}

This curriculum is designed to meet the requirements for the R.E.W.A.R.D. Oklahoma Supplement Scale. Courses address the CDA competencies and functional areas designed to prepare students for positions in either early childhood or infanttoddler or family child care programs. As part of this curriculum plan, students complete the application and assessment process for the Child Development Associate (CDA) National Credential administered by the Council for Early Childhood Professional Recognition. Students must have completed 480 hours of experience working with children within the past 5 years to apply for the CDA Credential. Students who achieve a grade of " C " or better in the CDA preparation courses may apply the credits toward any TCC Child Development Associate of Applied Science degree as controlled electives. Students take an additional Child Development course and Freshman Composition I in this plan. Students requesting advanced standing for a previously earned CDA credential should refer to page 20, Credit by Advanced Standing in this catalog.
NOTE: Persons convicted of a crime should check with the Oklahoma State Department of Human Services Child Care Licensing Unit prior to enrollment in this program.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176

\section*{Certificate Requirements Credit Hours: 18}

Child Development (CDA Preparation Courses) 9 hours
CHD 1102 CDA: Competencies 1 \& 4
CHD 1202 CDA: Competency 3
CHD 1302 CDA: Competency 2
CHD 1402 CDA: Competencies 5 \& 6
CHD 1501 CDA: Application and Assessment Preparation

\section*{English 3 hours}
*ENG 1113 Freshman Composition I
Child Development (select two courses) 6 hours
^CHD 2003 Child Development in the Lifespan
^CHD 2023 Child Development and Parenting
*^CHD 2103 Child Guidance
^CHD 2113 Child Care Center Management I
^CHD 2203 Child and Family in the Community
^CHD 2213 Children with Special Needs
^CHD 2313 Child Care Center Management II

\section*{Total Credit Hours: 18}
*Course has prerequisite (See course description section of catalog).
\(\wedge\) Course must be completed with a "C" or better.

\section*{CHILD DEVELOPMENT \\ Credential Preparation (CDA) \\ 550G}

\section*{Program Description:}

As part of this curriculum plan, students complete the application and assessment process for the Child Development Associate (CDA) National Credential administered by the Council for Early Childhood Professional Recognition. The program provides an introduction to the physical, social, emotional, and intellectual development of infants and young children. Courses address the CDA competencies and functional areas designed to prepare students for positions in either early childhood or infant-toddler or family child care programs. The Council has approved this CDA instructional program. Students must have completed 480 hours of experience working with children within the past 5 years to apply for the CDA Credential. Students who achieve a grade of "C" or better in these courses may apply the credits toward any TCC Child Development
Associate of Applied Science degree as controlled electives. See the TCC Child Development Associate in Science degrees for credits that may be applied toward university transfer degrees.

NOTE: Persons convicted of a crime should check with the Oklahoma State Department of Human Services Child Care Licensing Unit prior to enrollment in this program.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176

\section*{Certificate Requirements Credit Hours: 9}

Child Development 9 hours
CHD 1102 CDA: Competencies 1\& 4
CHD 1202 CDA: Competency 3
CHD 1302 CDA: Competency 2
CHD 1402 CDA: Competencies 5 \& 6
CHD 1501 CDA: Application and Assessment Preparation

\section*{Total Credit Hours: 9}
*Course has prerequisite (See course description section of catalog).

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLY CHILDHOODEDUCATION}

\section*{CHILD DEVELOPMENT}

Early Childhood
550E

\section*{Program Description:}

This degree plan is designed to prepare students to work in programs serving preschool children. The curriculum provides a framework for understanding the physical, social, emotional, and intellectual development of young children. Students will learn to design and implement developmentally appropriate programs and activities for preschool children. Students gain practical knowledge and skills necessary for effective communication, teaching, guidance, and motivation of young children as well as for interacting with parents.
NOTE: Students who intend to follow this degree plan must complete a one-page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office at West Campus. Students are responsible for \$15 fee and returning their Criminal Background reports to the appropriate TCC office at the Conference Center. Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division Office will notify that student that he/she may enroll in Child Development laboratory courses.
NOTE: Employment in child care requires CPR Certification. Students may meet this requirement by taking PE 2212 under controlled electives.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact::}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176
General Education Requirements Credit Hours: 21

\section*{Biology 3 hours}

BIO 1383 Nutrition

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Physical Education 3 hours}

PE 1113 Personal, School, and Community Health

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 30}

\section*{Child Development 27 hours}
^CHD 2003 Child Development in the Lifespan
*^CHD 2103 Child Guidance
^CHD 2203 Child and Family in the Community
^CHD 2213 Children with Special Needs
*^CHD 2223 Early Childhood Foundations
*^CHD 2233 Physical Development and Creative Expression: Early Childhood
*^CHD 2243 Language and Cognitive Development: Early Childhood
*^CHD 2253 Child Development Practicum
*^CHD 2263 Social and Emotional Development: Early Childhood

\section*{Computer Science 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{Controlled Electives Credit Hours: 9}
\(\wedge\) CHD Select Any Courses
CSC Select Any Courses
SPA Select Any Courses
ACC 1003 Introduction to Accounting
*BUS 2213 Small Business Management
HS 1113 Principles of Human Services
HS 1213 Basic Counseling Services
HUM 2113 Humanities I
HUM 2223 Humanities II
INT 1363 American Sign Language I
INT 1413 Deaf Culture and History
MUS 1002 Fundamentals of Music
MUS 1113 Music Appreciation
PE 2212 First Aid
PSY 1113 Introduction to Psychology
PSY 1313 Human Relations
*PSY 2023 Developmental Psychology
*PSY 2523 Child Psychology
SOC 1113 Introduction to Sociology
*SOC 2013 Marriage and Family
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog).
^Course must be completed with a "C" or better.
Students who have completed CHD 1102, CHD 1202, CHD 1302, and CHD 1402 with a grade of "C" or better may apply these credits toward any TCC Child Development Associate in Applied Science degree as controlled electives. Students who have earned a CDA credential may apply 9 hours controlled elective credit toward any TCC Child Development Associate in Applied Science degree. Students wanting to transfer to a four-year college or university should contact a counselor in the West Campus Counseling Center.

\title{
COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLYCHILDHOODEDUCATION
}

\section*{CHILD DEVELOPMENT \\ Head Start Credential}

\section*{550M}

\section*{Program Description:}

This certificate of achievement option is a competency based training program designed to build skills and knowledge needed to work with Head Start families. Course curriculum is based on the Head Start Program Performance Standards, Competency Goals and Indicators. A grade of "C" or better is required in each course and a student must successfully complete a portfolio assessment documenting skills and proveniences for each Competency Goal and Indicator to receive the Head Start Credential, Certificate of Achievement. Students who achieve a grade of "C" or better in these courses may apply the credits toward any TCC Child Development Associate in Applied Science degree as controlled electives. See the TCC Child Development Associate in Science degrees for credits that may be applied toward university transfer degrees.
NOTE: Employment in child care requires CPR Certification. Students may meet this requirement by taking PE 2212 under controlled electives.

\section*{Degree Awarded: Certificate of Achievement}

For More Information Contact:
Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176

\section*{Certificate Requirements: Credit Hours 9}

Child Development 9 hours
CHD 1901 Head Start: Commitment and Professionalism
*CHD 1912 Head Start: Building Relationships
*CHD 1922 Head Start: Parent Involvement and Services
*CHD 1932 Head Start: Resources and Assistance
*CHD 1942 Head Start: Literacy, Culture, and Language
Total Credit Hours: 9
*Course has prerequisite (See course description section of catalog).

\section*{CHILD DEVELOPMENT}

Infant/Toddler
550K

\section*{Program Description:}

This degree plan is designed to prepare students to work with infants and toddlers. Courses focus on the social, emotional, physical, intellectual, and language development of children birth to three years of age. Students learn developmentally appropriate program design and activities for infants and toddlers. Students gain practical knowledge and skills necessary for effective communication, nurturing, and facilitating optimal development for infants and toddlers. Note: Students who intend to follow this degree plan must complete a one-page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office at West Campus. Students are responsible for \(\$ 15\) fee and returning their Criminal Background reports to the appropriate TCC office. Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division Office will notify that student that he/she may enroll in Child Development laboratory courses.

NOTE: Employment in child care requires CPR Certification. Students may meet this requirement by taking PE 2212 under controlled electives.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176

\section*{General Education Requirements Credit Hours: 21}

\section*{Biology 3 hours}

BIO 1383 Nutrition

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Physical Education 3 hours}

PE 1113 Personal, School, and Community Health

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I SPE 2103 Interpersonal Communication
Specialized Course Requirements Credit Hours: 30

\section*{Child Development 27 hours}
^CHD 2003 Child Development in the Lifespan
\(\wedge *\) CHD 2103 Child Guidance
^CHD 2203 Child in the Family and the Community
^CHD 2213 Children with Special Needs
\(\wedge^{*}\) CHD 2253 Child Development Practicum
^*CHD 2263 Social and Emotional Development: Early
Childhood
\(\wedge *\) CHD 2513 Programming for Infants and Toddlers
^*CHD 2523 Physical Development in Infants and Toddlers
\(\wedge *\) CHD 2543 Cognitive and Language Development in Infants and Toddlers

\section*{Computer Science 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{Controlled Electives Credit Hours: 9}
\(\wedge\) CHD Select Any Courses
CSC Select Any Courses
SPA Select Any Courses
ACC 1003 Introduction to Accounting
*BUS 2213 Small Business Management
HS 1113 Principles of Human Services
HS 1213 Basic Counseling Services
HUM 2113 Humanities I
HUM 2223 Humanities II
INT 1363 American Sign Language I

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLYCHILDHOODEDUCATION}

INT 1413 Deaf Culture and History
MUS 1002 Fundamentals of Music
MUS 1113 Music Appreciation
PE 2212 First Aid
PSY 1113 Introduction to Psychology
PSY 1313 Human Relations
*PSY 2023 Developmental Psychology
*PSY 2523 Child Psychology
SOC 1113 Introduction to Sociology
*SOC 2013 Marriage and Family
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog).
^Course must be completed with a "C" or better.
Students who have completed CHD 1102, CHD 1202, CHD 1302, and CHD 1402 with a grade of "C" or better may apply these credits toward any TCC Child Development Associate in Applied Science degree as controlled electives.
Students who have earned a CDA credential may apply 9 hours controlled elective credit toward any TCC Child Development Associate in Applied Science degree.
Students wanting to transfer to a four-year college or university should contact a counselor in the West Campus Counseling Center.

\section*{CHILD DEVELOPMENT}

Infant/Toddler Certification of Mastery
550 N

\section*{Program Description:}

This curriculum is designed to meet the requirements for the R.E.W.A.R.D. Oklahoma Supplement Scale. Courses address infant - toddler development and care and are designed to prepare students for positions in child care programs serving infants and toddlers. Students who achieve a grade of "C" or better in the Infant - Toddler courses may apply the credits toward any TCC Child Development Associate of Applied Science degree as controlled electives. To complete the Certificate of Mastery students must also take Freshman Composition I.
NOTE: Students who intend to follow this degree plan must complete a one - page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office at West Campus. Students are responsible for \(\$ 15.00\) fee and returning their criminal background reports to the appropriate TCC office. Once the TCC Administration notifies the Liberal Arts Division Office at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division will notify that student he/she may enroll in Child Development Laboratory courses.
NOTE: Employment in child care requires CPR Certification. Students may meet this requirement by taking PE 2212 under controlled electives.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176
Certificate Requirements: Credit Hours: 18

\section*{Child Development 15 hours}
\(\wedge *\) CHD 2513 Programming for Infants and Toddlers
^*CHD 2523 Physical Development in Infants and Toddlers
\(\wedge^{*}\) CHD 2543 Cognitive and Language Development in Infants and Toddlers
^*CHD 2263 Social and Emotional Development: Early
Childhood
and select 3 credit hours from the following
^CHD 2003 Child Development in the Lifespan
\(\wedge\) CHD 2023 Child Development and Parenting
\(\wedge^{*}\) CHD 2103 Child Guidance
^CHD 2113 Child Care Center Management I
\(\wedge\) CHD 2203 Child and Family in the Community
^CHD 2213 Children with Special Needs
\(\wedge^{*}\) CHD 2313 Child Care Center Management II

\author{
English 3 hours
}
*ENG 1113 Freshman Composition I

\section*{Total Credit Hours: 18}
*Course has prerequisite (See course description section of catalog)
\(\wedge\) Course must be completed with a "C" or better.

\section*{CHILD DEVELOPMENT \\ Middle Childhood \\ 550F \\ Program Description: \\ This degree plan is designed to prepare students to work with children in middle childhood. The curriculum is designed to provide a framework for understanding the social, emotional, physical, and intellectual development of children five to twelve years of age. Students learn how to plan and implement developmentally appropriate programs and activities for children in before and after school programs, child care and classrooms. Students gain practical knowledge and skills necessary for effective communication, teaching, guidance, and motivation of school age children as well as interacting with parents. \\ NOTE: Students who intend to follow this degree plan must complete a one-page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office at West Campus. Students are responsible for \(\$ 15\) fee and returning their Criminal Background reports to the appropriate TCC office. Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division Office will notify that student that he/she may enroll in Child Development laboratory courses. \\ NOTE: Employment in child care requires CPR Certification. Students may meet this requirement by taking PE 2212 under controlled electives.}

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176
General Education Requirements Credit Hours: 21
Biology 3 hours
BIO 1383 Nutrition

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLYCHILDHOODEDUCATION}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Physical Education 3 hours}

PE 1113 Personal, School, and Community Health

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 27}

\section*{Child Development 24 hours}
^CHD 2003 Child Development in the Lifespan
\(\wedge^{*}\) CHD 2103 Child Guidance
\(\wedge^{*}\) CHD 2133 Middle Childhood Foundations
^CHD 2203 Child and Family in the Community
^CHD 2213 Children with Special Needs
\(\wedge^{*}\) CHD 2323 Physical and Creative Activities: Middle Childhood \(\wedge^{*}\) CHD 2333 Science, Math, and Computer Activities: Middle Childhood
\(\wedge^{*}\) CHD 2253 Child Development Practicum

\section*{Computer Science 3 hours}

CSC 1203 Computer Concepts and Applications
Controlled Electives Credit Hours: 12
\(\wedge\) CHD Select Any Courses
CSC Select Any Courses
SPA Select Any Courses
ACC 1003 Introduction to Accounting
*BUS 2213 Small Business Management
HS 1113 Principles of Human Services
^HS 1213 Basic Counseling Services
HUM 2113 Humanities I
HUM 2223 Humanities II
INT 1363 American Sign Language I
INT 1413 Deaf Culture and History
MUS 1002 Fundamentals of Music
MUS 1113 Music Appreciation
PE 2212 First Aid
PSY 1113 Introduction to Psychology
PSY 1313 Human Relations
*PSY 2023 Developmental Psychology
*PSY 2523 Child Psychology
SOC 1113 Introduction to Sociology
*SOC 2013 Marriage and Family
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog).
^Course must be completed with a "C" or better.
Students who have completed CHD 1802, CHD 1812, CHD 1822, and CHD 1842, and CHD 1852 with a grade of "C" or better may apply these credits toward the Middle Childhood Development Associate in Applied Science degree as controlled electives. Students who have earned a CDA credential may apply 9 hours controlled elective credit toward any TCC Child Development Associate in Applied Science degree. Students wanting to transfer to a four-year college or university should contact a counselor in the West Campus Counseling Center. Upon approval from the Oklahoma State Department of Career Technology Education and the Oklahoma State Regents for Higher Education, students who earn their School-Age certificate from Tulsa Technology Center, with a grade of "C" or better in each course, may apply 12 -hours controlled elective credit toward the Middle Childhood Associate of Applied Science Degree at Tulsa Community College.

\section*{CHILD DEVELOPMENT}

Residential Child and Youth Professional

\section*{Program Description:}

This certificate program is designed to prepare students to work in residential programs serving children and youth. Students will learn to provide care and service to children and youth living apart from their families whether in emergency shelter, group homes, juvenile detention, substance abuse centers, or psychiatric treatment facilities. The curriculum provides background and knowledge in the dynamics of child abuse and neglect as a basis for understanding children and youth in residential care.
NOTE: Students who intend to follow this degree plan must request and complete the appropriate Criminal Background Investigation paperwork from their home state. Students who have been residents of Oklahoma for more than one calendar year may obtain a packet from the Liberal Arts Division Office at West Campus prior to enrolling in CHD 1762 and CHD 1772. Out-of-State residents must secure a background check from the state of residence. Students are responsible for background check fee ( \(\$ 15\) in Oklahoma, may be a higher fee in other states) and returning an original Criminal Background report to any TCC Enrollment Services office. (Copies and/or fax copies are not acceptable.) Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has turned in a cleared criminal background and sex offender report from the state of residence, the Liberal Arts Division Office will notify that student that he/ she may enroll in CHD 1762 and/or 1772.
NOTE: Employment in child care requires CPR Certification. Students may meet this requirement by taking PE 2212 under controlled electives.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176

\section*{Certificate Requirements Credit Hours: 13-14}

Child Development 13 hours
CHD 1722 Developing a Culture of Care
CHD 1733 Understanding Child Development
CHD 1742 Building Relationships
\(\wedge^{*}\) CHD 1752 Teaching Discipline
\(\wedge^{*}\) CHD 1762 Interviewing and Documentation Skills
\(\wedge *\) CHD 1772 Residential Care Field Experience

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLYCHILDHOODEDUCATION}

\section*{Recommended Elective 0-1 hour}

CHD 1781 Youth Care Certification Preparation

\section*{Total Credit Hours: 13-14}
*Course has prerequisite (See course description section of catalog).
\(\wedge\) Course must be completed with a "C" or better.
Students who achieve a grade of " C " or better in the residential child and you care courses may apply the credits toward the TCC Certificate of Achievement Degree. Students completing this curriculum may also apply to complete certification as Residential Child and youth Care Professional Worker with the university of Oklahoma National Resource Center for Youth Services Residential Child and Youth Care Professional Worker certification at www.nrcysou.edu

\section*{CHILD DEVELOPMENT}

\section*{School-Age Certificate}

\section*{550 J}

\section*{Program Description:}

This curriculum is for students who want to acquire knowledge and skills for employment in out-of-school programs for children and youth such as before and after school services, youth groups, and summer camps. The curriculum provides a framework for understanding school-age programs, the development and behavior of school-age children, and child/ family issues specific to out-of-school time programs. Students will gain practical knowledge and skills necessary for working in and managing out-of-school time programs for children 5 to 12 years of age. Students who achieve a grade of C or better in the school-age courses may apply the credits toward the TCC Child Development Associate Degree in Middle Childhood or any other TCC associate degree. See the TCC Child Development Associate in Science degrees for credits that may be applied toward university transfer degrees.
NOTE: Students who intend to follow this degree plan must complete a one-page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office at West Campus. Students are responsible for \(\$ 15\) fee and returning their Criminal Background reports to the appropriate TCC office. Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division Office will notify that student that he/she may enroll in Child Development laboratory courses.
NOTE: Employment in child care requires CPR Certification. Students may meet this requirement by taking PE 2212 under controlled electives.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176
Certificate Requirements Credit Hours: 12

\section*{Child Development 12 hours}

CHD 1802 Establishing the Environment in Out-of-School Programs
CHD 1812 Physical and Intellectual Development of the SchoolAge Child
CHD 1822 Emotional Development and Guidance of the School-Age Child

CHD 1832 Professionalism and Management of Out-of-School Programs
CHD 1841 Educational Support of the School-Age Child
CHD 1851 Development of Community in Out-of-School Programs
*CHD 1862 Applied School-Age Practices

\section*{Total Credit Hours: 12}
*Course has prerequisite (See course description section of catalog).

\section*{CHILD DEVELOPMENT \\ School-Age Certificate of Mastery}

\section*{Program Description:}

This curriculum is designed to meet the requirements for the REWARD Oklahoma Supplement Scale. Courses address out-of-school care program competencies and are designed to prepare students for positions in child care programs serving school-age children. Students who achieve a grade of "C" or better in the School-Age courses may apply the credits toward any TCC Child Development Associate of Applied Science degree as controlled electives. To complete the Certificate of Mastery students must also take Freshman Composition I.

NOTE: Students who intend to follow this degree plan must complete a one-page information sheet and obtain a Criminal Background Investigation packet from the Liberal Arts Division Office at West Campus. Students are responsible for \(\$ 15\) fee and returning their Criminal Background reports to the appropriate TCC office. Once the TCC Administration notifies the Liberal Arts Division at West Campus that a student has received criminal background and sex offender clearance, the Liberal Arts Division Office will notify that student that he/she may enroll in Child Development laboratory courses.
NOTE: Employment in child care requires CPR Certification. Students may meet this requirement by taking PE 2212 under controlled electives.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176

\section*{Certificate Requirements Credit Hours: 18}

\section*{Child Development 15 hours}

CHD 1802 Establishing the Environment in Out-of School Programs
CHD 1812 Physical and Intellectual Development of the SchoolAge Child
CHD 1822 Emotional Development and Guidance of the School-Age Child
CHD 1832 Professionalism and Management of Out-of-School Programs
CHD 1841 Educational Support of the School-Age Child
CHD 1851 Development of Community in Out-of-School Programs
*CHD 1862 Applied School-Age Practices
and select 3 credit hours from the following:
CHD 2003 Child Development in the Lifespan
CHD 2023 Child Development and Parenting

\section*{COMMUNITY SERVICE: CHILDDEVELOPMENT \& EARLY CHILDHOODEDUCATION}
*CHD 2103 Child Guidance
CHD 2113 Child Care Center Management I
CHD 2203 Child and Family in the Community
CHD 2213 Children with Special Needs
CHD 2313 Child Care Center Management II
English 3 hours
*ENG 1113 Freshman Composition I

\section*{Total Credit Hours: 18}
*Course has prerequisite (See course description section of catalog).

\section*{CHILD DEVELOPMENT \\ Teacher Assistant}

550P

\section*{Program Description:}

This plan of study is designed for students who are currently working or want to work in a public school assisting a certified teacher in the classroom. Students will acquire knowledge and develop skills needed to work directly with school age children as a teacher assistant in a public school setting. An emphasis on science, mathematics, and technology is presented in the course of study. Students in this curriculum plan will complete a practicum experience in a public school. Students planning to transfer to a teacher education bachelor's degree program at a university should consult with a TCC counselor and the transfer university when selecting courses for the degree. Students will be required to submit a Criminal History Report and tuberculin skin test for evaluation before enrollment in CHD 2273 Teacher Assistant Practicum course.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Liberal Arts Division, Child Development Academic Program, West Campus: (918) 595-8079
Counseling Center, West Campus: (918) 595-8176
General Education Requirements Credit Hours :35
English 6 hours
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Mathematics 3 hours}
select 3 hours from courses designated Mathematics from the list of General Education courses.

\section*{Science 8 hours}

BIO 1114 General Biology for Non-Majors
PSC 1114 General Physical Science

\section*{Social Studies 6 hours}

POS 113 American Federal Government
and select one \(\mathbf{3}\) credit hour course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Computer Science 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{Specialized Course Requirements Credit Hours: 21}

\section*{Child Development}
^CHD 2003 Child Development in the Lifespan
^*CHD 2103 Child Guidance
^*CHD 2133 Middle Childhood Foundations
^CHD 2213 Children with Special Needs
^*CHD 2323 Physical and Creative Activities: Middle Childhood
\(\wedge^{*}\) CHD 2333 Science, Math, and Computer Activities: Middle
Childhood
\(\wedge *\) CHD 2273 Teacher Assistant Practicum

\section*{Recommended Electives Credit Hours: 4}

Students planning to transfer to a teacher education bachelor's degree program at a university should consult with a TCC counselor and the transfer university when selecting courses for this degree.

\section*{Total Credit Hours: 60}
*Course has prerequisites
^Course must be completed with a "C" or better.

\section*{Humanities 6 hours}
select 6 hours from courses designated Humanities from the list of General Education courses.


\section*{COMMUNITY SERVICE: EDUCATION}

\section*{EDUCATION PROGRAMS}

NOTE: All Teacher Education majors are required to take the OGET (Oklahoma General Education Test) prior to admission to professional education programs at the university. Please visit the Counseling Center at any campus for information about the OGET. National Council for Accreditation of Teacher Education (NCATE) is the national accrediting program for teacher education. The council requires that students in teacher education programs at 4-year colleges complete a portfolio. Students in Child Development or Education degree programs at Tulsa Community College should save all assignments from those courses for possible inclusion in the portfolio. Contact the college where you plan to transfer for specific portfolio requirements.
NOTE: Prior to graduation from a 4-year college or university, students majoring in Early Childhood, Elementary, or Special Education must complete with a "C" or better a minimum of:
12 hours of Communication Arts
12 hours of Social Science
12 hours of Math
12 hours of Science
Demonstrate Proficiency in a language other than English.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{EDUCATION}

Elementary Education 055 Secondary Education 060

\section*{Program Description:}

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Education may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalogs of the universities where the four-year degree is offered and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at the university of their choice.

\section*{Degree Awarded: Associate in Arts}

\section*{For More Information Contact:}

Counseling Centers:Metro:(918) 595-7151,
Northeast:(918) 595-7451, Southeast:(918) 595-7651,
West: (918) 595-8176

\section*{General Education Requirements Credit Hours: 35}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

See the General Education Requirements page for complete list
Mathematics 3 hours
See the General Education Requirements to select 3 hours of Mathematics.

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Science 8 hours}
*PSC 1114 General Physical Science BIO 1114 General Biology for Non-Majors
(Courses in Physics, Chemistry, Zoology may be substituted.
One of the courses must have a lab.)

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
Two (2) credit hours of General Education Requirements are satisfied in recommended electives section below.

\section*{Recommended Electives Credit Hours: 25}

Students should very carefully select courses which will
conform to requirements at the institution to which they will transfer.
Elementary Education 25 hours (055)
BIO 1383 Nutrition
BIO 2123 Human Ecology
CHD 2031 Early Field Experience
CSC 1203 Computer Concepts and Applications
ENG 2373 Teach-A-Reader
*ENG 2413 Introduction to Literature
*ENG 2683 Survey of World Literature from 1700
GEO 1023 World Geography (Economic)
GEO 1043 Introduction to Cultural Geography
GEO 2033 World Regional Geography
GEO 2153 Human Ecology
HIS 1033 History of Oklahoma
HIS 1053 Ancient and Medieval Western Civilization
HIS 1063 Modern Western Civilization
HUM 2113 Humanities I
HUM 2223 Humanities II
*MTH 2193 Elementary Statistics
MTH 2423 Mathematics Concepts for Educators
*MTH 2553 Geometry and Measurement
MUS 1612 Class Piano I
*MUS 1622 Class Piano II
PE 1113 Personal, School and Community Health
PE 2212 First Aid
PHI 1113 Introduction to Philosophy
PSY 1023 Psychology of Personal Adjustment
*PSY 2023 Developmental Psychology
*PSY 2523 Child Psychology
REL 1113 Introduction to Religious Studies
SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America
SPE 1013 Fundamentals of Listening
SPE 2103 Interpersonal Communication
**Select from one Foreign Language.
Note: Foreign Language is necessary and the number of hours will vary depending on the transfer university requirements.

\section*{COMMUNITY SERVICE: EDUCATION}

\section*{Secondary Education 25 hours (060)}

13 hours: From classes listed under Elementary Education above
and
12 hours: Choose classes that follow the suggested program in the anticipated academic teaching area.

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). **Check catalog for advanced standing credit. Language proficiency at the novice high level required. Call (918) 595-7851 for proficiency certification.
\(\wedge\) Course must be completed with a "C" or better.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements..
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{ELEMENTARY EDUCATION}

LU Transfer Option for Elementary or Special Education 055 A

\section*{Program Description:}

This curriculum includes degree requirements and courses generally completed in the first two years of a four-year curriculum. The degree is for students who want to receive Oklahoma Teacher Certification and teach at the elementary level or in special education. Students should work with an academic counselor at Tulsa Community College West Campus to carefully select courses that will meet the Langston baccalaureate and the TCC associate degree programs. Students in this degree should plan to take the Oklahoma General Education Test during the last semester at TCC. Upon completion of the four-year curriculum at Langston, a student will be prepared to apply for an Oklahoma Teacher Certificate in Elementary Education or Special Education. A grade of "C" or better is required in the coursework for this curriculum and students must maintain a 2.5 GPA to graduate from Langston University.
Degree Awarded: Associate in Arts
General Education Requirements Credit Hours: 38

\section*{English 9 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II
*ENG 2383 Advanced Composition

\section*{Humanities 6 hours}

See the General Education Requirements page for complete list
Mathematics 3 hours
See the General Education Requirements page for complete list

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Science 8 hours}
*PSC 1114 General Physical Science BIO 1114 General Biology for Non-Majors
(Courses in Physics, Chemistry, Zoology may be substituted. One of the courses must have a lab.)

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one of the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 10}
^CHD 2003 Child Development in the Lifespan
^CHD 2031 Early Field Experience
\(\wedge *\) CHD 2133 Middle Childhood Foundations
\(\wedge *\) CHD 2173 Historical and Philosophical Foundations of Schools

Recommended Electives Credit Hours: 12
CSC 1203 Computer Concepts and Applications ENG 1003 Strategies for Academic Success GEO 1043 Introduction to Cultural Geography MTH 2423 Mathematics Concepts for Educators *MTH 2553 Geometry and Measurement SPE 2103 Interpersonal Communication

\section*{Foreign Language 0-6 hours}

Students must meet the university requirement of two college-level courses in a single foreign language or successful completion of \(\mathbf{2}\) years of foreign language in high school and pass a proficiency exam.

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). \(\wedge\) Course must be completed with a "C" or better.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements..
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.


\section*{HEALTH and HUMAN PERFORMANCE}

\section*{Program Description:}

The Health and Human Performance program prepares students for careers in a variety of settings including corporate, hospital-based, community, government and private enterprises. This degree track prepares a student for the American Council on Exercise Certification Exam. This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the transfer university catalog and carefully select courses that will meet the requirements for both baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science Degree}

\section*{For More Information Contact:}

Science, Mathematics and Engineering:
Northeast: (918) 595-7542
Counseling Centers: Metro: (918) 595-7151,
Northeast: (918) 595-7451, Southeast: (918) 595-7651,
West: (918) 595-8176

\section*{General Education Requirements Credit Hours: 37}

\section*{English 6 Hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 Hours}

See the General Education Requirements page for complete list

\section*{Mathematics 3 Hours}
*MTH 1513 College Algebra

\section*{Social Science 6 Hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Science 8 Hours}

BIO 1224 Introduction to Biology for Majors *BIO 2154 Human Physiology

\section*{Required Electives 8 Hours}

\section*{Mathematics 3 Hours}
*MTH 2193 Elementary Statistics

\section*{Science 5 Hours}
*CHE 1315 General Chemistry I

\section*{Specialized Course Requirements Credit Hours: 23}

Behavioral Science 6 Hours
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology
Exercise Science Core 17 Hours
BIO 1383 Nutrition
**PE 2212 First Aid
PE 2263 Principles in Health Education and Human Promotion
*PE 2623 Fitness Assessment and Programming
PE 2653 Applied Anatomy and Kinesiology

\section*{156}
and choose one of the following:
+PE 1113 Personal, School, and Community Health or
+PE 2603 Total Wellness

\section*{Total Credit Hours: 60}
*Course has prerequisite (see course description section of catalog).
**Advanced Credit may be awarded for current certification.
+Requirements for PE 1113 or 2603 vary by institution. Visit with transfer institution for program requirements.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{HEALTH and HUMAN PERFORMANCE}

\section*{OSU Transfer Option}

089 A

\section*{Program Description:}

The Health and Human Performance program prepares students for careers in a variety of settings including corporate, hospital-based, community, government and private enterprises. This degree track prepares a student for the American Council on Exercise Certification Exam. This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum designed to transfer to Oklahoma State University's Bachelor of Science Degree in Health Promotion.

\section*{Degree Awarded: Associate in Science Degree}

For More Information Contact:
Science, Mathematics and Engineering:
Northeast: (918) 595-7542
Counseling Centers: Metro: (918) 595-7151,
Northeast: (918) 595-7451, Southeast: (918) 595-7651,
West: (918) 595-8176
General Education Requirements Credit Hours: 37
English 6 Hours
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 Hours}

See the General Education Requirements page for complete list

\section*{Mathematics 3 Hours}
*MTH 1513 College Algebra

\section*{Social Science 6 Hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Science 8 Hours}

BIO 1224 Introduction to Biology for Majors
*+BIO 2154 Human Physiology

\section*{Required Elective 8 Hours}

\section*{Mathematics 3 Hours}
*MTH 2193 Elementary Statistics

\section*{Science 5 Hours}
*CHE 1315 General Chemistry I

\section*{COMMUNITY SERVICE: EDUCATION}

\section*{Specialized Course Requirements Credit hours: 23}

\section*{Behavioral Science 6 Hours}

PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology
Exercise Science Core 17 Hours
+BIO 1383 Nutrition
**PE 2212 First Aid
+PE 2603 Total Wellness
+PE 2263 Principles in Health Education and Human Promotion
*+PE 2623 Fitness Assessment and Programming
+PE 2653 Applied Anatomy and Kinesiology

\section*{Total Credit Hours: 60 Hours}
*Course has prerequisite (see course description section of catalog).
**Advanced Credit may be awarded for current certification.
+ OSU requires a grade of \(C\) or higher in these courses.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{INTERPRETER EDUCATION \\ University of Arkansas at Little Rock Transfer Option}

\section*{Program Description:}

This program is designed to prepare students for a career as a sign language interpreter for persons who are deaf, or hard of hearing. This program emphasizes the acquisition of American Sign Language, the appreciation of deaf culture and the process of interpreting and transliterating.

\section*{Degree Awarded: Associate in Arts}

\section*{For More Information Contact:}

Liberal Arts Division: Northeast (918) 595-7494
Counseling Center: Northeast: (918) 595-7451

\section*{General Education Requirements Credit Hours: 37 \\ English 6 hours \\ *ENG 1113 Freshman Composition I \\ *ENG 1213 Freshman Composition II}

\section*{Humanities 6 hours}

HUM 2113 Humanities I
HUM 2223 Humanities II
Mathematics 3 hours
*MTH 1513 College Algebra

\section*{Science 7 hours}

See General Education Requirements. One course must be a lab science.

\section*{Social Science 6 hours}

POS 1113 American Federal Government
and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Required Electives 9 hours
*INT 1373 American Sign Language II
INT 1413 Deaf Culture and History
INT 1423 Introduction to Interpreting

Specialized Course Requirements Credit Hours: 29
*INT 2213 ASL to English Interpreting I
*INT 2233 ASL to English Interpreting II
*INT 2393 Interpreting I
*INT 2403 Interpreting II
*INT 2414 American Sign Language III
*INT 2443 Interpreting in Specialized Settings
*INT 2524 American Sign Language IV
*INT 2613 Interpreting III
*INT 2643 Interpreting Internship

\section*{Total Credit Hours: 66}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{INTERPRETER EDUCATION}

655A

\section*{Program Description:}

This program is designed to prepare students for a career as a sign language interpreter for persons who are deaf or hard of hearing. This program emphasizes the acquisition of American Sign Language, the appreciation of Deaf Culture and the process of interpreting and transliterating. The courses are designed to prepare the student to take the interpreter certification tests and to work in entry-level positions as an interpreter in the public schools, colleges and universities, social service agencies and/or private practice.

\section*{Degree Awarded: Associate in Applied Science}

For More Information Contact:
Liberal Arts Division: Northeast (918) 595-7494
Counseling Center: Northeast: (918) 595-7451

\section*{General Education Requirements Credit Hours: 15}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1013 Fundamentals of Listening
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication
The remaining General Education Requirements may be satisfied in Specialized Course Requirements or Controlled Electives.

\section*{Specialized Course Requirements Credit Hours: 41}

Interpreter Education 41 hours
INT 1363 American Sign Language I
*INT 1373 American Sign Language II
INT 1413 Deaf Culture and History

\section*{COMMUNITY SERVICE: EDUCATION}
*INT 1423 Introduction to Interpreting
*INT 2213 ASL to English Interpreting I
*INT 2233 ASL to English Interpreting II
*INT 2393 Interpreting I
*INT 2403 Interpreting II
*INT 2414 American Sign Language III
*INT 2443 Interpreting in Specialized Settings
*INT 2524 American Sign Language IV
*INT 2613 Interpreting III
*INT 2643 Interpreting Internship

\section*{Controlled Electives Credit Hours: 3}

ENG 1083 Grammar and Mechanics of Writing
PSY 1113 Introduction to Psychology
PSY 1313 Human Relations
SOC 2113 Social Problems in America
Recommended Electives Credit Hours: 1
Total Credit Hours: 60
*Course has prerequisite (See course description section of catalog)

\section*{INTERPRETER EDUCATION \\ Certificate \\ 655A}

\section*{Program Description:}

This program is designed to prepare students who have already obtained an associate or bachelor's degree in another field for a career in interpreting for persons who are deaf or hard of hearing. The program emphasizes the acquisition of American Sign Language, the appreciation of Deaf Culture and the process of interpreting and transliterating. The courses are designed to prepare the student to take the interpreter certification tests and to work in entry-level positions as an interpreter in the public schools, colleges and universities, social service agencies and/or private practice.

\section*{Degree Awarded: Certificate of Achievement}

For More Information Contact:
Liberal Arts/Community Services Division:Northeast:(918) 595-7494
Counseling Center: Northeast: (918) 595-7451
Certificate Requirements Credit Hours: 41
Interpreter Education 41 hours
INT 1363 American Sign Language I
*INT 1373 American Sign Language II
INT 1413 Deaf Culture and History
*INT 1423 Introduction to Interpreting
*INT 2213 ASL to English Interpreting I
*INT 2233 ASL to English Interpreting II
*INT 2393 Interpreting I
*INT 2403 Interpreting II
*INT 2414 American Sign Language III
*INT 2443 Interpreting in Specialized Settings
*INT 2524 American Sign Language IV
*INT 2613 Interpreting III
*INT 2643 Interpreting Internship

\section*{Total Credit Hours: 41}
*Course has prerequisite (See course description section of catalog).

\section*{PHYSICAL EDUCATION}

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. This degree is for the student who has interests in sports and fitness, exercise physiology, health and wellness, and the leisure services. Teaching is only one facet of this major. The choices are as broad as coaching to directing outdoor sports activities, trainer, or sports director in professional athletics. Students considering this major should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

For More Information Contact:
Science and Mathematics Divisions:Metro:(918) 595-7334,
Northeast:(918) 595-7542,Southeast:(918) 595-7742, West:(918) 595-8193
General Education Requirements Credit Hours: 18 See the General Education Requirements for the complete list. Science, math and elective requirements satisfied in Specialized Course Requirements and Recommended Electives.

\section*{Specialized Course Requirements Credit Hours: 28-29}

Behavioral Sciences 6 hours
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Physical Education 11 hours}

BIO 1383 Nutrition
PE 1113 Personal, School and Community Health
PE 1143 Foundations of Physical Education
PE 2212 First Aid
Science 8-9 hours
BIO 1114 General Biology for Non-Majors
and select one course from the following:
GEO 1014 Geography (Physical)
*CHE 1315 General Chemistry I

\section*{Recommended Electives Credit Hours: 14}
*CHE 1415 General Chemistry II
CSC 1203 Computer Concepts and Applications
GEO 1043 Introduction to Cultural Geography
*MTH 1613 Plane Trigonometry
*PHY 1114 General Physics I
*PHY 1214 General Physics II
SPE 1113 Speech Communication I

\section*{Total Credit Hours: 60-61}
*Course has prerequisite (See course description section of catalog).
Students should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{COMMUNITY SERVICE: HUMAN SERVICES}

\section*{HUMAN SERVICES}

\section*{Program Description:}

Human service workers and assistants provide direct and indirect client services and serve to improve and enhance the lives of others in a variety of roles within social and human service delivery settings. Job titles vary: case management aide, social work assistant, alcohol or drug abuse counselor, mental health aide, community outreach worker, life skill counselor, crisis intervention counselor, intake worker, gerontology aide, family support worker, habilitation aide, residential counselor, and juvenile specialist. The U.S. Department of Labor states, "Human services worker and assistant occupations are projected to be among the fastest growing. Job opportunities should be excellent [for qualified applicants]"... The Human Services program at Tulsa Community College is designed to provide education and training for individuals seeking careers in a wide range of helping profession settings. Students gain basic knowledge, skills, and values necessary to communicate and interact with persons experiencing personal and social problems in order to assess needs and provide appropriate intervention. Students have many opportunities to gain handson experience with community agencies and populations. In addition to general education requirements, all Human Service students complete core coursework in:
- Principles of Human Services
- Basic Counseling Skills
- Lifespan Development
- Human Services Applications/Case Management
- Internship

\section*{University Transfer (2+2) Options}

Degree options are available to provide seamless transfer to four-year degrees in Child and Family Services (Oklahoma State University), Therapeutic Recreation (Oklahoma State University), Pre-Social Work (Northeastern State University, Oral Roberts University, and University of Oklahoma), Human Development (St. Gregory's University), Family Studies (Southern Nazarene University) and Human Relations (University of Oklahoma). Articulation agreements between Tulsa Community College and the designated universities provide for a seamless transition toward a baccalaureate or advanced degree in a human services-related field. Students complete general education requirements for the bachelors degree and also complete core courses within the Human Services program, which complement upper division coursework within the major field at the four-year university.

\section*{General Information}

The Human Services coursework is available in a variety of schedule alternatives, including traditional 16-week classes day and evening. Courses are also aligned with the FAST-TRACK program to allow degree completion to students desiring an accelerated schedule. The Human Services Institute offers special focus courses providing in-depth information on current issues in the human services field for students and community professionals in short-course formats. Students are strongly encouraged to enroll in core courses within the Human Services program early in their academic career along with general education requirements. Faculty advisement is available in this program. For more career and occupational information in the human services field, visit the following Web sites:
http://bls.gov and http://stats.bls.gov/oco
Human Services University Transfer Options Degrees Awarded: Associate in Science

\section*{HUMAN SERVICES}

Child and Family Services - OSU Transfer Option

\section*{Program Description:}

This option is designed for individuals seeking careers in the helping professions providing services to children, youth, elderly, and families in a variety of community based settings. Students gain 24 credit hours of specialization in Human Services while earning the associate degree.

\section*{Degree Awarded: Associate in Science}

\section*{Semester plan available through faculty advisement.}

General Education Requirements Credit Hours: 37

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Geography 3 hours}

GEO 1043 Introduction to Cultural Geography

\section*{Humanities 3 hours}

HUM 2113 Humanities I
HUM 2223 Humanities II

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Science 7 hours}

BIO 1114 General Biology for Non-Majors BIO 1383 Nutrition

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
Specialized Course Credit Hours: 23-24 Hours
\(\wedge\) Human Services 18 hours
HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Management
*HS 2113 Internship
*HS 2203 Parent-Child Relations

\section*{Controlled Electives Credit Hours: 5-6}
^HS 1313 Chemical Dependency and Treatment
^HS 2003 Dynamics of Family Relationship
^HS 2073 Issues in Human Services
or
^HS 2173 Service Learning in Human Services PE 2212 First Aid
PE 2533 Introduction to Therapeutic Recreation
PSY 2133 / SOC 1133 Crisis Intervention and Experience
PSY 2053 Social Psychology

\section*{Total Credit Hours: 60-61}
*Course has prerequisite (See course description section of catalog).
To receive an A.A. or A.S.Degree, students must demonstrate computer proficiency. \(\wedge\) Students must earn a"C" or better in HS courses in order to progress to advanced courses in the program, or gain permission of instructor or associate dean.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{COMMUNITY SERVICE: HUMAN SERVICES}

\section*{HUMAN SERVICES}

Human Development,St. Gregory's UniversityTransfer Option 091 E

\section*{Program Description:}

This option is designed for individuals seeking a career in the helping professions with an emphasis in applying the principles and philosophy of human services to each area of human growth and development in a variety of human service delivery settings. This curriculum includes TCC requirements and courses generally completed in the first two years of a four-year curriculum while providing 27 hours of specialized coursework relevant to the field of study. Completion of this Associate Degree affords the student the opportunity to transfer to St. Gregory's University Human Development degree with articulated courses already completed within that program. Up to 76 credit hours may be transferred from Tulsa Community College towards the St. Gregory's University degree.

\section*{Degree Awarded: Associate in Science}

Semester plan available through faculty advisement.

\section*{General Education Requirements Credit Hours 37}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 9 hours}

See the General Education Requirements page for complete list

\section*{Mathematics 3 hours}

Select one course from the following:
*MTH 1473 Mathematics for Critical Thinking
*MTH 1513 College Algebra

\section*{Science 7 hours}

BIO 1114 General Biology for Non-Majors
BIO 1383 Nutrition

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Psychology/Sociology 3 hours
Select one from the following:
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology

\section*{Speech 3 hours}

Select one from the following:
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 27}

\section*{\(\wedge\) Human Services 18 hours}

HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Management
*HS 2113 Internship
and select one of the following:
*HS 2203 Parent-Child Relations
HS 2003 Dynamics of Family Relations

\section*{Recommended Electives 9 hours}
^HS 1313 Chemical Dependency and Treatment
^HS 2073 Issues in Human Services
^HS 2613 Gerontology in Human Services
\(\wedge\) HS Any Human Services Course
*PSY 2133/SOC 1133 Crisis Intervention and Experience
*SOC 2013 Marriage and Family
*SOC 2113 Social Problems in America
*SOC 2143 Minorities in America

\section*{Total Credit Hours: 64}
*Course has prerequisite (See course description section of catalog). \(\wedge\) Students must earn a "C" or better in HS courses in order to progress to advanced courses in the program, or gain permission of instructor or associate dean.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{HUMAN SERVICES}

Human Relations, OU-Tulsa Transfer Option

\section*{Program Description:}

This option is designed for individuals seeking a career in the helping professions with an emphasis on human relations skills necessary to apply the principles and philosophy of human services in a variety of human service delivery settings. This curriculum includes TCC requirements and courses generally completed in the first two years of a four-year curriculum while providing 24 hours of specialized coursework relevant to the field of study. Completion of this Associate Degree affords the student the opportunity to transfer to the University of Oklahoma Human Relations degree which can be earned through OU-Tulsa, with anti-culated courses already completed within that program.

\section*{Degree Awarded: Associate in Science}

Semester plan available through faculty advisement.

\section*{General Education Requirements Credit Hours 37-38}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

PHI 2133 Introduction to Ethical Thinking
and select 3 credit hours from the courses designated as

\section*{Humanities on the General Education page.}

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra
and select one course from the following:
*MTH 1613 Plane Trigonometry
*MTH 2193 Elementary Statistics
*PSY/SOC 2223 Behavioral Statistics

\section*{Science 7-8 hours}

BIO 1114 General Biology for Non-Majors
and select one course from the following:
AST 1104 General Astronomy
GEO 2013 Meteorology
GEO 2153 Human Ecology

\section*{COMMUNITY SERVICE: HUMAN SERVICES}

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 24}

\section*{^Human Services 15 hours}

HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Management *HS 2113 Internship

\section*{Recommended Electives 9 hours}

Note: An intermediate level 2000 language course is required for this OU program. It is not necessary to fulfill the language requirement prior to completion of the Associate degree or before applying and enrolling at OU-Tulsa.. Please check with your faculty advisor about specific requirements.
**CSC 1203 Computer Concepts and Applications
ECO 2013 Principles of Macroeconomics
\(\wedge\) HS 1313 Chemical Dependency and Treatment
^HS 2073 Issues in Human Services
^HS 2613 Gerontology in Human Services
\(\wedge\) HS Any Human Services Course
*PSY 2053/SOC 2053 Social Psychology
*PSY 2133/SOC 1133 Crisis Intervention and Experience
*PSY 2713/SOC 2713 Aging and Behavior
PSY 2813/SOC 2813 Human Sexuality
*SOC 2013 Marriage and Family
*SOC 2043 Juvenile Delinquency
SOC 2113 Social Problems in America
*SOC 2133 Introduction to Deviant Behavior
*SOC 2143 Minorities in America

\section*{Total Credit Hours: 61-62}
*Course has prerequisite (See course description section of catalog). **To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency.Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.
\(\wedge\) Students must earn a"C" or better in HS courses in order to progress to advanced courses in the program, or gain permission of instructor or associate dean.

\section*{HUMAN SERVICES}

Pre-SocialWork-NSUor ORU(B.S.W);OU(M.S.W.)Transfer Option091 B

\section*{Program Description:}

This option is designed for individuals seeking careers in helping professions providing services to children, youth, elderly, and families in a variety of community-based settings with an academic goal of earning a bachelors or masters degree in generalist social work practice. Articulation agreements between universities provide a seamless transition toward a baccalaureate degree (NSU or ORU) and a master's degree (OU), which can be earned in five years in the greater Tulsa area. Students gain 21 credit hours of specialization in Human Services while earning the associate degree.

\section*{Degree Awarded: Associate in Science \\ Semester plan available through faculty advisement. \\ General Education Requirements Credit Hours 37 \\ English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

GEO 1043 Introduction to Cultural Geography and select one from the following:
HUM 2113 Humanities I
HUM 2223 Humanities II

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra or MTH 1473 Mathematics for Critical Thinking (NSU option only) *MTH 2193 Elementary Statistics (ORU option only)

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Science 7 hours}

BIO 1114 General Biology for Non-Majors
BIO 1383 Nutrition

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Sociology 3 hours}

SOC 1113 Introduction to Sociology
Speech 3 hours
SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 27}

\section*{Computer Science 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{Economics 3 hours}

ECO 2013 Principles of Macroeconomics

\section*{^Human Services 21 hours}

HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
*HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Management
*HS 2113 Internship

\section*{Controlled Electives Credit Hours: 6}

Select 2 of the following Courses:
^HS 1313 Chemical Dependency and Treatment
^*HS 2073 Issues in Human Services
*PSY 2133/SOC 1133 Crisis Intervention and Experience

\section*{Total Credit Hours: 64}
*Course has prerequisite (See course description section of catalog). To receive an A.A.or A.S. Degree, students must demonstrate computer proficiency.Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.
\(\wedge\) Students must earn a "C" or better in HS courses in order to progress to advanced courses in the program, or gain permission of instructor or associate dean.

\section*{COMMUNITY SERVICE: HUMAN SERVICES}

\section*{HUMAN SERVICES}

Therapeutic Recreation, OSU Transfer Option
091 C

\section*{Program Description:}

This program is designed for individuals who want a professional career providing Therapeutic Recreation services within hospitals, rehabilitation centers, long-term care facilities and the community. This curriculum includes TCC requirements and courses generally completed in the first two years of a four-year curriculum in Therapeutic Recreation at Oklahoma State University. Students must complete the Associate Degree in order to transfer to Oklahoma State University under this agreement.

\section*{Degree Awarded: Associate in Science}

Semester plan available through faculty advisement.

\section*{General Education Requirements Credit hours: 34}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 3 hours}

HUM 2113 Humanities I
HUM 2223 Humanities II

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics
Philosophy 3 hours
PHI 2153 Medical Ethics

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Science 7 hours}

BIO 1114 General Biology
BIO 1383 Nutrition

\section*{Social Science 6 hours}

POS 1113 American Federal Government
and select one from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 24
^Human Services 12 hours
HS 1213 Basic Counseling Skills
HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Management ** *HS 2113 Internship
Physical Education 8 hours
PE 2212 First Aid
PE 2513/HS 2413 Introduction to Leisure Studies
PE 2533/HS 2433 Introduction to Therapeutic Recreation

\section*{Biology 4 hours}

BIO 1314 Human Anatomy and Physiology
Controlled Electives Credit Hours: 3
SOC 2143 Minorities in America
*HS 2073 Issues in Human Services
Recommended Electives Credit Hours 0-3
^HS 1113 Principles of Human Services
^HS 1313 Chemical Dependency and Treatment
^HS 1413 Introduction to Developmental Disabilities
^HS 1423 Models for Supporting Persons with Developmental Disabilities
^*HS 2203 Parent-Child Relations
\(\wedge *\) HS 2073 Issues in Human Services
^*HS 2613 Gerontology in Human Services
^PE/HS 2342 Recreation Therapy/ Rope Course Training ^PE/HS 2363 Recreation Therapy/ Outdoor Adventure AH 1323 Medical Terminology

\section*{Total Credit Hours: 61-64}
*Course has prerequisite (See course description section of catalog)
**The internship should be completed in a hospital setting under the supervision of a CTRS. Hours completed as part of your TCC Internship will go toward documentation of 500 hours of paid or volunteer experience within the recreation field required prior to enrolling in your senior internship experience ( 12 credits) at Oklahoma State University. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
^Students must earn a "C" or better in HS courses in order to progress to advanced courses in the program, or gain permission of instructor or associate dean.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{HUMAN SERVICES}

Workforce Development Program options

\section*{Degrees awarded: Associate in Applied Science or Certificate of Achievement}

Human Services workers and assistants provide direct and indirect client services and serve to improve and enhance the lives of others in a variety of roles within social and human service delivery settings. Job titles vary: case management aide, social work assistant, alcohol or drug abuse counselor, mental health aide, community outreach worker, life skill counselor, crisis intervention counselor, intake worker, gerontology aide, family support worker, habilitation aide, residential counselor, and juvenile specialist. The U.S. Department of Labor states:Human services worker and assistant occupations are projected to be among the fastest growing. Job opportunities should be excellent [for qualified applicants]... The Human Services program at Tulsa Community College is designed to provide education and training for individuals seeking careers in a wide range of helping profession settings. Students gain basic knowledge, skills, and values necessary to communicate and interact with persons experiencing personal and social problems in order to assess needs and provide appropriate intervention. Students have many opportunities to gain handson experience with community agencies and populations. In addition to general education requirements, all Human Service students complete core coursework in:
- Principles of Human Services
- Basic Counseling Skills
- Chemical Dependency and Treatment
- Lifespan Development
- Human Services Applications/Case Management
- Issues in Human Services
- Crisis Intervention
- Internship

Additional career and occupational information in the human services field can be found at:
http://bls.gov
http://stats.bls.gov/oco

\section*{COMMUNITY SERVICE: HUMAN SERVICES}

\section*{HUMAN SERVICES}

645
Degree Awarded: Associate in Applied Science
Semester plan available through faculty advisement
General Education Requirements Credit Hours: 24
English 6 hours
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Social Science 6 hours}

POS 1113 American Federal Government
and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Sociology 6 hours}
*SOC 1133 Crisis Intervention and Experience and select 3 credit hours from the following:
SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America

\section*{Speech 3 hours}

SPE 1013 Fundamentals of Listening
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 36}

\section*{^Human Services 33 hours}

HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
HS 1313 Chemical Dependency and Treatment HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Management
*HS 2073 Issues in Human Services
*HS 2113 Internship
*HS 2613 Gerontology in Human Services and select 3 credit hours from the following: HS 1413 Introduction to Developmental Disabilities HS 1423 Models for Supporting Persons with Developmental Disabilities and select 3 credit hours from the following: HS 2003 Dynamics of Family Relationships
*HS 2203 Parent-Child Relations
and select 3 credit hours from the following:
*HS 2513 Management of Community Programs
*HS 1523 Volunteer Management in Human Services

\section*{Computer Information Systems 3 hours}

Select three credit hours from any of the Computer Information Systems courses.

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). \(\wedge\) Students must earn a grade of "C" or better is HS courses in order to progress to advanced courses in the program, or gain permission of instruction or associate dean.

\section*{HUMAN SERVICES}

Certificate Option
645

\section*{Program Description:}

The certificate option involves the student strictly in courses specific to the human services field, providing students with technical skills necessary for employment prior to obtaining general education requirements for an academic degree or may provide the core courses needed to individuals with academic degrees in unrelated fields desiring to change careers.
Degree Awarded: Certificate of Achievement

\section*{Semester plan available through faculty advisement}

Certificate Requirements Credit Hours: 30
\(\wedge\) Human Services 27 hours
HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
HS 1313 Chemical Dependency and Treatment
HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case
Management
*HS 2113 Internship
and select one course from the following:
*HS 2003 Dynamics of Family Relationships
*HS 1443 Direct Support Professional I
HS 2513 Management of Community Programs
and select one course from the following:
HS 1413 Introduction to Developmental Disabilities
*HS 2073 Issues in Human Services
*HS 2203 Parent-Child Relations
HS 2433 Introduction to Therapeutic Recreation
and select one course from the following:
HS 1423 Models for Supporting Persons with Developmental Disabilities
*HS 2213 Introduction to Group Dynamics
HS 2413 Introduction to Leisure Services
*HS 2613 Gerontology in Human Services

\section*{Psychology/Sociology 3 hours}

Select one course from the following:
*PSY 2133 Crisis Intervention and Experience
*SOC 1133 Crisis Intervention and Experience

\section*{Total Credit Hours: 30}
*Course has prerequisite (See course description section of catalog).
\(\wedge\) Students must earn a grade of " C " or better is HS courses in order to progress to advanced courses in the program, or gain permission of instructor or associate dean.

\section*{COMMUNITY SERVICE: HUMAN SERVICES}

\section*{HUMAN SERVICES}

Chemical \& Alcohol Dependency Counseling Option
645G

\section*{Program Description:}

Graduates from this program should meet the qualifications in preparation for certification for an Alcohol/Drug Counselor in Training with the Oklahoma Drug and Alcohol Professional Counselor Certification Board. Specialized course requirements (12 credit hours) include:
- Dynamics of Family Relationships
- Introduction to Group Dynamics
- CADC Practicum

\section*{Degree Awarded: Associate in Applied Science}

Semester plan available through faculty advisement

\section*{General Education Requirements Credit Hours: 24}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Sociology 6 hours}
*SOC 1133 Crisis Intervention and Experience
and select 3 credit hours from the following:
SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America

\section*{Speech 3 hours}

SPE 1013 Fundamentals of Listening
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication
Specialized Course Requirements Credit Hours: 33
\(\wedge\) Human Services 30 hours
HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
HS 1313 Chemical Dependency and Treatment
HS 2003 Dynamics of Family Relationships
HS 2023 Lifespan Development
*HS 2213 Introduction to Group Dynamics
*HS 2053 Human Services Applications/Case Management
*HS 2073 Issues in Human Services
*HS 2103 Practicum I
*HS 2113 Internship

\section*{Computer Information Systems 3 hours}

Select three credit hours from any of the Computer
Information Systems (CIS/CSC) courses.
Controlled Electives Credit Hours: 3
Foreign Languages - Any Course
\(\wedge\) Human Services - Any Courses

INT 1363 American Sign Language I
CJ 2103 Criminal Evidence
CJ 2123 Criminal Law I
*PSY 2053 Social Psychology
*PSY 2423 Introduction to Abnormal Psychology
*SOC 2053 Social Psychology
*SOC 2133 Introduction to Deviant Behavior
*SOC 2143 Minorities in America
*SOC 2243 Introduction to Social Work

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). \(\wedge\) Students must earn a grade of "C" or better is HS courses in order to progress to advanced courses in the program, or gain permission of instruction or associate dean.

\section*{HUMAN SERVICES}

Family Studies
NEW

\section*{Program Description}

This option provides graduates with additional knowledge and skills to serve at-risk families and children in settings addressing prevention and intervention in child abuse, domestic violence, welfare assistance, youth supervision, adoption services, special needs and disabilities, child advocacy, shelters, and foster care. This option also meets requirements for transfer to Family
Studies \& Gerontology at Southern Nazarene University-Tulsa.

\section*{Degree Awarded: Associate in Applied Science}

Semester plan available through faculty advisement.

\section*{General Education Requirements Credit Hours: 30-31}

Communications 9 hours
*ENG 1113 Freshman Composition I
and select 6 credit hours from the following:
each course must be from a different discipline
Literature (ENG)
*ENG 2413 or other ENG literature course
Speech (SPE)
Foreign Language

\section*{Humanities 9 hours}

Select 9 credit hours from 3 different disciplines designated as humanities on the general education page

\section*{Science/Math 6-7 hours}

Select one course from 2 of the following disciplines
MTH
PHY or PSC
BIO
GEL or GEO
Social Science 6 hours
POS 1113 American Federal Government
and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 33
^Human Services 24 hours
HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills

\section*{COMMUNITY SERVICE: HUMAN SERVICES}

HS 2003 Dynamics of Family Relationships
HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Management
*HS 2113 Internship
*HS 2203 Parent-Child Relations
*HS 2613 Gerontology in Human Services

\section*{Psychology/Sociology 3 hours}

Select one course from the following:
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology

\section*{Computer Information Systems 3 hours}

Select 3 credit hours from any of the Computer Information Systems (CIS/CSC) courses.

\section*{Controlled Electives Credit Hours: 3}

Foreign Languages - Any Courses
\(\wedge\) Human Services - Any Courses
PE 1113 Personal, School, and Community Health
PE 2212 First Aid
PSY any courses
PSY 2133/SOC 1133 Crisis Intervention and Experience
SOC any courses
*SOC 2013 Marriage and Family

\section*{Total Credit Hours: 63-64**}
*Course has prerequisite (See course description section of catalog). \(\wedge\) Students must earn a grade of "C" or better is HS courses in order to progress to advanced courses in the program, or gain permission of nstructor or associate dean.
**Up to 88 credit hours may be transferred from TCC towards the SNU Family Studies and Gerontology baccalaureate degree- 62 hours transfer at initial transcript evaluation. TCC earned hours over 62 may be petitioned for potential elective credit after successful admission to SNU and after academic advising. Students will need to have a total of 124 credit hours to obtain a Bachelor of Science in Family Studies and Gerontology; total of 36 hours will be earned in SNU major consisting of 14 modules/courses.

\section*{HUMAN SERVICES}

\section*{Community Services Management}

645B

\section*{Program Description:}

Students in this option gain learning experiences that focus on the knowledge and skills necessary to manage, operate, and deliver services in community-based agencies. Graduates will be prepared for entry-level management positions in non-profit and other human service agencies as volunteer coordinator, program coordinator, site coordinator, residential manager, advocacy or social policy liaison, or board member, as well as gaining insights to enhance performance in any position within an agency. Specialized course requirements (1215 credit hours) include:
- Management of Community Programs
- Volunteer Management in Human Services
- Supervisory Management or Management Essentials

Degree Awarded: Associate in Applied Science Semester plan available through faculty advisement
General Education Requirements Credit Hours: 24

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Sociology 3 hours}
*SOC 1133 Crisis Intervention and Experience
and select 3 credit hours from the following:
SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America

\section*{Specialized Course Requirements Credit Hours: 33}

\section*{Business/Management 3 hours}
select one course from the following:
BUS 2363 Supervisory Management
MGT 1353 Management Essentials

\section*{^Human Services 27 hours}

HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
HS 1313 Chemical Dependency and Treatment
HS 2003 Dynamics of Family Relationships
HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Management
*HS 2073 Issues in Human Services
*HS 2113 Internship
*HS 2513 Management of Community Programs
Controlled Electives Credit Hours: 3
\(\wedge\) Human Services - Any Courses
INT 1413 Deaf Culture and History
*MGT 1373 Human Resources Management
MGT 1233 Health Care Management
PE 1113 Personal, School, and Community Health
*POS 2103 Introduction to State and Local Government
*POS 2133 Introduction to Public Administration
*PSY/*SOC 2053 Social Psychology
*PSY/*SOC 2813 Human Sexuality
*SOC 2043 Juvenile Delinquency
*SOC 2133 Introduction to Deviant Behavior
*SOC 2143 Minorities in America

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). \(\wedge\) Students must earn a grade of " C " or better in HS courses in order to progress to advanced courses in the program, or gain permission of the instructor or associate dean

\section*{COMMUNITY SERVICE: HUMAN SERVICES}

\section*{HUMAN SERVICES}

Corrections
645C

\section*{Program Description:}

Students gain a diversity of skills necessary for job functions related to juvenile and adult corrections, including positions in parole, halfway houses, and residential settings for youth, correctional facilities, and community centers. Specialized coursework (12-15 credit hours) includes:
- Social Psychology
- Juvenile Delinquency or Adolescent or Adult Psychology
- Criminal Justice or relevant courses

Degree Awarded: Associate in Applied Science Semester plan available through faculty advisement
General Education Requirements Credit Hours: 27

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Psychology 6 hours}

PSY 1113 Introduction to Psychology *PSY/SOC 2053 Social Psychology

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Sociology 6 hours}
*SOC 1133 Crisis Intervention and Experience
and select one course from the following:
SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America

\section*{Speech 3 hours}

SPE 1013 Fundamentals of Listening
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication
Specialized Course Requirements Credit Hours: 24

\section*{Computer Information Systems 3 hours}

Select 3 credit hours from any of the Computer Information Systems (CIS/CSC) courses.
^Human Services 21 hours
HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
HS 1313 Chemical Dependency and Treatment
HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Manaqement
*HS 2073 Issues in Human Services
*HS 2113 Internship

\section*{Controlled Electives Credit Hours: 9}

Criminal Justice - Any Courses
^Human Services - Any Courses
*MGT 1373 Human Resources Management PE 1113 Personal, School, and Community Health
*POS 2103 Introduction to State and Local Government
*POS 2133 Introduction to Public Administration
PSY 2323 Conflict Resolution
*PSY 2533 Adolescent Psychology
*PSY / SOC 2813 Human Sexuality
*SOC 2013 Marriage and Family
*SOC 2043 Juvenile Delinquency
*SOC 2133 Introduction to Deviant Behavior
*SOC 2143 Minorities in America
*SOC 2243 Introduction to Social Work

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). \(\wedge\) Students must earn a grade of " C " or better is HS courses in order to progress to advanced courses in the program, or gain permission of instruction or associate dean.

\section*{HUMAN SERVICES}

Direct Support Professional I Certificate

\section*{Pending Approval of the Oklahoma State Regents for Higher} Education

\section*{Program Description:}

The DSP Certificate involves the student strictly in courses specific to the Direct Support Professional, building upon required training in the State of Oklahoma. DSPs support people with developmental disabilities, physical disabilities, and other related conditions in residential, vocational, educational, recreation, health, and other community settings.

\section*{Degree Awarded: Certificate of Achievement}

Semester plan available through faculty advisement.
Certificate Requirements Credit Hours: 15

\section*{\(\wedge\) Human Services 15 hours}
*HS 1403 Direct Support Professional Foundations
HS 1413 Introduction to Developmental Disabilities HS 1423 Models for Supporting Persons with Developmental Disabilities *HS 1443 Direct Support Professional I
*HS 1453 Direct Support Professional Practicum

\section*{Total Credit Hours: 15}
*Course has prerequisite (See course description section of catalog). \(\wedge\) Students must earn a grade of "C" or better in HS courses in order to progress to advanced course in the program, or gain permission of the instructor.
NOTE:This certificate option may be completed prior to obtaining general education requirements for an academic degree or may provide the core courses needed or may provide the core courses needed to individuals with academic degrees in unrelated fields desiring to change raroore

\section*{COMMUNITY SERVICE: HUMAN SERVICES}

\section*{HUMAN SERVICES \\ Developmental Disabilities}

\section*{645D}

\section*{Program Description:}

This option is designed to provide graduates with the basic knowledge, attitudes, and skills regarding family, community living, education, employment, leisure and recreation, and support services necessary for job preparation in organizations serving people with developmental disabilities. Specialized coursework ( 15 credit hours) includes:
- Introduction to Developmental Disabilities
- Models for Supporting Persons with Disabilities
- Management of Community Programs

Degree Awarded: Associate in Applied Science Semester plan available through faculty advisement
General Education Requirements Credit Hours: 24
English 6 hours
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Sociology 6 hours}
*SOC 1133 Crisis Intervention and Experience
and select 3 credit hours from the following:
SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America

\section*{Speech 3 hours}

SPE 1013 Fundamentals of Listening
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 30}
^Human Services \(\mathbf{3 0}\) hours
HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
HS 1313 Chemical Dependency and Treatment
HS 1413 Introduction to Developmental Disabilities
HS 1423 Models for Supporting Persons with Developmental Disabilities
HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Management
*HS 2073 Issues in Human Services
*HS 2113 Internship
*HS 2513 Management of Community Programs

\section*{Controlled Electives Credit Hours: 6}

CHD 2213 Children with Special Needs
\(\wedge *\) HS 1433 Leisure,Recreation,Visual, and Performing Arts in Disabilities \(\wedge *\) HS 1523 Volunteer Management in Human Services
^HS 2003 Dynamics of Family Relationships
^HS 2203 Parent-Child Relations
INT 1363 American Sign Language I
OTA 1313 Introduction to Occupational Therapy
PE 1113 Personal, School, and Community Health
PHI 2153 Medical Ethics
*POS 2133 Introduction to Public Administration
*PSY / SOC 2053 Social Psychology
*PSY 2213 Brain and Behavior
*PSY / SOC 2813 Human Sexuality
*SOC 2133 Introduction to Deviant Behavior
*SOC 2243 Introduction to Social Work
Total Credit Hours: 60
*Course has prerequisite (See course description section of catalog). \(\wedge\) Students must earn a grade of "C" or better is HS courses in order to progress to advanced courses in the program, or gain permission of instructor or associate dean.

\section*{HUMAN SERVICES}

Gerontology
645E

\section*{Human Services - Specialized Options}

Students in the Gerontology Option obtain skills and knowledge that will provide flexibility to work in a number of settings relating to the aging population. Careers serving the elderly can be found in senior centers, adult day care, nursing homes and other residential settings for the elderly, home companion/home health care, hospice, and family support. Specialized coursework (15-16 credit ours) includes:
- Gerontology in Human Services
- Aging and Behavior
- Management of Community Programs

Degree Awarded: Associate in Applied Science
General Education Requirements Credit Hours: 27

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Psychology 6 hours}

PSY 1113 Introduction to Psychology
PSY/SOC 2713 Aging and Behavior

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Sociology 6 hours}
*SOC 1133 Crisis Intervention and Experience and select one course from the following:
SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America

\section*{Speech 3 hours}

SPE 1013 Fundamentals of Listening
SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{COMMUNITY SERVICE: HUMAN SERVICES}

\section*{Specialized Course Requirements Credit Hours: 33}

\section*{Computer Information Systems 3 hours}

Select 3 credit hours from any of the Computer Information Systems (CIS/CSC) courses.
\(\wedge\) Human Services 27 hours
HS 1113 Principles of Human Services
HS 1213 Basic Counseling Skills
HS 1313 Chemical Dependency and Treatment
HS 2023 Lifespan Development
*HS 2053 Human Services Applications/Case Management
*HS 2073 Issues in Human Services
*HS 2113 Internship
*HS 2513 Management of Community Programs
*HS 2613 Gerontology in Human Services
Philosophy 3 hours
PHI 2153 Medical Ethics

\section*{Controlled Electives Credit Hours: 3-4}
^Human Services - Any Courses
AH 1323 Medical Terminology
BIO 1383 Nutrition
HT 1031 Therapeutic Horticulture
MGT 1233 Health Care Management
PE 1113 Personal, School, and Community Health PE 2212 First Aid
*POS 2133 Introduction to Public Administration
*PSY / SOC 2053 Social Psychology
*PSY 2213 Brain and Behavior
*PSY 2613 Adult Psychology
*SOC 2243 Introduction to Social Work

\section*{Total Credit Hours: 63-64}
*Course has prerequisite (See course description section of catalog). \(\wedge\) Students must earn a grade of "C" or better is HS courses in order to progress to advanced courses in the program, or gain permission of instructor or associate dean.


\section*{CRIMINAL JUSTICE}

\section*{Program Description:}

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Criminal Justice may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalogs of the universities where the four-year degree is offered and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at the university of their choice. Criminal justice agencies have various strenuous entrance, background and physical requirements. This program will assist in preparing students for employment in criminal justice if other criteria established by employer/agency are met.

\section*{Degree Awarded: Associate in Arts}

\section*{For More Information Contact:}

Liberal Arts and Community Services Division:
Northeast: (918) 595-7494
Counseling Center: Northeast: (918) 595-7451
General Education Requirements Credit Hours: 37 See the General Education Requirements page for the complete list.

\section*{Specialized Course Requirements Credit Hours: 15}

\section*{Criminal Justice 15 hours}

CJ 1013 Introduction to Criminal Justice
CJ 2103 Criminal Evidence
CJ 2123 Criminal Law I
* CJ 2143 Criminal Law II

CJ 2223 Criminal Procedures I
Recommended Electives Credit Hours: 9
*CIS 2563 Enterprise Security
*CJ 2113 Criminalistics
* CJ 2333 Criminal Procedures II

CSC 1203 Computer Concepts and Applications
GEO 1023 World Geography (Economic)
GEO 1043 Introduction to Cultural Geography
HIS 1033 History of Oklahoma
HIS 1053 Ancient and Medieval Western Civilization
HIS 1063 Modern Western Civilization
PHI 1113 Introduction to Philosophy
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology
SOC 2113 Social Problems in America
*SOC 2223 Behavioral Statistics

\section*{Total Credit Hours: 61}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.
Proficiency in a foreign language is recommended.

\section*{EMERGENCY MEDICAL TECHNOLOGY \\ 629}

\section*{Program Description:}

This program is developed jointly by Tulsa Community College and Tulsa Technology Center. Basic:This option provides an opportunity for individuals to develop skills to function as an entry-level Emergency Medical Technician in a pre hospital setting. Course of study includes introductory anatomy and physiology, patient assessment, automatic operations. Paramedic:The paramedic phase of the program emphasizes the care of more extended and in-depth study of theories and clinical experiences. Basic Trauma Life Support, Advanced Cardiac Life Support and Pediatric Advanced Life Support units are taught. This phase also contains leadership instruction appropriate to prepare the student to function in the role of the Paramedic and as a member of the health care team. Successful completion of the National Registry of Emergency Medical Technicians examination at the Basic and Paramedic levels qualifies graduates for licenser by the Oklahoma State Department of Health.

\section*{Degree Awarded: Associate of Applied Science}

\section*{Procedures for Application:}
1. Obtain an admission packet from Tulsa Technology Center. Packets are located at all Tulsa Technology Center campuses in the Adult Education office.
2. An admission test is required for full-time programs at Tulsa Technology Center (see admission packet for details).
3. Submit completed program application form and required documents to the Career Services Center, Tulsa Technology Center, Please call (918) 828-2024 for application deadlines. 4. Contact Associate Dean, Liberal Arts and Community Service Programs (918) 595-7494, for program application form and any specific information.
5. All prospective EMT program students must complete an application for enrollment to the College and submit their high school transcripts, GED scores, ACT/SAT scores, college transcripts and any previous training and/or education to the Northeast Campus Registrar at 3727 East Apache, Tulsa, OK 74115. Incomplete submissions will not be considered for Science Degree program.
6. Acceptance to Tulsa Community College does not guarantee admission to the Emergency Medical Technology Associate of Applied Science Degree program.

\section*{For More Information Contact:}

Tulsa Technology Center - Admissions and Enrollment Office. Students should consult with Tulsa Tech Admissions and Enrollment Staff in the Career Services Center at (918) 828-5200 before enrolling in this option.
Liberal Arts and Community Services Division:
Northeast Campus (918) 595-7494

\section*{General Education Requirements Credit Hours: 19}

Biology 4 hours
*BIO 1314 Human Anatomy and Physiology
English 6 hours
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2343 Business Communications
Psychology 3 hours
PSY 1113 Introduction to Psychology

\section*{COMMUNITY SERVICE: LAW, PUBLIC ADMINISTRATION \& SAFETY AND CORRECTIONS}

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 35}

\section*{EMT Basic 8 hours}
**EMT 1013 EMT Basic Introduction
**EMT 1024 EMT Basic Practicum
**EMT 1041 EMT Basic Clinical

\section*{EMT Paramedic 24 hours}

EMT 1213 Introduction to Paramedicine EMT 1231 Paramedicine Clinical Introduction
EMT 1342 Paramedic Patient Assessment
EMT 1351 Patient Assessment Clinical
EMT 2003 Paramedic Trauma and Trauma Clinical
EMT 2014 Paramedic Medical
EMT 2031 Paramedic Medical Clinical
EMT 2061 PreHospital Trauma Life Support
EMT 2111 EMS Clinical
*EMT 2131 Paramedic Special Considerations and Assessment Based Mgmt.
EMT 2151 Special Considerations Clinical
EMT 2212 Physician Internship
EMT 2231 Paramedic Operations
EMT 2252 EMS Internship
Fire and Emergency Services 3 hours
FES 1313 Fundamentals of Fire Protection
Recommended Electives Credit hours 6
AH 1323 Medical Terminology
BUS 2363 Supervisory Management
CSC 1203 Computer Concepts and Applications
HCA 1103 Legal Practices in Health Care
HCA 1113 Risk Management in Health Care
HS 1313 Chemical Dependency and Treatment
HS 2003 Dynamics of Family Relationships
INT 1363 American Sign language I
MGT 2123 Leadership Development
*MTH 1513 College Algebra
NUR 2403 Dosage Calculations for Nurses
PHI 2153 Medical Ethics
*PSY 2023 Developmental Psychology
*PSY 2053 Social Psychology
*SOC 2713 Aging and Behavior
SPA 1103 Spanish I
SPE 1113 Speech Communication I

\section*{Total Credit Hours: 61}
\({ }^{*}\) *Oourse has prerequisite (See course description section of catalog). **Course must be completed with a"B"grade or above.
NOTE: Students who have passed the State of Oklahoma and National Registry examinations at either the Basic EMT or Paramedic level may apply for advanced standing credit in these courses. Application must be made in the Counseling and Testing center at the Northeast Campus. Specialized Course Requirements should be taken at Tulsa Technology Center, Peoria Campus, or any other educational institution that offers approved programs.

\section*{FIRE and EMERGENCY SERVICES \\ NSU Transfer Option \\ 071 \\ Program Description: \\ This program offers a broad education in the principles and practical applications of fire prevention, fire hydraulics, incident command, fire and associated hazards, fire protection systems, building design, and fire service administration. It provides specialized training for in-service fire personnel and individuals who wish to enter the profession. Graduates are prepared to secure employment with municipal or other fire departments, industrial firms, governmental agencies, and fire protection companies. In addition to the Associate in Science degree, attainment of Emergency Medical Technician-Basic (EMT-B) is strongly encouraged for individuals seeking employment in the fire service. \\ IT SHOULD BE NOTED THAT FIRE DEPARTMENTS HAVE RIGOROUS PHYSICAL REQUIREMENTS AND THE TYPICAL APPLICATION PROCESS IS EXTREMELY COMPETITIVE;WHILE FIRE DEPARTMENT ADMINISTRATIONS VIEW FORMAL EDUCATION IN FIRE AND EMERGENCY SERVICES WITH FAVOR, STUDENTS SHOULD NOT ASSUME THAT COMPLETION OF THIS PROGRAM WILL GUARANTEE EMPLOYMENT WITH A FIRE DEPARTMENT. (In most fire departments, applicants must be at least 21 years of age.)}

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Fire and Emergency Services Program: (918) 595-7443
Liberal Arts and Community Services Division:
Northeast: (918) 595-7494
Counseling Center: Northeast: (918) 595-7451

\section*{General Education Requirements Credit Hours: 38}

\section*{Chemistry 4 hours}
*CHE 1114 Principles of Chemistry

\section*{Computer Information Systems 3 hours}

CSC 1203 Computer Concepts and Applications
or
any higher level Computer Information Systems course

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{History 3 hours}

HIS 1483 U.S. History 1492 to Civil War Era
or
HIS 1493 U.S. History Civil War Era to Present

\section*{Humanities 6 Hours}

See the General Education Requirements page for complete list.

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Physics 4 hours}
*PHY 1114 General Physics

\section*{Political Science 3 hours}

POS 1113 American Federal Government
Psychology 3 hours
PSY 1113 Introduction to Psychology

\section*{COMMUNITY SERVICE: LAW, PUBLIC ADMINISTRATION \& SAFETY AND CORRECTIONS}

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
Specialized Course Requirements Credit Hours: 30
Fire and Emergency Services \(\mathbf{3 0}\) hours
FES 1313 Fundamentals of Fire Protection
*FES 1333 Fire Protection Hydraulics and Water Supply
FES 1343 Fundamental of Fire Prevention
FES 1353 Introduction to Incident Management
FES 2213 Introduction to Homeland Defense
FES 2313 Building Construction for Fire Protection
FES 2323 Fire and Emergency Services Administration
FES 2343 Fire Behavior and Combustion
FES 2403 Fire Protection Systems
FES 2463 Emergency Services Internship
Recommended Elective Credit Hours: 0-8
FES 2108 Basic Emergency Medical Technician Certification

\section*{Total Credit Hours: 68-76}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{FIRE AND EMERGENCY SERVICES}

\section*{Program Description:}

This certificate program is designed for both students who are preparing themselves for a career in the fire service and those who are currently employed as Firefighters. The curriculum is designed to provide education in the development of fire protection in the U.S., hydraulics and water supply, fire prevention, incident management, fire investigation, building construction, fire and emergency services administration, fire behavior, fire protection systems, and emergency medical services response. This curriculum provides students with the technical knowledge necessary to maximize effectiveness in the position of Firefighters.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Fire and Emergency Services Program: (918) 595-7443.
Liberal Arts and Community Services Division:
Northeast: (918) 595-7494.
Counseling Center: Northeast: (918) 595-7451

\section*{Certificate Requirements Credit Hours: 41}

FES 1313 Fundamentals of Fire Protection
*FES 1333 Fire Protection Hydraulics and Water Supply
FES 1343 Fundamentals of Fire Prevention
FES 1353 Introduction to Incident Management
FES 1363 Fire Investigation and Arson
FES 2108 Basic Emergency Medical Technician Certification.
FES 2213 Introduction to Homeland Defense
FES 2313 Building Construction for Fire Protection
FES 2323 Fire and Emergency Services Administration
FES 2343 Fire Behavior and Combustion
FES 2403 Fire Protection Systems
FES 2463 Emergency Services Internship

\section*{Total Credit Hours: 41}
*Course has prerequisite (See course description section of the catalog).

\section*{FIRE AND EMERGENCY SERVICES \\ Emergency and Community Preparedness Option}

\section*{Program Description:}

This certificate program is designed for individuals who want to increase their knowledge of homeland security issues and solutions. It is recommended for individuals who either are employed as or are seeking employment as Firefighters, Police Officers, emergency management officials, and in business and industry. The curriculum is designed to provide education in the development of emergency services in the U.S., emergency incident management, homeland defense, and cyber security. This curriculum provides students with the basic knowledge necessary to provide effectiveness in positions requiring knowledge of homeland security issues.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Fire and Emergency Services Program: (918) 595-7443
Liberal Arts and Community Services Division:
Northeast (918) 595-7494
Counseling Center: Northeast (918) 595-7451

\section*{Certificate Requirements Credit Hours: 12}
*CIS 2563 Enterprise Security
FES 1313 Fundamentals of Fire Protection
FES 1353 Introduction to Incident Management
FES 2213 Introduction to Homeland Defense
Total Credit Hours: 12
*Course has prerequisite (see course description section of the catalog)

\section*{LAW ENFORCEMENT}

\section*{Program Description:}

This program is designed principally for persons interested in a career as a peace officer and as a program for current peace officers to improve their knowledge and skills in specialized fields. Law enforcement agencies have various strenuous entrance, background, and physical requirements. Students should not assume this program will lead to employment in law enforcement.

\section*{Degree Awarded: Associate in Applied Science}

For More Information Contact:
Liberal Arts/Community Services Division:
Northeast: (918) 595-7494
Counseling Center: Northeast: (918) 595-7451
General Education Requirements 24 hours
English 6 hours
*ENG 1113 Freshman Composition I and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology
PSY 1313 Human Relations

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{COMMUNITY SERVICE: LAW, PUBLIC ADMINISTRATION \& SAFETY AND CORRECTIONS}

\section*{Sociology 6 hours}

SOC 1113 Introduction to Sociology
*SOC 2043 Juvenile Delinquency

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 24}

\section*{Computer Information Systems 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{Criminal Justice 21 hours}

CJ 1013 Introduction to Criminal Justice
CJ 2103 Criminal Evidence
*CJ 2113 Criminalistics
CJ 2123 Criminal Law I
*CJ 2143 Criminal Law II
CJ 2223 Criminal Procedures I
*CJ 2333 Criminal Procedures II
Recommended Electives Credit Hours: 12
*CJ 1213 Police Fundamentals
*CJ 1253 Police Methods and Equipment
*CJ 2023 Traffic Investigation
CJ 2063 Law Enforcement Supervision
CJ 2183 Police Equipment and Weapons
CJ 2213 Interrogation Techniques
FES 1363 Fire Investigation and Arson
MGT 2363 Principles of Management
POS 2103 Introduction to State and Local Government

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of the catalog).
LAW ENFORCEMENT
Collegiate Officer Option
840A

\section*{Program Description:}

This program is designed principally for persons interested in obtaining state certification as a peace officer and as a program for current peace officers to improve their knowledge and skills in specialized fields.
Law enforcement agencies have various strenuous entrance, background, and physical requirements. Students should not assume this program will lead to employment in law enforcement.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Liberal Arts/Community Services Division:
Northeast: (918) 595-7494
Counseling Center: Northeast: (918) 595-7451
Certificate Requirements Credit Hours: 25

\section*{General Education Requirements 24 hours}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology
PSY 1313 Human Relations

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Sociology 6 hours}

SOC 1113 Introduction to Sociology
SOC 2043 Juvenile Delinquency
Speech 3 hours
SPE 1113 Speech Communication I SPE 2103 Interpersonal Communication
Specialized Course Requirements Credit Hours: 26
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications
Criminal Justice 6 hours
*CJ 2023 Traffic Investigation
* CJ 2113 Criminalistics

\section*{Law Enforcement 17 hours}
*LE 1013 Introduction to Law Enforcement
LE 1023 Law and Law Enforcement
*LE 1033 Patrol Function
*+LE 2013 Police and Community Relations
*+LE 2021 Custody and Control
*+LE 2033 Law Enforcement Drivers Training
*+LE 2041 Police Basic Firearms

\section*{Recommended Electives Credit Hours: 12}
*CJ 1213 Police Fundamentals
*CJ 1253 Police Methods and Equipment
CJ 2063 Law Enforcement Supervision
CJ 2183 Police Equipment and Weapons
CJ 2213 Interrogation Techniques
MGT 2363 Principles of Management
POS 2103 Introduction to State and Local Government

\section*{Total Credit Hours: 62}
*Course has prerequisite (See course description section of the catalog). + These courses require compliance with Oklahoma Statutes and qualifications for certification as a peace officer. Students desiring to enter this program should consult counseling for specific program requirements. Some courses may require medical waivers and/or insurance against personal injury. Successful completion of the Associate in Applied Science - Law Enforcement Degree or the Certificate of Achievement in Law Enforcement may qualify the graduate to test for basic peace officer certification under the rules of the Council On Law Enforcement Education and Training. Students desiring to enter the Collegiate Officers Program must declare their intent in advance of commencing class and should consult advisement before enrolling in any LE course. Credits applying to the Collegiate Officer Program cannot be obtained from testing or advanced standing. For more information contact Director of TCC/COP at (918) 595-7463, or the Liberal Arts/Community Services Division at Northeast Campus at (918) 595-7494.

\section*{COMMUNITY SERVICE: LAW, PUBLIC ADMINISTRATION \& SAFETY AND CORRECTIONS}

\section*{PARALEGAL}

\section*{107}

\section*{Program Description:}

Graduates may continue their education and training at a four-year university. Students should consult the catalog of the university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs. Upon satisfactory completion of the course requirements, including a grade of "C" or better in all Paralegal courses, graduates are eligible to apply for the examination given by the National Association of Legal Assistants, Inc. to become Certified Legal Assistants (CLA).Tulsa Community College is a member of the American Association for Paralegal Education.

\section*{Degree Awarded: Associate in Arts}

\section*{For More Information Contact:}

Business and Information Technology Division:
Metro Campus: (918) 595-7439
Counseling Center: Metro Campus (918) 595-7151
Legal Assistant Program Coordinator: (918) 595-7317

\section*{ADMISSION TO THE PROGRAM}
1. Complete all admission requirements to Tulsa Community College.
2. Complete all admission requirements to the Paralegal Program.
a. Complete Paralegal Application. (Available in the Business and Technology Division Office, Metro Campus, MC 416)
b. Furnish copies of all transcripts to the program director with application.
Tulsa Community College will refuse program completion credit for legal specialty courses taken more than six years prior to completion of the program, unless the student's proficiency in the area can be demonstrated.

\section*{General Education Requirements Credit Hours: 34}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

See the General Education Requirements page for complete list (no performance classes).

\section*{Mathematics 3 hours}

MTH 1513 College Algebra
or higher level MTH course

\section*{Science 7 hours}

See the General Education Requirements page for complete list (one course must be laboratory).

\section*{Social Science 6 hours}

POS 1113 American Federal Government
and select one of the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Required Electives 6 hours}

Select at least one 3-hour course from the general education list in Foreign Language, Psychology, or Social Science and select 3 credit hours from Humanities, Fine Arts (Art,Music, Theatre - but not performance classes), Foreign Language,Social Science,Economics, Geography,Health Education,Nutrition,Business Law,Math,or English 2343 is recommended for students with no office experience.

\section*{Specialized Course Requirements Credit Hours 27}

\section*{Accounting 3 hours}

ACC 2213 Financial Accounting

\section*{Paralegal 21 hours}

Students are required to earn a "C" or better in all Paralegal Courses
*PLG 1213 Introduction to the Legal System
*PLG 1313 Civil Procedure I
*PLG 2303 Civil Procedure II
*PLG 2333 Introduction to Legal Research and Writing
*PLG 2343 Advanced Legal Research and Writing
*PLG 2353 Contracts
*PLG 2363 Real Property Law
Speech 3 hours
SPE 1113 Speech Communication I

\section*{Total Credit Hours: 61}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{PARALEGAL}

712

\section*{Program Description:}

This program is designed to prepare graduates to work as professional assistants under the supervision of attorneys, with training in civil procedure, legal research and writing, drafting of documents, interviewing techniques, litigation support, computer use in the law, and law office systems management. Students acquire additional knowledge of various substantive and procedural areas of law including, among others, contract law, real property transactions, business organizations, family law, bankruptcy or probate practice. Upon satisfactory completion of the course requirements, including a grade of "C" or better in all Paralegal courses, graduates are eligible to apply for the examination given by the National Association of Legal Assistants, Inc. to be Certified Legal Assistants (CLA).Tulsa Community College is a member of the American Association for Paralegal Education.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Paralegal Program Coordinator: (918) 595-7317
Business and Information Technology Division:
Metro Campus (918) 595-7039
Counseling Center: Metro Campus (918) 595-7151

\section*{ADMISSION TO THE PROGRAM}
1. Complete all admission requirements to Tulsa Community College.
2. Complete all admission requirements to the Paralegal Program.
a. Complete Paralegal Application. (Available in the Business and Information Technology Division
Office, Metro Campus, MC 416
b. Furnish copies of all transcripts to the program direction with application.
Tulsa Community College will refuse program completion credit for legal specialty courses taken more than six years prior to completion of the program, unless student's proficiency in the area can be demonstrated.

\section*{COMMUNITY SERVICE: LAW, PUBLIC ADMINISTRATION \& SAFETY AND CORRECTIONS}

\section*{General Education Requirements Credit hours: 18}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Additional General Education 6 hours}

Within the requirement for 18 semester hours or the equivalent of General Education coursework, students must take courses in at least three different disciplines such as social sciences, natural sciences, mathematics, humanities, foreign language and English. Acceptable courses include survey and theory courses, but exclude performance, activity, and special topics 2991-2996 courses. See the Paralegal Program Coordinator for questions about specific course acceptability.

\section*{Specialized Course requirements Credit Hours: 27-30}

\section*{Accounting 3 hours}

ACC 2213 Financial Accounting
Computer information Systems 0-3 hours
CSC 1203 Computer Concepts and Applications

\section*{Paralegal 21 hours}

Students are required to earn a "C" or better in all Paralegal Courses.
*PLG 1213 Introduction to the Legal System
*PLG 1313 Civil Procedure I
*PLG 2303 Civil Procedure II
*PLG 2333 Introduction to Legal Research and Writing
*PLG 2343 Advanced Legal Research and Writing
*PLG 2353 Contracts
*PLG 2363 Real Property Law
Speech 3 hours
SPE 1113 Speech Communication I

\section*{Controlled Electives Credit Hours: 15}

\section*{**Paralegal 9 hours}
*PLG 2373 Computers in the Law
*PLG 2403 Principles of Family Law
*PLG 2413 Law Office Systems and Procedures
*PLG 2423 Corporations, Partnerships and LLC's
*PLG 2433 Bankruptcy
*PLG 2443 Probate, Administration of Estates and Trusts
*PLG 2453 Administrative Law
*PLG 2463 Labor and Employment
*PLG 2473 Torts and Insurance
*PLG 2483 Native American Law
*PLG 2493 Criminal Law for Paralegals
*PLG 2502 Medical Record Analysis for Paralegals
*PLG 2601 Worker's Compensation for Paralegals
*PLG 2611 Social Security Disability
*PLG 2621 Elder Law
*PLG 2802 Internship
*PLG 2813 Internship
Select an additional 6 hours from other computer, accounting, business, management, administrative careers, or paralegal courses, Examples are:
MGT 2363 Principles of Management
***ENG 2343 Business Communications
*PLG 2802 Internship
*PLG 2813 Internship

\section*{Total Credit Hours: 60-63}
\({ }^{*}\) Course has prerequisite (See course description section of catalog).
**Graduation credit for 1 and 2 credit hour courses in this series is limited to a maximum of 3 credit hours.
***ENG 2343 is recommended for students with no law office experience.
*PLG 2802 or *PLG 2813 is recommended for students with no law office experience or no experience as paralegals.

POLITICAL SCIENCE, A.A.
Associate in Arts (transfer degree).
See:Arts \& Communications area of study:Liberal Arts \& Social Sciences


\section*{Health Science Area of Study}

AA: Associate in Arts, university transfer degree • AS: Associate in Science, university transfer degree AAS: Associate in Applied Science, workforce degree - CER: Certificate of Achievement
University transfer degree programs include TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.
Workforce development degree and certificate programs are specifically designed to prepare students for direct entry into the workforce. They may advance students within their current career or open doors to new career opportunities. Traditionally these programs were not designed for transfer;however, varying amounts of coursework - and in some cases entire degrees - may now apply towards a degree at a four-year institution; the number of applicable transfer hours will vary from one university to another. Check with an advisor for further information. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.

Allied Health
Dental Assisting, AAS Cooperative agreement TTC
Dental Hygiene, AAS
(Emergency Medical Technology AAS see: Community Services area of study:Law, Public Administration, Safety \& Corrections)
Medical Laboratory Technician, AAS/CER
Medical Laboratory Technician- Phlebotomy, CER
Occupational Therapy Assistant, AAS
Pharmacy Technology, CER
Physical Therapist Assistant, AAS
Radiography, AAS
Respiratory Care, AAS

\section*{MEDICAL OFFICE SUPPORT}
(Business, Healthcare Business Operations options, AAS/CER see Business)
Health Information Technology:
Medical Records, AAS
Coding \& Reimbursement Specialist, CER
Medical Assistant:
Clinical Administrative, CER
Transcription, CER

\section*{NURSING}

Geriatric Technician, CER
Health Sciences, Pre-Nursing, AS
Nursing, AAS
Patient Care Technician, CER
Surgical Technology, AAS
Pre-Professional
Pre-Pharmacy OU option
Pre-Professional Science Related Fields of Concentration:
Dentistry, AS
Medicine, AS
Optometry, AS
Pre-Veterinary Science OSU option, AS
Other Health Sciences
Veterinary Technology, AAS
(Biotechnology, AS/AAS/CER see Science, Technology, Engineering \& Mathematics area of study: Science)

\section*{HEALTH SCIENCE: ALLIED HEALTH}

\section*{DENTAL ASSISTING}

588

\section*{Program Description:}

This program was developed by a joint effort of Tulsa Community College and Tulsa Technology Center. The Dental Assisting program option provides an opportunity for graduates of an accredited Dental Assisting program to develop additional skills in mathematics, English, humanities, social and biological sciences and to earn an Associate in Applied Science Degree. Dental Assistants are integral members of dental offices and clinics in a chair side setting. They assist dentists by passing instruments, mixing materials, taking impressions of teeth, fabricating temporary crowns, making custom trays and other operative procedures. Students should consult with the Associate Dean of the Allied Health Services Division for information and enrollment. Course Location: Dental Assisting Courses will be taken at Tulsa Technology Center, Lemley Campus. General Education courses will be offered by Tulsa Community College.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Allied Health Services Division at Metro Campus (918) 595-7002 TTC Career Resources Center Department: (918) 828-5151

\section*{Procedures For Application To Tulsa Technology Center:}
1. Obtain an admission packet from Tulsa Technology Center. Packets are located at all Tulsa Technology Center campuses in the Adult Education office.
2. An admission test is required for full-time programs at Tulsa Technology Center (see admission packet for details).
3. Submit completed program application form and required documents by August 1st for the Fall semester to the Career Services Center, Tulsa Technology Center, Lemley Campus, 3420 S. Memorial Dr.Tulsa, OK 74145. Please call (918) 828-5200 for application deadlines.
4. All prospective Dental Assisting program students must complete an application for enrollment to the College and submit their high school transcripts, GED scores, ACT/SAT scores, college transcripts and any previous training and/or education to the Metro Campus Registrar at 909 S. Boston, Tulsa, OK 74119 . Incomplete submissions will not be considered for admission into the Dental Assisting Associate of Applied Science Degree program.
5. Acceptance to Tulsa Community College does not guarantee admission to the Dental Assisting Associate of Applied Science Degree program. Graduates of Tulsa Technology Centers Dental Assisting program may seek national certification by accomplishing each of the following: high school graduation or equivalent; two years of full-time work experience as dental assistant, along with recommendation from the dentist employer; current cardiopulmonary resuscitation (CPR) certification with the American Heart Association or the American Red Cross; and passing the Dental Assisting national board certification examination (CDA). National Certification is administered by the Dental Assisting National Board, Inc., 216 E. Ontario St., Chicago, IL 6061, (312) 642-3368.

General Education Requirements Credit Hours: 28

\section*{Biology 7 hours}
\({ }^{\circ}\) BIO 1314 Human Anatomy and Physiology oBIO 1323 Basic Microbiology

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select 3 credit hours from the following: ENG 1083 Grammar and Mechanics of Writing *ENG 1213 Freshman Composition II

\section*{Humanities 3 hours}

PHI 2153 Medical Ethics

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 20}

\section*{Dental Assisting 20 hours}
- DA 1124 Dental Assisting Introduction
o*DA 1133 Dental Anatomy and Physiology
- DA 1231 Office Procedures Dental
o*DA 1242 Operative Chairside Procedures I
o*DA 2344 Operative Chairside Procedures II
o*DA 2432 Radiology and Laboratory Procedures
o*DA 2444 Clinical Dental Assisting

\section*{Recommended Electives Credit Hours: 14}

ACC 1003 Introduction to Accounting
AH 1323 Medical Terminology
BIO 1383 Nutrition
*CHE 1114 Principles of Chemistry
*CHE 1124 Introduction to Organic Chemistry
CSC 1011 Introduction to Microcomputers
MKT 2343 Customer Service
PSY 1313 Human Relations
SOC 1113 Introduction to Sociology
Total Credit Hours: 62
*Course has prerequisite (See course description section of catalog). \({ }^{\circ}\) Course must be completed with a " C " or above.

\section*{DENTAL HYGIENE}

\section*{Program Description:}

Dental Hygiene is an allied health profession which is concerned with the prevention and control of oral disease. This program prepares the student to be a dental hygienist, whose primary duties are to care for patients with an individualized oral health regimen which includes gathering of information

\section*{HEALTH SCIENCE: ALLIED HEALTH}
about health status, and providing appropriate periodic oral prophylaxis, dental x-rays, oral health instruction and other prevention services. The dental hygienist is also prepared to apply preventive measures in community health programs. The Dental Hygiene Program is accredited by The Commission on Dental Accreditation, Chicago, Illinois. The graduate will receive an Associate Degree in Applied Science and be eligible to take national and state licensing and certifying examinations. After passing these examinations, the graduate may practice dental hygiene under the supervision of a licensed dentist. Individuals who have:
1. been addicted to narcotics or alcohol;
2. received treatment for the habitual use of narcotics or alcohol;
3. been convicted for a narcotics-related offense;
4. been reprimanded, disciplined, disqualified or suspended from the practice of dentistry or another health-related field;
5. been a patient in a sanitarium or institution for the treatment of mental illness;
6. been arrested/convicted of any felony offense, including a deferred sentence; may not be eligible for dental hygiene licensure in the state of Oklahoma. If any of these circumstances exist, it is advised that the prospective student discuss this with the Oklahoma Board of Dentistry, (405) 524-3592, prior to makingapplication to the program.

\section*{Procedures For Application:}
1. Applications are available through the Allied Health Services Division (918) 595-7002.
2. Submit ALL materials by the March 1st deadline to the Allied Health Services Division, room MP458, 909 South Boston, Tulsa, OK 74119.
3. All prospective Dental Hygiene students must complete an application for enrollment to the College, submit their high school transcripts, ACT scores and previous college transcripts to the Metro Campus Registrar at 909 South Boston,Tulsa, OK 74119. Incomplete submissions will not be considered for admission into the Dental Hygiene program.
4. Acceptance to Tulsa Community College does not guarantee admission to the Dental Hygiene program.
5. Prerequisite coursework for the Dental Hygiene program must be completed by the end of the Spring semester in which application is reviewed.

\section*{These prerequisites are:}

BIO 1314 Human Anatomy and Physiology
BIO 1323 Basic Microbiology
CHE 1114 Principles of Chemistry or High School Chemistry
CHE 1124 Introductory Organic and Biochemistry
ENG 1113 Freshman Composition I
ENG 1213 Freshman Composition II
HIS 1483 U.S. History 1492 to Civil War Era or
HIS 1493 U.S. History Civil War Era to Present
MTH 0013 Beginning Algebra or High School Algebra
POS 1113 American Federal Government
6. Eligible applicants to be interviewed will be notified by mail for consideration for admission into the Dental Hygiene program. All interviewed applicants will be notified by mail regarding their selection status.
7. In order to enroll in courses that include a clinical component and are part of the program degree plan, students must receive clearance on a criminal background check, including sex offender registry.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Allied Health Services Division at Metro Campus:
(918) 595-7002

\section*{General Education Requirements Credit Hours: 38-45}

Biology 10 hours
o+BIO 1314 Human Anatomy and Physiology
o+BIO 1323 Basic Microbiology
- BIO 1383 Nutrition

\section*{Chemistry 4-8 hours}
\({ }^{\circ}+{ }^{*}\) CHE 1114 Principles of Chemistry
or
High School Chemistry (with a "C" or better)
\({ }^{\circ}+{ }^{*}\) CHE 1124 Introductory Organic and Biochemistry
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications

\section*{English 6 hours}
+*ENG 1113 Freshman Composition I
+*ENG 1213 Freshman Composition II

\section*{Mathematics 0-3 hours}
- MTH 0013 Beginning Algebra
or
High School Algebra (with a"C" or better)

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Social Science 6 hours}
+POS 1113 American Federal Government and select one course from the following:
+HIS 1483 U.S. History 1492 to Civil War Era
+HIS 1493 U.S. History Civil War Era to Present

\section*{Sociology 3 hours}

SOC 1113 Introduction to Sociology

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 53}

\section*{Dental Hygiene 53 hours}
o*DH 1012 Dental and Oral Anatomy
o*DH 1022 Head and Neck Anatomy
o*DH 1303 Oral Embryology and Histology
o*DH 1333 Pathology
o*DH 1353 Periodontology
o*DH 1363 Dental Hygiene Theory I
o*DH 1373 Dental Hygiene Theory II
o*DH 1382 Clinical Dental Hygiene I
o*DH 1394 Clinical Dental Hygiene II
o*DH 1412 Dental Radiography Foundation
o*DH 1421 Dental Radiography Techniques
o*DH 1512 Dental Pain Management
o*DH 1532 Dental Hygiene Pharmacology
o*DH 2022 Special Needs / Geriatrics

\section*{HEALTH SCIENCE: ALLIED HEALTH}
o*DH 2312 Community Dental Health I
o*DH 2321 Community Dental Health II
o*DH 2343 Dental Materials Techniques and Supportive

\section*{Services}
o*DH 2363 Dental Hygiene Theory III
o*DH 2372 Dental Hygiene Theory IV
o*DH 2384 Clinical Dental Hygiene III
o*DH 2394 Clinical Dental Hygiene IV

\section*{Total Credit Hours: 91-98}
*Course has prerequisite (See course description section of catalog). +Prerequisite to Dental Hygiene Curriculum schedule.(19-27 hours). \({ }^{\circ}\) Course must be completed with a " C " or above.

\section*{MEDICAL LABORATORY TECHNOLOGY}

\section*{Program Description:}

This program prepares the student to perform tests and related duties in a medical laboratory with the supervision of a medical technologist. The Medical Laboratory Technician Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences. Upon successful completion of the program, students may sit for the National Registry sponsored by the American Society of Clinical Pathology.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Allied Health Services Division at Metro Campus:
(918) 595-7002 for program application form and any specific program information.

\section*{Procedures For Application:}
1. Submit completed program application form and required materials by July 15th to the Allied Health Services Division located in the Alfred M. Philips Building, room MP 458, 909 South Boston, Tulsa, OK 74119.
2. All prospective Medical Laboratory technology program students must complete an application for enrollment to the College, submit their high school transcript, ACT scores and previous college transcripts to the Metro Campus Registrar at 909 South Boston, Tulsa, OK 74119. Incomplete submissions will not be considered for admission into the Medical Laboratory Technology program.
3. Acceptance to Tulsa Community College does not guarantee admission into the Medical Laboratory Technology program. 4. Eligible applicants to be interviewed will be notified by mail for consideration for admission into the Medical Laboratory Technology program. All interviewed applicants will be notified by mail regarding their selection status.
5. In order to enroll in courses that include a clinical component and are part of the program degree plan, students must receive clearance on a criminal background check, including sex offender registry.

\section*{General Education Requirements Credit Hours: 28}

\section*{Biology 8 hours}
obIO 1314 Human Anatomy and Physiology
o*BIO 2164 Microbiology

\section*{Chemistry 5 hours}
\({ }^{\circ}\) *CHE 1315 General Chemistry I

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Psychology or Sociology 3 hours}

PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours:41}

\author{
Medical Laboratory Technology 41 hours \\ +MLT 1203 Phlebotomy \\ +MLT 1212 Introduction to Medical Laboratory Technology \\ +0*MLT 1222 Phlebotomy Clinical \\ o*MLT 2305 Basic Hematology \\ o*MLT 2344 Clinical Chemistry I \\ o*MLT 2365 Clinical Chemistry II \\ o*MLT 2395 Clinical Microbiology \\ o*MLT 2426 Urinalysis, Immunology and Blood Banking \\ o*MLT 2434 Clinical Practicum I \\ o*MLT 2465 Clinical Practicum II
}

\section*{Total Credit Hours: 69}
* Course has prerequisite (See course description section of catalog).
- Course must be completed with a "C" or above.
+Course must be taken concurrently.

\section*{MEDICAL LABORATORY TECHNOLOGY \\ Phlebotomy}

\section*{Program Description:}

This option is for phlebotomy trainees and professionals new to the medical laboratory technology field who need to rapidly acquire phlebotomy (the drawing of blood) skills, as well as acquire a comprehensive overview of the key areas of the clinical laboratory to include specimen processing. The Phlebotomy Program is approved through the National Accrediting Agency for Clinical Laboratory Sciences. Graduates with a phlebotomy certificate may apply for the National Phlebotomy Registry examination through the American Society of Clinical Pathology.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Allied Health Services Division at Metro Campus: (918) 595-7002 for program application form and any specific program information.

\section*{Procedures For Application:}
1. Submit completed program application form and required materials by July 15th and November 15th to the Allied Health Services Division located in the Alfred M. Philips Building, room MP 458, 909 South Boston,Tulsa, OK 74119.

\section*{HEALTH SCIENCE: ALLIED HEALTH}
2. All prospective Medical Laboratory Technology program, Phlebotomy Option, students must complete an application for enrollment to the College, submit their high school transcript, ACT scores and previous college transcripts to the Metro Campus Registrar at 909 South Boston,Tulsa, OK 74119. Incomplete submissions will not be considered for admission into the Medical Laboratory Technology program, Phlebotomy Option.
3. Acceptance to Tulsa Community College does not guarantee admission into the Medical Laboratory Technology program, Phlebotomy Option.
4. Eligible applicants to be interviewed will be notified by mail for consideration for admission into the Medical Laboratory Technology program, Phlebotomy Option. All interviewed applicants will be notified by mail regarding their selection status.
5. In order to enroll in courses that include a clinical component and are part of the program degree plan, students must receive clearance on a criminal background check, including sex offender registry.

\section*{Certificate Requirements Credit Hours: 7}

\section*{Medical Laboratory Technology 7 hours}
o+MLT 1203 Phlebotomy
**+MLT 1212 Introduction to Medical Laboratory Technology
o*+MLT 1222 Phlebotomy Clinical

\section*{Total Credit Hours: 7}
*Course has prerequisite (See course description section of catalog).
\({ }^{\circ}\) Course must be completed with a "C" or above.
** Course required for Medical Laboratory Technology majors.
+ Course must be taken concurrently.

\section*{OCCUPATIONAL THERAPY ASSISTANT}

\section*{Program Description:}

This program is designed to prepare a student to perform occupational therapy procedures and related tasks under the direction and supervision of a Registered Occupational Therapist. The Occupational Therapy Assistant performs various treatment procedures delegated by the Registered Occupational Therapist to patients with physical, psychological, or cognitive disabilities. The Assistant also will work independently in programs to prevent disability and maintain health, such as Activity Director.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Allied Health Services Division at Metro Campus: (918) 595-7002 for program application form and any specific program information.
The Occupational Therapy Assistant Program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P O. Box 31220, Bethesda, MD 20824-1220. AOTAs phone number is (301) 652-2682 (Website: www.aota.org).

Graduates of the program will be able to sit for the national certification examination for the occupational therapy assistant administered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice; however, state licenses are usually based on the results of the NBCOT Certification Examination.

\section*{Admission To The Program:}

The program admits one class each year in the summer semester. Prospective students are required to complete the application process by January 15 of each year.

\section*{Procedures for Application:}
1. Submit completed program application form and required materials by January 15 to the Allied Health Services Division located in the Alfred M. Philips Building, room MP458, 909 South Boston Avenue,Tulsa, OK 74119.
2. All prospective Occupational Therapy Assistant program students must complete an application for enrollment to the College, submit their high school transcripts, ACT scores and previous college transcripts to the Metro Campus Registrars Office at 909 South Boston Avenue,Tulsa, OK 74119. Incomplete submissions will not be considered for admission into the Occupational Therapy Assistant program. 3. Acceptance to Tulsa Community College does not guarantee admission to the Occupational Therapy Assistant program. 4. Interviews will be granted to applicants who meet the programs minimum requirements. All interviewed applicants will be notified by mail regarding their selection status. 5. In order to enroll in courses that include a clinical component and are part of the program degree plan, students must receive clearance on a criminal background check, including sex offender registry.

\section*{General Education Requirements Credit Hours: 22}

\section*{Biology 4 hours}
©BIO 1314 Human Anatomy and Physiology

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Psychology 6 hours}

PSY 1113 Introduction to Psychology and select one course from the following:
*PSY 2023 Developmental Psychology PSY 2193 Personality Theories

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{HEALTH SCIENCE: ALLIED HEALTH}

\section*{Specialized Course Requirements Credit Hours: 46}

\section*{Occupational Therapy Assistant 46 hours}
©OTA 1203 Introduction to Occupational Therapy
o*OTA 1293 Introduction to Occupational Therapy II
o*OTA 1303 Clinical Conditions, Terminology, and Skills
o*OTA 1352 Neuro Anatomy and Physiology for OTAs
o*OTA 1363 Applied Anatomy for OTAs
o*OTA 1403 Therapeutic Media
o*OTA 1483 Physical Disabilities
o*OTA 1443 Psychosocial Theory and Practice
o*OTA 1502 Fieldwork I
o*OTA 2203 Therapeutic Adaptations
o*OTA 2233 Developmental Disabilities Theory and Practice
o*OTA 2263 Current Trends in Occupational Therapy
o*OTA 2356 Fieldwork II A
o*OTA 2376 Fieldwork II B

\section*{Total Credit Hours: 68}
*Course has prerequisite (See course description section of catalog).
**It is recommended that students intending to pursue a Bachelor's degree in Occupational Therapy counsel with an OTA faculty member to select appropriate electives.
- Course must be completed with a "C" or above.

NOTE:When you apply to write the certification examination with the National Board for Certification in Occupational Therapy (NBCOT), you will be asked to answer questions related to the topic of felonies. For further information on these limitations, you may contact the NBCOT at: National Board for Certification in Occupational Therapy 4720
Montgomery Lane P.O. Box 31220 Bethesda, MD 20824-1220

\section*{PHARMACY TECHNOLOGY \\ Pharmacy Technician Certificate}

\section*{Program Description:}

The Pharmacy Technician Program at Tulsa Community College prepares individuals to work under the supervision of registered pharmacists in providing a high level of modern pharmaceutical care in hospitals, clinics, extended care facilities, nursing homes and other organized health care settings. Their duties may include prescription order processing, inventory activities, quality assurance and control, over-the-counter sales, customer service and relations, product prepackaging, bulk compounding, parenteral IV admixture operations, third party processing and computer operations. A faster than average growth in the profession is expected. The demand for qualified technicians is increasing due to cost containment, advanced technology and changes in legislation.
Program Information:
The Pharmacy Technician Program admits a new class each full semester beginning in August and January. Admission to the class is limited to 25 students. The Pharmacy Technician classes are offered in the evenings on the Metro Campus and will take 16 weeks to complete. The graduates of this one semester program will receive a Certificate of Achievement and will be eligible to take the National Pharmacy Technician Certification Examination through the Pharmacy Technician Certification Board (PTCB). Individuals who have been convicted of a felony or a crime involving moral turpitude, or who have a substance abuse problem, may not be eligible for licensure in the State of Oklahoma or as a candidate for national certification. If any
of these circumstances exist, you may wish to contact the Oklahoma State Board of Medical Licensure and Supervision, P.O. Box 18256, Oklahoma City, OK 73154 and the Pharmacy Technician Certification Board, 2215 Constitution Avenue, NW, Washington, D.C. 20037-2985.

\section*{ACCREDITATION}

The Pharmacy Technology Program at Tulsa Community College is accredited by the Oklahoma State Board of Regents for Higher Education.

\section*{Degree Awarded:Certificate of Achievement}

\section*{For More Information Contact:}

Allied Health Services Division: Metro: (918) 595-7002

\section*{Application Instructions:}
1. Complete the Tulsa Community College Application for Admission and submit it to the Registrar's Office if you have not been enrolled at TCC within the past year.
2. Send official high school transcript or GED scores to the Registrar's Office. High school seniors should send a seven (7th) semester transcript. Upon completion of high school, another official transcript must be sent with final grades and graduation date.
3. Send official college transcript(s) to the Registrar's Office from each college attended.
4. Send official ACT/SAT scores to the Registrar's Office. (Each candidate must have either an ACT or SAT score to be considered for the program, regardless of age or educational background.)
5. First-time college students must meet with a counselor in the Counseling and Testing Center regarding new student orientation, CPT (College Placement Test) and possible high school curricular deficiencies.
6. College students new at TCC must meet with a counselor regarding the CPT (College Placement Test). Each applicant must show a proficiency in English, Reading and Science. 7. Send the completed Pharmacy Technology Program application for admission to the Allied Health Services Division by June 15 for the Fall semester and by November 15 for the Spring semester.
8. In order to enroll in courses that include a clinical component, which are a part of the program plan, all Allied Health Services students are required to complete and receive clearance on a criminal background check, including sex offender registry.

\section*{Selection Criteria:}

A selection committee reviews all applications. Qualified applicants will be granted an interview with the Pharmacy Technology Program faculty. Qualified applicants are then ranked from the highest to the lowest score according to an established point system. The top 20-25 applicants are selected for the next semester class and are notified of their selection within two weeks of their interview. The selection criteria is based upon the following:
- Cumulative GPA of 2.0
- ACT/SAT Composite Score minimum of 14
- High School GPA of 2.5 (if less than 12 college credit hours)
- Submission of high school transcript or GED
- Submission of college transcript(s)
- Interview

\section*{HEALTH SCIENCE: ALLIED HEALTH}

\section*{Certificate Requirements Credit Hours: 16}

\section*{Pharmacy Technology 16 hours}

O*PHT 1318 Introduction to Pharmacy Technician I
O*PHT 1414 Pharmacy Technician Practicum I
O *PHT 1524 Preceptorship I

\section*{Total Credit Hours: 16}
*Course has prerequisite (see course description section of catalog) O Course must be completed with a "C" of above.

\section*{PHYSICAL THERAPIST ASSISTANT}

\section*{Program Description:}

Tulsa Community College offers a 5-semester Physical Therapist Assistant Program accredited by The Commission on Accreditation in Physical Therapy Education Department of

\section*{Accreditation}

American Physical Therapy Association
1111 North Fairfax Street
Alexandria, VA 22314
Telephone: 703-706-3245
Website: www.apta.org/CAPTE
The graduate of this program is eligible to apply for the National Physical Therapy Examination for the physical therapist assistant. Individuals who have been convicted of a felony or of a crime involving moral turpitude, or who have had a drug problem, may not be permitted to take the licensure examination. If any of these circumstances exist, you may wish to contact the Oklahoma State Board of Medical Licensure and Supervision, 405-848-6841 for clarification. The physical therapist assistant is a technically educated health care provider who assists the physical therapist in the provision of physical therapy. The physical therapist assistant may perform procedures and related tasks that have been selected and delegated by the supervising physical therapist. To further investigate the role of the physical therapist assistant, contact the American Physical Therapy Association at www.apta. org. Successful completion of this program requires that the student perform at a "C" level or better in all of their physical therapist assistant courses.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Allied Health Services Division at Metro Campus:
(918) 595-7002 for program application form and any specific program information.

\section*{Admission To The Program:}

Program admits one class each year during the spring semester.
Prospective students MUST request an application to the program by December I5th of each year.

\section*{Procedure For Application:}
1. Submit completed program application form and required materials by January 20 to the Allied Health Services Division located in the Alfred M. Philips Building, room MP458, 909 South Boston, Tulsa, OK 74119.
2. All prospective Physical Therapist Assistant Program students must complete an application for enrollment to the College, submit their high school transcripts, ACT scores and previous college transcripts to the Metro Campus Registrar at 909 South Boston, Tulsa, OK
74119. Incomplete submissions will not be considered for admission into the Physical Therapist Assistant program. 3. Acceptance to Tulsa Community College does not guarantee admission to the Physical Therapist Assistant Program.
4. Eligible applicants to be interviewed will be notified by mail for consideration for admission into the Physical Therapist Assistant Program. All interviewed applicants will be notified by mail regarding their selection status.
5. In order to enroll in courses that include a clinical component and are part of the program degree plan, students must receive clearance on a criminal background check, including sex offender registry.

\section*{General Education Requirements Credit Hours: 19}

\section*{Biology 4 hours}
o**BIO 1314 Human Anatomy and Physiology

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 - Technical / Professional Writing

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 50}

\section*{Allied Health 3 hours}
\({ }^{\circ}\) AH 1323 Medical Terminology

\section*{Physical Therapist Assistant 47 hours}
o*PTA 1203 Anatomy and Physiology for PTAs
o*PTA 1231 Clinical Practice I
o*PTA 1242 Human Growth and Development
o*PTA 1303 Introduction to Physical Therapy
o*PTA 1363 Kinesiology for PTA's
o*PTA 1383 Pathophysiology for PTAs
o*PTA 1392 Clinical Procedures I
o*PTA 2113 Rehabilitation
o*PTA 2332 Clinical Practice II
o*PTA 2343 Clinical Procedures II
o*PTA 2373 Therapeutic Exercise I
o*PTA 2383 Therapeutic Exercise II
o*PTA 2432 Clinical Practice III
o*PTA 2442 Psychosocial Aspects of Physical Therapy
o*PTA 2486 Clinical Practice IV
o*PTA 2543 Neuroscience
o*PTA 2522 Special Studies in Clinical Practice
o*PTA 2551 Pharmacology for PTAs

\section*{Total Credit Hours: 69}
*Course has prerequisite (See course description section of catalog).
**Student may substitute BIO 2154 and BIO 2134 for BIO 1314.
\({ }^{\circ}\) Course must be completed with a " C " or above.

\title{
HEALTH SCIENCE: ALLIED HEALTH
}

\section*{RADIOGRAPHY}

\section*{(X-ray)}

869

\section*{Introduction:}

The Radiography (X-ray) Program at Tulsa Community College is designed to prepare students with the knowledge and skills to function as medical radiographers. The program is nationally accredited by the Joint Review Committee on Education in Radiologic Technology. The graduates of this program receive an Associate Degree in Applied Science and are eligible to apply for the American Registry of Radiologic Technologists Examination.

\section*{Position Description:}

Medical Radiographers/Radiologic Technologists are the medical personnel who perform diagnostic imaging examinations. Radiographers use x-rays to produce black and white images of anatomy. These images are captured on film, computer or videotape. Radiographers are educated in anatomy, patient positioning, examination techniques, equipment protocols, radiation safety, radiation protection and basic patient care. Radiographers often specialize in areas of CT, MRI, Mammography, Cardiovascular Technology, Quality Control, Management and Education. Radiographers work closely with radiologists, physicians who interpret medical images to either diagnose or rule out disease or injury.

\section*{Program Information:}

The Radiography (X-ray) Program admits a new class each year beginning in June (summer term). The number of students admitted to the class is limited to 35 students. The Radiography courses are offered during the day only and will take a total of six (6) semesters to complete. The program consists of 50 credit hours of radiography lecture and clinical courses and 22 credit hours of related general education courses.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Allied Health Service Division located in the Alfred M. Philips Building, Metro Campus, Room MP 458, 909 South Boston,Tulsa, OK 74119, (918) 595-7002 for program application and specific information.

\section*{Application Instructions:}
1. Complete the Tulsa Community College Application for Admission and submit it to the Registrars Office, if you have not been enrolled at TCC within the past year.
2. Send Official High School Transcript or GED scores to the Registrars Office. High school seniors should send seventh (7th) semester transcript. Upon completion of high school, another official transcript must be sent with final grades and graduation date.
3. Send Official College transcript(s) to the Registrars Office from each college attended.
4. Send official ACT/SAT scores to the Registrars Office. (Each applicant must have either ACT/SAT scores to be considered for the program.)
5. First-time college students must meet with counselors regarding new student orientation, CPT (College Placement Test) and possible high school curricular deficiencies. 6. College students new at TCC must meet with counselors regarding CPT (College Placement Test). Each applicant must show proficiency in English, Reading and Science.
7. Send the completed Allied Health Radiography Program Application for admission to the Allied Health Services Division by February 1. (All information required for the Radiography Program must be on file
by February I, including TCC Application, Program Application, Transcripts, and ACT/SAT Scores).
8. Acceptance to TCC does not guarantee admission to the Radiography Program.
9. All prospective applicants are encouraged to enroll in: BIO 1314 Human Anatomy and Physiology, RT 1212 Introduction to Radiography, RT 1201 Introduction to Radiographic Clinical Education.
10. All applicants will be contacted by the program director for an informational visit and will be ranked for acceptance according to their academic background.
11. In order to enroll in courses that include a clinical component and are part of the degree plan, students must receive clearance on a criminal background check, including sex offender registry.

\section*{General Education Requirements Credit Hours: 22 Biology 4 hours \\ o**BIO 1314 Human Anatomy and Physiology \\ English 6 hours}
*ENG 1113 Freshman Composition I and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Mathematics 3 hours}

Select one course from the following:
*MTH 1473 Mathematics for Critical Thinking
*MTH 1513 College Algebra

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology
PSY 1313 Human Relations

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 50 Radiography 50 hours}
o*RT 1212 Introduction to Radiography
o*RT 1224 Radiographic Clinical Education I
o*RT 1313 Radiographic Anatomy and Positioning I
o*RT 1324 Radiographic Clinical Education II
o*RT 1333 Radiographic Anatomy and Positioning II
o*RT 1344 Radiographic Clinical Education III
o*RT 1372 Radiographic Technique
o*RT 1382 Advanced Radiographic Technique
o*RT 2301 Radiographic Seminar
o*RT 2314 Radiographic Clinical Education IV
o*RT 2323 Radiographic Special Procedures
o*RT 2336 Radiographic Clinical Education V
o*RT 2343 Radiographic Biology and Pathology
o*RT 2356 Radiographic Clinical Education VI
o*RT 2383 Radiographic Physics

\section*{Total Credit Hours: 72}
*Course has prerequisite (See course description section of catalog).
**Student may substitute BIO 2154 and BIO 2134.
\({ }^{\circ}\) Course must be completed with a " C " or above.

\section*{HEALTH SCIENCE: ALLIED HEALTH}

\section*{RESPIRATORY CARE}

\section*{Program Description:}

The Respiratory Care Program at Tulsa Community College (TCC) is designed to prepare individuals with the knowledge, skills and behaviors that are required for successful advanced respiratory therapists. If you enjoy working in a fast-paced environment where your technical and scientific responsibilities will be matched by a real need for human relations skills, then the TCC Respiratory Care Program may be for you. Respiratory Care is a health care specialty that offers a set of unique challenges in the areas of prevention, diagnosis, treatment, management and rehabilitation of people with lung disorders. As an advanced respiratory therapist, you will be involved in a wide variety of lifesaving and life-supporting situations, working side by side with physicians, nurses and others on the health care team. You will treat patients ranging from newborns to senior citizens. Your expertise will be in demand and opportunities to expand your knowledge and skills will be great.

\section*{Program Information:}

The Respiratory Care Program at TCC generally accepts 20-25 students each year beginning in the fall semester. The general education courses may be taken prior to being accepted into the program to lighten semester course loads. Human Anatomy and Physiology (BIO 1314) is a prerequisite course that must be taken prior to acceptance into the program. The Respiratory Care Program is a 2-year, 6-semester, full-time day program consisting of specialized courses offered in a specific sequence. Graduates of the program are awarded an Associate Degree in Applied Science and are eligible to apply for the National Board for Respiratory Care (NBRC) Certification and Registry Examinations.

\section*{Accreditation:}

The Respiratory Care Program at Tulsa Community College is nationally accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) upon the recommendation of the Committee on Accreditation for Respiratory Care (CoARC).

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Allied Health Services Division: Metro: (918)-595-7002

\section*{Application Instructions:}
1. Complete the Tulsa Community College Application for Admission and submit it to the Registrars Office if you have not been enrolled at TCC within the past year.
2. Send official high school transcript or GED scores to the Registrars Office. High school seniors should send a seven (7th) semester transcript. Upon completion of high school, another official transcript must be sent with final grades and graduation date.
3. Send official college transcript(s) to the Registrars Office from each college attended.
4. Send official ACT/SAT scores to the Registrars Office.
(Each candidate must have either an ACT or SAT score to be considered for the program, regardless of age or educational background.)
5. First-time college students must meet with a counselor in
the Counseling and Testing Center regarding new student orientation, CPT (College Placement Test) and possible high school curricular deficiencies.
6. College students new at TCC must meet with a counselor regarding the CPT (College Placement Test). Each applicant must show a proficiency in English, Reading and Science. 7. Send the completed Respiratory Care Program application for admission to the Allied Health Services Division by July 1. 8. In order to enroll in courses that include a clinical component and are part of the program degree plan, students must receive clearance on a criminal background check, including sex offender registry.

\section*{Selection Criteria}

A selection committee reviews all applications. Qualified applicants will be granted an interview with the Respiratory Care Program faculty. Qualified applicants are then ranked from the highest to the lowest score according to an established point system. The top 20-25 applicants are selected for the next fall semester class and are notified of their selection by the middle of July. The selection criteria are based upon the following:
- Cumulative GPA
- ACT/SAT Composite Score
- High School GPA (if less than 12 college credit hours)
- Math and/or Science GPA
- Math and Science ACT/SAT Score
- Interview

\section*{General Education Requirements Credit Hours: 19}

\section*{Biology 4 hours}
o+BIO 1314 Human Anatomy and Physiology

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 53
o *RES 1213 Neonatal and Pediatric Respiratory Care
o *RES 1232 Applied Sciences for Respiratory Care
o *RES 1241 Respiratory Care Patient Assessment
o *RES 1251 Physician/Therapist Interaction
o *RES 1313 Respiratory Care Theory and Techniques I
o *RES 1353 Cardiopulmonary Anatomy and Physiology
o *RES 1403 Respiratory Care Theory and Techniques II
o *RES 1413 Clinical I
o *RES 1443 Respiratory Care Pathophysiology
o *RES 1492 Cardiopulmonary Diagnostics I
o *RES 1511 Clinical Procedure Laboratory
o *RES 1522 - Introduction to Mechanical Ventilation
o *RES 2103 Clinical II

\section*{HEALTH SCIENCE: ALLIED HEALTH/MEDICAL OFFICE SUPPORT}
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o *RES 2203 Clinical III
o *RES 2323-Advanced Topics in Mechanical Ventilation
o *RES 2352 Respiratory Care Pharmacology
o *RES 2392 Respiratory Care Case Management
o *RES 2413 Clinical IV
o *RES 2433 Clinical V
o *RES 2452 NBRC Exam Review
o *RES 2562 Cardiopulmonary Diagnostics II
o *RES 2493 Respiratory Critical Care

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\section*{Total Credit Hours: 72}
*Course has prerequisite (See course description section of catalog). +Prerequisite to admission into the Respiratory Care Program. oCourse must be completed with a"C" or above.

\section*{HEALTH INFORMATION TECHNOLOGY}

\section*{Medical Records}

\section*{Program Description:}

This program of study prepares the student for employment in the field of health information management in a variety of health care settings including hospitals, physician's office or clinic, home health agencies, hospice, long term care facilities, rehabilitation facilities, psychiatric care settings, insurance companies, and pharmaceutical companies. Career options for the Health Information Technician include coding and reimbursement specialist; clinical data specialist (statistics, database research, and specialty registries); patient information coordinator (release of information, confidentiality, medicallegal aspects of documentation, health history management and information resources); data quality manager (quality improvement for data integrity, and quality care/service monitoring and audits); document and repository manager (retention and accessibility of health care data, and preparation and conversion to electronic health records); and health information manager (enterprise- or facility-wide line or staff manager for health information management services). This program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) in association with the American Health Information Management Association (AHIMA). After graduation, students are eligible to apply to write the national qualifying examination for certification as a Registered Health Information Technician (RHIT).

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Allied Health Services Division: Metro: (918) 595-7002
for program application form and any specific program information.

\section*{Procedures For Application:}
1. Submit completed program application form and required materials by May 1 to the Allied Health Services Division located in the Alfred M. Philips Building, Room MP458,909 South Boston, Tulsa, OK 74119.
2. All prospective Health Information Technology students must also complete an application for enrollment to the College, submit their high school transcripts or GED scores, ACT or SAT scores and previous college transcripts to the Metro Campus Registrar at 909 South Boston, Tulsa, OK 74119. Incomplete submissions will not be considered for admission into the Health Information Technology program.
3. Acceptance to Tulsa Community College does not guarantee admission to the Health Information Technology program. 4. Eligible applicants to be interviewed will be notified by mail for consideration for admission into the Health Information Technology program. All interviewed applicants will be notified by mail regarding their selection status.
5. In order to enroll in courses that include a clinical component and are a part of the program degree plan, students must receive clearance on a criminal background check, including the sex offender registry.

\section*{General Education Requirements Credit Hours: 16}

Biology 4 hours
**BIO 1314 Human Anatomy and Physiology

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Remaining general education requirements are satisfied by selection of an applicable course from the controlled electives section.

\section*{Specialized Course Requirements Credit Hours: 50}

\section*{Allied Health 3 hours}
*AH 1323 Medical Terminology

\section*{Computer Information Systems 3 hours}
** *CIS 2073 MS Office

\section*{Health Information Technology 44 hours}
** *HIT 1113 Introduction to Health Information Management
** *HIT 1131 Health Care Delivery, Systems and Trends
** *HIT 1213 Statistics and Data Management
** *HIT 1231 Management of Medical Document Processing
** *HIT 1242 Health Information Management in Alternate Care
Settings
** *HIT 1333 CPT and HCPCS Coding
** *HIT 1353 Legal Aspects of Health Records
** *HIT 1363 ICD-9-CM Coding I
** *HIT 1412 Practicum I
** *HIT 2053 Pathophysiology and Pharmacology I
** *HIT 2113 Management Techniques for Health Information Services
** *HIT 2121 Physician Billing and Reimbursement
** *HIT 2133 Reimbursement Systems and Classification
** *HIT 2153 Pathophysiology and Pharmacology II
** *HIT 2213 Quality, Utilization and Risk Assessment
** *HIT 2342 Coding and Reimbursement Internship
** *HIT 2403 ICD-9-CM Coding II
** *HIT 2412 Practicum II

\section*{HEALTH SCIENCE: MEDICAL OFFICE SUPPORT}

\section*{Controlled Electives Credit Hours: 3}

Choose 3 credit hours from the courses listed below.
**BUS 1313 Employee/Employer Relations
**BUS 2363 Supervisory Management
** *CSC 1161 Introduction to the Internet
** *CSC 1253 Internet Research
** *CSC 1263 Network Fundamentals
** *CSC 1463 Disk Operating Systems
** *CSC 1711 Introduction to PowerPoint
** *CSC 2013 Word
** *CSC 2043 Access
** *CSC 2163 Windows Operating Systems
\(\wedge^{* *}\) ENG 1141 Effective Business Writing
\(\wedge * *\) *ENG 2343 Business Communications
** *HR 2323 Employment and Evaluation Techniques
** *PLG 2502 Medical Record Analysis for Paralegals
** *MTR 2303 Medical Transcription I
** *MGT 1003 Team Basics
**MGT 1233 Health Care Management
**MGT 2363 Principles of Management
**MGT 2041 Effective Problem Solving
**MGT 2123 Leadership Development
** MGT 2363 Principles of Management
**MGT 2403 Critical Thinking for Results
\(\wedge^{* *}\) PHI 2153 Medical Ethics
\({ }^{\wedge * *}\) PSY 1313 Human Relations
\(\wedge^{* *}\) SPE 1113 Speech Communication I
Total Credit Hours: 69
*Course has prerequisite (See course description of catalog).
**Course must be completed with a "C" or above.
\(\wedge\) Satisfies General Education Requirement.

HEALTH INFORMATION TECHNOLOGY
Coding and Reimbursement Specialist

\section*{Program Description:}

This option is designed to prepare the student with the necessary skills to be employed as a coding and reimbursement specialist in a variety of health care settings including hospitals, physicians office or clinic, home health agencies, hospice, long-term care facilities, rehabilitation facilities, insurance companies, and pharmaceutical companies. ICD-9-CM and CPT coding guidelines will be examined in detail, as will insurance and reimbursement issues such as claims processing, case mix index, and reimbursement systems, (i.e., diagnosis related groups (DRGs), ambulatory patient classification (APCs), resource based relative value system (RBRVS), resource utilization groups (RUGs), case mix groups (CMG) and home health resource groups (HHRG). Students successfully completing the certificate option may apply to sit for a national examination to become a certified coding associate (CCA). After 2-3 years of recommended coding experience, the graduate may sit for the national certified coding specialist (hospital based, CCS, physician based, CCSP) examination. The Coding and Reimbursement Specialist Certificate program has been approved by the American Health Information Management Association (AHIMA).

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Allied Health Services Division: Metro: (918)
595-7002, for program application form and any
specific program information.

\section*{Procedures For Application:}
1. Submit completed program application form and required materials by May 1 to the Allied Health Services Division located in the Alfred M. Philips Building, Room MP458, 909 South Boston, Tulsa, OK 74119.
2. All prospective Coding and Reimbursement Specialist Certificate students must also complete an application for enrollment to the College, submit their high school transcripts, or GED scores; ACT or SAT scores and previous college transcripts to the Metro Campus Registrar at 909 South Boston, Tulsa, OK 74119. Incomplete submissions will not be considered for admission into the Coding and Reimbursement Specialist Certificate program.
3. Acceptance to Tulsa Community College does not guarantee admission to the Health Information Technology Coding and Reimbursement Specialist Certificate program.
4. Eligible applicants to be interviewed will be notified by mail for consideration for admission into the Health Information Technology - Coding and Reimbursement Specialist Certificate program. All interviewed applicants will be notified by mail regarding their selection status.
5. In order to enroll in courses that include a clinical component and are a part of the program degree plan, students must receive clearance on a criminal background check, including the sex offender registry.

\section*{General Education Requirements Credit Hours: 4}

\section*{Biology 4 hours}
**BIO 1314 Human Anatomy and Physiology

\section*{Specialized Course Requirements Credit Hours: 33}

\section*{Allied Health 3 hours}
**AH 1323 Medical Terminology

\section*{Computer Information Systems 3 hours}
* **CIS 2073 MS Office

\section*{Health Information Technology 27 hours}
***HIT 1113 Introduction to Health Information Management
***HIT 1131 Health Care Delivery, Systems and Trends
***HIT 1242 Health Information Management in Alternate Care
Settings
* **HIT 1333 CPT and HCPCS Coding
* **HIT 1363 ICD-9-CM Coding I
* **HIT 2053 Pathophysiology and Pharmacology I
* **HIT 2133 Reimbursement Systems and Third Party Payer Issues
***HIT 2121 Physician Billing and Reimbursements
* **HIT 2153 Pathophysiology and Pharmacology II
* **HIT 2342 Coding and Reimbursement Internship
* **HIT 2403 ICD-9-CM Coding II

Total Credit Hours: 37
*Course has a prerequisite (See course description section of catalog).
**Course must be completed with a"C" or above.

\section*{HEALTH SCIENCE: MEDICAL OFFICE SUPPORT}

\section*{MEDICAL ASSISTANT PROGRAM \\ Clinical / Administrative Certificate \\ 750B}

\section*{Program Description:}

The Medical Assistant is a Certificate of Achievement that takes 3 semesters to complete and prepares individuals with the skills needed for both the clinical (back office) and administrative (front office) areas in a physician office or clinic setting. Clinical duties include but are not limited to: patient triage, medial record documentation, taking of vital signs, performing EKGs and X-rays, drawing blood, giving injections, basic pharmacology, wound dressing, suture removal, performing lab tests infection control, medical asepsis and sterilization procedures, disposal of biohazard waste, or assisting the physician with patient exams, diagnostic procedures and minor office surgery. Administrative duties include but are not limited to: confidentiality of patient information, computer applications in the medial office, telephone triage, scheduling of office, outpatient, and hospital visits, medical record preparation, filing, coding, compliance, insurance billing, patient billing, collections, accounts payable and receivable, payroll, inventory, medical office management and medical office supervision.

\section*{Accreditation:}

The Medical Assistant Program at Tulsa Community College is nationally accredited by the commission on Accreditation of Allied Health Education Program (CAAHEP) upon the recommendation of the Curriculum Review Board (CRB) of the American Association of Medical Assistants' Endowment (AAMAE).

\section*{Program Information:}

Prerequisites should be taken prior to admission to the program. Prospective students should submit an application for admission to Tulsa Community College and the Medical Assistant program application by May 1 each year.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}
the Allied Health Services Division located in the Alfred M. Phillips Building, Metro Campus, Room MP 458, 909 South Boston Avenue,Tulsa, Oklahoma 74119, (918) 595-7002 for program application and any other specific information.

\section*{Procedures For Application:}
1. Submit completed Tulsa Community College application for admission, high school or GED transcripts, ACT scores, and any previous technical school or college transcripts to Metro Campus Registrar at 909 South Boston Avenue, Tulsa, Oklahoma 74119.
2. All applicants must have a 2.5 GPA or better and / or an ACT of 19 or better or passing scores in all areas of the CPT. Submit completed Medical Assistant program application before May 1 to TCC Allied Health Services Division, Alfred M. Phillips Center, Room MP458, 909 South Boston Avenue,Tulsa, Oklahoma 74119.
4. All applicants must possess keyboarding by
touch skills with ability to type 40 wpm on a typing test. If keyboarding skills are lacking, take BUS 1123 and / or BUS 1243. 5. All applicants must possess proficient computer skills with ability to pass a computer concepts and applications test or take CSC 1203.
6. All applicants must possess current First Aid and CPR certification prior to enrollment in the medical assistant internship course.
7. Applicants selected for the program will receive a letter of acceptance through the mail.
8. All applicants must complete the prerequisite courses AH 1323, BIO 1314. and CSC 2013 with a 'C' or better prior to acceptance into the program.
9. All specialized courses in the MA Program must be passed with a grade of "C" or above.
10. In order to enroll in courses that include a clinical component, students must receive clearance on a criminal background check, including sex offender registry.

\section*{General Education Requirements Credit Hours: 10}

Allied Health 3 hours
AH 1323 Medical Terminology
Biology 4 hours
BIO 1314 Human Anatomy \& Physiology
Computer Science 3 hours
CSC 2013 Microsoft Word
Specialized Courses Requirements Credit Hours: 27
Medical Assistant 27 hours
*MA 1315 Clinical Procedures
*MA 1343 Medical Office Concepts and Applications
*MA 2234 Common Disease and Treatments
*MA 2243 Medical Office Financial Management and Applications
*MA 2333 Medical Assistant Internship
*MA 2346 Clinical Laboratory Procedures
*MA 2393 Medical Coding \& Insurance Billing for the Physician Office

\section*{Total Credit Hours: 37}
*Course has perquisite (See course description section of catalog)

\section*{MEDICAL ASSISTANT PROGRAM}

Medical Transcription Certificate

\section*{Program Description:}

The Medical Transcription program is a Certificate of Achievement that takes 3 semesters to complete and provides the training for an individual to work as a medical transcriptionist in a hospital, medical transcription service, physician's office, clinic, laboratories, medical libraries, government medical facilities, other related health care setting or at home. Responsibilities include but are not limited to: Knowledge of professional ethics, confidentiality, record retention, commonly used medical report formats, basic grammar and mechanics of writing, proofreading and editing skills, computer concepts and word processing, medical terminology, human anatomy and physiology, laboratory testing, diagnostic procedures, common surgical procedures, basic pharmacology, and human disease processes.

\section*{Program Information:}

Prospective students should submit an application for admission to Tulsa Community College and the Medical Transcription program by May 1 each year.

\section*{HEALTH SCIENCE: MEDICAL OFFICE SUPPORT}

\section*{Degree Awarded:Certificate of Achievement}

\section*{For more Information Contact:}

Allied Health Services Division located in the Alfred M. Phillips Building, Metro Campus, Room MP 458, 909 South Boston Avenue,Tulsa, Oklahoma 74119, (918) 595-7002 for program application and any other specific information.

\section*{Procedures For Application:}
1. Submit completed Tulsa Community College application for admission, high school or GED transcripts, ACT scores, and any previous technical school or college transcripts to Metro Campus Registrar at 909 South Boston Avenue, Tulsa, Oklahoma 74119.
2. All applicants must have a 2.5 GPA or better and / or an ACT of 19 or better or passing scores in all areas of the CPT.
3. Submit completed Medical Transcription Program application before May 1st to TCC Allied Health Services Division, Alfred M. Phillips Center, Room MP458, 909 South Boston Avenue, Tulsa, Oklahoma 74119.
4. All applicants, must possess keyboarding by touch skills with ability to type 40 wpm on a typing test. If keyboarding skills are lacking, take BUS 1123 and / or BUS 2173.
5. All applicants must possess proficient computer skills with ability to pass a computer concepts and applications test or take CSC 1203.
6. Applicants selected for the program will receive a letter of acceptance through the mail.
7. All general education and specialized courses in the Medical Transcription Program must be passed with a grade of " C " or above.
8. In order to enroll in courses that include a clinical component, students must receive clearance on a criminal background check, including sex offender registry.

\section*{General Education Requirements Credit Hours: 13}

\section*{Allied Health 3 hours}

AH 1323 Medical Terminology

\author{
Biology 4 hours
}

BIO 1314 Human Anatomy \& Physiology

\section*{Computer Science 3 hours}

CSC 2013 Microsoft Word

\section*{English 3 hours}

ENG 1083 Grammar and Mechanics of Writing

\section*{Specialized Course Requirements Credit Hours: 16}

\section*{Medical Transcription 16 hours}
*MA 2234 Common Disease and Treatments
*MTR 2303 Medical Transcription I
*MTR 2313 Medical Transcription II
*MTR 2373 Medical Transcription III
*MTR 2433 Medical Transcription Externship
Total Credit Hours: 29
*Course has prerequisite (See course description section of catalog.


\section*{HEALTH SCIENCE: NURSING}

\section*{NURSING PROGRAMS}

Setting the standard of nursing excellence for our community, TCC's Nursing Programs have provided Tulsa and northeastern Oklahoma with thousands of excellent nursing professionals. With programs ranging from one to five semesters, students may earn an associate degree in nursing or prepare for nursing support positions through the certificate programs.
- The five-semester Nursing Program (RN) on page 189 is approved by both the Oklahoma Board of Nursing and the National League for Nursing Accrediting Commission. Students are eligible to take the National Council Licensure Exam for Registered Nurses (NCLEX-RN) upon successful completion of the program.
- An Advanced Placement Track, for Licensed Practical Nurses entering the Nursing program allows them to complete the Associate Degree in three semesters.
- In addition to the general education courses required for entry and progression in the TCC Associate Degree Nursing Program information is provided concerning additional general education courses (at TCC) that will provide the foundation for admission into many RN Bachelor of Science in Nursing (BSN) programs upon completion of TCC's Nursing Program.
- The University of Oklahoma and TCC offer a Collaborative Bachelor of Science in Nursing (CBSN) degree. Students must meet all OU College of Nursing (OUCN) Criteria and be admitted to the OU college of Nursing. Students in this program take their Level 3 OUCN nursing courses at TCC then transfer to OUCN-Tulsa for their final year of nursing. Students completing this program receive a Bachelor of Science in Nursing (BSN) from the University of Oklahoma. Program and course information follow the Health Sciences, Pre-Nursing degree plan.
-The Patient Care Technician Certificate Program completed in a 16-week regular semester ( 8 -week summer), provides graduates with eligibility to take the State Certification Exam to obtain the Advanced Unlicensed Assistant Certification from the Oklahoma Board of Nursing.
-The Geriatric Technician Certificate Program consists of two options 1) the Geriatric Technician Certificate that offers six (6) hours of college credit in eight (8) weeks or 2) The Certified Nursing Assistant (CNA) Career Ladder with three distinctive levels, similar to the proposed Oklahoma Certified Nurse Aid Career Ladder model

\section*{HEALTH SCIENCES}

Pre-Nursing
108 A

\section*{Program Description:}

This curriculum includes courses designed to meet lower division prerequisites for a baccalaureate program in Nursing. Students considering this major should consult a counselor and the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

For More Information Contact:
Nursing Division: Metro (918) 595-7188
Science and Mathematics Division: Metro: (918) 595-7334
Northeast: (918) 595-7542, Southeast: (918) 595-7742
West: (918) 595-8193
Counseling Centers: Metro: (918) 595-7151
Northeast: (918) 595-7451, Southeast: (918) 595-7651 West: (918) 595-8176

General Education Requirements Credit Hours: 24 See the General Education Requirements for the complete
list. Science and Mathematics and 3 hours general education elective requirements satisfied in Specialized Course Requirements section.

\section*{English 6 Hours}

ENG 1113 Freshman Composition I
ENG 1213 Freshman Composition II

\section*{Social Science 6 Hours}

POS 1113 American Federal Government
And select one course from the following
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Humanities 6 hours
See the General Education Requirements for complete list.
Psychology 6 hours
PSY 1113 Introduction to Psychology
*PSY 2023 Developmental Psychology

\section*{Specialized Course Requirements Credit hours: 36}

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics

\section*{Science 24 hours}

BIO 1224 Introduction to Biology for Majors
BIO 1383 Nutrition
*BIO 2134 Human Anatomy
*BIO 2154 Human Physiology
*BIO 2164 Microbiology
*CHE 1315 General Chemistry I

\section*{Controlled Electives 6 hours}

Select classes that will apply to the University of your choice:
BUS 1053 Introduction to Business
CSC 1203 Computer Concepts and Applications
*CSC 2033 Excel
*ENG 2383 Advanced Composition
*MTH 2513 Finite Mathematics
SOC 1113 Introduction to Sociology

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.
NOTE: Consult an advisor at the 4-year institution for prerequisite and application information. This curriculum prepares a student for transfer to the University of Langston's Bachelor of Nursing Program. University of Oklahoma College of Nursing requires 3 additional hours of general education to be earned at the upper-division level.

OU /TCC Collaborative

\section*{Bachelor of Science in Nursing}

\section*{Program Description:}

The University of Oklahoma and TCC offer a Collaborative Bachelor of Science in Nursing (CBSN) degree. Students must meet all OU College of Nursing (OUCN) criteria and be admitted to the OU College of Nursing. Students in this program take their Level 3 OUCN nursing courses at TCC then transfer to OUCN-Tulsa for their final year of nursing. Students completing this program receive a Bachelor of Science in Nursing (BSN) from the University of Oklahoma.

\section*{Prerequisites:}

Completion of Health Science-Pre Nursing A.S. Degree and admission to the University of Oklahoma College of Nursing. Contact OUCN-Tulsa for specific admission requirements.

\section*{Specialized Course Requirements Credit Hours:30}

\section*{Level 3 Nursing}

\section*{Fall Semester}

NUR 2765/OU N3025 Clinical Nursing I
NUR 2774/OU N3034 Human Experience in Health
NUR 2783/OU N3043 Health Assessment
NUR 2792/OU N3062 Introduction to Philosophy and Logic of Nursing

\section*{Spring Semester}

NUR 2865/OU N3125 Clinical Nursing 2
NUR 2874/OU N3134 Human Experience in Acute \& Chronic Illness I
NUR 2883/OU N3143 Human Focused Nursing
NUR 2892/OU N3162 Human Experience of Disability
NUR 2902/OU N3182 Pharmacology in Nursing
Level 4 Nursing
Available at OUCN-Tulsa

\section*{Total Credits: 60 (30 completed at OUCN-Tulsa)}

\section*{NURSING}

\section*{Program Description:}

Tulsa Community College offers a five-semester Nursing Program that is accredited by the National League for Nursing Accrediting Commission (NLNAC) and approved by the Oklahoma Board of Nursing. The graduate receives an Associate Degree in Applied Science and is eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). All potential nursing students must have two (2) applications on file. The application to the College must be on file in the Office of the Registrar. The application for the Nursing Program must be submitted to the Nursing Division office, Metro Campus. These applications are available in the Nursing Division office, Metro Campus Or online at www.tulsacc.edu/ nursing.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Nursing Division: Metro: (918) 595-7188
Counseling Center: Metro (918) 595-7151

The Nursing Program admits a new class each fall and each spring semester. Applicants become qualified for admission based on achievement of Nursing Program admission criteria by the application deadline date. Admission criteria is listed in the Program application. Deadlines for submitting the nursing applications are the second Friday in February for the fall semester class and the second Friday in September for the spring semester class. All applicants are notified of their admission status, in writing, within ten (10) to twelve (12) weeks of the application deadline dates. The admission decision is based on a ranking process (See the Nursing Application Packet). Students who are accepted to the Nursing Program must meet the following program and curriculum prerequisites prior to beginning nursing courses:
1. Attend Program Enrollment and Orientation sessions.
2. Earn required minimum scores on the entry tests and complete science prerequisites within five years of program application. (See the Nursing Application Packet for specific information related to nursing entry testing.)
3. Complete the following prerequisite semester courses of general education classes with a grade of " C " or higher.
ENG 1113 Freshman Comp I
*CHE 1114 Principles of Chemistry
PSY 1113 Introduction to Psychology
*BIO 2134 Human Anatomy
BIO 1224 Introduction to Biology for Majors
Science courses: CHE 1114, BIO 2134, BIO 2154, and BIO 2164 (Or equivalent transfer credit) must have been completed within five (5) years of the date of application to the Nursing Program. The University of Oklahoma and TCC offer a Collaborative BSN (CBSN) degree.
4. Provide documentation of Certification as a Nurse Assistant (CNA) or acceptable substitute. Demonstrate competency in CNA skills. (See nursing application packet.)
5. Students must make a minimum of " \(C\) " in all courses required at each level of the curriculum pattern for continued enrollment and graduation in the Nursing Program. See course descriptions for pre- and corequisite course requirements. A Nursing Program Curriculum Plan is available in the Nursing Division Office.
6. Students must receive clearance on a criminal background check, including sex offender registry, prior to admission to the program.
7. Admission to Tulsa Community College does not guarantee admission to the Nursing Program. To be admitted to the Nursing Program and to remain in the program, the student must be in "good standing" at TCC.
8. See Nursing Administration Application packet for specific requirements related to criminal background check, health record requirements, and CPR certification. Potential students need to be aware that they may not be approved by the Oklahoma Board of Nursing to take the NCLEX-RN licensure examination if they have: 1 ) Been arrested/convicted of any offense including a deferred sentence. 2 ) Been declared judicially incompetent. 3 ) Ever been convicted of a felony. 4 ) Ever had disciplinary action taken against another health related license. Those needing other information regarding this topic can obtain a copy of Guidelines for NCLEX Candidates with History of Arrests, Convictions, or prior Disciplinary Action in the Metro Campus Nursing Division office.

\section*{HEALTH SCIENCE: NURSING}

\section*{LPN Advanced Placement Track}

The TCC Nursing Program offers an Advanced Placement Track for Licensed Practical Nurses (LPN) which allows for completion of nursing courses in as few as two or three semesters. To facilitate the progression of the working LPN, the courses of the Advanced placement Track are offered using on-line resources and some on-campus classroom and laboratory activities. Clinical rotations are typically during evening and weekend hours. The courses will consist of classroom, lab/clinical and blended/hybrid (internet-based). Students in the Advanced placement Track, must have access to a personal computer with broadband or DSL ISP (internet service provider). The first course, NUR 1393 LPN Bridge, may be offered each semester based on demand. After successful completion of NUR 1393, the student will be eligible to enter Level 3 Nursing courses or may be eligible to receive advanced standing based on review of standardized testing results (contact the Nursing Division Office for advanced placement testing information) and enter Level 4 classes. Upon successful completion of Level 4 and TCC graduation requirements, graduates receive an Associate in Applied Science and are eligible to take the National council Licensure Examination for Registered Nurses (NCLEX-RN). LPNs interested in pursuing a degree through advanced placement should contact the Nursing Division office for an application and curriculum plan or access the Nursing Division web page (www.tulsacc.edu/nursing) for more information.

\section*{General Education Requirements Credit Hours:38}

\section*{English 6 hours}
+*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select 1 course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Psychology 6 hours}

PSY 1113 Introduction to Psychology
*PSY 2023 Developmental Psychology

\section*{Science \(\mathbf{2 0}\) hours}
+BIO 1224 Introduction to Biology for Majors
+*BIO 2134 Human Anatomy
*BIO 2154 Human Physiology
*BIO 2164 Microbiology
+*CHE 1114 Principles of Chemistry

\section*{Specialized Course Requirements Credit Hours:34}

Nursing 34 hours (enrollment requires admission to
Nursing Program)
NUR 1401 Nursing Issues \& Perspectives I
NUR 1421 Nursing Issues \& Perspectives II
NUR 1431 Introduction to Pharmacology and Dosage Calculations
NUR 1446 Foundations of Nursing Practice
NUR 1457 Nursing of Adults w/Major Health Disruptions
NUR 2423 Nursing of Childbearing Families
NUR 2433 Nursing of Children and Their Families
NUR 2453 Nursing Promotion of Quality of Life

NUR 2512 Psychiatric / Mental Health Nursing
NUR 2564 Advanced Medical Surgical Nursing
NUR 2543 Transition to Novice Nurse

\section*{Total Credit Hours 72}
*Has prerequisite (See above)
+Prerequisite course

\section*{Additional Nursing Courses/Electives}

NUR 2303 Pharmacology
NUR 2403 Dosage Calculations For Nurses

\section*{BSN Articulation Option}

In addition to the general education courses required for entry and progression in the TCC Nursing Program, these courses provide the foundation for admission into many RN-BSN programs upon completion of TCC's Nursing Program.

\section*{Humanities 6 hours}

Humanities requirements vary by BSN program. Please contact Academic Counselor for recommendations for specific programs

\section*{Mathematics 3 hours}
*MTH 2193 Elementary Statistics

\section*{Social Science 6 hours}

SOC 1113 Introduction to Sociology
SOC 2123 Introduction to Cultural Anthropology
Sciences 10 hours
BIO 1224 Introduction to Biology for Majors
BIO 1383 Nutrition
*CHE 1315 General Chemistry I (may be substituted for Nursing prerequisite

\section*{Most BSN programs require additional electives}
representing non-nursing courses for a total of up to 64-67 general education credits.

\section*{TCC-OU Collaborative Bachelor of Nursing Information follows Health Sciences, Pre-Nursing In the programs that transfer sections of this catalog.}

\section*{GERIATRIC TECHNICIAN}

566

\section*{Program Description:}

The Tulsa Community College Geriatric Technician Program is based on the proposed Oklahoma Certified Nurse Aide Career Ladder that provides an industry recognized professional development career path for certified nurse aides. The program provides collaborative learning experiences that develop advanced skills which will be utilized in the care of elderly clients in community-based long-term care facilities/agencies. The TCC Geriatric Technician Program consists of two options 1) the Geriatric Technician Certificate that offers six (6) hours of college credit in eight (8) weeks or 2) The Certified Nursing Assistant (CNA) Career Ladder with three distinctive levels, similar to the proposed Oklahoma Certified Nurse Aid Career Ladder model

\section*{Option 1:}

\section*{Geriatric Technician Certificate}

Geriatric Technicians are employed in community-based longterm care settings. Their job responsibilities are performed under the delegation and supervision of licensed nurses. Their responsibilities fall between those of a Certified Nurse Assistant and a Licensed Practical Nurse.

\section*{Option 2:}

\section*{CNA Career Ladder Certificate Option}

The CNA Career Ladder Certificate Option offers a three (3) step progression in becoming a Geriatric Technician. Level 1 is based upon current Oklahoma nurse aide certification training and testing requirements regulated by the Oklahoma State Department of Health, Nurse Aide Registry. For those students who are already certified nursing assistants, the CNA Level 2 courses provides 2 hours of college credit with an additional 32 hours of skill development in core competencies applicable to certified nursing assistant working in a variety of communitybased long term care settings. The Level 3 CNA program provides 4 hours of college credit with an additional 128 hours of advanced education with a specialization in geriatric and dementia care. Upon completion of the CNA Level 3 course, the graduate receives certification as a Geriatric Technician. NOTE: Students enrolling in the CNA Level 1 course must also be enrolled in the CNA Level 2 program. Students must complete all coursework within the Geriatric Technician and CNA Career Ladder programs with a grade of " C " or higher, which includes satisfactory demonstration of required skills.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Geriatric Technician Office: Metro (918) 595-7369
Counseling Center: Metro (918) 595-7151

\section*{Procedure For Application:}
1. Contact the Geriatric Technician Program Office, (918) 5957369 for Geriatric Technician program application form and specific program information.
2. All prospective Geriatric Technician students must complete an application for enrollment to the College.
3. Submit completed program application form and required materials by the deadlines as identified in application materials. Submit materials to the Geriatric Technician Office located on the Metro Campus, Room MC501G, 909 South Boston Ave., Tulsa, OK 74119.
4. Acceptance to Tulsa Community College does not guarantee admission into the Geriatric Technician Program.
5. Eligible applicants will be notified by mail regarding their selection status.
6. An orientation to the program, immunizations, current CPR certification and TB screening are required of students after their admission letter has been received and prior to the start of class.
7. In order to enroll in courses that include a clinical component and are a part of the program degree plan, students must receive clearance on a criminal background check, including sex offender registry.

\section*{Certificate Requirements Credit Hours: 6}

Nursing 6 hours

\section*{Option 1:}

NUR 1216 Geriatric Technician
or
Option 2:
*NUR 1142 Certified Nursing Assistant Level 2 (CNA II)**
*NUR 1154 Certified Nursing Assistant Level 3 (CNA III)
Total Credit Hours: 6
*Course has prerequisite (see course description section of the catalog). **Requires NUR 1133 Long-Term Care Nursing Assistant (LTCNA) Level 1 or CNA Certification or equivalent
\begin{tabular}{|c|}
\hline NURSING \\
See Health Services.Pre-Nursing for transfer program; or Nursing in the \\
workforce development section of this catalog.
\end{tabular}

\section*{PATIENT CARE TECHNICIAN}

\section*{Program Description:}

The Patient Care Technician (PCT) Program is approved by the Oklahoma Board of Nursing. Students who successfully complete the Patient Care Technician Program will be eligible to take the State Certification Exam offered by the Oklahoma Board of Nursing to practice as an Advanced Unlicensed Assistant (Patient Care Technician). Students must complete the PCT course with a grade of " \(C\) " or higher which includes satisfactory demonstration of required skills.

\section*{Degree Awarded:Certificate of Achievement}

\section*{For More Information Contact:}

Patient Care Technician Office: Metro: (918) 595-7324
Counseling Center: Metro: (918) 595-7151

\section*{Patient Care Technician Certificate}

Patient Care Technicians are employed in a variety of healthcare settings. Their job responsibilities are performed under the delegation and supervision of licensed nurses. Their job responsibilities fall between those of a Certified Nurse Assistant and a Licensed Practical Nurse.

\section*{Procedure For Application:}
1. Contact the Patient Care Technician Program (918) 5957324, for program application form and any specific program information.
2. All prospective Patient Care Technician students must complete an application for enrollment to the College. 3. Submit completed program application form and required materials by the deadlines as identified in application materials. Submit materials to the Patient Care Technician office located on the Metro Campus, Room MC501, 909 South Boston, Tulsa, OK 74119.
4. Acceptance to Tulsa Community College does not guarantee admission into the Patient Care Technician Program. 5. Eligible applicants will be notified by mail regarding their selection status.
6. An orientation to the program, immunizations, current CPR certification and TB screening are required of students after their admission letter has been received and prior to the start of class.
7. In order to enroll in courses that include a clinical component and are a part of the program plan, students must receive clearance on a criminal background check, including sex offender registry.

\section*{Certificate Requirements Credit Hours: 6}

Nursing 6 hours
NUR 1206 Patient Care Technician

\section*{Total Credit Hours: 6}

\section*{HEALTH SCIENCE: NURSING}

\section*{SURGICAL TECHNOLOGY}

918

\section*{Program Description:}

The Surgical Technology program option provides an opportunity for Certified Surgical Technologists who are graduates of an accredited educational program, to develop additional skills in mathematics, English, humanities, social and biological sciences and to earn an Associate in Applied Science degree. Surgical technologists are integral members of the surgical team who work closely with surgeons, anesthesiologists, registered nurses and other surgical personnel delivering patient care and assuming appropriate responsibilities before, during and after surgery. Students should consult with the Associate Dean of the Nursing Services Division for information and enrollment. Graduates of the Surgical Technology Program are qualified to take the national certifying exam given by:Liaison Council on Certification for the Surgical Technologist (LCCST), 7790 E. Arapahoe Rd., Suite 240, Englewood, CO 80112-1274, (303) 694-9264, (800) 7070057.

Course Location: Surgical Technology courses will be taken either at Tulsa Technology Center Lemley Campus or Central Technology Center, Drumright Campus.
General Education courses will be offered by Tulsa Community College.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Nursing Services Division at Metro Campus:
(918) 595-7188

Tulsa Technology Center Career Services Center Department: (918) 828-5200

Central Technology Center Student Services Office: (918) 352-2551 Ext. 206

Students should consult with Tulsa Tech and Central Tech Admissions and Enrollment Staff before enrolling in this program.

\section*{Procedures For Application: \\ Tulsa Technology Center}
1. Obtain an admission packet from Tulsa Technology Center. Packets are located at all Tulsa Tech campuses in the Adult Education office, counseling offices.
2. An admission test is required for full- time programs at Tulsa Tech (see admission packet for details)
3. Submit a completed program application form and required documents to the Career Services Center, Tulsa Technology Center, 3420 S. Memorial Dr.,Tulsa OK, 74145. Please call (918) 828-5200 for application deadlines.
4. All prospective Surgical Technology program students must complete an application for enrollment to the college and submit their high school transcripts, GED scores, ACT/SAT scores, college transcripts and any previous training and / or education to the Metro Campus Registration at 909 S . Boston, Tulsa OK, 74119. Incomplete submissions will not be considered for the associate in the applied science degree program.
5. Acceptance to TCC does not guarantee admission to the Surgical Technology Associate in Applied Science program.

\section*{Procedures For Application:}

Central Technology Center
1. Obtain an admission packet from Central Technology Center (CT). Packets are available in the CT Student Services Office, Drumright Campus, 3CT Circle, Drumright, OK 74030, (918) 3522551, Ext. 206.
2. An admission test is required for entrance into this Central Technology Center class. (See admission packet for details) Applications are taken year round for programs beginning in mid-August (full-time day classes). Class size limited.
3. For start dates and further information, contact the Student Services Office, located on the CT Drumright Campus, 3CT Circle, Drumright, OK 74030. (918) 352-2551 Ext. 206

\section*{General Education Requirements Credit Hours:31-32}

\section*{Biology 7-8 hours}
select 1 anatomy course and 1 microbiology course from the following:
obIO 1314 Human Anatomy and Physiology
or
o*BIO 2134 Human Anatomy
and
o*BIO 1323 Basic Microbiology
or
o*BIO 2164 Microbiology

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
ENG 1083 Grammar and Mechanics of Writing
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Mathematics 3 hours}

NUR 2403 Dosage Calculations for Nurses
Philosophy 3 hours
PHI 2153 Medical Ethics

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours:33}

Surgical Technology 33 hours
osRT 1102 Surgical Technology Orientation
o*SRT 1112 Surgical Technology Introduction
o*SRT 1124 Surgical Case Management
o*SRT 1211 Medical Terminology
o*SRT 1222 Microbiology and Wound Healing
o*SRT 1324 Anatomy and Physiology
o*SRT 1333 Aseptic Technique and Skills
o*SRT 1341 Surgical Technology Clinical Practicum I
\({ }^{\circ}\) *SRT 2221 Surgical Pharmacology

\section*{HEALTH SCIENCE: PRE-PROFESSIONAL}
o*SRT 2312 Surgical Patient Care and Skills
o*SRT 2323 Surgical Procedures I
o*SRT 2332 Surgical Technology Clinical Practicum II
o*SRT 2434 Surgical Procedures II
o*SRT 2442 Surgical Technology Clinical Practicum III
Total Credit Hours: 64-65
*Course has prerequisite (See course description section of catalog).
"Course must be completed with a"C" or above.

\section*{PRE-PROFESSIONAL HEALTH SCIENCES}

\section*{PRE-PHARMACY \\ OU College of Pharmacy Transfer Option}

165

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and OU College of Pharmacy prerequisite courses generally completed in the first two years of a doctoral curriculum. This curriculum has been specifically designed to provide a seamless transition to the doctoral program at the University of Oklahoma College of Pharmacy.
Students considering this major should consult the divisions listed below and/or Student Services at the OU College of Pharmacy, (Tulsa-Schusterman) and carefully select courses that will meet the prerequisite requirements of the doctoral program and course requirements for the Pre- Pharmacy associate degree program.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Divisions: Metro (918) 595-7334, Northeast (918) 595-7542, Southeast • (918) 595-7742, West (918) 595-8193
Counseling Centers: Metro (918) 595-7151
Northeast (918) 595-7451, Southeast (918) 595-7651, West (918) 595-8176
The University of Oklahoma College of Pharmacy Student Services:Tulsa-Schusterman, (918) 660-3570

\section*{General Education Requirements Credit Hours:27}

General Education requirements in mathematics (3-5 and Science (8) are met in specialized course requirements.

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 9 hours}

Select one course from the following:
GEO 2033 World Regional Geography
PHI 1213/REL 1213 Religions of the World:The Eastern Tradition and select one course from of the following:
HUM 2113 Humanities I
HUM 2223 Humanities II
and select one course from the following:
Art 1113 Art Appreciation
MUS 1113 Music Appreciation

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

Social/ Behavioral Sciences \(\mathbf{3}\) hours (Required Elective) select one course from the following:
PSY 1113 Introduction to Psychology
SOC 1113 Introduction to Sociology
Speech 3 hours
SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours:62-66}

\section*{Mathematics 9-10 hours}

Select one of the following \(\mathbf{2}\) groups
1) *MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry
*MTH 2114 Analytic Geometry and Calculus I
or
2) *MTH 1715 College Algebra and Trigonometry
*MTH 2114 Analytic Geometry and Calculus I

\section*{Science 47-48 hours}

BIO 1224 Introduction to Biology for Majors
*BIO 1604 Zoology
*BIO 2134 Human Anatomy
*BIO 2154 Human Physiology
*BIO 2164 Microbiology
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II
*CHE 2145 Organic Chemistry I
*CHE 2245 Organic Chemistry II
and select one course from the following:
*BIO/CHE 2364 Biochemistry
*CHE 2353 Introduction to Biochemistry
and select one course from the following:
*PHY 1114 General Physics I
*PHY 1214 General Physics II

\section*{Advanced Biology/Life Sciences}

Additional prerequisite courses are required for students entering the University of Oklahoma's Pharmacy program for Fall 2008. Contact the Science and Mathematics Division or an academic advisor for details.

\section*{Controlled Electives 3 hours}

\section*{Business 3 hours}

\section*{select one course from the following:}

ACC 2213 Financial Accounting
ECO 2013 Principles of Macroeconomics
ECO 2023 Principles of Microeconomics

\section*{Recommended Electives Credit Hours:0-6}

\section*{Foreign Language 0-6 hours}

Note: OU requires two semesters of college credit in a foreign
language or completion of two years of the same foreign language in high school.
A foreign language is usually required for all doctoral programs.

\section*{Total Credit Hours: 92-102}
*Course has prerequisites (See course description section of TCC catalog).
Students should be aware that any variation in this degree plan might result in credit hours that will not transfer to OU.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{HEALTH SCIENCE: PRE-PROFESSIONAL}

\section*{PRE-PROFESSIONAL SCIENCE RELATED \\ FIELDS OF CONCENTRATION \\ Dentistry 050, Medicine 130 and Optometry 160}

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students considering this major should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded:Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Divisions: Metro: (918) 595-7334
Northeast: (918) 595-7542, Southeast: (1918) 595-7742, West: (918) 595-8193
Counseling Centers:Metro: (918) 595-7151, Northeast:(918) 595-7451, Southeast: (918) 595-7651, West: (918) 595-8176
General Education Requirements Credit Hours: 21 See the General Education Requirements page for complete list. Science, Mathematics, and recommended elective requirements satisfied in Specialized Course Requirements.

\section*{Specialized Course Requirements Credit Hours:42}

\section*{Biology 16 hours}

BIO 1224 Introduction to Biology for Majors
and \(\mathbf{1 2}\) hours from the following:
*BIO 1404 General Botany
*BIO 1604 Zoology
*BIO 2134 Human Anatomy
*BIO 2154 Human Physiology
*BIO 2164 Microbiology
Chemistry 15 hours
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II
*CHE 2145 Organic Chemistry I
*CHE 2245 Organic Chemistry II

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry
*MTH 1715 College Algebra and Trigonometry
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II
*MTH 2134 Analytic Geometry and Calculus III

\section*{Physics 8 hours}
*PHY 1114 General Physics I
and
*PHY 1214 General Physics II
or
*PHY 2034 Engineering Physics I
and
*PHY 2124 Engineering Physics II

\section*{Total Credit Hours: 63}
*Course has prerequisite (See course description section of catalog). Students should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{PRE-VETERINARY SCIENCE OSU Transfer Option}

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. This curriculum is designed for students desiring to transfer to OSU for completion of a baccalaureate degree in Pre-veterinary science followed by application for admission to the OSU College of Veterinary Medicine.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Divisions:
West Campus: (918) 595-8193
Counseling Centers: Metro:West Campus: (918) 595-8176
General Education Requirements Credit Hours:21
See general education requirements for complete list. Science, Mathematics and Recommended Electives requirements satisfied in Specialized Course Requirements.
Specialized Course Requirements Credit Hours:39
Biology 12 hours
+BIO 1224 Introduction to Biology for Majors
*BIO 1604 Zoology
*BIO 2164 Microbiology
Chemistry 10 hours
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra
and select one course from the following:
*MTH 2193 Elementary Statistics
*MTH 2523 Calculus for Business, Life and Social Sciences

\section*{Physics 8 hours}
*PHY 1114 General Physics I
*PHY 1214 General Physics II

\section*{Speech 3 hours}
*SPE 1113 Speech Communication I

\section*{Total Credit Hours: 60}
+BIO 1224 is a prerequisite for BIO 1604 and BIO 2164.
*Course has prerequisites (See course description section of TCC catalog). Student should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible.
To receive an A. A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical education activity classes do no count toward the associate degree requirements in this curriculum.

\section*{BIOTECHNOLGY, AS/AAS/CER \\ See Science,Technology,Engineering \& Mathematics area of study:Science.}

\section*{VETERINARY TECHNOLOGY}

\section*{Program Description:}

Veterinary Technicians are essential members of the veterinary health care team. A Registered Veterinary Technician will support and augment the technical capabilities of many fields that involve animal care, including private veterinary practice, biomedical research, herd health management, teaching, zoological parks, and government services. Under the supervision of a licensed veterinarian, a technician may perform a variety of duties including: intensive nursing care, clinical laboratory procedures, radiology, anesthesiology, dentistry, and surgical assistance. A graduate will also have an in-depth understanding of the fundamentals of animal husbandry, management, and nursing care for a variety of species. The Veterinary Technology Program is accredited by the American Veterinary Medical Association (AVMA) and the Oklahoma State Board of Veterinary Medical Examiners (OSBVME).

\section*{Degree Awarded: Associate In Applied Science}

\section*{For More Information Contact:}

Veterinary Technology Program West Campus: (918) 595-8212
Science and Math Division:West Campus: (918) 595-8193
Counseling Center:West Campus: (918) 595-8176
The graduate will receive an Associate Degree in Applied Science and will be eligible to take national and state licensing examinations. After passing these examinations, the graduate may work under the direct supervision of a licensed veterinarian.
Individuals may not be eligible for a veterinary technician licensure in the state of Oklahoma who have:
- been addicted to narcotics or alcohol,
- received treatment for the habitual use of narcotics or alcohol;
- been convicted of a narcotics-related offense;
- ever been reprimanded, disciplined, disqualified or suspended
from the duties of a veterinary technician or animal care;
- ever been a patient in a sanitarium or institution for the treatment of mental illness;
- been arrested/convicted of any felony offense, including a deferred sentence;
If any of these circumstances exist, it is advised that the prospective student discuss this with the Oklahoma State Board of Veterinary Medical Examiners (405) 524-9006.
Note: All applicants for licensure in the State of Oklahoma must undergo an OSBI (Oklahoma State Bureau of Investigation) background check during application for Examination and Licensure.

\section*{Procedures For Application:}
1. All program applicants must complete an application to Tulsa Community College and to the Veterinary Technology Program. 2. Contact the Veterinary Technology Program, West Campus (918) 595-8212, for program application and specific program information.
3. Submit completed applications and required materials, including official high school and college transcripts, and SAT/ACT scores, to the Veterinary Technology Program, West Campus, 7505 West 41st Street, Tulsa, OK 74107-8633, by April 30. 4. Incomplete submissions will not be considered for admission to the Program.
5. Admission to TCC does not guarantee acceptance into the Veterinary Technology Program.
6. Eligible applicants will be notified and an interview will be scheduled.
7. All interviewed applicants will be notified by mail regarding their selection status.
8. Prerequisite work for the Veterinary Technology Program must be completed prior to admission. This prerequisite is:

\section*{Biology 4 hours}
+^BIO 1224 General Biology for Majors
*+^BIO 1604 Zoology

\section*{General Education Requirements Credit Hours:23-25}

\section*{Biology 4 hours}
+^BIO 1224 Introduction to Biology for Majors
*+^BIO 1604 Zoology

\section*{Chemistry 4-5 hours}
*^CHE 1114 Principles of Chemistry
*^CHE 1315 General Chemistry I

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Mathematics 3-4 hours}
*^MTH 1473 Mathematics for Critical Thinking
*^MTH 1513 College Algebra
*^MTH 1454 Technical Mathematics

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours:53}

\section*{Veterinary Technology 53 hours}
-^VT 1125 Anatomy and Physiology
-^VT 1132 Introduction to Veterinary Technology
-^VT 1183 Principles of Small Animal Care
-^VT 1193 Principles of Large Animal Care
-^VT 1223 Veterinary Hospital Technology I
*^VT 1234 Clinical Pathology I
*^VT 1263 Veterinary Office and Computer Skills
*^VT 2126 Practicum: Animal Clinics and Nursing
*^VT 2224 Microbiology and Sanitation
*^VT 2234 Clinical Pathology II
*^VT 2254 Laboratory, Wild and Exotic Animal Technology
*^VT 2313 Veterinary Hospital Technology II
*^VT 2333 Veterinary Pharmacology
*^VT 2352 Radiology, Ultrasound and Diagnostic Imaging
*^VT 2364 Large Animal Technology

\section*{Total Credit Hours: 76-78}
* Course has prerequisite (See course description section of catalog).
+ Prerequisite to Veterinary Technology curriculum schedule (4 hours).
\(\wedge\) Course must be completed with a "C" or better.
- Admission to VT program or permission of instructor.


Manufacturing Areas of Study
AA: Associate in Arts, university transfer degree • AS: Associate in Science, university transfer degree AAS: Associate in Applied Science, workforce degree - CER: Certificate of Achievement
University transfer degree programs include TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.
Workforce development degree and certificate programs are specifically designed to prepare students for direct entry into the workforce. They may advance students within their current career or open doors to new career opportunities. Traditionally these programs were not designed for transfer; however, varying amounts of coursework - and in some cases entire degrees - may now apply towards a degree at a four-year institution; the number of applicable transfer hours will vary from one university to another. Check with an advisor for further information. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.

\section*{MANUFACTURING ENGINEERING TECHNOLOGY}

\section*{Program Description:}

Tulsa Community College's Manufacturing Engineering Technology program provides the student with solid knowledge and skills in the area of applied engineering. Manufacturing Engineers create and implement the manufacturing build plan in order to take engineering designs from the drawing board to product delivery. The manufacturing build plan includes defining the requirements for facilities, equipment, special machinery, tooling, materials, manpower, and processes required to produce all of the detail parts and assemblies to make the final product. Manufacturing Engineering takes a leading role in the creation, maintenance, and improvement of the processes used in the production of every manufactured product in industry today.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Science, Math, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7541
General Education Requirements Credit Hours: 20-22

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Mathematics 4-6 hours}
*MTH 1454 Technical Mathematics
or
*MTH 1513 College Algebra
and
*MTH 1613 Plane Trigonometry

\section*{Physics 4 hours}
*PHY 1114 General Physics I

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 38

\section*{Computer Information Systems 3 hours}

Select any three credit hours of Computer Information Systems (CSC-CIS) Courses
Drafting \& Computer Aided Design Technology 3 hours DRF 1323 Engineering Design with CAD

\section*{Manufacturing Engineering Technology 23 hours}

EGR 1313 Manufacturing Processes
EGR 1363 Metallurgy
*EGR/QCT 1443 Geometric Dimensioning and Tolerancing EGR 1463 Composite Materials
EGR 2153 Lean, Six Sigma Quality Systems
*EGR 2462 Project Engineering and Management
*EGR 2543 Manufacturing Engineering I
*EGR 2643 Manufacturing Engineering II
Quality Control Technology 9 hours
QCT 1223 Blueprint Reading
QCT 1313 Introduction to Quality Control
*QCT 2333 Inspection Principles
Recommended Electives Credit Hours: 2-3
DRF 2473 Tool Design
EGR 1111 Introduction to Engineering
*ELE 1212 Introduction to Electricity
*ELE 1223 Hydraulics and Pneumatics
MGT 1353 Management Essentials
NCM 1212 Introduction to Machining
Total Credit Hours: 60-63
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{NUMERICAL CONTROL/MACHINIST TECHNOLOGY}

\section*{Program Description:}

This program leads to employment as a machinist trainee, machinist apprentice, mechanical technician, or machine operator. Instruction emphasizes technical theory, bench work, floor work, assembly, layout, and inspection. Instruction at advanced levels includes an introduction to metallurgy, numerical control, and other phases of mechanical technology.

\section*{Degree Awarded: Associate in Applied Science}

For More Information Contact:
Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center Northeast: (918) 595-7451

\section*{General Education Requirements Credit Hours: 18}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Mathematics 3 hours}
*MTH 1473 Mathematics for Critical Thinking
*MTH 1513 College Algebra

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Psychology/Speech 3 hours}
select 3 credit hours from the following:
PSY 1113 Introduction to Psychology
PSY 1313 Human Relations

\section*{MANUFACTURING}

PSY 2123 Leadership Development
SPE 1113 Speech Communication I SPE 2103 Interpersonal Communication

\section*{Specialized Course Requirements Credit Hours: 35}

\section*{Business 3 hours}

BUS 1313 Employee/Employer Relations
Numerical Control/Machinist Technology 32 hours
*NCM 1223 Blueprint Reading
*NCM 1324 Machine Shop Technology I
*NCM 1334 Machine Shop Technology II
*NCM 2333 CNC Mill Programming
*NCM 2363 Programming with Esprit
*NCM 2453 Cutter Grinding
*NCM 2493 CNC Lathe Programming
*QCT 1313 Introduction to Quality Control
*QCT 1443 Geometric Dimensioning and Tolerancing
*QCT 2333 Inspection Principles
Recommended Electives Credit Hours: 12
BUS 2363 Supervisory Management
CSC 1203 Computer Concepts and Applications
DRF 1323 Engineering Drawing with CAD
EGR 1313 Manufacturing Processes
EGR 1363 Metallurgy
*MGT 2103 Workforce Development Internship
*QCT 2343 Statistical Process Control
QCT 2413 ISO 9000/2000
Total Credit Hours: 65
*Course has prerequisite (See course description section of catalog)

\section*{NUMERICAL CONTROL/MACHINIST TECHNOLOGY \\ Certificate: General Option 722,Computer-Aided \\ Manufacturing Option 722C, Machine Operator Option 722B}

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Northeast: (918) 595-7542

Counseling Center Northeast: (918) 595-7451

\section*{General - Certificate Option 722 \\ Certificate Requirements Credit Hours: 32}

\section*{Computer Information Systems 3 hour}

CSC 1203 Computer Concepts and Applications

\section*{Specialized Course Requirements 29 hours}

EGR 1313 Manufacturing Processes
*NCM 1223 Blueprint Reading
*NCM 1324 Machine Shop Technology I
*NCM 1334 Machine Shop Technology II
*NCM 2333 CNC Mill Programming
*NCM 2363 Programming with Esprit
*NCM 2453 Cutter Grinding
*NCM 2493 CNC Lathe Programming
*QCT 1443 Geometric Dimensioning and Tolerancing

\section*{Total Credit Hours: 32}
*Course has prerequisite (See course description section of catalog).
Computer-Aided Manufacturing-Certificate Option 722C
Certificate Requirements Credit Hours: 21
EGR 1313 Manufacturing Processes
*NCM 2333 CNC Mill Programming
*NCM 2363 Programming with Esprit
*NCM 2453 Cutter Grinding
*NCM 2493 CNC Lathe Programming
*NCM 2503 Advanced CNC Operation
*QCT 1443 Geometric Dimensioning and Tolerancing
Total Credit Hours: 21
*Course has prerequisite (See course description section of catalog).

\section*{Machine Operator-Certificate Option 722B}

Certificate Requirements Credit Hours 14
*NCM 1223 Blueprint Reading
*NCM 1324 Machine Shop Technology I
*NCM 1334 Machine Shop Technology II
*QCT 1443 Geometric Dimensioning and Tolerancing

\section*{Total Credit Hours: 14}
*Course has prerequisite (See course description section of catalog).

\section*{NUMERICAL CONTROL/MACHINIST \\ TECHNOLOGY}

Craftsmanship Program - **NSU Transfer Option

\section*{Program Description:}

This option provides an opportunity for graduates of the Craftsmanship program to develop the necessary skills and knowledge necessary for employment and success in metalworking and manufacturing industries. This option was developed by a joint effort of Tulsa Public Schools, Tulsa Technology Center, and Tulsa Community College. Students should consult with the Tulsa Community College Counseling Center staff at the Northeast Campus before enrolling in this option.

\section*{Degree Awarded: Associate in Applied Science \\ For More Information Contact: \\ Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542 \\ Counseling Center Northeast: (918) 595-7451 \\ **Northeastern State University Department of Industry College of Business and Industry Tahlequah Campus \\ (918) 456-5511}

\section*{General Education Requirements Credit Hours:31}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{MANUFACTURING}

\section*{Geography 3 hours}

GEO 1043 Introduction to Cultural Geography

\section*{Humanities 3 hours}

See the General Education Requirements for the complete list.

\section*{Mathematics 3 hours}
*MTH 1613 Plane Trigonometry

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Science 4 hours}

Select 1 laboratory science course designated by(L) on the General Education requirements list.

\section*{Social Science 6 hours}

POS 1113 American Federal Government
and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Speech 3 hours
SPE 1113 Speech Communication I
Specialized Course Requirements Credit Hours: 33
**Apprenticeship 18 hours
APP 1306 Apprenticeship I
*APP 1346 Apprenticeship II
*APP 2306 Apprenticeship III
Engineering 3 hours
EGR 1363 Metallurgy
Management 3 hours
MGT 2363 Principles of Management
Quality Control Technology 6 hours
QCT 1313 Introduction to Quality Control
*QCT 2343 Statistical Process Control
Purchasing and Materials Management 3 hours
PMM 1303 Basics of Supply Chain Management
Total Credit Hours: 64
*Course has prerequisite (See course description section of catalog).
**This 18 credit hour block of classes will be awarded to those students who have successfully completed the Craftsmanship program conducted by the Tulsa Technology Center. (Students planning to transfer to pursue a Bachelor's degree should contact Northeast Campus Counseling Center staff to select courses that will transfer.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{PROCESS TECHNOLOGY}

833
Pending Approval of the Oklahoma State Regents for Higher Education
Program Description:
This program is designed to provide students with the concepts and skills needed to enter careers as Process Technicians in the petro-chemical industry.

\section*{Degree Awarded: Associate in Applied Science}

For More Information Contact:
Science, Mathematics, and Engineering Technology Division:
Northeast: (918) 595-7542
Counseling Center Northeast: (918) 595-7451
General Education Requirements Credit Hours: 34
Chemistry 8 hours
*CHE 1114 Principles of Chemistry
*CHE 2014 Process Organic Chemistry

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Economics 3 hours}

ECO 2013 Principles of Macroeconomics
Mathematics 4 hours
*MTH 1454 Technical Mathematics
Physics 4 hours
*PHY 1014 Conceptual Physics

\section*{Social Sciences 6 hours}

HIS 1483 U.S. History 1492 to Civil War Era
or
HIS 1493 U.S. History Civil War Era to Present
POS 1113 American Federal Government

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 29}

\section*{Process Technology}

PRT 1123 Introduction to Process Technology
PRT 1133 Safety, Health \& Work Practices
*PRT 2024 Process Tech I (Equipment)
*PRT 2034 Industrial Instrumentation
*PRT 2134 Process Tech II (Systems)
*PRT 2224 Process Tech III (Operations)
*PRT 2243 Principles of Quality
*PRT 2324 Process Troubleshooting

\section*{Total Credit Hours: 63}
*Course has prerequisite (See course description section of catalog).

\section*{PROCESS TECHNOLOGY}

Certificate Option

\section*{Pending Approval of the Oklahoma State Regents for Higher Education}

\section*{Program Description:}

This program is designed to provide students with the concepts and skills needed to enter careers as Process Technicians in the petro-chemical industry.
Degree Awarded:Certificate of Achievement

\section*{MANUFACTURING}

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7451
Certificate Requirements Credit Hours: 48
Chemistry 8 hours
*CHE 1114 Principles of Chemistry
*CHE 2014 Process Organic Chemistry
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications

\section*{Mathematics 4 hours}
*MTH 1454 Technical Mathematics

\section*{Physics 4 hours}
*MTH 1454 Technical Mathematics

\section*{Specialized Course Requirements Credit Hours: 29}

Process Technology 29 hours
PRT 1123 Introduction to Process Technology
PRT 1133 Safety, Health and Work Practices
PRT 2024 Process Tech I (Equipment)
PRT 2034 Industrial Instrumentation
*PRT 2134 Process Tech II (Systems)
*PRT 2224 Process Tech III (Operations)
PRT 2243 Principles of Quality
*PRT 2324 Process Troubleshooting

\section*{Total Credit Hours: 48}
*Course has prerequisite (See course description section of catalog).

\section*{QUALITY CONTROL TECHNOLOGY \\ NSU Transfer Option}

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear Industrial Operations Management curriculum. Students should consult the Northeastern State University catalog and carefully select courses that will meet requirements for both the baccalaureate and associate degree options.

\section*{Degree Awarded: Associate in Science}

For More Information Contact:
Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7451
General Education Requirements Credit Hours: 34
English 6 hours
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Geography 3 hours}

GEO 1043 Introduction to Cultural Geography
Humanities 6 hours
HUM 2113 Humanities I
and select one 3-hour course from the humanities list on the General Education Requirements page.

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Science 7 hours}

See General Education Requirements for the complete list.

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Speech 3 hours
SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 30}

\section*{Computer Information Systems 3 hours}

Select any three credit hours of Computer Information Systems (CSC/CIS) courses.

\section*{Engineering 9 hours}

EGR 1313 Manufacturing Processes
EGR 1363 Metallurgy
EGR 1463 Composite Materials
Management 3 hours
*MGT 1353 Management Essentials
Quality Control Technology 15 hours
*QCT 1223 Blueprint Reading
QCT 1313 Introduction to Quality Control
*QCT 1443 Geometric Dimensioning and Tolerancing
*QCT 2333 Inspection Principles
*QCT 2343 Statistical Process Control

\section*{Total Credit Hours: 64}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{QUALITY CONTROL TECHNOLOGY}

\section*{Program Description:}

This program is designed to prepare the student with no previous experience in quality control for an entry level position as a quality control professional. Students having previous quality control experience will be able to upgrade their skills and knowledge in order to qualify for advancement in their chosen field. This program will help the graduate prepare to sit for the examination to become a Certified Quality Control Technician administered through the American Society for Quality, P.O. Box 3005, Milwaukee, WI 53201-3005, 1-800-2481946.

Degree Awarded: Associate in Applied Science

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7451

\section*{MANUFACTURING}

\section*{General Education Requirements Credit Hours: 19-20}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Mathematics 3-4 hours}
*MTH 1454 Technical Mathematics
*MTH 1513 College Algebra

\section*{Physics 4 hours}
*PHY 1114 General Physics I

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 39}

\section*{Computer Information Systems 3 hours}

Select any three credit hours of Computer Information Systems (CSC-CIS) Courses

\section*{Engineering 9 hours}

EGR 1313 Manufacturing Processes
EGR 1363 Metallurgy
EGR 1463 Composite Materials

\section*{Quality Control Technology 27 hours}
*QCT 1223 Blueprint Reading
QCT 1313 Introduction to Quality Control
*QCT 1443 Geometric Dimensioning and Tolerancing
QCT 2153 Lean, Six Sigma Quality Systems
*QCT 2333 Inspection Principles
*QCT 2343 Statistical Process Control
*QCT 2363 Quality Standards and Specifications
*QCT 2373 Quality Costs, Surveys and Audits
QCT 2413 ISO 9000/2000
Recommended Elective Credit Hours: 3-4
EGR 2462 Project Engineering and Management
EGR 2543 Manufacturing Engineering I
MGT 1353 Management Essentials
NCM 1212 Introduction to Machining

\section*{QUALITY CONTROL TECHNOLOGY}

General Option Certificate
849

\section*{Program Description:}

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Quality Control Technology, General option, may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalogs of the universities where the four-year degree is offered and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at the university of their choice.

\section*{Degree Awarded:Certificate of Achievement}

For More Information Contact:
Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7451

\section*{Certificate Requirements Credit Hours: 33-34}

\section*{Computer Information Systems 3 hours}

Select any three credit hours of Computer Information Systems (CSC-CIS) Courses

\section*{English 3 hours}
*ENG 1113 Freshman Composition I

\section*{Management 3 hours}

MGT 1353 Management Essentials

\section*{Mathematics 3-4 hours}
*MTH 1454 Technical Mathematics
*MTH 1513 College Algebra
Quality Control Technology 21 hours
*QCT 1223 Blueprint Reading
QCT 1313 Introduction to Quality Control
*QCT 1443 Geometric Dimensioning and Tolerancing
*QCT 2333 Inspection Principles
*QCT 2363 Quality Standards and Specifications
*QCT 2373 Quality Costs, Surveys and Audits
QCT 2413 ISO 9000/2000
Total Credit Hours: 33-34
*Course has prerequisite (See course description section of catalog).

\section*{Total Credit Hours: 61-63}
*Course has prerequisite (See course description section of catalog).

\title{
Science, Technology, Engineering \& Mathematics Area of Study
}

\begin{abstract}
AA: Associate in Arts, university transfer degree • AS: Associate in Science, university transfer degree AAS: Associate in Applied Science, workforce degree • CER: Certificate of Achievement
University transfer degree programs include TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.
Workforce development degree and certificate programs are specifically designed to prepare students for direct entry into the workforce. They may advance students within their current career or open doors to new career opportunities. Traditionally these programs were not designed for transfer;however, varying amounts of coursework - and in some cases entire degrees - may now apply towards a degree at a four-year institution; the number of applicable transfer hours will vary from one university to another. Check with an advisor for further information. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.
\end{abstract}


\section*{ence, Technology,}

Engineering \& Mathematics
www.careerclusters.com

\section*{Science}

Biology, AS
Biotechnology, AS/AAS/CER
Chemical Laboratory Technology, AAS
Chemistry, AS
Environmental Science \& Natural Resources, AS
Geography, AS
Geographic Information Systems, CER
Geology, AS
Horticulture, OSU option, AS
Horticulture Technology:
General Horticulture, AAS/CER
Golf and Sports Turf, AAS/CER
Greenhouse and Nursery Production, AAS/CER
Floral Design and Interiorscape, AAS/CER
Landscape Design and Construction, AAS/CER
Landscape Maintenance, AAS/CER
Interior Plant Care Specialist, CER
Landscape Specialist, CER
Physics, AS
(Veterinary Technology, AAS see Health Sciences areas of study)

hitecture d.
Construction

\section*{Technology}

Electronics Engineering Technology OSU, AS
Electronics Technology NSU, AS
Civil Engineering/Surveying Technology, AAS/CER CET/SUR, Construction, AAS/.CER
Drafting \& Design Engineering, AAS
Drafting and Computer Aided Design, CER
Electronics Technology, AAS/CER
Electronics Technology, Alternative Energy, AAS/CER
Electronics Technology, Biomedical Equipment Technology, AAS/CER
Electronics Technology, Electromechanical Manufacturing Technology, AAS/CER
Electronics Technology, Nanotechnology, AAS
Electronics Technology US Navy option, AAS
Nanotechnology, CER
(Technology, AAS see Business area of study)

\section*{Engineering}

Engineering, AS
Engineering, Electrical and Computer Engineering OSU, AS
Engineering, Mechanical Engineering OSU, AS

\section*{Mathematics}

Mathematics, AS

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: SCIENCE}

\section*{BIOLOGY}

\section*{030}

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Majoring in the biological sciences is a likely choice for the student who is curious about life, creative, highly motivated, and interested in solving biological problems. Biologists are involved in agriculture, forestry, wildlife management, environmental science and other fields that make the world a healthier and safer place to live. The biological sciences will also prepare the student for entry into one of a variety of technical fields in Allied Health. Students considering this major should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Divisions: Metro: (918) 595-7334, Northeast: (918) 595-7542, Southeast: (918) 59-7742, West: (918) 595-8193
Counseling Centers: Metro: (918) 595-7151,
Northeast (918) 595-7451, Southeast: (918) 595-7651,
West (918) 595-8176
General Education Requirements Credit Hours: 27
See the General Education Requirements list for complete list.
Science and Mathematics requirements satisfied in
Specialized Course Requirements section.
Specialized Course Requirements Credit Hours: 34

\section*{Biology 16 hours}

BIO 1224 Introduction to Biology for Majors
*BIO 1404 General Botany
*BIO 1604 Zoology
*BIO 2134 Human Anatomy
*BIO 2154 Human Physiology
*BIO 2164 Microbiology
Chemistry 15 hours
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II
*CHE 2145 Organic Chemistry I
*CHE 2245 Organic Chemistry II

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry
*MTH 1715 College Algebra and Trigonometry
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II
*MTH 2134 Analytic Geometry and Calculus III
Recommended Electives Credit Hours: 0-3
CSC 1203 Computer Concepts and Applications
*MTH 2193 Elementary Statistics
PSY 1113 Introduction to Psychology

\section*{Total Credit Hours: 60-64}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum.

\section*{BIOTECHNOLOGY}

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Students will be educated in the fundamentals of biology, chemistry and biochemistry with heavy emphasis on a wide range of laboratory procedures. The topics of lab safety, protein isolation and separation techniques, cell culture, molecular biology and recombinant DNA, and quality control will be addressed as they apply to both a manufacturing and research environment. Students considering this major should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Division, Southeast Campus (918) 595-7742

Counseling Centers: Metro (918) 595-7151,
Northeast (918) 595-7451, Southeast (918) 595-7651,
West (918) 595-8176

\section*{Contact the Science and Mathematics Division or see an} advisor for recommended course sequence.

General Education Requirements Credit Hours: 24
Science and recommended general education elective
requirements are satisfied in the Specialized Course
Requirements section for this degree.

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Humanities 6 hours}

See General Education Requirement page for complete list. PHI 2153 Medical Ethics recommended.

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Required Electives 3 hours}

Select one 3-hour course from one of the following: Psychology, Social Sciences, Foreign Language, or Fine Arts. (Art, Music, Theatre)

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: SCIENCE}

Specialized Course Requirements Credit Hours: 43

\section*{Biology 4 hours}
*BIO 2164 Microbiology
Biotechnology 24 hours
BTC 1113 Introduction to Biotechnology
*BTC 1315 Biotechnology Laboratory Methods \& Techniques
*BTC 1534 Cell Culture Techniques
*BTC 2246 Molecular Biology
*BTC 2335 Proteomics and Instrumentation
*BTC 2101 Biotechnology Quality Assurance

\section*{Chemistry 15 hours}
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II
*CHE 2145 Organic Chemistry I

\section*{Additional Recommended Courses}
*ENG 2333 Technical Professional Writing
*MTH 2193 Elementary Statistics
*CHE 2353 Introduction to Biochemistry
*CHE 2245 Organic Chemistry II

\section*{Total Credit Hours: 67}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. See page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{BIOTECHNOLOGY}

\section*{531}

\section*{Program Description:}

This program is designed for students who wish to acquire the skills necessary to work in the field of biotechnology. Students will be educated in the fundamentals of biology, chemistry, and biochemistry with heavy emphasis on a wide range of laboratory procedures. The topics of lab safety, protein isolation and separation techniques, cell culture, molecular biology and recombinant DNA will be included. The topics of technical writing, medical ethics and quality control will be addressed as they apply to both a manufacturing and research environment.

\section*{Degree Awarded: Associate in Applied Science}

For More Information Contact:
Science and Mathematics Division:
Southeast Campus (918) 595-7742
Counseling Centers: Metro (918) 595-7151,
Northeast (918) 595-7451, Southeast (918) 595-7651,
West (918) 595-8176
Contact the Science and Mathematics Division or see an advisor for recommended course sequence.

\section*{General Education Requirements Credit Hours: 21}

\section*{English 6 hours}

ENG 1113 Freshman Composition I
*ENG 2333 Technical /Professional Writing

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War to Present

\section*{Humanities \(\mathbf{3}\) hours}

PHI 2153 Medical Ethics
Mathematics 6 hours
*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics

\section*{Specialized Course Requirements Credit Hours: 42}

\section*{Biology 8 hours}

BIO 1224 Introduction to Biology for Majors
*BIO 2164 Microbiology

\section*{Biotechnology 26 hours}

BTC 1113 Introduction to Biotechnology
*BTC 1315 Biotechnology Laboratory Methods \& Techniques
*BTC 1534 Cell Culture Techniques
*BTC 2246 Molecular Biology and Techniques
*BTC 2335 Proteomics and Instrumentation
*BTC 2101 Biotechnology Quality Assurance
*BTC 2512 Biotechnology Apprenticeship

\section*{Chemistry 8 hours}

CHE 1114 Principles of Chemistry
***CHE 1124 Introductory Organic and Biochemistry

\section*{Total Credit 63 Hours}
*Course has prerequisite (see course description section of catalog).
**Admissions to Biotechnology program or permission of instructor.

\section*{BIOTECHNOLOGY CERTIFICATE}

\section*{Program Description:}

This program is for students who desire to acquire or upgrade their skills in the area of biotechnology. It is assumed that students will have the required background in the biological sciences and chemistry prior to entering this program. Students will be trained in the practices and procedures of biotechnology as well as in the theory behind the procedures so that they will be prepared to extrapolate present knowledge to solve problems faced in the future. There will be a heavy emphasis on a wide range of laboratory procedures. The topics of lab safety, protein isolation and separation techniques, cell culture, molecular biology and recombinant DNA, and quality control will be addressed as they apply to both a manufacturing and research environment.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Science and Mathematics Division:
Southeast Campus (918) 595-7742
Counseling Centers: Metro (918) 595-7151, Northeast (918) 595-
7451, Southeast (918) 595-7651,West (918) 595-8176
Please contact the Science and Mathematics Division or see an advisor for recommended course sequence.

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: SCIENCE}

\section*{Certificate Requirements Credit Hours: 26}

\section*{Biotechnology 26 hours}

BTC 1113 Introduction to Biotechnology
*BTC 1315 Biotechnology Laboratory Methods and Techniques
*BTC 1534 Cell Culture Techniques
*BTC 2246 Molecular Biology and Techniques
*BTC 2335 Proteomics and Instrumentation
*BTC 2101 Biotechnology Quality Assurance
*BTC 2512 Biotechnology Apprenticeship
Total Credit Hours: 26
*Course has prerequisite (See course description section of catalog)

\section*{CHEMICAL LABORATORY TECHNOLOGY \\ 542}

\section*{Program Description:}

This program was developed jointly by Tulsa Community College and Tulsa Technology Center. The Chemical Laboratory Technology option prepares the student to perform a variety of physical and chemical analyses and related duties under the supervision of a chemist or laboratory technologist. The skills and abilities mastered are applicable to industrial, chemical, and environmental analytical laboratories. The student will participate in OSHA safety compliance, laboratory maintenance, manual and electronic instrumentation usage, preparation of reagents, advanced analytical techniques, and will become familiar with the basic structures and formulas of inorganic and organic chemistry. The Associate in Applied Science in Chemical Laboratory option provides the student the opportunity to develop additional skills in English, mathematics, social sciences and chemistry.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Science and Math Division: Southeast: (918) 595-7742
Tulsa Technology Center Career Resources Center Department: (918) 828-5151

Counseling Centers: Southeast: (918) 595-7651

\section*{Procedures for Application}
1. Obtain an admission packet from Tulsa Technology Center. Packets are located at all Tulsa Tech campuses in the Adult Education office.
2. An admission test is required for full-time programs at Tulsa Technology Center (see admission packet for details). 3. Submit completed program application form and required documents to the Career Services Center, Tulsa Technology Center, 3420 S, Memorial Dr., Tulsa, OK 74145. Please call (918) 828-5200 for application deadlines.
4. All prospective Chemical Laboratory Technology students must complete an application for enrollment to Tulsa Community College and submit their high school transcripts, GED scores, ACT/SAT scores, college transcripts and any previous training and/or education to the Southeast Campus Registrar at 10300 East 81 \({ }^{\text {st }}\) Street, Tulsa, OK 74133. Incomplete submissions will not be considered for admission to the Chemical Laboratory Technology Associate of Applied Science degree program.
5. Acceptance to TCC does not guarantee admission to Chemical Laboratory Technology Associate of Applied Science degree program.
General Education Requirements Credit Hours: 31

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select one course from the following:
*ENG 2333 Technical/Professional Writing
*ENG 1213 Freshman Composition II
ENG 1083 Grammar and Mechanics of Writing
Chemistry \(\mathbf{1 0}\) hours
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Psychology 3 hours}

PSY 1023 Psychology of Personal Adjustment
PSY 1113 Introduction to Psychology
PSY 2123 Leadership Development

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 33 Chemical Laboratory Analysis 33 hours}

CLT 1011 Laboratory Sciences Orientation I
CLT 1141 Professional Support Skills
CLT 1213 General Laboratory Safety
CLT 1242 Scientific Mathematics
CLT 1331 General and Inorganic Chemistry
CLT 1351 Organic Chemistry
CLT 1413 Laboratory Techniques I
CLT 1433 Laboratory Glassware and Equipment
CLT 1441 Introduction to Laboratory Careers
CLT 2011 Laboratory Sciences Orientation II
CLT 2023 Organic Analysis (GC \& IR)
CLT 2123 Titration and Standardization
CLT 2153 Laboratory Techniques II
CLT 2322 Laboratory Management and Quality Issues
CLT 2353 Laboratory Sciences Practicum
Choose one of the following:
CLT 1452 Option 1: Medical Safety and Analyses
*CLT 1522 Option 2: Environmental Safety and Analysis
CLT 1022 Option 3: Industrial Safety Analysis
Recommended Electives Credit Hours: 6-14
AH 1323 Medical Terminology
BIO 1224 Introduction to Biology for Majors
*BIO 1604 Zoology
*CHE 1124 Introductory Organic and Biochemistry
*CHE 2144 Organic Chemistry I
*CHE 2244 Organic Chemistry II
SPE 1151 Effective Communications
Total Credit Hours: 70-78
*Course has prerequisite (See course description section of catalog).

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: SCIENCE}

\section*{CHEMISTRY}

045

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Since chemistry deals with the composition, structure and interactions of matter, the study of chemistry is basic to all sciences. This degree prepares the student to enter the allied health and other medical fields such as nursing, pre-med, and medical laboratory technology. This degree also prepares the student to enter programs in aerospace, agriculture, biology, engineering, environmental science, and petroleum engineering. Students considering this major should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Divisions: Metro: (918) 595-7334, Northeast: (918) 595-7542, Southeast: (918) 595-7742,
West: (918) 595-8193
Counseling Centers: Metro: (918) 595-7151, Northeast: (918)
595-7451, Southeast: (918) 595-7651, West: (918) 595-8176
General Education Requirements Credit Hours: 27 See the General Education Requirements for complete list. Science and mathematics requirements satisfied in Specialized Course Requirements Section.
Specialized Course Requirements Credit Hours: 34-37
Chemistry 20 hours
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II
*CHE 2145 Organic Chemistry I
*CHE 2245 Organic Chemistry II

\section*{Mathematics 5-9 hours}
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry
*MTH 1715 College Algebra and Trigonometry
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II
*MTH 2134 Analytic Geometry and Calculus III

\section*{Physics 8 hours}
*PHY 1114 General Physics I
and
*PHY 1214 General Physics II
or
*PHY 2034 Engineering Physics I
and
*PHY 2124 Engineering Physics II

\section*{Total Credit Hours: 60-64}
*Course has prerequisite (See course description section of catalog).
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

ENVIRONMENTAL SCIENCE \& NATURAL RESOURCES
OSU option
056
Pending Approval of the Oklahoma State Regents for Higher Education

\section*{Program Description:}

This curriculum includes TCC degree requirements and courses general completed in the first two years of a four-year curriculum. This curriculum is designed for students desiring to transfer to OSU-Stillwater for completion of a baccalaureate degree in Agricultural Science and Natural Resources with a major in either Environmental Science or Natural Resource Ecology and Management. This degree is designed for students interested in pursuing a career in agriculture, conservation, environmental science, or natural resource management (such as forestry, range or wildlife sciences).

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Division
Metro: (918) 595-7334 West (918) 595-8193
Counseling Centers
Metro: (918) 595-7151 West: (918) 595-8176
General Education Requirements Credit Hours: 35
Additional hours of General Education recommended
elective requirements satisfied in Specialized Course
Requirements.

\section*{Biology 8 hours}

BIO 1224 Introduction to Biology for Majors
and select one course from the following
*BIO 1604 Zoology
*BIO 1404 General Botany

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

See the General Education Requirements for complete list.
^TCC_OSU Dual admitted students may take PHI 3413 (course
offered through OSU)

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Controlled Electives 6 hours
ECO 2013 Principles of Macroeconomics
SPE 1113 Speech Communications I
Specialized Course Requirements Credit Hours: 26-28
Chemistry 10 hours
*CHE 1315 Chemistry I
*CHE 1415 Chemistry II

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: SCIENCE}

\section*{Mathematics 6 hours}
*MTH 1613 Plane Trigonometry
*MTH 2193 Elementary Statistics

\section*{Earth Science 4 hours}

Select one of the following:
GEL 1014 General Physical Geology
*PSC 1114 General Physical Science
Select one of the following options:
Environmental Science Option 6-8 hours
select \(6-8\) credit hours from the following
SOC 1113 Introduction to Sociology
BIO 2123 Human Ecology
MTH 2114 Analytical Geometry and Calculus I
or
MTH 2523 Calculus for Business, Life, and Social Sciences
*PHY 1114 General Physics I
*PHY 1214 General Physics II

\section*{Natural Resources Option 6-8 hours}
select \(6-8\) credit hours from the following
*BIO 1404 General Botany
*BIO 1604 Zoology
GEO/GIS 2344 Introduction to Geographic Information Systems GIS 2373 GIS Data Acquisition and Management
*GIS 2383 Advanced Geographic Information Systems
Total Credit Hours: ^61-63
*Course has prerequisites (See course description section of catalog). \(\wedge\) dual admitted students taking PHI 3413 to satisfy humanities requirement may transfer 63 credit hours to OSU
Student should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible.
To receive an A.A. or A.S. degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{GEOGRAPHY}

087

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Geography is the scientific study of Earth's surface and its immediate atmosphere. Geographers study the political, economic, social and environmental qualities of places and how these attributes interact. A geography graduate will possess the flexibility to pursue a career in urban and regional planning, international affairs, community development, location analysis in both the public and private sector, resource planning and management, cartography and teaching. Students considering this major should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Division Metro: (918) 595-7334,
Liberal Arts Division Southeast: (918) 595-7780
Counseling Centers Metro: (918) 595-7151, Northeast: (918)
595-7451, Southeast: (918) 595-7651, West: (918) 595-8176

\section*{General Education Requirements** Credit Hours: 30}

See the General Education Requirements for the complete list. Science requirements satisfied in Specialized Course Requirements.

\section*{Specialized Course Requirements Credit Hours: 18-19}

\section*{Geography 10 hours}
+GEO 1014 Geography (Physical)
GEO 1023 World Geography (Economic)
GEO 1043 Introduction to Cultural Geography
GEO 2033 World Regional Geography
GEO 2013 Meteorology
GEO 2113 Introduction to Oceanography
GEO 2153 Human Ecology

\section*{Geology 8-9 hours}

GEL 1014 General Geology (Physical)
GEL 1024 General Geology (Historical)
GEL 2021 Map and Airphoto Interpretations

\section*{Recommended Electives Credit Hours: 12}
*BIO 1404 General Botany
*BIO 1604 Zoology
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II
*GEO/GIS/SUR 2344 Introduction to Geographic Information Systems
GEO 2354 Computer Cartography
*GIS 2373 GIS Data Acquisition and Management
*GIS 2383 Advanced Geographic Information Systems
*GIS 2393 Geographic Information Systems Practicum
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II
*MTH 2134 Analytic Geometry and Calculus III
SOC 2123 Introduction to Cultural Anthropology

\section*{Total Credit Hours: 60-61}
*Course has prerequisite (See course description section of catalog).
**Students should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible. +This course is required as part of the 10 hour program requirement.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: SCIENCE}

\section*{GEOGRAPHIC INFORMATION SYSTEMS}

Pending Approval of the Oklahoma State Regents for Higher Education

\section*{Program Description:}

This certificate is designed for individuals whose objective is to become qualified for employment as a Geographic Information Systems Technician. The certificate will also serve to enable students to pursue education in GIS supplemental to any major they have chosen. In addition, the certificate will provide additional training and education to individuals currently working in a GIS career.

\section*{Degree Awarded:Certificate of Achievement}

\section*{For More Information Contact:}

Science and Mathematics Division: Metro: (918) 595-7334
Counseling Center: Metro: (918) 595-7151

\section*{Certificate Credit Hours: 17}

Geography/Geographic Information Systems 17 hours
GIS/GEO 2344 - Introduction to Geographic Information Systems
GEO 2354 Computer Cartography
*GIS 2373 GIS Data Acquisition and Management
*GIS 2383 Advanced Geographic Information Systems
*GIS 2393 Geographic Information Systems Practicum
Total Credit Hours: 17
*Course has prerequisite (See course description section of catalog).

\section*{GEOLOGY}

082

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Geology is the scientific study of the earth. This endeavor includes Earth's composition, history, surface processes and internal workings. A degree in geology will provide the graduate the skills to discover, recognize and use the earth's natural resources to promote the quality of human life. Because the geologist will be aware of the events that continually shape the earth's surface, the geology graduate will provide to society the knowledge to enable all of us to occupy this planet's physical environment more safely. Students considering this major should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Division: Metro: (918) 595-7334
Counseling Center: Metro: (918) 595-7151
General Education Requirements** Credit Hours:27-29
See the General Education Requirements for the complete list.
NOTE: Students must complete a total of 60 hours to graduate. Science and Mathematics requirements satisfied in Specialized Course Requirements.

Specialized Course Requirements Credit Hours:31
Chemistry \(\mathbf{1 0}\) hours
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II
Geology 8-9 hours
GEL 1014 General Geology (Physical)
GEL 1024 General Geology (Historical)
*GEL 2021 Map and Airphoto Interpretation
Mathematics 5-6 hours
*MTH 1513 College Algebra
and
*MTH 1613 Plane Trigonometry
or
*MTH 1715 College Algebra and Trigonometry

\section*{Physics 8 hours}
*PHY 1114 General Physics I and
*PHY 1214 General Physics II
or
*PHY 2034 Engineering Physics I and
*PHY 2124 Engineering Physics II

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog).
**Students should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{HORTICULTURE TECHNOLOGY PROGRAMS}

\section*{For More Information Contact:}

Green Country Horticulture Center Northeast: (918) 595-8435 Counseling Center Northeast: (918) 595-7451

\section*{HORTICULTURE TECHNOLOGY \\ OSU Transfer Option}

\section*{Program Description:}

Horticulture Technology is for students who want to make an enduring difference in the environment by working with plants. Opportunities abound in landscape architecture, public horticulture, turf management and numerous related fields. Students may use their associate degree as the first two years of a baccalaureate degree at Oklahoma State University Stillwater.

\section*{Degree Awarded: Associate in Science}

General Education Requirements Credit Hours: 45
Biology 8 hours
BIO 1224 Introduction to Biology for Majors
*BIO 1404 General Botany
Chemistry \(\mathbf{1 0}\) hours
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: SCIENCE}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

See the General Education Requirements page for complete list

\section*{Mathematics 3 hours}
*MTH 1513 College Algebra

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 18}

\section*{Horticulture 18 hours}

HT 1303 Principles of Horticulture Technology
*HT 1313 Ornamental Horticulture
*HT 1343 Plant Identification
HT 2353 Lawn and Turf Care
HT 2413 Nursery and Greenhouse Management
HT 2483 Interior Plants

\section*{Total Credit Hours: 63}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{HORTICULTURE TECHNOLOGY}

\section*{Program Description:}

This multi-option program is designed to develop the necessary skills for graduates to function in such jobs as foreman, groundskeeper, horticulture technician, interiorscaper, floral designer, landscaper, management trainee, sales person with greenhouses, garden centers, landscaping operation, parks, and private industry.
Options:
General Horticulture Option
Golf and Sports Turf Option
Greenhouse and Nursery Production Option
Floral Design and Interiorscape Option
Landscape Design and Construction Option Landscape Maintenance Option
Degree Awarded: Associate in Applied Science
General Education Requirements Credit Hours: 19
Biology 4 hours
*BIO 1404 General Botany

Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications

\section*{English 6 hours}
* ENG 1113 Freshman Composition I and select one course from the following:
* ENG 1213 Freshman Composition II
* ENG 2333 Technical/Professional Writing
* ENG 2343 Business Communications

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 35-39}

Horticulture Technology 23 hours
(Required for all Options)
HT 1233 Introduction to Irrigation
HT 1303 Principles of Horticulture Technology
HT 1313 Ornamental Horticulture
*HT 1343 Plant Identification
*HT 1353 Fertilizers and Soils
*HT 1363 Plant Diseases and Pests
HT 2251 Horticulture Internship I Project
HT 2401 Pest Control Certification and Licensing
*HT 2493 Horticulture Management Principles
Horticulture Technology Options Credit Hours: 12-16 Depending on Option Selected. Students must complete courses in at least one option.
General Horticulture Option 780A - 15 hours
HT 1413 Equipment Safety and Maintenance
HT 2353 Lawn and Turf Care
*HT 2363 Landscape Planning and Design I
HT 2373 Propagation of Horticulture Plants
HT 2413 Nursery and Greenhouse Management
Golf and Sports Turf Option 780I-13 hours
HT 1413 Equipment Safety and Maintenance
HT 2224 Golf and Sports Turf
HT 2353 Lawn and Turf Care
*HT 2363 Landscape Planning and Design I
Greenhouse and Nursery Production 780F - Option 15 hours
HT 1413 Equipment Safety and Maintenance
HT 2373 Propagation of Horticulture Plants
HT 2413 Nursery and Greenhouse Management
HT 2433 Floral Design
HT 2483 Interior Plants
Floral Design and Interiorscape Option 780B-15 hours
*HT 2363 Landscape Planning and Design I
HT 2373 Propagation of Horticulture Plants
HT 2413 Nursery and Greenhouse Management
HT 2433 Floral Design
HT 2483 Interior Plants

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: SCIENCE}

Landscape Design and Construction Option 780C -13 hours
HT 1091 Landscape Construction
HT 1413 Equipment Safety and Maintenance
*HT 2353 Lawn and Turf Care
*HT 2363 Landscape Planning and Design I
*HT 2513 Landscape Planning and Design II
*SUR 1324 Surveying I
Landscape Maintenance Option 780D - 12 hours
HT 1413 Equipment Safety and Maintenance
*HT 2353 Lawn and Turf Care
*HT 2363 Landscape Planning and Design I
HT 2423 Arboriculture Practices
Controlled Electives Credit Hours: 6
Select any Horticulture Classes not applied to major.
Total Credit Hours: 60-64
*Course has a prerequisite (See course description section of catalog).

\section*{HORTICULTURE TECHNOLOGY}

Certificate Program
780A

\section*{Program Description:}

This curriculum serves as an overview of Horticulture. Designed primarily to allow individuals to master most home horticulture challenges.
Degree Awarded:Certificate of Achievement
Certification Requirements Credit Hours: 33
Biology 4 hours
*BIO 1404 General Botany
Horticulture Technology 23 hours
HT 1233 Introduction to Irrigation
HT 1303 Principles of Horticulture
*HT 1313 Ornamental Horticulture
*HT 1343 Plant Identification
*HT 1353 Fertilizers and Soils
*HT 1363 Plant Diseases and Pests
HT 2251 Horticulture Internship I Project
HT 2401 Pest Control Certification and Licensing
*HT 2493 Horticulture Management Principles

\section*{Courses Required for Specific Options 6 hours}
(See Associate Degree, Specialized Course Requirements)
Total Credit Hours: 33
*Course has a prerequisite (See course description section of catalog).

\section*{HORTICULTURE TECHNOLOGY \\ Applied Horticulture Certificate \\ Interior Plant Care Specialist Option \\ 780L}

\section*{Program Description:}

This program is designed to develop the necessary skills for graduates to function as an assistant to an Interior Plant Technician.

\section*{Certification Requirements Credit Hours: 10}

Computer Information Systems 2 hours
CSC 1011 Introduction to Microcomputers
*CSC 1161 Introduction to Internet
Horticulture Technology 8 hours
HT 1031 Therapeutic Horticulture
HT 1041 Bonsai
HT 1081 Small Greenhouses
HT 1221 Principles of Floral Arranging
HT 1241 Cacti and Kin/Orchids and Others
HT 1261 Tropical Plant Care
HT 2251 Horticulture Internship I Project
HT 2401 Pest Control Certification and Licensing
Total Credit Hours: 10
*Course has a prerequisite (See course description section of catalog).

\section*{HORTICULTURE TECHNOLOGY}

Applied Horticulture Certificate
Landscape Specialist Option

\section*{Program Description:}

This program is designed to develop the necessary skills for graduates to function as a nursery retail assistant or assistant to a Landscape Technician.
Degree Awarded: Certificate of Achievement
Certification Requirements Credit Hours: 10
Computer Information Systems 1 hour
*CSC 1161 Introduction to Internet

\section*{Horticulture Technology 9 hours}

HT 1021 Lawn Sprinkler System and Drainage
HT 1051 Nightscaping
HT 1061 Water Gardening
HT 1071 Annual and Perennial Culture
HT 1091 Home Landscape Construction
HT 1201 Habitat Gardening
HT 1381 Home Landscape Design
HT 2251 Horticulture Internship I Project
HT 2401 Pest Control Certification and Licensing
Total Credit Hours: 10
*Course has a prerequisite (See course description section of catalog)

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS/TECHNOLOGY}

\section*{PHYSICS \\ 185}

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a fouryear curriculum. Physics is the foundation for all science areas such as Astronomy, Biology, Chemistry, and Geology. Physics is also the foundation for medicine-related studies and aviation. Students considering this major should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Divisions: Metro: (918) 595-7334, Northeast: (918) 595-7542, Southeast: (918) 595-7742, West: (918) 595-8193
Counseling Centers: Metro: (918) 595-7151,
Northeast: (918) 595-7451, Southeast: (918) 595-7742, West: (918) 595-8193
General Education Requirements Credit Hours: 27
See the General Education Requirements page for complete list.
Science and mathematics requirements are satisfied in Specialized Course Requirements.

\section*{Specialized Course Requirements Credit Hours:26}

\section*{Chemistry \(\mathbf{1 0}\) hours}
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II

\section*{Mathematics 8 hours}
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II

\section*{Physics 8 hours}
*PHY 2034 Engineering Physics I
*PHY 2124 Engineering Physics II

\section*{Recommended Electives Credit Hours: 7}

CSC 1203 Computer Concepts and Applications
*EGR 1242 Introductory Engineering Computer Programming
*MTH 2134 Analytic Geometry and Calculus III
*MTH 2613 Elementary Differential Equations

\section*{Total Credit Hours: 60}
*Course has prerequisite (See course description section of catalog). Students should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\footnotetext{
VETERINARY TECHNOLOGY, AAS
See Health Sciences are of Study:Other Health Sciences
}

\section*{CIVIL ENGINEERING / SURVEYING TECHNOLOGY}

\section*{Program Description:}

Civil Engineering / Surveying Technology graduates work for a variety of employers, including consulting firms, government agencies, construction, and utility companies. The program provides a broad based knowledge of construction, civil engineering technology and surveying fundamentals. The major study areas include computer aided drafting and design, construction materials, physics, mathematics, ethics, land law, equipment and calculations used in surveying, hydrology and hydraulics. Graduates of the program may become licensed as a Land Surveying Intern after passing the Fundamentals of Land Surveying examination administered by the Oklahoma State Board of Registration for Professional Engineers and Land Surveyors. After gaining qualified experience, a Land Surveying Intern may apply to take the Principals of and Practices of Land Surveying exam. After successfully completing this second exam, a Land Surveying Intern will become registered as a Professional Licensed Surveyor. Additionally, graduates may apply for the examination to become a Certified Engineering Technician given by the National Institute for the Certification of Engineering Technicians.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center:Northeast: (918) 595-7451

\section*{General Education Requirements Credit Hours:24-25}

\section*{Computer Science 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
select any 3 credit hours from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing
*ENG 2343 Business Communications

\section*{Mathematics 5-6 hours}

MTH 1715 College Algebra and Trigonometry or the following two courses:
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry

\section*{Physics 4 hours}
*PHY 1114 General Physics I

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 40

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: TECHNOLOGY}

\section*{Civil Engineering Technology 15 hours}
*CET 1373 Materials of Construction
*CET 1383 Construction Plans, Specifications and Contract
Documents
*CET 1393 Basic Hydrology
*CET 2373 Physical Properties of Soil
*CET 2443 Basic Hydraulics
Drafting and Design Engineering Technology: 6 hours
DRF 1323 Engineering Drawing I
*DRF 1363 Civil Drafting and Design
Surveying Technology 19 hours
*SUR 1324 Surveying I
*SUR 2262 Professional EGR/SUR Ethics
*SUR 2334 Surveying II
SUR 2363 Land Law I
*SUR 2373 Land Law II
*SUR 2393 Survey Exam Topics
Total Credit Hours: 64-65
*Course has prerequisite (See course description section of catalog)

\section*{CIVIL ENGINEERING / SURVEYING TECHNOLOGY CERTIFICATE OPTION}

\section*{Program Description:}

The Civil Engineering / Surveying Technology - Certificate Option prepares students with necessary skills for employment in the civil engineering and surveying industries. The Certificate of Achievement recognizes students who have completed 2223 hours of technical coursework in surveying, computer aided drafting and design, mathematics and construction plans and specifications.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast (918) 595-7542
Counseling Center: Northeast (918) 595-7451

\section*{Mathematics 5-6 hours}
*MTH 1715 College Algebra and Trigonometry
or the following two courses:
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry

\section*{Specialized Course Requirements Credit Hours: 17}

Civil Engineering Technology 3 hours
*CET 1383 Construction Plans, Specifications and Contract Documents
Drafting and Design Engineering Technology 6 hours DRF 1323 Engineering Drawing I
*DRF 1363 Civil Drafting and Design

\section*{Surveying Technology 8 hours}
*SUR 1324 Surveying I
*SUR 2334 Surveying II
Total Credit Hours: 22-23
*Course has prerequisite (See course description section of catalog)

\section*{CIVIL ENGINEERING / SURVEYING TECHNOLOGY \\ Construction Option}

\section*{Program Description:}

The Civic Engineering / Surveying Technology -Construction Option is designed for students who are currently employed by or interested in the construction or supporting industries. Construction careers often are not limited to only working for construction companies. Many construction professionals are employed by consulting firms, government agencies, petrochemical and utility companies. The program provides a broad based knowledge of construction, civil engineering technology and surveying fundamentals. The major study areas include computer aided drafting and design, construction materials, drawing interpretations, physics, mathematics, ethics, construction management, construction planning and scheduling, equipment and calculations used in surveying and construction cost estimating.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast (918) 595-7542
Counseling Center: Northeast (918) 595-7451

\section*{General Education Requirements Credit Hours: 24-25}

\section*{Computer Science 3 hours}

CSC 1203 Computer Concepts and Applications

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical / Professional Writing
*ENG 2343 Business Communication

\section*{Mathematics 5-6 hours}
*MTH 1715 College Algebra and Trigonometry or the following two courses:
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry
Physics 4 hours
*PHY 1114 General Physics I
Social Science 6 hours
POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 37
Civil Engineering Technology 6 hours
*CET 1373 Materials of Construction
*CET 1383 Construction Plans, Specifications and Contract Documents
Drafting and Design Engineering Technology 6 hours
DRF 1323 Engineering Drawing I
*DRF 1363 Civil Drafting and Design

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: TECHNOLOGY}

\section*{Surveying Technology 10 hours}
*SUR 1324 Surveying I
SUR 2262 Professional EGR/SUR Ethics
*SUR 2334 Surveying II
Construction Technology 15 hours
COT 2103 Introduction to Construction Management
*COT 2123 Construction Drawings and CAD
*COT 2163 Construction Cost Estimating
*COT 2183 Construction Codes and Practices
*COT 2213 Construction Planning and Scheduling
Total Credit Hours: 61-62
*Course has prerequisite (See course description section of catalog)

\section*{DRAFTING AND DESIGN \\ ENGINEERING TECHNOLOGY}

590A

\section*{Program Description:}

The American Design Drafting Association has fully certified this program to the level of design drafter. It provides the student with a general education in mathematics, physics, English, engineering drawing, and design as well as specific training in Computer Aided Design Drafting (CADD). Those completing the associate degree program will be prepared for exciting careers in the fields of mechanical, structural, electrical, or other graphics communication technologies. Upon completion of this program, the graduate may apply for the ADDA National Examination for certification.

\section*{Degree Awarded: Associate in Applied Science}

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center Northeast: (918) 595-7451

\section*{General Education Requirements Credit Hours: 20-22}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Mathematics 4-6 hours}
*MTH 1454 Technical Mathematics
or the following two courses:
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry

\section*{Physics 4 hours}
*PHY 1114 General Physics I

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\author{
Specialized Course Requirements Credit Hours:40 \\ Computer Information Systems 3 hours \\ *CIS 2073 MS Office \\ Drafting and Computer Aided Design Technology 20 hours \\ DRF 1323 Engineering Drawing I \\ *DRF 1442 Descriptive Geometry \\ *DRF 2203 AutoCad 2 \\ *DRF 2223 Mechanical Design I (CAD) \\ DRF 2223 Survey of CAD Applications and select 6 credit hours from the following: \\ *DRF 2023 Pro/Engineer Modeling \\ *DRF 2033 Pro/Engineer Manufacturing \\ DRF 2233 Autodesk Inventor *DRF 2393 Basic Solid Works \\ \section*{Electronics 2 hours} \\ *ELE 1212 Introduction to Electricity \\ \section*{Engineering 6 hours} \\ EGR 1313 Manufacturing Process \\ *EGR 1443 Geometric Dimensioning and Tolerancing \\ Quality Control 3 hours \\ *QCT 1223 Blueprint Reading \\ Speech 3 hours \\ SPE 2103 Interpersonal Communication \\ \section*{Controlled Electives Credit Hours: 3} \\ CSC 1203 Computer Concepts and Applications \\ *DRF 1363 Civil Drafting and Design \\ *DRF 2042 CATIA Fundamentals \\ *DRF 2243 Mechanical Design II (CAD) \\ *DRF 2393 Basic Solid Works \\ DRF 2233 Autodesk Inventor \\ QCT 1313 Introduction to Quality Control \\ Total Credit Hours: 60-62 \\ *Course has prerequisite (See course description section of catalog).
}

\section*{DRAFTING AND DESIGN \\ ENGINEERING TECHNOLOGY}

Drafting and Computer Aided Design Certificate

\section*{Program Description:}

The Certificate of Achievement in Drafting and Computer Aided Design Technology is designed to recognize the accomplishment of students who have completed the technical coursework required for the Associate of Applied Science degree in Design Engineering Technology, but not the General Education requirements. This certificate is a logical goal for students seeking the technical skill level of the Associate Degree, but whose circumstances impose a more limited time frame than the Degree requires. It also provides documentation of exposure to both basic Drafting and more advanced Design theory and practice.

\section*{Degree Awarded: Certificate of Achievement \\ Specialized Course Requirements Credit Hours: 16-18 \\ Drafting and Computer Aided Design Technology 6 hours \\ DRF 1323 Engineering Drawing I \\ *DRF 2203 AutoCad 2}

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: TECHNOLOGY}

\section*{Engineering 3 hours}
*EGR 1443 Geometric Dimensioning and Tolerancing

\section*{Mathematics 4-6 hours}

MTH 1454 Technical Mathematics
or the following two courses:
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry
Quality Control 3 hours
*QCT 1223 Blueprint Reading

\section*{Controlled Electives Credit Hours: 6-8}
*DRF 1363 Civil Drafting and Design
*DRF 2023 Pro/Engineer Modeling
*DRF 2033 Pro/Engineer Manufacturing
DRF 2042 CATIA Fundamentals
*DRF 2223 Mechanical Design I (CAD)
DRF 2233 Autodesk Inventor
*DRF 2243 Mechanical Design II (CAD)
DRF 2393 Basic Solid Works
*EGR 1132 Engineering Design with Computer-Aided Design
Total Credit Hours: 22-26
*Course has prerequisite (See course description section of catalog)

\section*{ELECTRONICS ENGINEERING TECHNOLOGY OSU Transfer Option 063 \\ See Science, Technology, Engineering and Mathematics area of study: Engineering.}

\section*{ELECTRONICS TECHNOLOGY PROGRAMS}

For More Information Contact:
Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7451

\section*{ELECTRONICS TECHNOLOGY \\ NSU Transfer Option \\ 064}

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses in the first two years of a four year Bachelor of Science in Technology. Students should consult the Northeastern State University catalog and carefully select courses that meet requirements for both baccalaureate and associate degree programs.
Degree Awarded: Associate in Science

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7451
General Education Requirements Credit Hours:34

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II
Geography 3 hours
GEO 1043 Introduction to Cultural Geography
Humanities 6 hours
See the General Education Requirements page for complete list.
Mathematics 6 hours
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry

\section*{Science 4 hours}
*PHY 1114 General Physics

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I
Specialized Course Requirements Credit Hours: 33
**Apprenticeship 3 hours
APP 1203 Apprenticeship
Computer Information Systems 3 hours
Select any 3 hours of CSC/CIS courses.

\section*{Electronics 27 hours}
*ELE 1212 Introduction to Electricity
*ELE 1303 DC Circuit Analysis
*ELE 1313 AC Circuit Analysis
*ELE 1503 Programmable Controls
*ELE 2215 Digital Circuits
*ELE 2244 Amplifiers I
*ELE 2525 Wireless Communications
*ELE 2622 Electronic Design

\section*{Total Credit Hours: 67}
*Course has prerequisite (See course description section of catalog).
**This 3 credit hour apprenticeship will be awarded to those students who have successfully completed the equivalent of 3 credit hours of Computer Science, Electronics or Telecommunications from a Career Technology Center. (Students planning to transfer to pursue a bachelor's degree should contact Northeast Campus Counseling Center staff to select courses that will transfer.)
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: TECHNOLOGY}

\section*{ELECTRONICS TECHNOLOGY}

650

\section*{Program Description:}

This program prepares the student with the necessary knowledge and skills to gain employment as an engineering technician, field service technician, research and development technician, or production technician in the field of electronics and be able to advance to positions of increasing responsibility. This program will help the graduate prepare to take the examination to become a Certified Engineering Technician given by the Institute for Certification of Engineering Technicians.

\section*{Degree Awarded: Associate in Applied Science}

\section*{General Education Requirements Credit Hours: 20-22}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select one course from the following:
*ENG 1213 Freshman Composition II
**ENG 2333 Technical/Professional Writing

\section*{Mathematics 4-6 hours}
*MTH 1454 Technical Mathematics
or the following two courses:
***MTH 1513 College Algebra
***MTH 1613 Plane Trigonometry

\section*{Science 4 hours}

Select one course from the following:
*PHY 1114 General Physics
*PSC 1114 General Physical Science

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 43
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications
Drafting and Design Engineering Technology 3 hours
DRF 1323 Engineering Drawing with CAD
Electronics Technology \(\mathbf{2 8}\) hours
*ELE 1212 Introduction to Electricity
*ELE 1303 DC Circuit Analysis
*ELE 1313 AC Circuit Analysis
*ELE 1503 Programmable Control
*ELE 2215 Digital Circuits
*ELE 2244 Amplifiers I
*ELE 2333 Amplifiers II
*ELE 2525 Wireless Communications

\section*{Engineering 3 hours}

EGR 1313 Manufacturing Processes
Numerical Control/Machinist Technology 2 hours
NCM 1212 Introduction to Machining

Controlled Electives Credit Hours:4
*ELE 2622 Electronic Design Alternative
*ELE/ALT 1442 Introduction to Alternative Energy
*ELE 2632 Introduction to Nanotechnology

\section*{Total Credit Hours: 63-65}
*Course has prerequisite (See course description section of the catalog).
**It is highly recommended that students select this course as part of their English requirements.
***Recommended for students who plan to transfer to a four-year program.

\section*{ELECTRONICS TECHNOLOGY \\ Certificate}

\section*{Program Description:}

This program prepares the student with the necessary knowledge and skills to gain employment as an engineering technician, field service technician, research and development technician, or production technician in the field of electronics and be able to advance to positions of increasing responsibility. This program will help the graduate prepare to take the examination to become a Certified Engineering Technician given by the Institute for Certification of Engineering Technicians.
Degree Awarded: Certificate of Achievement

\section*{Certificate Requirements Credit Hours: 21}

Electronics Technology 17 hours
*ELE 1212 Introduction to Electricity
*ELE 1303 DC Circuit Analysis
*ELE 1313 AC Circuit Analysis
*ELE 2215 Digital Circuits
*ELE 2244 Amplifiers I
Mathematics 4 hours
*MTH 1454 Technical Mathematics

\section*{Total Credit Hours: 21}
*Course has prerequisite (See course description section of the catalog).

\section*{ELECTRONICS TECHNOLOGY Alternative Energy Option}

\section*{Pending Approval of the Oklahoma State Regents for Higher} Education

\section*{Program Description:}

This multi-functional program is designed for students interested in working with alternative/renewable energy. Oklahoma is ranked \(6^{\text {th }}\) in the United States for wind mill utility operation and is growing with the reduced cost of manufacturing solar cells. The student will measure and analyze both wind and solar power systems. This program will also study Biofuels and Hydrogen power conversion systems.
Degree Awarded: Associate in Applied Science
General Education Requirements Credit Hours: 20-22

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: TECHNOLOGY}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Mathematics 4-6 hours}
*MTH 1454 Technical Mathematics
or the following two courses:
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry

\section*{Science 4 hours}

Select one course from the following:
*PHY 1114 General Physics
*PSC 1114 General Physical Science

\section*{Specialized Course Requirements Credit Hours:41}

Computer Information Systems. 3 hours
CSC 1203 Computer Concepts and Applications
Drafting and Design 3 hours
DRF 1323 Engineering Drawing with CAD
Alternative Energy 13 hours
ALT/ELE 1223 Hydraulics and Pneumatics
*ALT/ELE 1442 Introduction to Alternative Energy
ALT 1453 Solar Energy Systems
ALT 1463 Wind Energy Systems
ALT 1472 Renewable Design Project
Electronics 14 hours
*ELE 1212 Introduction to Electricity
*ELE 1303 DC Circuits
*ELE 1313 AC Circuits
*ELE 1503 Programmable Control
*ELE 2533 Automation Control
Engineering 6 hours
EGR 1363 Metallurgy
EGR 1463 Composite Materials
Numerical Control 2 hours
NCM 1212 Introduction to Machining
Total Credit Hours: 61-63
* Course has prerequisite. (See course description section of catalog).

ELECTRONICS TECHNOLOGY
Alternative Energy Certificate Option
608
Pending Approval of the Oklahoma State Regents for Higher Education

\section*{Program Description:}

This short program is designed for those interested in working with alternative/renewable energy or wanting a better understanding of the different energy production fields.

Oklahoma is ranked \(6^{\text {th }}\) in the US for wind mill utility operation and is growing. Solar has long been a part in alternative energy production and is growing with the reduced cost of manufacturing solar cells. The student will measure and analyze both wind and solar power systems. This program also studies Biofuels and Hydrogen power conversion systems.

\section*{Degree Awarded: Certificate of Achievement}

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast (918) 595-7542
Counseling Center: Northeast (918) 595-7451

\section*{Certificate Requirements Credit Hours: 20-22}

\section*{Mathematics 4-6 hours}
*MTH 1454 Technical Mathematics
or the following two courses:
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry
Alternative Energy 11 hours
ALT/ELE 1223 Hydraulics and Pneumatics
*ALT/ELE 1442 Introduction to Alternative Energy
ALT 1453 Solar Energy Systems
ALT 1463 Wind Energy Systems

\section*{Electronics 5 hours}
*ELE 1212 Introduction to Electricity and select one course from the following:
*ELE 1503 Programmable Control
*ELE 2533 Automation Control
Total Credit Hours 20-22
* Course has prerequisite. (See course description section of catalog).

\section*{ELECTRONICS TECHNOLOGY \\ Biomedical Equipment Technology Option}

Program Description:
This program prepares the student with the necessary knowledge and skills to gain employment as a biomedical equipment technician. The biomedical equipment technician is qualified for positions in medical research and development, operation calibration, and maintenance of medical equipment for hospitals, equipment suppliers, and manufacturers. Upon completion of the program, the graduate may apply for the certification test given by the board of examiners for the International Certification Commission for the Certified Biomedical Equipment Technician (CBET)

\section*{Degree Awarded: Associate in Applied Science}

General Education Requirements Credit Hours: 20-22

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Mathematics 4-6 hours}
*MTH 1454 Technical Mathematics
or the following two courses:
***MTH 1513 College Algebra
***MTH 1613 Plane Trigonometry

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: TECHNOLOGY}

\section*{Science 4 hours}

Select one course from the following:
*PHY 1114 General Physics I
*PSC 1114 General Physical Science

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following: HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours:45 \\ Biomedical Equipment 15 hours}
*BET 1304 Introduction to Biomedical Electronics
*BET 2343 Biomedical Electronics Theory I
*BET 2353 Biomedical Electronics Theory II
*BET 2382 Contemporary Issues in Biomedical Electronics
and select one course from the following:
*BET 2373 Biomedical Electronics Clinical
*CSC 2103 Networking Technology
Computer Information Systems 6 hours
CSC 1203 Computer Concepts and Applications
*CSC 1263 Networking Fundamentals
Electronics Technology 24 hours
*ELE 1212 Introduction to Electricity
*ELE 1303 DC Circuit Analysis
*ELE 1313 AC Circuit Analysis
*ELE 2215 Digital Circuits
*ELE 2244 Amplifiers I
*ELE 2525 Wireless Communication
*ELE/NST 2632 Introduction to Nanotechnology
Total Credit Hours: 65-67
*Course has prerequisite (See course description section of catalog).
***It is highly recommended that students select this course as part of this program.

\section*{ELECTRONICS TECHNOLOGY \\ Biomedical Equipment Technology Certificate Option 650A \\ Program Description: \\ This program is designed to prepare students who have already obtained an associate or bachelor's degree in science to work in the medical electronic field.}

\section*{Degree Awarded:Certificate of Achievement}

General Education Requirements Credit Hours:4-6

\section*{Mathematics 4-6 hours}
*MTH 1454 Technical Mathematics
or the following two courses:
***MTH 1513 College Algebra
***MTH 1613 Plane Trigonometry

\section*{Specialized Course Requirements Credit Hours: 27}

\section*{Biomedical Equipment 10 hours}
*BET 1304 Introduction to Biomedical Electronics
*BET 2343 Biomedical Electronics Theory I
*BET 2353 Biomedical Electronics Theory II
Electronics Technology 17 hours
*ELE 1212 Introduction to Electricity
*ELE 1303 DC Circuit Analysis
*ELE 1313 AC Circuit Analysis
*ELE 2215 Digital Circuits
*ELE 2244 Amplifiers I
Total Credit Hours: 31-33
*Course has prerequisite (See course description section of catalog). ***It is highly recommended that students select this course as part of this program.

\section*{ELECTRONICS TECHNOLOGY \\ Electro-Mechanical Manufacturing Option \\ 650 H}

\section*{Program Description:}

This multi functional program is designed for students to gain a successful career in many of Tulsa's manufacturing jobs. Automation is the lead technology used to control processes in manufacturing circles. Students will receive training in electronics, fluid power, PLCs, and motor control systems that applies to industry needs. Energy and composite material will be introduced with laboratory experiences. This program is also designed to provide upgrade training to those already employed in a manufacturing environment.

\section*{Degree Awarded: Associate in Applied Science}

General Education Requirements Credit Hours: 20-22

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Mathematics 4-6 hours}
*MTH 1454 Technical Mathematics or the following two courses:
***MTH 1513 College Algebra
***MTH 1613 Plane Trigonometry

\section*{Science 4 hours}

Select one course from the following:
*PHY 1114 General Physics I
*PSC 1114 General Physical Science

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present
Specialized Course Requirements Credit Hours: 41

\section*{Computer Information Systems 3 hours}

CSC 1203 Computer Concepts and Applications
Drafting and Design Engineering Technology 3 hours
DRF 1323 Engineering Drawing with CAD
Electronics Technology 18 hours
*ELE 1212 Introduction to Electricity
*ELE/ALT 1223 Hydraulics and Pneumatics
*ELE/ALT 1442 Introduction to Alternative Energy
*ELE 1503 Programmable Control
*ELE 2215 Digital Circuits
*ELE 2533 Automation Control

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: TECHNOLOGY}

\section*{Engineering 9 hours}

EGR 1313 Manufacturing Processes
EGR 1363 Metallurgy
EGR/NST 1463 Composite Materials
Numerical Control/Machinist Technology 2 hours
NCM 1212 Introduction to Machining
Controlled Electives Credit Hours: 6
**APP 1203 Apprenticeship
*ELE 1303 DC Circuit Analysis
*ELE 1313 AC Circuit Analysis
MGT 1353 Management Essentials
QCT 1313 Introduction to Quality Control
Total Credit Hours: 61-63
\({ }^{*}\) Course has prerequisite (See course description section of catalog).
**This 3 credit hour block of classes will be awarded to those students who have successfully completed the equivalent of 3 credit hours related coursework from a career technology center, industry training or 3 credit hours of Science and Engineering classes at TCC.
***It is highly recommended that students select this course as part of this program.

\section*{ELECTRONICS TECHNOLOGY}

Nanotechnology Option
6501

\section*{Program Description:}

This program prepares the student with a background in the growing field of nanotechnology. Nanotechnology is currently in the forefront of all other new technologies because nano and micro substances is a large part of electrical, chemical, and biological science. This option will help the graduate to obtain employment in the nano sciences or as a field service technician, engineering and research technician or systems electronic technician.

\section*{Degree Awarded: Associate in Applied Science General Education Requirements Credit Hours: 28-31 \\ Biology 4 hours \\ BIO 1114 General Biology for Non-Majors \\ BIO 1224 Introduction to Biology for Majors}

\section*{Chemistry 4-5 hours}
*CHE 1114 Principles of Chemistry
*CHE 1315 General Chemistry I

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
and select 3 credit hours from the following:
*ENG 1213 Freshman Composition II
**ENG 2333 Technical / Professional Writing

\section*{Mathematics 4-6 hours}
*MTH 1454 Technical Mathematics
or the following two courses:
***MTH 1513 College Algebra
***MTH 1613 Plane Trigonometry

\section*{Science 4 hours}

Select one course from the following:
*PHY 1114 General Physics
*PSC 1114 General Physical Science
Social Science 6 hours

POS 1113 American Federal Government and select one of the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Specialized Course Requirements Credit Hours: 36}

\section*{Computer Information System 3 hours}

CSC 1203 Computer Concepts and Applications
Biomedical Equipment Technology 4 hours
BET 1304 Introduction to Biomedical Electronics
Electronics Technology 22 hours
*ELE 1212 Introduction to Electricity
*ELE 1303 DC Circuit Analysis
*ELE 1313 AC Circuit Analysis
*ELE 2215 Digital Circuits
*ELE 2244 Amplifiers I
*ELE 2525 Wireless Communications

\section*{Nanotechnology 8 hours}
*NST/ELE 2632 Introduction to Nanotechnology
*NST/ELE 2643 Nanoelectronics
*NST/ELE 2653 Nanoscience

\section*{Total Credit Hours 65-68}
*Course has prerequisite (see course description of the catalog)
** It is highly recommended that students select this course as part of their English requirements.
***Recommended for students who plan to transfer to a four-year program.

\section*{ELECTRONIC TECHNOLOGY \\ Nanotechnology Certificate Option}

\section*{Program Description:}

This program certificate is designed to prepare the engineering technologist student with a background in Nanotechnology. The study of Nanotechnology includes chemistry, electronics, bio science, plastics, and micro mechanical machines. It is recommended that the additional math and science courses be completed before starting this course work.
Degree Awarded: Certificate of Achievement
General Education Requirements Credit Hours: 7-9
Chemistry 4-5 hours
select one course from the following:
*CHE 1114 Principles of Chemistry
*CHE 1315 General Chemistry I
Mathematics 3-4 hours
select one course from the following:
*MTH 1454 Technical Mathematics
***MTH 1513 College Algebra
Specialized Course Requirements Credit Hours: 10
Electronics Technology 2 hours
*ELE 1212 Introduction to Electricity

\section*{Nanotechnology/Electronics 8 hours}

NST/EGR 1463 Composite Materials
*NST/ELE 2632 Introduction to Nanotechnology and select one course from the following:

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: TECHNOLOGY}
*NST/ELE 2643 Nanoelectronics
*NST/ELE 2653 Nanoscience
Total Credit Hours: 17-19
*Course has prerequisite (See course description section of the catalog).
***Recommended for students who plan to transfer to a four year program.

\section*{ELECTRONICS TECHNOLOGY}
U.S. Navy Technology Option

650F
Program Description:
Successful completion of both blocks of the college coursework: 1) preliminary studies, including general education requirements and specific technical courses at the participating state system institutions, and 2) the successful completion of all USN technical training programs curricula and job experience (college credit recommended by the American Council of Education [ACE] guidelines) is required before the student is eligible to receive an appropriate AAS degree.
Degree Awarded: Associate in Applied Science
General Education Requirements Credit Hours: 18

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
select one course from the following:
*ENG 1213 Freshman Composition II
*ENG 2333 Technical/Professional Writing

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present
Mathematics 3 hours
*MTH 1513 College Algebra

\section*{General Education Electives 3 hours}

Choose any 3 hours of General Education.
Specialized Course Requirements **Credit Hours: 30
Navy Technical Training Schools (ACE Credit) 30 hours

\section*{Controlled Electives: Credit Hours: 12}

Electives must be chosen in relation to the student's occupational /educational goal and approved by the instructor to enter the program.
***Total Credit Hours: 60
*Course has prerequisite (See course description section of catalog).
**Students with less than 30 hours ACE credit should contact counseling or testing for other options.
\({ }^{* * *}\) Minimum of 15 credit hours must be completed through the degree granting institution.

ELECTRONICS ENGINEERING TECHNOLOGY OSU Transfer Option 063
See Science, Technology, Engineering and Mathematics area of study: Engineering.

\section*{ELECTRONICS ENGINEERING \\ TECHNOLOGY}

OSU Transfer Option
063

\section*{Program Description:}

This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year Bachelor of Science in Electronics Engineering Technology curriculum. Students should consult the Oklahoma State University catalog and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

For More Information Contact:
Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7451
General Education Requirements Credit Hours:42
Chemistry 5 hours
*CHE 1315 General Chemistry I

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Humanities 6 hours}

See the General Education Requirements page for complete list

\section*{Mathematics 8 hours}
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II

\section*{Physics 8 hours}
*PHY 1114 General Physics I
*PHY 1214 General Physics II

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Required Electives 3 hours}

SPE 1113 Speech Communication

\section*{Specialized Course Requirements Credit Hours: 24}

Computer Information Systems 4 hours
*CSC 1901 UNIX
*CSC 2473 C Language
Electronics Technology 20 hours
*ELE 1303 DC Circuit Analysis
*ELE 1313 AC Circuit Analysis
*ELE 1212 Introduction to Electricity
*ELE 2215 Digital Circuits
*ELE 2244 Amplifiers I
*ELE 2333 Amplifiers II

\section*{Total Credit Hours: 66}
*Course has prerequisite (See course description section of catalog). To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements. Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{SCIENCE, TECHNOLOGY, ENGINEERING \& MATHEMATICS: ENGINEERING}

\section*{ENGINEERING}

\section*{065}

\section*{Program Description:}

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Engineering may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalogs of the universities where the four-year degree is offered and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at the university of their choice.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7451

\section*{General Education Requirements Credit Hours: 21}

See the General Education Requirements for the complete list, including the \(\mathbf{3}\) hours of required electives from the following: Psychology, Social Sciences, Foreign Languages, Fine Arts (Art, Music, Theatre). Science, Mathematics, and elective requirements satisfied in Specialized Course Requirements.

\section*{Specialized Course Requirements Credit Hours:45}

\section*{Chemistry 5 hours}
*CHE 1315 General Chemistry I

\section*{Engineering 17 hours}
*EGR 1132 Engineering Design with Computer Aided Design
*EGR 2103 Engineering Statics
*EGR 2143 Engineering Strength of Materials
*EGR 2213 Thermodynamics
*EGR 2523 Elementary Dynamics
*EGR 2613 Introduction to Electrical Science
Mathematics 15 hours
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II
*MTH 2134 Analytic Geometry and Calculus III
*MTH 2613 Elementary Differential Equations

\section*{Physics 8 hours}
*PHY 2034 Engineering Physics I
*PHY 2124 Engineering Physics II
Recommended Electives Credit Hours: 1-5
+*CHE 1415 General Chemistry II
CSC 1203 Computer Concepts and Applications
**EGR 1111 Introduction to Engineering
**EGR 1242 Introductory Engineering Computer Programming
Total Credit Hours: 67-71
\({ }^{*}\) Course has prerequisite (See course description section of catalog).
**Recommended for all engineering majors.
+Recommended for students wishing to complete a BS degree in chemical or environmental engineering.
Students should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible. Courses needed to remedy any necessary deficiency in mathematics may, in some cases, meet general education requirements.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{ENGINEERING}

Electrical and Computer Engineering
OSU Transfer Option

\section*{Program Description:}

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Electrical and Computer Engineering may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalogs of the universities where the four-year degree is offered and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at the university of their choice. Degree Awarded: Associate in Science.

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7451
General Education Requirements Credit Hours: 21
See the General Education Requirements for the complete list, including the 3 hours of required electives from the following: Psychology, Social Sciences, Foreign Languages, Fine Arts (Art, Music, Theatre). Science, Mathematics, and elective requirements satisfied in Specialized Course Requirements

\section*{Specialized Course Requirements Credit Hours:46}

Chemistry 5 hours
*CHE 1315 General Chemistry I

\section*{Engineering 12 hours}

EGR 1111 Introduction to Engineering
*EGR 1132 Engineering Design with Computer Aided Design
*EGR 2103 Engineering Statics
*EGR 2523 Elementary Dynamics
*EGR 2613 Introduction to Electrical Science

\section*{Mathematics 15 hours}
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II
*MTH 2134 Analytic Geometry and Calculus III
*MTH 2613 Elementary Differential Equations

\section*{Physics 8 hours}
*PHY 2034 Engineering Physics I
*PHY 2124 Engineering Physics II

\section*{Computer Information Systems 6 hours}
*CSC 2473 C Language
*CSC 2843 C++ Programming Language

\section*{Total Credit Hours: 67}
*Course has prerequisite (See course description section of catalog). Students should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible. Courses needed to remedy any necessary deficiency in mathematics may, in some cases, meet general education requirements. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{SCIENCE,TECHNOLOGY,ENGINEERING \& MATHEMATICS: MATHEMATICS}

\section*{ENGINEERING \\ Mechanical Engineering \\ OSU Transfer Option}

065 B

\section*{Program Description:}

Students who are interested in pursuing a course of study leading to a baccalaureate degree in Mechanical Engineering may complete the freshman and sophomore general education and prerequisite courses at TCC. Students should visit a TCC counseling office in order to consult the transfer catalogs of the universities where the four-year degree is offered and design a program of study and select courses that meet requirements for both the TCC associate degree and the baccalaureate degree at the university of their choice.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science, Mathematics, and Engineering Technology Division: Northeast: (918) 595-7542
Counseling Center: Northeast: (918) 595-7451

\section*{General Education Requirements Credit Hours: 21}

See the General Education Requirements for the complete list, including the 3 hours of required electives from the following: Psychology, Social Sciences, Foreign Languages, Fine Arts (Art, Music, Theatre).
Science, Mathematics, and elective requirements satisfied in Specialized Course Requirements.

\section*{Specialized Course Requirements Credit Hours:48}

\section*{Chemistry 5 hours}
*CHE 1315 General Chemistry I

\section*{Engineering 20 hours}

EGR 1111 Introduction to Engineering
*EGR 1132 Engineering Design with Computer Aided Design
**EGR 1242 Introductory Engineering Computer Programming
*EGR 2103 Engineering Statics
*EGR 2143 Engineering Strength of Materials
*EGR 2213 Thermodynamics
*EGR 2523 Elementary Dynamics
*EGR 2613 Introduction to Electrical Science

\section*{Mathematics 15 hours}
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II
*MTH 2134 Analytic Geometry and Calculus III
*MTH 2613 Elementary Differential Equations

\section*{Physics 8 hours}
*PHY 2034 Engineering Physics I
*PHY 2124 Engineering Physics II

\section*{Total Credit Hours: 69}
*Course has prerequisite (See course description section of catalog).
**Recommended for all engineering majors.
Students should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible. Courses needed to remedy any necessary deficiency in mathematics may, in some cases, meet general education requirements. To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count toward the associate degree requirements in this curriculum at TCC.

\section*{MATHEMATICS}

Program Description:
This suggested curriculum includes TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. This degree is designed for the student interested in an academic field that reflects the real world through numeric patterns, geometric forms, and analytical processes. A degree in mathematics provides students with tools for lifelong learning in a wide variety of other careers. The mathematics graduate will be prepared to be involved in fields that blend quantitative skills with applied areas such as chemistry, engineering, and physics. Students considering this major should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs.

\section*{Degree Awarded: Associate in Science}

\section*{For More Information Contact:}

Science and Mathematics Division:
Metro: (918) 595-7334,Northeast: (918) 595-7542,
Southeast: (918) 595-7742,West: (918) 595-8193
Counseling Centers: Metro: (918) 595-7151,
Northeast:(918) 595-7451, Southeast: (918) 595-7651,
West: (918) 595-8176
General Education Requirements Credit Hours:37
See the General Education Requirements for the complete list.

\section*{Specialized Course Requirements Credit Hours: 15}

\section*{Mathematics 15 hours}
*MTH 2114 Analytic Geometry and Calculus I
*MTH 2124 Analytic Geometry and Calculus II
*MTH 2134 Analytic Geometry and Calculus III
*MTH 2613 Elementary Differential Equations

\section*{Recommended Electives Credit Hours:9}
*CHE 1315 General Chemistry I
*CHE 1415 General Chemistry II
CSC 1203 Computer Concepts and Applications
*MTH 1613 Plane Trigonometry
*MTH 1715 College Algebra and Trigonometry
*MTH 2193 Elementary Statistics
*PHY 1114 General Physics I
and
*PHY 1214 General Physics II
or
*PHY 2034 Engineering Physics I
and
*PHY 2124 Engineering Physics II

\section*{Total Credit Hours: 61}
*Course has prerequisite (See course description section of catalog). Students should select hours from the recommended field of concentration and/or recommended electives to satisfy general education requirements where possible.
To receive an A.A. or A.S. Degree, students must demonstrate computer proficiency. Please see page 22 for complete requirements.
Physical Education activity classes do not count

\section*{Transportation, Distribution \& Logistics Area of Study}

AA: Associate in Arts, university transfer degree • AS: Associate in Science, university transfer degree AAS: Associate in Applied Science, workforce degree - CER: Certificate of Achievement
University transfer degree programs include TCC degree requirements and courses generally completed in the first two years of a four-year curriculum. Students should consult the catalog of the college or university to which they are planning to transfer and carefully select courses that will meet requirements for both the baccalaureate and associate degree programs. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.
Workforce development degree and certificate programs are specifically designed to prepare students for direct entry into the workforce. They may advance students within their current career or open doors to new career opportunities. Traditionally these programs were not designed for transfer;however, varying amounts of coursework - and in some cases entire degrees - may now apply towards a degree at a four-year institution; the number of applicable transfer hours will vary from one university to another. Check with an advisor for further information. Final decisions regarding the transferability of courses are made by the school to which the student plans to transfer.

Aviation Sciences Technology options:
Flight Simulation Specialist Technician, AAS
Aviation Maintenance Technology, OSU Transfer AAS
Avionics, OSU Transfer AAS
Management, OSU Transfer AAS
Professional Pilot, OSU Transfer

For more information on Aviation Science Programs:
Science, Math, and Engineering Technology Division,
Northeast: (918) 595-7542
Counseling Center, Northeast: (918) 595-7451
TTC Riverside Campus
801 E. 91st St.
Tulsa, OK 74132
Counseling Center Riverside: (918) 828-4041


\section*{TRANSPORTATION, DISTRIBUTION \& LOGISTICS}

\section*{AVIATION MAINTENANCE TECHNOLOGY OSU Transfer Option \\ 528A}

\section*{Program Description:}

This option provides an opportunity for Federal Aviation Administration Airframe and Powerplants Certified Technicians to develop skills in mathematics, physics, humanities and social sciences and to earn an Associate in Applied Science Degree. This option was developed by a joint effort of Tulsa Technology Center, Tulsa Community College, and Oklahoma State University.
Students should consult with the Tulsa Community College aviation counselor at the Tulsa Technology Center Riverside Campus before enrolling in this option.

\section*{Degree Awarded: Associate in Applied Science}

\section*{General Education Requirements Credit Hours: 35}

\section*{Economics 3 hours}
*ECO 2023 Principles of Microeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Geography 3 hours}

GEO 1043 Introduction to Cultural Geography

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics

\section*{Sciences 8 hours}

AST 1104 General Astronomy
*PHY 1114 General Physics I
*CHE 1114 Principles of Chemistry
BIO 1114 General Biology for Non-Majors

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 33}

Aviation Sciences Technology 30 hour
**AVS 1209 Aviation Maintenance
** *AVS 1239 Airframe
** *AVS 1259 Powerplant
AVS 2113 History of Aviation
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications

\section*{Total Credit Hours: 68}
*Course has prerequisite (See course description section of catalog).
**Students who have graduated from an FAA approved Aviation Maintenance Technology Program and have a valid FAA license may apply for advanced standing credit in these courses. Application must be made in the Counseling and Testing Center at the Northeast Campus.

NOTE - Specialized Course Requirements. These courses should be taken at Tulsa Technology Center or any other educational institution which offers FAA approved programs.
NOTE - It is recommended that students take MGT 2103 Workforce Development Internship during the last semester before graduation to enhance employability.

\section*{AVIATION SCIENCES TECHNOLOGY Avionics- OSU Transfer Option}

\section*{Program Description:}

This option provides an opportunity for graduates of the Tulsa Technology Center Avionics program or individuals with documented equivalent training to develop skills in mathematics, physics, humanities and social sciences and to earn an Associate in Applied Science Degree. This option was developed by a joint effort of Tulsa Technology Center,Tulsa Community College, and Oklahoma State University. Students should consult with the Tulsa Community College aviation counselor at the Tulsa Technology Center Riverside Campus before enrolling in this option.

\section*{Degree Awarded: Associate in Applied Science \\ General Education Requirements - Credit Hours: 41}

Economics 3 hours
*ECO 2023 Principles of Microeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Geography 3 hours}

GEO 1043 Introduction to Cultural Geography

\section*{Humanities 6 hours}

HUM 2113 Humanities I
HUM 2223 Humanities II
PHI 1113 Introduction to Philosophy
PHI 1143 Introduction to Business Ethics: Business Issues
Mathematics 6 hours
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry

\section*{Sciences 8 hours}

AST 1104 General Astronomy
BIO 1114 General Biology for Non-Majors
*CHE 1114 Principles of Chemistry
*PHY 1114 General Physics I

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\title{
TRANSPORTATION, DISTRIBUTION \& LOGISTICS
}

\section*{Specialized Course Requirements Credit Hours: 31}

\section*{Aviation Sciences Technology 31 hours}
+*AVS 1007 Avionics I
+*AVS 1017 Avionics II
+*AVS 1027 Avionics III
+*AVS 1037 Avionics IV
AVS 2113 History of Aviation

\section*{Total Credit Hours: 72}
*Course has prerequisite (See course description section of catalog). +Course must be taken through Tulsa Technology Center - Riverside Campus.
NOTE - Specialized Course Requirements. These courses should be taken at Tulsa Technology Center or any other educational Institution which offers FCC approved programs.
NOTE - It is recommended that students take MGT 2103 Workforce Development Internship during the last semester before graduation to enhance employability.

AVIATION SCIENCES TECHNOLOGY Flight Simulation Specialist

528E
FlightSafety International Option

\section*{Program Description:}

This program is intended to develop the basic skills and experience needed to function as a Simulation Test Engineer at FlightSafety International. It is designed to prepare the student with knowledge in physics, aviation, electronics, digital computers, hydraulics and other skills necessary to assemble, modify, troubleshoot and operate complex training equipment like flight simulators. It is intended for both employees and non-employees of FlightSafety International. Students should consult with the Tulsa Community College aviation counselor at the Tulsa Technology Center Riverside Campus before enrolling in this option.

\section*{Degree Awarded: Associate in Applied Science \\ General Education Requirements Credit Hours: 22}

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following
HIS 1483 U.S. History 1492 to Civil War Era
HIS 1493 U.S. History Civil War Era to Present

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry

\section*{Sciences 4 hours}
*PHY 1114 General Physics I

\section*{Specialized Course Requirements Credit Hours:44}

\section*{Aviation Sciences Technology 31 hours}

AVS 1113 Private Pilot Ground School
***AVS 1007 Avionics I
* **AVS 1017 Avionics II
* **AVS 1027 Avionics III
* **AVS 1037 Avionics IV

\section*{Electronics 6 hours}
*ELE 1223 Fluid Power
*ELE 2253 Servo-Systems
Computer Information Systems 4 hours
*CSC 1901 Beginning UNIX
*CSC 2753 Introduction to Networking

\section*{Total Credit Hours: 63}
*Course has prerequisite (See course description section of catalog). **These courses should be taken at Tulsa Technology Center or any other educational institution which offers FCC approved programs.

\section*{AVIATION SCIENCES TECHNOLOGY \\ Management Option-OSU Transfer Option \\ 528 D}

\section*{Program Description:}

This option is designed to educate the future managers for the aviation industry. The curriculum stresses scientific principles, the human side of management, computer knowledge, critical thinking, cognitive and analytical skills, and communication skills, in addition to mathematics, science and technology. Upon successful completion, the student will be awarded an Associate in Applied Science degree. This option was developed by a joint effort of Tulsa Community College and Oklahoma State University. Students should consult with the Tulsa Community College aviation counselor at the Tulsa Technology Center Riverside Campus before enrolling in this option.

\section*{Degree Awarded: Associate in Applied Science General Education Requirements Credit Hours: 41}

\section*{Economics 3 hours}
*ECO 2023 Principles of Microeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Geography 3 hours}

GEO 1043 Introduction to Cultural Geography

\section*{Humanities 3 hours}

HUM 2113 Humanities I
HUM 2223 Humanities II
PHI 1113 Introduction to Philosophy
PHI 1143 Introduction to Business Ethics: Business Issues
Mathematics 6 hours
*MTH 1513 College Algebra
*MTH 2193 Elementary Statistics

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Sciences 8 hours}

AST 1104 General Astronomy
BIO 1114 General Biology for Non-Majors
*CHE 1114 Principles of Chemistry
*PHY 1114 General Physics I
(One course must be a laboratory science)

\section*{TRANSPORTATION, DISTRIBUTION \& LOGISTICS}

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 21}

\section*{Accounting 6 hours}

ACC 2213 Financial Accounting
*ACC 2223 Management Accounting

\section*{Aviation Sciences Technology 6 hours}

AVS 1113 Private Pilot Ground School
AVS 2113 History of Aviation
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications

\section*{Economics 3 hours}

ECO 2013 Principles of Macroeconomics
Management 3 hours
MGT 1353 Management Essentials

\section*{Total Credit Hours: 62}
*Course has prerequisite (See course description section of catalog). NOTE - It is recommended that students take MGT 2103 Workforce Development Internship during the last semester before graduation to enhance employability.

\section*{AVIATION SCIENCES TECHNOLOGY Professional Pilot Option - OSU Transfer Option}

\section*{Program Description:}

This option provides degree and courses generally completed in the freshman and sophomore year of the Bachelor curriculum at Oklahoma State University. The student will be provided with the ground school and flight training necessary to acquire a Federal Aviation Administration (FAA) Private Pilot Instrument and Commercial certification. Upon successful completion, the student will be awarded an Associate in Applied Science degree. TCC Professional Pilot School is a FAA Part 141 approved Pilot School.

\section*{Procedures for enrolling in Aviation Courses:}
1. All prospective flight students must meet with the TCC aviation counselor at the Tulsa Technology Center Riverside Campus located at 801 East 91st Street.
2. Potential Flight Students must provide the following documents to the Aviation Counselor:
a. Proof of U.S. Citizenship in form of:
i. An original birth certificate with raised seal documenting birth in the United States or one of its territories.
ii. A valid, unexpired United States passport.
iii. An original U.S. Naturalization Certificate with raised seal, Form N-550 or Form N-570.
iv. An original certification of birth abroad, Form FS-545 or Form DS-1350 or
v. An original Certificate of U.S. Citizenship, Form N-560 or Form N-561.
b. Current FAA Medical

Note: A student seeking a Professional Pilot Degree must complete two or more flight labs through TCC resident credit.

\section*{Degree Awarded: Associate in Applied Science}

General Education Requirements Credit Hours: 37
Economics 3 hours
*ECO 2023 Principles of Microeconomics

\section*{English 6 hours}
*ENG 1113 Freshman Composition I
*ENG 1213 Freshman Composition II

\section*{Geography 3 hours}

GEO 1043 Introduction to Cultural Geography
Humanities 3 hours
HUM 2113 Humanities I
HUM 2223 Humanities II
PHI 1113 Introduction to Philosophy
PHI 1143 Introduction to Business Ethics: Business Issues

\section*{Mathematics 6 hours}
*MTH 1513 College Algebra
*MTH 1613 Plane Trigonometry

\section*{Psychology 3 hours}

PSY 1113 Introduction to Psychology

\section*{Sciences 4 hours}
*PHY 1114 General Physics I

\section*{Social Science 6 hours}

POS 1113 American Federal Government and select one course from the following:
HIS 1483 U.S. History 1492 to Civil War Era HIS 1493 U.S. History Civil War Era to Present

\section*{Speech 3 hours}

SPE 1113 Speech Communication I

\section*{Specialized Course Requirements Credit Hours: 27}

\section*{Aviation Sciences Technology 24 hours}

AVS 1113 Private Pilot Ground School
*AVS 1222 Private Pilot Flight Lab
*AVS 1403 Advanced Theory of Flight
AVS 2113 History of Aviation
*AVS 2122 Cross-Country Flight Lab
*AVS 2132 Instrument Flight Lab
*AVS 2142 Commercial Flight Lab
AVS 2191 Validation Flight
*AVS 2213 Instrument Pilot Ground School
*AVS 2313 Commercial Pilot Ground School
Computer Information Systems 3 hours
CSC 1203 Computer Concepts and Applications

\section*{Total Credit Hours: 64}
*Course has prerequisite (See course description section of catalog). NOTE - All students who are not U.S. Citizens must meet all Transportation Safety Administration clearance requirements before being enrolled in the aviation courses.
NOTE - It is recommended that students take MGT 2103 Workforce Development Internship during the last semester before graduation to enhance employment.


\title{
TC Tulsa Community College Course Descriptions
}

\section*{COURSE DESCRIPTIONS}

Courses at Tulsa Community College are offered in "disciplines." A discipline is a related grouping of courses in a specified subject area. Each course within the discipline is assigned a specific four-digit course number. The prerequisites of each course are listed in the course description. A schedule of classes will be prepared prior to each semester enrollment period. Not all courses listed in the catalog may be offered each semester and certain classes may be offered only on one campus. Please check the current semester schedule for this information.

\section*{COURSE NUMBERING SYSTEM:}
- First digit - The year in which the course is usually taken.*
- Second and third digit - The individual course number within a discipline.
- Fourth - The credit hours of a course.
*(Zero level courses are not included in the admission, retention, or graduation grade point averages.)

Courses used to fulfill general education requirements at TCC are listed in the catalog section titled, General Education Requirements. A code letter following a course title designates the general education category for which the course may be used, as follows:
(A) Analytical and Quantitative Thought
(D) Diversity
(H) Humanities
(I) International or Non-Western Dimension
(L) Laboratory Science
(S) Social and Behavioral Sciences

\section*{ACCOUNTING}

\section*{ACC 1003 - Introduction to Accounting}

\section*{3 Credits}

Provides an understanding of the fundamental principles of double entry accounting as applied to practical business situations. Emphasis is given to the following: financial statements, debit and credit rules of accounting, the accounting cycle, special journals, and payroll accounting. Lecture 3 hours. No Laboratory.

\section*{ACC 1211 - Taxes for the Individual}

\section*{1 Credit}

This course will introduce the basic concepts in federal income tax requirements for individuals. Example returns will be completed using current federal tax forms. Lecture 1 hour. No Laboratory.

\section*{ACC 1221 - Taxes for the Small Business}

\section*{1 Credit}

This course will introduce basic concepts of income tax requirements for small businesses. Example returns will be completed using current federal tax forms. Lecture 1 hour. No Laboratory.

\section*{ACC 1231 - Pro Series Turbo Tax}

1 Credit
This course will concentrate on the installation and
implementation of an individual income tax package using a microcomputer. Consequently, a good working knowledge of IRS tax forms is very beneficial to obtain the most from this course. Initial setup, general operating information, menu options, tax preparation, forecasting, tax record keeping, tax planning and instructions for printing the IRS tax forms will be covered. Data entry exercises will be performed for various tax problems. Requires familiarity with IRS tax forms and basic Windows operating system skills are very beneficial. Lecture and Laboratory 1 hour.

\section*{ACC 1241 - Tax Research on the Internet 1 Credit}

A hands-on course that teaches students to perform tax research, tax planning, and other related topics using the Internet. This course will start with the basics of how to access the Internet to find the latest changes in the tax law, etc. Lecture and Laboratory 1 hour.

\section*{ACC 1251 - Payroll and Human Resources Applications 1 Credit}

A hands-on course in the calculation of payroll, reporting of payroll to governmental agencies, and internal data storage of Personnel information. Lecture and Laboratory 1 hour.

\section*{ACC 1331- Introduction to Peachtree} 1 Credit
This course will provide an in-depth study of automated accounting. It will include the setup and configuration of the software and the use and reporting of modules including General Ledger, Accounts Receivable, Accounts Payable, Payroll and Inventory. The financial statements will be produced as well as other reports. This class will include lecture and inclass simulation. Lecture and Laboratory 1 hour. Prerequisite: Working knowledge of accounting and computers.

\section*{ACC 1411 - Quickbooks Pro}

1 Credit
This course includes the review and use of this powerful accounting tool for both accountants and non-accountants to: 1) record sales, track accounts receivable and accounts payable, 2) record expenses and pay bills, 3) track receipts and shipments/sales of inventory as well as inventory analysis, 4) document work estimates, activity by jobs, and employees/contractors time for invoicing and payroll, 5) process employee payroll, print paychecks, prepare quarterly and annual payroll reports and print W-2 forms, and 6) analyze accounting information through the preparation of various reports including balance sheet and income statement. Lecture and Laboratory 1 hour. Prerequisite:Working knowledge of accounting and computers.

\section*{ACC 1421 - Quicken}

\section*{1 Credit}

This course covers the theory and practice of routine personal or business financial management including entering and paying bills, easier spending analysis, organizing tax information, budgeting, credit management, and financial planning. Lecture and Laboratory 1 hour.

\section*{ACC 1621 - Introduction to Accounting Using Access} 1 Credit
This course provides necessary instructions to open and complete Access tables, queries, forms, and reports to satisfy accounting information requirements for revenue, purchase, payroll, and production cycles. Lecture and Laboratory 1 hour. Prerequisite: CSC 1011.

\section*{ACC 2213 - Financial Accounting}

3 Credits
Theory and practice of measuring and recording financial data for an economic unit: journalizing transactions, adjusting entries for revenue and expense items, inventories, depreciation, internal control with an emphasis on cash, current and long-term liabilities, and accounting for corporation stock transactions. Emphasis also will concentrate on the preparation and use of the income statement, balance sheet, and statement of cash flows. Lecture 3 hours. No Laboratory.

\section*{ACC 2223 - Managerial Accounting}

\section*{3 Credits}

An introduction to managerial accounting. Analysis of cost behavior with an emphasis on the accumulation of product costs and budgeting for planning and performance evaluation. Coverage includes job order costing, process costing, cost-volume-profit analysis, capital budgeting, standard costs, and departmentalization. Lecture 3 hours. No Laboratory. Prerequisites: ACC 2213 with grade of "C" or better.

\section*{ACC 2233 - Financial Accounting Applications}

\section*{3 Credits}

A bridge from Financial Accounting to Intermediate Accounting I with emphasis on measuring/recording business transactions, adjusting entries, the accounting cycle, preparation and interpretation of financial statements, merchandising and manufacturing operations, time value of money and accounting theory. Recommend concurrent enrollment with Managerial Accounting, ACC 2223. Lecture 3 hours. No Laboratory. Prerequisites: ACC 2213 with a grade of "C" or better.

\section*{ACC 2243 - Payroll Administration}

3 Credits
This course will cover a wide spectrum of basic payroll accounting and employment topics for large and small employers. It will concentrate on the administration of the payroll function under the Fair Labor Standard Act and the Internal Revenue Code. Other subjects include overtime pay, payroll taxes, withholding reporting and deposits, voluntary and non-voluntary deductions (cafeteria plans, group health plans, COBRA requirements, worker's compensation issues, pension plans, etc.), and W-2 preparation and reconciliation. The Certified Payroll Professional (CPP) designation requirements will also be introduced. Lecture 3 hours. No Laboratory. Prerequisites: ACC 2213 and ACC 2223 with a grade of " C " or better or instructor approval.

\section*{ACC 2253 - Peachtree}

\section*{3 Credits}

This class is a study of a comprehensive automated accounting program. Includes all modules of the package, set-up of a business, and actual operation of the package for three months.

Includes lecture and in-class production. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ACC 2213.

\section*{ACC 2303 - Analyzing Financial Statements}

3 Credits
This course teaches the basic skills of financial statement analysis to the student who is already familiar with fundamental accounting procedures and practices. The course is a practical means of discovering how financial data are generated and their limitations; techniques for analyzing the flow of business funds; and methods for selecting and interpreting financial ratios. It also presents analytical tolls for predicting and testing assumptions about a firm's performance. Lecture 3 hours. No Laboratory. Prerequisite: ACC 2223 or permission instructor.

\section*{ACC 2313 - Intermediate Accounting I}

3 Credits
A review of the accounting cycle and advanced work in the areas of cash, receivables, inventories, current liabilities, plant and equipment, intangible assets and long-term liabilities and stockholders' equity. Lecture 3 hours. No Laboratory. Prerequisites: ACC 2223 and ACC 2233 with a grade of "C" or better or instructor approval.

\section*{ACC 2323 - Intermediate Accounting II}

3 Credits
A continuation of Intermediate Accounting I, with emphasis on investments, long-term liabilities, accounting for leases and pensions, stock holders' equity, earnings per share, revenue recognition, income taxes, accounting changes, statement of cash flows, financial statement analysis, and disclosures. Lecture 3 hours. No Laboratory. Prerequisite: ACC 2313.

\section*{ACC 2333 - Cost Accounting}

3 Credits
Basic principles and procedures of cost accounting and cost control in a manufacturing organization through study of job order and process cost procedures, predetermined cost, and variance analysis. Lecture 3 hours. No Laboratory. Prerequisites: ACC 2223 with grade of "C" or better, MTH 1513 or equivalent.

\section*{ACC 2363 - Income Tax I}

3 Credits
Provides an understanding of basic income tax laws applicable to individuals and sole proprietorships. Subjects treated include personal exemption, gross income, business expenses, nonbusiness deductions, capital gains, and losses. Emphasis is on problems commonly encountered in the preparation of income and tax returns. Lecture 3 hours. No Laboratory. Prerequisite:
ACC 2213 or instructor approval.

\section*{ACC 2383 - Governmental Accounting} 3 Credits
A study is made of the unique characteristics of fund accounting used at various levels of governmental units and nonprofit operations. Special emphasis is devoted to budgeting and accounting control as a means of furthering sound financial administration of these organizations. Lecture 3 hours. No Laboratory. Prerequisites: ACC 2213 and ACC 2223.

\section*{ACC 2393 - Accounting Information Systems}

\section*{3 Credits}

Study of alternative accounting systems used for the collection, organization, and presentation of information. Practice in (1) designing accounting systems to assist management in decision-making process, and (2) designing financial reports for internal and external purposes. Practice in using accounting software. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ACC 2333, CSC 1203.

\section*{ACC 2403 - Income Tax II}

\section*{3 Credits}

The study of advanced federal income taxation problems. Special emphasis is placed on the preparation of returns for partnerships, trusts, and corporations. Other subjects include an introduction to tax planning and research. Lecture 3 hours. No Laboratory. Prerequisite: ACC 2363 with a grade of " C " or better or instructor approval.

\section*{ACC 2443 - Auditing}

3 Credits
A study is made of the audit function; a survey is made of the professional authority, body of theory, and standards - general, fieldwork and reporting; and a discussion of the audit opinion and its implications. Special emphasis will be placed on workpaper techniques, internal control and internal auditing. Lecture 3 hours. No Laboratory. Prerequisite: ACC 2313 with a grade of "C" or better or instructor approval.

\section*{ACC 2463 - Fraud Examination}

3 Credits
An examination of various aspects of fraud detection and prevention, including asset misappropriation, skimming, cash larceny, check tampering, register disbursement schemes, payroll and expense reimbursement schemes, inventory and other assets, corruption, bribery, conflicts of interest and fraudulent financial statements. Lecture 3 hours. No Laboratory. Prerequisites: ACC 2213 and ACC 2223 or consent of instructor.

\section*{ACC 2523 - Microcomputer Accounting Applications} 3 Credits
The study of a computer application package using microcomputers as a vehicle. Systems studied will be general ledger, accounts receivable, accounts payable, billing, payroll, and inventory control. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ACC 2213 and CSC 1203.

ACC 2533 - Fundamentals of Health Care Accounting 3 Credits
This is an introductory course in financial accounting for health care organizations. Vocabulary, financial tools and concepts, and assessing financial information will be included. Lecture 3 hours. No Laboratory.

\section*{ACC 2543 - Management Accounting in Health Care Organizations}

3 Credits
An introduction to management accounting that provides the student with techniques necessary to understand management accounting as used in health care organizations. The limitations
of management accounting in making health care operations decisions will be included. Lecture 3 hours. No Laboratory. Prerequisite: ACC 2533 or ACC 2213 or instructor approval.

\section*{ACC 2553 - Essentials of Cost Accounting in Health Care Organizations}

\section*{3 Credits}

This course provides the students with the tools and techniques of cost accounting as they apply to health care organizations. An interactive learning approach will be used. Lecture 3 hours. No Laboratory. Prerequisites: ACC 2533 and ACC 2543 or ACC 2213 and ACC 2223.

\section*{ACC 2563 - Accounting Internship}

3 Credits
Supervised employment in the student's chosen field of Accounting. Intended to provide practical experience for students preparing for a career in accounting. Requires instructor approval. No Lecture. Laboratory 12 hours.

\section*{ACC 2990 - Selected Topics in Accounting 1-4 Credits}

The study and/or analysis of a selected topic in Accounting. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{ACCOUNTING ASSISTANT}
(See Accounting Program and Course Descriptions)

\section*{AFRICAN STUDIES}

\section*{AFR 2323 - Field Experience and/or Study Abroad} 3 Credits
This course is designed to provide an on-site experience in a selected African country or in a location rich in African history and/or African connections. Includes lectures, readings, oral interaction, and written reports. All or a portion of the instruction and activities are conducted at the site. Focus on acquiring knowledge of the economic, political, geographical and cultural makeup of the location. Lecture 3 hour. Self-paced lab may be required. Prerequisite: Permission of associate dean of division before enrollment and in advance of on-site experience.

\section*{AFR 2343 -The African Diaspora}

3 Credits
A historical study of the dispersion of African peoples from the continent of Africa. Topics include the peopling of the world, slavery, colonialism, post-emancipation, civil rights and nationalist movements, post-independence struggles, and-Pan Africanism. Lecture 3 hours. No Laboratory.

\section*{AFR 2713 - Survey of African Civilizations (H)}

\section*{3 Credits}

An interdisciplinary survey of the countries and peoples of Africa from the emergence of human society to the present, with a focus on their discoveries and achievements. Areas of consideration include history, literature, music, art, philosophy, and religion. Lecture 3 hours. No Laboratory.

\section*{AFR 2990 - Selected Studies in Africa}

1-4 Credits
The study and/or analysis of a selected topic in Africa. May be repeated with a different topic. Lecture and/or Laboratory 1-4 hours.

\section*{ALLIED HEALTH}

\section*{AH 1001 - Allied Health Careers Exploration}

\section*{1 Credit}

This course offers a systematic approach to a career search in the medical field. It includes an orientation to self-assessment and decision making techniques to allow the student to pursue allied health career options more compatible to their interest and personality. Each allied health program and the nursing program will be discussed in detail regarding the profession, curriculum, and application process. Lecture 1 hour. No Laboratory.

\section*{AH 1111- Multimedia for the Allied Health Professional}

1 Credit
This one credit hour course is designed to help the Allied health Professional improve his/her efficiency and increase his/her clinical expertise. Within this course, participants will learn to find resources on the Internet about patient care. The student will explore the uses of electronic mailing lists (listservs) to correspond with staff or individuals who have a particular interest in treatments for specific diagnosis. Each participant will develop a web page using the web page editor on a subject which pertains to his/her clinical field of practice. This course will be hands on with a computer available for each participant. Students will have class time to work on projects; however, outside time may be required. Lecture 1 hour. No Laboratory.

\section*{AH 1323 - Medical Terminology}

\section*{3 Credits}

A comprehensive medical terminology course focusing on root words, suffixes and prefixes, with exposure to medical terms relating to symptomatology, disease process, diagnostic testing, procedures and abbreviations. The medical terms are introduced and examined by body system. Upon completion of the course, students should be proficient in utilizing, defining and accurately spelling medical terms and identifying medical abbreviations. Lecture 3 hours, No Laboratory.

\section*{ALTERNATIVE ENERGY \\ (See Electronics Technology Program)}

\section*{ALT 1223 - Hydraulics and Pneumatics 3 Credits}

A study of hydraulic and pneumatic systems as it relates to fluids, energy and power, pumps, actuators, control devices, flow distribution, and industrial applications. Lecture 2 hours. Laboratory 2 hours.
systems, including wind, solar and Oklahoma-produced biofuels. Students will have the opportunity to build or test a wind power generator and a solar electric generator. Battery storage systems will be included. Lecture 1 hour. Laboratory 2 hours. Prerequisite: ELE 1212.

\section*{ALT 1453 - Solar Energy Systems}

3 Credits
Study of electrical and thermal energy conversion using the Sun. Students will design and measure both types of systems for home and/or business use. Lecture 2 hours. Laboratory 2 hours.

\section*{ALT 1463 - Wind Energy Systems}

\section*{3 Credits}

Study of electrical energy conversion using an Oklahoma natural resource, the wind. Students will measure wind system efficiency for the area, and service or design a system. Lecture 2 hours. Laboratory 2 hours.

\section*{ALT 1472 - Renewable Design Project}

2 Credits
A student-driven application approach to using any of the alternative energy methods. Wind, solar, biofuels, or hydrogen projects will be examined. Lecture 1 hour. Laboratory 2 hours.

\section*{APPAREL DESIGN and MERCHANDISING}
(See Marketing Program and Course Descriptions)

\section*{APPRENTICESHIP}

\section*{APP 1203 - Apprenticeship}

\section*{3 Credits}

Instruction will include supervised on-the-job training, classroom lectures, and outside assignments. This format will provide the training necessary for students to acquire the basic skills required for success in their chosen skilled craft. Laboratory 6 hours.

\section*{APP 1306 - Apprenticeship I}

6 Credits
Instruction will include supervised on-the-job training, classroom lectures, and outside assignments. This format will provide the training necessary for students to acquire the basic skills required for success in the chosen skilled craft. Lecture 2 hours. Laboratory 10 hours.

\section*{APP 1346 - Apprenticeship II}

6 Credits
Instruction will include supervised on-the-job training, classroom lectures, and outside assignments. This format will provide the training necessary for students to acquire the basic skills required for success in their skilled craft. Lecture 2 hours. Laboratory 10 hours. Prerequisite: APP 1306.

\section*{ALT 1442 - Introduction to Alternative Energy}

2 Credits
This course provides basic knowledge of alternative energy

\section*{APP 2306 - Apprenticeship III}

\section*{6 Credits}

Instruction will include supervised on-the-job training, classroom lectures, and outside assignments. This format will provide the training necessary for students to acquire the basic skills required for success in their skilled craft. Lecture 2 hours. Laboratory 10 hours. Prerequisite: APP 1346.

\section*{APP 2347 - Apprenticeship IV}

\section*{Credits}

Instruction will include supervised on-the-job training, classroom lectures, and outside assignments. This format will provide the training necessary for students to acquire the basic skills required for success in their skilled craft. Lecture 2 hours. Laboratory 12 hours. Prerequisite: APP 2306.

\section*{ARABIC}

\section*{ARA 1001 - Arabic for Communication I}

\section*{1 Credit}

A companion course for ARA 1103 with emphasis on speaking and comprehension of colloquial Arabic. Recommended that it be taken simultaneously with ARA 1103 or after. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: ARA 1103 or approval of instructor or Dean of Global Education.

\section*{ARA 1031 - Arabic Pronunciation}

\section*{1 Credit}

A beginning course in Arabic with special emphasis on pronunciation and the oral skills. May be taken simultaneously with ARA 1103. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{ARA 1103-Arabic I}

\section*{3 Credits}

A beginning course in understanding, speaking, reading, and writing Arabic. The first in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.

\section*{ARA 1213 - Arabic II}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Arabic. The second in sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: ARA 1103 or approval of instructor or Dean of Global Education.

\section*{ARA 1313-Arabic III}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Arabic. The third in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required Prerequisite: ARA 1213 or approval of instructor or Dean of Global Education.

\section*{ARA 1413 - Arabic IV}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Arabic. The fourth in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.

Prerequisite: ARA 1313 or approval of instructor or Dean of Global Education.

\section*{ARA 2033-Arabic Literature in Translation}

3 Credits
Readings of literary works in translation selected to increase the student's knowledge of Arabic societies. Conducted in English. Lecture 3 hours. No Laboratory.

\section*{ARA 2041 - Arabic-Introduction to the Arts 1 Credit}

An introduction to the arts of Arabic-speaking countries with an attempt to develop an aesthetic awareness and an understanding of the role that the arts play in modern day Arabic activities. Conducted in English. Lecture 1 hour. No Laboratory.

\section*{ARA 2071 - Arabic History and Geography \\ Introduction}

\section*{1 Credit}

A survey of history and geography of the Arabic people as it relates to modern day Arabic societies and language with an awareness of the relationship between the physical, political, and linguistic regions. Conducted in English. Lecture 1 hour. No Laboratory.

\section*{ARA 2421 - Arabic Culture Comparisons}

1 Credit
Focus on the cultural aspects of the Arabic-speaking people. Includes a comparison with the U.S. American culture as well as other culture groups. Conducted in English. Lecture 1 hour. Selfpaced laboratory may be required.

\section*{ARA 2990 - Selected Topics in Arabic}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Arabic. May be repeated with a different topic. Lecture 1-4 hours. Self-paced laboratory may be required.

\section*{ART}

\section*{ART 1013 - Fundamentals of Art I}

\section*{3 Credits}

Fundamentals of Art I is a study of the principle elements of two-dimensional design. Those elements include color, perspective, fundamental drawing concepts and compositional elements. By using a variety of materials, students will apply the information to a series of studio assignments. Beginning course required of all art majors. Open to all interested students.
Lecture 2 hours. Laboratory 4 hours.

\section*{ART 1023 - Painting I}

3 Credits
Painting I will develop skills in opaque painting, stressing form and content, visual appreciation, and individual expression. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 1013.

\section*{ART 1033 - Painting II}

3 Credits
Painting II will continue to develop the student's skills in opaque painting. The course will continue to stress form and content, visual appreciation, and individual expression. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 1023 or instructor approval

\section*{ART 1053 - Art History Survey I (H)}

3 Credits
Art History Survey I is a study of the arts, artists and their cultures from the Prehistoric man through the Early Renaissance. Required of all art majors. Lecture 3 hours. No Laboratory.

\section*{ART 1063 - Art History Survey II (H)} 3 Credit
Art History Survey II is a study of the arts, artists and their cultures from the Early Renaissance to the present. Required of all art majors. Lecture 3 hours. No Laboratory.

\section*{ART 1083 - Fundamentals of Art II}

3 Credits
Fundamentals of Art II is a continuation of Fundamentals of Art I.The course is a study and analysis of three-dimensional art forms. By using a variety of materials and processes, the student will complete a series of studio assignments. Basic concepts involving the use of line, mass, space, texture, and form as related to various three-dimensional materials will be stressed. Suggested for all art majors. Lecture 2 hours. Laboratory 4 hours.

\section*{ART 1113 - Art Appreciation (H)}

\section*{3 Credits}

The study of art from a variety of different backgrounds and cultures as both product and process. Aesthetic judgmentmaking in evaluation of art from different times and places is stressed. Lecture 3 hours. No Laboratory.

\section*{ART 1123 - Drawing I}

3 Credits
Drawing I will develop the student's understanding of the basic concepts of drawing and their powers of observation. Students will work with various media utilizing a variety of sources and environments. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 1013.

\section*{ART 1133 - Drawing II}

\section*{3 Credits}

Drawing II will continue to develop the student's
understanding of the concepts of drawing. Students will continue to develop their skills in media by using a variety of sources and environments. Lecture 2 hours. Laboratory 4 hours. Prerequisites: ART 1013 and ART 1123.

\section*{ART 2053 - Art History Survey IV}

3 Credits
Art History Survey IV is a study of the arts, artists and their cultures beginning with the early 20th century. Various 20thcentury styles will be covered including Cubism, Dada, Pop,

Super-Realism, Conceptual, and Performance. Lecture 3 hours. No Laboratory.

\section*{ART 2063 - Watercolor I}

3 Credits
Watercolor I will develop skills in watercolor painting, stressing form and composition, visual perception, and individual expression. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 1013.

\section*{ART 2073 - Watercolor II}

\section*{3 Credits}

Watercolor II will continue to develop skills in watercolor painting. Projects will continue to stress form and composition, visual perception, and individual expression. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 1013 and ART 2063.

\section*{ART 2083 - Sculpture I}

3 Credits
Sculpture I is a creative approach to sculpture techniques and form exploration using a variety of media. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 1013 and ART 1083.

\section*{ART 2093 - Sculpture II}

\section*{3 Credits}

Students will continue to develop their skills, methods, and study of the sculptural form. The course will continue to stress methods, materials, concept, and artistic style. Lecture 2 hours. Laboratory 4 hours. Prerequisites: ART 1013, ART 1083, and ART 2083.

\section*{ART 2143 - Figure Drawing I}

3 Credits
Figure Drawing I includes study in gesture and finished drawings of the model. Emphasis will be placed on pose, composition, and a variety of media. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 1123 or instructor approval.

\section*{ART 2153 - Figure Drawing II}

3 Credits
Figure Drawing II will continue to develop study in gesture and finished drawings of the model. Students will further their skills in use of media and papers. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 2143.

\section*{ART 2223 - Printmaking I}

\section*{3 Credits}

Printmaking I will cover basic media and processes involved in the relief, intaglio, lithographic and monotype processes. Lecture 2 hours. Laboratory 4 hours. Prerequisites: ART 1013 and ART 1123 or instructor approval.

\section*{ART 2233 - Printmaking II}

3 Credits
Printmaking II will continue to develop the student's skills and knowledge in the relief, intaglio, lithographic and monotype processes. Students will continue to develop their conceptual and studio skills. Lecture 2 hours. Laboratory 4 hours.
Prerequisites: ART 1013, ART 1123, and ART 2223 or instructor approval.

\section*{ART 2243 - Serigraphy I}

\section*{3 Credits}

Serigraphy I introduces the student to both hand and photo stencil and screen print methods. Each student will produce a body of work exploring the image-making potential of screen printing techniques. Strong emphasis will be placed on exploring color, design, and personal creativity. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 1013 or instructor approval.

\section*{ART 2253 - Serigraphy II}

\section*{3 Credits}

Serigraphy II involves advanced studies in utilizing screen printing techniques. Students will produce a body of work that emphasizes the exploration of color, design, and personal creativity. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 2243.

\section*{ART 2263 - Introduction to Ceramics}

\section*{3 Credits}

Introduction to clay as a medium through hand building and wheel forming methods with an emphasis on critical thinking in relation to three-dimensional form. Techniques explored will include forming, glazing, decoration, and firing. Lecture 2 hours. Laboratory 4 hours. Prerequisites: ART 1013 and ART 1083.

\section*{ART 2313 - Jewelry I}

\section*{3 Credits}

Jewelry I will develop the student's skills in fabrication, metalforming, and casting. Emphasis will be on artistic design and craftsmanship. Lecture 2 hours. Laboratory 4 hours. Prerequisites: ART 1013 and ART 1083.

\section*{ART 2323 - Jewelry II}

\section*{3 Credits}

Jewelry II will continue to develop the student's skills in casting, fabrication, and metal-forming. Continued emphasis will be placed on artistic design and craftsmanship. Lecture 2 hours. Laboratory 4 hours. Prerequisites: ART 1013, ART 1083, and ART 2313.

\section*{ART 2403 - Illustration I}

\section*{3 Credits}

Introduction to historic and contemporary illustration and consideration of a wide range of illustrative styles. Required experiments with media and consideration of alternate ways of illustrating a message through conceptual and compositional variations. Lecture 2 hours. Laboratory 4 hours. Prerequisites: ART 1013 and ART 2143.

\section*{ART 2413 - Typography I}

\section*{3 Credits}

Letter forms and their characteristics will be explored through a study of spacing, leading, type selection, layout alternatives, type specification, and copy fitting. Hand lettering and computer graphic skills will be taught. Lecture 2 hours. Laboratory 4 hours. Prerequisite: ART 1013.

\section*{ART 2423 - Graphic Design I}

\section*{3 Credits}

Computer applications are used to explore basic design principles - line, form, and color - as visual communication. Students will learn problem solving generation of ideas, development of concepts, the integration of word and image, and technical and presentation skills. Lecture 2 hours. Laboratory 4 hours. Prerequisites: ART 1013 and ART 1123.

\section*{ART 2503 - Professional Practice}

\section*{3 Credits}

Includes information about artistic materials, how to make them, how to use them, their health risks, and how to mitigate health risks. Students will also explore avenues of making a living as an artist and related skills such as preparation of art for presentation, presentation techniques, and portfolio development. Lecture 2 hours. Laboratory 4 hours. Prerequisites: Six hours of art classes, including at least one studio class.

\section*{ART 2530 - Field Studies in Art}

\section*{1-3 Credits}

In this course, students are exposed through travel to art, artists, and inspiring environments. The course includes lectures and readings to prepare for the experience and discussions and writing or artistic creation as a response to or evaluation of the experience. Lecture 1-3 hours. No Laboratory. Prerequisite: Permission of the instructor.

\section*{ART 2813 - Filmmaking I}

\section*{3 Credits}

Beginning art filmmaking covering basic technical and aesthetic problems of the experimental films. Lecture 3 hours. No Laboratory.

\section*{ART 2823 - Film Internship Filmmaking II}

3 Credits
Continuation of art filmmaking covering basic technical and aesthetic problems of the experimental films. Lecture 3 hours.

\section*{ART 2853 - Photography}

\section*{3 Credits}

A comprehensive course in darkroom photography.Topics include historical techniques, black and white film exposure, processing and printing, equipment selection, image manipulation, color theory, and digital applications. Emphasis will be placed in the production of informative images that effectively communicate with the viewer, and adapting those images to publication requirements. Lecture 2 hours Laboratory 4 hours.

\section*{ART 2863 - Advanced Photography}

\section*{3 Credits}

An advanced black \& white photography course for students who have completed ART/JMC 2853. Students will use fiber-based paper and investigate alternative processing and printing techniques with the goal of creating works of photographic art. Zone System basics and studio lighting techniques will be explored. Students must provide their own 35 mm or medium format camera. Lecture 2 hours. Laboratory 4 hours .Prerequisite: ART 2853 or JMC 2853.

\section*{ART 2913 - Film/Video History and Analysis I}

\section*{3 Credits}

Topics vary. Examines films or videos technically as well as aesthetically. Covers either a specific genre of film or video, a certain time period, or works produced by a single director. Lecture 3 hours. No Laboratory.

\section*{ART 2990 - Selected Topics in Art}

1-4 Credits
The study and/or analysis of a selected topic in Art. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{ASIAN STUDIES}

\section*{ASN 1103 - Asian Philosophy and Culture}

\section*{3 Credits}

An Asian introductory course with an interdisciplinary investigation of cultural, philosophical and aesthetic roots. Includes literature, history, art, architecture, geography, music, family issues, and philosophy in association with major cultural and historical movements. Lecture 3 hours. No Laboratory.

\section*{ASN 2103 - Survey of the Asian Civilization ( \(\mathrm{H}, \mathrm{I}\) )} 3 Credits
In introductory course with an interdisciplinary study of Asian culture, philosophy, and aesthetics. Taught in English. Lecture 3 hours. No Laboratory.

\section*{ASN 2123 - Pacific Century}

\section*{3 Credits}

This interdisciplinary course emphasizes the interconnections of Asian countries and their relationship with the West, the historical and cultural development of the area, and the developing Asian economic structures. The role of the Pacific Rim countries in the 21st century will be considered and examined. Lecture 3 hours. No Laboratory.

\section*{ASN 2693 - Asian Literature in Translation}

\section*{3 Credits}

The study and/or analysis of a selected topic in Asian Studies. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{ASN 2990 - Selected Topics in Asian Studies}

1-4 Credits
The study and/or analysis of a selected topic in Asian Studies. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{ASTRONOMY}

\section*{AST 1104 - General Astronomy}

\section*{4 Credits}

An introduction to the concepts of modern astronomy including the solar system, the sun and stars, the Milky Way, other galaxies, and methods of observation. Lecture 4 hours. No Laboratory.

\section*{AST 1121 - Field Astronomy \\ 1 Credit}

An introduction to field astronomy including how to plan for the field work from star charts, setup of the telescope in the field, alignment to the north celestial pole, astronomical coordinates and observational techniques. Lecture 1 hour. No Laboratory. Prerequisite: AST 1104 or concurrent enrollment.

\section*{AST 2990 - Selected Topics in Astronomy \\ 1-4 Credits}

The study and/or analysis of a selected topic in Astronomy. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

AUTOMATION TECHNOLOGY
(See Electronics Technology Program and Course Descriptions.)

\section*{AVIATION SCIENCES TECHNOLOGY}

\section*{AVS 1007 - Avionics I}

\section*{7 Credits}

Students are instructed in mathematics, avionics safety and soldering proficiency. Studies include DC, AC, and semiconductor theory and applications. Students learn to analyze circuits using analog and digital test equipment, oscilloscopes and transistor checkers. Analog amplifiers, power supplies, oscillators, pulse and control circuits are constructed and analyzed. Differential and operational amplifiers are used to construct and test various timers, regulators, and active filters. Lecture 1 hour. Laboratory 12 hours. Requires instructor approval.

\section*{AVS 1017 - Avionics II}

\section*{7 Credits}

Students study digital logic with emphasis placed on integrated circuits from the TTL and CMOS families. Number systems, combination logic circuits, boolean algebra, flip-flops, shift registers, counter and data conversions are taught with microcomputer operation and programming. To familiarize students with the requirements for working on and around aircraft, technician courses in basic aircraft sciences and mechanics are taught. Studies in electronic communications include: amplitude modulation, angle modulation, pulse modulation, transmitters and receivers, and antenna and transmission line theory and application. Spectrum analyzers, grid dip meters, SWR meters, and time-domain reflectometers are used in circuit analysis. Lecture 1 hour. Laboratory 12 hours. Prerequisites: AVS 1007.

\section*{AVS 1027 - Avionics III}

\section*{7 Credits}

Students study regulating agencies and regulatory requirements pertinent to avionics technicians. Proper use of maintenance manuals, parts procurement, documentation and record keeping are emphasized. Studies include theory and practical application in the operation, maintenance, calibration and repair of aircraft communication, navigation and surveillance (pulse) systems. Systems include: HF and VHF transceivers, ELT, SATCOM, ADF, VHF nav (VOR and localizer), glideslope, marker beacon, GPS, ATC and mode-S transponders, weather radar, radar altimeters and collision-avoidance systems. Lecture 1 hour. Laboratory 12 hours. Prerequisite: AVS 1017.

\section*{AVS 1037 - Avionics IV}

\section*{7 Credits}

Students study how avionics systems integrate using various data buses. Flight director and autopilot systems are briefly covered. An avionics radio panel and radio installation are planned and implemented using FM and manufacturers guidelines, wiring diagrams, computer-aided design software and teamwork. Preparation for the FCC General Radiotelephone Operator license examination is emphasized. Lecture 1 hour. Laboratory 12 hours. Prerequisite: AVS 1027.

\section*{AVS 1113 - Private Pilot Ground School 3 Credits}

A ground school course that complies with the requirements of the Federal Aviation Regulations as set forth in FAR61.105 (b). Completes FAR Part 141 and 61 requirements. Fulfills the ground training requirements for completion of the FAA Private Pilot Airplane knowledge written for the Private Pilot Certificate. Special fee required. Lecture 3 hours. No Laboratory.

\section*{AVS 1209 - Aviation Maintenance}

\section*{9 Credits}

Examines theory and practical in general hangar and shop safety, mathematics, physics and basic aerodynamics, aircraft ground handling and servicing, aircraft in flight and weight and balance, structural materials and non-destructive inspection, aircraft hardware and precision measuring instruments. Includes aircraft cleaning and corrosion control, blueprints and drawings, hand and power tools, fluid lines and fittings, basic electricity, DC and AC electrical circuits, and aircraft battery inspection and servicing. Examines theory and practical application in aircraft motors and generators, solid-state circuits, interpretation and application of Federal Aviation Regulations (FAR's), maintenance publications and records, and aircraft wiring installation requirements and practices. Includes applying aircraft finishes and fabric coverings, manufacturing and repairing bonded structures, laminates and plastics, and servicing, inspecting, troubleshooting and repairing hydraulic, pneumatic, landing gear and steering systems and components. Lecture 9 hours. Laboratory 22 hours.

\section*{AVS 1222 - Private Pilot Flight Lab}

\section*{2 Credits}

Meets the minimum requirements for the issuance of a Private Pilot Certificate. Includes 20 hours of flight instruction and 15 hours of solo flight with an introduction to instrument and night flying. Additional direct costs apply based upon hourly rates. See the TCC Flight Center advisor at the Tulsa Tech Riverside Campus. No Lecture. Laboratory 4 hours. Prerequisite: Permission required.

\section*{AVS 1239-Airframe}

\section*{9 Credits}

Examines theory and practical application in various types of fixed-wing and rotary-wing aircraft structures, aerodynamics and rigging. Provides practical application of manufacturing and repair of aircraft welded, non-metallic and sheet metal structures. Also covers the following aircraft systems: cabin atmosphere and control, fuel quantity indicating, ice and rain control, fire detection, fire extinguishing, position and warning,
pitot-static, and communication and navigation systems. Various types of aircraft design and operation. Examines theory and practical application of reciprocating engine lubrication systems. In-depth study of techniques and handson application of reciprocating engine inspection, preventive maintenance, troubleshooting, engine removal, overhaul, and engine installation and operation. Lecture 9 hours. Laboratory 24 hours. Prerequisite: AVS 1209.

\section*{AVS 1259 - Powerplant}

\section*{9 Credits}

Examines theory and practical application of preventive maintenance, troubleshooting and repair of reciprocating engine ignition systems and components, fuel and fuelmetering systems, fire protection and instrument systems, and propellers and propeller governing systems. Examines fundamentals of turbine engine design and operation. Indepth study of techniques and hands-on application of servicing, inspecting, troubleshooting and repair of turbine engine fuel, lubrication and cooling systems. Students perform turbine engine overhaul, removal, installation and operation, and perform inspection, maintenance, and troubleshooting on turbine engines. Lecture 9 hours. Laboratory 27 hours. Prerequisite: AVS 1209.

\section*{AVS 1403 - Advanced Theory of Flight}

3 Credits
Material addressed includes increasing the knowledge and skills of the certified pilot. Lecture 3 hours. No Laboratory. Prerequisite: AVS 1113 or TCC Flight Center advisor approval.

\section*{AVS 2113 - History of Aviation}

\section*{3 Credits}

History of aviation from its early developments to the present. Historic events and the role of government as they relate to the evolution of the regulatory infrastructure of the aviation industry. Lecture 3 hours. No Laboratory.

\section*{AVS 2122 - Cross-Country Flight Lab}

2 Credits
Meets the cross country pilot in command requirements for the issuance of advanced ratings and certificates. Includes 9 hours of flight instruction and 45 hours of solo (pilot in command) flight. Additional direct costs apply based upon hourly rates. No Lecture. Laboratory 4 hours. Prerequisite: AVS 1222 or Private Pilot Certificate. Permission required. See the TCC Flight Center advisor at the Tulsa Tech Riverside Campus.

\section*{AVS 2132 - Instrument Flight Lab}

2 Credits
Meets the minimum requirements for the issuance of an instrument rating. Includes 35 hours of flight instruction. Additional direct costs apply based upon hourly rates. No Lecture. Laboratory 4 hours. Prerequisite: AVS 2122. Permission required. See the TCC Flight Center advisor at the Tulsa Tech Riverside Campus.

\section*{AVS 2142 - Commercial Flight Lab}

\section*{2 Credits}

Meets the minimum requirements for the issuance of a Commercial Pilot Certificate. Includes 26 hours of flight instruction and 40 hours of solo, improving proficiency in precision maneuvers and flying skills and complex aircraft performance. Additional direct costs apply based upon hourly rates. No Lecture. Laboratory 4 hours. Prerequisite: AVS 2132. Permission required. See the TCC Flight Center advisor at the Tulsa Tech Riverside Campus.

\section*{AVS 2191 - Validation Flight}

1 Credit
This course is designed to flight check the proficiency of those students who have received their flight training at another school, and wish to transfer those credits to Tulsa Community College. No Lecture. Laboratory 2 hours. Prerequisite: FM Pilot certificate. Permission required. See counselor.

\section*{AVS 2213 - Instrument Pilot Ground School} 3 Credits
A ground school course that complies with the requirements of the Federal Aviation Regulations as set forth in FAR61.65. Completes FAR Part 141 and 61 requirements. Fulfills the ground training requirements for completion of the FAA Instrument Airplane knowledge written for the Instrument Pilot Rating. Lecture 3 hours. No Laboratory. Prerequisite: AVS 1403 or TCC Flight Center advisor approval

\section*{AVS 2313 - Commercial Pilot Ground School} 3 Credits
A ground school course that complies with the requirements of the Federal Aviation Regulations as set forth in FAR61.125. Completes FAR Part 141 and 61 requirements. Fulfills the ground training requirements for completion of the FAA Commercial Airplane knowledge written for the Commercial Pilot Certificate. Lecture 3 hours. No Laboratory. Prerequisite: AVS 2213.

\section*{AVS 2990 - Selected Topics in Aviation Sciences Technology}

1-4 Credits
The study and/or analysis of selected topics in Aviation Sciences Technology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{BIOLOGY}

\section*{BIO 0123 - Basic Biology}

\section*{3 Credits}

This course is designed to provide a laboratory-based science for students who have not met the lab science requirements for state college admissions standards. The primary objective is to provide knowledge of the basic concepts and principles of biology: the cell, diversity, energy transformations, complimentarily of organisms and their ecosystems, control and regulation, evolution, form and function. Laboratory activities will demonstrate the process and procedure of the scientific method. Lecture 2 hours. Laboratory 2 hours.

\section*{BIO 1114 - General Biology for Non-Majors (L)} 4 Credits
A presentation of selected principles in biological science for the non-science major, including the cell concept, the organization of multi-cellular systems, plants and animals as organized systems, and man in relation to his environment. Lecture 3 hours. Laboratory 3 hours.

\section*{BIO 1132 - Topical Reading in Biology}

2 Credits
Reading a combination of popular materials (newspapers, magazines, and books for non-scientists) and semi-technical materials in topics of current biological and popular interests. Discussion of such topics with students, faculty, and visitors. For majors and non-majors. Lecture 2 hours. No Laboratory.

\section*{BIO 1224 - Introduction to Biology for Majors (L)}

4 Credits
Introductory biology course for majors with lab. This course includes an in-depth study of fundamental biological concepts, including metabolism, homeostasis, heredity, evolution, and ecology at the sub-cellular, cellular and organismal levels. It provides the foundation for other advanced courses in the biological sciences. Lecture 3 hours.
Laboratory 3 hours.

\section*{BIO 1314 - Human Anatomy and Physiology}

4 Credits
An introduction to the basic principles of the structure and function of the human body. A beginning course designed to emphasize the integration of all body systems. Designed for students in Allied Health programs. Lecture 3 hours. Laboratory 3 hours.

\section*{BIO 1323 - Basic Microbiology}

3 Credits
An introductory course in microbiology. Consideration will be given primarily to the pathogenic microorganisms, including bacteria, viruses, and protozoa. Emphasis will be placed on nomenclature of organisms, their associated diseases, and related terminology. Lecture 3 hours. Laboratory 1 hour.

\section*{BIO 1383 - Nutrition}

3 Credits
An evaluation of basic composition of nutrients and accessory factors required for adequate human nutrition. Application of nutritional principles to the planning of normal and special dietary regime. Lecture 3 hours. No Laboratory.

\section*{BIO 1404 - General Botany (L)}

\section*{4 Credits}

An introduction to photosynthetic organisms and fungi, including their anatomy, physiology, genetics, ecology, classification, and evolution with emphasis on the seed plants. Recommended for science majors. Lecture 3 hours. Laboratory 3 hours. Prerequisite: Completion of BIO 1224 with a grade of " C " or better or instructor approval.

\section*{BIO 1604 - Zoology (L)}

\section*{4 Credits}

An integrated approach to the evolution of anatomical and physiological mechanisms within the animal kingdom. The morphology, physiology, and embryological development of systems and mechanisms within the major invertebrate and vertebrate phyla will be covered. Lecture 3 hours. Laboratory 3 hours. Prerequisite: Completion of BIO 1224 with a grade of "C" or better or instructor approval.

\section*{BIO 2123 - Human Ecology}

\section*{3 Credits}

A study of environment apart from mankind (natural environment), the influence of humans on the environment with emphasis on population growth and problems it has created relative to environmental features such as soil, waters, vegetation, wildlife, landforms, and the atmosphere. Lecture 3 hours. No Laboratory.

\section*{BIO 2134 - Human Anatomy (L)}

\section*{4 Credits}

A systemic approach to the study of the human body. Clinical and functional relationships of each organ system is emphasized. Lecture 3 hours. Laboratory 3 hours. Prerequisite: Completion of BIO 1224 or BIO 1604 with a grade of "C" or better.

\section*{BIO 2144 - Marine Biology}

\section*{4 Credits}

The nature, interrelationships, and ecology of lifeforms throughout the oceans will be explored. Morphology and physiology of major phyla of marine organisms will be investigated. Interrelationships of marine life to the geological, physical, and chemical characteristics of the ocean will be studied. An ecological approach to all relationships will be used. Lecture 3 hours. Laboratory 3 hours. Prerequisite: BIO 1114.

\section*{BIO 2154 - Human Physiology (L)}

\section*{4 Credits}

The function of mammalian organ systems including basic, cellmolecular properties, maintenance systems, communication and control, reproduction and integration of activities. Emphasis on humans in homeostasis. Lecture 3 hours. Laboratory 3 hours. Prerequisites: Completion of BIO 1224 or BIO 1604, BIO 2134, and CHE 1114 or CHE 1315 with a grade of "C" or better.

\section*{BIO 2164 - Microbiology (L)}

\section*{4 Credits}

Included will be a survey of the protozoa and fungi of medical significance, with an in-depth survey of bacteria, their morphology, metabolism, pathogenic capabilities, and classification. Laboratory will emphasize those techniques concerned with isolation and pure culture of microorganisms and the use of biochemical criteria in taxonomy. Lecture 3 hours. Laboratory 3 hours. Prerequisite: CHE 1114 or CHE 1315 and completion of BIO 1224 with a grade of "C" or better or instructor approval.

\section*{BIO 2213 - Brain and Behavior}

\section*{3 Credits}

This course covers both the biological basis of human behavior (including the nervous system, homeostasis, biological clocks, etc.) and the psychological consequences of the biology of our species (feelings, learning and memory, thinking and consciousness, the malfunctioning brain, etc.) The course also includes speculation on future developments in brain research. The. Lecture 3 hours. No Laboratory. Prerequisites: BIO 1114, BIO 1224, BIO 1314 or PSY 1113.

\section*{BIO 2364 - Biochemistry}

\section*{4 Credits}

This is an advanced course designed to familiarize students with structure and function of biochemical macromolecules as well as the process of metabolism. Lecture 3 hours. Laboratory 3 hours. Prerequisite: Completion of BIO 1224, CHE 1315, CHE 1415 and CHE 2145 all with grade of "C" or better. BIO 2164 is highly recommended.

\section*{BIO 2990 - Selected Topics in Biology}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Biology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{BIOMEDICAL EQUIPMENT TECHNOLOGY}

\section*{BET 1304-Introduction to Biomedical Electronics}

\section*{4 Credits}

A study of the techniques and instruments used in hospitals and medical clinics. Information on hospital and clinical organization and operations with emphasis on regulations and procedures for patient safety and shock hazard prevention is provided. Additional emphasis is given to medical terminology, and anatomy and physiology. Lecture 3 hours. Laboratory 2 hours. Prerequisite: Concurrent enrollment in ELE 1303.

\section*{BET 2343 - Biomedical Electronics Theory I}

\section*{3 Credits}

A study of the basic principles by which physiological events are measured. Electronic fundamentals are used to understand electrodes, transducers, amplifiers, and patient monitoring systems. Electrode care and placement and the operation of medical electronic instruments are studied. Lecture 2 hours. Laboratory 2 hours. Prerequisite: BET 1304, concurrent enrollment, or approval of the associate dean.

\section*{BET 2353 - Biomedical Electronics Theory II} 3 Credits
A continuation of BET 2343. An application of the techniques studied in BET 2343 to measurements made in cardiology, laboratory medicine, and radiology. Theory, operation, and maintenance of equipment used in clinics and hospitals. Testing of equipment used for respiratory and physical therapy will be included. Lecture 2 hours. Laboratory 2 hours. Prerequisites: BET 2343 and ELE 2244.

\section*{BET 2373 - Biomedical Electronics Clinical}

\section*{3 Credits}

Supervised practical experience in cooperating hospitals, and/or Biomedical Service Centers, which encompass a study of techniques used in repair of medical equipment. No Lecture. Laboratory 12 hours. Prerequisites: BET 2343 and concurrent enrollment in BET 2353.

\section*{BET 2382 - Contemporary Issues in Biomedical Electronics}

\section*{2 Credits}

This course will review the topics from the previous biomedical courses and investigate new areas of study in the industry. Networking for biomedical equipment will also be covered. Lecture 2 hours. No laboratory. Prerequisites: CSC 1263 and BET 2343 or BET 2353.

\section*{BET 2990 - Selected Topics in Biomedical Equipment Technology}

1-4 Credits
The study and/or analysis of a selected topic in Biomedical Equipment Technology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{BIOTECHNOLOGY}

\section*{BTC 1113 - Introduction to Biotechnology}

3 Credits
An introduction to biotechnology including career exploration, history and applications of DNA/RNA technology, molecular biology, bioethics, safe laboratory practices and bioinformatics. The course covers calculations for solution preparations, instruction on making buffers, determining pH , pipetting, making dilutions, calibration of pipets and balances as well as an introduction into DNA and protein isolation and analysis.
Lecture 2 hours. Laboratory 2 hours.

\section*{BTC 1315 - Biotechnology Laboratory Methods and Techniques}

5 Credits
Emphasis is on laboratory operations, management, equipment, instrumentation, quality control techniques, and safety procedures. Lecture emphasis will be on biochemistry, bioorganic topics and the scientific method, including assay design. Laboratory practice will stress lab safety and the design of assays for various classes of biochemicals, including RNA, DNA, enzyme and total protein assays. Lecture 2 hours. Laboratory 6 hours. Prerequisites: BTC 1113, BIO 1224, and CHE 1114 or CHE 1315 with grades of "C" or better.

\section*{BTC 1534 - Cell Culture Techniques}

4 Credits
This course will discuss the lecture topics of the cell cycle, cell requirements for growth, and bacterial and animal viruses. Lab topics will include sterile technique, bacterial media preparation, the process of preparative fermentation, and the handling of bacteriophage in prokaryotic cultures. In the study of eukaryotic cell culture techniques, the laboratory emphasizes the principles and practices of media preparation and sterilization, initiation, cultivation, maintenance, and the
preservation of cell including applications such as project development and biomanufacturing. The topic of lab safety with potentially biohazardous agents will be covered. Lecture 1 hour. Laboratory 6 hours. Prerequisites: BTC 1315, BIO 2164 and CHE 1124 or CHE 1415 with grades of " C " or better.

\section*{BTC 2101 - Biotechnology Quality Assurance 1 Credit}

The issues of quality control in a biotechnology setting will be explored, along with FDA, EPA and OSHA regulations. Lecture 1 hour. No Laboratory. Prerequisite: BTC 1315.

\section*{BTC 2246 - Molecular Biology and Techniques 6 Credits}

An introduction to the principles of heredity and theory of molecular biology with an emphasis on DNA replication, transcription, gene expression and regulation, recombinant DNA, and RNA interference. Techniques such as DNA and RNA isolation, DNA restriction digests, cell transformation, transfection, PCR, DNA sequencing, real-time PCR, blot assays, microarray analysis, DNA mapping, cloning and DNA bioinformatic tools will be discussed and explored. Lecture 3 hours. Laboratory 6 hours. Prerequisites: BTC 1315, BIO 2164 and CHE 1124 or CHE 1415 with grades of " C " or better.

\section*{BTC 2335 - Biotechnology Proteomics and Instrumentation}

\section*{5 Credits}

Lecture will discuss theory, applications, and operation of various analytical instruments with an emphasis on protein purification in both an R\&D laboratory and a biomanufacturing facility. Laboratory exercises will focus on calibration of instruments, quantitative and qualitative analysis by chromatography, centrifugation, spectrophotometry, and SDSPAGE gel analysis. Additionally, basic immunology including humoral and cellular immunity with ELISAs, Western Blots and cytoimmunology will be taught. An introduction to protein bioinformatics tools is included. Lecture 2 hours. Laboratory 6 hours. Prerequisite: BTC 1534 with a grade of "C" or better.

\section*{BTC 2512 - Biotechnology Apprenticeship}

\section*{2 Credits}

This is an experience external to the college for an advanced student in a specialized field involving a written agreement between the educational institution and a business or industry partner. Mentored and supervised by a workplace employee, the student achieves objectives in a biotechnical project that are developed and documented by the college that directly relate to specific occupational outcomes. This may be a paid or unpaid experience. This course may be repeated if topics and learning outcomes vary. The student should have a minimum of 160 hrs on the job. No Lecture. Laboratory 10 hours. Prerequisites: BTC 2246 and BTC 2335 with grades of " \(C\) " or better.

\section*{BUSINESS}

\section*{BUS 1001 - Interpersonal Skills}

1 Credit
Students will learn interpersonal skills necessary to participate in highly participative organizations. Emphasis will be on communication skills required as well as on techniques for building trust with co-workers, customers, leaders and others. One session will focus on ways to create a supportive work environment for yourself and your co-workers. A final session will be developed to address handling conflict. Lecture 16 hours.

\section*{BUS 1011 - Microcomputer Keyboarding}

1 Credit
Introduction to touch control of the alpha and numeric keys. Lecture 1 hour. Laboratory 1 hour.

\section*{BUS 1021 - Working in Teams/Workplace Diversity 1 Credit}

This course will provide opportunities to identify prejudices, determine how they can be managed, and learn how to change stereotypical responses which are often based on fear, lack of positive experiences, and/or misunderstandings. Lecture 1 hour. No Laboratory.

\section*{BUS 1031 - Work Habits for the Manufacturing Workplace}

1 Credit
Students will participate in discussions around how changes in the workplace affect them directly. Learning and applying six basic workplace habits will better equip participants to add value to their company. Lecture 16 hours.

\section*{BUS 1041 - Meeting Skills}

\section*{1 Credit}

Students will learn skills necessary to participate in and lead effective meetings. Emphasis will be on communication skills required as well as on methods for reaching agreement in meetings. Lecture 16 hours.

\section*{BUS 1053 - Introduction to Business}

3 Credits
Provides overall picture of business operation: includes analysis of specialized fields with business organization; identifies role of business in modern society. Lecture 3 hours. No Laboratory.

\section*{BUS 1062 - Human Safety and Health Fundamentals} 2 Credits
This course introduces the field of occupational safety and health. Topics include historical developments, legislative overview, problem identification, introduction to measurement and evaluation, and resources available to the safety professional. Lecture 1 hour. Laboratory 2 hours.

\section*{BUS 1101 - Statistical Process Controls}

\section*{1 Credit}

A study of Statistical Process Control (SPC) as a method of improving and controlling the manufacturing process as well
as improving productivity. By using the various statistical tools, SPC can improve the quality of the manufacturing process and the products it produces. Lecture 16 hours.

\section*{BUS 1123 - Keyboarding I}

3 Credits
Introduction and development of alpha/numeric keyboarding skills using the touch method on the microcomputer. Development of speed and accuracy. Lecture 1 hour. Laboratory 4 hours.

\section*{BUS 1143 - Introduction to Ethics: Business Issues (H)} 3 Credits
An introductory level course in ethics, focusing on the types of situations that pose ethical problems in business. An attempt will be made to help the student develop an ethical framework which will allow the student to address ethical issues in the business world. Lecture 3 hours. No Laboratory. Cross listed as PHI 1143.

\section*{BUS 1153 - Introduction to Hospitality Operations -Hotels, Restaurants and Tourism \\ 3 Credits}

Study of hotels, restaurants, gaming operations, and the tourism and hospitality industry around the world. The course covers the scope of the industry including an analysis of ethical issues and career opportunities. Special emphasis is given to the essential management functions of the hospitality enterprise including marketing, human resources, accounting, finance, and information technologies. Lecture 3 hours. No Laboratory.

\section*{BUS 1163 - Introduction to the Legal System}

3 Credits
History and overview of the legal system, legal ethics, unauthorized practice, the rules of professional conduct, importance of communications, judgment and analytical ability, terminology sources, and works of the law. Lecture 3 hours. No Laboratory.

\section*{BUS 1173 - Introduction to Health Care Business Operations}

3 Credits
A basic course in United States health care including the history of health care delivery systems, comparable systems outside the United States, available resources, system processes, outcomes, and health policies for the future. Lecture 3 hours. No Laboratory.

\section*{BUS 1200 - Understanding Corporate Finance} 1-3 Credits
This course covers the concepts necessary to understand and interpret financial statements and reports, cost of producing a product, profit, and cash flow. Lecture 1-3 hours. No Laboratory.

\section*{BUS 1211 - Basic Corporate Finance}

\section*{1 Credit}

The purpose of this course is to discuss key core business principles and operational realities, providing employees with fundamental information on how businesses operate. Informed and motivated employees are a vital competitive advantage to a business and can dramatically impact profitability. It is in the employees' interest to understand how businesses operate because successful businesses have longevity and profitability, providing a variety of benefits to employees. Lecture 16 hours.

\section*{BUS 1221 - Strategic Planning}

1 Credit
Strategic Management is defined including process elements: values, vision, mission, situation analysis, setting goals, objectives strategies, writing action plans, and implementation of the plan. Lecture 16 hours.

\section*{BUS 1233 - Project Management}

\section*{3 Credits}

The study of a project manager's responsibility of guiding a project toward successful completion based upon established parameters including time, cost, and resources while maintaining a high standard of quality. Key elements included: defining the project, project assessment and goal setting, defining tasks, milestones, resources including budgets, timelines, schedule adjustments; and reporting progress and results. Lecture 48 hours.

\section*{BUS 1261 - Food Safety and Quality}

1 Credit
A course designed for food manufacturing students. Topics include food handling sanitation, hazardous analysis, critical control points, quality, microbiology, contamination, food borne illness, and establishing the food service safety systems. Lecture 1 hour. No Laboratory.

\section*{BUS 1313 - Employee/Employer Relations}

3 Credits
A study of the relationship between employers and employees in industry. The focus is on individuals within organizations and how their habits, patterns, ambitions and motives affect their job performance and job satisfaction. Some of the topics covered include communications, perception, motivation, group behavior, conformity, and leadership. Lecture 3 hours. No Laboratory.

\section*{BUS 1343 - Shorthand I}

3 Credits
Presentation of the theory of Gregg shorthand. Development of the ability to read and write shorthand and to take and transcribe familiar and new dictation. Development of correct spelling, punctuation, and language usage. Lecture 2 hours. Laboratory 2 hours.

\section*{BUS 1353 - Business Mathematics}

3 Credits
Development of the ability to apply mathematics fundamentals to business applications through the use of the touch method on ten-key electronic calculators. Includes percentage calculations, simple interest, bank discount, compound interest,
annuities, and payrolls. Lecture 2 hours. Laboratory 2 hours.

\section*{BUS 1413 - Money and Banking}

3 Credits
This course is a fundamental treatment on bankers' stock-in-trade -money and how it functions in the U.S. and world economies. This course explores money as a medium of exchange, introduces the concept of money supply, and discusses the role of banks as money creators and as participants in the nation's payment mechanism. Money and Banking also explains how the various types of financial institutions operate; the workings of monetary and fiscal policies; the functions and powers of the Federal Reserve; and more. Lecture 3 hours. No Laboratory. Prerequisite: ECO 2013 or instructor approval.

\section*{BUS 1433 - Principles of Banking}

3 Credits
This course touches on nearly every aspect of banking from the fundamentals of negotiable instruments to contemporary issues and developments within the industry. Lecture 3 hours. No Laboratory.

\section*{BUS 2003 - Credit Internship}

3 Credits
Supervised experience in the Credit area of Utility Services designed to provide practical application of Credit procedures. No Lecture. Supervised Lab. Permission of program coordinator required.

\section*{BUS 2023 - Customer Support Internship}

3 Credits
Supervised experience in the Customer Support area of Utility Services designed to provide practical application of Customer Support procedures. No Lecture. Supervised Lab. Permission of program coordinator required.

\section*{BUS 2033 - Customer Service/Personal Internship} 3 Credits
Supervised experience in the Customer Service/Personal area of Utility Services designed to provide practical application of Customer Service/ Personal procedures. No Lecture. Supervised Lab. Permission of program coordinator required.

\section*{BUS 2043 - Customer Service/Phone Center Internship 3 Credits \\ Supervised experience in the Customer Service/Phone Center area of Utility Services designed to provide practical application of Customer Service/Phone Center procedures. No Lecture. Supervised Lab. Permission of program coordinator required.}

\section*{BUS 2053 - Intercultural Communication (H,I)} 3 Credits
An introductory course in intercultural communication; the study of communication among people from different cultures. Emphasis is on increasing students' understanding of cultural theories of communication and cultural issues that affect communication effectiveness especially in educational and business contexts. Lecture 3 hours. No Laboratory. Cross listed as SPE 2053.

\section*{BUS 2063 - New Accounts - Taps Internship}

\section*{3 Credits}

Supervised experience in the New Accounts - Taps area of Utility Services designed to provide practical application of New Accounts -Taps procedures. No Lecture. Supervised Lab. Permission of program coordinator required.

\section*{BUS 2103 - Apportionment Billing}

3 Credits
Supervised experience in the Billing Apportionment area of Utilities Services designed to provide practical application of account apportionment procedures. No Lecture. Supervised Lab. Permission of program coordinator required.

\section*{BUS 2123 - Billing}

\section*{3 Credits}

Supervised experience in the Billing area of Utilities Services designed to provide practical application of commercial and residential billing procedures. No Lecture. Supervised Lab. Permission of program coordinator required.

\section*{BUS 2133 - Stormwater}

3 Credits
Supervised experience in the Stormwater Billing area of Utilities Services designed to provide practical application of Stormwater billing, records, research, and account set-up procedures. No lecture. Supervised Lab. Permission of program coordinator required.

\section*{BUS 2153 - Systems Support}

\section*{3 Credits}

Supervised experience in the Systems Support area of Utilities Services designed to provide practical application of utility system support procedures. No Lecture. Supervised Lab. Permission of program coordinator required.

\section*{BUS 2173 - Skillbuilding and Document Processing 3 Credits}

An intensive skillbuilding and document processing course designed to prepare students with the skills needed for today's office environment. Skillbuilding and major business document formats including business memos, letters, envelopes, basic reports and tables will be covered. Lecture 1 hour. Laboratory 4 hours. Prerequisite: BUS 1123 or permission of the instructor.

\section*{BUS 2183 - Word for Administrative Careers}

3 Credits
This course is designed to provide students with handson experience in creating documents used in a business environment. The course will concentrate on the advanced features of Microsoft Word. Problem-solving and critical thinking skills will be developed and applied to projects that may be encountered in a business office. Integration of the Microsoft Office Suite will be included, as well as proper formatting techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisite: BUS 2173.

\section*{BUS 2193 - Constitutional Law 3}

Credits
Basic concepts of arrest, search and seizure of persons, places, and things with or without warrant; cause and procedure to
obtain and execute warrants; exclusionary rule and effects of illegal actions, with emphasis on hospitality and gaming industries. Lecture 3 hours. No Laboratory.

\section*{BUS 2203 - Supervision \& Leadership - Hospitality Industry \\ 3 Credits}

Functions and methods of supervision as related to hospitality and related industries; overview of knowledge and skills required by frontline supervisors and managers in diagnosing performance and training issues, analyzing and selecting appropriate supervisory methods, conducting performance and follow-up evaluations; development of emerging or existing leadership skills in industry supervisors and managers. Lecture 3 hours. No Laboratory.

\section*{BUS 2213 - Small Business Management} 3 Credits
A study of the steps necessary to start and operate a small business including the development of a business plan covering forecasting, feasibility, financing, location, legal requirements, and other activities as well as a study of market planning, staffing, financial analysis, legal problems, and monitoring on-going activities. Lecture 3 hours. No Laboratory. Prerequisite: ACC 2213, or concurrent enrollment in ACC 2213, or instructor approval.

\section*{BUS 2231 - International Business Seminar and/or Field Studies}

1 Credit
This one credit course is based on completing one of the following components: a lecture seminar, a research writing project, or a field study tour; see BUS 2253. Prerequisite: instructor approval.

\section*{BUS 2242 - International Business Seminar and/or Field Studies}

2 Credits
This two credit course is based on completing two of the following components: a lecture seminar, a research writing project, and/or a field study tour; see BUS 2253. Prerequisite: instructor approval.

\section*{BUS 2253 - International Business Seminar and/or Field Studies}

3 Credits
This course is designed to provide an in-depth view of the business, political, cultural and governmental environment of the selected country. There are three components: a lecture seminar, a research writing project, and a field study tour. All three components may be taken for a total of three credits or each component may be taken for one credit; see BUS 2231 and BUS 2242. Requires instructor approval.

\section*{BUS 2303 - Shorthand II}

3 Credits
Review of the theory of Gregg shorthand. Reinforcement of the ability to read and write shorthand and to take and transcribe familiar and new-matter dictation. Development of transcription skill for production of mailable copies. Lecture 2 hours. Laboratory 2 hours. Prerequisite: BUS 1243 and BUS 1343.

\section*{BUS 2313 - Business Law I}

\section*{3 Credits}

Introduction to basic legal principles with emphasis on torts, contracts, property, bailments, sales, and secured transactions. Lecture 3 hours. No Laboratory.

\section*{BUS 2323 - Business Law II}

\section*{3 Credits}

A continuation of Business Law I with emphasis on commercial paper, insurance, agency, business associations, antitrust, and bankruptcy. Lecture 3 hours. No Laboratory. Prerequisite: BUS 2313.

\section*{BUS 2333 - Principles of Finance}

3 Credits
This course covers concepts essential for successful management of business finances and emphasizes financial analysis and planning techniques, capital investment analysis, techniques for managing financial assets, and sources of business financing. Lecture 3 hours. No Laboratory. Prerequisite: ACC 2213.

\section*{BUS 2343 - Investments in Stocks and Bonds}

3 Credits
The basic principles of the stock market as they affect the individual investor in stocks and bonds. Investments in these securities are studied from the standpoint of the short-term and long-term investor. Lecture 3 hours. No Laboratory.

\section*{BUS 2363 - Supervisory Management} 3 Credits
A study of management philosophy and decision-making processes; study of principles in the functions of planning, organizing, supervising, and controlling. Includes cases in handling of morale, discipline, communications, grievances, order-giving, and other phases of effective relations with subordinate employees. Lecture 3 hours. No Laboratory.

\section*{BUS 2403 - Guest Relations and Customer Service} 3 Credits
Basic concepts and current trends in customer service and guest relations in the hospitality industry. Special areas of emphasis include problem solving, development of a customer service strategy, creating customer service systems, coping with challenging customers, customer retention and measuring satisfaction. Examines organization and operation of hotels and restaurants from frontline, front office and guest service operations. Explores key front office functions, related systems, and skills necessary to ensure guest satisfaction and efficient operations. Lecture 3 hours. No Laboratory.

\section*{BUS 2483 - Health Care Law}

\section*{3 Credits}

This course provides a foundation of health care law that covers improvement of health care delivery including criminal and civil aspects, staffing issues, records management, legal reporting, ethics, patients' rights, employment laws, and other important legal issues. Lecture 3 hours. No Laboratory. Prerequisite: BUS 1173 or instructor approval.

\section*{BUS 2492 - Health Care Business Operations Internship}

\section*{2 Credits}

This course provides supervised practice of Health Care Business Operations skills and knowledge gained in the core courses of the program and should be taken during the student's last semester. Laboratory 8 hours per week.

\section*{BUS 2633 - Industrial and Organizational Psychology (S) \\ 3 Credits \\ An application of the principles of psychology to the problems of business and industry. Special attention will be given to the areas of communication, motivation, job satisfaction, and personnel selection, placement, and training. Lecture 3 hours. No Laboratory. Prerequisite: PSY 1113 or PSY 1313. Cross listed as PSY 2633.}

\section*{BUS 2643 - Procedures for Administrative Careers}

3 Credits
This course includes issues related to changes in the workplace, current technology in the workplace, communications, records management, financial issues, conference and meeting planning, travel arrangements and exploration of career opportunities. Lecture 2 hours. Laboratory 2 hours. Prerequisite: BUS 2463.

\section*{BUS 2683 - Administrative Careers Internship}

3 Credits
Supervised employment providing practical and technical skills experience beyond the scope of the classroom. Lecture 1 hour. Laboratory 12 hours per week. Prerequisite: instructor approval.

\section*{BUS 2783 - Business Seminar (Honors) \\ 3 Credits}

A capstone course to integrate the student's business knowledge, and to investigate, analyze, and discuss current business issues. Lecture 3 hours. No Laboratory. Prerequisites: Sophomore standing, 3.0 GPA, honors scholar status, or instructor approval.

\section*{BUS 2813 - Legal Issues in Hospitality Management 3 Credits}

A study of the legal environment of the hospitality industry including restaurants, hotels, casinos, meetings and tourist destinations. Basic legal principles such as torts, contract law, property, sales, and secured transactions will be covered. Special emphasis will be given to the study of customer and employee relationships, safety and product liability and alcoholic beverages. The course will emphasize local, state, federal and international law as well as ethical considerations. Lecture 3 hours. No Laboratory.

\section*{BUS 2990 - Selected Topics in Business}

\section*{1-4 Credits}

This course will orient the student to academic and student service areas of the College. Lecture 1 hour. No Laboratory.

\section*{CAREERS}

\section*{CAR 0811 - Orientation to College for the Deaf and Hard of Hearing}

1 Credit
Designed to introduce deaf and hard of hearing students to the college setting. Special emphasis on self advocacy, accommodations, interaction with faculty and staff, and familiarity with TCC. Lecture 1 hour. No Laboratory.

\section*{CAR 1011 - Career Exploration}

\section*{1 Credit}

Involves a systematic approach to a career search, and includes a general orientation to self-assessment and decision making techniques, trends in occupational choice, and a general overview of the class. Services available include: interest inventories, abilities assessments, and three computerized guidance systems: DISCOVER for Colleges and Adults, SIGI Plus (System of Interactive Guidance Information), and GIS (Guidance Information System). No Lecture. Laboratory selfpaced.

\section*{CAR 2990 - Selected Topics in Careers}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Careers. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{CHEMICAL LABORATORY TECHNOLOGY}

\section*{CLT 1011 - Laboratory Sciences Orientation I}

1 Credit
This course serves as an orientation to philosophy, rules, and regulations. Students will become familiar with professional expectations of behavior and dress, and will receive an introduction to the Career Technology Student Organizations. Students will participate in career field trips and community outreach. Lecture 1 hour. No Laboratory.

\section*{CLT 1022 - Option 3: Industrial Safety \& Analysis 2 Credits}

This course introduces students to industrial laboratory samples including the proper quality control measures, which accompany sampling, testing and clean up. A basic understanding of interaction between environmental and industry is covered. Lecture 1 hour. Laboratory 2 hours.

\section*{CLT 1141 - Professional Support Skills} 1 Credit
This course familiarizes the student with maintenance of laboratory records an databooks, preparation of a resume and portfolio, graphing of chemical data, and the use of computers and scientific literature. Lecture 1 hour. No Laboratory.

\section*{CLT 1213 - General Laboratory Safety}

3 Credits
This course provides the student with practice in OSHA requirements for personal protective equipment, safety
showers, eye washes, fire fighting equipment and procedures, and safety behavior in the lab. Use of MSDS sheets and proper NFPA labeling are included. Lecture 2 hours. Laboratory 2 hours.

\section*{CLT 1242 - Scientific Mathematics}

2 Credits
This course provides the student with skills in calculation and application of scientific notation, significant figures, metric, English and temperature conversions, percent, sample statistics, basic algebra and word problems. Lecture 2 hours. Laboratory 1 hour.

\section*{CLT 1331 - General and Inorganic Chemistry \\ 1 Credit}

This course familiarizes the student with chemical particles, the Periodic Table, formulas, nomenclature, reactions, concentration calculations, and practice in pH , titration and extraction analytical methods. Lecture 1 hour. Laboratory 1 hour.

\section*{CLT 1351 - Organic Chemistry}

1 Credit
This course familiarizes the student with the basis of organic chemistry, bonding; structures, IUPAC naming, physical properties, and functional groups. Lecture 1 hour. Laboratory 1 hour.

\section*{CLT 1413 - Laboratory Techniques I}

3 Credits
This course provide students with practice in housekeeping duties, preparing chemical solutions from powders and liquids, and performing analytical methods including centrifugation, filtration, evaporation, distillation, viscosity, conductivity, turbidity, and spectrophotometry. Lecture 2 hours. Laboratory 2 hours.

\section*{CLT 1433 - Lab Glassware and Equipment}

3 Credits
This course familiarizes the student with common laboratory glassware and utensils, balances, reading volume, utilization of pipets and burets to make solutions, cutting, bending and fife polishing of glass tubing, and utilization of various heat sources and stirrers. Lecture 3 hours, Laboratory 1 hour.

\section*{CLT 1441 - Introduction to Laboratory Careers} 1 Credit
This course familiarizes the student with various laboratory types and the similarities and differences found for each area. A general overview of the area with heavy emphasis on the safety disposal and mathematics used will be covered. Lecture 1 hour. No Laboratory.

\section*{CLT 1452 Option I: Medical Safety and Analysis} 2 Credits
Students are introduced to manual testing of blood, including ABO typing, hemocratic, CBC, DLC, hemoglobin, and urinalysis including physical characteristics, chemical characteristics by Multistix \({ }^{\circledR}\), and microscopic identification of urine solids. A microbiology unit is completed including preparation of agar, inoculation of plates, incubation, description of colonies, heat fixing, Gram staining and identification of bacteria morphology. Lecture 1 hour. Laboratory 2 hours.

\section*{CLT 1522 - Option 2: Environmental Safety \& Analysis} 2 Credits
This course introduces students to environmental samples including the proper quality control measures, which accompany sampling, testing and clean up. A basic understanding of environmental laws, specifically in Oklahoma is reviewed. The course prepares the student for the Class D Water and Waste Water License test. Lecture 1 hour. Laboratory 2 hours. Prerequisite: must complete year one courses.

\section*{CLT 2011 - Laboratory Sciences Orientation II} 1 Credit
Students complete enrollment paperwork, tour the campus, review audio/visual skills, become familiar with on-the-job training requirements, and complete a first-year review evaluation, and participate in career fields and community outreach. Lecture 1 hour. Laboratory 1 hour.

\section*{CLT 2023 - Organic Analysis (GC \& IR)}

\section*{3 Credits}

This course familiarizes the student with the analysis of various organic compounds using instrumentation. Instrumentation programming, operation, and maintenance are covered along with sample preparation specifically with a GC and FTIR. Lecture 2 hours. Laboratory 2 hours.

\section*{CLT 2123 - Titration \& Standardization}

3 Credits
This course provides the student the opportunity to explore the properties of concentrated base pellets, use concentrated bases and acids to make reagents, prepare primary KHP standards, and standardize regents using manual titration and titration by pH meter. Lecture 2 hour. Laboratory 4 hours.

\section*{CLT 2153 - Laboratory Techniques II}

3 Credits
Students perform physical methods including sample clean up, preparing solutions and standards, density determination, fractional distillation, extraction, rotary evaporation, and the operation of an atomic absorption spectrometer. Lecture 2 hours. Laboratory 4 hours.

\section*{CLT 2311 - Instrumental Analysis Atomic Absorption} (AA)
1 Credit
This course familiarizes the student with electromagnetic energy as it is applied to AA, calculating and preparing standards in dilute acid, preparing an AA for analysis, programming element parameters, analyzing standards and unknowns, preparing standard curves, calculating concentrations of unknowns, and performing minor maintenance. Lecture 1 hour. Laboratory 1 hour.

\section*{CLT 2322 - Laboratory Management and Quality Issues \\ 1 Credit}

Students maintain inventory of chemicals, equipment and supplies, interact with vendors, write purchase order requests, and receive goods. Students utilize Quality Performance concepts and tools and become familiar with data collection,
sample tracking and control charts. Lecture 1 hour. Laboratory 2 hours.

\section*{CLT 2353 - Laboratory Sciences Practicum}

3 Credits
Students who have a passing grade, appropriate attendance and professional behavior, the recommendation of the instructor, and transportation may be placed in industry sites for job training/ internships. Students may also obtain parttime paid employment in program related areas and receive practicum credit. No Lecture. Laboratory 8 hours.

\section*{CHEMISTRY}

\section*{CHE 1034 - Practical Chemistry}

4 Credits
This one semester course for non-science majors will include an examination of the principle concepts, theories, and practical applications of chemistry. These fundamental principles are applied to topics of vital interest to society such as energy, polymers, foods, drugs, and pollution. Lecture 3 hours. Laboratory 3 hours.

\section*{CHE 1114 - Principles of Chemistry (L)}

4 Credits
A one semester course for science majors. Not open for credit to students who have credit in CHE 1315 or 1415. Does not substitute for CHE 1315. Principle concepts and theories of chemistry are examined. These fundamental principles are applied to a variety of topics such as chemical bonding, chemical reactions, states of matter, solutions, electrochemistry, and nuclear chemistry. The descriptive chemistry of some common elements and compounds is included. Lecture 3 hours.
Laboratory 3 hours. Prerequisite: MTH 0013 or equivalent.

\section*{CHE 1124 - Introductory Organic and Biochemistry 4 Credits}

A course designed principally for the student whose major interest is one of the health related fields. It will include an introduction to the principles of organic chemistry of significance to biology and to compounds and reactions of physiological importance. Lecture 3 hours. Laboratory 3 hours. Prerequisites: CHE 1114 or high school chemistry and beginning algebra.

\section*{CHE 1315 - General Chemistry I (L)}

5 Credits
Designed for science and science-related majors. The course includes the fundamental laws and theories dealing with the structure and interactions of matter and the use of these principles in understanding the properties of matter, chemical bonding, chemical reactions, the physical states of matter, changes of state, and solutions. The fundamental principles are applied to the solution of quantitative problems relating to chemistry. Lecture 4 hours. Laboratory 2 hours. Prerequisite: MTH 1513 or equivalent.

\section*{CHE 1415-General Chemistry II (L)}

\section*{5 Credits}

Designed for science and science-related majors, this course is a continuation of CHE 1315. The fundamental concepts introduced previously, together with additional ones, are applied to solutions, colloids, chemical kinetics, chemical equilibria, electrochemistry, nuclear chemistry, and organic chemistry. Qualitative inorganic analysis is included in the laboratory work. Lecture 4 hours. Laboratory 2 hours. Prerequisite: CHE 1315.

\section*{CHE 2014 Process Organic Chemistry}

4 Credits
Terminal course in organic chemistry covering general principles, methods of preparation, reactions and uses of both acyclic and cyclic compounds. Lecture 3 hours. Laboratory 3 hours. Prerequisite: CHE 1114.

\section*{CHE 2145-Organic Chemistry I (L)}

\section*{5 Credits}

A study of fundamental concepts of organic structure and bonding, reactions of principal functional groups, mechanisms, and nomenclature of hydrocarbons and their derivatives. Laboratory emphasis is on purification, separation, synthesis and instrumental methods of studying organic systems. Lecture 4 hours. Laboratory 2 hours. Prerequisite: CHE 1415.

\section*{CHE 2245-Organic Chemistry II (L)}

\section*{5 Credits}

A continuation of CHE 2145, reactions of principal functional groups and mechanisms. Laboratory emphasis is on synthesis and organic qualitative analysis. Lecture 4 hours. Laboratory 2 hours. Prerequisite: CHE 2145.

\section*{CHE 2353 - Introduction to Biochemistry}

3 Credits
This is an introductory course designed to assist students in their preparation for MCAT, PCAT and upper level biochemistry courses. The course covers the topics of the structure and function biochemicals, especially proteins, carbohydrates, lipids and nucleic acids and goes into the elementary details of membrane structures and transport across membranes, DNA replication, transcription and translation, and intermediary metabolism of carbohydrates. Lecture 3 hours. No Laboratory. Prerequisite: CHE 2145.

\section*{CHE 2364 - Biochemistry}

\section*{4 Credits}

This is an advanced course designed to familiarize students with the structure and function of biochemical macromolecules as well as the processes of metabolism. Lecture 3 hours.
Prerequisites: Completion of BIO 1224, CHE 1315, CHE 1415 and CHE 2145 all with grade of " C " or better.

\section*{CHE 2990 - Selected Topics in Chemistry}

1-4 Credits
The study and/or analysis of a selected topic in Chemistry. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\title{
CHILD DEVELOPMENT \\ (Students are required to earn a "C" or better in Child Development courses in order to graduate.)
}

\section*{CHD 1102 - CDA: Competencies 1 and 4}

2 Credits
This is a preparation course for the CDA Credential. Focus on how to establish and maintain a safe, healthy, learning environment for children and how to establish positive relationships with families. Students will learn how to promote good health and nutrition, prevent illness, reduce injuries, arrange materials and space, and establish routines in the preschool environment for learning, exploration, and play. The importance of involving families in programs for children will be emphasized. Course addresses CDA Competencies \#1 and \#4. Assigned field experiences. Lecture 2 hours. No Laboratory.

\section*{CHD 1202 - CDA: Competency 3}

2 Credits
This is a preparation course for the CDA Credential. Focus on how to promote children's self esteem and independence and how to help children feel physically and emotionally secure. Children's development of social skills, empathy, and respect for others will be emphasized. Students will learn the relationship between guidance methods and children's individuality, personality, and developmental levels. Prevention of behavior problems and positive guidance techniques are presented. Course addresses CDA Competency \#3. Assigned field experiences. Lecture 2 hours. No Laboratory.

\section*{CHD 1302 - CDA: Competency 2}

\section*{2 Credits}

This is a preparation course for the CDA Credential. Study of developmentally appropriate equipment, activities, and methods to promote the physical and cognitive development of children. Focus on music, art, drama, books, literature, writing, and block play. Students learn how to provide opportunities that promote creativity, curiosity, exploration, and problem solving. Gross motor, fine motor, and development of children's senses are featured. Language development and communication are studied. Course addresses CDA Competency \#2. Assigned field experiences. Lecture 2 hours. No Laboratory.

\section*{CHD 1402 - CDA: Competencies 5 \& 6}

2 Credits
This is a preparation course for the CDA Credential. Focus on the management of resources, organization strategies, communication, planning, record keeping, and working cooperatively with others. Making professional and ethical decisions based on knowledge of child development theories, practices and quality child care services is emphasized. Importance of participation in activities that promote competence, personal growth, and professional development is stressed. Course addresses CDA Competencies \#5 and \#6. Assigned field experiences. Lecture 2 hours. No Laboratory.

\section*{CHD 1501 - CDA: Application and Assessment Preparation}

\section*{1 Credit}

This is a preparation course for the CDA Credential. Students will study the CDA assessment system and review the competency standards for the CDA Credential evaluation. How to complete the direct assessment application, compile the Professional Resource File, distribute and collect the parent questionnaires, select a CDA Advisor, and completion of the Observation Instrument will be covered. Student candidates for the CDA credential may apply in one or more of the following: preschool, family childcare, infant/toddler, bilingual, and/or monolingual Spanish. Each of these areas will be explained in this class. Lecture 1 hour. No Laboratory.

\section*{CHD 1722 - Developing a Culture of Care}

\section*{2 Credits}

This is a preparation course for the Residential Child and Youth Care Professional Certification. This course will cover the history of and recent trends in the profession of residential child and youth care. Differences in types of residential programs and methods to establish a healthy culture of care will be studied. Strength-and competency-based theories and philosophies will be included. The various roles of child and youth care workers, professional ethics, and the importance of care for the caregiver will also be discussed. Lecture 2 hours. No Laboratory.

\section*{CHD 1733 - Understanding Child Development} 3 Credits
This is a preparation course for the Residential Child and Youth Care Professional Certification. Developmental assessment of individual children will be studied including lifespan stages, special needs, moral and spiritual development, and the effects of child abuse and neglect on growth and development. Understanding developmental delays and how to plan activities that promote life skills development with children and youth in out-of-home care is a primary focus. Lecture 3 hours. No Laboratory.

\section*{CHD 1742 - Building Relationships}

\section*{2 Credits}

This is a preparation course for the Residential Child and Youth Care Professional Certification. Building positive relationships with children and youth is critical to healthy child and youth development. A focus on effective communication, appropriate age/stage expectations, and providing a culturally competent culture of care is featured in this course. Strategies for assisting children and youth through transitions, with problem-solving and personal empowerment will be addressed. Lecture 2 hours. No Laboratory

\section*{CHD 1752 - Teaching Discipline}

\section*{2 Credits}

This is a preparation course for the Residential Child and Youth Care Professional Certification. This course will focus on the critical elements for teaching discipline to children in out-of-home care. Topics include appropriate limit setting, behavior reinforcement, and consequence. Strategies for the effective crisis behavior management are studied. Individual and group level management is discussed. Lecture 2 hours.

No Laboratory. Prerequisite: CHD 1722 with a grade of "C" or better.

\section*{CHD 1762 - Interviewing and Documentation Skills} 2 Credits
This is a preparation course for the Residential Child and Youth Care Professional Certification. The course will cover communication strategies, basic case management components, record keeping, and observation skills used with children and youth in residential care. Individual and family interviewing models and techniques will be studied Various types of assessment tools and evaluation reports used with children, youth and families will be reviewed. Assigned field experiences. Lecture 2 hours. No Laboratory. Prerequisites: Criminal History and Sex Offender Registry Background Check, CHD 1722, CHD 1733, CHD 1742 with a grade of "C" or better.

\section*{CHD 1772 - Youth Care Field Experience}

2 Credits
This is a preparation course for the Residential Child and Youth Care Professional Certification. This course is designed to help the student apply and enhance the skills and knowledge they have learned in classes. Students will study different types of facilities and current issues in residential care. Identifying community resources and networking supports in residential care will be a primary activity. Field trips to residential programs will be required. Assigned Field Experiences. Lecture 2 hours. No Laboratory. Prerequisites: Criminal History and Sex Offender Registry Background Check, CHD 1722, CHD 1733, CHD 1742, CHD 1752, CHD 1762 with a grade of " \(C\) " or better.

\section*{CHD 1781 - Youth Care Certification Preparation}

1 Credit
This course is optional for the Residential Child and Youth Care Professional Certification. This course will prepare you for taking the University of Oklahoma National Resource Center for Youth Services' Residential Child and Youth Care Professional Certification exam. Also, knowledge and skills for job preparation in the field of residential care for children and youth will be discussed. Lecture 1 our. No Laboratory.

\section*{CHD 1802 - Establishing the Environment in Out-of-School Programs}

2 Credits
This course is an introduction to the different types of out-of-school-time programs for children 5 to 12 years of age. How to select materials and establish developmentally appropriate, safe, healthy, enriching environments and daily schedules will be studied. Exercise, rest, and nutritional needs of school-age children will be focused. Assigned field experiences. Lecture 2 hours. No Laboratory.

\section*{CHD 1812 - Physical and Intellectual Development of the School-Age Child}

\section*{2 Credits}

This course focuses on the physical and intellectual development of children 5 to 12 years of age. Gross and fine motor activities appropriate for out-of-school care will be studied. Physical activities and appropriate exercise to promote physical health and well being will be included. Intellectual enrichment, creativity and problem solving through group projects, drama, art, and creative expression will be focused. Assigned field experiences. Lecture 2 hours. No Laboratory.

\section*{CHD 1822 - Emotional Development and Guidance of the School-Age-Child}

2 Credits
A focus on the emotional and social development of children 5 to 12 years of age is featured in this course. Helping children to develop interpersonal skills, communication, empathy, and respect for others will be included. Positive constructive guidance techniques that promote moral autonomy, selfcontrol and self-discipline will be studied. Helping school-age children to feel capable, connected, and contributing will be a goal of this course. Assigned field experiences. Lecture 2 hours. No Laboratory.

\section*{CHD 1832 - Professional Management of Out-of-School Programs \\ 2 Credits}

Management of out-of-school programs for children will be focused. Scheduling, planning, record keeping, resource management, personnel, and other management issues will be featured. Documentation of incidents and safety and emergency procedures will be included. Professionalism and ethical considerations will be studied. Family involvement and participation in school-age childcare will be emphasized. Assigned field experiences. Lecture 2 hours. No Laboratory.

\section*{CHD 1841- Educational Support of the \\ School-Age Child}

1 Credit
Focus on the collaboration and cooperation with the child's school and of homework support, literacy, and school readiness issues. Exceptional children, behavioral issues, tutoring and supportive activities to help children with schoolwork and issues regarding computer technology and children will be addressed. Assigned field experiences. Lecture 1 hour. No Laboratory.

\section*{CHD 1851 - Development of Community in Out-of-School Programs \\ 1 Credit}

The course will study the development of community, diversity, and tolerance in school age children and the development of empathy, caring, and community connections. Understanding diversity and multicultural issues within communities, family crisis, recognizing and reporting child abuse and neglect, and identifying community resources and referral services for children and families will be studied. Assigned field experiences. Lecture 1 hour. No Laboratory.

\section*{CHD 1862 - Applied School-Age Practices}

\section*{2 Credits}

This class provides students an opportunity to apply their knowledge of school-age children and programs. Observing and recording child development and behavior will be studied. This is the culminating experience for students in the Out-of-School-Time Certificate program. Lecture 2 hours. No Laboratory. Assigned field experiences Prerequisites: CHD 1802, CHD 1812, CHD 1822, CHD 1832, CHD 1841 and CHD 1851.

\section*{CHD 1901 - Head Start: Commitment and Professionalism \\ 1 Credit}

This course covers the portfolio assessment and required documentation for the Head Start Credential, Certificate of Achievement. Competency Goal \#9 is addressed in this course with an emphasis on commitment, professionalism, theories, practices, code of ethics and values. A student must complete this course before enrollment in CHD 1912, CHD 1922, CHD 1932, or CHD 1942 or it may be taken simultaneously with CHD 1912, CHD 1922, CHD 1932, CHD 1942. A student must receive a grade of "C" or better to enroll in the next course in the sequence. Lecture 1 hour. No Laboratory.

\section*{CHD 1912 - Head Start: Building Relationships} 2 Credits
The focus of this course is how to establish a mutually respectful, on-going partnership with Head Start families. The Head Start Program philosophy, services, outreach, recruitment, and enrollment will be emphasized. Effective communication, successful Head Start home visits, development of the Head Start IFP, and being an advocate for Head Start families and children will be featured. Head Start Competency Goals \#1 and \#2 and Indicators are addressed in the course. Assigned Field Experiences. Lecture 2 hours. No Laboratory. Prerequisites: CHD 1901 or simultaneous enrollment and all previous CHD coursework with a grade of "C" or better.

\section*{CHD 1922 - Head Start: Parent Involvement and Services}

2 Credits
Educational activities, Head Start policy groups, and group activities will be featured in this course. Students will learn how to coordinate and integrate Head Start services. Head Start Competency Goals \#3 and \#5 and Indicators are addressed in this course. Assigned Field Experiences. Lecture 2 hours. No Laboratory. Prerequisites: CHD 1901 or simultaneous enrollment and all previous CHD coursework with a grade of "C" or better.

\section*{CHD 1932 - Head Start: Resources and Assistance} 2 Credits
Community resources for families will be identified and how to assist families in accessing services will be emphasized in this course. Head Start Competency Goals \#6 and \#7 and Indicators are addressed in this course. Assigned Field Experiences. Lecture 2 hours. No Laboratory. Prerequisites: CHD 1901 or simultaneous enrollment and all previous CHD coursework with a grade of "C" or better.

\section*{CHD 1942 - Head Start: Literacy, Culture, and Language}

\section*{2 Credits}

Students will learn about Head Start family literacy services and will study the rich diversity of family cultures, lifestyles, and values. Head Start Competency Goals \#4 and \#8 and Indicators are addressed in this course. Assigned Field Experiences. Lecture 2 hours. No Laboratory. Prerequisites: CHD 1901 or simultaneous enrollment and all previous CHD coursework with a grade of "C" or better.

\section*{CHD 2003 - Child Development in the Lifespan} 3 Credits
This course focuses on the study of child development beginning with conception and continuing through the significant age periods of human life. Students will study the principles of development, developmental theories and the dynamics of development within the context of the cultural, societal, and family environments. Assigned field experiences. Lecture 3 hours. No Laboratory.

\section*{CHD 2023 - Child Development and Parenting} 3 Credits
A systems perspective of child development and parenting with an emphasis on the ecological approach. Course will include the study of family processes, parenting philosophies, styles, and techniques. Assigned field experiences. Lecture 3 hours. No Laboratory.

\section*{CHD 2031 - Early Field Experience}

\section*{1 Credit}

This course is for education majors, child development majors, and others interested in school related careers working with children and/or families. Students in this course will receive tutor/mentor training for preschool and/or school age children. The primary focus of the course is to provide students an opportunity to help children in public school settings build selfesteem and academic skills. A 2-hour weekly field experience is required. Lecture 1 hour. No Laboratory.

\section*{CHD 2103 - Child Guidance}

3 Credits
This course presents the theoretical basis for the use of constructive child guidance and discipline techniques in programs serving children. Students learn observational methods and behavior analysis to help determine the most appropriate guidance techniques and understand the impact of development on children's behavior. Laboratory facilitates the acquisition of observational skills and provides models for discussion and learning child guidance and classroom management skills. Lecture 2 hours. Laboratory 3 hours. Prerequisites: Criminal History and Sex Offender Registry Background Check, CHD 2003 with a grade of "C" or better.

\section*{CHD 2113 - Child Care Center Management I}

3 Credits
Course provides an overview of how to effectively manage child care programs. A focus on relevant and current issues in child care is presented. Licensing requirements, managing staff, conflict resolution, and ethical issues are addressed. How to
implement developmentally appropriate practices and create a positive and safe learning environment will be addressed. The course also emphasizes the development of a program vision. Assigned field experiences. Lecture 3 hours. No Laboratory.

\section*{CHD 2133 - Middle Childhood Foundations}

\section*{3 Credits}

How school-age children develop and learn, as well as techniques to enhance learning will be addressed. Study will include out-of-school and in-school programs, planning, implementing, and evaluating appropriate activities and environments for school-age children. Lecture 3 hours. No Laboratory. Assigned Field Experiences. Prerequisites: CHD 2003 with a grade of " \(C\) " or better.

\section*{CHD 2173 - Historical and Philosophical Foundations of Schools}

3 Credits
This course provides an overview of the history and philosophy of schools in the United States. The purposes, structure and organization of schools in a multi-cultural society are explored. Lecture 3 hours. No Laboratory. Fifteen clock hours of field experiences are required. Prerequisite: CHD 2003 and a minimum grade of " \(C\) " in ENG 1113 and ENG 1213, MTH 1513 and MTH 1613 or a higher level mathematics course, completion of 30 hours of general education, and a minimum overall grade point average of 2.00 .

\section*{CHD 2203 - Child and Family in the Community}

\section*{3 Credits}

Focus on contemporary societal factors including diversity, culture, and family structures as they relate to children in various childcare programs. Ethics, professionalism, and skills development for child development and human services professionals will be addressed. Emphasis on promoting optimum development and support of families and children within programs and the larger community. Assigned field experiences. Lecture 3 hours. No Laboratory.

\section*{CHD 2213 - Children with Special Needs}

3 Credits
Focus on the exceptional child. Emphasis on implementing practical strategies and inclusive practices. Assigned field experiences. Lecture 3 hours. No Laboratory.

\section*{CHD 2223 - Early Childhood Foundations}

3 Credits
History and philosophy of early childhood education with emphasis on planning, implementing, evaluating, and developing appropriate learning experiences for children birth to eight. Course includes application of Piaget's and Vygotskgi's principles of learning and development. Art, music, science, math and other curricula in preschool education will be studied. Lecture 2 hours. Laboratory 3 hours. Prerequisites: Criminal History and Sex Offender Registry Background Check, CHD 2003 with a "C" or better.

\section*{CHD 2233 - Physical Development and Creative Expression: Early Childhood}

3 Credits
Study of creativity, play, and motor development with appropriate experiences in play, music, art, and motor skills for children, birth to eight years. Lecture 3 hours. No Laboratory. Assigned field experiences. Prerequisites: CHD 2223 with a grade of "C" or better.

\section*{CHD 2243 - Language and Cognitive Development: Early Childhood}

\section*{3 Credits}

Study of language and cognitive development with consideration of appropriate experiences in literacy, numeracy, and science for children birth to eight years. Lecture 3 hours. No Laboratory. Assigned field experiences. Prerequisites: CHD 2223 with a grade of "C" or better.

\section*{CHD 2253 - Child Development Practicum}

3 Credits
The practicum is the culminating experience for the Child Development student. Practicum site placements will be individualized based on the student's degree option. Students will interact with children and/or families teaching appropriate curriculum and activities. A portfolio of previously completed course work will be compiled by each student to document student knowledge, skills and abilities as they relate to the NAEYC associate degree standards for early childhood education. Lecture 1 hour. Laboratory 4 hours. Prerequisites: Criminal History and Sex Offender Registry Background Check, CHD 2223, CHD 2243, CHD 2263, CHD 2233 or CHD 2333, CHD 2313 and CHD 2323 with a grade of " C " or better.

\section*{CHD 2263 - Social and Emotional Development: Early Childhood}

3 Credits
Study of social and emotional development and appropriate experience for children birth to eight years. Lecture 3 hours. No Laboratory. Assigned field experiences. Prerequisites: CHD 2223 with a grade of "C" or better.

\section*{CHD 2273 - Teacher Assistant Practicum}

3 Credits
Observation and participation in an elementary school or program serving school-age children. Emphasis on teaching strategies in math, science, and computer technology for school-age children. Lecture 1 hour. Laboratory 4 hours. Prerequisites: Criminal History and Sex Offender Registry Background Check, CHD 2003, CHD 2103, CHD 2133, CHD 2323, CHD 2333 with a " \(C\) " or better.

\section*{CHD 2301- Preschool Behavior and Guidance}

\section*{1 Credit}

Students will study the physical, cognitive, social, and emotional development of preschool children 2 to 6 years of age. Course will present positive guidance and discipline techniques that promote the development of healthy personalities and moral autonomy. Appropriate expectations and guidance based on children's needs, and ages/stages will be addressed. Lecture 1 hour. No Laboratory.

\section*{CHD 2313 - Child Care Center Management II 3 Credits}

Course presents an in depth study of topics meaningful to child care center managers. The class will focus on leadership skills, understanding families and their needs, managing and empowering staff, and working with program budgets and finances. Assigned field experiences. Lecture 3 hours. No Laboratory.

\section*{CHD 2323 - Physical and Creative Activities: Middle Childhood}

\section*{3 Credits}

Study of physical and motor development, creativity, and play in middle childhood. Students will learn appropriate experiences and activities for children 6 to 12 years. Study and implementation of activities to promote physical and motor development, drama, literature, creative expression, art appreciation, and play will be emphasized. Lecture 3 hours. No Laboratory. Assigned Field Experiences. Prerequisites: CHD 2003, CHD 2133 with a grade of "C" or better.

\section*{CHD 2333 - Science, Math, and Computer Activities: Middle Childhood \\ 3 Credits}

Study of cognitive development in middle childhood. Science, math, and computer activities for children 6 to 12 years. Students will learn how to develop and implement activities in science, math and computer technology for children in middle childhood. Lecture 3 hours. No Laboratory. Assigned Field Experiences. Prerequisites: CHD 2003, 2133 with a grade of "C" or better.

\section*{CHD 2341 - Brain Development: Birth to Age Eight}

\section*{1 Credit}

The focus of this course is research findings in the field of neuroscience that relate to early childhood development, care, and education. Students will students will study the impact of negative experiences as well as the protective functions of responsive care and attachment in elation to brain development during early childhood. A primary objective will be to learn how to make practical application of brain development knowledge to the early care and education of young children. Assigned field experiences. Lecture 1 hour. No Laboratory.

\section*{CHD 2401 - Child Development Assessment and Evaluation}

1 Credit
Developmental assessment and evaluation of individual children will be studied including portfolios, developmental checklists and screenings, observational records, and other assessment strategies. Assessment and evaluation issues regarding children will be addressed. Lecture 1 hour. No Laboratory.

\section*{CHD 2421 - Children and Trauma}

1 Credit
The study of how children are affected by traumatic experiences is the emphasis of this course. Students will learn the difference between trauma and stress. Post-Traumatic Stress Syndrome, including the definition, symptoms, and a discussion of referral criteria and commonly used treatments will be included. Students will be introduced to supportive techniques for children in early childhood care and education programs who may be exhibiting behaviors that are indicative of trauma. Behaviors consistent with different types of trauma will be discussed. Assigned field experiences. Lecture 1 hour. No Laboratory.

\section*{CHD 2501 - Infant and Toddler Behavior and Guidance} 1 Credit
An in-depth study of the physical, cognitive, social, and emotional development of children birth to two. Appropriate expectations, activities and guidance for infants and toddlers will be addressed. Lecture 1 hour. No Laboratory.

\section*{CHD 2513 - Programming for Infants and Toddlers} 3 Credits
This course will focus on developmental theories as they relate to infant and toddler development and behavior. Students will study infant and toddler care-giving routines as opportunities for facilitating development through focus on individuality and responsiveness. Developmentally appropriate environmental and interaction practices, including health and safety, will be addressed. Lecture 2 hours. Laboratory 3 hours. Prerequisites: Criminal History and Sex Offender Registry Background Check, CHD 2003 with a grade of " C " or better and all previous CHD coursework with a grade of "C" or better.

\section*{CHD 2523 - Physical Development in Infants and Toddlers}

3 Credits
The focus of this course is the physical development of children birth to three years. Developmentally appropriate expectations, environments and activities that encourage freedom of exploration and that support the physical development of infants and toddlers are studied. Assigned field experiences. Lecture 3 hours. No Laboratory. Prerequisites: CHD 2003, CHD 2513 or concurrent enrollment and all previous CHD coursework with a grade of " \(C\) " or better.

\section*{CHD 2543 - Cognitive and Language Development in Infants and Toddlers}

\section*{3 Credits}

This course focuses on cognitive and language development from birth to three years. Sensitive, supportive, and responsive care-giving that meets the needs and interests of infants and toddlers is emphasized. Developmentally appropriate expectations and environments that support the cognitive and language development of infants and toddlers are studied and emphasized. Assigned field experiences. Lecture 3 hours. No Laboratory. Prerequisites: CHD 2003, CHD 2513 or concurrent enrollment and all previous CHD coursework with a grade of " C " or better.

\section*{CHD 2601 - School-Age Behavior and Guidance}

1 Credit
This course focuses on the physical, cognitive, social, and emotional development of children from 6 to 12 years of age. Course will present positive guidance and discipline techniques that promote the development of healthy personalities and moral autonomy. Appropriate expectations and guidance based on children's needs, and ages/stages will be addressed. Lecture 1 hour. No Laboratory.

\section*{CHD 2701 - Child Abuse and Neglect}

1 Credit
An in-depth study of child sexual, physical, and emotional abuse and child neglect. The impact of abuse on children at different ages/stages will be covered. Course will feature community and individual factors associated with abuse as well as prevention and intervention strategies. Lecture 1 hour. No Laboratory.

\section*{CHD 2723 - Effects of Abuse and Neglect on Child and Youth Development \\ \section*{3 Credits}}

An in-depth study of child sexual, physical and emotional abuse and child neglect. The impact of abuse on child and youth development at different ages/stages will be covered. Course will feature community and individual factors associated with abuse as well as prevention and intervention strategies. Lecture 3 hours. No Laboratory.

\section*{CHD 2990 - Selected Topics in Child Development} 1-4 Credits
The study and/or analysis of selected topics in child development. May be repeated with a different topic. Field experiences in topic-related settings may be required beyond the normal class hours. Lecture 1-4 hours. No Laboratory.

\section*{CHINESE}

\section*{CHI 1001 - Chinese for Communication I}

1 Credit
A companion course to CHI 1103 with emphasis on speaking and comprehension skills. Recommended that it be taken simultaneously with CHI 1103 or after. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: CHI 1103 or approval of instructor or Dean of Global Education.

\section*{CHI 1031- Chinese Pronunciation}

1 Credit
A beginning course in Chinese with special emphasis on pronunciation and the oral skills. May be taken simultaneously with Chinese 1103. Prerequisite: CHI 1103 or approval of instructor or Dean of Global Education.

\section*{CHI 1103 - Chinese I}

3 Credits
An elementary course in understanding, speaking, reading, and writing Chinese. The first in a sequence of related courses. Lecture 3 hours. No Laboratory.

\section*{CHI 1201- Chinese for Communication II}

1 Credit
Continued instruction in basic language concepts and beginning conversational skills. Lecture 1 hour. No laboratory. Prerequisite: CHI 1103 or approval of instructor.

\section*{CHI 1213-Chinese II}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Chinese. Lecture 3 hours. No Laboratory. Prerequisite:
CHI 1103 or approval of instructor or Dean of Global Education.

\section*{CHI 1313 - Chinese III}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Chinese. Lecture 3 hours. No Laboratory. Prerequisite:
CHI 1213 or approval of instructor or Dean of Global Education.

\section*{CHI 1413 - Chinese IV}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Chinese. Lecture 3 hours. No Laboratory. Prerequisite:
CHI 1313 or approval of instructor or Dean of Global Education.

\section*{CHI 2033 - Chinese Literature in Translation}

\section*{3 Credits}

Readings of literary works in translation selected to increase the student's knowledge of Chinese culture and societies. Conducted in English. Lecture 3 hours. Self-paced lab may be required.

\section*{CHI 2041 - Chinese - Introduction to the Arts}

1 Credit
An introduction to the Chinese arts with an attempt to develop an aesthetic awareness and an understanding of the role that the arts play in modern day Chinese activities. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{CHI 2071 - Chinese History and Geography Introduction}

1 Credit
A survey of Chinese history and geography as it relates to modern day Chinese societies and language with an awareness of the relationship between the physical, political, and linguistic regions. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{CHI 2113 - Intermediate Chinese I}

\section*{3 Credits}

An intermediate course in understanding, speaking, reading, and writing Chinese. Taught in Chinese. Lecture 3 hours. No Laboratory. Prerequisite: CHI 1413 or approval of instructor or Dean of Global Education.

\section*{CHI 2121 - Intermediate Chinese Communication}

\section*{1 Credit}

Intensive practice in speaking Chinese at the intermediate level or above covering a wide range of subjects, i.e., everyday language, intermediate literature samples, other publications, and current events. Conducted in Chinese. Lecture 1 hour. No

Laboratory. Prerequisite: CHI 2113 or Chinese Proficiency Exam results.

\section*{CHI 2143 - Asian Civilization and Culture}

3 Credits
This course provides a comprehensive look at the AsiaPacific region including China and how it relates to America. Recommended for all interested in Asia including students of Chinese. Conducted in English. Lecture 3 hours. No Laboratory.

\section*{CHI 2213 Intermediate Chinese II}

\section*{3 Credits}

An intermediate course in understanding, speaking, reading, and writing Chinese. Taught in Chinese. Lecture 3 hours. No Laboratory. Prerequisite: CHI 2113 or approval of instructor or Dean of Global Education.

\section*{CHI 2330 - Chinese International Seminar and/or Field Studies}

\section*{1-3 Credits}

This course is designed to provide an on-site experience in the selected Chinese speaking country or site. Includes lectures, readings, oral interactions, and written reports. All or a portion of instruction and activities are conducted at the international site. Focus on language (oral and written forms) and culture development. Prerequisite: Permission of Dean of Global Education and Associate Dean before enrollment and in advance of in-country experience.

\section*{CHI 2421 - Chinese Culture Comparisons}

1 Credit
Focus on the cultural aspects of the Chinese people. Includes a comparison with the American culture as well as other culture groups. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{CHI 2990 - Selected Topics in Chinese}

1-4 Credits
The study and/or analysis of a selected topic in Chinese. May be repeated with a different topic.

\section*{CIVIL ENGINEERING TECHNOLOGY}

\section*{CET 1373 - Materials of Construction}

\section*{3 Credits}

Fundamentals of construction materials such as masonry, wood, concrete, asphalt, and steel along with their application to construction. Blueprint techniques, planning and code provisions are studied through design problems. Lecture 3 hours. No Laboratory. Prerequisite: MTH 1454, or MTH 1715 or MTH 1513 and MTH 1613.

\section*{CET 1383 - Construction Plans, Specifications and Contract Documents}

3 Credits
A study and interpretation of construction plans, shop drawings, contract documents, specifications, scheduling, and estimating relative to construction operations. An introduction to the purpose and use of A.I.S.C., A.S.T.M., A.S.M.E., A.C.I., C.S.I. of standards. Lecture 3 hours. No Laboratory. Prerequisite: Concurrent enrollment in or completion of MTH 1454, or MTH 1715 or MTH 1513.

\section*{CET 1393 - Basic Hydrology}

\section*{3 Credits}

A study of the hydrologic cycle; precipitation,
evapotranspiration, infiltration, runoff, and underground flow. Will also include a study of drainage problems confronting the hydrologist in urban areas and techniques used to prevent flooding. Lecture 3 hours. No Laboratory. Prerequisites: MTH 1454, or MTH 1715 or MTH 1513 and MTH 1613.

\section*{CET 1413 - Wastewater Treatment}

3 Credits
A study of wastewater treatment systems including flow estimation, sewer system design, and design of each unit in a wastewater treatment plant. Other topics studied will be environmental concerns, water quality, laboratory analysis, and sludge disposal. Lecture 3 hours. No Laboratory. Prerequisite: MTH 1454, or MTH 1513 and MTH 1613.

\section*{CET 2373 - Physical Properties of Soil}

3 Credits
Load bearing qualities of soils and methods of analyzing subsoil conditions, bearing capacity and settlement. Types of foundation design and behavioral characteristics studied. Lecture 2 hours. Laboratory 3 hours. Prerequisites: MTH 1454 or MTH 1513 and MTH 1613, or MTH1715 and PHY 1114.

\section*{CET 2443 - Basic Hydraulics}

\section*{3 Credits}

Principles of fluid mechanics, pressure conduits, open channel flow, fluid measurement, drainage structure, design of collection systems for municipal drainage. Lecture 3 hours. No Laboratory. Prerequisite: PHY 1114.

\section*{CET 2461 - HEC I}

Credit
An introduction to the HEC-I computer model which is designed to simulate the surface runoff at a river basin by unit hydrographic and routing components. The Corps of Engineers and the City of Tulsa use this model. Lecture 1 hour. No Laboratory. Prerequisite: MTH 1454 or MTH 1513 and MTH 1613.

\section*{CET 2471 - HEC II}

\section*{1 Credit}

An introduction to the HEC-2 computer model which is intended for calculating water surface profiles in natural or man-made channels. Both subcritical and supercritical flow profiles can be calculated. The Corps of Engineers and the City of Tulsa use this program. Lecture 1 hour. No Laboratory. Prerequisite: MTH 1454 or MTH 1513 and MTH 1613.

\section*{CET 2990 - Selected Topics in Civil Engineering Technology}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Civil Engineering Technology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{CODING AND REIMBURSEMENT SPECIALIST \\ (See Health Information Technology and Course Descriptions)}

> COMPUTER AIDED DESIGN (CAD) (See Drafting and Design Engineering Technology Program and Course Descriptions)

COMPUTER AIDED MANUFACTURING
(CAM)
(See Numerical Control/Machinist Technology Program and Course Descriptions)

\section*{COMPUTER INFORMATION SYSTEMS}

\section*{CIS 1013 - XHTML}

\section*{3 Credits}

Hypertext Markup Language (HTML) and the syntax of eXtensible Markup Language (XML) combined in the form of eXtensible Hypertext Markup Language (XHTML) will be presented along with web page design and efficiency principles and techniques. Projects will include the creation of a variety of different types of web pages for Internet and intranet use. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 CSC 2163 recommended.

\section*{CIS 1022 - MS Word for Medical Professionals 2 Credits}

This course provides introductory word processing skills for medical professionals. Creating, formatting, editing, and illustrating documents; creating tables, forms, and templates; and collaborating on documents will be covered. Lecture 1 hour. Laboratory 2 hours.

\section*{CIS 1033 - Adobe Photoshop}

3 Credits
Key Photoshop concepts and techniques plus the more advanced features and tools in the latest version of the software will be covered. Emphasis will be placed on the work area, basic photo corrections, retouching and repairing, working with selections, layer basics, masks and channels, correcting and enhancing digital photographs, typographic design, vector drawing, techniques, advanced layering, advanced compositing, preparing files for the web, working with scientific images, and producing and printing consistent color. This is the first course to prepare students with the skills for continued creative study in CIS 1073 Advanced Photoshop. Students will learn about the benefits of obtaining Adobe Certified Associate (ACA) and/or Adobe Certified Expert (ACE) status through industry certification. Offered fall, spring, and summer sessions. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CIS 1043 - Adobe Acrobat}

\section*{3 Credits}

A presentation of key Acrobat concepts and techniques plus the more advanced features and tools in the latest version of the software will be covered. Emphasis will be placed on Acrobat basics, the work area, creating Adobe PDF files, creating Adobe PDF files from Microsoft Office files (Windows), creating Adobe PDF files from Microsoft Office files (Mac OS), combining files in PDF packages, creating Adobe PDF from web pages, converting email files to Adobe PDF (Windows), working with PDF files, editing PDF files, using Acrobat in a review cycle, adding signatures and security, creating multimedia presentations, using engineering and technical features, using legal features, working with forms in Acrobat, creating forms with Adobe Live Cycle Designer (Windows), using Acrobat in professional publishing, and making documents accessible and flexible. Students will be encouraged to obtain Adobe Certified Ace (ACA) and/or Adobe Certified Expert (ACE) status through industry certification. Offered fall semester only. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval instructor approval

\section*{CIS 1073 - Advanced Photoshop}

\section*{3 Credits}

An advanced course in Adobe Photoshop. Students will learn professional Photoshop techniques to enhance and alter digital photographs and illustrations and prepare them for web and print output, using Macintosh computers. Emphasis will be placed on masking, shortcuts, and choosing a non-destructive workflow that will raise skill levels to new heights. Students will be encouraged to obtain Adobe Certified Associate (ACA) and/or Adobe Certified Expert (ACE) status through industry certification. Offered fall, spring, and summer semesters. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 1211 and CIS1033 or instructor approval.

\section*{CIS 1103 - Introduction to Computer Electronics} 3 Credits
An introduction to electronic principles used in microcomputers. Elements from DC, AC, Digital Electronics, and Microprocessors will be covered. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1203.

\section*{CIS 1133 - Oracle: Introduction to SQL}

\section*{3 Credits}

This course offers an extensive introduction to data server technology. The course covers the concepts of relational databases and the SQL languages. Demonstrations and handson exercises reinforce the concepts. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CIS 1153 - Adobe Dreamweaver}

3 Credits
A presentation of key Dreamweaver concepts and techniques plus the more advanced features and tools in the latest version of the software will be covered. Emphasis will be placed on Dreamweaver basics, customizing the workspace, applying cascading style sheets, working with text, designing with images, inserting links, crafting page layouts, creating interactive pages, integrating AJAX with Spry, constructing
forms, adding multimedia, publishing to the web, increasing productivity with templates, and working with code. Students will be encouraged to obtain Adobe Certified Associate (ACA) and/or Adobe Certified Expert (ACE) status through industry certification. Offered fall and spring semesters. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 1013; and CIS 1033 or permission of instructor.

\section*{CIS 1203 - Introduction to Computer Programming} 3 Credits
This course is a required prerequisite for all programming classes and will serve as an introduction to structured programming techniques. Topics to be covered include flowcharting, pseudo code, sequence, selection, iteration, arrays, I/O, principles of problem solving, debugging, documentation and good programming practice. Topics will be applied using an appropriate programming language. Lecture 2 hours. Laboratory 2 hours. Co-requisite: CSC 1203 Computer Concepts and Applications.

\section*{CIS 1211 - Introduction to MAC OS}

1 Credit
This course is a hands-on introduction to the MacIntosh operating system. The student will learn to setup and configure as well as launch and run multiple applications in the Mac environment. Basic features and operations performed in Mac applications will be demonstrated and practiced, including file management techniques. Offered fall and spring semesters. Lecture 1 hour. Laboratory 1 hour.

\section*{CIS 1233-XML}

3 Credits
This course will focus on the use of XML markup language to create valid, well-formed XML documents. Topics covered will include the proper use of the XML markup language, Document Type Definitions (DTD), XML Schema and the X-Path and Xpointer specifications. XSL and XSLT will also be discussed as a means of formatting and converting XML formatted data. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 1013 or instructor approval.

\section*{CIS 1393 - Web Design and Marketing}

\section*{3 Credits}

An introduction to Web site creation and marketing as it relates to E-Commerce business. Topics may include market research, usability issues, and design guidelines which include marketing approaches such as importance of logos, psychology of color, product promotion and cost factors. Students will develop and test a Web site using popular Web development software. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 Recommended: MKT 2423.

\section*{CIS 1443 - Electronic Commerce}

3 Credits
This course will examine the foundation, operation and implications of the Internet economy. Course content may include such topics as Internet technologies, privacy, security, online market mechanisms, interaction with customers, electronic publishing, electronic shopping, knowledgebased products, pricing in the Internet economy, database
issues, online auctions and e-marketplaces, intellectual property, policies, ethics for the Internet economy, emerging technologies and an outlook for the new economy. Lecture 3 hours. No Laboratory.

\section*{CIS 1593 - Computer and Video Game development I} 3 Credits
A hands on introduction to designing, developing and testing computer and video games. Input/Output, structured programming, object oriented programming, problem solving, debugging and documentation will be among the topics covered using appropriate game development software. Lecture 2 hours. Laboratory 2 hours.

\section*{CIS 2013 - Web-Site Administration}

3 Credits
Methods of building, maintaining, monitoring and controlling a web site. Architecture of web sites and integration with other servers will be addressed. Security issues. Firewall options and current web server software will be explored. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS1203, CSC 1203, and CSC 1263.

\section*{CIS 2023 - A+ Essentials}

3 Credits
CompTIA A+ Essentials validates knowledge of basic computer hardware and operating systems, covering skills such as installation, building, upgrading, repairing, configuring, troubleshooting, optimizing, diagnosing and preventive maintenance, with additional elements of security and soft skills. The Essentials Exam validates the basic skills needed by any entry-level service technician regardless of job environment. As the Comp TIA exam is modified to meet industry needs, this course will also be modified to cover the new topics in the exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC1203 or instructor approval.

\section*{CIS 2033 - Scripting}

3 Credits
Course objectives consist of learning the JavaScript scripting language and how it is used to create dynamic content for web pages through the use of variables, functions, objects and events along with data types and operators. Also covered will be the use of the JavaScript language to process web page based forms, animations, cookies, and implementing web page security. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 1013 or concurrent enrollment.

\section*{CIS 2043 - Microsoft Windows 2000 Professional} 3 Credits
Students will develop the abilities for installing, configuring, managing, monitoring, and troubleshooting Windows 2000 Professional. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CIS 2053 - Windows Network Administration}

3 Credits
Installation and configuration of Windows Server with an emphasis on the management and administration of user hardware and software resources. Hands-on application
of network administration principles on an operational NT Network is provided. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1263 or instructor approval.

\section*{CIS 2063 - Microsoft Windows 2000 Series Server 3 Credits \\ Students will perform server installation and operations of networking services, Active Directory services, monitoring and troubleshooting, as well as gain an understanding of the operating system functions and capabilities. Comp TIA's objectives and certification guidelines will be covered. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1263 or instructor approval.}

\section*{CIS 2073 - MS Office}

3 Credits
An in-depth treatment of the Microsoft Office product. Access, Excel, Word, and PowerPoint will be used separately and as an integrated part of Office. Emphasis will be placed on hands-on training. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CIS 2083 - Microsoft Windows 2000 Series Network Infrastructure}

\section*{3 Credits}

Students will develop the abilities for installing, configuring, managing, monitoring, and troubleshooting DNS in a Windows 2000 Series Network Infrastructure. Install, configure, and troubleshoot DHCP, remote access, network protocols, WINS, and IP routing protocols. Install Internet Connection Sharing. Install and configure Certificate Authority (CA). Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2063 or instructor approval.

\section*{CIS 2093 - Implementing Microsoft Windows 2000 Series Directory Services Infrastructure} 3 Credits
Students will develop the ability to install, configure and troubleshoot the components of Active Directory. Install Active Directory, create sites, create subnets, create site links, create site link bridges, create connection objects, create global catalog servers, move server objects between sites. Transfer operations master roles, verify Active Directory installation, Implement an organizational unit (OU) structure. Back up and restore Active Directory, perform authoritative restore of Active Directory, and recover from a system failure. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2063 or instructor approval.

\section*{CIS 2103 - Designing Microsoft Windows 2000 Series Network Infrastructure}

\section*{3 Credits}

Students will develop the skills required to analyze the business requirements for a Windows 2000 Series network infrastructure and design a network infrastructure that meets business requirements. Network infrastructure elements include: network topology, routing, IP addressing, name resolution such as WINS and DNS, virtual private networks, remote access, and telephony solutions. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2063 or instructor approval.

\section*{CIS 2113 - Designing Security in a Microsoft Windows 2000 Network}

3 Credits
Students will develop the skills required to analyze the business requirements for security and design a security solution that meets business requirements in a Windows 2000 Series environment. Security includes: controlling access to resources, auditing access to resources, authentication, and encryption. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2063 or instructor approval.

\section*{CIS 2123 - Advanced Computer Electronics}

\section*{3 Credits}

A continuation of CIS 1103 Introduction to Computer Electronics. Electronic principles used in microcomputers. Elements from DC AC, Digital Electronics, and Microprocessors will be covered. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 1103.

\section*{CIS 2133 - Designing Microsoft Windows 2000 Series Directory Services Infrastructure \\ 3 Credits}

Students will develop the ability to analyze the business requirements and design a directory services architecture, including: unified directory services such as Active Directory and Windows NT domains, connectivity between and within systems, systems components, and applications, and data replication such as directory replication and database replication. Students will also develop the skills required to analyze the business requirements for desktop management and design a solution for desktop management that meets business requirements. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2063 or instructor approval.

\section*{CIS 2143 - Advanced Hardware/Software Installation/} Configuration
3 Credits
A continuation of CSC 2143. Advanced techniques used to install hardware and software into microcomputers. Troubleshooting installation and configuration problems will be addressed. Hardware and software utilized in troubleshooting and PC maintenance will be addressed. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2143.

\section*{CIS 2153 - Advanced XHTML Technologies}

\section*{3 Credits}

This course focuses on the development of multimediaintensive, platform independent web pages for conventional Internet, Intranet, and Extranet based applications. Topics will include DHTML, CSS, client-side scripting, XML, and multimedia. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 1013.

\section*{CIS 2203 - NT Essentials}

\section*{3 Credits}

Course covers basic networking terminology, the OSI Model, hardware, software, topology, user and group management, domains, resource sharing/access, trusts and printer implementations. Lecture 2 hours. Laboratory 2 hours. Prerequisite: Extensive knowledge of Windows 95, NT Workstation or approval of program coordinator.

\section*{CIS 2213 - Oracle DBA: Database Fundamentals I} 3 Credits
Students will learn the basic administrative tasks and the knowledge needed to setup, maintain, and troubleshoot an Oracle database. The student will use an administrative tool to startup and shutdown a database, create a database, manage file and database storage, and manage users and their privileges. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 1133 or instructor approval.

\section*{CIS 2233 - Oracle DBA: Database Fundamentals II} 3 Credits
This course introduces students to several methods to backup and to recover an Oracle database and to develop skills for basic network administration. Several utilities and the Recovery Manager are introduced. Network configuration and recovery techniques are demonstrated through various workshop scenarios. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 2213 or instructor approval.

\section*{CIS 2253 - Database Server Programming}

3 Credits
This course will cover multi-user, client-server relational database concepts. Topics may include development of forms and reports, normalization of databases, and SQL. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1263; CSC 2043 would be beneficial for students to have taken.

\section*{CIS 2273 - Internet Business Applications} 3 Credits
An introduction to the development of applications that can be used in a web-based environment. Topics can include Active Server Pages, JAVA Server Pages, and DCOM development. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 1013.

\section*{CIS 2303 - NT Workstation}

3 Credits
Course covers how to support, secure and troubleshoot NT Servers and Workstations. Includes work with printers, disk/file systems and applications in both homogenous and heterogeneous NT networks. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2203 or program coordinator approval.

\section*{CIS 2313 - Novell Advanced Administration}

3 Credits
This course provides students with the knowledge and the skills they need to design, configure and administer a complex NetWare 5 network. Skills learned include upgrading from a NetWare 3 environment, migrating to NetWare Distributed Print Services executing Java-based utilities, network backup and configuring NetWare 5 for remote access. This course will focus on the objectives and skills to pass the latest version of the Novell test. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1263, CSC 2053 or instructor approval.

\section*{CIS 2323-Outlook}

3 Credits
This course covers the topics necessary to utilize a powerful integrated messaging, scheduling, and information management tool and to assist n the preparation necessary for
the Microsoft Office Specialist Outlook core exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CIS 2333 - NDS Design and Implementation}

3 Credits
This course teaches network administrators, network designers and networking consultants the skills needed to create an NDS design and implementation strategy. Students will complete an NDS design strategy and implementation schedule using templates that they can re-use to create a design for their workplaces. Students will then use these strategies and schedules to complete a NetWare implementation in a hands-on environment. The processes taught in this course for creating a solid NetWare design have been proven in use with Novell Consulting Services. This course will focus on the objectives and skills to pass the latest version of the Novell test. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1263, CSC 2053, CIS 2313 or instructor approval.

\section*{CIS 2343 - Visual Basic for Applications}

3 Credits
The Visual Basic for Applications language is presented with emphasis on how to record, edit, and write VBA macros and procedures for use with word processing, spreadsheet, and database applications. Specific topics include automating routine applications tasks, automating OLE and other types of data exchanges between applications programs, and writing complete programs that handle all aspects of performing complex tasks. Lecture 2 hours. Laboratory 2 hours. Prerequisites: (CSC 2013 and CSC 2033) or (CSC 2013 and CSC 2043) or (CSC 2033 and CSC2043) or instructor approval.

\section*{CIS 2353 - Integrating NetWare and Windows}

3 Credits
In this course students learn the fundamentals of Windows networking and how to integrate Windows networks with a NetWare network. This course will focus on the objectives and skills to pass the latest version of the Novell test. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1263, CSC 2053, CIS 2313, CIS 2333 or instructor approval.

\section*{CIS 2363 - NT Advanced Server}

3 Credits
Course covers the following subjects:Trusts, domain models, Performance Monitor, performance optimization, Network Monitor, network traffic, troubleshooting. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2303 or approval of coordinator.

\section*{CIS 2373 - NT Advanced Server/Enterprise}

\section*{3 Credits}

Continuation of subjects and coursework outlined in CIS 2363. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2363 or coordinator approval.

\section*{CIS 2383 - Implementing and Supporting TCP/IP}

3 Credits
Course covers installation, configuration, use, and support TCIP/IP, to include: protocol suite components, IP addressing,
subnet masks, DHCP, LMHOSTS, WINS, DNS, SNMP. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2373 or coordinator approval.

\section*{CIS 2393 - Internet Information Server}

3 Credits
Course covers installation and management of an intranet or internet site using Internet Information Server, to include: virtual directories and servers, FTP servers, Web pages, databases using ODBC. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2373 or coordinator approval.

\section*{CIS 2403 - TCP/IP for NetWare}

3 Credits
In this course students learn the TCP/IP protocol with special emphasis on NetWare with the latest version of NetWare the core protocol for NetWare is now TCP/IP or IPX with deference to TCP/IP. The NetWare CNE curriculum recognized this change and incorporated some of the concepts from the older courses into the core CNE classes. Understanding how to use TCP/IP on a NetWare network is critical to successfully using the NOS, especially for NetWare 3 and 4 CNEs who tend to be familiar only with IPX. This course will focus on the objectives and skills needed to pass the latest version of the Novell test. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1263, CSC 2053, CIS 2313, CIS 2333 or instructor approval.

\section*{CIS 2413 - Advanced JAVA}

\section*{3 Credits}

This is an advanced programming course that emphasizes JDBC and advanced client server programming techniques in JAVA. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2133 or instructor approval.

\section*{CIS 2433 - Microsoft Exchange Server}

3 Credits
Course covers installation and configuration of Exchange Server and clients, to include: public folders, replication of folders, forms, Internet mail, Netware connectivity. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2373 or coordinator approval.

\section*{CIS 2443 - Systems Network Architecture (SNA) Server 3 Credits}

Course covers installation and configuration of SNA Server, to include: hierarchical model, peer oriented model, peer within hierarchical model, mainframe and AS/400. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2373 or coordinator approval.

\section*{CIS 2453-Object Oriented Analysis/Design}

3 Credits
An advanced course that focuses on creating computer programs using an OOP (Object Oriented Programming) approach. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2133 or instructor approval.

\section*{CIS 2463 - PHP Programming}

3 Credits
Course objectives consist of learning the PHP scripting language and how it is used to create dynamic content for web pages through the use of variables, functions, and objects along with data types and operators. Also covers the use of the PHP language to: process web page based forms, read and write cookies, perform service side file I/O and access databases. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2033.

\section*{CIS 2473 - ColdFusion}

3 Credits
This course will focus on the use of Macromedia's ColdFusion application server and its ability to provide powerful visual layout and prototyping, enhanced code editing and development capabilities, and integrated debugging. The course will allow the student to create powerful dynamic web sites through the use of ColdFusion Markup Language (CFML), ColdFusion Components (CFC's), integration with Microsoft's Active Server Pages (ASP) and .NET as well as Sun Microsystem's Java Server Pages (JSP), XML handling, session management, and database connectivity. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS1013, CIS 1153, or permission of the instructor.

\section*{CIS 2483 - Security+}

\section*{3 Credits}

This course emphasizes various aspects of access control, authentication, malicious software, and general exploits and attacks, basics of protocols such as RADIUS, TACACS, L2TP, PPTP, SSH, SSL, and ISPEC. Topics include: vulnerabilities, ports, and OSI layers related to these protocols, system hardening, DMZs, firewalls, router placement, VLANs, mobile devices, cryptology, physical security, backup strategies, proper data disposal, basic forensics, risk assessment, user education, policy creation and documentation. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 2063, CSC 1483. Admission to the program and a criminal background check are required.

\section*{CIS 2493 - Principles of Information Assurance}

\section*{3 Credits}

Introduction to all areas of information assurance, including attackers and techniques, policies \& procedures, hardening of operating systems, applications, and networks, email and web security, cryptography, public key infrastructures, operational security, and recovery of digital evidence (forensics). This course prepares students to take the CompTIA Security+ certification exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1263 or instructor approval.

\section*{CIS 2503 - ASP.NET}

\section*{3 Credits}

This course will teach students how to use ASP.NET to create data driven web pages. Topics will include a brief overview of MS-SQL Server and Internet Information Server, creating web pages that dynamically display, insert, update, and delete records from a SQL Server database and use Crystal Reports to present data on a web page. Programming techniques are presented that enhance Rapid Application Development for web based programs. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2283 or instructor approval.

\section*{CIS 2523 - Secure Electronic Commerce}

\section*{3 Credits}

This course provides general aspects of Internet security including websites, e-commerce and transactions. Topics covered are digital currency schemes, public key infrastructure, smartcards and biometrics, and inventory management. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2493, admission to the program and a criminal background check are required.

\section*{CIS 2533 - Java Server Pages}

3 Credits
This course prepares students to develop real world web applications using Java Server Pages (JSP). Students are introduced to the fundamentals of JSP technology with an emphasis on extensible and dynamic web applications that include the following: how to write Java Server Pages using Java Beans, how to submit and process HTML forms, how to write customized Tag Libraries which simplify web page maintenance, and how to write web applications that connect to a database. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 1013, CIS 2413, or instructor approval.

\section*{CIS 2543 - Network Security}

\section*{3 Credits}

This course provides network security fundamentals. A layered defense for networks is examined including perimeter security, routers, VPNs, intrusion detection and assessment. The design of networks for maximum security, and how to monitor for unauthorized activity is studied. After an introduction to firewalls, packet filtering, and access lists, router setup is discussed with special-purpose firewalls, and general-purpose hosts with security in mind. Also coverage of network access and security as well as network troubleshooting are included. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2493, admission to the program and a criminal background check are required.

\section*{CIS 2553 - Information Technology Services, Hospitality \& Gaming Emphasis}

\section*{3 Credits}

Overview of computer system components, file structure, operating systems, word processing, spreadsheets, and databases utilized in the hospitality and gaming industries. Integrated applications between technology and communications, both written and oral, in the hospitality and gaming organizations. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or Computer Proficiency exam on file, any higher level CIS or CSC course with instructor approval.

\section*{CIS 2563 - Enterprise Security}

3 Credits
A broad view of information security for the entire organization from a management perspective. Topics include the history and development of computer and network security, system development life cycle, user needs, threats, attacks, risk analysis and management, legal \& ethical issues, policy \& procedure development, converged network security, cryptology, tools \& techniques, physical security, operational security, implementation \& administration, personnel security, contingency planning, incident handling and disaster recovery. Lecture 3 hours. No Laboratory. Prerequisite: CSC 1203.

\section*{CIS 2573 - Fundamentals of Videography}

3 Credits
An introductory study in video techniques, basic equipment - including digital video camera operation - video, composition, basic lighting and audio, production planning and visual story telling. Lecture 2 hours. Laboratory. Prerequisite: JMC 1103 or instructor approval.

\section*{CIS 2583 - Cyber Forensics}

3 Credits
Students will learn how to recover, preserve, extract and analyze digital evidence from a variety of media, utilizing sound forensics techniques, which will stand up in court. Lecture 2 hours. Laboratory 2 hours. Prerequisite: Admission to the Information Security program and an OSBI background check.

\section*{CIS 2593 - Computer and Video Game Development II 3 Credits}

A continuation of Computer and Video Game Development I. Among the topics to be covered: arrays, pointers, files, highspeed player input and the game design process. Topics will be covered using appropriate game development software and appropriate high-level programming languages. Lecture 2 hours. Laboratory 2 hours. Prerequisite: Computer and Video Game Development I

\section*{CIS 2633 - Systems Management Server}

\section*{3 Credits}

Course covers installation and configuration, to include: multiple sites, hardware/software inventory, distributing software, shared applications and remote diagnosis. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2373 or coordinator approval.

\section*{CIS 2643 - Database Design on MS SQL Server} 3 Credits
Course covers modeling components, storage allocation, creating objects, data retrieval and manipulation, referential integrity, row operations and distributed data. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2373 or coordinator approval.

\section*{CIS 2653 - System Administration for MS SQL Server} 3 Credits
Course covers installation and configuration, to include: storage management, user accounts, login security, permissions, import and export, replication and day to day operations. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2373 or coordinator approval.

\section*{CIS 2673 - Adobe Illustrator}

3 Credits
Key Illustrator concepts and techniques plus the more advanced features and tools in the latest version of the software will be covered. Emphasis on Illustrator basics, the work area, selecting and aligning, creating shapes transforming objects, drawing with the pen tool, working with type, layers, brushes, and symbols; blending shapes and colors, applying effects, appearance attributes, and graphic styles; combining Illustrator graphics with the Creative Suite, printing artwork and
producing color separations. Students will be encouraged to obtain Adobe Certified Associate (ACA) and/or Adobe Certified Expert (ACE) status through industry certification. Offered spring semester only. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CIS 2683 - Adobe InDesign}

3 Credits
Key InDesign concepts and techniques plus the more advanced features and tools in the latest version of the software will be covered. Emphasis will be placed on InDesign basics, the work area, setting up a document, working with frames, importing and editing text, working with typography, working with color and styles, importing and linking graphics, creating tables, working with transparency, working with long documents, output and PDF exporting and using XML. Students will be encouraged to obtain Adobe Certified Associates (ACA) and/or Adobe Certified Expert (ACE) status through industry certification. Offered fall semester only. Lecture 2 hours, Laboratory 2 hours. Prerequisites: CSC 1203 or instructor approval.

\section*{CIS 2703 - Computers in the Law}

3 Credits
A beginning class covering the use of computer applications in legal organizations designed to introduce the use of computer software and hardware; word processing; databases; timekeeping and billing; docket control; case management; litigation support; computer-assisted research; courthouserelated applications; and specialized legal software. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CIS 2713 - Adobe Premiere}

3 Credits
Key Premiere concepts and techniques plus the more advanced features and tools in the latest version of the software will be covered. Emphasis will be placed on Premiere basics such as working with audio, creating transitions, and producing titles; the ability to build Blu-Ray Disc, DVD, and Flash projects with Adobe Encore; the ability to record directly to computer with Adobe OnLocation; slow motion effects with time-remapping; and compressing video for handheld devices such as mobile phones, iPods, PSPs, and smartphones. Students will be encouraged to obtain Adobe Certified Associate (ACA) and/or Adobe Certified Expert (ACE) status through industry certification. Offered fall semester only. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1203 and CIS 1211 or instructor approval.

\section*{CIS 2733 - Adobe Soundbooth}

3 Credits
Key Soundbooth concepts and techniques plus the more advanced features and tools in the latest version of the software will be covered. Emphasis will be placed on Soundbooth basics, the work area, repairing and adjusting audio clips, editing and enhancing voice-over recordings, creating background music, exploring effects, working with markers, importing, exporting, and round-trip editing. Students will be encouraged to obtain Adobe Certified Associate (ACA) and/or Adobe Certified Expert (ACE) status through industry certification. Offered spring semester only. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1203 and CIS 1211 or instructor approval.

\section*{CIS 2753 - Adobe AfterEffects}

3 Credits
Key AfterEffects concepts and techniques plus the more advanced features and tools in the latest version of the software will be covered. Emphasis will be placed on AfterEffects basics, the work area, creating a basic animation using effects and presets, animating text, working with shape layers, animating a multimedia presentation, animating layers, working with masks, distorting objects with the puppet tools, keying, performing color correction, building and animating a 3D object, using 3D effects, advanced editing techniques, and rendering and outputting. Students will be encouraged to obtain Adobe Certified Associate (ACA) and/or Adobe Certified Expert (ACE) status through industry certification. Offered spring semester only. . Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1203 and CIS 1211 or instructor approval.

\section*{CIS 2763 - Digital Photography}

\section*{3 Credits}

The techniques and procedures of digital photography will be introduced. Working with digital cameras to input images into the digital environment and using Adobe Photoshop software, students will learn how to enhance, resize, and alter photographs while preparing them for print and online distribution. The integration of technical skills and aesthetic expression are emphasized. Projects require exploration and experimentation. Students must provide their own cameras. Offered fall and spring semesters. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 1033 or instructor approval.

\section*{CIS 2990 - Selected Topics in Computer Science}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Computer Science. May be repeated with a different topic. Lecture 1-4 hours and/or Laboratory 1-3 hours.

\section*{CSC 0802 - Computer Concepts for the Deaf and Hard of Hearing \\ 2 Credits}

This course is designed to give students with a hearing loss the vocabulary and conceptual base necessary to succeed in college level computer classes, specifically introductory theory classes. Lecture 2 hours. No Laboratory.

\section*{CSC 0811 - Computer Exploration for the Deaf and Hard of Hearing}

1 Credit
This course is designed to introduce students to the Windows operating system and beginning word processing with Microsoft Word. An introduction to the Internet, Email, PowerPoint and Excel may be explored. May be repeated with a different topic. Lecture and Laboratory 1 hour.

\section*{CSC 1011 - Introduction to Personal Computers}

\section*{1 Credit}

This class for the complete novice is designed to eliminate the fear of computers and introduce the Windows environment plus word processing, spreadsheet, and database programs. Hands-on sessions on the personal computer will help the student gain confidence in using the computer. Lecture and Laboratory 1 hour.

\section*{CSC 1123 - 3D Graphics Using Lightwave}

\section*{3 Credits}

The study of terminology and principles relating to the creation of ray-traced images using Lightwave computer graphics software. Students will design and construct 3D objects with surface detail.Topics will include mapping textures, fundamental modeling tools, and techniques. Additional topics will include the use of 3D graphics within the web, multimedia, and digital video. Offered fall and spring semesters. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 and or CIS 1033 or instructor approval.

\section*{CSC 1143 - Introduction to AS/400}

\section*{3 Credits}

The purpose of this course is to introduce the student to the AS/400 Programmer Option Certificate of Achievement. It will also be useful to Computer Integrated Manufacturing majors to introduce them to the computer used as the data repository for much of CIM. Topics introduced will include: AS/400 hardware, operating system software, menus, programming development manager, an introduction to RPG, messages, printing, physical files, source entry utility, an introduction to utilities and control language. There will be hands-on exercises in the lab part of the course. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203.

\section*{CSC 1161 - Introduction to Internet}

\section*{1 Credit}

This course is designed to develop skills at locating and using the many resources that are available locally and globally through the Internet. This course will concentrate on hands-on experience with the various tools through structured tours as well as unstructured "hunts." Lecture and laboratory 1 hour. Prerequisite: CSC 1011 or concurrent enrollment, or instructor approval.

\section*{CSC 1171 - Introduction to Web Page Design 1 Credit}

This course is intended to provide students with an overview of the tools available to design and develop an effective personal or corporate presence on the World Wide Web.This will be accomplished through the use of hands-on projects and exercises. Lecture and laboratory 1 hour.

\section*{CSC 1203 - Computer Concepts and Applications} 3 Credits
This is a theory/applications course. The theory introduces the role of computers in all aspects of global society including security issues. The applications segment utilizes Microsoft Windows, Word, Excel, Access, Power Point and the Internet to equip students with basic computer skills necessary for their academic and professional careers. It will serve as the first course to be taken by any computer science major, may satisfy a computer science requirement for another discipline, a university parallel transferable course and meets the computer proficiency requirements mandated by the Oklahoma State Regents for Higher Education. Lecture 2 hours. Laboratory 2 hours.

\section*{CSC 1253 - Internet Research}

3 Credits
An introduction to the basic tools of the Internet (ftp, gopher, telnet, WWW, searching, e-mail, etc.), discussion lists and newsgroups, research possibilities, and basic web page construction. Methods for efficiently locating specific information on the Internet will be emphasized. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or concurrent enrollment or instructor approval.

\section*{CSC 1263 - Network Fundamentals}

3 Credits
This first course in the network curriculum provides a general introduction to networking. Topics will include an overview of the hardware and software needed for network connectivity including personal computer operating systems, network media and topology, network card configuration and installation, communication protocols and standards. This course provides for hands-on interaction with network related hardware and software. The focus will include coverage of Comp TIA'S objectives for the Network + certification exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval. Recommended: CIS 2023 and CSC 2143.

\section*{CSC 1273 - Customer Support}

\section*{3 Credits}

Designed to show how customer support positions provide guidance and assistance in both consulting and troubleshooting roles within a helpdesk environment. Guidance in educating the user community based upon current hardware/software products. Understanding the importance of developing a better understanding of a customer's business environment and troubleshooting/resolving the customer's problems as quickly as possible. Develop troubleshooting and problem solving techniques to distinguish between communication vs. equipment hardware/software problems and be able to effectively communicate with non technical users over the telephone. Lecture 3 hours. No Laboratory. Prerequisite: CSC 1263.

\section*{CSC 1283 - Adobe Flash}

3 Credits
Key Flash concepts and techniques plus the more advanced features and tools in the latest version of the software will be covered. Emphasis will be placed on Flash basics, the work
area, working with graphics, creating and editing symbols, working with text, adding animation, creating interactive files, ActionScript basics, using components, working with sound and video, loading and optimizing Flash content and publishing Flash documents. Students will be encouraged to obtain Adobe Certified Associate (ACA) and/or Adobe Certified Expert (ACE) status through industry certification. Offered fall and spring semesters. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CSC 1293 - 3D Animation Using Lightwave 3 Credits}

The study of terminology and principles relating to the creation of ray-traced 3D animations using Lightwave computer graphics software on Macintosh platforms. Students will design and construct motion graphics for the web, multimedia, and digital video. Topics will include keyframe animation, animation using paths, and procedural animation techniques. Offered fall and spring semesters. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1123, or instructor approval.

\section*{CSC 1363 - AS/400 RPG}

\section*{3 Credits}

RPG is used to teach the Report Program Generator language on the IBM AS/400. Programming assignments are from normal business applications. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1203, CSC 1143, or instructor approval.

\section*{CSC 1403 - BASIC Language}

3 Credits
Interactive ANSI standard BASIC is presented along with extensions that have widespread application. The student will write, execute, test, and debug programs drawn from a variety of disciplines using loops, subroutines, table handling, sequential file processing, and other fundamental programming techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1203 and CIS 1203 or instructor approval.

\section*{CSC 1463 - Disk Operating Systems}

3 Credits
An in-depth study of a microcomputer operating system. Emphasis will be placed on command line operations and learning the proper syntax for commands, including keywords, parameters, and switches and their proper usage, both at the command line and batch files. Other major concepts will include configuration and management of disks, file management, memory configuration and optimization, system troubleshooting, and use of an edit program.
Additional operating concepts and examples from Graphical User Interface based operating systems may be covered at the instructor's option. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203.

\section*{CSC 1473 - Software Utility Packages for Microcomputers}

\section*{3 Credits}

Provides the microcomputer user with a working knowledge of commonly used utility software packages. Several industry standard application software packages will be used to demonstrate enhanced memory and disk management. Critical issues like operating system add-on's and virus protection will also be discussed. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1463.

\section*{CSC 1483 - Introduction to UNIX (Linux)}

3 Credits
An introduction to UNIX operating system with specific reference to UNIX commands, the UNIX file structure, editors, and shell programming. Includes an introduction to system administration and security. Lecture 2 hours, Laboratory 2 hours. Prerequisites: CSC 1203 or instructor approval.

\section*{CSC 1493 -AS/400 CL}

\section*{3 Credits}

Introduction to IBM AS/400 Control Language. Overview of operating system. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1203, CSC 1143 or instructor approval.

\section*{CSC 1501 - Disk Operating System 1 Credit}

This course concentrates on disk storage organization, batch file operation, and utilities provided by the popular Microsoft Disk Operating System (DOS). Emphasis is placed on device and file naming conventions, system functions, commands, and the hardware interface enabling students to effectively create and manage files, execute programs, and manage logically related data. Lecture and Laboratory I hour. Prerequisite: CSC 1011.

\section*{CSC 1511 - Beginning Visual BASIC} 1 Credit
This is a hands-on course which is designed to introduce students to fundamental principles of programming using Visual BASIC. Several simple programs will be written to illustrate the use of commonly used Visual BASIC commands. Lecture and Laboratory 1 hour. Prerequisites: CSC 1011 and CSC 1501.

\section*{CSC 1521 - PC Setup and Configuration}

\section*{1 Credit}

This course is designed to help individuals maintain or upgrade their computers and diagnose a problem if one should arise. Peripheral devices will be discussed from a compatibility and capability standpoint. Lecture and Laboratory 1 hour. Prerequisite: CSC 1011.

\section*{CSC 1531 - Introduction to Excel}

\section*{1 Credit}

This course is designed for the beginning spreadsheet student. Instruction will focus on the set-up and elementary operations of using and building spreadsheets and workbooks. Lecture and Laboratory 1 hour. Prerequisite: CSC 1011 and CSC 1641 or CSC 1203.

\section*{CSC 1541 - Advanced Excel}

\section*{1 Credit}

This course is a continuation of CSC 1531. A brief review of the basic spreadsheet operations will be covered. Emphasis will be on data commands and shortcuts. Add-In options and macros will be discussed. Lecture and Laboratory 1 hour. Prerequisite: CSC 1531.

\section*{CSC 1551 - Introduction to Word}

1 Credit
This course is designed for the beginning word processing student. Instruction will focus on the set-up and elementary operations of creating and using documents. Lecture and Laboratory 1 hour. Prerequisite: CSC 1011 and CSC 1641.

\section*{CSC 1561 - Advanced Word}

1 Credit
This course is a continuation of CSC 1551. A brief review of the basic word processing operations will be covered. Emphasis will be on assembly and merging documents. There will be discussion on shortcuts, styles, macros, and creating templates. Lecture and Laboratory 1 hour. Prerequisite: CSC 1551.

\section*{CSC 1571 - Introduction to Access}

\section*{1 Credit}

This course is designed for the beginning database student. Instruction will focus on the set-up and elementary operations of creating and using a database. Queries and reports will be generated. Lecture and Laboratory 1 hour. Prerequisite: CSC 1011 and CSC 1641 or CSC 1203.

\section*{CSC 1581 - Advanced Access}

1 Credit
The Advanced Database class is a continuation of CSC 1571. Programs illustrating record management, multiple file handling, and menu driven systems will be written. Lecture and Laboratory 1 hour. Prerequisites: CSC 1011 and CSC 1571.

\section*{CSC 1601 - Introduction to Integrated Software 1 Credit}

This course is designed for the student who wants to manipulate word processing, spreadsheet, database, and graphics packages easily. Instruction will focus on the common tools of these packages. Integration will be demonstrated. Lecture and Laboratory 1 hour. Prerequisite: CSC 1011 and CSC 1641 or CSC 1203.

\section*{CSC 1641 - Windows}

1 Credit
This course is a hands-on introduction to the Windows operating system. The student will learn how to set-up and configure the Windows environment plus launch and run multiple applications. Many of the basic features and operations that are performed in most Windows applications will be demonstrated and practiced. Lecture and Laboratory 1 hour. Prerequisite: CSC 1011.

\section*{CSC 1671 - Beginning Network Administrator} 1 Credit
This course will consist of a lecture/lab combination to acquaint students to a network environment and to provide basic entry level skills to become a network administrator. Handson exercises will allow the students to become familiar with a network operating system's management utilities. Lecture and Laboratory 1 hour. Prerequisites: CSC 1501 or instructor approval.

\section*{CSC 1681 - Advanced Network Administrator}

1 Credit
This course will be a continuation of CSC 1671 and will build on the concepts and assignments previously presented. Advanced network commands and utilities will be demonstrated to further supplement the skills required by a network administrator. Directory structures, security, printing, and network administration will be covered. Lecture and Laboratory 1 hour. Prerequisites: CSC 1501 and CSC 1671.

\section*{CSC 1711 - Introduction to PowerPoint}

1 Credit
This course is designed for the beginning student. Instruction will be on developing slide presentations, speaker notes, handouts and flyers. Guidelines for effective presentation will be discussed. Lecture and Laboratory 1 hour. Prerequisites: CSC 1011 and CSC 1641 or CSC 1203.

\section*{CSC 1721 - Applied Integrated Software} 1 Credit
The student must have basic integrated spreadsheet knowledge. The study of the integration of the functions of the package including the development and use of charts will be provided through lecture and lab activities. Lecture and Laboratory 1 hour. Prerequisite: CSC 1601.

\section*{CSC 1733 - AS/400 Operation and Utilities}

\section*{3 Credits}

An interactive study of the physical operations and utilities of the IBM AS/400. Emphasis will be on controlling the operations of the entire system, i.e., device configuration and communications, working with subsystems and jobs, handling messages and printer output, implementation of system backup and restore procedures, networking in a client/server environment, and working knowledge of commonly used utilities. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1143 or instructor approval.

\section*{CSC 1741 - Advanced Integrated Software}

1 Credit
This course is a continuation of CSC1601. The student will learn advanced Word software techniques. PowerPoint skills will be developed to aid the student in presenting information including spreadsheet data. Lecture and Laboratory 1 hour. Prerequisites: CSC 1601 and CSC 1721.

\section*{CSC 1801 - Advanced DOS}

\section*{1 Credit}

This course is a hands-on continuation of CSC 1501, Disk Operating System. Hard disk management, memory
management, batch files, system configurations, and DOS shells and editors will be covered through in-depth lecture and hands-on exercises. Lecture and Laboratory 1 hour. Prerequisites: CSC 1011 and CSC 1501.

\section*{CSC 1811 - PC Utilities}

1 Credit
This course is designed for the experienced DOS user. This course teaches the student how to optimize and manage a PC's hard disk. Elements of the microcomputer's architecture and configuration will be discussed. Typical utility packages also will be discussed and demonstrated, such as RAM resident programs, diagnostics utilities, desktop organizers, print spoolers, public domain tools, and backup methods. Lecture and Laboratory 1 hour. Prerequisites: CSC 1011 and CSC 1501.

\section*{CSC 1821 - Introduction to PC Communications}

1 Credit
This course provides an introduction for microcomputer users to the fundamentals of data communication, hardware, software networks, and E-mail. Demonstration, discussion, and hands-on exercises emphasize telecommunications and applications, including use of modems and popular software to connect with RBBS's and on-line services. Lecture and Laboratory 1 hour. Prerequisites: CSC 1011 and CSC 1501.

\section*{CSC 1861 - Introduction to Object Oriented Programming}

\section*{1 Credit}

This is a hands-on course which is designed to introduce students to an industry standard object oriented programming language. Exercises and lecture will concentrate on teaching the features of an object oriented package through developing several simple applications. It will be helpful if the student is already proficient in at least one programming language. Lecture and Laboratory 1 hour. Prerequisites: CSC 1011 and CSC 1501.

\section*{CSC 1901 - Beginning UNIX (Linux)}

1 Credit
A practical introduction to the UNIX operating system, with emphasis on creating and manipulating files and using basic commands. Includes an introduction to shell programming. Lecture and Laboratory 1 hour. Prerequisite: CSC 1011 or instructor approval.

\section*{CSC 1911 - Intermediate UNIX (Linux)}

1 Credit
Continued coverage of the UNIX operating system, including more commands and further work with file editing and shell scripts. Program development is also covered. Lecture and Laboratory 1 hour. Prerequisite: CSC 1901 or instructor approval.

\section*{CSC 1921 - UNIX (Linux) AWK Programming}

1 Credit
This course provides instruction in the AWK programming language. Programs that interact with files and devices will be created and implemented. Lecture and Laboratory 1 hour. Prerequisite: CSC 1911 or instructor approval.

\section*{CSC 1931 - Graphical User Interfaces Using X Window} 1 Credit
This course covers the design and creation of graphical user interfaces, with emphasis on the current standards of window layouts. The X Window system will be used to implement the interfaces. Lecture and Laboratory 1 hour. Prerequisite: CSC 1911 or instructor approval.

\section*{CSC 1941 - Client/Server Computing}

\section*{1 Credit}

This course provides instruction in the set-up and operation of a distributed system in a UNIX network environment. It covers both the Remote Procedure Call (RPC) interface and file sharing utilities. Lecture and laboratory 1 hour. Prerequisite: CSC 1911 or instructor approval.

\section*{CSC 1951 - Advanced UNIX (Linux)}

1 Credit
This class covers advanced user techniques. Emphasized are shell-scripting techniques, security, process and memory control, and networking. Also covered are backups and file management, communication, and specialized tools. Lecture and laboratory 1 hour Prerequisites: CSC 1911 or instructor approval.

\section*{CSC 1961 - Using a Network}

1 Credit
Practical application of a major Network operating system as it relates to users of the network. The student will learn the capabilities and limitations of a network. Hands-on experience with an operational network operating system is provided. Courses may be repeated with a different network operating system. Lecture and Laboratory 1 hour. Prerequisite: CSC 1671 or instructor approval.

\section*{CSC 2013 - Word}

3 Credits
This course offers an in-depth coverage of the concepts and techniques required to create complex documents for business use and to assist in the preparation for the Microsoft Office Specialist Word expert exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CSC 2033 - Excel}

3 Credits
This course provides an in-depth coverage of the concepts and techniques required to use a spreadsheet to express, analyze, and solve business-related problems and to assist in the preparation for the Microsoft Office Specialist Excel expert exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CSC 2043 - Access}

3 Credits
This course covers the topics required to create, update, and query a database and generate reports and to assist in the preparation necessary for the Microsoft Office Specialist Access core exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CSC 2053 - NOVELL Network Administration}

\section*{3 Credits}

This course is an introduction to Novell Network Administration. Topics will include installation and configuration of server software with an emphasis on the management and administration of user hardware and software resources. Hands-on application of network administration principles on an operational network is provided. The focus will include coverage of Comp TIA's objectives for the server + certification exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1263 or instructor approval.

\section*{CSC 2072-Network Seminar}

2 Credits
Study of network related concepts from current literature and periodicals to keep up with the changes in this fast paced field. The course will familiarize the student with research methods and sources for ongoing self study. Sources include: trade periodicals, vendor brochures and spec. sheets, current books, tours, demonstrations, and guest speakers. Course may be repeated. Lecture 1 hour. Laboratory 2 hours. Prerequisite: CSC 1263 or instructor approval.

\section*{CSC 2083 - AS/400 Advanced CL}

\section*{3 Credits}

Continuation of CSC 1493, Introduction to AS/400 Control Language. Additional Control Language instruction in the AS/400 operating system. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1363, CSC 1493, and CSC 2113.

\section*{CSC 2103 - Networking Technologies}

3 Credits
A continuation of network fundamentals and administration expanded to the Wide Area Network (WAN) environment.
Topics to include Internet and Intranet connectivity on a variety of platforms (routers, bridges, and gateways to hosts); including an exploration of network protocols with the emphasis on Transmission Control Protocol/Internet Protocol (TCP/IP). Hands-on application of the hardware and software relevant to wide area connectivity will be provided whenever possible. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2053 or permission from the instructor.

\section*{CSC 2113 - AS/400 Advanced RPG}

3 Credits
Continued instruction in RPG Language. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1363.

\section*{CSC 2123 - Microcomputers for Teachers}

3 Credits
This course will cover how to select a microcomputer for the classroom, evaluating existing instructional programs (software), and learning to develop your own course material. This hands-on course will provide teachers the opportunity to acquire experience in entering and executing programs on the microcomputer. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1011.

\section*{CSC 2133 - Introduction to JAVA}

\section*{3 Credits}

An introduction to how Java language is used to develop highly portable applications and applets. Topics will include data objects exceptions, threads, and the Abstract Windows Toolkit. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 1203 and CSC 2473 or CSC 2843 or instructor approval.

\section*{CSC 2143- - A+ IT Technician}

3 Credits
The second of the A+ courses deals with more in-depth technical aspects of hardware and software troubleshooting and security issues, soft skills and office communication, as well as some basics on electricity and safety procedures. Students familiar with computer technology, but unfamiliar with service communication, delve deeper into the proper methods of assisting customers, coworkers, and superiors. As the Comp TIA exam is modified to meet industry needs, this course will also be modified to cover the new topics in the exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC1203 or instructor approval.

\section*{CSC 2153 - Microcomputer to Mainframe Communications}

\section*{3 Credits}

This course will discuss the various protocols, cabling, expansion cards, and trade-offs in connecting microcomputers to mainframe computers. The lab work will be to connect one or more types of microcomputers to a mainframe computer, including installation, cabling, software installation, and troubleshooting and diagnostics. Lecture 2 hours. Laboratory 2 hours. Prerequisites: MTH 1513, CSC 1203, CSC 1463, CSC 2203, CSC 2433, and CSC 2353.

\section*{CSC 2163 - Windows Operating Systems} 3 Credits
This course covers a state-of-the-art operating system environment. Major areas to be studied will include coverage of installation procedures, customizing desktops, security issues, file management, network/internet connectivity, managing programs/hardware/digital media, maximizing performance, and some troubleshooting techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203.

\section*{CSC 2203 - Data Communications}

3 Credits
This course serves as an introduction to the complex and extensive field of data communications in a cross-platform environment. Concepts and terminology associated with networks, protocols, equipment and applications are presented. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1203 and a 3 credit hour computer programming language course.

\section*{CSC 2233 - AS/400 RPG IV ILE}

3 Credits
The RPG IV programming language presented on the AS/400 platform covering the following: Creation, syntax \& processing of physical files, display files, logical files, subfiles, and printer files using the SEU, DFU, PDM \& SDA in both batch \& interactive environments. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 2113.

\section*{CSC 2243 - Network Design and Troubleshooting} 3 Credits
Planning, analysis, design, and installation of a network will be discussed; students will design networks for a variety of situations. Problems common to networks will be integrated into the course. Troubleshooting methods and procedures will be discussed. Hardware and software to aid with problem identification and resolution will be discussed and demonstrated where possible. The focus will include coverage of Comp TIA's objectives for the Server + certification exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 2063, CSC 2053, and CSC 1263 or permission of the instructor.

\section*{CSC 2253 - Network Programming}

\section*{3 Credits}

Programming considerations and applications as they apply to network operating systems. The course will include writing programs that will be run in a network environment and developing program applications specific to the network. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 1203 and CSC 1593 and CSC 1403 or CSC 1443 or CSC 2303 or CSC 2473 , or one year of experience with one of these programming languages, or permission of the instructor.

\section*{CSC 2263 - Digital Video I/Final Cut Pro}

3 Credits
A general overview of digital video editing. Students will gain hands on experience in video capture and editing using Final Cut Pro nonlinear video editing software on Macintosh platforms. Offered fall semester only. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 1211 and CIS 2573 or JMC 1303 or instructor approval.

\section*{CSC 2273 - Digital Video II/ Final Cut Pro} 3 Credits
An in depth continuation of CSC 2263 where students will integrate graphics, audio, animation, and special effects into digital video projects. Students will use Final Cut Pro editing software on Macintosh platforms. Offered spring semester only. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2263 or instructor approval.

\section*{CSC 2283 - Visual Basic}

3 Credits
The Visual Basic language is presented with the students creating applications that will run in the Windows environment. Topics include event processing techniques, incorporating GUI objects and menus into an application and discussion of application specific commands and functions. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 1203 and CSC 1403, CSC 1463, CSC 1641 or CSC 2163 or instructor approval.

\section*{CSC 2293 - AS/400 Networking}

3 Credits
Discuss the different types of Local Area Network (LAN),Token Ring, Ethernet, and PC support as used with an AS/400. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1733 and CSC 2193.

\section*{CSC 2303 - PASCAL}

\section*{3 Credits}

The PASCAL language is presented with the students writing, compiling, debugging, executing, and testing PASCAL programs drawn from a variety of disciplines. Students should have a working knowledge of the operating system in which they will be interacting. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1203 and CIS 1203 or instructor approval.

\section*{CSC 2333 - Systems Analysis and Design}

\section*{3 Credits}

An overview of the entire system development life cycle with a more detailed discussion of the analysis and design phases. Topics include: fact gathering techniques, communication skills, project management, feasibility analysis, and data flow diagrams. Lecture 3 hours. No Laboratory. Prerequisites: CIS 1203 or CSC 1403 or instructor approval.

\section*{CSC 2433 - Telecommunication Systems}

\section*{3 Credits}

A study of the concepts involved in the design, implementation, and utilization of systems transmitting information between a computing system and remotely located sending and receiving devices. Lecture 3 hours. No Laboratory. Prerequisite: CSC 2333.

\section*{CSC 2473 - C Language}

3 Credits
The C programming language is presented with emphasis on applications as a portable,"mid-level" language. The student will write several programs utilizing the important features of \(C\) such as functions, structures, pointers, recursion and bitoperations. Students should have a working knowledge of the operating system in which they will be interacting. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 1203 or CSC 1403 or CSC 2303 or instructor approval.

\section*{CSC 2483 - PowerPoint / Multimedia}

\section*{3 Credits}

This course provides comprehensive coverage of the concepts and techniques to create presentations suitable for professional purposes, to understand the underlying functionality of presentation software, and to assist in the preparation for the Microsoft Office Specialist PowerPoint comprehensive exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or instructor approval.

\section*{CSC 2653 - Database for UNIX (Linux) Systems} 3 Credits
An introduction to UNIX database software including how to create, update, and query a database, generate reports, set up a command file, and organize a database. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1483 and a 3-credit hour programming class, or instructor approval.

\section*{CSC 2673 - Advanced PASCAL}

3 Credits
Advanced programming concepts and techniques using the PASCAL programming language. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2303 or instructor approval.

\section*{CSC 2683 - Data Structures}

\section*{3 Credits}

Advanced programming techniques and concepts using the C programming language. Topics will include algorithm analysis and design, memory management, software engineering concepts and standard data structures including linked lists and binary trees. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2473 or instructor approval.

\section*{CSC 2753 - Introduction to Networking}

\section*{3 Credits}

This course is designed for the student majoring in microcomputer programming, microcomputer software applications, or mainframe programming. It provides an overview of networks in a computer environment. Topics will include installation and configuration of software and hardware components of a network, typical network configurations, and file and software sharing. Hands on experience will be provided on a typical network in the lab. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1463 or instructor approval.

\section*{CSC 2773 - Advanced Database for UNIX (Linux) Systems \\ 3 Credits \\ Continued instruction in the creation and use of UNIX databases, including performance improvement techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2653.}

\section*{CSC 2783 - Advanced UNIX (Linux)}

\section*{3 Credits}

Continued instruction in the UNIX operating system, including system administration functions. Emphasis will be placed on setting up and maintaining file systems, networks, devices, and users. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1483 or instructor approval.

\section*{CSC 2793 - UNIX (Linux) Programming}

3 Credits
This course provides instruction in the various programming methods available with UNIX, including advanced shell scripts, awk, sed, C, make files, and SCCS. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 1483 and CSC 2473, or instructor approval.

\section*{CSC 2803 - UNIX (Linux) Networking}

3 Credits
A study of networking and distributed processing in the UNIX environment. Topics covered include TCP/IP, UUCP, Network File System (NFS), and electronic mail. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2783 or instructor approval.

\section*{CSC 2823 - UNIX (Linux) Programming in C} 3 Credits
An advanced programming class utilizing Inter Process Communications (IPCs) and system calls. An in-depth review of device driver programming will be done. Device drivers will be among the programs created. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 2683 and CSC 2783 or instructor approval.

\section*{CSC 2833 - X Window Programming}

\section*{3 Credits}

This course provides in-depth coverage of the X Window system. Students will learn the X protocol and how to design and develop Graphical User Interface (GUI) programs. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CSC 2683 and CSC 2783 or instructor approval.

\section*{CSC 2843 - C+ + Programming Language}

\section*{3 Credits}

Programming techniques in object-oriented programming, including data abstraction, inheritance, polymorphism, and dynamic object creation. Emphasis will be placed on the reusability of objects and the focus on object concepts as they deal with future program maintenance. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CIS 1203 and CSC 2473 or instructor approval.

\section*{CSC 2863 - PowerBuilder}

\section*{3 Credits}

This course is designed to teach students how to use PowerBuilder to develop Windows based client/server business applications. The PowerBuilder application systems tools and object oriented controls and language will be used to create robust event driven programs. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2163.

\section*{CSC 2873 - Advanced C+ +}

\section*{3 Credits}

This course is intended to strengthen a student's ability to design an object oriented system and implement that system on a Windows based platform. The class will concentrate on conforming to industry-standard user and system interface guidelines to build potentially commercial level products. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2843 or instructor approval.

\section*{CSC 2893 - Advanced Visual Basic}

\section*{3 Credits}

This course provides continued instruction in Visual Basic using advanced object oriented programming techniques. Subject matter includes classes, ADO database connectivity, SQL, ASP, and various web service topics. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 2283 or instructor approval.

\section*{CSC 2953 - Analysis/Solution Architecture}

\section*{3 Credits}

This course is designed to help prepare for the Solution Architecture component of the Microsoft Certified Solutions Developer certification exam. Topics include how to gather, analyze, and present business processes and requirements and the use of appropriate Microsoft \({ }^{\circledR}\) Solutions Framework (MSF) models and processes to create conceptual, logical and physical designs for a business solution. Students will learn how to select suitable technologies and architectures for their solution, based on trade-off analysis. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 2903, CIS 2913 or instructor approval.

\section*{CSC 2973 - Digital Media Internship}

3 Credits
Expands the Digital Media Program, offering internship as a means to provide students with hands-on learning and working experience in their chosen specialty options of Adobe Master Design Specialist, Digital Media Specialist, or Web Design Specialist. Offered fall and spring semesters. Initiation of the application process with the program coordinator or Associate Dean. No Lecture. Laboratory 12 hours.

\section*{CSC 2990 - Selected Topics in Computer Science} 1-4 Credits
The study and/or analysis of a selected topic in Computer Science. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{CONSTRUCTION TECHNOLOGY \\ (See Civil Engineering/Surveying Technology Program)}

\section*{COT 2103 - Introduction to Construction Management \\ 3 Credits}

An introduction to the skills, knowledge, tools and techniques needed for successful management of projects from the prospective of the construction contractor. Lecture 3 hours. No Laboratory.

\section*{COT 2123 - Construction Drawings and CAD} 3 Credits
Interpretation and production of construction drawings, including architectural and civil engineering drawings using computer aided drafting software and techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisite: DRF 1363.

\section*{COT 2163 - Construction Cost Estimating}

3 Credits
Calculations and computer techniques for quantity takeoffs, material requirements and labor for estimating costs of construction. Lecture 2 hours. Laboratory 2 hours. Prerequisite: COT 2123.

\section*{COT 2183 - Construction Codes and Practices} 3 Credits
An introduction to building codes, regulations and OSHA safety requirements affecting the construction industry. Commonly used practices and techniques in construction. Lecture 3 hours. No Laboratory. Prerequisite: COT 2103.

\section*{COT 2213 - Construction Planning and Scheduling} 3 Credits
Methods of scheduling including Gantt charts and critical path methods; development of work breakdown structures; computer techniques using construction industry software. Lecture 2 hours. Laboratory 2 hours. Prerequisite: COT 2103 and concurrent enrollment in or completion of COT 2183.

\section*{CRIMINAL JUSTICE}

\section*{CJ 1013 - Introduction to Criminal Justice}

\section*{3 Credits}

An examination of the historical development of law enforcement. Fundamental functions of federal, state, and local law enforcement agencies. The trend toward professionalism. Lecture 3 hours. No Laboratory.

\section*{CJ 1213 - Police Fundamentals}

3 Credits
Theory and basic knowledge necessary to enable a beginning peace officer to perform field services. Emphasis on authority, ethics, arrest, evidence, public relations, preventive patrol, crimes, and basic criminal procedure. Lecture 3 hours. No Laboratory. Prerequisite: State certification as peace officer.

\section*{CJ 1253 - Police Methods and Equipment} 3 Credits
Methods and equipment necessary to enable a beginning peace officer to perform field services. Lecture 3 hours. No Laboratory. Prerequisite: State certification as peace officer.

\section*{CJ 2023 - Traffic Investigation}

3 Credits
A study of traffic enforcement, education, and engineering with primary emphasis on techniques, traffic accident investigation analysis, and selective enforcement. Lecture 3 hours. No Laboratory. Collegiate officer program only. Prerequisite: LE 1023.

\section*{CJ 2063 - Law Enforcement Supervision} 3 Credits
The essentials of supervision with primary emphasis toward the supervisor's role in planning, budgeting, training, methods of improving leadership, and awareness of the managerial role. Lecture 3 hours. No Laboratory.

\section*{CJ 2103-Criminal Evidence}

3 Credits
The law, rules, and kinds of evidence. Admissible evidence for criminal prosecution. Lecture 3 hours. No Laboratory.

\section*{CJ 2113 - Criminalistics}

\section*{3 Credits}

Basic criminalistics designed to develop proficiency in the scientific detection, collection, and preservation of evidence in criminal investigation. Forensic science from a practical, rather than theoretical point of view. Lecture 3 hours. No Laboratory. Prerequisite: CJ 1013.

\section*{CJ 2123 - Criminal Law I}

3 Credits
An examination of the nature of the criminal act. Classification of crimes, necessary elements, and defenses. Consideration of the effects of case decisions on criminal law. Lecture 3 hours. No Laboratory.

\section*{CJ 2133 - Introduction to Crime Scene Investigation} 3 Credits
This course is designed to familiarize the student with the collection of physical evidence at the scene of the crime. The course will emphasize the crime scene search, the recognition of physical evidence, the techniques and methods for collection, preservation and transmission for laboratory analysis of visible and latent evidence. Lecture 3 hours. No Laboratory.

\section*{CJ 2143 - Criminal Law II 3 Credits}

The substantive criminal law defining common law and statutory offenses and punishments. Lecture 3 hours. No Laboratory. Prerequisite: CJ 2123.

\section*{CJ 2183 - Police Equipment and Weapons 3 Credits}

A study of the various types of equipment and weapons used in law enforcement. Lecture 3 hours. No Laboratory.

\section*{CJ 2213 - Interrogation Techniques}

3 Credits
Basic fundamentals of proper techniques of interrogation, interview, case preparation, and courtroom testimony. Lecture 3 hours. No Laboratory.

\section*{CJ 2223 - Criminal Procedures I}

3 Credits
The control machinery of criminal law from investigation to pardon. Problems incident to investigation, search and seizure, arrest, trial, judgment, and disposition of persons suspected and/or accused of criminal acts. Lecture 3 hours. No Laboratory.

\section*{CJ 2333 - Criminal Procedures II 3 Credits}

A hybrid course presented in lecture, independent and on-line study requiring service learning/internship in a field-study environment. The course includes review and preparation of common documents in law enforcement including a case report, affidavit of probable cause, and a search warrant with accompanying documents. Lecture 3 hours. No Laboratory. Prerequisite: CJ 2223 or concurrent enrollment.

\section*{CJ 2990 - Selected Topics in Criminal Justice}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Criminal Justice. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\footnotetext{
DEAF AND HARD OF HEARING COURSES
Tulsa Community College offers specialized courses for the deaf and hard of hearing in the following subjects, each of which has its own category heading and course prefix numbers: English, Math, Computer Science, Sign Language and personal development. These courses are listed in alphabetical order within their discipline. For more information please refer to the Student Services section of this catalog.
}

\section*{DENTAL ASSISTING}

\section*{DA 1124 - Dental Assisting Introduction 4 Credits}

An overview of dental specialties which include all the dental team members, reviewing educational requirements, responsibilities, and job duties. Lecture 3 hours. Laboratory 2 hours.

\section*{DA 1133 - Dental Anatomy and Physiology 3 Credits}

A study in the structures of the head and neck, including tooth anatomy and morphology. The course focuses on preventive dentistry with an emphasis on disease transmission and pathology. Lecture 2 hours. Laboratory 2 hours. Prerequisite: DA 1124.

\section*{DA 1231 - Office Procedures}

1 Credit
The course provides an overview of general office procedures. Manual procedures and dental computer software will be utilized. Lecture 1 hour. No Laboratory.

\section*{DA 1242 - Operative Chairside Procedures I}

\section*{2 Credits}

Course covers theory and clinical practice of concepts and methods used in infection control, rotary and dental hand instruments, pharmacology and pain control, oral evacuation, instrument transfer, dental materials, restorative dental procedures and the dental operatory. Lecture 1 hour. Laboratory 2 hours.

\section*{DA 2344 - Operative Chairside Procedures II}

\section*{4 Credits}

Course covers theory and clinical practice in the use of dental materials, restorative dental procedures, and the dental operatory. Students will also practice oral screening exams and dental charting. Lecture 3 hours. Laboratory 2 hours.

\section*{DA 2432 - Radiology and Laboratory Techniques} 2 Credits
A study of physical and chemical properties of \(x\)-radiation. Clinical/practical experience in techniques, processing, evaluation, and care of equipment. Practical laboratory topics include theory and fabrication of diagnostic casts, custom trays, elastrometric impressions, and crown and bridge. Lecture 1 hour. Laboratory 2 hours.

\section*{DA 2444 - Clinical Dental Assisting}

\section*{4 Credits}

Course offers clinical dental experience working in a dental office with professional staff, and the application of dental assisting knowledge and objectives in a clinical setting. No Lecture. Laboratory 8 hours.

\section*{DENTAL HYGIENE}
(A student must be admitted into the Dental Hygiene Program and remain a student in good standing before enrolling in any course
within the discipline.)

\section*{DH 1012 - Dental and Oral Anatomy}

2 Credits
This course includes anatomy of the oral structures, tooth morphology, dental anomalies, and physiology of occlusion. Lecture 1 hour. Laboratory 2 hours. Prerequisite: BIO 1314.

\section*{DH 1022 - Head and Neck Anatomy}

2 Credits
Gross anatomy of the head and neck with emphasis on osteology, circulation, innervation and musculature as these structures relate to the clinical practice of dental hygiene. Lecture 2 hours. No laboratory. Prerequisite: BIO 1314.

\section*{DH 1303 - Oral Embryology and Histology}

3 Credits
Embryonic development and microscopic anatomy of human body systems with emphasis on the oral structures. Lecture 3 hours. No Laboratory. Prerequisite: BIO 1314.

\section*{DH 1333 - Pathology}

\section*{3 Credits}

This course provides an overview of the principles of general pathology, the study of pathology of organ systems of most importance to the dental hygienist and an in-depth study of pathology of the head, neck, and oral structures. The course includes the etiology of disease, host responses of inflammation, repair and immunology, and common clinical features of disease. It emphasizes visual differentiation between normal and abnormal tissues and conditions. Lecture 3 hours. No Laboratory. Prerequisites: DH 1303 and DH 1314.

\section*{DH 1353 - Periodontology}

3 Credits
This course is designed to provide the student with a thorough understanding of the role of the dental hygienist in the treatment of periodontal disease. The normal periodontinum, pathogenesis and etiology of periodontal disease will be reviewed. This course also includes host response and periodontitus as a manifestation of systemic diseases along with incorporating an evidence-based approach to periodontal care. Assessment, planning implementing and maintenance strategies for the prevention and treatment of periodontal diseases are also presented. Lecture 3 hours. No Laboratory. Prerequisites: DH 1303, DH 1363. Corerequisite: DH 1394.

\section*{DH 1363 - Dental Hygiene Theory I}

\section*{3 Credits}

Introduction to the dental hygiene profession. Principles of ethical and professional behavior are presented along with professional responsibility. This course includes dental terminology, basic principles of infection control (standard precautions), concepts of oral hygiene and disease prevention, patient health education, dental deposits and their significance in oral disease. Introduction to oral inspection procedures (extra/intra oral examination, examinations of teeth and surrounding periodontal structures) along with obtaining medical/dental histories and vital signs are also presented. Lecture 3 hours. No laboratory. Prerequisites: CHE 1124, BIO 1314, BIO 1323. Corequisite: DH 1382.

\section*{DH 1373 - Dental Hygiene Theory II}

\section*{3 Credits}

This course includes an overview of dental specialties; procedures for emergencies; concepts of planning dental hygiene care for the child, adolescent, adult, and geriatric patients along with patients who have special needs. Also included in this course are the rationale and the use of instrument sharpening, tobacco use cessation, the ultrasonic scaler, and the air polisher. Lecture 3 hours. Laboratory 1 hour. Prerequisites: DH 1363, DH1382; Corequisite: DH 1394.

\section*{DH 1382 - Clinical Dental Hygiene I}

\section*{2 Credits}

This course includes the preclinical experience designed to develop thorough and efficient dental instrumentation techniques for comprehensive oral hygiene services. It includes clinical concepts of patient education and treatment, the setup and care of equipment and instruments, aseptic technique and the prevention of disease transmission, taking medical/ dental histories and vital signs, inspection of oral hard and soft tissues, dental charting procedures, and instrumentation skills. Preclinical experience will be gained through mannequins and student partner practice. Materials fee required. No lecture. Laboratory 8 hours. Prerequisite: Basic Life Support for Health Care Providers. Corequisite: DH 1363.

\section*{DH 1394 - Clinical Dental Hygiene II}

\section*{4 Credits}

Focus will be on the application of treatment concepts into clinical skills and techniques. Emphasis on integrating knowledge into individualized treatment plans for patient motivation/education, using charting/data gathering skills, data processing support, instrumentation skills, selection of appropriate oral health products, ultrasonic and air polisher utilization, administration of local anesthesia, nitrous oxide/ oxygen analgesia along with fluoride applications. Materials fee required. No Lecture. Laboratory 12 hours. Prerequisites: DH 1382, Basic Life Support for Healthcare Providers. Corequisite: DH 1373.

\section*{DH 1412 - Dental Radiography Foundation}

\section*{2 Credits}

A study of physical and chemical properties of X-radiation, biological effects of X-rays, materials and procedures. Lecture 2 hours. No Laboratory. Corequisite: DH 1421.

\section*{DH 1421 - Dental Radiography Techniques}

\section*{1 Credit}

The student will receive practical experience in radiography techniques, processing, evaluation, and interpretation, care of equipment, radiation safety and infection control. No Lecture. Laboratory 3 hours. Corequisite: DH 1412.

\section*{DH 1512 - Dental Pain Management}

\section*{2 Credits}

Introduction to dental pain management therapies with emphasis on administration of Nitrous Oxide/Oxygen sedation and local anesthesia. Lecture 1 hour. Laboratory 3 hours. Prerequisites: CHE 1124, Basic Life Support for Healthcare Providers. Corequisite: DH 1532.

\section*{DH 1532 - Dental Hygiene Pharmacology}

\section*{2 Credits}

This course includes an introduction to the basic principles of drug actions and interactions, emphasizing dental-related therapeutics and drugs associated with common system disorders. Also included in this course are the indications and procedures for use of emergency drugs that are commonly used in dentistry. Lecture 2 hours. No Laboratory. Prerequisite: CHE 1124.

\section*{DH 2022 - Special Needs/Geriatrics}

\section*{2 Credits}

Focus is on the management of those patients whose medical, physical, psychological, or social situations make it necessary to modify normal dental routines in order to provide dental treatment for those individuals. These individuals include, but are not limited to, people with developmental disabilities, complex medical problems, and significant physical limitations. Lecture 2 hours. No Laboratory. Prerequisites: DH 1373, DH 2363.

\section*{DH 2312 - Community Dental Health I}

2 Credits
This course is designed to prepare students to promote oral health and prevent oral disease through organized communitybased efforts. Topics presented include: the role of the dental public health professional, epidemiological patterns of oral diseases, basic principles of research methodology and biostatistics and governmental influences in the oral health care delivery system. Principles in program assessment, planning, implementation, and evaluation are also presented. Cultural competency, social responsibility and service-learning are also introduced. Lecture 2 hours No Laboratory.

\section*{DH 2321 - Community Dental Health II}

1 Credit
This course provides practice experience within the community for developing, implementing and evaluating dental health projects. Students will participate in dental screenings, health fairs, table clinics, school health oral presentations and other community-based projects. No Lecture. Laboratory 2 hours. Prerequisite: DH 2312 and Basic Life Support for Healthcare Providers.

\section*{DH 2343 - Dental Materials, Techniques and Support Services}

3 Credits
Presentation of procedures and materials used in dentistry, including their chemical composition and physical characteristics. Allows student to perform procedures that fall within the scope of dental hygiene practice, manipulate materials, and explain procedures to patients. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CHE 1114. Corequisite: DH 2384.

\section*{DH 2363 - Dental Hygiene Theory III}

\section*{3 Credits}

This course includes concepts and application of nonsurgical periodontal therapy, advanced instrumentation skills, reevaluation of oral and Periodontal health status and referral, application of chemotherapeutic agents, care and
maintenance of implants, insurance coding for dental hygiene procedures, dietary analysis and counseling, and planning dental hygiene case presentations. Students will participate in extra-mural clinical rotations with outside agencies. Lecture 2 hours. Laboratory 2 hours. Prerequisite: Basic Life Support for Healthcare Providers. Corequisite: DH 2384.

\section*{DH 2372 - Dental Hygiene Theory IV}

\section*{2 Credits}

This course focuses on preparation for practice, including principles of professionalism, principles of office management with emphasis on productivity, renumeration, risk management and the concept of the dental health team, jurisprudence, current dental hygiene issues, preparation for board examinations, preparation of personal resumes, and interviewing techniques. Lecture 2 hours. No Laboratory. Corequisite: DH 2394.

\section*{DH 2384 - Clinical Dental Hygiene III}

\section*{4 Credits}

Continued emphasis on clinical techniques including implementation of individualized dental hygiene treatment plans, reevaluation of oral and periodontal health status, subsequent treatment needs, referral, risk assessment, expanded functions, dental hygiene case presentations and current advances in dental hygiene services. Clinical application of radiography, non-surgical periodontal therapy and advanced instrumentation, the use of ultrasonic scalers, the administration of nitrous oxide/oxygen analgesia and local anesthesia. Materials fee required. No Lecture. Laboratory 6 hours. Prerequisite: DH 1394, Basic Life Support for Healthcare Providers. Corequisite: DH 2363.

\section*{DH 2394 - Clinical Dental Hygiene IV}

4 Credits
This course offers continued development of competency in clinical techniques and current procedural practices of the dental hygienist with emphasis on self evaluation. Includes continuing clinical application of nitrous oxide/oxygen analgesia and local anesthesia along with non-surgical periodontal therapy and periodontal maintenance strategies. Students also participate in extramural clinical rotations at selected community sites. Materials fee required. No Lecture. Laboratory 16 hours. Prerequisite: DH 2384, Basic Life Support for Healthcare Providers. Corequisite: DH 2372.

\section*{DH 2990 - Selected Topics in Dental Hygiene}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Dental Hygiene. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{DESIGN ENGINEERING TECHNOLOGY}
(See Drafting and Design Engineering Technology)

\section*{DRAFTING AND DESIGN ENGINEERING TECHNOLOGY}

\section*{DRF 1323 - Engineering Drawing with CAD}

\section*{3 Credits}

This introductory course for the beginning drafter includes such topics as drafting room practices, graphical geometry, orthographic projection, dimensioning, and perspective views. Emphasis is placed on developing the abilities of threedimensional vision, graphic communication skills, and lettering. Dimensioning is taught to ASME standards. Course also includes introduction to AutoCAD. Lecture 2 hours. Laboratory 4 hours.

\section*{DRF 1363 - Civil Drafting and Design}

3 Credits
This course introduces the different drawings used in the field of Civil Engineering. Typical subjects covered include project stationing, development of roadway; storm sewer; sanitary sewer; water line and drainage structure plan and profile sheets, plotting drawings from survey field notes, contour interpolation and cross-sections. Lecture 2 hours. Laboratory 2 hours. Prerequisites: DRF 1323 and MTH 1513 or MTH 1454.

\section*{DRF 1442 - Descriptive Geometry}

2 Credits
Study geometric projection of lines, points, and planes in AutoCAD. Solve related drafting problems. Study space relations that points, lines, and planes share in forming any given shape. Lecture 2 hours. No Laboratory. Prerequisite: DRF 1323 or DRF 2203.

\section*{DRF 2023 - Pro/Engineer Modeling}

3 Credits
This course in solid modeling covers all basic aspects of Pro/ ENGINEER in a project oriented environment. The student uses the current version of Pro/ENGINEER Wildfire to create part models with their drawings and assemblies. Also covered are advanced modeling, BOM and sheet metal techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisite: Computer skills with Windows software and an understanding of basic drafting.

\section*{DRF 2033 - Pro/Engineer Manufacturing}

3 Credits
This course is designed to explore the manufacturing module in Pro/ENGINEER in a project oriented environment. The student uses the current version of Pro/ENGINEER Wildfire to create manufacturing assemblies. Also covered are advanced modeling, structure and mechanism techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisite: DRF 2023 or equivalent.

\section*{DRF 2042 - CATIA Fundamentals}

2 Credits
This course is designed to familiarize the student with the functional skills required to employ CATIA in a project orientated environment. Instruction will be provided covering the basic concepts needed to use CATIA to create part models, file functions, and analysis. Lecture 2 hours. No Laboratory. Basic Windows skills and an understanding of Basic Drafting is highly recommended.

\section*{DRF 2052 - CATIA Solids and Surfacing}

\section*{2 Credits}

This course is designed to familiarize the student with the advanced skills required to employ CATIA's Surfacing and Solid functions in a project orientated environment. Instruction will be provided covering the concepts needed to use CATIA to create part models, file functions, and analysis. Lecture 2 hours. No Laboratory. Prerequisite: DRF 2042.

\section*{DRF 2123 - Construction Drawings and CAD} 3 Credits
Interpretation and production of construction drawings, including architectural and civil engineering drawings using computer aided drafting software and techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisite: DRF 1363.

\section*{DRF 2203 - AutoCAD 2}

\section*{3 Credits}

This course introduces AutoCAD software as a drafting tool. Students develop skills needed to produce 2D drawings, basic dimensioning, and disk data storage. Covers creation, retrieval, and modification of drawings using basic AutoCAD commands. Lecture 2 hours. Laboratory 4 hours. Prerequisite: DRF 1323.

\section*{DRF 2223 - Mechanical Design I (Computer Aided Design) \\ 3 Credits}

A study of mechanical design principles which addresses such problems as geometric arrangements, effects of motion of one part on others, and effects of forces. Also addressed are properties of materials, limitation of manufacturing processes and economics, and the use of handbooks to aid in the study of the interrelationship of parts. Computer aided drafting equipment is utilized. Lecture 2 hours. Laboratory 4 hours. Prerequisites: MTH 1513 or MTH 1454 and DRF 2203.

\section*{DRF 2233 - Autodesk Inventor Modeling}

3 Credits
This course introduces 3D solid modeling and parametric modeling techniques and concepts using the Inventor program. It starts by constructing basic shapes to building intelligent more complex solid models and creating multi-view drawings. Lecture 2 hours. Laboratory 2 hours.

\section*{DRF 2293 - Survey of CAD Applications}

3 Credits
This course is intended to provide comprehensive overview of production drawings and documents from the standpoint of the production designer. This course is project-oriented comprised of three component phases, and the final project is delivered as a set of documents. One phase demonstrates the relation between tool and product design processes and manufacturing methods. Another phase covers structural working drawings per AISC design specifications with a focus on members, connections, and fasteners. A third phase presents fundamentals in process piping drafting. The use of handbook and standards including architectural design will be highlighted throughout the course. Lecture 2 hours. Laboratory 2 hours. Prerequisite: DRF 2203 and a 3D solids course such as ProE, Inventor or Solidworks.

\section*{DRF 2393 - Basic SolidWorks}

\section*{3 Credits}

A fundamental introduction to 3-dimensional production solids modeling utilizing SolidWorks CAD software, including generation of the solids model and conversion to a working drawing. Lecture 2 hours. Laboratory 4 hours.

\section*{DRF 2473 - Tool Design}

3 Credits
An introductory course designed to provide fundamental knowledge of designing efficient tools for material removal, pressworking, joining, and inspecting manufactured parts, such as die design, jig and fixture design, and gage design. Emphasis will be placed on troubleshooting, safety, and economics.
Lecture 2 hours. Laboratory 4 hours. Prerequisite: EGR 1313.

\section*{DRF 2990 - Selected Topics in Drafting and Design Technology \\ 1-4 Credits}

The study and/or analysis of a selected topic in Drafting and Design Technology. May be repeated with a different topic, Lecture 1-4 hours. No Laboratory.

\section*{ECONOMICS}

\section*{ECO 1353 - Personal Finance}

\section*{3 Credits}

The study of practical applications in budgeting, borrowing, insurance, investments, taxes, home ownership, and other aspects of personal money management. Lecture 3 hours. No laboratory.

\section*{ECO 2013 - Principles of Macroeconomics (S)} 3 Credits
An introduction to the functioning and current problems of the aggregate economy. Major topics include supply and demand, determination and analysis of national income, employment and unemployment, inflation, monetary and fiscal policy, and international trade. Lecture 3 hours. No Laboratory.

\section*{ECO 2023 - Principles of Microeconomics (S)}

\section*{3 Credits}

An introduction to prices and markets. Major topics include elasticity and consumer choice, product markets, factor markets, income distribution, and the foreign exchange market. Lecture 3 hours. No laboratory. Prerequisite: ECO 2013 or instructor approval.

\section*{ECO 2123 - International Economic Issues (S,I)}

3 Credits
This course examines the unique aspects of business operations within various regions of the world and the nature of international trade, foreign exchange, and the critical operational problems and issues involved in conducting business in other countries. A review of global geography will be conducted during the course and current international business trends and topics will be discussed. Lecture 3 hours. No laboratory. Prerequisite: ECO 2013.

\section*{ECO 2990 - Selected Topics in Economics}

1-4 Credits
The study and/or analysis of a selected topic in Economics. May be repeated with a different topic. Lecture 1-4 hours. No laboratory.

\section*{ELECTRONICS TECHNOLOGY}

\section*{ELE 1212 - Introduction to Electricity}

2 Credits
A beginning course in basic electricity/electronics. Emphasis will be placed on equipment familiarization using digital multimeters, oscilloscopes, also electrical safety, and analyzing simple direct and alternating current circuits. This course is designed for students needing an exposure to electricity or as a beginning class for electronics. Lecture 2 hours. No Laboratory. Prerequisite: MTH 0013 or instructor approval.

\section*{ELE 1223 - Hydraulics and Pneumatics}

\section*{3 Credits}

A study of hydraulic and pneumatic systems as it relates to fluids, energy and power, pumps, actuators, control devices, flow distribution, and industrial applications. Lecture 2 hours. Laboratory 2 hours.

\section*{ELE 1303 - DC Circuit Analysis}

3 Credits
An introductory course in basic electricity including electrical properties of materials, units, basic electrical laws and theorems, and electrical circuits and components. This course also introduces the student to electronic design software used in troubleshooting circuits. Lecture 2 hours. Laboratory 2 hours. Prerequisite: MTH 1513.

\section*{ELE 1313 - AC Circuit Analysis}

3 Credits
Introduction to alternating current electricity. A study of the characteristics of sine wave including the amplitude, frequency, period, and phase relationships; analyzing AC circuits by use of AC network theorems, resonant circuits and filter circuits. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ELE 1303 and MTH 1613.

\section*{ELE 1433 - Kinematics}

3 Credits
This course is designed to help the student develop an understanding of the fundamental concepts related to basic mechanical systems. Topics include gears, gear trains, cams, belt drives, chain drive and linkages. Lecture 2 hours. Laboratory 2 hours. Prerequisite: MTH 1454 or MTH 1613 or concurrent enrollment.

\section*{ELE 1442 - Introduction to Alternative Energy 2 Credits}

This course provides basic knowledge of alternative energy systems, including wind, solar and Oklahoma-produced biofuels. Students will have the opportunity to build or test a wind power generator and a solar electric generator. Battery storage systems included. Lecture 1 hour. Laboratory 2 hours. Prerequisite: ELE 1212.

\section*{ELE 1503 - Programmable Control}

3 Credits
A study of programmable controllers as they relate to the control of automated systems. Included is a study of the memory system and I/O interaction, specifications, wiring, logic concepts, number systems and codes, the instruction set, ladder logic programming and application problems. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ELE 1212.

\section*{ELE 2215 - Digital Circuits}

\section*{5 Credits}

The course is a comprehensive study of the principles and techniques of modern digital system. Topics to be included are number systems and codes, logic gates and Boolean algebra, combinational logic circuits, flip-flops and related devices, arithmetic circuits, counters and registers, MSI logic circuits, analog conversion, memory devices, and integrated-circuit logic families. Lecture 4 hours. Laboratory 2 hours. Prerequisites: ELE 1303 and ELE 1313.

\section*{ELE 2244 - Amplifiers I}

4 Credits
A thoroughly modern introduction to solid state electronic devices and basic electronic circuits. The study includes diodes, rectifiers transistor bias and load lines, common emitter, common collector and common base circuits, and an introduction to field effect transistors and thyristors. It deals with special amplifiers, power amplifiers, push-pull amplifiers, feedback amplifiers, differential amplifiers, direct coupled and integrated circuit amplifiers, and operational amplifiers. Lecture 3 hours. Laboratory 2 hours. Prerequisites: ELE 1303 and ELE 1313.

\section*{ELE 2253 - Servo-Systems}

3 Credits
A study of the operational characteristics of electrohydraulic servovalves as they relate to robotics, machine tools, and automated systems. Topics to be studied include: basic control concepts, transducers, operational amplifiers, loading characteristics, and system response. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ELE 1223 and ELE 2244.

\section*{ELE 2333 - Amplifiers II}

3 Credits
A continuation of topics covered in Amplifiers I.This course will cover power and operational amplifier circuits. The study also includes generators, timers, active filters, and power supply circuits. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ELE 2244.

\section*{ELE 2514 - Microprocessors}

\section*{4 Credits}

An introduction to the architecture and instruction sets of the 8080A, 8085, and 8086. Logic switches, lamp monitors, pulsers, and displays are used in the lab. Included will be a study of the hardware and software used for input and output by the microprocessor. Address decoding, part decoding, and signal flow between the microprocessor and peripheral chips will be covered. Diagnostic software/hardware will be demonstrated and used. Lecture 3 hours. Laboratory 2 hours. Prerequisite: ELE 2215.

\section*{ELE 2525 - Wireless Communications}

\section*{5 Credits}

This course is designed to instruct the student in communication circuits and systems. Topics will include R.F. amplifiers, variable oscillators, amplitude and frequency modulation. Lab experience will include receiver trouble shooting, antenna fabrication and testing on an antenna range, microwave test equipment, LNA design, and wireless telecommunication systems. Lecture 4 hours. Laboratory 2 hours. Prerequisite: ELE 2244.

\section*{ELE 2533 - Automation Control}

\section*{3 Credits}

This course covers electrical power, motors and the devices used to control motor systems. Topics to be included are PLC programming techniques, servo-controls, sensors, and integrated applications. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ELE 1212 or ELE 1503.

\section*{ELE 2622 - Electronics Design}

2 Credits
This course will analyze and design a selected project in electronics. The student will be introduced to surface mount soldering and will build a project that emphasizes the principles covered from previous courses. Lecture 1 hour. Laboratory 2 hours. Prerequisites: ELE 2244 or ELE 2215.

\section*{ELE 2632 - Introduction to Nanotechnology}

\section*{2 Credits}

This course is designed to help the student develop an understanding of the fundamental concepts behind nano and micro technology. Topics include fabrication, clean-rooms, microscopy, lithograph, and materials used in the building of silicon devices. Other areas of study will focus on where and how this new technology is used. Classroom demonstration will be used. Lecture 2 hours. No Laboratory. Prerequisite: ELE 1212.

\section*{ELE 2643 - Nanoelectronics}

\section*{3 Credits}

Nanoelectronics covers the processes of developing micro and no scale electronics devices. The student will be introduced to carbon nanotubes, MEMS, memory, self-assembly, topdown and bottom-up techniques. Students will also be taken through the steps in building a micro-chip and how it applies to nano-structures. Equipment topics will include wet and dry etch, lithograph, deposition, evaporators, and vacuum systems. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ELE/NST 2632 or instructor approval.

\section*{ELE 2653 - Nanoscience}

\section*{3 Credits}

Nanoscience explores the many possibilities for which nanostructures can and are being used. The study will include nanotube and nanopartical applications in medicine, drug delivery and detection. Microscopy will include the scanning tunneling, atomic force and optical microscopes. Material and chemical make-up of micro and nano-structures will be introduced. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ELE/NST 2632 or instructor approval.

\section*{ELE 2990 - Selected Topics in Electronics Technology 1-4 Credits \\ The study and/or analysis of a selected topic in Electronics \\ Technology. May be repeated with a different topic. Lecture 1-4 hours. No laboratory.}

EMERGENCY MEDICAL TECHNOLOGY

\section*{EMT 1013 - EMT Basic Introduction}

\section*{3 Credits}

Study of modules of EMT preparatory activities, basic airway management, and patient assessment. This course of study also includes blood sugar determination and intravenous therapy maintenance. A physical examination and certain immunizations required. Lecture 2 hours. Laboratory 2 hours. Prerequisites: American Heart Association CPR for the Health Care Provider or American Red Cross Professional Rescuer CPR.

\section*{EMT 1024 - EMT Basic Practicum}

\section*{4 Credits}

This course covers modules of medical emergencies, trauma, pediatrics, and EMT operations. During this course of study the EMT Basic student will be concurrently enrolled in EMT-Basic Clinical course. Lecture 2 hours. Laboratory 2 hours. Prerequisite: EMT 1013.

\section*{EMT 1041 - EMT-Basic Clinical}

\section*{1 Credit}

Under the direct supervision of a clinical preceptor the EMTBasic student will spend time in the emergency department of a health care facility and in the ambulance. The student will be required to have liability insurance. Laboratory/Clinical 2 hours. Prerequisite: Permission of program director.

\section*{EMT 1213 - Paramedicine Introduction \\ 3 Credits}

This course is designed to introduce the student to the roles and responsibilities of a Paramedic within the EMS system. The content includes pathophysiology and pharmacology related to assessment and management of emergency patients, administration of medications, and patient communication. The student will be able to establish and/or maintain a patient airway, oxygenate, and ventilate a patient. Lecture 3 hours. Laboratory 1 hour. Prerequisite: EMT - Basic and permission of program director.

\section*{EMT 1231 - Paramedicine Clinical Introduction} 1 Credit
This course is taken concurrently with Introduction to Paramedicine. Under the supervision of a clinical preceptor, the paramedic student will administer medications, start intravenous lines, establish patient airways, oxygenate, and ventilate patients. No Lecture. Laboratory 2 hours.

\section*{EMT 1342 - Paramedic Patient Assessment}

\section*{2 Credits}

This course is designed to instruct the student in obtaining a proper history and performing a comprehensive physical examination on a variety of patients. The student will be
expected to be able to communicate their findings to other health professionals. Lecture 1 hour. Laboratory 2 hours. Prerequisite: Completion of EMT 1213 -Introduction to Paramedicine and permission of program director.

\section*{EMT 1351 - Patient Assessment Clinical}

\section*{1 Credit}

This course is taken concurrently with Paramedic Patient and Assessment. Under the supervision of a clinical preceptor, the paramedic student will take proper histories and perform comprehensive physical examinations on patients. No Lecture. Laboratory 2 hours. Prerequisite: Permission of program director.

\section*{EMT 2003 - Paramedic Trauma and Trauma Clinical} 3 Credits
This course is designed for the paramedic student to be able to integrate pathophysiological principles and assessment findings in order to formulate a field impression and implement the treatment plan for the trauma patient. The clinical component will allow students to apply what they have learned in the classroom. Lecture 2 hours. Laboratory 2 hours. Prerequisite: Completion of EMT 1342 - Paramedic Patient Assessment and permission of program director.

\section*{EMT 2014 - Paramedic Medical}

4 Hours
This course is designed for the paramedic student to be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the medical patient. Lecture 3 hours. Laboratory 2 hours. Prerequisite: Completion of EMT-2003 Paramedic Trauma and Clinical and permission of program director.

\section*{EMT 2031 - Paramedic Medical Clinical}

\section*{1 Credit}

This course is taken concurrently with the Paramedic Medical course. Focus will be on the assessment and treatment for medical patients. Lecture 1 hour. Laboratory 1 hour. Prerequisite: Permission of program director.

\section*{EMT 2061 - PreHospital Trauma Life Support}

\section*{1 Credit}

This course is taken concurrently with the Paramedic Trauma and Clinical. The course is designed to provide prehospital care providers knowledge related to both prehospital assessment of the trauma patient and intervention technique. Laboratory 2 hours. Prerequisite: Permission of program director.

\section*{EMT 2111 - EMS Clinical}

\section*{1 Credit}

This course allows the student to apply all aspects learned thus far in the program in the prehospital setting under the supervision of a clinical preceptor. Laboratory 3 hours. Prerequisites: Completion of EMT 2014 -Paramedic Medical and permission of program director.

\section*{EMT 2131 - Paramedic Special Considerations and Assessment Based Management}

1 Credit
This course is designed to integrate pathophysiological principles assessment findings to formulate a field impression and implement the treatment plan for neonatal, pediatric, and geriatric patients, diverse patients, chronically ill patients, and patients with common complaints. Lecture 1 hour. Laboratory 2 hours. Prerequisite: Permission of program director.

\section*{EMT 2151 - Special Considerations Clinical} 1 Credit
This course is taken with Paramedic Special Consideration and Assessment Based Management. Under the supervision of a clinical preceptor the student will experience the management of pediatric and geriatric patients. Lecture 1 hour. Laboratory 1 hour. Prerequisite: Permission of program director.

\section*{EMT 2212 - Physician Internship}

2 Credits
This course is designed for the student to experience patient management under the supervision of a preceptor that covers all aspects learned thus far in the Paramedic Program. Lecture 2 hours. Laboratory 1 hour. Prerequisite: Permission of program director.

\section*{EMT 2231 - Paramedic Operations}

1 Credit
This course covers ambulance operation, medical incident command, rescue operations, hazardous materials awareness, and crime scene management. This course is designed so that the paramedic student will be able to safely manage the scene of an emergency. Lecture 1 hour. Laboratory 2 hours. Prerequisite: Permission of program director.

\section*{EMT 2252 - EMS Internship}

2 Credits
This course is designed to integrate all of the didactic, knowledge, psychomotor skills, and clinical instruction into the prehospital environment. The paramedic student under the direct supervision of a paramedic preceptor will demonstrate the ability to serve as a team leader in a variety of prehospital emergency situations. Laboratory 4 hours. Prerequisite: Completion of EMT 2231 Paramedic Operations and permission of program director.

\section*{ENGINEERING}

\section*{EGR 1111 - Introduction to Engineering}

1 Credit
An overview of study skills, orientation and entrance requirements for a typical engineering college, computerbased productivity tools, and engineering ethics and careers. Lecture 1 hour. No laboratory.

\section*{EGR 1132 - Engineering Design with Computer Aided Design \\ 2 Credits \\ An introduction to engineering design using modern methodologies and state-of-the-art computer-aided design tools. Hands-on design construction and testing through class participation. Lecture 1 hour. Laboratory 2 hours. Prerequisite: MTH 1454 or MTH 1613.}

\section*{EGR 1242 - Introductory Engineering Computer Programming}

\section*{2 Credits}

Programming to solve problems typical of practice in engineering. Instruction and writing programs in computer languages. Lecture 2 hours. No laboratory. Prerequisites: MTH 1454 or MTH 1513.

\section*{EGR 1253 - Introduction to Industrial and Systems Engineering}

3 Credits
An overview of the dynamics of industrial and systems engineering techniques in modeling, production control, inventory control, quality control, layout, method engineering, material handling, and engineering economy. Lecture 3 hours. No laboratory.

\section*{EGR 1263 - Productivity Planning and Inventory Control}

\section*{3 Credits}

An overview of the dynamics of managing production and inventory in the constantly changing industrial and commercial environments. Topics include forecasting sales,"just in time" manufacturing, production, and inventory requirements. The relationships of marketing management to production planning and inventory control are studied. Lecture 3 hours. No laboratory.

\section*{EGR 1301 - Introduction to Manufacturing Processes -the BAMA Model}

1 Credit
A study of the manufacturing processes used by a single manufacturing company. An overview of the entire process from raw materials to the finished product will be studied. Lecture 1 hour. No laboratory.

\section*{EGR 1313 - Manufacturing Processes}

\section*{3 Credits}

A study of the history of, and current trends in, industrial processes, their development and impact, and the sources and classifications of engineering materials used in manufacturing. The means of material recovery from nature to fabrication as it is related to tools, machines, and processes, which are combined to produce a finished product. Visits to local industrial plants are arranged. Lecture 3 hours. No Laboratory.

\section*{EGR 1363 - Metallurgy}

\section*{3 Credits}

A basic metallurgy course that includes instruction In process and physical metallurgy covering composition, structure, heat treatment, and properties of various alloys, both ferrous and non-ferrous. Designed for manufacturing engineering and quality control majors. Lecture 3 hours. No laboratory.

EGR 1443-Geometric Dimensioning and Tolerancing 3 Credits
An in depth study of dimensional tolerancing as identified in the American National Standards Institute, ANSI Y 14.5 specification. This course will explore the meaning of symbols used in the International Standard, their application and the processes necessary to achieve the specified geometry, as well as the common practices used in Engineering drawings and practical limits and challenges in the manufacturing environment. Lecture 3 hours. No Laboratory. Prerequisite: NCM/QCT 1223 or any DRF class.

\section*{EGR 1463 - Composite Materials}

3 Credits
This course explores the properties and the processes of manufacturing used with today's modern composite materials. Typical processes used in the Tulsa area will be reviewed along with site visits. Lecture 2 hours. Laboratory 2 hours.

\section*{EGR 2023 - Pro/Engineer Modeling}

\section*{3 Credits}

This course in solid modeling covers all basic aspects of Pro/ ENGINEER in a project oriented environment. The student uses the current version of Pro/ENGINEER Wildfire to create part models with their drawings and assemblies. Also covered are advanced modeling, BOM and sheet metal techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisite: Computer skills with Windows software and an understanding of basic drafting.

\section*{EGR 2033 - Pro/Engineer Manufacturing \\ 3 Credits}

This course is designed to explore the manufacturing module in Pro/ENGINEER in a project oriented environment. The student uses the current version of Pro/ENGINEER Wildfire to create manufacturing assemblies. Also covered are advanced modeling, structure and mechanism techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisite: DRF/EGR 2023 or equivalent.

\section*{EGR 2042 - CATIA Fundamentals}

2 Credits
This course is designed to familiarize the student with the functional skills required to employ CATIA in a project orientated environment. Instruction will be provided covering the basic concepts needed to use CATIA to create part models, file functions, and analysis. Lecture 2 hours. No laboratory. Basic Windows skills and an understanding of Basic Drafting are highly recommended.

\section*{EGR 2052 - CATIA Solids and Surfacing}

\section*{2 Credits}

This course is designed to familiarize the student with the advanced skills required to employ CATIA's Surfacing and Solid functions in a project orientated environment. Instruction will be provided covering the concepts needed to use CATIA to create part models, file functions, and analysis. Lecture 2 hours. No laboratory. Prerequisite: EGR 2042 and Basic Windows skills and an understanding of Basic Drafting are highly recommended.

\section*{EGR 2103 - Engineering Statics}

3 Credits
Topics covered are: equilibrium of particles and rigid bodies in two and three dimensions, vector algebra of forces and moments, friction, centroids, moments of inertia, distributed forces, internal loads with loading diagrams, trusses, and frames. Lecture 3 hours. No laboratory. Prerequisites: PHY 2034 and MTH 2114.

\section*{EGR 2143 - Engineering Strength of Materials} 3 Credits
Topics covered are elastic and plastic stress, strain and deformation, axial, torsion, bending and combined loading, thermal stress, pressure vessels, columns and buckling, shear flow, bending moment and torque diagrams, beam deflection; Mohr's circle of stress, statically indeterminate members. Lecture 3 hours. No laboratory. Prerequisites: EGR 2103 and MTH 2124.

\section*{EGR 2153 - Lean, Six Sigma, Quality Systems 3 Credits}

An introduction to the history, evolution and practice of advanced manufacturing and quality systems, including Lean Manufacturing, Kiazen, 5-S, Kanban, Toyota Production System and Six Sigma. Exploration into the theory and tools behind today's most advanced business philosophies. Lecture 3 hours. No Laboratory.

\section*{EGR 2213 - Thermodynamics}

3 Credits
Energy and energy relationships involving heat, work, and mass. First and second laws of thermodynamics for ideal and pure substances, control volume analysis and cyclic systems; equations of state. Lecture 3 hours. No laboratory. Prerequisites: CHE 1315, PHY 2034, and MTH 2124.

\section*{EGR 2231 - Project Engineering}

1 Credit
Project engineering skills are required in all types of businesses including manufacturing facilities. This course will introduce the student to the basic elements that are required to implement a successful project from initiation to completion. The course material will include project scheduling, project cost management, resource allocation, project scope, and risk management. Lecture 1 hour. Prerequisite: EGR 1313.

\section*{EGR 2253 - Productivity, Measurement, and Improvements}

\section*{3 Credits}

An introduction to productivity work analysis, productivity measurement, time and motion studies, and productivity implements. Designed to provide training and simulated on-the-job experience in the analysis and evaluation of present and improved or proposed methods of production. Lecture 3 hours. No laboratory.

\section*{EGR - 2262 - Professional EGR/SUR Ethics}

2 Credits
This course covers an introduction to contemporary ethics and provides an overview of professional issues dealing with responsibility and professionalism. It delves into everyday problems encountered by professional land surveyors and engineers. Lecture 2 hours. No laboratory.

\section*{EGR 2462 - Project Engineering and Management} 2 Credits
Project engineers are responsible for overseeing the various stages of development for a variety of products and projects. This course will preapre the student for assignments in industrial project management. Course material includes project scheduling, cost management, resource allocation, team building, project scope, and risk management. Lecture 2 hours. No Laboratory.

\section*{EGR 2523 - Elementary Dynamics}

\section*{3 Credits}

Kinematics and Kinetics of particles and bodies, using the three different coordinate systems in two and three dimensions; pulley systems; work-energy methods, impulse-momentum principles, including oblique impact, coefficient of restitution, linear and angular momentum. Lecture 3 hours. No laboratory. Prerequisite: EGR 2103.

\section*{EGR 2543 - Manufacturing Engineering I}

\section*{3 Credits}

An introduction to manufacturing engineering methods used for component parts manufacture. Topics covered include concurrent engineering and manufacturing plan development for formed metal parts, machined parts, and composite parts. This course emphasizes the methods used in the aerospace industry to create producible designs and successful manufacturing build plans. Lecture 3 hours. No Laboratory. Prerequisite EGR 1313.

\section*{EGR 2613 - Introduction to Electrical Science 3 Credits}

Elements of electrical engineering; AC and DC Circuits, mesh and nodal formulation of network equations, steady-state response to sinusoids and step function, energy, power, power factor, Thevenin and Norton analysis, Laplace transforms. Introduction to PSPICE. Lecture 3 hours. No laboratory, Prerequisites: PHY 2124 and MTH 2124.

\section*{EGR 2643 - Manufacturing Engineering II}

\section*{3 Credits}

A study of manufacturing engineering techniques required to create and implement a manufacturing build plan. Topics covered include concurrent engineering and planning of bonding and assembly manufacturing sequences. This course emphasizes the methods used in the aerospace industry to create successful manufacturing build plans and disciplined bills of material for detail parts, subassemblies, and major assemblies. Lecture 3 hours. No Laboratory. Prerequisite: EGR 2543.

\section*{EGR 2990 - Selected Topics in Engineering}

1-4 Credits
The study and/or analysis of a selected topic in Engineering. May be repeated with a different topic. Lecture 1-4 hours. No laboratory.

\section*{ENGLISH}

\section*{ENG 0123 - Basic English}

\section*{3 Credits}

Designed for students who have not met high school English/ Language Arts requirements or need to satisfy a high school curricular deficiency. Primary objective is to improve reading and writing skills. The course presents an introductory study of literature and includes the use of laboratory materials and equipment. Grade options are satisfactory or unsatisfactory. Lecture 3 hours. Laboratory 1 hour.

\section*{ENG 0601- Basic Grammar}

\section*{1 Credit}

Designed to teach fundamental principles of grammar: parts of speech, clauses and phrases, sentence patterns, subject-verb agreement, and major sentence errors. No lecture. Laboratory self-paced.

\section*{ENG 0611 - Sentence Improvement}

\section*{1 Credit}

Designed to teach different kinds of sentence construction and the application of that knowledge to actual writing experiences. No lecture. Laboratory self-paced.

\section*{ENG 0621-Punctuation}

1 Credit
Designed to teach students the rules of punctuation and their proper application. No lecture. Laboratory self-paced.

\section*{ENG 0631-Spelling and Phonics}

\section*{1 Credit}

Designed for the student who needs to master basic spelling literacy and principles of phonics. Mastery of commonly misspelled words and decoding skills is included. No Lecture. Laboratory self-paced.

\section*{ENG 0641 - Basic Vocabulary}

1 Credit
Designed to provide fundamentals for vocabulary building. Course content includes instruction in dictionary use, presentation of prefixes, suffixes, and roots and the application of that knowledge to the decoding of words. No Lecture. Laboratory self-paced.

\section*{ENG 0651-Study Skills}

1 Credit
Designed to show the student proper study habits: note and test-taking techniques, the SQ3R (survey, question, read, recite and review) method for reading, exercises for memory, vocabulary building aids, and hints for specific writing assignments. No Lecture. Laboratory self-paced.

\section*{ENG 0661 - Writing Skills}

1 Credit
Designed to help the student with basic techniques of writing: organization, diction, word economy, and order. Content will also include paragraph development, paragraph unity, and coherence. No Lecture. Laboratory self-paced.

\section*{ENG 0681-Reading Comprehension}

\section*{1 Credit}

Level of material determined by pretest. Both course levels emphasize the different types of reading comprehension: factual, inferential, and evaluative. No Lecture. Laboratory selfpaced.

\section*{ENG 0691 - One by One Fundamentals of Reading}

1 Credit
Designed to teach students the fundamental skills necessary to increase reading proficiency. The primary emphasis is placed on creating an individualized study program of teacher-directed and self-paced activities to improve skills in comprehension, vocabulary, and phonics. Lecture 1 hour. Laboratory 2 hours.

\section*{ENG 0711 - Essay Writing}

1 Credit
Designed to provide individualized instruction in the basic process of writing an essay. No Lecture. Laboratory self-paced.

\section*{ENG 0731 - Research Paper}

1 Credit
Designed to provide individualized instruction in the basic process of writing a research paper. No Lecture. Laboratory selfpaced.

\section*{ENG 0753 - Computer-Enhanced Reading}

3 Credits
This course is designed to strengthen students' basic reading skills through a comprehensive computerized curriculum. Each student will follow an individualized course of study based upon personal academic needs and goals. Students' assignments will focus on reading comprehension, vocabulary building, and spelling enrichment. Lecture 3 hours. Laboratory 1 hour.

\section*{ENG 0801 - Study Skills for the Deaf and Hard of Hearing \\ 1 Credit \\ Designed for the deaf and hard of hearing students to improve academic performance and enhance skills in time management, note taking, effective tutoring sessions, study techniques and introduction to college support services. Lecture 1 hour. No Laboratory.}

\section*{ENG 0813 - Reading and Vocabulary for the Deaf and Hard of Hearing}

\section*{3 Credits}

Designed for deaf and hard of hearing students to enhance vocabulary and teach basic reading skills necessary to proceed through the Developmental Studies Program and on through a planned college program. Emphasis on comprehension, vocabulary, and grasping main ideas. Lecture 3 hours. No Laboratory.

\section*{ENG 0823 - Writing Skills for the Deaf and Hard of Hearing}

3 Credits
Designed for deaf and hard of hearing students to improve their writing skills to proceed through the Developmental Studies Program and on through a planned college program. Emphasis on English language usage including sentence structure, grammar, punctuation, paragraphs and writing essays. Lecture 3 hours. No Laboratory.

\section*{ENG 0903 - Reading I}

\section*{3 Credits}

Designed to teach students the basic reading skills which are necessary for a planned college program. Primary emphasis is placed on developing interest in reading, improving comprehension of textbook materials, skills in grasping main ideas, and vocabulary building. Practice materials, computers, and both individual and group instruction are in continued use to accomplish these goals. Lecture 3 hours. Laboratory 1 hour.

\section*{ENG 0913 - Reading II}

\section*{3 Credits}

Designed to enhance the skills and techniques taught in Reading I.Emphasis is on improving the student's ability to locate central themes and/or main ideas, distinguish between major and minor details, and draw logical conclusions, as well as to recognize purpose and tone. Practice materials and computer programs are in continued use to accomplish these goals. Lecture 3 hours. Laboratory 1 hour. Prerequisite: ENG 0903, ACT or CPT, or approval of instructor.

\section*{ENG 0923 - Writing I}

3 Credits
Designed to help students improve their writing skills so that they may proceed through a planned college program. Emphasis is on practical writing experiences for social, business, and academic life. Designed as a clinic for individual problems: English language usage with specialized practice in sentence structure, grammar, punctuation, and spelling. Course work includes use of tapes, and other laboratory equipment. Lecture 3 hours. Laboratory 1 hour.

\section*{ENG 0933 - Writing II}

\section*{3 Credits}

A continuation of Writing I. A step-by-step approach to paragraph and essay writing. Special emphasis will be placed on sentence structure, punctuation, editing and revising skills, and English language usage and basic types of academic writing. Lecture 3 hours. Laboratory 1 hour. Prerequisite: ENG 0923, ACT or CPT, or approval of instructor.

\section*{ENG 0963 - College Survival}

\section*{3 Credits}

Designed to teach traditional and nontraditional students study techniques that will enable them to successfully complete their college program. Course activities include practice in taking tests, organizing lecture notes, establishing a study schedule and determining career goals. Special activities are designed to familiarize participants with student services available at TCC. Lecture 3 hours. Self-paced laboratory may be required.

\section*{ENG 0990- Selected Topics in Developmental English 1-4 Credits \\ The study and/or analysis of a selected topic in Developmental English. May be repeated with a different topic. Lecture 1-4 hours. No laboratory.}

\section*{ENG 1003 - Strategies for Academic Success}

\section*{3 Credits}

Designed to improve academic performance and enhance skills in time management, test taking, note taking, memory, diversity, and critical thinking. Special emphasis will be placed on writing, also preparing and presenting group and individual presentations. College Orientation material will be included. Lecture 3 hours. Appropriate CPT or ACT reading score recommended. Self-paced laboratory may be required.

\section*{ENG 1083 - Grammar and Mechanics of Writing 3 Credits}

A study of English grammar and the mechanics of writing. Fundamental principles of English will be emphasized: word classification, sentence parts, sentence structure, proper usage, capitalization, and punctuation. Lecture 3 hours. Laboratory self-paced.

\section*{ENG 1091 - College Orientation}

1 Credit
Designed to help traditional and non-traditional college students understand and respond to many academic issues that face them at TCC. Special emphasis on structured interaction of students with faculty, staff, and other students. Lecture 1 hour. No laboratory.

\section*{ENG 1113 - Freshman Composition I}

3 Credits
Composition I guides students through the writing process with regular practice and analysis of effective writing. It is the first in a sequence of two freshman composition courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisites: Appropriate CPT or ACT score, or completion of ENG 0933 with a grade of "C" or better, or permission of Associate Dean.

\section*{ENG 1121 - College Composition Lab}

1 Credit
Designed to supplement freshman composition courses, providing individualized instruction in standard usage and essential college writing skills. No Lecture. Laboratory, selfpaced.

\section*{ENG 1131 - College Reading Lab}

1 Credit
Designed to assist the student who has already achieved college-level reading skills to develop efficient techniques in college content area reading and to approach the reading process with critical and evaluative skills. No Lecture. Laboratory self-paced.

\section*{ENG 1141 - Effective Business Writing}

\section*{1 Credit}

Designed to provide individualized instruction on letters and memos commonly used in business. Special emphasis on effective organization, correct format, grammar usage, and diction. No Lecture. Laboratory self-paced.

\section*{ENG 1151 - Effective Communications}

\section*{1 Credit}

This course is designed to study the principles and the theories of communication in one-on-one and group settings. Emphasis will be on increasing student awareness of verbal and nonverbal communication behavior. Focus will be directed toward establishing improved communication skills. Lecture 1 hour. No Laboratory.

\section*{ENG 1161 - Information in the Digital Age}

1 Credit
This course is designed to teach fundamental research skills and familiarize students with library and Internet information resources. The course emphasizes how to find print and online sources appropriate for college-level research assignments; how to evaluate information; and how to use information effectively and ethically. Skills acquired in this course will help develop information literacy and lifelong learning abilities, benefiting students' performance in other classes and in personal and professional pursuits. Lecture 1 hour. No Laboratory.

\section*{ENG 1213 - Freshman Composition II}

3 Credits
A continuation of English 1113 (Freshman Composition I), Composition II involves critical reading, thinking, and writing. The course includes analysis and evaluation of reading selections and techniques of research and documentation. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: ENG 1113.

\section*{ENG 1691 - Speed Reading}

1 Credit
Designed to help the student improve his/her rate of reading. Reading machines and other mechanical devices are used with special consideration and instruction for the transfer of those skills to the written page. No lecture. Laboratory self-paced.

\section*{ENG 2223 - Reading Enhancement}

\section*{3 Credits}

Designed to direct the student in more efficient college reading. Especially emphasized is the application of logical thinking and deep speculation related to reading across the curriculum. Laboratory exercises, which are designed to promote skill in vocabulary, comprehension, and speed, may be tailored to enhance these skills in a student's major area of study if he/she so desires. Lecture 3 hours. Laboratory 1 hour. Prerequisite: ENG 0903.

\section*{ENG 2333 - Technical/Professional Writing}

3 Credits
Techniques of style, organization, and format for the appropriate audience. Emphasis on objectivity, clarity, and precision. Writing assignments adapted from specialized forms used in industry. Lecture 3 hours. No Laboratory. Prerequisite: ENG 1113 or approval of instructor or Associate Dean.

\section*{ENG 2343 - Business Communications}

\section*{3 Credits}

The course focuses on effective methods of business communications, including various letters, memoranda, a presentation, and a researched report. Attention is given to audience analysis and business writing style and usage. Word processing and/or keyboarding skills are strongly recommended. Lecture 3 hours. No Laboratory. Prerequisite: ENG 1113 or approval of instructor or Associate Dean.

\section*{ENG 2363 - Advanced Business Communication} 3 Credits
This course focuses on advanced methods of business communications, including the application of written and oral communication techniques to the business setting. Attention is given to audience analysis and business writing style and usage. Word processing and/or keyboarding skills are strongly recommended. Lecture 3 hours. No Laboratory. Prerequisite: ENG 2343 or approval of instructor or Associate Dean.

\section*{ENG 2373-Teach-A-Reader}

3 Credits
Designed to teach the student to tutor functionally illiterate adults who wish to learn to read. Fifteen hours of training workshop is provided, and the student commits to 55 hours of tutoring. One paper is required at the completion of the 55 hours of tutoring. Lecture 1 hour. Laboratory 4 hours.

\section*{ENG 2383 - Advanced Composition}

3 Credits
Advanced Composition is designed for students who have successfully completed ENG 1113 and 1213 but who desire to reinforce and refine their writing skills. Assignments will provide practice in drafting and revising expository essays and analyzing the work of professional writers through primary and secondary sources. Some sections will use the computer as a writing aid. Lecture 3 hours. No Laboratory. Prerequisites: ENG 1113 and 1213.

\section*{ENG 2393 - Introduction to Drama (H)}

3 Credits
Introductory study of the performance of dramatic literature. Lecture 3 hours. No Laboratory. Prerequisite: ENG 1113 or THE 1093 or approval of instructor.

\section*{ENG 2403 - Advanced Reading Enhancement and Speed}

3 Credits
A comprehensive program designed to improve the following: critical thinking and evaluating, vocabulary, comprehension, and reading rate. Students will use practice materials and computer programs to attain improvement. Lecture 3 hours. Laboratory 1 hour. Prerequisite: ENG 1113 or instructor approval.

\section*{ENG 2413 - Introduction to Literature (H)} 3 Credits
Introductory study of major literary types: fiction, poetry, and drama. Lecture 3 hours. No Laboratory. Prerequisites: ENG 1113 and ENG 1213 or approval of instructor.

\section*{ENG 2433 - Creative Writing: Introduction to the Novel I \\ 3 Credits \\ The techniques of writing the novel. Lecture 3 hours. No Laboratory.}

\section*{ENG 2443 - Creative Writing: Poetry} 3 Credits
The techniques of writing poetry. Lecture 3 hours. No Laboratory.

\section*{ENG 2453 - Creative Writing: Scriptwriting} 3 Credits
The course teaches screenplay writing techniques. Attention is given to subject and character development. Students learn the components of plot development, scene building and screenplay formats. Lecture 3 hours. No Laboratory.

\section*{ENG 2463 - Creative Writing Non-Fiction Prose} 3 Credits
The techniques of writing non-fiction prose. Lecture 3 hours. No Laboratory.

\section*{ENG 2473 - Creative Writing: Short Story I} 3 Credits
The techniques of writing the short story. Lecture 3 hours. No Laboratory.

\section*{ENG 2483 - Creative Writing: Introduction to the Novel II}

3 Credits
The techniques of writing the novel. Lecture 3 hours. No Laboratory. Prerequisites: ENG 2433.

\section*{ENG 2493 - Creative Writing: Introduction}

3 Credits
Introductory study of three major genres: poetry, the short story, and drama. Lecture 3 hours. No Laboratory.

\section*{ENG 2533 - Creative Writing: Short Story II}

3 Credits
Techniques of writing specific types of short fiction. Lecture 3 hours. No Laboratory. Prerequisite: ENG 2473.

\section*{ENG 2543 - Survey of British Literature to 1800 (H) 3 Credits \\ Old English to 1800.Works of representative authors from the Anglo-Saxon period to the Romantic period. Lecture 3 hours. No Laboratory. Prerequisites: ENG 1113 and ENG 1213 or approval of instructor.}

\section*{ENG 2653 - Survey of British Literature from 1800 (H)} 3 Credits
1800 to Present. Works of representative authors from the Romantic period to the present. Lecture 3 hours. No Laboratory. Prerequisites: ENG 1113 and ENG 1213 or approval of instructor.

\section*{ENG 2663 - The Novel}

3 Credits
The origins and development of the novel. Lecture 3 hours. No Laboratory. Prerequisites: ENG 1113 and ENG 1213 or approval of instructor.

\section*{ENG 2673 - Survey of World Literature to 1700 (H) 3 Credits \\ The study of representative works of literature to 1700. Lecture 3 hours. No Laboratory. Prerequisites: ENG 1113 and ENG 1213 or approval of instructor.}

\section*{ENG 2683 - Survey of World Literature from 1700 (H)} 3 Credits
The study of representative works of literature from 1700. Lecture 3 hours. No Laboratory. Prerequisites: ENG 1113 and ENG 1213 or approval of instructor.

\section*{ENG 2773 - Survey of American Literature to 1865 (H)} 3 Credits
Survey of representative American literary works from the colonial period through the Civil War. Lecture 3 hours. No Laboratory. Prerequisites: ENG 1113 and ENG 1213 or approval of instructor.

\section*{ENG 2883 - Survey of American Literature from 1865 \\ (H) \\ 3 Credits \\ Survey of representative American literary works from Civil War to the present. Lecture 3 hours. No Laboratory. Prerequisites: \\ ENG 1113 and ENG 1213 or approval of instructor.}

\section*{ENG 2893 - Minority Literature}

3 Credits
The study of representative works of literature from AfricanAmerican, Asian-American, Hispanic-American, and Native American writers. Lecture 3 hours. No Laboratory. Prerequisites: ENG 1113 and ENG 1213 or approval of instructor.

\section*{ENG 2990 - Selected Topics in English}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in English. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{ENGLISH AS A SECOND LANGUAGE}

English as a Second Language (ESL) courses are designed for students whose native language is not English. In accordance with the policy statement of the State Board of Regents, ESL students with a TOEFL score below 500 are not eligible for admission in undergraduate coursework at Oklahoma institutions of higher learning. The state approved Intensive English Program at Tulsa Community College incorporates classroom instruction with language laboratory activities which assist students in gaining sufficient language skills to become eligible for undergraduate coursework. A proficiency check is made at the end of each level. No credit toward graduation is awarded. Placement in each course is determined through an evaluation process administered by the ESL Program.

\section*{ESL 0513 - ESL Listening for Understanding}

\section*{3 Credits}

This intermediate course will develop basic listening strategies for everyday communication. The emphasis is on identifying the main idea, and sound discrimination. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0523 - ESL Reading for Understanding} 3 Credits
This intermediate level course will develop basic reading strategies necessary in everyday life. The emphasis is on identifying the main idea and identifying details. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0533 - ESL Grammar for Understanding} 3 Credits
This intermediate level course develops fundamental principles of English grammar in both written and spoken form. Using grammar in communication is emphasized. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0543 - ESL Writing for Understanding}

\section*{3 Credits}

This intermediate course develops basic sentence and paragraph structures as well as vocabulary and some grammatical concepts. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0553 - ESL Speaking for Understanding}

\section*{3 Credits}

This intermediate level course develops the basic strategies for oral communication. The focus in this course is on day-to-day conversation. Vocabulary and idiomatic usage is also developed. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0613 - ESL Listening for Communication 3 Credits}

This intermediate level course continues the development of listening strategies used in everyday communication. The emphasis is on listening for both details and the main idea. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0623 - ESL Reading for Communication 3 Credits}

This intermediate level course continues the development of basic reading strategies. The emphasis is on reading for speed and comprehension. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0633 - ESL Grammar for Communication}

3 Credits
This intermediate level course continues the development of basic grammatical principles in spoken and written form. Using appropriate grammar in communication is stressed. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0643 - ESL Writing for Communication}

\section*{3 Credits}

This intermediate level course continues development of paragraph writing with attention to organization, word economy and order, paragraph development with unity and coherence needed for longer connected discourse. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0653 - ESL Speaking for Communication}

\section*{3 Credits}

This intermediate level course continues the development of oral communication strategies. Vocabulary development, grammatical issues and context usage are examined in this course. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced Laboratory may be required.

\section*{ESL 0713 - ESL Listening for Academic Purposes 3 Credits}

This advanced level course develops listening skills necessary in an academic setting. The emphasis is on identifying important points and note taking strategies. Listening passages are based on college lecture material. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0723 - ESL Reading for Academic Purposes 3 Credits}

This advanced level course develops reading skills necessary in an academic setting. Texts are based on actual college level textbooks. A variety of strategies for academic reading are addressed. Speed and comprehension are stressed. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0733 - ESL Grammar for Academic Purposes}

\section*{3 Credits}

This advanced level course develops the advanced English grammatical concepts necessary for success in the American college classroom. Written and spoken forms are developed. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0743 - ESL Writing for Academic Purposes}

\section*{3 Credits}

This advanced level course develops writing skills necessary for success in the American college classroom with attention to essay development. Organization of multiple paragraphs, word economy and vocabulary development are examined in this course. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0753 - ESL Speaking for Academic Purposes} 3 Credits
This advanced level course develops speaking strategies necessary in an academic setting as well as daily life. The emphasis is on speaking on and American classroom setting as well as development of idiomatic speech. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0763 - ESL TOEFL Preparation \\ 3 Credits}

This course reviews English reading, writing, listening and speaking skills to prepare students for the Test of English as a Foreign Language (TOEFL). Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0813 - ESL Listening for College}

3 Credits
This advanced level course continues the development of listening strategies necessary in an American college setting. The emphasis is on note-taking and identifying verbal and nonverbal cues. Listening passages are based on college lecture material. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0823 - ESL Reading for College}

\section*{3 Credits}

This advanced level course continues the development of college level reading skills. Speed and comprehension are the focus. Texts are based on authentic college texts. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0833 - ESL Grammar for College}

\section*{3 Credits}

This advanced level course continues the development of English grammatical concepts necessary for success in the American college classroom. Written and spoken forms are focused on. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0843 - ESL Writing for College}

3 Credits
This advanced level course continues to develop the essay
writing skills necessary for success in the American college. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0853 - ESL Speaking for College}

\section*{3 Credits}

This advanced level course continues the development of speaking strategies in both academic and daily life settings. The emphasis is on speaking in a variety of classroom situations and the use of idiomatic speech. Placement is determined by the ESL Program. Lecture 3 hours. A self-paced laboratory may be required.

\section*{ESL 0990 - Selected Topics in English as a Second Language}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in ESL. May be repeated with a different topic. Placement determined by the ESL Program. Lecture 1-4 hours. Self-paced laboratory may be required.

\section*{FIRE AND EMERGENCY SERVICES}

\section*{FES 1013 - Fire Practices I}

3 Credits
A general state-approved course covering minimum requirements in firefighting skills and basic knowledge designed to enable a beginning firefighter to perform public firefighting services. Emphasis is placed on forcible entry, rope and portable extinguisher practices, ladder, hose, salvage and overhaul practices, and fire stream practices. Lecture 2 hours. Laboratory 2 hours.

\section*{FES 1023 - Fire Practices II}

3 Credits
A companion course to Fire Practices I to equip a beginning firefighter with specific skills and theories in approved methods and operating procedures including fire apparatus practices, ventilation theory and practices, rescue and first aid practices, and fire prevention inspection procedures. Lecture 2 hours.
Laboratory 2 hours.

\section*{FES 1313 - Fundamentals of Fire Protection}

3 Credits
The history and development of fire protection; the role of the fire service in the development of civilization; introduction to general fire hazards; and a discussion of the problems and possible solutions for current and future fire protection. Lecture 3 hours. No Laboratory.

\section*{FES 1333 - Fire Protection Hydraulics and Water Supply}

\section*{3 Credits}

Mathematics designed to develop understanding of fluid flow through hoses, pipes, pumps, and fire protection appliances. Water supply and distribution analysis using hydraulics calculations. Testing techniques to detect anomalies in design or performance capabilities. Lecture 3 hours. No Laboratory. Prerequisite: One year of high school algebra or MTH 0013.

\section*{FES 1343 - Fundamentals of Fire Prevention}

3 Credits
The fundamentals of fire prevention codes and their enforcement; the techniques of fire safety inspection which result in maximum compliance; fire prevention through the methods of public fire safety education. Lecture 3 hours. No Laboratory.

\section*{FES 1353 - Introduction to Emergency Incident Management}

3 Credits
The aspects of tactics and strategy in extinguishing fires; prefire plans, organization of the fire ground, including techniques of using available equipment and manpower; a study of conflagrations and techniques of predicting fire severity; the development of skills for effective response to crisis. Lecture 3 hours. No Laboratory.

\section*{FES 1363 - Fire Investigation and Arson}

3 Credits
The firefighter's role in fire investigations; the method and mechanics of protecting, searching, and controlling the fire scene; determining the point or origin, path of fire travel, and fire causes; interviews and interrogations; recognizing and preserving evidence; Oklahoma arson laws; alibis, motives, providing the corpus delicti, preparation of the case, court testimony, and reports and records; juvenile fire setters. Lecture 3 hours. No Laboratory.

\section*{FES 1403 - Fire Prevention Inspection Certification}

3 Credits
A course leading to State Certification in fire prevention inspection covering the following topics: letter writing, chemistry of fire, hazards and causes, sprinkler systems, N.F.P.A. Code Numbers 30, 70 and 101, blueprint reading, public fire education, and the management of a fire prevention inspection program. Lecture 2 hours. Laboratory 2 hours.

\section*{FES 1413 - Fire Cause Determination and Investigation \\ 3 Credits}

A course leading to State Certification in fire investigation covering the following topics: report writing, fire scene investigation, fire cause determination, photography, evidence gathering and preservation, interviewing and interrogation, motives, structural investigation, wildland investigation, legal aspects, courtroom procedures, and case studies. Lecture 2 hours. Laboratory 2 hours.

\section*{FES 1431 - Life Safety Code Seminar}

1 Credit
A survey of the National Fire Protection Association's Life Safety Code, including its history and development, as well as its current requirements and application. Lecture 1 hour. No Laboratory.

\section*{FES 1451 - Fire Investigation Overview}

1 Credit
An overview of the current state of the art of fire investigations delivered in a seminar format. Lecture 1 hour. No Laboratory.

\section*{FES 2108 - Basic Emergency Medical Technician Certification}

\section*{8 Credits}

A study of the role of the EMT, CPR, triage, patient assessment, treatment of shock, hemorrhage, unconscious patients, fracture, traumatic injuries, medical emergencies, light extrication, and Universal Precautions. A field and hospital practicum is an integral part of the course. Curriculum is prescribed by the U.S. DOT and controlled by the Oklahoma State Department of Health. Advanced standing credit will only be granted upon proof of current National Registry Certification as an EMT-Basic. Lecture 6 hours. Laboratory 4 hours.

\section*{FES 2213 - Introduction to Homeland Defense \\ 3 Credits}

Presents a broad overview of an emergency management system and the importance of an integrated approach to managing emergencies. Enables the student to formulate the elements of an integrated teamwork system and devise specific actions for improving their own contributions to local emergency management teams. Focuses on all disciplines that work together in planning for or responding to emergencies. Lecture 3 hours. No Laboratory.

\section*{FES 2313 - Building Construction for Fire Protection 3 Credits}

Concepts in fire safe building design and construction to include a detailed study of materials, assemblies and methods, building codes and the Life Safety Code, and relationships among public and private agencies with fire safety interests. Lecture 3 hours. No Laboratory.

\section*{FES 2323 - Fire and Emergency Services Administration}

3 Credits
Planning and organization for the municipal fire service, methods of management and supervision applied to the fire service, relations with other municipal entities, the bargaining agent and the public, and the expanding scope of municipal fire service responsibilities. Lecture 3 hours. No laboratory.

\section*{FES 2343 - Fire Behavior and Combustion}

3 Credits
A review of basic physical science; fundamental chemistry and physics of fire; the hazards of many materials, systems, and processes, and appropriate techniques to control their risks. Lecture 3 hours. No Laboratory

\section*{FES 2403 - Fire Protection Systems}

\section*{3 Credits}

A study of fire hazards related to various industrial processes, techniques, and facilities; the design and properties of private fire protection devices and agents; automatic fire detection and fire extinguishing systems; familiarization with regulatory agencies, codes, and standards. Lecture 3 hours. No Laboratory.

\section*{FES 2423 - Fire Officer Preparation}

3 Credits
Designed to prepare firefighters to assume leadership positions in the fire service. Topics include driving and pumping fire apparatus, ladder operations, fire pumps and hydraulics, pre-fire planning, records, emergency communications, leadership and team effectiveness, fire tactics, hazardous materials and safety, fire prevention through inspections, investigations, and public fire safety education. Lecture 2 hours. Laboratory 2 hours.

\section*{FES 2433 - Fire Problems and Solutions}

3 Credits
This course provides a survey of current issues and problems in the fire service. Alternative methods of addressing these problems are developed by the students using the nominal group process. Lecture 3 hours. No Laboratory.

\section*{FES 2463 - Emergency Services Internship}

3 Credits
This advanced level course provides 160 hours of experience in a fire service administrative functional area with a local fire department. Students must have completed seven of the core FPT courses. Instructor permission required. Lecture 3 hours. No Laboratory.

\section*{FES 2990 - Selected Topics in Fire and Emergency Services}

1-4 Credits
The study and/or analysis of a selected topic in Fire Protection Technology. May be repeated with a different topic. Lecture 1-4 hours. No laboratory.

\section*{FOREIGN LANGUAGE}

Tulsa Community College offers courses in the following languages, each of which has its own category heading and course prefix: Arabic, Chinese, ESL, French, German, Greek, Hebrew, Italian, Japanese, Latin, Portuguese, Russian, and Spanish. These languages are listed in alphabetical order.

\section*{FRENCH}

\section*{FRE 1001 - French for Communication I}

1 Credit
A companion course to FRE 1103 with emphasis on speaking and comprehension skills. Recommended that it be taken simultaneously with FRE 1103 or after. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: FRE 1103 or approval of instructor or Dean of Global Education.

\section*{FRE 1031 - French Pronunciation}

\section*{1 Credit}

A beginning course in French with special emphasis on pronunciation and the oral skills. May be taken simultaneously with FRE 1103. Lecture 1 hour. Self-paced lab may be required. Prerequisite: FRE 1103 or approval of instructor or Dean of Global Education.

\section*{FRE 1103 - French I}

3 Credits
A beginning course in understanding, speaking, reading, and writing French. The first in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.

\section*{FRE 1201 - French for Communication II}

\section*{1 Credit}

Continued instruction in basic language concepts and beginning conversational skills. Conducted in French. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: FRE 1103 or approval of Instructor or Dean of Global Education.

\section*{FRE 1213 - French II}

3 Credits
Continued instruction in understanding, speaking, reading, and writing French. The second in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: FRE 1103 or approval of instructor or Dean of Global Education.

\section*{FRE 1301 - French for Communication III}

1 Credit
Continued instruction to develop oral fluency and conversational skills. Conducted in French. Self-paced laboratory may be required. Prerequisite: FRE 1213 or approval of instructor or Dean of Global Education.

\section*{FRE 1313 - French III}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing French. The third in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.
Prerequisite: FRE 1213 or approval of instructor or Dean of Global Education.

\section*{FRE 1401 - French for Communication IV}

1 Credit
Continued instruction to develop oral fluency and conversational skills. Conducted in French. Lecture 1 hour. No Laboratory. Prerequisite: FRE 1313 or approval of instructor or Dean of Global Education.

\section*{FRE 1413 - French IV}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing French. The fourth in a sequence of related courses.
Lecture 3 hours. Self-paced laboratory may be required.
Prerequisite: FRE 1313 or approval of instructor or Dean of Global Education.

\section*{FRE 2033 - French Literature in Translation}

\section*{3 Credits}

Readings of literary works in translation selected to increase the student's knowledge of Francophone societies. Conducted in English. Lecture 3 hours. Self-paced laboratory may be required.

\section*{FRE 2041 - French - Introduction to the Arts}

\section*{1 Credit}

An introduction to the French arts with an attempt to develop an aesthetic awareness and an understanding of the role that the arts play in modern day French activities. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{FRE 2071 - French History and Geography \\ Introduction}

1 Credit
A survey of French history and geography as it relates to modern day French societies and language with an awareness of the relationship between the physical, political, and linguistic regions. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{FRE 2113 - Intermediate French I}

3 Credits
An intermediate course in understanding, speaking, reading, and writing French. Taught in French. Lecture 3 hours. No Laboratory. Prerequisite: FRE 1413 or approval of instructor or Dean of Global Education.

\section*{FRE 2121 - Intermediate French Communication} 1 Credit
Intensive practice in speaking French at the intermediate level covering a wide range of subjects; i.e., everyday language, intermediate literature samples, other publications, and current events. Conducted in French. Lecture 1 hour. No Laboratory. Prerequisite: FRE 2113 or approval of instructor or Dean of Global Education.

\section*{FRE 2143 - French Civilization and Culture}

3 Credits
Conversations and readings concerning French culture and civilization. Conducted in French. Lecture 3 hours. No Laboratory. Prerequisite: FRE 2113 or approval of instructor or Dean of Global Education.

\section*{FRE 2213 - Intermediate French II}

\section*{3 Credits}

An intermediate course in understanding, speaking, reading, and writing French. Taught in French. Lecture 3 hours. No Laboratory. Prerequisite: FRE 1413 or approval of instructor or Dean of Global Education.

\section*{FRE 2263 - Intermediate French Literature}

\section*{3 Credits}

Development of reading skills in the target language using intermediate level literary texts. Conducted in French. Lecture 3 hours. No Laboratory. Prerequisite: FRE 2113 or approval of instructor or Dean of Global Education.

\section*{FRE 2320 - International Work and/or Study Seminar} 1-3 Credits
Practicum with an international firm and/or study abroad. Focus on application and enhancement of language skills (oral and written forms). Lecture and/or laboratory equivalent. Prerequisite: Permission of Dean of Global education and Associate Dean before enrollment and in advance of work/ study abroad experience.

\section*{FRE 2330 - French International Seminar and/or Field Studies}

\section*{1-3 Credits}

This course is designed to provide and on-site experience in the selected French speaking country. Includes lectures, readings, oral interactions, and written reports. All or a portion of instruction and activities are conducted at the international site. Focus on language (oral and written forms) and culture development. Prerequisite: Permission of Dean of Global Education and Associate Dean before enrollment and in advance of in-country experience.

\section*{FRE 2413 - French Translating}

3 Credits
Translating skills course with focus on translating the written language of French to English with some English to French. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: FRE 2113 or approval of instructor or Dean of Global Education.

\section*{FRE 2421 - French Culture Comparisons} 1 Credit
Focus on the cultural aspects of the Francophone people. Includes a comparison with the American culture as well as other culture groups. Conducted in English. Lecture 1 hour. Selfpaced laboratory may be required.

\section*{FRE 2433 French Cinema and Conversation}

3 Credits
Analytical study of French films in terms of historical and cultural contexts. Students will use language in a meaningful way to address the different cultural aspects portrayed in the films. Lecture 3 hours. Self-Paced Laboratory may be required

\section*{FRE 2523 - Intermediate French Grammar and Composition \\ 3 Credits}

This course includes a thorough review of syntax and grammar and the development of composition skills. Conducted in French and English. Lecture 3 hours. Self-paced lab may be required. Prerequisite: FRE 2213 or 18 hours of French or permission of Dean of Global Education.

\section*{FRE 2533 - Advanced French Conversation}

\section*{3 Credits}

This course is intended for students who have studied French structure through the intermediate level and have gained a basic oral fluency and proficiency. Class activities will focus on acquiring sufficient speaking skills to interact with native speakers and the use of French as the main language of communication without the aid of an interpreter. Conducted in French. Lecture 3 hours. Self-paced lab may be required. Prerequisite: FRE 2213 or 18 hours of French or permission of Dean of Global education.

\section*{FRE 2990 - Selected Topics in French}

1-4 Credits
The study and/or analysis of a selected topic in French. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{GAMING OPERATIONS}

\section*{GAM 1113 - Basic Room \& Basic Game Operations 3 Credits}

Covers observation techniques for suspicious activity and breaches of policy and procedure including basic camera systems and operation; policy and procedures for the various geographical areas of the casino; observation techniques for gaming sheets, slots and table games; rules and regulations for casino games; and personnel roles, duties, and functions. Lecture 3 hours. No Laboratory.

\section*{GAM 1213 - Gaming Management \& Protection} 3 Credits
History, development, and management of casinos and gaming. Emphasis on environment, operations, regulation, accounting, auditing and taxation of casinos and gaming operations. Also covers basic gaming sheets, slots, and table games; observation of suspicious activity and breaches of policy and procedure. Lecture 3 hours. No Laboratory. Prerequisite: GAM 1113 or instructor approval.

\section*{GEOGRAPHICAL INFORMATION SYSTEMS}

\section*{GIS 2344 - Introduction to Geographic Information Systems}

\section*{4 Credits}

An introductory course designed to acquaint students with the theory and uses of Geographic Information Systems to capture, store, query, and analyze data referenced to a location on the Earth's surface. Topics include history and applications, map projections, coordinate systems, data sources, structures, and models, along with methods of data acquisition, management, manipulation, analysis, and visualization. The lab component will provide students hands-on experiences with ArcGIS software. Lecture 3 hours. Laboratory 3 hours.

\section*{GIS 2373 - GIS Data Acquisition and Management 3 Credits}

This course will serve as an introduction to spatial data acquisition for Geographic Information Systems. Students will gain the experience necessary in order to acquire, convert, and create spatial data. Emphasis will be placed on Global Positioning Systems, Metadata, and the creation and editing of data in a personal geo database. Lecture 2 hours. Laboratory 3 hours.

\section*{GIS 2383 - Advanced Geographic Information Systems 3 Credits}

Students will explore various components of spatial analysis and raster data. The lab component of this course will provide students with an introduction to the ArcGIS Spatial Analyst and 3D Analyst extensions. This course is a continuation of the Introduction to GIS course (GEO 2344 or GIS 2344) course. Lecture 2 hours. Laboratory 3 hours. Prerequisite: GEO 2344, GIS 2344, SUR 2344 or instructor approval.

GIS 2393 - Geographic Information Systems Practicum 3 Credits
This course is designed to provide the student with experience
in designing, implementing, and completing GIS projects. Emphasis will be placed on project planning, data acquisition, management, analysis, and presentation. Prior knowledge of GIS is required. Lecture 1 hour. Laboratory 4 hours. Prerequisites: GIS/GEO/SUR 2344, GEO 2354, GIS 2373, GIS 2383 or instructor approval.

\section*{GIS 2990 - Selected Topics in Geographical Information Systems}

1-4 Credits
The study and/or analysis of selected topics in Geographical Information Systems. Lecture 1-4 hours. Laboratory 1-4 hours.

\section*{GEOGRAPHY}

GEO 1014 - Geography (Physical) (L)
4 Credits
Physical geography is a survey of those sciences which study the natural environment. The course presents a study of meteorology, climatology, geology, hydrology, oceanography, soil science, and plant and animal ecology. A major thrust of the course is to establish the interrelatedness of these sciences in terms of scientific principles which apply to each of them. Attention is given to the laws of thermodynamics as well as factors influencing the distributions of weather phenomena, climate zones, landforms, oceanic processes, soil processes, plants, and animals. The course is specifically aimed at nonscience majors. Lecture 3 hours. Laboratory 2 hours.

\section*{GEO 1023 - World Geography (Economic) (S)} 3 Credits
A study of the relation of mankind to his environment and his utilization of natural resources, dealing with problems of production manufacture, and distribution of goods throughout the world. The aspects of primitive subsistence and degrees of commercialism are considered. Lecture 3 hours. No Laboratory.

\section*{GEO 1043 - Introduction to Cultural Geography (S,I)} 3 Credits
An introduction to the basic concepts associated with people and their relationships to their physical and cultural environment, with an emphasis on social, economic and political organization. Lecture 3 hours. No laboratory.

\section*{GEO 2013 - Meteorology}

3 Credits
A study of the Earth's atmosphere including its dynamics, processes, and structure as they pertain to the establishment of weather. Attention will be given to the relationships between weather conditions and air pollution. Lecture 3 hours. No Laboratory.

\section*{GEO 2033 - World Regional Geography (S,I)}

3 Credits
A study of China, the former USSR, Europe, Latin America, the Arab world, and other parts of our globe. Special emphasis will be given to the five dimensions: political, economic, historical, social, and geographic as each relates to the specific regions. Foresights and options will be examined to improve our vision of the modern world with its ever more close associations and dependencies. Lecture 3 hours. No laboratory.

\section*{GEO 2153 - Human Ecology}

\section*{3 Credits}

A study of the environment apart from mankind (natural environment), the influence of humans on the environment with emphasis on population growth and problems it has created relative to environmental features such as soil, waters, vegetation, wildlife, landforms, and the atmosphere. Lecture 3 hours. No Laboratory.

\section*{GEO 2344 - Introduction to Geographic Information Systems}

\section*{4 Credits}

An introductory course designed to acquaint students with the theory and uses of Geographic Information Systems to capture, store, query, and analyze data referenced to a location on the Earth's surface. Topics include history and applications, map projections, coordinate systems, data sources, structures, and models, along with methods of data acquisitions, management, manipulation, analysis, and visualization. The lab component will provide students hands-on experiences with ArcGIS software. Lecture 3 hours. Laboratory 3 hours.

\section*{GEO 2354 - Computer Cartography}

\section*{4 Credits}

This course will provide students with a brief history and an introduction of cartography. Students will be introduced to the basics of map creation, interpretation, and design. The lab component of this course will introduce students to ESRI's ArcView software mapping capabilities. Lecture 3 hours. Laboratory 2 hours.

\section*{GEO 2990 - Selected Topics in Geography} 1-4 Credits
The study and/or analysis of a selected topic in Geography. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{GEOLOGY}

\section*{GEL 1014 - General Geology (Physical) (L)} 4 Credits
Study of earth materials and processes for science and nonscience majors. Includes examination of the Earth's interior, magnetism, gravity, setting in space, minerals, rocks, structure, and geologic processes. Lecture 3 hours. Laboratory or Field Studies 3 hours.

\section*{GEL 1024 - General Geology (Historical) (L) 4 Credits}

Study of earth materials and processes within a time perspective. For science and non-science majors. Utilizes fossils, geologic maps, and field studies to interpret geologic history. Lecture 3 hours. Laboratory or Field Studies 3 hours.

\section*{GEL 1113 - Introduction to Oceanography 3 Credits}

General survey of the scientific framework of the four specializations of oceanographic study-biological, chemical, geological/geophysical, and physical oceanography. Lecture 3 hours. No Laboratory.

\section*{GEL 2021 - Map and Airphoto Interpretation 1 Credit \\ Recognition of landforms and geologic features on topographic maps and airphotos. Includes interpretation of geologic maps and fundamentals basic to all types of contour maps. No Lecture. Laboratory 3 hours. Prerequisite: GEL 1014 or GEO 1014, or instructor approval.}

\section*{GEL 2990 - Selected Topics in Geology}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Geology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{GERMAN}

\section*{GER 1001 - German for Communication I}

\section*{1 Credit}

A companion course to GER 1103 with emphasis on speaking and comprehension skills. Recommended that it be taken simultaneously with GER 1103 or after. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: GER 1103 or approval of instructor or Dean of Global Education.

\section*{GER 1031 - German Pronunciation}

\section*{1 Credit}

A beginning course in German with special emphasis on pronunciation and the oral skills. May be taken simultaneously with GER 1103. Lecture 1 hour. No Laboratory. Prerequisite: GER 1103 or approval of instructor or Dean of Global Education.

\section*{GER 1103 - German I}

\section*{3 Credits}

A beginning course in understanding, speaking, reading, and writing German. The first in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.

\section*{GER 1201 - German for Communication II}

\section*{1 Credit}

Continued instruction in basic language concepts and beginning conversational skills. Conducted in German. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: GER 1103 or approval of instructor or Dean of Global Education.

\section*{GER 1213 - German II}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing German. The second in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: GER 1103 or approval of instructor or Dean of Global Education.

\section*{GER 1301- German for Communication III}

\section*{1 Credit}

Continued instruction to develop oral fluency and conversational skills. Conducted in German. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: GER 1213 or approval of instructor or Dean of Global Education.

\section*{GER 1313-German III}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing German. The third in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.
Prerequisite: GER 1213 or approval of instructor or Dean of Global Education.

\section*{GER 1401 - German for Communication IV} 1 Credit
Continued instruction to develop oral fluency and
conversational skills. Conducted in German. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: GER 1313 or approval of instructor or Dean of Global Education.

\section*{GER 1413 - German IV}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing German. The fourth in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: GER 1313 or approval of instructor or Dean of Global Education.

\section*{GER 2033 - German Literature in Translation}

3 Credits
Readings of literary in translation selected to increase the student's knowledge of German societies. Conducted in English. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: Permission of the Dean of Global Education.

\section*{GER 2041 - German - Introduction to the Arts}

\section*{1 Credit}

An introduction to the German arts with an attempt to develop an aesthetic awareness and an understanding of the role that the arts play in modern day German activities. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{GER 2071 - German History and Geography Introduction}

1 Credit
A survey of German history and geography as it relates to modern day German societies and language with an awareness of the relationship between the physical, political, and linguistic regions. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{GER 2113 - Intermediate German I}

\section*{3 Credits}

An intermediate course in understanding, speaking, reading, and writing German. Taught in German. Lecture 3 hours. No Laboratory. Prerequisite: GER 1413 or approval of instructor or Dean of Global Education.

\section*{GER 2121 - Intermediate German Communication} 1 Credit
Intensive practice in speaking German at the intermediate level covering a wide range of subjects; i.e., everyday language, intermediate literature samples, other publications, and current events. Conducted in German. Lecture 1 hour. No Laboratory. Prerequisite: GER 2113 or approval of instructor or Dean of Global Education.

\section*{GER 2143 - German Culture and Civilization}

\section*{3 Credits}

Focus on conversational skills and readings concerning German culture and civilization. Conducted in German. Lecture 3 hours. No Laboratory. Prerequisite: GER 2113 or approval of instructor or Dean of Global Education.

\section*{GER 2213 - Intermediate German II}

3 Credits
An intermediate course in understanding, speaking, reading, and writing German. Taught in German. Lecture 3 hours. No Laboratory. Prerequisite: GER 1431 or approval of instructor or Dean of Global Education.

\section*{GER 2263 - Intermediate German Literature} 3 Credits
Development of reading skills in the target language using intermediate level literary texts. Conducted in German. Lecture 3 hours. No Laboratory. Prerequisite: GER 2113 or approval of instructor or Dean of Global Education.

\section*{GER 2320 - International Work and/or Study Seminar} 1-3 Credits
Practicum with an international firm and/or study abroad. Focus on application and enhancement of language skills (oral and written forms). Lecture and/or laboratory equivalent. Prerequisite: Permission of Dean of Global Education and Associate Dean before enrollment and in advance of work/ study abroad experience.

\section*{GER 2330 - German International Seminar and/or Field Studies}

1-3 Credits
This course is designed to provide an on-site experience in the selected German speaking country. Includes lectures, readings, oral interactions, and written reports. All or a portion of instruction and activities are conducted at the international site. Focus on language (oral and written forms) and culture development. Prerequisite: Permission of Dean of Global Education and Associate Dean before enrollment and in advance of in-country experience.

\section*{GER 2413 - German Translating}

\section*{3 Credits}

Translating skills course with focus on translating the written language of German to English with some English to German Lecture 3 hours. Self- paced laboratory may be required. Prerequisite: GER 1413 or approval of instructor or Dean of Global Education.

\section*{GER 2421 - German Culture Comparisons}

\section*{1 Credit}

Focus on the cultural aspects of the Germanic people. Includes a comparison with the American culture as well as other culture groups. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{GER 2523 - Intermediate German Grammar and Composition}

\section*{3 Credits}

This course includes a thorough review of syntax and grammar and the development of composition skills. Conducted in German and English. Lecture 3 hours. Self-paced lab may be required. Prerequisite: GER 2213 or 18 hours of German or approval of instructor or Dean of Global Education.

\section*{GER 2533 - Advanced German Conversation}

\section*{3 Credits}

This course is intended for students who have studied German structure through the intermediate level and have gained a basic oral fluency and proficiency. Class activities will focus on acquiring sufficient speaking skills to interact with native speakers and the use of German as the main language of communication without the aid of an interpreter. Conducted in German. Lecture 3 hours. Self-paced lab may be required. Prerequisite: GER 2213 or 18 hours of German or approval of instructor or Dean of Global Education.

\section*{GER 2990 - Selected Topics in German}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in German. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{GRAPHICS AND IMAGING TECHNOLOGIES}

\section*{GT 1011 - Graphics \& Imaging Technologies Introduction}

1 Credit
This course presents an overview of the graphic arts industry and career opportunities in the offset and flexographic industry. Lecture 1 hour. No Laboratory.

\section*{GT 1143 - Reproduction Photography}

\section*{3 Credits}

This course focuses on techniques and procedures for creating a photographic negative to be used to produce an offset printing plate. Students are taught the effective use of darkroom equipment, safe use of chemicals, and camera operations include line negative, halftone negative and diffusion transfer. Lecture 3 hours. Laboratory 1 hour Prerequisite: GT 1011.

\section*{GT 1223 -Image Assembly/Platemaking}

\section*{3 Credits}

In this course, image preparation techniques for assembling a photographic negative and producing an offset printing plate are taught. Flat reproduction, contacting and proofing, metal and photo-direct reproduction and special platemaking operations are covered. Lecture 3 hours. Laboratory 1 hour. Prerequisite GT 1143.

\section*{GT 1333 - Basic Press Operation}

3 Credits
The student will be taught equipment and chemical safety procedures for operating presses, set up and operation,
cleanup and maintenance procedures, and use of materials and chemicals. Lecture 3 hours. Laboratory 1 hour. Prerequisite: GT 1223.

\section*{GT 1413 - Basic Electronic Imaging}

\section*{3 Credits}

This course focuses on image composition techniques and procedures utilizing page layout and drawing software. Basic principles of design and layout, electronics imaging software, type and typography, scanning and layout are taught Lecture 3 hours. Laboratory 1 hour. Prerequisite: GT 1011.

\section*{GT 1443 - Finishing/Binding}

3 Credits
This course covers techniques and procedures involved in finishing the printed copy:cutting, folding, stitching, collating, numbering, scoring, perforating, and binding. Lecture 3 hours. Laboratory 1 hour. Prerequisite: GT 1011.

\section*{GT 2014 - Advanced Electronic Imaging I}

\section*{4 Credits}

Provides a further study of imaging utilizing advanced techniques, software usage, composition techniques and procedures utilizing Quark Xpress. Lecture 4 hours Laboratory 2 hours. Prerequisite: GT 1413.

\section*{GT 2064 - Advanced Electronic Imaging II}

4 Credits
Advance study of electronic imaging utilizing techniques, software, composition techniques and procedures utilizing Adobe Illustrator and Photoshop. Lecture 4 hours. Laboratory. 2 hours. Prerequisite. GT 2014.

\section*{GT 2124 - Advanced Press Operation I}

\section*{4 Credits}

This course covers methods and procedures used to produce one and two color reproduction using various offset and flexographic printing presses. (AB Dick 360, AB Dick 8800 and 9850 with colorhead). Lecture 4 hours. Laboratory 2 hours. Prerequisite: GT 1443.

\section*{GT 2224 - Advanced Press Operation II 4 Credits}

This course focuses on methods and procedures used to produce one and two color reproduction using various offset and flexographic printing presses. (Itek 975, AB Dick 3500, and Cadet Flexographic Press). Lecture 4 hours. Laboratory 2 hours. Prerequisite: GT 2124.

\section*{GREEK}

\section*{GRE 1001 - Greek for Communication I}

1 Credit
A beginning course in basic language with emphasis on speaking and comprehension skills. May be taken simultaneously with GRE 1103. Lecture 1 hour. No Laboratory. Prerequisite: GRE 1103 or approval of instructor or Dean of Global Education.

\section*{GRE 1023 - Biblical Greek I}

3 Credits
This course will serve as an introduction to New Testament Greek with an emphasis on work with biblical texts and Biblical Greek grammar. Lecture 3 hours. No Laboratory.

\section*{GRE 1103 - Greek I}

3 Credits
An elementary course in understanding, speaking, reading, and writing Greek. The first in a sequence of two related course sections. See GRE 1213. Lecture 3 hours. No Laboratory.

\section*{GRE 1143 - Greek for Travel I}

3 Credits
A beginning course in understanding, speaking, reading, and writing Greek with emphasis on language needed for traveling. Includes basic language and culture concepts. Lecture 3 hours. No Laboratory.

\section*{GRE 1201 - Greek for Communication II} 1 Credit
Continued instruction in basic language concepts and beginning conversational skills. Lecture 1 hour. No Laboratory. Prerequisite: GRE 1103 or approval of instructor or Dean of Global Education.

\section*{GRE 1213 - Greek II}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Greek. Lecture 3 hours. No Laboratory. Prerequisite: GRE 1103 or approval of instructor or Dean of Global Education.

\section*{GRE 1223 - Biblical Greek II}

\section*{3 Credits}

This course of elementary readings in New Testament Greek will involve translation of narrative material to gain a familiarity with simple biblical texts and to continue the process of vocabulary building. Lecture 3 hours. No Laboratory. Prerequisite: GRE 1023 or approval of instructor or Dean of Global Education.

\section*{GRE 1313-Greek III}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Greek. Lecture 3 hours. No Laboratory. Prerequisite: GRE 1213 or approval of instructor or Dean of Global Education.

\section*{GRE 1413-Greek IV}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Greek. Lecture 3 hours. No Laboratory. Prerequisite: GRE 1313 or approval of instructor or Dean of Global Education.

\section*{GRE 2990 - Selected Topics in Greek}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Greek. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{HEALTH CARE ADMINISTRATION \\ (See also Business course descriptions and Business Health Care Business Operations)}

\section*{HCA 1103 - Legal Practices in Health Care}

\section*{3 Credits}

Both general and specific legal practices of health care delivery and administration are explored in this course. Topics included are management issues, credentialing, liability, access to and financing of treatment, consent to treatment, corporate and structural issues for the health care system and emerging legal topics. Lecture 3 hours. No Laboratory.

\section*{HCA 1113 - Risk Management in Health Care 3 Credits}

This course presents an introduction to the basic concepts of maintaining a safe and healthful environment in patient care facilities. An overview of loss control topics including patient-visitor liability, accident problem analysis investigation, workers compensation, legislative review and alternative risk management action is presented. Lecture 3 hours. No Laboratory.

\section*{HEALTH INFORMATION TECHNOLOGY (Medical Records)}

\section*{HIT 1113 - Introduction to Health Information Management}

\section*{3 Credits}

Students are exposed to the educational requirements and professional credentials for health information management as well as job functions, career opportunities, and alternative work settings. The organizational structure of the American Health Information Management Association (AHIMA) is reviewed along with member services provided. Record format, content, documentation guidelines, and procedures for quantitative and qualitative analysis of the record are also examined. Other topics addressed include: the master patient index, the number index, numbering and filing systems, record tracking, retrieval and retention, abstracting and the diagnosis, procedure, and physician indices. Lecture 3 hours. Laboratory 1 hour. Prerequisite: Admission to the Health Information Technology Program.

\section*{HIT 1131 - Health Care Delivery Systems and Trends 1 Credit \\ Students are exposed to the evolution and organization of current health care systems in the United States, regulatory agencies, health care organizations, health care settings (i.e., hospitals, ambulatory care, long term care, home health care, hospice), health care professionals, third party payers, and health care financing. Terminology associated with health care delivery systems will be defined and current trends with health care delivery examined. Lecture 1 hour. No Laboratory.}

\section*{HIT 1213 - Statistics and Data Management}

\section*{3 Credits}

Basic statistics and health care statistics are introduced including definitions, sources, methods for collection and reporting, and analysis techniques to determine significance, reliability, validity, and/or manipulation. Registers (i.e., birth, death, cancer, and trauma) maintained in the health information management department are examined. Micrographics and optical imaging, as well as, computer applications and issues (i.e., data integrity, security and compatibility, networking capabilities, voice recognition and other technological advances) are also presented. Lecture 3 hours. Laboratory 1 hour. Prerequisite: HIT 1113, with a "C" or better.

\section*{HIT 1231 - Management of Medical Document Processing \\ 1 Credit}

This course is designed to expose students to report formats utilized in medical transcription, dictation challenges (i.e., accents, mumbling, speed problems, and specialized terminology), and dictation and transcription equipment. Other issues examined include automated authentication, voice recognition technology, centralized versus decentralized transcription, outsourcing of transcription services and incentive pay plans. Lecture 1 hour. Laboratory 1 hour. Prerequisite: CIS 2073 or program director/ instructor approval.

\section*{HIT 1242 - Health Information Management in Alternate Care Settings}

2 Credits
Alternate care settings (i.e., physician's office, ambulatory care, long term care, home health, hospice, subacute care, rehabilitation, mental health, and dental care) will be examined individually with respect to accrediting agencies, regulatory guidelines, and professional associations. An emphasis will be placed on documentation requirements, systems and administrative procedures, medical office procedures, software and technological tools and professional practice standards related to management of health information in each of the settings. Lecture 2 hours. No Laboratory. Prerequisite:HIT 1113 with a "C" or better or concurrent enrollment.

\section*{HIT 1333 - CPT and HCPCS Coding}

\section*{3 Credits}

The course will examine the process of coding procedures using Current Procedural Terminology IV (CPT-IV) and HCFA's Common Procedural Coding System (HCPCS). CPT coding guidelines, section guidelines, modifier usage, and code linkage will be examined in detail. Students will be exposed to HCPCS codes and the hospital chargemaster. Coding exercises will demonstrate the student's understanding of the principles of CPT coding. Lecture 2 hours. Laboratory 2 hours. Prerequisites: BIO 1314 and AH 1323, with a "C" or better.

\section*{HIT 1353 - Legal Aspects of Health Records}

\section*{3 Credits}

The focus of this course is on legal issues affecting health information. It provides exposure to the American legal system, legal terminology, case studies, and statutes with
practical application of these principles and concepts to medical records. Confidentiality and security of medical information is addressed as are HIPAA regulations. Other topics examined include: birth and death certificates, informed consent, response to subpoenas, admissibility, discoverability, negligence, liability, living wills, and organ donations. Lecture 3 hours. No laboratory. Prerequisite: HIT 1113, with a "C" or better.

\section*{HIT 1363 - ICD-9-CM Coding I}

\section*{3 Credits}

The principles, guidelines, and conventions utilized in coding diagnoses and procedures with the International Classification of Diseases, \(9^{\text {th }}\) Revision, Clinical Modification (ICD-9-CM) are examined in detail. Differences between hospital and physician based coding will be delineated. Pertinent reference books and publications will be identified, and guidelines from the Uniform Hospital Discharge Data Set (UHDDS) will be reviewed. Proficiency in coding will be demonstrated through coding exercises and practical application. Lecture 2 hours. Laboratory 2 hours. Prerequisites: B10 1314 and AH 1323 with a "C" or better.

\section*{HIT 1412 - Practicum I}

\section*{2 Credits}

Supervised experience in a hospital's health information management department. Emphasis on record assembly, quantitative analysis, chart completion, master patient index, abstracting, indexes and registers, statistics, filing, microfilming and/or optical imaging, birth registry, and release of information. No Lecture. Laboratory 8 hours. Prerequisites: HIT 1213 and HIT 1353 with a "C" or better.

\section*{HIT 2053 - Pathophysiology and Pharmacology I 3 Credits}

Review of current theories of disease process by body systems to assist the student in interpreting documentation within the medical record. This course will familiarize students with common diseases by examining diagnostic criteria, tests and procedures, etiological factors, associated complications and treatment regimens, including procedures and/or medications. Drug classification and adverse drug reactions are examined as are the implications of diagnostic test results. Lecture 3 hours. No Laboratory. Prerequisites: BIO 1314 and AH 1323, with a"C" or better.

\section*{HIT 2113 - Management Techniques for Health Information Services}

\section*{3 Credits}

During this course the application of basic management techniques as they relate to health information services are examined including planning, organizing, staffing, supervising, and controlling. Students will be exposed to the development and use of job descriptions, policies and procedures, productivity standards, performance evaluations, and budgets. Techniques for resume writing, interviewing, counseling, procedure analysis, forms design, department design and/or layout with ergonomic equipment consideration, and purchase, will also be addressed. Critical thinking skills, decision making techniques and team building concepts are examined. Lecture 3 hours. No laboratory. Prerequisite: HIT 1213, with a "C" or better.

\section*{HIT 2121 - Physician Billing and Reimbursement} 1 Credit
Introduction to physician billing and reimbursement issues including insurance verification, preauthorization, claims processing and adjudication, interpretation of explanation of benefits (EOB), appeal of denials, accounts receivable, postings and collections. Other issues examined include the physician fee schedule, Resource Based Relative Value System (RBRVS) and major third party players (private and government sponsored). Lecture 1 hour. Laboratory 1 hour. Prerequisites: HIT 1333 and HIT 1363 with a "C" or better and HIT 2403 or concurrent enrollment.

\section*{HIT 2133 - Reimbursement and Classification Systems}

\section*{3 Credits}

Students are introduced to the following reimbursement systems: Ambulatory Patient Classification (APC), Diagnosis Related Groups (DRG), Resource Utilization Groups (RUG), Home Health Resource Groups (HHRG), and the prospective payment systems for inpatient rehabilitation and psychiatric facilities. Retrospective and prospective reimbursement systems are examined as is capitation and managed care (HMO, PPO, etc). Other issues addressed include preparation of the UB-92, review of Remittance Advice, appeal of denials, case mix index, charge master maintenance and coding quality and compliance plans. Other nomenclature and classification systems (i.e., ICD-10-CM, ICD-10-PCS, SNDO, DSM, SNOMED, CDT) utilized in reimbursement or managing health information are investigated. Lecture 3 hours. No Laboratory. Prerequisites: HIT 1333 and HIT 1363 with a "C" or better and HIT 2403 or concurrent enrollment.

\section*{HIT 2153 - Pathophysiology and Pharmacology II 3 Credits}

This course continues the review of current theories of disease process for the remaining body systems not covered in HIT 2053. Students will investigate common diseases by examining diagnostic criteria, tests and procedures, etiological factors, associated complications and treatment regimens, including procedures and/or medications. Drug classification and adverse drug reactions are examined as are the implications of diagnostic test results. Lecture 3 hours. No Laboratory. Prerequisites: BIO 1314 and AH 1323 with a "C" or better.

\section*{HIT 2213 - Quality, Utilization, and Risk Assessment} 3 Credits
Course includes a detailed examination of licensure and accreditation standards utilized to measure department compliance. Students are introduced to quality improvement theory and techniques (departmental and hospital-wide) and to the "team concept approach" including a review of member and/or facilitator skills needed to successfully participate. The course will also address the concepts and theories of utilization management, critical care pathways, severity of illness systems, quality improvement organizations, and risk management. The role of the medical staff coordinator in credentialing, privileging, committee preparation, and minutes documentation is also examined. Lecture 3 hours. No laboratory. Prerequisite: HIT 1213, with a "C" or better.

\section*{HIT 2342 - Coding and Reimbursement Internship} 2 Credits
ICD-9-CM and CPT/HCPCS coding guidelines and principles are integrated and applied to advanced coding problems. Coding software, groupers and optimizers are utilized. Students receive supervised experience coding and abstracting medical information at a physician's office or billing service and at a hospital coding inpatient, outpatient and emergency room records. No Lecture. Laboratory 8 hours. Prerequisites: HIT 1333, HIT 1363, HIT 2403, HIT 2133, HIT 2121, HIT 2053 and HIT 2153 with a "C" or better or instructor approval.

\section*{HIT 2403 - ICD-9-CM Coding II}

3 Credits
The application of coding principles and guidelines introduced in HIT 1363 will be continued. Source documents are reviewed to practice identifying diagnostic and procedural information to be coded. ICD-9- CM coding guidelines and UHDDS reporting guidelines are applied to diagnostic and procedural information obtained from the health records. This enables the student to establish the necessary skills for achieving totality of codes, coding accuracy, and appropriate sequencing. Students are introduced to coding software, groupers and optimizers. Lecture 2 hours. Laboratory 2 hours. Prerequisite: HIT 1363 with a"C" or better.

\section*{HIT 2412 - Practicum II}

2 Credits
Supervised experience in alternative care settings including long term care, ambulatory care, subacute care, mental and rehabilitation facilities, hospice, home health and insurance companies. Emphasis is placed on policies and procedures and documentation requirements specific to each setting. Students will also have supervised exposure to the state quality improvement organization, tumor registry activities, quality improvement, utilization management, and risk management. No lecture. Laboratory 8 hours. Prerequisites: HIT 1412 and HIT 2213 , with a " \(C\) " or better.

\section*{HIT 2990 - Selected Topics in Health Information Technology}

1-4 Credits
The study and/or analysis of a selected topic in Health Information Technology. May be repeated with a different topic. Lecture 1-4 hours. No laboratory.

\section*{HEBREW}

\section*{HEB 1011 - Introduction to Hebrew}

\section*{1 Credit}

Includes a study of language structure and vocabulary of biblical scriptures. Lecture 1 hour. No Laboratory.

\section*{HEB 1023 - Biblical Hebrew I}

\section*{3 Credits}

This course will serve as an introduction to biblical Hebrew with an emphasis on language use through work with biblical texts as well as instruction in the fundamentals of Hebrew grammar. Lecture 3 hours. No Laboratory.

\section*{HEB 1223 - Biblical Hebrew II}

\section*{3 Credits}

This course of elementary readings in biblical Hebrew will involve translation of narrative material to gain a familiarity with simple biblical texts and to continue the process of vocabulary building. Lecture 3 hours. No Laboratory. Prerequisite: HEB 1023 or approval of instructor or Associate Dean or Dean of Global Education.

\section*{HEB 2990 - Selected Topics in Hebrew}

1-4 Credits
The study and/or analysis of a selected topic in Hebrew. May be repeated with a different topic. Lecture 1-4 hours. Self-paced laboratory may be required.

\section*{HISTORY}

\section*{HIS 1033 - History of Oklahoma}

\section*{3 Credits}

Intercultural contributions from prehistoric to present, including explorations, Indian cultures, homesteading, and statehood. Lecture 3 hours. No Laboratory.

\section*{HIS 1044-Oklahoma History plus Research} 4 Credits
Intercultural contributions from prehistoric to present, including explorations, Indian cultures, homesteading, and statehood with individually directed research. Lecture 3 hours. Laboratory 2 hours.

HIS 1053 - Ancient and Medieval Western Civilization (H)

3 Credits
A survey of the background for development of civilization in the West including the Near East, Greece, and Rome through the Middle Ages and into the period of the Renaissance and Reformation. Lecture 3 hours. No Laboratory.

\section*{HIS 1063 - Modern Western Civilization (H)}

3 Credits
The unfolding of the pattern of modern western civilization from the Renaissance to current times. A study of the Age of Revolution and the beginnings of industrialism in the nineteenth century and the social, economic, and political factors of recent world history. Lecture 3 hours. No Laboratory.

\section*{HIS 1073 - Twentieth Century World History (H) (I)} 3 Credits
A survey of world history covering World War I and its aftermath, the Depression and the rise of totalitarianism, World War II, the decline of Western imperialism and the growth of the Third World, and the issues of the 1980's. Lecture 3 hours. No Laboratory.

\section*{HIS 1083 - Survey of English History to 1688 (H)}

\section*{3 Credits}

An introductory survey of English history from its prehistoric beginnings to 1688. The course will trace the early development of the English people, the growth of monarchy
and representative government in the Middle Ages, and the golden age of the Tudors to the triumph of parliament over the Stuarts in 1688. Lecture 3 hours. No Laboratory.

\section*{HIS 1093 - Survey of English History from 1688 to Present (H)}

3 Credits
An introductory survey of English history from the Glorious Revolution of 1688 to the present. The course will trace the emergence of the modern British political system after 1688, the growth and decline of the British Empire, and the role of Britain as a great world power. Lecture 3 hours. No Laboratory.

\section*{HIS 1483 - U.S. History 1492 to the Civil War Era 3 Credits}

A general presentation of United States history, commencing with the European background and first discoveries. The pattern of exploration, settlement, and development of institutions is followed throughout the colonial period and the early national experience to Civil War era. Lecture 3 hours. No Laboratory.

\section*{HIS 1493 - U.S. History - Civil War Era to the Present 3 Credits}

A survey of the unfolding of United States history from the Civil War Era to the present day. The study includes social, economic, and political aspects of American life and follows the development of the United States as a world power. Lecture 3 hours. No Laboratory.

\section*{HIS 2023 - Modern Eastern Civilization}
(H,I) 3 Credits
A survey of modern East Asian civilizations, including Japan, during the nineteenth and early twentieth centuries, and China, during the early and mid-twentieth century. A study of the impact of the West on these Eastern societies will be considered with particular emphasis placed on the problems of trade and diplomacy, the political and industrial transformation of Japan, the revolutionary process in China, and the rise of nationalism in Southeast Asia. Lecture 3 hours. No Laboratory.

\section*{HIS 2043 - Contemporary Affairs (H) (D) 3 Credits}

A study of contemporary affairs based on news magazines, newspapers, and audiovisual resources. By studying current events the student can gain a greater insight into his/her own time and also into historical methodology. Emphasis on self-directed study and skills in using the Learning Resources Center.Lecture 3 hours. No Laboratory.

\section*{HIS 2163 - Introduction to the History and Philosophy of Science}

3 Credits
An introductory survey of the development of Western science, and some of the philosophical issues involved in this development. The development of the scientific method will be examined, as will the effects that this method has had on man's perception of himself and the world around him. Lecture 3 hours No Laboratory.

\section*{HIS 2223 - Modern Latin American History (I)}

\section*{3 Credits}

The study of Latin American republics after the independence movements, emphasizing the dictators and the liberal reform movement of the nineteenth century, U.S. involvements, and the recent social revolutions of the twentieth century. Lecture 3 hours. No Laboratory.

\section*{HIS 2333 - African-American History (H)}

\section*{3 Credits}

A survey of the African-American experience in American history, beginning with slavery during the creation of the United States as a democratic republic. Tracing the abolitionist movement, African-Americans in the Civil War, Reconstruction and post-Reconstruction, the course will focus on America's attempts to deal with the consequences of slavery throughout the twentieth century. Lecture 3 hours. No Laboratory.

\section*{HIS 2343 - Native American History}

3 Credits
An introduction to the cultures, experiences, and conflicts of Native Americans from pre-history to the present. Lecture 3 hours. No Laboratory.

\section*{HIS 2533 - Survey of the American Frontier}

3 Credits
An introductory survey of the frontier movement in American history. Attention will go to the various phases of the frontier, to the interaction of Anglo-immigrant and Indian cultures and to the effects that the process of western settlement had on the development of the American national character. Lecture 3 hours. No Laboratory

\section*{HIS 2990 - Selected Topics in History}

1-4 Credits
The study and/or analysis of a selected topic in History. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{HORTICULTURE TECHNOLOGY}

\section*{HT 1011 - Rose Culture}

1 Credit
This course provides information on the culture and uses of a number of types and varieties of roses, their propagation, production, pruning, planting, and maintenance. Lecture 1 hour. No Laboratory.

\section*{HT 1021 - Lawn Sprinkler System/Drainage}

\section*{1 Credit}

A study of subsurface water management required to establish and maintain high quality residential turf and landscape plants. Lecture 1 hour. No Laboratory.

\section*{HT 1031 - Therapeutic Horticulture}

\section*{1 Credit}

An introductory background and orientation on how to improve the physical and mental health of the individual, using plants in many settings such as psychiatric, medical, vocational rehabilitation, geriatric, corrections and community gardening. Lecture 1 hour. No Laboratory.

\section*{HT 1041 - Bonsai}

1 Credit
The study of miniaturizing living trees in small containers and shaping into beautiful treelike forms. Lecture 1 hour. No Laboratory.

\section*{HT 1051 - Nightscaping}

1 Credit
Practical design study using outdoor lights to illuminate the home landscape. Lecture 1 hour. No Laboratory.

\section*{HT 1061 - Water Gardening}

1 Credit
The functions of water fountains and garden pools in the home landscapes to include design, construction, and maintenance. Lecture 1 hour. No Laboratory.

\section*{HT 1071 - Annual and Perennial Culture}

1 Credit
The culture and uses of a number of types and varieties of annuals and perennials including bulbs, corns, tuberous plants, and ornamental grasses to include their planting, maintenance, and propagation. Lecture 1 hour. No Laboratory.

\section*{HT 1081 - Small Greenhouses}

1 Credit
The use of materials, methods of construction, and related environmental systems used to operate the backyard greenhouse. Methods of growing are covered. Lecture 1 hour. No Laboratory.

\section*{HT 1091 - Landscape Construction}

1 Credit
Emphasis on the study of various landscape materials, their proper application in the residential and small commercial landscape. Job plan reading, specifications, bidding, with coverage of job estimating. Lecture 1 hour. No Laboratory.

\section*{HT 1201 - Habitat Gardening}

1 Credit
Class will discuss wildlife-friendly landscape techniques. This class will teach the basics of using native plants as well as other important features necessary for inviting nature to your doorstep. Lecture 1 hour. No Laboratory.

\section*{HT 1221 - Principles of Floral Arranging \\ 1 Credit}

Principles of floral design, which include basic design shapes, corsages, bud vases, centerpieces and bows. Study will include care and handling of cut flowers from both the florist and the home garden. Each class will have a lecture followed by a creative hands-on laboratory. Lecture 1 hour. No Laboratory.

\section*{HT 1233 - Introduction to Irrigation}

3 Credits
This course will focus on the following topics: greenhouse and nursery; topics pertaining to lawn and turf; components and terms used in industry; differences in AC and DC current; use of test equipment; interpreting wiring diagrams and schematics; and systematic troubleshooting of mechanical and electrical components. Lecture 3 hours. No Laboratory.

\section*{HT 1241 - Cacti and Kin/Orchids and Others}

\section*{1 Credit}

Identification, growth habits, cultural requirements and use of cacti, succulents, orchids and bromeliads for indoor and outdoor environments. Lecture 1 hour. No Laboratory.

\section*{HT 1261 - Tropical Plant Care}

\section*{1 Credit}

This class will cover the basics for caring for common interior foliage plants used at home and in the office. Lecture 1 hour. No Laboratory.

\section*{HT 1303 - Principles of Horticulture Technology}

\section*{3 Credits}

Introduction to horticultural principles and practices, including basics of landscape design, characteristics and the use of horticultural plants, and the scope and development of the horticulture industry. Lecture 3 hours. No Laboratory.

\section*{HT 1313-Ornamental Horticulture}

\section*{3 Credits}

Care and maintenance of trees, shrubs, hedges, groundcovers, and flowers. Principles of planting, transplanting, pruning, mulching, and fertilizing techniques will be covered. Lecture 3 hours. No Laboratory. Prerequisites: HT 1303, HT 1363, BIO 1404, or consent of instructor.

\section*{HT 1343 - Plant Identification}

\section*{3 Credits}

Identification and classification of plants. Will include growth habits, cultures, habitat, range and uses of vines, shrubs, trees, and ornamental plants. Lecture 3 hours. No Laboratory. Prerequisite: BIO 1404.

\section*{HT 1353 - Fertilizers and Soils}

\section*{3 Credits}

The evaluation of soils and their properties in relation to plant growth and climate factors. Economical use of commercial fertilizers also will be discussed. Lecture 3 hours. No Laboratory. Prerequisite: HT 1303.

\section*{HT 1363 - Plant Diseases and Pests}

\section*{3 Credits}

A study of common plant diseases, insects, weeds, and other pests indigenous to the local horticulture industry. Will include recognizing pest life-cycle vulnerabilities, calculation of application rates, and a brief survey of laws pertaining to the industry. Lecture 3 hours. No Laboratory.

\section*{HT 1381 - Home Landscape Design}

\section*{1 Credit}

Individual landscape plans will be constructed by the students with professional help from the instructor. Emphasis is on what will grow where, what works and does not work for your particular site. Where to buy and proper methods of installations for all materials will be discussed. Emphasis on solving particular landscape problems. Lecture 1 hour. No Laboratory.

\section*{HT 1413 - Equipment Safety and Maintenance}

\section*{3 Credits}

Techniques involved in preventive maintenance, operational safety, and minor repairs of commonly used machinery and equipment used in landscaping, golf courses, parks, and related areas. The student will study safety program planning and develop actual maintenance schedules. Lecture 2 hours. Laboratory 2 hours.

\section*{HT 2224 - Golf and Sports Turf}

\section*{4 Credits}

This course is a management based study of principles used in caring for and design of golf course and sports turf areas, with emphasis on seasonal maintenance and construction problems and procedures. This will include equipment and maintenance record keeping, labor and materials budgeting, and time scheduling of daily work activities such as mowing, fertilizing, and pest control. Lecture 4 hours. No Laboratory.

\section*{HT 2251 - Horticulture Internship 1 Project} 1 Credit
This course will provide a supervised work experience as an internship either with a local firm or a supervised special project with the student's current employer with input from TCC faculty. This course should be considered a capstone experience for advanced students in the Horticulture program. No Lecture. Laboratory 2 hours. Prerequisite: Permission of the instructor.

\section*{HT 2262 - Horticulture Internship 2 Project} 2 Credits
This course will provide a supervised work experience as an internship either with a local firm or a supervised special project with the student's current employer with input from TCC faculty. This course should be considered a capstone experience for advanced students in the Horticulture program. No Lecture. Laboratory 4 hours. Prerequisite: Permission of the instructor.

\section*{HT 2273 - Horticulture Internship 3 Project}

3 Credits
This course will provide a supervised work experience as an internship either with a local firm or a supervised special project with the student's current employer with input from TCC faculty. This course should be considered a capstone experience for advanced students in the Horticulture program. No Lecture. Laboratory 6 hours. Prerequisite: Permission of the instructor.

\section*{HT 2353 - Lawn and Turf Care}

3 Credits
The study of the factors influencing the successful establishment and maintenance of turf grasses. Includes budgets, schedules, and selection of equipment. Lecture 3 hours. No Laboratory.

\section*{HT 2363 - Landscape Planning and Design I}

\section*{3 Credits}

Planning and designing landscape areas. Basic drafting techniques will be covered. Emphasis on location of lawns, trees, shrubs, walks, driveways patios, planters, and other landscape structures for home and commercial areas. Reading of job plans as well as techniques of job estimating will be covered. Lecture 2 hours. Laboratory 2 hours. Prerequisites: HT 1313 and HT 1343.

\section*{HT 2373 - Propagation of Horticulture Plants I} 3 Credits
The principles and skills used in propagation of horticultural plants using seed budding, grafting, and cuttings in propagating structures and open ground. Green house techniques will be emphasized. Lecture 2 hours. Laboratory 2 hours.

\section*{HT 2401 - Pest Control Certification and Licensing} 1 Credit
The study of general and specific standards required by federal and state laws in the obtaining of licenses in the State of Oklahoma for pest control purposes. Lecture 1 hour. No Laboratory.

\section*{HT 2413 - Nursery and Greenhouse Management 3 Credits}

Analysis and comparison of practices involved in building and operating a commercial nursery and greenhouse including design, construction, maintenance, environmental control, and crop production. Lecture 2 hours. Laboratory 2 hours.

\section*{HT 2423 - Arboriculture Practices}

\section*{3 Credits}

A study of the organization and management of the work done by municipal departments and businesses concerned with the care of trees. Street tree planting and care are emphasized. Tree maintenance is practiced in actual field experiences. Lecture 2 hours. Laboratory 2 hours.

\section*{HT 2433 - Floral Design}

3 Credits
Elementary principles of floral design, which include design of boutonnieres and corsages, rose bud vases and vase arrangements, hospital arrangements centerpiece designs, and bows. Study will include floral care and handling customer service, order taking and telephone skills, computer-wireservice fundamentals, and delivery. Lecture 2 hours. Laboratory 2 hours.

\section*{HT 2483 - Interior Plants}

\section*{3 Credits}

Course designed to familiarize the student with the use of foliage plants and blooming plants for interior use. Emphasis on identification, culture, and maintenance of interior plants. Both residential and commercial design application will be reviewed. Lecture 3 hours. No Laboratory.

\section*{HT 2493 - Horticulture Management Principles} 3 Credits
Aspects of establishment and operation of various wholesale and retail horticulture business ventures including financing, purchasing, advertising, and merchandising. Includes taxes, insurance, security, and governmental regulations of horticultural businesses as compared to others. Lecture 3 hours.

\section*{HT 2513 - Landscape Planning and Design II}

3 Credits
A continuation of HT 2363 with theory and practical application of some advanced landscape design practice. Special emphasis will be on working drawings, which are illustrated with the use of color plot plans and elevation. Construction details and specification writing will be covered. Computer aids also will be discussed. Lecture 2 hours. Laboratory 2 hours. Prerequisites: SUR 1324 and HT 2363, or consent of instructor.

\section*{HT 2533 - Horticulture for Special Populations} 3 Credits
An intensive study of the concepts and methods of using plants and gardening as therapeutic activities with developmentally disabled, geriatric, economically and socially disadvantaged, emotionally disturbed, educationally deprived or physically disabled clients. Lecture 2 hours. Laboratory 2 hours.

\section*{HT 2990 - Selected Topics in Horticulture}

1-4 Credits
The study and/or analysis of a selected topic in Horticulture. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{HOSPITALITY AND FOOD SERVICE}

\section*{HFS 1413 - Labor and Food Cost Management}

3 Credits
Concepts related to preparation of hot foods, pantry, and bakery items for commercial kitchens. Emphasis on essential components and techniques of food production, food cost control, setting standards, ordering, and inventory. Lecture 3 hours. No Laboratory.

\section*{HFS 2021 - Quality Control Procedures for Hospitality}

1 Credit
Techniques, logistics and responsibilities involved in overseeing product specification compliance, sanitation, standard operating procedures and food safety programs. Understanding of the process of establishing product specifications and of product labeling to ensure compliance and an operationally specific HACCP (Hazard Analysis Critical Control Point) program. Instruction for investigative processes associated with possible food-borne illness incidents, including the working relationship with regulatory and investigative agencies. Lecture 1 hour. No Laboratory.

\begin{abstract}
HFS 2312-Off-Premise Service Management 2 Credits
Techniques, logistics and responsibilities involved in managing carry-out, delivery and off-premise catering operation. Covers such topics as legal requirements of delivery and off-premise catering; developing and executing catering contracts, menu planning and food quantities; off-premise service of alcoholic beverages, pricing, sanitation and safety; accessory services; theme parties; and accounting. Also includes instruction in managing personnel, market catering services, identifying appropriate equipment, and creating innovative solutions to catering problems and demands; and instruction in risk management associated with delivery operations, including training, driver-risk assessment, tracking, and insurance related issues. Lecture 2 hours. No Laboratory.
\end{abstract}

\section*{HUMAN RESOURCES}

\section*{HR 1313 - Principles of Human Resources}

3 Credits
The principles, policies, and practices currently related to the organization and administration of the human resources department. Will include topics on the employment process, diversity in the workplace, promotion principles, retirement plans, union and nonunion activities and relations. Comparative analysis of such human resources practices as rating scales, job evaluation, safety, and welfare programs also will be included. Lecture 3 hours. No Laboratory.

\section*{HR 1333 -Benefits Management}

\section*{3 Credits}

A study of employee benefits management. Will include the analysis, selection, and administration of benefit plans, including health delivery systems (HMO's and PPO's, etc.), retirement plans, savings investment plans, and workers' compensation. Lecture 3 hours. No Laboratory. Prerequisite: HR 1313 or instructor approval.

\section*{HR 1343 -Compensation Management}

\section*{3 Credits}

A study of compensation management systems. A salary planning emphasis which includes organizational policies, job analysis, job evaluation, salary surveys, compensation structuring computer generated programs, and employee performance appraisals. Lecture 3 hours. No Laboratory. Prerequisite: HR 1313 or instructor approval.

\section*{HR 2313 - Human Resource Law I}

\section*{3 Credits}

An in-depth study of the various human resource laws which have an effect on companies and organizations today. Topics to be covered include the ADA, EEO, affirmative action programs, discrimination, employment contracts, employee discipline, and employee termination. Lecture 3 hours. No Laboratory. Prerequisite: HR1313 or instructor approval.

\section*{HR 2323 - Employment and Evaluation Techniques} 3 Credits
Recruitment and selection will be covered for both exempt and non-exempt employees, with concentration on interviewing
techniques. Employee evaluation will be covered including performance appraisal, discipline and reward system. Case examples will be reviewed in both the manufacturing and service sectors. Lecture 3 hours. No Laboratory. Prerequisite: HR 1313 or instructor approval.

\section*{HR 2333 - Employee and Labor Relations}

\section*{3 Credits}

A study of issues in the areas of industrial, labor, and employee relations including handling personnel problems, analyzing labor relations problems and their resolutions, and negotiating collective bargaining agreements. Lecture 3 hours. No Laboratory. Prerequisite: HR 1313 or instructor approval.

\section*{HR 2343 - Training and Development}

\section*{3 Credits}

An introduction to training and development, including program development, media, methods, and resources. Will include section on cost benefits resulting from the relationship of training and development to employee productivity. Will include oral presentations. Lecture 3 hours. No Laboratory. Prerequisite:HR 1313 or instructor approval.

\section*{HR 2353 - Human Resource Law II}

\section*{3 Credits}

A continuation of Human Resource Law I with an emphasis on the importance of legal compliance related to performance appraisals, training, employee privacy, OSHA, safety programs, union-management relations including NLRB and current labor legislation, compensation and benefits, retirement, worker's compensation and unemployment compensation. Lecture 3 hours. No Laboratory. Prerequisite:HR 1313 or instructor approval.

\section*{HR 2990 - Selected Topics in Human Resources} 1-4 Credits
The study and/or analysis of a selected topic in Human Resources. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{HUMAN SERVICES \\ Students must earn a grade of "C" or better in HS courses in order to progress to advanced courses in the program, \\ or gain instructor approval.}

\section*{HS 1113 - Principles of Human Services}

\section*{3 Credits}

An interdisciplinary approach to the understanding of human services. The theoretical and practical approaches utilized by various human service agencies within the community will be considered. The course will also introduce the student to the skills necessary for the paraprofessional in education, developmental disabilities, gerontology, mental health care, and substance abuse areas. Lecture 3 hours. No Laboratory.

\section*{HS 1213 - Basic Counseling Skills}

\section*{3 Credits}

Basic models and techniques of individual and group counseling for a variety of clients will be introduced. Content will emphasize communication skills, interviewing techniques, assessment of client's needs, problem identification skills, client rights, and development of client goals and objectives. Lecture 3 hours. No Laboratory.

\section*{HS 1313 - Chemical Dependency and Treatment} 3 Credits
Introduction to substance abuse and treatment; includes treatment strategies, perspectives, and understanding of the addiction process and its effects upon the individual, his/her family, his/her employer, and society. Lecture 3 hours. No Laboratory.

\section*{HS 1403 - Direct Support Professional Foundations} 3 Credits
Basic knowledge necessary to enable a beginning Direct Support Professional (DSP) or Habilitation Training Specialist (HTS) to provide supports in residential, employment or vocational, community waiver or specialized foster care services for individuals with disabilities. Emphasis on fundamentals of working in the field, effective teaching/learning, communication, ethical and legal issues, basic residential support, health and safety issues, physical assistance, behavioral intervention, and community inclusion. Lecture 2 hours. Laboratory 4 hours. Prerequisite: DDSD Certificate of Training or instructor approval.

\section*{HS 1413 - Introduction to Developmental Disabilities} 3 Credits
This course will provide an overview of developmental disabilities, focusing on education and training needs of persons with mild to severe/profound disabilities, as well as trends and issues in services to this population. Students will be exposed to strategies/outcomes planning and assessment skills that are used to help the consumer with disabilities prepare for transition from school to community living and employment. Students will examine job opportunities, training and skill requirements for employment. Lecture 3 hours. No Laboratory

\section*{HS 1423 - Models for Supporting Persons with Developmental Disabilities \\ 3 Credits}

An examination of the community environment support settings in which persons with disabilities live, go to school, and work. The course will emphasize the concepts of values, beliefs, ethics, attitudes, respect, and choices as the foundation within all the support networks. The latest models in the areas of family, education, employment, medical, recreation and leisure, advocacy, and community-based programming will be reviewed. Lecture 3 hours. No Laboratory.

\section*{HS 1433 - Leisure, Recreation, and Visual and Performing Arts in Disabilities}

3 Credits
An examination of the resources, programs, literature, technical assistance, and support services available to enhance the lives of persons with disabilities. Course will examine training
and research for a variety of paraprofessionals to expand and enhance their skills relevant to leisure, recreation, and visual and performing arts. Lecture 2 hours. Laboratory 2 hours. Prerequisite:HS 1413.

\section*{HS 1443 - Direct Support Professional I}

\section*{3 Credits}

This course will enhance professional awareness and knowledge of issues related to the Direct Support Professional. Emphasis on professionalism, code of ethics, DSP roles and interaction with various professionals and organizations. Course will also guide participants in analysis of life experiences and professional growth, incorporating portfolio and career path development. Lecture 3 hours. No Laboratory. Instructor approval required.

\section*{HS 1453 - Direct Support Professional Practicum 3 Credits}

Practicum provides an opportunity for students to observe daily operations and practice skills in a setting specializing in disabilities. Faculty-guided seminar and assignments will provide opportunities for students to demonstrate the application of attitudes, skills, and knowledge to the field of developmental disabilities. Students will demonstrate sensitivity to diverse populations, self-examination, and satisfactory proficiency in developing, interpreting, implementing, and documenting helping interventions specific to the provider agency. Demonstration of effective communication, positive behavioral interventions, documentation of activities icorporating client-specific supportive services, and other DSP role competencies will be emphasized. Lecture 1 hour. Laboratory 7 hours. Prerequisites: Instructor approval required.

\section*{HS 1523 - Volunteer Management in Human Services 3 Credits}

Many health and human services agencies and providers expand and extend their services through the work of volunteers. This course will examine the operation of volunteer programs, including program design, recruitment and selection, orientation, and training and supervision. Lecture 2 hours. Laboratory 2 hours. Prerequisite: HS 1113.

\section*{HS 2003 - Dynamics of Family Relationships} 3 Credits
The study of interpersonal relationships with family members addressing processes and influences throughout family life. Principles and issues of family life perspective, including dynamics of families affected by chemical and alcohol dependency will be addressed. Lecture 3 hours. No Laboratory.

\section*{HS 2023 - Lifespan Development}

3 Credits
Theoretical concepts and principles of development from prenatal period through death. Addresses the nature and dynamics of developmental changes and the impact upon individuals and family groups over their life spans with emphasis on multidimensional and ecological perspectives. Directed observation/field assignments. Lecture 3 hours. No Laboratory.

\section*{HS 2053 - Human Services Applications/ Case Management}

\section*{3 Credits}

Intervention strategies for diverse populations, recognizing family, community, state, and societal systems and each system's role in mental and physical health. Course content will include treatment planning, community resources, referral and networking, program coordination, ethical standards for human services workers, and advocacy. Lecture 3 hours. No Laboratory. Prerequisites:HS 1113 and HS 1213.

\section*{HS 2073 - Issues in Human Services}

\section*{3 Credits}

This course is designed to address recent trends, issues, values and ethics, policies, and laws relevant to working with diverse populations. Human services planning and in-depth coverage of specific areas in human services, such as developmental disabilities, elderly, and other special populations, will provide the student with current information and strategies in human services. Lecture 3 hours. No Laboratory. Prerequisite: HS 1113.

\section*{HS 2103 - Practicum I}

3 Credits
This course is designed to give students field experience through a supervised work experience in an alcohol or chemical dependency program. In addition to the 100 hour on-site experience, students will also participate in a weekly lecture to analyze their experiences and concerns. Lecture 1 hour. Laboratory 7 hours per week. Prerequisites:HS 1113, HS 1213, HS 1313, HS 2213, and SOC 1133 or PSY 2133 with a "C" or better and Instructor approval.

\section*{HS 2113 - Internship}

\section*{3 Credits}

This course is designed to give students field experience through a supervised work experience with an appropriate agency. This experience should relate to the student's area of concentration. In addition to the 160 hours of on-site work experience, students will meet weekly in a lecture/discussion to discuss and analyze their experiences and concerns. Lecture 1 hour. Laboratory 12 hours per week. Prerequisites: HS 1113, HS 1213, HS 2023 and HS 2053 and Instructor approval.

\section*{HS 2153 Peer - Mentoring and Leadership I}

\section*{3 Credits}

This course provides students with the opportunity whereby advanced human services majors can serve peers and faculty in the Human Services program at Tulsa Community College while practicing various skills critical to professional development. No Lecture. Laboratory 10 hours. Prerequisite: Instructor approval.

\section*{HS 2163 - Peer Mentoring and Leadership II} 3 Credits
This course provides students with the opportunity whereby advanced human services majors can serve peers and faculty in the Human Services program at Tulsa Community College while practicing various skills critical to professional development. Students previously serving as peer mentors will progress in professional competencies individualized to
meet the needs of the student and the program. No Lecture. Laboratory 10 hours. Prerequisite: Instructor approva

\section*{HS 2173 - Service Learning in Human Services 3 Credits}

Features hands-on learning in diverse human service settings. Learning in a "real world" environment by participating in activities that contribute to improving conditions for those in need. Students will perform various assignments available at the identified agencies. In-class time may include conceptual overview lecture/discussion prior to field assignments and "process" assignments, such as journals and group discussions while in the field. Lecture 1 hour. Laboratory 4 hours.

\section*{HS 2203 - Parent-Child Relations}

\section*{3 Credits}

Focus on parent-child relations across the lifespan. The interactional influence of children on the family and the impact of parenting on the child will be addressed within a variety of system contexts, including family, school and neighborhood, community and professionals. Emphasis on promoting optimum development and support of families and children addressing challenging issues of contemporary parenting, such as single parenting, stepfamilies, and high risk families. Assigned field experiences. Lecture 3 hours. No Laboratory. Prerequisite:HS 2023.

\section*{HS 2213 - Introduction to Group Dynamics}

\section*{3 Credits}

Lecture will focus on the history and application of group dynamics and group therapy. Students will gain knowledge and skill in conducting group therapy. Application of group therapy with special populations, such as chemical dependency, adolescents, and mental disorders, will be discussed. Students will gain awareness of group therapy techniques in an experiential setting. Lecture 2 hours. Laboratory 2 hours per week. Prerequisites: HS 1213 and HS 1313.

\section*{HS 2342 - Recreation Therapy/Rope Course Training} 2 Credits
Certified low sequencing of icebreakers, warm-ups and initiatives for low challenge course elements. Trained in belaying, repelling, high set-ups, rescues, and all technical aspects of running a high challenge course. Lecture 2 hours. No Laboratory. (Miscellaneous fees may be required.)

\section*{HS 2363 - Recreation Therapy/Outdoor Adventure 3 Credits}

Field based course to understand origins and components of involvement in outdoor pursuits. Numerous skills applied to various outdoor settings. Lecture 3 hours. No Laboratory. (Miscellaneous fees may be required.)

\section*{HS 2413 - Introduction to Leisure Services}

\section*{3 Credits}

The nature, scope and significance of leisure and recreation. Delivery systems for leisure services, major program areas and the interrelationship of special agencies and institutions serving the recreation needs of society. This course is also available as PE 2513. Lecture 3 hours. No Laboratory.

\section*{HS 2433 - Introduction to Therapeutic Recreation} 3 Credits
Theory and application of therapeutic recreation with emphasis on types of illnesses and disabilities, delivery systems, programming and services. This course is also available as PE 2533. Lecture 3 hours. No Laboratory.

\section*{HS 2513 - Management of Community Programs 3 Credits}

This course will prepare students for management careers and/or enhance the skills of professionals already employed in a community setting. It will include an examination of management philosophies, guidelines, strategies, personnel issues, and current program operations of human service agencies/organizations, particularly small non-profit entities. Lecture 3 hours. No Laboratory. Prerequisite: HS 1113.

\section*{HS 2613 - Gerontology in Human Services} 3 Credits
Focus on the roles and responsibilities of the human services worker with this specialized population, including knowledge of the social welfare system, bereavement, current status of managed care, and other related issues. An overview of the aging process and implications of an aging population will be presented. Discussion of levels of care, resources, and options for the elderly population within the community will be addressed. Fifteen to twenty field hours in a related service agency are required. Lecture 3 hours. No Laboratory. Prerequisite: PSY 2713 or SOC 2713.

\section*{HS 2990 - Selected Topics in Human Services}

1-4 Credits
The study and/or analysis of a selected topic in Human Services. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{HUMANITIES}

\section*{HUM 2113 - Humanities I (H)}

\section*{3 Credits}

An interdisciplinary survey designed to strengthen the student's fundamental grasp of human values, ideas, discoveries, and creative achievements. Areas of consideration may include architecture, cosmology, dance, drama, film, history, literature, music, mythology, painting, philosophy, religion, and sculpture. Lecture 3 hours. No Laboratory.

\section*{HUM 2223 - Humanities II (H)}

\section*{3 Credits}

A continued interdisciplinary survey designed to strengthen the student's fundamental grasp of human values, ideas, discoveries and creative achievements. Areas of consideration may include architecture, cosmology, dance, drama, film, history, literature, music, mythology, painting, philosophy, religion, and sculpture. Lecture 3 hours. No Laboratory.

\section*{HUM 2333 - Humanities: Literature and Film (H)} 3 Credits
An introductory study of the narrative through examination of selected literature and its adaptation into film. Lecture 3 hours. No Laboratory.

\section*{HUM 2443 - Art of Film (H)}

3 Credits
A critical study of film as an art form and as a reflection of modern culture through examination of selected works and reviews. Lecture 3 hours. No Laboratory.

\section*{HUM 2553 - American Humanities (H)}

3 Credits
An interdisciplinary, multi-cultural survey designed to strengthen the student's appreciation of America's rich cultural heritage. Areas of consideration may include architecture, cosmology, dance, drama, film, history, literature, music, painting, philosophy, religion, and sculpture. Lecture 3 hours. No Laboratory.

\section*{HUM 2613 - International Film (H,I)}

3 Credits
Analytical study of exemplary international films in terms of major historical periods or trends, themes and aesthetics. Critical analysis of aesthetic and narrative traditions of film as a reflection of the humanistic values of the cultures of their production. Students will speak and write critically about film as an art form as well as about film in relation to culture. Lecture 3 hours. No Laboratory.

\section*{HUM 2663 - Hollywood's America (H)}

3 Credits
This course will explore values, myths, and legends about America as portrayed by Hollywood. It will examine how films about America both reflect and lead popular American and international consciousness of America's society, history, heroes, heroines, and villains. Lecture 3 hours. No Laboratory.

\section*{HUM 2773 - American Popular Culture (H)} 3 Credits
This course is a critical analysis of the form and content of the arts Americans experience on a daily basis. Areas of consideration may include advertising arts, cartoons, dance, fashions, film, new religions, popular literature, popular music, and television. Lecture 3 hours. No Laboratory.

\section*{HUM 2883 - Art and Identity: Cultural Encounters in America (H)}

3 Credits
This course examines cultural identities in America as they are expressed through oral traditions, music, literature, and the arts. The course explores how the various cultures which came together in America borrowed for each other to produce the forms we see today. Distinctions are made between perceived cultural differences and those cultural elements which are common to all humanity. Lecture 3 hours. No Laboratory.

\section*{HUM 2990 - Selected Topics in Humanities}

1-4 Credits
The study and/or analysis of a selected topic in Humanities. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{INDEPENDENT STUDY}

\section*{IS 2990 - Independent Study}

\section*{1-6 Credits}

An above average student may earn from 1-6 hours credit through specially approved academic projects relating to lower division course offerings. Procedures and criteria for enrolling in Independent Study courses may be obtained from the Associate Dean's offices.

\section*{INTERIOR DESIGN}

\section*{ID 1313 - Interior Design Orientation}

\section*{3 Credits}

An introductory course into the field of interior design which includes the basic elements and principles of design. The development of creative ability is stressed through space planning projects. An overall view of the profession including professional standards, employment opportunities, interior materials, and an understanding of basic human needs in relation to design. Concurrent enrollment in ID 1343 is recommended. Lecture 3 hours. No Laboratory.

\section*{ID 1333 - Design I: Color}

3 Credits
This course will reinforce theories taught in previous courses and will advance students' drafting and space planning skills. There will be an emphasis on color theory, applications, materials and color boards. Lecture 2 hours. Laboratory 2 hours. Prerequisites:ID 1313, ID 1343. No concurrent enrollment allowed.

\section*{ID 1343 - Drawing and Mechanical Drafting} 3 Credits
This course will introduce interior design students to visual communications for the design professional through technical drafting skills including floor plans, elevations, isometrics and perspectives. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ID 1313 or concurrent enrollment.

\section*{ID 1353 - Design II: Presentation}

\section*{3 Credits}

This course will advance the interior design student in architectural drawing skills. Presentation elevations, perspectives, isometrics, and floor plan enhancement with color delineation and architectural sketching techniques will be included. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ID 1313, ID 1333, ID 1343. (Fall Only)

\section*{ID 1373 - Color Graphics for Interior Designers}

\section*{3 Credits}

This course presents color techniques using markers, colored pencils and other media to produce interior presentations. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ID 1313, ID 1343, and ID 1333 or concurrent enrollment. (Spring only).

\section*{ID 1383 - Lighting Concepts}

3 Credits
A study of lighting design for interiors. This course will focus on
lighting systems, fixtures, specifications and Reflected Ceiling Plans. Lecture 3 hours. No Laboratory. Prerequisites: ID 1313, ID 1343, and ID 1333 or concurrent enrollment. (Spring only).

\section*{ID 1413 - History of Interiors}

\section*{3 Credits}

Includes a comprehensive study of architecture and period furnishings from prehistoric through American art-deco period. Major political, religious and art movements influencing the interior design profession are included. Lecture 3 hours. No Laboratory.

\section*{ID 2313 - Professional Practice}

\section*{3 Credits}

This course is a study of professional practices in interior design. Includes: business procedures, professional ethics, contracts, project management and specifications. Lecture 3 hours. No Laboratory. Prerequisites: ID 1313, ID 1333, and ID 1343

\section*{ID 2323 - Design III}

\section*{3 Credits}

Provides information in planning interior floor plans and elevations with consideration to traffic flow and room functions. Included is planning of traditional as well as contemporary interiors, multiple design solutions; coordination of schemes, styles, and furnishings ranging from the single dwelling to the business and recreational complex. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ID 1333, ID1343, ID 1353, ID 1373, ID 1383, ID 1413, and ID 2313.

\section*{ID 2333 - Applied Interior Design IV}

\section*{3 Credits}

Will apply knowledge and skills to advanced solutions to special problems of commercial and residential interiors, working drawings, specifications, oral presentations, and critical thinking will be stressed. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ID 2323.

\section*{ID 2343 - Field Application}

\section*{3 Credits}

Supervised employment in the student's chosen field. Intended to provide practical experience for students preparing for a career in the area of interior design and decorating who are not already employed in this field. No Lecture. Laboratory 12 hours per week. Prerequisites: ID 1333, ID 1343, ID 2313, ID 2323, and instructor approval.

\section*{ID 2352 - Field Application}

\section*{2 Credits}

Supervised employment in the student's chosen field. Intended to provide practical experience for students preparing for a career in the area of interior design and decorating who are not already employed in this field. No lecture. Laboratory 8 hours per week. Prerequisites:ID 1333, ID 1343, ID 2313, ID 2323 and instructor approval.

\section*{ID 2383 - Introduction to Computer Aided Design for Interior Design}

\section*{3 Credits}

This course introduces the principles and techniques utilized in Computer Aided Design and drafting for two dimensional application. Students will be introduced to concepts of drawing entities and objects, as well as processes to manipulate, edit, or modify drawings. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ID 1313, ID 1333, and ID 1343 and instructor approval.

\section*{ID 2403 - Market Field Trip}

3 Credits
Students will become familiar with market showroom services available to interior designers. Showroom procedures in relation to samples, ordering, and financial requirements will be covered. Lecture 1 hour. Laboratory 4 hours.

\section*{ID 2413 - Advanced CAD for Interior Design}

3 Credits
This course will teach advanced principles and techniques in Computer Aided Design. Lecture 2 hours. Laboratory 2 hours. Prerequisites: Instructor approval and ID 2383 and ID 2323. Concurrent enrollment in ID 2333 is recommended.

\section*{ID 2990- Selected Topics in Interior Design}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Interior Design. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{INTERNATIONAL BUSINESS (See International Business Program Description and Business Course Descriptions)}

\section*{INTERPRETER EDUCATION}

\section*{INT 0612 - Conversational Sign Language for the Deaf and Hard of Hearing I

\section*{2 Credits}

\section*{2 Credits}

This course is designed for deaf and hard of hearing students, offering a continuation of manual communication skills leading to the development of conversational skills. Lecture 2 hours. Laboratory 1 hour. Prerequisite: INT 0812 or instructor approval.

\section*{INT 0622 - Conversational Sign Language for the Deaf and Hard of Hearing II \\ 2 Credits}

The continuation of Conversational Sign Language for the Deaf and Hard of Hearing I. Lecture 2 hours. Laboratory 1 hour. Prerequisite: INT 0612 or instructor approval.

\section*{INT 0802 - Sign Language for the Deaf and Hard of Hearing I}

2 Credits
This course is designed for deaf and hard of hearing students in developing basic manual communication skills for social, classroom, and work situations. Emphasis will be placed on learning elementary receptive and expressive conversational skills through targeted vocabulary. Lecture 2 hours. Laboratory 1 hour.

\section*{INT 0812 - Sign Language for the Deaf and Hard of Hearing II}

2 Credits
The continuation of Sign Language for the Deaf and Hard of Hearing I.Lecture 2 hours. Laboratory 1 hour. Prerequisite: INT 0802 or instructor approval.

\section*{INT 1351 - Receptive Fingerspelling}

1 Credit
This course is designed to provide intensive study of fingerspelled word recognition skills. Emphasis is placed on cognitive and practical aspects of receptive fingerspelling. Class activities should enable the student to develop improved fingerspelled word recognition skills and strategies for continued improvement. Lecture 1 hour. Laboratory 1 hour. Prerequisite: INT 2414.

\section*{INT 1363 - American Sign Language I}

\section*{3 Credits}

An introductory course in American Sign Language (ASL) using a natural language approach to introduce culturally appropriate signed concepts related to the immediate environment. Common communicative events and interactions are utilized to acquire a basic working vocabulary and grammar. Includes development of appropriate linguistic/ cultural behaviors and awareness of respect for deaf culture. Receptive and expressive skills are fostered through interactive ASL lessons without voice. Lecture 3 hours. Laboratory 1 hour.

\section*{INT 1373 - American Sign Language II} 3 Credits
This course is a continuation of ASL I progressing from common, concrete communicative events and interactions to language expressing abstract ideas. Emphasis is on the comprehension and production of increasingly complex linguistic structure focusing on dialogues and conversational expressions. More complex receptive and expressive skills are fostered through interactive ASL lessons without voice. Lecture 3 hours. Laboratory 1 hour. Prerequisite: INT 1363 with a grade of " C " or better or instructor approval.

\section*{INT 1413 - Deaf Culture and History}

\section*{3 Credits}

This is an interdisciplinary course to introduce students to human values through the exploration of American deaf culture through its history, literature, and arts. Students will explore deaf culture as a minority culture focusing on awareness and understanding of cultural diversity and preservation of language. Culture and relationships are examined through the impact of modern technology and moral trends. Lecture 3 hours. No Laboratory.

\section*{INT 1423 - Introduction to Interpreting}

3 Credits
This course is designed to provide students with a working knowledge of the profession of interpreting, including the Code of Ethics, certification criteria, the roles and responsibilities of an interpreter, and compensation. The role of the interpreter in a variety of professional settings including educational, medical, legal, the performing arts, mental health, and employment will be addressed. Lecture 3 hours. No Laboratory.

\section*{INT 1501 - Sign Choir I}

\section*{1 Credit}

This course is designed to allow students to experience music through the medium of American Sign Language. Students work together as a unit to present songs visually by following the signed directions of the director. Students will learn how to gloss English lyrics into ASL matching the spirit of the music. There are opportunities for outside performances by the group. Lecture 1 hour. Laboratory 1 hour. Prerequisite: INT 1363, or proficiency skills approved by the instructor.

\section*{INT 2001 - Sign Choir II}

\section*{1 Credit}

This course is a continuation of Sign Choir I, with the requirement that the student's final song be performed before an audience with the director present. Lecture 1 hour. Laboratory 1 hour. Prerequisite: INT 1501 with a grade of " \(C\) " or better or instructor approval.

\section*{INT 2101 - Artistic Interpreting}

\section*{1 Credit}

This course is designed to study techniques of facial expression, characterization, body movement, and spatialization as it relates to American Sign Language. Students will develop expressive sign language skills through he use of poetry, songs, and skits. No Lecture. Laboratory 2 hours. Prerequisite: INT 1373 with a grade of "C" or better or instructor approval.

\section*{INT 2131 - Conceptual Sign Vocabulary Development} 1 Credit
This course is designed to increase conceptually accurate sign vocabulary. Emphasis will be on analysis of English texts and finding appropriate sign equivalents. Lecture 1 hour. Laboratory 1 hour. Prerequisite: INT 1373 with a grade of "C" or better or instructor approval.

\section*{INT 2213 - American Sign Language to English Interpreting I}

\section*{3 Credits}

This course is designed to develop consecutive interpreting skills from American Sign Language to spoken English. Emphasis will be on development of interpreting processing skills. Lecture 3 hours. Laboratory 1 hour. Prerequisites: INT 1373 and INT 1423 with a "C" or better or instructor approval. Concurrent enrollment with INT 2414 and INT 2393 is recommended.

\section*{INT 2233 - American Sign Language to English Interpreting II}

\section*{3 Credits}

This course is a continuation of American Sign Language to English Interpreting I. Students will refine consecutive interpretation skills and develop simultaneous interpretation skills from American Sign Language to English. Students will discuss the application of process skills, contrastive ASLEnglish linguistics, contrastive cultural analysis, and teaming skills. This course includes practice of requisite skills and process tasks of increased complexity with rehearsed and unrehearsed language samples. Lecture 3 hours. Laboratory

1 hour. Prerequisite: INT 2213 with a "C" or better or instructor approval. Concurrent enrollment with INT 2403 and INT 2524 is recommended.

\section*{INT 2251 - Preparing for Interpreter Evaluations}

\section*{1 Credit}

This course is designed to provide instruction for those persons seeking certification for the state Quality assurance Screening Test (QAST) or the National Registry of Interpreters for the Deaf (RID) evaluation. Students will be exposed to the application processes, test-taking techniques for the written portions, protocol for the interview section, and the skill assessment procedures for both evaluations. Upon completion of the course, students will be given the opportunity to take the QAST written test. Lecture 1 hour. Laboratory 1 hour. Prerequisite: INT 2403 or instructor approval.

\section*{INT 2393 - Interpreting I}

\section*{3 Credits}

This course is designed to develop skills in consecutive interpretation from spoken English to American Sign Language. Coursework will enhance development in auditory memory, visualization, message analysis and target language production. Students are required to observe interpreters in two instructorapproved situations beyond the classroom. Lecture 3 hours. Laboratory 1 hour. Prerequisites: INT 1373 and INT 1423 with a grade of "C" or better and an appropriate CPT or ACT score or a grade of "C" or better in ENG 1113 or instructor approval. Concurrent enrollment with INT 2213 and INT 2414 is recommended.

\section*{INT 2403 - Interpreting II}

\section*{3 Credits}

This course is a continuation of Interpreting I with an emphasis on transliteration skills. Students will work from consecutive interpreting to simultaneous interpreting increasing linguistic competency and cultural appropriateness. Students are required to observe interpreters in two instructor-approved situations beyond the classroom. Lecture 3 hours. Laboratory 1 hour. Prerequisite: INT 2393 with a grade of "C" or better or instructor approval. Concurrent enrollment with INT 2233 and INT 2524 is recommended.

\section*{INT 2414 - American Sign Language III}

4 Credits
An ASL course focusing on specific grammatical and cultural topics. Emphasis is on the development of fluent conversational skills utilizing grammatical non-manual signals and markers. Students will learn how to narrate, describe, compare, and comment. Narratives of native language users are utilized for beginning text analysis of ASL. Interactive ASL lessons without voice lead to expanded vocabulary mastery and fluency. Lecture 4 hours. Laboratory 2 hours. Prerequisite: INT 1373 with a grade of "C" or better or instructor approval.

\section*{INT 2443 - Interpreting in Specialized Settings} 3 Credits
This course is designed to equip the student with the skills and vocabulary needed to interpret in a variety of settings including but not limited to medical, mental health, legal, employment, educational, religious and the performing arts. Lecture 3 hours. Laboratory 1 hour. Prerequisites: INT 2393 and INT 2414 with "C' or better or instructor approval.

\section*{INT 2461 - Medical Interpreting}

\section*{1 Credit}

This course is designed to provide students with practical skills development for interpreting in a variety of medical settings. Skills development will focus on three primary aspects: interpreting medical terminology with appropriate sign concepts, demonstrating professional problem-solving and decision-making skills when faced with medical ethical issues, and identifying special needs and characteristics of various medical situations. Lecture 1 hour. Laboratory 1 hour. Prerequisite: INT 2393 with a grade of "C" or better or instructor approval.

\section*{INT 2471 - Religious Interpreting}

1 Credit
This course is designed to provide students with an intensive study of religious interpreting/transliterating. The course of study includes vocabulary related to the religious setting, interpreting/transliterating prayers, hymns, sermons, and certain religious ceremonies; studying factors related to Deaf culture, including sensitivity to social and educational implications, studying the roles and responsibilities of the religious interpreter/transliterator, and studying the basic structure of church ministries for persons who are deaf. Students will be assigned to observe interpreters/ transliterators in an instructor-approved religious setting beyond the classroom. Lecture 1 hour. Laboratory 1 hour. Prerequisite: INT 2403 or instructor approval.

\section*{INT 2483 - Educational Interpreting I}

\section*{3 Credits}

Issues related to the administration of Educational Interpreting and best practices in primary, elementary and middle school settings. Topics will include a discussion of sign systems used in educational settings, certification issues, working conditions, analyzing classroom interpreting tasks and knowledge, skills, appropriate roles in a regular education classroom, and attitudes needed for educational interpreting at the primary through middle school levels. Site visits are a mandatory portion of the curriculum. Lecture 3 hours. No Laboratory. Prerequisite: INT 2393 or instructor approval.

\section*{INT 2524 - American Sign Language IV}

\section*{4 Credits}

An advanced ASL performance course integrating cultural and linguistic competencies ranging from informal to formal communication events. Emphasis is on greater fluency in idiomatic language usage and mastery of vocabulary and syntax. Linguistic competence is enhanced through interactive discourse without voice. Lecture 4 hours. Laboratory 2 hours. Prerequisite: INT 2414 with a grade of " C " or better or instructor approval.

\section*{INT 2613 - Interpreting III}

\section*{3 Credits}

This course is designed to strengthen processing skills and target language production from spoken English to American Sign Language and from American Sign Language to spoken English through the use of interactive materials. Continued application of process skills, contrastive ASL-English linguistics, contrastive cultural analysis and teaming skills will be provided using rehearsed and unrehearsed texts. Lecture 3 hours.
Laboratory 1 hour. Prerequisites: INT 2403 with a grade of "C" or better or instructor approval. Concurrent enrollment with INT 2643 is recommended.

\section*{INT 2643 - Interpreting Internship}

\section*{3 Credits}

This course provides practical experience in settings such as educational, rehabilitation, community service center, and agencies serving children, adolescents, and/or adults who are Deaf or hard of hearing. Students have the opportunity to synthesize practical and academic experiences gained during coursework. The site, supervision, and plan of activity will be agreed upon mutually by student and instructor. Lecture 2 hours. Laboratory 10 hours. Prerequisites: INT 1413, INT 2233, INT 2403, INT 2443, and INT 2524 with a grade of "C" or better or instructor approval. Concurrent enrollment with INT 2613 is recommended.

\section*{INT 2990 - Selected Topics in Interpreter Preparation 1-4 Credits}

The study and/or analysis of a selected topic in Interpreter Preparation. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{ITALIAN}

\section*{ITA 1001 - Italian for Communication I}

\section*{1 Credit}

A companion course to ITA 1103 with emphasis on speaking and comprehension skills. Recommended that it be taken simultaneously with ITA 1103 or after. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: ITA 1103 or approval of instructor or Dean of Global Education.

\section*{ITA 1103 - Italian I}

3 Credits
A beginning course in understanding, speaking, reading, and writing Italian. The first in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.

\section*{ITA 1201 - Italian for Communication II}

1 Credit
Continued instruction in basic language concepts and beginning conversational skills. Conducted in Italian. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: ITA 1103 or approval of instructor or Dean of Global Education.

\section*{ITA 1213 - Italian II}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Italian. The second in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: ITA 1103 or approval of instructor or Dean of Global Education.

\section*{ITA 1301 - Italian for Communication III}

1 Credit
Continued instruction to develop oral fluency and conversational skills. Conducted in Italian. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: ITA 1213 or approval of instructor or Dean of Global Education.

\section*{ITA 1313 - Italian III}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Italian. The third in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: ITA 1213 or approval of instructor or Dean of Global Education.

\section*{ITA 1401 - Italian for Communication IV}

\section*{1 Credit}

Continued instruction to develop oral fluency and
conversational skills. Conducted in Italian. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: ITA 1313 or approval of instructor or Dean of Global Education.

\section*{ITA 1413 - Italian IV}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Italian. The fourth in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.
Prerequisite: ITA1313 or approval of instructor or Dean of Global Education.

\section*{ITA 2033 - Italian Literature in Translation}

\section*{3 Credits}

Readings of literary works in translation selected to increase the student's knowledge of Italian societies. Conducted in English. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: None.

\section*{ITA 2041 - Italian - Introduction to the Arts}

1 Credit
An introduction to the Italian arts with an attempt to develop an aesthetic awareness and an understanding of the role that the arts play in modern day Italian activities. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{ITA 2071 - Italian History and Geography Introduction} 1 Credit
A survey of Italian history and geography as it relates to modern day Italian societies and language with an awareness of the relationship between the physical, political, and linguistic regions. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{ITA 2113 - Intermediate Italian I}

\section*{3 Credits}

An intermediate course in understanding, speaking, reading, and writing Italian. Taught in Italian. Lecture 3 hours. No Laboratory. Prerequisite: ITA 1413 or approval of instructor or Dean of Global Education.

\section*{ITA 2121 - Intermediate Italian Communication}

\section*{1 Credit}

Practice in speaking Italian at the intermediate level covering a wide range of subjects: i.e., everyday language, intermediate literature samples, other publications, and current events. Conducted in Italian. Lecture 1 hour. Self-paced lab may be required. Prerequisite: ITA 2113 or approval of instructor, Dean of Global Education.

\section*{ITA 2143 - Italian Civilization and Culture}

3 Credits
Conversations and readings concerning Italian culture and civilization. Conducted in Italian. Lecture 3 hours. No Laboratory. Prerequisite:ITA 2113 or approval of instructor or Associate Dean or Dean of Global Education.

\section*{ITA 2213 - Intermediate Italian II}

\section*{3 Credits}

An intermediate course in understanding, speaking, reading, and writing Italian. Taught in Italian. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: ITA 1413 or approval of instructor or Dean of Global Education.

\section*{ITA 2263 - Intermediate Italian Literature}

3 Credits
Development of reading skills in the target language using intermediate level literary texts. Conducted in Italian. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: ITA 2113 or approval of instructor or Dean of Global Education.

\section*{ITA 2320 - International Work and/or Study Seminar} 1-3 Credits
Practicum with an international firm and/or study abroad. Focus on application and enhancement of language skills (oral and written forms). Lecture and/or laboratory equivalent. Prerequisite: Approval of Dean of Global Education and Associate Dean before enrollment and in advance of work/ study abroad experience.

\section*{ITA 2330 - Italian International Seminar and/or Field Studies}

\section*{1-3 Credits}

This course is designed to provide an on-site experience in the selected Italian speaking country. Includes lectures, readings, oral interactions, and written reports. All or a portion of instruction and activities are conducted at the international site. Focus on language (oral and written forms) and culture development. Prerequisite: Permission of the Dean of Global Education and Associate Dean before enrollment and in advance of in-country experience.

\section*{ITA 2413 - Italian Translating}

3 Credits
Translating skills course with focus on translating the written language of Italian to English with some English to Italian. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: ITA 1413 or approval of instructor or Dean of Global Education.

\section*{ITA 2421 - Italian Culture Comparisons} 1 Credit
Focus on the cultural aspects of the Italian people. Includes a comparison with the American culture as well as other culture groups. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{ITA 2433 - Italian Film/Literature}

3 Credits
This course explores various literary and cinematic movements from 20th century Italy. Readings and films in Italian will correspond to particular themes. Lecture 3 hours. No Laboratory. Prerequisite:ITA 1413 or approval of instructor, Dean of Global Education or Associate Dean.

\section*{ITA 2523 - Intermediate Italian Grammar and Composition}

3 Credits
This course includes a thorough review of syntax and grammar and the development of composition skills. Conducted in Italian and English. Lecture 3 hours. Self-paced lab may be required. Prerequisite: ITA 2213 or 18 hours of Italian or approval of Instructor or Dean of Global Education.

\section*{ITA 2533 - Advanced Italian Conversation}

3 Credits
This course is intended for students who have studied Italian structure through the intermediate level and have gained a basic oral fluency and proficiency. Class activities will focus on acquiring sufficient speaking skills to interact with native speakers and the use of Italian as the main language of communication without the aid of an interpreter. Conducted in Italian. Lecture 3 hours. Self-paced lab may be required. Prerequisite: ITA 2213 or 18 hours of Italian or approval of instructor or Dean of Global Education.

\section*{ITA 2990 - Selected Topics in Italian}

1-4 Credits
The study and/or analysis of a selected topic in Italian. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{INFORMATION TECHNOLOGIES CONVERGENCE}

\section*{ITC 1033 - Introduction to Voice Communications and Convergence}

\section*{3 Credits}

An introductory study of voice communications and convergence hardware, standards, protocols, and technologies. Topics include the history and development of the telecommunications infrastructure, regulatory agencies,
standards organizations, electricity, Ohm's law, power, analog and digital signaling and transmission techniques, protocols, framing, decimal, binary, and hexadecimal numbering systems, service providers, transmission media, numbering plans, customer premise equipment, cable plant, PBX's, key systems, circuit and packet switching, TCP/IP, cellular, satellite and other wireless voice communications systems, WAN technologies, information security, CTI, voice over IP, jitter, latency, QoS, and convergence protocols and technologies. This course will help to prepare students for portions of TIA certification exams. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or demonstration of computer proficiency.

\section*{ITC 2014 - Data Convergence}

4 Credits
An in-depth study of data communications, networking, and convergence hardware, standards, protocols and technologies. Topics include the history and development of computer networks, the OSI model, digital and analog signaling and conversion, decimal, binary, and hexadecimal numbering systems, data codes, wired and wireless media, dialup, cable, DSL, ISDN, FDM, TDM, and STDM, multiplexing, LAN topologies, Ethernet, Token Ring, FDDI, encapsulation, segmentation, internetworking, NIC's, cables, hubs, bridges, swirches, routers, NOSs, PANs, LANs, CANs, MANs, WANs, IP, IPX, TCP, UDP, ICMP, ARP, NAT, HCP, FTP, Telnet, SSH, VPN's, IPv6, ISDN, network security, SNMP, packet sniffers, resource sharing, and troubleshooting. This course will help students prepare for portions of the CompTIA Network+, Cisco CCNA INTRO, and TIA certification exams. Lecture 3 hours. Laboratory 2 hours. Prerequisite: CSC 1203 or demonstration of computer proficiency.

\section*{ITC 2023 - Wireless Networking} 3 Credits
An in-depth study of current and emerging wireless communications and networking technologies used in personal area networks, local area networks, metropolitan area networks, and wide area networks. Topics include wireless transmission, RF, IR, antennas, WLAN's, security, global positioning systems, cellular technologies, RFID, Blue Tooth, satellite, VoWLAN, ZigBee, and Wi-Max. This course also prepares the student to take the CWNP Wireless\# certification exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ITC 2014 or instructor approval.

\section*{ITC 2033 - Broadband Networking/CCENT} 3 Credits
An in-depth study of broadband networking hardware, standards, protocols, and technologies. Topics include the history and development of telecommunications networks into a broadband transport vehicle, the merger of voice and data networks, digital and analog signaling, QoS, routing, WAN interfaces, access circuits, transmission methods, frame relay, ATM, SONET, SDH, VPN's, FDDI, DSL, ISDN, B-ISDN, wireless WAN technologies, RPR, Fibre Channel, InfiniBand, SAN's, BPL, MPLS, IP addressing, subnet masks, internets, intranets, extranets, network management and monitoring, SNMP, Telnet, SSH, problem solving \& troubleshooting. This course prepares students for the Cisco ICNDI certification exam, which is part 1 of the CCNA exam. Lecture 2 hours. Laboratory 2 hours. Prerequisites; ITC 1033 and ITC 2014.

\section*{ITC 2043 - CWNA Wireless LAN Administration 3 Credits}

This course provides the student with the necessary skills to plan, design, deploy, administer, secure, and manage a wireless network in a business environment. It also helps students prepare for the CWNA certification exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ITC 2023 or instructor approval.

\section*{ITC 2053 - CWSP Wireless LAN Security}

3 Credits
This course provides the student with the necessary skills to implement and manage wireless LAN security in the enterprise environment. It also helps students prepare for the CWSP certification exam. Topics include physical security, layers 2 and 3 security, authentication, authorization, accounting, intrusion prevention, and wireless management. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ITC 2043 or instructor approval.

\section*{ITC 2063 - VoIP \& Convergence Technologies} 3 Credits
This course prepares the student to install, configure, and maintain VoIP and other convergent networking technologies. It will also help students to prepare for CompTia and TIA convergence certification exams. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ITC 1033 and CSC 1263.

\section*{ITC 2203 - CCNA Routing and Switching}

3 Credits
Configure and manage Cisco routers and switches. Topics include LAN switching, STP, VLAN's, trunking, IP addressing \& subnetting, static routing, RIP, IGRP, OSPF, EIGRP, route summarization, classless routing, VLSM, CIDR, NAT, PAT, 802.1Q, PPP, ISDN, Frame relay, and access control list security. This course prepares the student to take the CCNA ICND certification exam, and reviews materials found in the CCNA INTRO exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ITC 2033 or instructor approval.

\section*{ITC 2233 - CCNP Routing}

\section*{3 Credits}

Installation, configuration, maintenance, and troubleshooting of complex routed networks. This course helps students prepare for the CCNP BSCI certification exam. Topics include multicast routing and security authentication. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ITC 2203 or instructor approval.

\section*{ITC 2253 - CCNP Switching}

3 Credits
Installation, configuration, maintenance, and troubleshooting of complex networks. This course helps students prepare for the CCNP BCMSN certification exam. Topics include VLAN's, QoS, and security. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ITC 2203 or instructor approval.

\section*{ITC 2263 - CCNP Secure Converged WANs} 3 Credits
Installation, configuration, maintenance, and troubleshooting of secure converged WANs. Topics include VPNs, AAA, QoS,
wireless technologies, and security. This course helps students prepare for the CCNP ISCW certification exam. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ITC 2253 or instructor approval.

\section*{ITC 2283 - CCNP Optimizing Converged Cisco \\ Networks}

\section*{3 Credits}

Optimization and advanced troubleshooting techniques for converged Cisco networks. This course helps student prepare for the CCNP ONT certification exam. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ITC 2233 and ITC 2263 or instructor approval.

\section*{ITC 2990 - Selected Topics in Information Technologies Convergence}

\section*{3 Credits}

Selected topics in Information Technologies Convergence. Lecture 1-4 hours. May include 1 hour of laboratory.

\section*{JAPANESE}

\section*{JPN 1001 - Japanese for Communication I}

\section*{1 Credit}

A companion course to JAP 1103 with emphasis on speaking and comprehension skills. Recommended that it be taken simultaneously with JAP 1103 or after. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: JPN 1103 or approval of instructor or Dean of Global Education.

\section*{JPN 1103 - Japanese 13 Credits}

A beginning course in understanding, speaking, reading, and writing Japanese. The first in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.

\section*{JPN 1201 - Japanese for Communication II}

\section*{1 Credit}

Continued instruction in basic language concepts and beginning conversational skills. Conducted in Japanese. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: JPN 1103 or approval of instructor or Dean of Global Education.

\section*{JPN 1213 - Japanese II}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Japanese. The second in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: JPN 1103 or approval of instructor or Dean of Global Education.

\section*{JPN 1301 - Japanese for Communication III} 1 Credit
Continued instruction to develop oral fluency and conversational skills. Conducted in Japanese. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: JPN 1213 or approval of instructor or Dean of Global Education.

\section*{JPN 1313 - Japanese III}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Japanese. The third in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.
Prerequisite: JPN 1213 or approval of instructor or Dean of Global Education.

\section*{JPN 1401 - Japanese for Communication IV}

\section*{1 Credit}

Continued instruction to develop oral fluency and conversational skills. Conducted in Japanese. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: JPN 1313 or approval of instructor or Dean of Global Education.

\section*{JPN 1413 - Japanese IV}

3 Credits
Continued instruction in understanding speaking, reading, and writing Japanese. The fourth in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: JPN 1313 or approval of instructor or Dean of Global Education.

\section*{JPN 2033 - Japanese Literature in Translation} 3 Credits
Readings of literary works in translation selected to increase the student's knowledge of Japanese societies. Conducted in English. Lecture 3 hours. Self-paced laboratory may be required.

\section*{JPN 2041 - Japanese - Introduction to the Arts}

\section*{1 Credit}

An introduction to the Japanese arts with an attempt to develop an aesthetic awareness and an understanding of the role that the arts play in modern day Japanese activities. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{JPN 2071 - Japanese History and Geography Introduction}

\section*{1 Credit}

A survey of Japanese history and geography as it relates to modern day Japanese societies and language with an awareness of the relationship between the physical, political, and linguistic regions. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{JPN 2113 - Intermediate Japanese I}

\section*{3 Credits}

An intermediate course in understanding, speaking, reading, and writing Japanese. Taught in Japanese. Lecture 3 hours. No Laboratory. Prerequisite: JPN 1413 or approval of instructor or Dean of Global Education.

\section*{JPN 2121 - Intermediate Japanese Communication} 1 Credit
Practice in speaking Japanese at the intermediate level covering a wide range of subjects; i.e., everyday language, intermediate literature samples, other publications, and current events. Conducted in Japanese. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: Japanese 1413 or approval of instructor.

\section*{JPN 2143 - Japanese Civilization and Culture}

\section*{3 Credits}

Conversations and readings concerning Japanese culture and civilization. Conducted in Japanese. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: JPN 2113 or approval of instructor or Dean of Global Education.

\section*{JPN 2213 - Intermediate Japanese II}

3 Credits
An intermediate course in understanding, speaking, reading, and writing Japanese. Taught in Japanese. Lecture 3 hours. Selfpaced laboratory may be required. Prerequisite: JPN 1413 or approval of instructor or Dean of Global Education.

\section*{JPN 2320 - International Work and/or Study Seminar 1-3 Credits \\ Practicum with an international firm and/or study abroad. Focus on application and enhancement of language skills (oral and written forms). Lecture and/or laboratory equivalent. Prerequisite: Approval of Dean of Global Education and Associate Dean before enrollment and in advance of work/ study abroad experience.}

\section*{JPN 2413 - Japanese Translating}

3 Credits
Translating skills course with focus on translating the written language of Japanese to English with some English to Japanese. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: JPN 1413 or approval of instructor or Dean of Global Education.

\section*{JPN 2421 - Japanese Culture Comparisons}

1 Credit
Focus on the cultural aspects of the Japanese people. Includes a comparison with the American culture as well as other culture groups. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{JPN 2990 - Selected Topics in Japanese} 1-4 Credits
The study and/or analysis of a selected topic in Japanese. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{JOURNALISM/MASS COMMUNICATIONS}

\section*{JMC 1013 - Introduction to Mass Communications} 3 Credits
A survey course designed to provide students with a panoramic view of mass communications and an understanding of the role of mass media in modern society. Not restricted to Journalism and Mass Communications majors. Lecture 3 hours. No Laboratory.

\section*{JMC 1103 - Introduction to Broadcasting 3 Credits}

History, growth, and development of broadcasting; FCC and other federal regulatory agencies; station and network operations and their effects on society. Lecture 3 hours. Laboratory 1 hour.

\section*{JMC 1113 - Writing for the Mass Media}

\section*{3 Credits}

Introduction to writing which focuses on both news and nonnews styles used by media writers and professionals. Directed study of practice in writing for print and electronic media. Lecture 2 hours. Laboratory 2 hours. Prerequisite:Typing/word processing ability and ENG 1083 or concurrent enrollment.

\section*{JMC 1123 - News Writing and Reporting}

3 Credits
Techniques of news writing and reporting: writing leads, structuring, and polishing the news story; using the stylebook; introduction to information gathering and interviewing; determining news value; practice in writing different types of stories - news, feature, police, government, and speech coverage. Lecture 2 hours. Laboratory 2 hours. Prerequisite: Typing/word processing ability, successful completion of ENG 1083 and JMC 1113 or instructor's permission. Students are required to pass the News Writing Skills Test with a "C" or better.

\section*{JMC 1143 - Reporting Across Cultures}

3 Credits
Students will learn how to approach, report and write about various cultures, communities and genders with knowledge and sensitivity, and will learn how to include these voices in the media. Not restricted to Journalism and Mass Communications majors. Lecture 3 hours. No Laboratory.

\section*{JMC 1151 - Reporting in the Digital Age}

\section*{1 Credit}

Students will learn how changing technology is influencing how journalists do their work, the structure of the newsroom, the relationship among news organizations, and the content of the news itself. Student will also discuss current events associated with digital media and reporting. Lecture 1 hour. No Laboratory.

\section*{JMC 1233 -Television Scriptwriting}

\section*{3 Credits}

A study in the style, terminology, structure and narrative devices employed in scriptwriting for television. Emphasis is on the process of scriptwriting, from treatment to final script. Lecture 2 hours. Laboratory 2 hours. Prerequisite: JMC 1103 or instructor approval.

\section*{JMC 1303 - Fundamentals of Videography}

\section*{3 Credits}

An introductory study in video technologies, basic equipment -- including digital video camera operation -- video composition, basic lighting and audio, production planning and visual story telling. Lecture 2 hours. Laboratory 2 hours. Prerequisite: JMC 1103 or permission of the instructor.

\section*{JMC 2013 - Principles of Advertising}

3 Credits
Elements and purposes of advertising; study of historical, legal, ethical, psychological, economic, global, societal and artistic aspects. Focus on advertising structure, comprehensive campaign reports, marketing and promotional mixes, budget, and media planning, practice in advertising copywriting and
design and sales. Lecture 3 hours. Prerequisites: JMC 1113 and/ or concurrent enrollment.

\section*{JMC 2143 - Studio Production}

\section*{3 Credits}

Students learn to write, produce and direct multi-camera studio productions. Topics include studio camera operation, lighting and sound, as well as organized pre-production and crewing in a studio environment. Lecture 2 hours. Laboratory 2 hours. Prerequisites: JMC 2263 or permission of the instructor.

\section*{JMC 2153 - International Communication and Global Media}

3 Credits
This course focuses on international mass communication, cross-cultural audiences and global media systems. Students will gain an understanding of associated theoretical, pragmatic, political and ethical issues, including cultural differences, comparative media systems, development communication, patterns of world news flow, political propaganda, and the impact of international advertising. Lecture 3 hours. Self-paced laboratory may be required. Not restricted to Journalism and Mass Communications majors.

\section*{JMC 2163 - Editing}

3 Credits
Copy editing and legal considerations for print and online media from an editor's perspective; design techniques for newspapers, magazines and online content, picture editing, introduction to type, makeup and design practices. Lecture 1 hour. Laboratory 2 hours. Prerequisites: JMC 1123, CIS 2683.

\section*{JMC 2173 - Advanced Broadcasting}

3 Credits
An advanced-level study in the techniques of writing for television and radio broadcasting; practice in script writing; broadcast performance/ announcing; pre-production; broadcast reporting and management of programs and formats Lecture 2 hours. Laboratory 2 hours. Prerequisites: Successful completion of JMC 1103, JMC 1113, and JMC 1123 and/or concurrent enrollment.

\section*{JMC 2183 - Principles of Public Relations} 3 Credits
An historical survey course designed to provide students with fundamental principles of public relations processes: research, planning, and communication. An examination of selected case study methodologies, including writing acceptable publicity news releases, planning, detailing, and producing a comprehensive public relations campaign. Lecture 3 hours. Laboratory 1 hour. Prerequisites: JMC 1013, JMC 1113, and JMC 1123 and/or concurrent enrollment.

\section*{JMC 2263 - Digital Video I/Final Cut Pro}

3 Credits
A general overview of digital video editing. Students will gain hands-on experience in video capture and editing using Final Cut Pro nonlinear video editing software on Macintosh platforms. Offered Fall semester only. Lecture 2 hours. Laboratory 2 hours. Prerequisites: CIS 1211 and CIS 2573 or JMC 1303 or instructor approval.

\section*{JMC 2273 - Digital Video II/Final Cut Pro}

\section*{3 Credits}

An in-depth continuation of JMC 2263 where students will integrate graphics, audio, animation, and special effects into digital video projects. Students will use Final Cut Pro video editing software on Macintosh platforms. Offered Spring semester only. Lecture 2 hours. Laboratory 2 hours. Prerequisite: JMC 2263 or instructor approval.

\section*{JMC 2373 - Broadcast Laboratory}

\section*{3 Credits}

Course focuses on practical application of writing, performance, and technical production of TCC student video programs and program segments. Students will work as a broadcasting team, rotating duties as they produce campus-related programming throughout the semester. Emphasis is on a studio-laboratory setting. Lecture 1 hour. Laboratory 4 hours. Prerequisite: JMC 2353 or permission of the instructor.

\section*{JMC 2423 - Advanced Video Production}

\section*{3 Credits}

An advanced-level study in the techniques and practices of today's video production, using broadcast video technology. Students will develop their skills in pre-production, production and post-production video work, both in the studio and on location. The course will include concept development, story boarding, shooting and editing video projects. Lecture 2 hours. Laboratory 2 hours. Prerequisites: Successful completion of JMC 2353 or instructor approval.

\section*{JMC 2433 - Field Production}

3 Credits
Pre and post-production processes involved in field (on location) television productions. Topics include field camera setup and operation, field audio, television direction, and in-camera or basic continuity editing with an emphasis on underlying principles of video technology. Lecture 2 hours. Laboratory 3 hours. Prerequisites: JMC 2263 or instructor approval.

\section*{JMC 2853 - Photography}

\section*{3 Credits}

A comprehensive course in darkroom photography.Topics include historical techniques, black and white film exposure, processing and printing, equipment selection, image manipulation, color theory, and digital applications. Emphasis will be placed in the production of informative images that effectively communicate with the viewer, and adapting those images to publication requirements. Lecture 2 hours. Laboratory 4 hours.

\section*{JMC 2863 - Photojournalism}

\section*{3 Credits}

This course will take an in-depth look at all aspects of photojournalism from news reportage to editorial photography and the photo-essay. Course emphasis is placed mainly on content, but technical considerations such as film characteristics, incident and strobe lighting, equipment choices and printing for reproduction are not ignored. Students can expect to be challenged regularly to articulate their rationale
for choosing the manner in which they portray their assigned topics. Lecture 2 hours. Laboratory 4 hours. Prerequisites: JMC 1013, and JMC 2853.

\section*{JMC 2973 - Journalism and Mass Communications Internship I \\ 3 Credits}

Expands the Digital Media Program, offering internship as a means to provide students with hands-on learning and working experience in their chosen specialty options of Adobe Master Design Specialist, Digital Media Specialist, or Web Design Specialist. Offered fall and spring semesters. Students must apply through instructor. No Lecture. Laboratory 12 hours.

\section*{JMC 2983 - Journalism and Mass Communications Internship II}

\section*{3 Credits}

Designed as an expansion of the TCC Journalism and Mass Communications Program, offering internship as a means to provide students with hands-on learning experiences and working experience in their chosen field(s) of Journalism: Print Media (newspaper/magazine), Broadcasting (radio/television), Public Relations and Advertising. Prerequisite: Successful completion of JMC 2973, initiation of the application process with the Program Coordinator or Associate Dean.

\section*{JMC 2990 - Selected Topics in Journalism}

1-4 Credits
The study and/or analysis of a selected topic in Journalism and Mass Communications. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{LANGUAGE INSTRUCTIONAL TECHNOLOGY}

\section*{LNT 1101 - Introduction to Language Instructional Technology \\ 1 Credit}

Focus on basic components and activities of language learning systems. Includes organization of instructional software, scheduling of lab usage, presentation of lab orientations, organization of lab menu, selection of lab equipment. Lecture 1 hour self-paced laboratory required. Prerequisite: 3 hours of a foreign language.

\section*{LNT 1121 - Language Lab Maintenance Basics} 1 Credit
Includes an introduction to the mechanical operations of lab equipment with training in troubleshooting and minor repair.

\section*{LNT 1131 - Language Instructional Technology Internship I}

1 Credit
Practicum in operating a language laboratory under supervision of a lab director. Focus on lab activities and interaction with lab users. All assignments completed in language lab. May be taken simultaneously with other language lab courses. Lecture 1 hour. Self-paced laboratory required. Prerequisite: LNT 1101.

\section*{LNT 1141 - Language Instructional Technology Internship II}

1 Credit
Practicum II in operating a language laboratory under supervision of a lab director. Focus on lab activities and multigroup use. Allows the student to learn to integrate technology with language acquisition. May be taken simultaneously with other language lab courses. Lecture 1 hour. Self-paced laboratory required. Prerequisite: LNT 1131.

\section*{LNT 1151 - Language Instructional Technology Internship III}

\section*{1 Credit}

Practicum III in operating a language laboratory under supervision of a lab director. Focus on lab activities and setting up/organizing a new lab. Allows the student to learn to integrate technology with language acquisition. May be taken simultaneously with other language lab courses. Lecture 1 hour. Self paced laboratory required. Prerequisite: LNT 1141.

\section*{LNT 1161 - Language Instructional Technology Concepts}

1 Credit
Focus on learning activities appropriate for instruction using technical systems. Lecture 1 hour. Self-paced laboratory required. Prerequisite: LNT 1131 and 12 hours of a foreign language.

\section*{LNT 1171 - Language Instructional Software Development}

1 Credit
Development of software (video, computer, and/or audio) for learning activities in the language lab. Lecture 1 hour. Selfpaced laboratory required. Prerequisite: LNT 1161.

\section*{LNT 1181 - Language Instructional Curriculum Development}

1 Credit
Development of language learning activities with interactive technology. Lecture I hour. Self-paced laboratory may be required. Prerequisite: Permission of instructor or Director of ILC.

\section*{LNT 2990 - Selected Topics in Language Instructional Technology}

1-4 Credits
The study and/or analysis of a selected topic in Language Instructional Technology. May be repeated with a different topic. Lecture 1-4 hours. Self-paced laboratory may be required.

\section*{LATIN}

\section*{LAT 1103 - Latin I}

3 Credits
An elementary course in understanding, speaking, reading, and writing Latin. The first in a sequence of four related course sections. See LAT 1213, LAT 1313, and LAT 1413. Lecture 3 hours. No Laboratory.

\section*{LAT 1213 - Latin II}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Latin. Lecture 3 hours. No Laboratory. Prerequisite: LAT 1103 or approval of instructor or Dean of Global Education.

\section*{LAT 1313 - Latin III}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Latin. Lecture 3 hours. No Laboratory. Prerequisite: LAT 1213 or approval of Instructor or Dean of Global Education.

\section*{LAT 1413 - Latin IV}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Latin. Lecture 3 hours. No Laboratory. Prerequisite: LAT 1313 or approval of instructor or Dean of Global Education.

\section*{LAT 2113 - Intermediate Latin I}

\section*{3 Credits}

An intermediate course in understanding, reading, and writing Latin. Lecture 3 hours. No Laboratory. Prerequisite: LAT 1413 or approval of instructor or Dean of Global Education.

\section*{LAT 2413 - Latin Translations}

\section*{3 Credits}

This course will focus on the meaning of Latin Terminology used in areas of professional, legal, research, health, and government areas. Lecture 3 hours. No Laboratory. Prerequisite: Permission of instructor or Dean of Global Education.

\section*{LAT 2990 - Selected Topics in Latin}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Latin. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{LAW ENFORCEMENT}

\section*{LE 1013 - Introduction to Law Enforcement}

\section*{3 Credits}

An orientation course to the basic tools related to success in the law enforcement discipline. Emphasis is placed on field note taking, report writing, telecommunications, and police ethics. Lecture 3 hours. No Laboratory. Prerequisite: LE 1023.

\section*{LE 1023 - Law and Law Enforcement}

3 Credits
An examination of the basic legal skills and knowledge required by the law enforcement officer.Topics include introduction to criminal law, legal research, the court system, probable cause, laws of arrest, deadly force, weapons law, search and seizure, rules of evidence, the exclusionary rule, and trial of a criminal case. Lecture 3 hours. No Laboratory.

\section*{LE 1033 - Patrol Function}

\section*{3 Credits}

The role and responsibilities of the police patrol emphasizing the concepts of patrol function, perception, beat familiarization, crimes in progress, vehicle pullover, and building search techniques. Lecture 3 hours. No Laboratory. Prerequisites:LE 1023.

\section*{LE 2013 - Police and Community Relations}

3 Credits
A study of the relationship between the law enforcement officer and the citizenry with emphasis on effective community relations, victimology, civil rights, protective orders, mentally ill, suicides and officer survival. Lecture 3 hours. No Laboratory. Prerequisites:LE 1023.

\section*{LE 2021 - Custody and Control}

1 Credit
In this course the student will be exposed to the basic control techniques utilized by the law enforcement officer. Weaponless control techniques, basic police baton, hand-cuffing, and defensive tactics are among the topics explored. Students should be physically prepared for the demands of this active skills course and will be expected to supply certain equipment needs. Lecture 1 hour. No Laboratory. Prerequisite:LE 1023.

\section*{LE 2033 - Law Enforcement Drivers Training}

3 Credits
The fundamentals of police operation of a patrol vehicle.Topics include the law of police vehicle operation, driving techniques, cornering and steering, pursuit, and safe stops. Training requires student provide own transportation to the driving range. Lecture 3 hours. No Laboratory. Prerequisite:LE 1023

\section*{LE 2041 - Police Basic Firearms}

1 Credit
Topics discussed include safety, nomenclature, range procedures, dry-fire techniques, accuracy, clearing malfunctions, and proper stances. The student will successfully complete a live-fire course with an approved handgun and police shotgun. Training requires student provide own transportation to the firing and will be expected to supply certain equipment needs. Lecture 1 hour. No Laboratory. Prerequisite:LE 1023.

\section*{LEGAL ASSISTANT}
(See Paralegal)

\section*{LEGAL SECRETARY}
(See Business Program)

\section*{LIBRARY TECHNOLOGY}

\section*{LIB 1161- Information in the Digital Age 1 Credit}

This course is designed to teach fundamental research skills and familiarize students with library and Internet information resources. The course emphasizes how to find print and online sources appropriate for college-level research assignments; how to evaluate information; and how to use information
effectively and ethically. Skills acquired in this course will help develop information literacy and lifelong learning abilities, benefiting students' performance in other classes and in personal and professional pursuits. Lecture 1 hour. No Laboratory.

\section*{MACHINIST/NUMERICAL CONTROL TECHNOLOGY \\ (See Numerical Control/Machinist Technology Program and Course Descriptions)}

\section*{MANAGEMENT}

\section*{MGT 1003 - Team Basics}

\section*{3 Credits}

A course which emphasizes the basic processes of team management and the importance of working relationships. Methods of developing attitudes which lead to increased productivity, harmony in the workplace, success as a team member, effectively managing stress and change, and strengthening business ethics are discussed. Lecture 3 hours. No laboratory. Prerequisite: ENG 1113, CSC 1203 or instructor approval.

\section*{MGT 1043 - Team Leadership}

\section*{3 Credits}

A focus on the leadership roles expected of team members with practical suggestions for improved leadership skills. Sources of power and influence, delegation, group processes, conflict resolution, and group decision-making techniques will be discussed. Additionally, students will review basic business principles in economics, marketing and accounting. Lecture 3 hours. No laboratory. Prerequisite: MGT 1003 or instructor approval.

\section*{MGT 1063 - Management Experiential Studies} 3 Credits
Experiential learning credit may be granted for knowledge gained through bona fide corporate training programs. Personal involvement in certain professional organizations offering bona fide training programs may also be considered. The student will be required to attend a portfolio orientation session with the instructor, then develop a portfolio of management training and experiences to be submitted to the college for review to determine the equivalence to college learning. No Lecture. No Laboratory. Prerequisite:Completed 12 credit hours of coursework at TCC with a 2.0 GPA or higher.

\section*{MGT 1073 - Business Experiential Studies}

3 Credits
Experiential learning credit may be granted for knowledge gained through bona fide corporate training programs. Personal involvement in certain professional organizations offering bona fide training may also be considered. The student will be required to attend a portfolio orientation session with the instructor, then develop a portfolio of business training and experiences to be submitted to the college for review to determine the equivalence to college learning. No lecture. No Laboratory. Prerequisite:Completed 12 credit hours of coursework at TCC with a 2.0 GPA or higher.

\section*{MGT 1213 - Call Center Management}

\section*{3 Credits}

A study of the application of sound management theory and decision making techniques in the call center environment. Focuses on ways for call center professionals to increase their proficiency as managers and supervisors. Lecture 3 hours. No Laboratory.

\section*{MGT 1233 - Health Care Management}

3 Credits
A study of the application of sound management theory and decision-making techniques to the health services environment. Focuses on ways for health care professionals to increase their proficiency as managers and supervisors. Lecture 3 hours. No Laboratory.

\section*{MGT 1343 - Management Internship I}

3 Credits
Supervised employment in the student's chosen field of management. Intended to provide practical experience for students preparing for a career in management. No Lecture. Laboratory 12 hours. Prerequisites: Concurrent enrollment in MGT 1353 and instructor approval.

\section*{MGT 1353 - Management Essentials}

3 Credits
Introduction to practical management with emphasis on the role of the manager in the company/organization. Examines the function of management in conjunction with leadership, motivation, and communication. Lecture 3 hours. No Laboratory.

\section*{MGT 1363 - Management Internship II}

\section*{3 Credits}

Supervised employment in the student's chosen field of management. Intended to provide practical experience for students preparing for a career in management. No Lecture. Laboratory 12 hours. Prerequisites: MGT 1343, MGT 1353, concurrent enrollment in MGT 1373, and instructor approval.

\section*{MGT 1373 - Human Resources Management}

3 Credit
Study of the principles and practices of management with emphasis on the human factors, including recruitment, interviewing, testing, training, and performance appraisal. Emphasizes the responsibilities of all managers for human resources in their organization. Lecture 3 hours. No Laboratory. Prerequisite: MGT 1353 or instructor approval.

\section*{MGT 1383 - Human Resources Management for the Hospitality Industry}

3 Credits
Study of the principles of management for the hospitality industry with emphasis on human factors including the employee selection process, orientation and training, effective communication and motivational techniques. Special emphasis is placed on the legal landscape of the hospitality including issues such as wage and hour laws, employee rights and working with union organizations. Lecture 3 hours. No Laboratory.

\section*{MGT 1393 - Industrial Management}

\section*{3 Credits}

Basic introduction to first-time industrial management concepts where the primary concern is production. Includes basic management theory, total quality management concepts, human relations, and quality/ productivity improvement. Lecture 3 hours. No Laboratory. Prerequisite: EGR 1313 or instructor approval.

\section*{MGT 2001 - Quality Concepts/Problem Solving} 1 Credit
Basic quality concepts are addressed in this course, along with the BAMA Quality Story and historical overview of a 12 year quality process. The course then summarizes the primary quality principles Deming, Covey, Joiner, and Goldratt and explains how these theories shape the quality culture of a business. The course also outlines basic problem solving concepts, the Plan, Do, Study, and Act model and gives a seven stop methods of employing problem solving techniques. Lecture 1 hour. No Laboratory.

\section*{MGT 2041 - Effective Problem Solving}

1 Credit
The problem solving methods continues with the teaching of problem solving tools and applying that knowledge and the information from Quality Concepts and Problem Solving to problems. Measurement is a key ingredient in the Problem Solving process and this course teaches how to apply effective measures to situations to measure the extent of a problem and determine root cause fixes for it. Lecture 1 hour. No Laboratory.

\section*{MGT 2061 - Quality Concepts/Effective Problem Solving II}

1 Credit
Continuation of MGT 2001. Basic quality concepts are addressed in this course. The course summarizes the primary quality principles of Deming, Covey, Joiner, and Goldratt and explains how these theories shape the quality culture of a business. The course also outlines basic problem solving concepts, the Plan, Do, Study, Act model and gives a seven step method of employing problem solving techniques. Lecture 1 hour. No Laboratory. Prerequisite: MGT 2001

\section*{MGT 2103 - Workforce Development Internship} 3 Credits
Supervised work experience related to the student's chosen workforce development field of study. Designed to provide practical application of workforce development program content in the work environment. No Lecture. Laboratory 12 hours. Student must contact workforce development internship instructor and meet all requirements for internship participation including completion of 15 credit hours with a 2.0 GPA or higher, or instructor approval.

\section*{MGT 2123 - Leadership Development}

\section*{3 Credits}

This course is designed to provide emerging and existing leaders the opportunity to explore the concept of leadership and to develop and improve their leadership skills. The course integrates reading from the humanities, experiential exercises, films and contemporary readings on leadership. Lecture 3 hours. No Laboratory.

\section*{MGT 2201 - Management and Planning Tools} 1 Credit
An integrated approach designed to help the manager become a better planner and implementer. The tools presented could include tree diagrams, matrix diagrams, activity network diagrams, affinity diagrams, interrelationship digraphs, prioritization matrices and process decision program charts. Lecture 1 hour.

\section*{MGT 2213 - Coaching/Performance Management 1 Credit}

Students will have the opportunity to develop knowledge and skills required by frontline supervisors and managers in diagnosing performance and training issues, designing and implementing a variety of coaching strategies and conducting training follow-up and performance evaluations. Lecture 3 hours.

\section*{MGT 2303 - Management Internship III}

3 Credits
Supervised employment in the student's chosen field of management. Intended to provide practical experience for students preparing for a career in management. No Lecture. Laboratory 12 hours. Prerequisites: MGT 1363, MGT 1373, concurrent enrollment in MGT 2323, and instructor approval.

\section*{MGT 2323 - Organizational Behavior}

3 Credits
A study of the behavioral sciences and their application to human relations and productivity. Includes such topics as motivation, leadership, participative management, group dynamics, communication, organizational change, and group processes as related to team building and total quality management. Lecture 3 hours. No Laboratory. Prerequisite: MGT 1353, MGT 1373 or instructor approval.

\section*{MGT 2343 - Management Internship IV}

3 Credits
Supervised employment in the student's chosen field of management. Intended to provide practical experience for students preparing for a career in management. No Lecture. Laboratory 12 hours. Prerequisites: MGT 2303, MGT 2323, concurrent enrollment in MGT 2353, and instructor approval.

\section*{MGT 2353 - Business Policy}

3 Credits
A study of management activities utilizing comprehensive case problems. Emphasis is on the integration of management functions in the process of planning objectives, establishing policies, and determining strategic plans of action. Lecture 3 hours. No Laboratory. Prerequisite: MGT 1353, MGT 1373, MGT 2323, or instructor approval.

\section*{MGT 2363 - Principles of Management}

3 Credits
Introduction to the basic theory and principles of management. Emphasis is on the functions of management, planning, organizing, staffing, directing, and controlling. A survey approach to current trends in management and possible future developments in organization and administration. Lecture 3 hours. No Laboratory.

\section*{MGT 2403 - Critical Thinking for Results}

3 Credits
Study of managerial critical thinking skills with application in pre-problem solving, purposeful position taking, and methodology to take in information with proper precision, breadth, and depth. Students will learn to persevere intellectually to meet both short and long term business goals. Lecture 3 hours. No Laboratory.

\section*{MGT 2413 - Global Management}

3 Credits
The study of managing individuals from various cultures with different perceptions of both current and potential customers. Designed to examine international labor relations, political and socioeconomic forces. Emphasis is on international managerial cases. Lecture 3 hours. No Laboratory.

\section*{MGT 2423 - Entrepreneurship Management}

3 Credits
Study of managerial skills necessary for being a successful business owner. Students will learn the types of managerial skills necessary and appropriate with business start up, business growth, and business maturity. Students will be given management practicums to learn which managerial skills they possess, which need development and which to obtain in proper business operation. Lecture 3 hours. No Laboratory

\section*{MGT 2990 - Selected Topics in Management}

1-4 Credits
The study and/or analysis of a selected topic in Management. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{MARKETING}

\section*{MKT 1313 - Sales and Negotiations}

\section*{3 Credits}

A multi-pronged approach, focused on the development and growth of the salesperson through a study of self-motivation, business communication, and the development of sales presentations and closing strategies, with special emphasis on developing negotiation skills. Lecture 3 hours. No Laboratory.

\section*{MKT 1333 - Fashion Innovation and Marketing}

3 Credits
Course emphasizes the process of fashion innovation, variables of fashion affecting production and distribution of consumer goods, and development of present structure in the fashion industry. Lecture 3 hours. No Laboratory.

\section*{MKT 1371 - Introduction to Customer Service} 1 Credit
An introductory background and orientation on career opportunities in the customer service industry. Professional work skills, positive work ethics, understanding company diversity, enhancing communications, problem solving, and an overview of world geography are included. Lecture 1 hour. No Laboratory.

\section*{MKT 1381 - Marketing on the Internet}

\section*{1 Credit}

A hands-on course that teaches students to apply marketing concepts as they visit quality Internet sites. Students will be taught how to access the Internet and will gain familiarity with the Internet as a marketing resource tool. Lecture and Laboratory 1 hour.

\section*{MKT 1393 - Web Design and Marketing}

\section*{3 Credits}

An introduction to Web site creation and marketing as it relates to E-Commerce business. Topics may include market research, usability issues, and design guidelines which include marketing approaches such as importance of logos, psychology of color, product promotion and cost factors. Students will develop and test a Web site using popular Web development software. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC 1203. Recommended MKT 2423.

\section*{MKT 1403 - Marketing Internship I}

\section*{3 Credits}

Supervised employment in the student's chosen field of marketing. Intended to provide practical experience for students preparing for a career in marketing. No lecture. Laboratory 15 hours. Requires instructor approval.

\section*{MKT 1423 - Marketing Internship II}

\section*{3 Credits}

Supervised employment in the student's chosen field of marketing. Intended to provide practical experience for students preparing for a career in marketing. No lecture. Laboratory 15 hours. Requires instructor approval.

\section*{MKT 1433 - Marketing Internship III}

\section*{3 Credits}

Supervised employment in the student's chosen field of marketing. Intended to provide practical experience for students preparing for a career in marketing. No lecture. Laboratory 15 hours. Requires instructor approval.

\section*{MKT 1443 - Electronic Commerce}

3 Credits
This course will examine the foundation, operation and implications of the Internet economy. Course content may include topics such as Internet technologies, privacy, security, online market mechanisms, interaction with customers, electronic publishing, electronic shopping, knowledgebased products, pricing in the Internet economy, database issues, online auctions and e-marketplaces, intellectual property, policies, ethics for the Internet economy, emerging technologies and an outlook for the new economy. Lecture 3 hours. No Laboratory.

\section*{MKT 2343 - Customer Service}

\section*{3 Credits}

This course provides students with the basic concepts and current trends in the customer service industry. Special areas of emphasis include problem solving, development of a customer service strategy, creating customer service systems, coping with challenging customers, customer retention and measuring satisfaction. Lecture 3 hours. No Laboratory.

\section*{MKT 2363 - Consumer Behavior}

\section*{3 Credits}

The study of the consumer decision-making process including the effects of psychology and sociology. Course is taught from the perspective of those involved with or interested in selling, advertising, and retailing. Lecture 3 hours. No Laboratory. Prerequisite: MKT 2423 or instructor approval.

\section*{MKT 2393 - Advertising and Promotion Management} 3 Credits
Emphasizing the selection of media sources and coordination of advertising and promotion as a part of the marketing mix. The student will learn how to prepare and manage an advertising and promotion campaign. Lecture 3 hours. No Laboratory. Prerequisite: MKT 2423 or instructor approval.

\section*{MKT 2423 - Principles of Marketing}

3 Credits
A study of the marketing mix, including product, price, promotion and distribution and the influence of political, competitive, social, and technological environments on the marketing mix. The course also includes a review of marketing research and consumer behavior. Lecture 3 hours. No Laboratory.

\section*{MKT 2433 - Product Development}

3 Credits
Course emphasizes the stages of product development, acquiring raw materials and products, design elements, production processes, pricing strategies, promotional tools, and distribution elements. A focus will be placed on principles related to merchandising, display, and retail practices. Lecture 3 hours. No Laboratory.

\section*{MKT 2813 - International Marketing}

3 Credits
Dealing with the problems and opportunities of marketing in an international environment. Includes representation, licensing, credit, export and import requirements, and governmental regulations. Lecture 3 hours. No Laboratory. Prerequisite: MKT 2423 or instructor approval.

\section*{MKT 2990 - Selected Topics in Marketing} 1-4 Credits
The study and/or analysis of a selected topic in Marketing. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{MATHEMATICS}

\section*{MTH 0003 - Basic Mathematics}

\section*{3 Credits}

A study of the fundamental operations of whole numbers, fractions, and decimals, including a study of percents, measurement, interest. Lecture 3 hours. No Laboratory.

\section*{MTH 0013 - Beginning Algebra}

3 Credits
A course for students that need to review their basic algebra background. Included within this course are signed numbers, positive and negative exponents, order of operations, conversions in fractions, decimals and percents, algebraic expressions, factoring, polynomials, slope, graphing, linear equations and inequalities, and applications. Equivalent to one year of high school algebra. Prerequisite: Appropriate CPT score or a grade of "C" or better in MTH 0003. Lecture 3 hours. No Laboratory.

\section*{MTH 0055 - Basic Mathematics and Beginning Algebra} 5 Credits
A combination of MTH 0003 and MTH 0013. A course for students that need to review their basic mathematics and basic algebra skills. Included in this course are operations with whole numbers, fractions, decimals, and percents, signed numbers, exponents, algebraic expressions, factoring, algebraic fractions, linear equations and inequalities, and graphing. Equivalent to one year of high school algebra. Lecture 5 hours. No Laboratory.

\section*{MTH 0090 - Selected Topics NP (No Prerequisite)} 1-3 Credits
Selected topics in mathematics that do not require students to have a prerequisite basic math or algebra background. Courses in math that are specially designed for companies, institutions, or private organizations and are not dependent upon prerequisite math courses. Lecture 1-3 hours. No Laboratory.

\section*{MTH 0105 - Beginning and Intermediate Algebra} 5 Credits
A combination of MTH 0013 and MTH 0123 and equivalent to two years of high school algebra. A course for students that need to review their algebra background or need to satisfy a high school deficiency. Included within this course are signed numbers, negative and fractional exponents, algebraic expressions, factoring, algebraic fractions, functions, domain and range, linear equations and inequalities, absolute value equations and inequalities, systems of linear equations, graphing, irrational numbers, radicals, complex numbers, quadratic and higher degree equations, applications, and variation. Prerequisite: Appropriate CPT score or a grade of "C" or better in MTH 0003. Lecture 5 hours. No Laboratory.

\section*{MTH 0113 - Geometry}

3 Credits
A course for students that need to review their basic geometry. Included within this course are formal proofs, lines, angles, parallel and perpendicular lines, triangles, polygons, circles, three-dimensional geometry, computational geometry and constructions. Lecture 3 hours. No Laboratory. Prerequisite: One
year of high school algebra and appropriate CPT score or a grade of "C" or better in MTH 0013.

\section*{MTH 0123 - Intermediate Algebra}

3 Credits
An extension of MTH 0013 for students that need to review their algebra background or need to satisfy a high school deficiency. Included within this course are absolute value equations and inequalities, algebraic fractions, irrational numbers, scientific notation, negative and fractional exponents, roots and radicals, complex numbers, domain and range, quadratic equations, variation, parallel and perpendicular lines, graphing, systems of equations and applications. Lecture 3 hours. No Laboratory. Prerequisite: One year of high school algebra and appropriate CPT score or a grade of "C" or better in either MTH 0013 or MTH 0055, or their equivalent.

\section*{MTH 0803 - Math Skills for the Deaf and Hard of Hearing}

\section*{3 Credits}

Designed to assist students who are deaf and hard of hearing in developing math skills necessary to proceed through a planned college curriculum. Course selections will include operations in addition, subtraction, multiplication, division, and fractions. Lecture 3 hours. No Laboratory.

\section*{MTH 0822 - Consumer Math for the Deaf and Hard of Hearing}

2 Credits
This course is designed for students who are deaf and hard of hearing to practice using math in everyday situations such as employment, business transactions, transportation, and basic budgeting.Lecture 2 hours. No Laboratory.

\section*{MTH 1454 - Technical Mathematics \\ 4 Credits}

A course designed for technical-occupational students in pursuit of a degree in technical education. Topics to be included are fundamental concepts of basic mathematics, algebra, right-triangle trigonometry, functions and graphs, factoring and algebraic functions, systems of linear equations, quadratic equations, exponents and radicals, exponents and logarithms, trigonometric functions, complex numbers, and oblique triangles and vectors. Lecture 4 hours. No Laboratory. Prerequisite: One year of high school algebra and geometry and appropriate CPT score or MTH 0013 with a grade of "C" or better, or the equivalent.

\section*{MTH 1473 - Mathematics for Critical Thinking (A) 3 Credits}

Topics in algebra, set theory, logic, graph theory, geometry, probability, statistics, and computer programming. Other topics as time allows. Lecture 3 hours. No Laboratory. Prerequisites: Two years of high school algebra and appropriate CPT or ACT score, or completion of MTH 0123 or MTH 0105 with a grade of " C " or better, or their equivalent.

\section*{MTH 1483 - Mathematics Functions and Their Uses (A)} 3 Credits
This course focuses on the analysis of functions and their graphs from the viewpoint of rates of change. Linear, polynomial exponential, logarithmic, and other function models will be studied, with applications to the natural sciences, business, social sciences, and agriculture. Lecture 3 hours. No Laboratory. Prerequisites:Two years of high school algebra and appropriate CPT or ACT score, or completion of MTH 0123 or MTH 0105 with a grade of "C" or better, or their equivalent.

\section*{MTH 1513 - College Algebra (A)}

3 Credits
A continuation of MTH 0123 or MTH 0105, including relations and functions, graphing using transformations, algebra of functions, conic sections, polynomial and rational functions, systems of equations, matrices, exponential and logarithmic functions, binomial theorem, sequences and series, and applications. Lecture 3 hours. No Laboratory. Prerequisites:Two years of high school algebra and appropriate CPT or ACT score, or completion of MTH 0123 or MTH 0105 with a grade of " \(C\) " or better, or their equivalent.

\section*{MTH 1613 - Plane Trigonometry (A)}

\section*{3 Credits}

This course consists of trigonometric functions, degree and radian measure, solutions of right and oblique triangles, the unit circle, graphs of circular functions and the inverse functions, identities, inverse trigonometric functions and equation, complex numbers, and ploar coordinates. Lecture 3 hours. No Laboratory. Prerequisite: MTH 1513 with a grade of "C" or better, or concurrent enrollment.

\section*{MTH 1715 - College Algebra and Trigonometry (A)}

\section*{5 Credits}

A course composed of topics from college algebra and trigonometry involving a strong emphasis on graphing and functions. The course consists of quadratic relations, functions, inverse functions, systems of equations, matrices and determinants, theory of equations, complex numbers, logarithmic and exponential functions, probability, the binomial theorem, sequences, trigonometric functions, trigonometric identities, polar coordinates, solutions of triangles and vectors. Lecture 5 hours. No Laboratory. Prerequisites:Two years of high school algebra and appropriate CPT or ACT score, or completion of MTH 0123 or MTH 0105 with a grade of " \(C\) " or better, or their equivalent.

\section*{MTH 2114 - Analytic Geometry and Calculus I (A)} 4 Credits
Introduction to analytic geometry, limits, derivatives (including trigonometry), differentials, anti-derivatives, integrals, and applications of derivatives and integrals. Lecture 4 hours. No Laboratory. Prerequisites: A grade of "C" or better in MTH 1513 and MTH 1613, or MTH 1715.

MTH 2124 - Analytic Geometry and Calculus II (A) 4 Credits
A continuation of MTH 2114 involving calculus of additional transcendental functions, techniques of integration, improper
integrals, sequences and series Taylor's formula, and conic sections. Lecture 4 hours. No Laboratory. Prerequisite: MTH 2114 with a grade of "C" or better.

\section*{MTH 2134 - Analytic Geometry and Calculus III} 4 Credits
A continuation of MTH 2124, including polar coordinates, analytic geometry in 3-space, parametric equations, vectors in 2-space and 3 - space, and multi-variant differential and integral calculus. Lecture 4 hours. No Laboratory. Prerequisite: MTH 2124 with a grade of "C" or better.

\section*{MTH 2193 - Elementary Statistics}

3 Credits
An introduction to basic statistical terminology, organization of data, measures of central tendency and dispersion, review of combinations, permutations, and probability, binomial and normal distributions, hypothesis testing, and a variety of other statistical techniques. Lecture 3 hours. No Laboratory. Prerequisite: A grade of "C" or better in MTH 1513 or MTH 1454 or MTH 1473 or MTH 1483.

\section*{MTH 2423 - Mathematics Concepts for Educators}

\section*{3 Credits}

A course designed to provide the foundations for teaching arithmetic and geometry on the elementary level. Origins of numerals, number bases, systems of whole numbers, integers, rational numbers, real numbers, and intuitive geometry are some of the topics included in the course. The course also focuses on current issues in mathematics education and research as well as the use of microcomputers in mathematics education. Lecture 3 hours. No Laboratory. Prerequisite: MTH 0123 with a grade of "C" or better.

\section*{MTH 2513 - Finite Mathematics}

\section*{3 Credits}

A survey course in mathematics designed for business and economic students, involving set theory, logic probability, matrices, vectors, linear programming, game theory, and mathematics of finance and accounting. Lecture 3 hours. No Laboratory. Prerequisite: MTH 1513 with a grade of "C" or better.

\section*{MTH 2523 - Calculus for Business, Life, and Social Sciences}

3 Credits
An introduction to differential and integral calculus with applications in the fields of business, and the life and social sciences. Lecture 3 hours. No Laboratory. Prerequisite: A grade of "C" or better in MTH 1513 or MTH 1483 or MTH 2513.

\section*{MTH 2533 - Using Multimedia Environments for Research and Test Analysis in the Social Sciences 3 Credits}

This course will acquaint educators with powerful statistical multimedia environments for the purpose of test analysis and/ or conducting research in education, psychology, and the social sciences. Some previous experience with statistics, research, testing and/or evaluation theory is helpful for the course. Participants will explore hands-on multimedia applications in testing and research. Lecture 3 hours. Laboratory 1 hour. Prerequisite: A grade of "C" or better in MTH 2193 and CSC 1011.

\section*{MTH 2553 - Geometry and Measurement}

\section*{3 Credits}

This course provides a modeling and hands-on approach to geometry concepts for elementary teachers. Topics include perimeter, area, volume, mass, English and metric systems, time, temperature, vocabulary, polygons, polyhedrons, shapes, constructions, transformations, tessellation, and trigonometry. Prerequisite: A grade of "C" or better in MTH 1473 or MTH 1513 or MTH 1483 or their equivalent. Lecture 3 hours. No Laboratory.

\section*{MTH 2593 - Applied Statistical Analysis}

\section*{3 Credits}

This course extends the number of concepts that are included in MTH 2193 (Elementary Statistics) by providing advanced statistical types of analysis and methodologies. Emphasis in the course will be on applying advanced statistical techniques to specific application areas such as social science, business, and medical fields. Research techniques, field work, and computer analyses will be the tools involved in conducting the statistical applications in the course. Lecture 3 hours. Laboratory 1 hour. Prerequisite: MTH 2193 with a grade of "C" or better or instructor approval.

\section*{MTH 2613 - Elementary Differential Equations} 3 Credits
Solutions and applications of first order ordinary differential equations by symbolic and numerical methods. Solutions and applications of second order linear equations. Series solutions, Laplace transforms, and higher order equations with constant coefficients and an introduction to systems of differential equations. Lecture 3 hours. No Laboratory. Prerequisite: MTH 2134 with a grade of "C" or better.

\section*{MTH 2653 - Discrete Mathematics}

3 Credits
Set theory proof techniques, logic, mathematical induction, Boolean Algebra and lattices, equivalence relations and partitions, functions, algorithm analysis, principles of counting and probability, statistics, recurrence relations, mathematical modeling, matrix algebra, trees, graphs and graph theory. Lecture 3 hours. No Laboratory. Prerequisite: MTH 2114 with a grade of "C" or better.

\section*{MTH 2990 - Selected Topics in Mathematics}

1-4 Credits
The study and/or analysis of a selected topic in Mathematics. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{MEDICAL ASSISTANT}

\section*{MA 1315 - Clinical Procedures}

\section*{5 Credits}

This course provides instruction in clinical exam room procedures employed by the medical assistant. Topics include asepsis, infection control, disposal of biohazardous material, sterilization/maintenance of instruments and equipment, patient screening, chart documentation, vital signs, preparation/maintenance of treatment areas, assisting with exams and procedures including minor office surgery,
restocking of supplies, patient education and nutrition, immunizations, prescriptions, dosage calculation, and preparation and administration of medication. Lecture 3 hours. Laboratory 4 hours. Prerequisites: AH 1323, BIO 1314, CSC 2013 or concurrent enrollment and program director approval.

\section*{MA 1343 - Medical Office Concepts and Applications 3 Credits}

A study of the administrative procedures necessary in the management of the medical office in reference to professionalism, communication skills, human behavior, legal concepts, medical ethics, coping skills for patients \& employees, patient diversity, community resources, public relations, receptionist skills, telephone etiquette, appointment scheduling, correspondence, mail processing and medical records management. The course will also include computer terminology, medical office software and applications. Lecture 2 hours. Laboratory 2 hours. Prerequisites: AH 1323, BIO 1314, CSC 2013 and program director approval.

\section*{MA 2234 - Common Diseases and Treatments} 4 Credits
A study of common diseases, diagnostic tests, procedures, treatments, and medication options by body system. Medications (generic, brand-name, and over-the-counter) will be discussed and linked to diseases they are most commonly prescribed to treat. The most common side effects, contraindications, and adverse reactions of medications will be studied. Lecture 4 hours. No Laboratory. Prerequisites: AH 1323, BIO 1314, CSC 2013 and program director approval.

\section*{MA 2243 - Medical Office Finance and Management} 3 Credits
A course that presents the administrative procedures involved with patient billing, collections, bookkeeping, banking, petty cash, accounts receivable, accounts payable, inventory of supplies, marketing, statistical reports, payroll, medical office supervision, teamwork, office policies and procedures, human resource management, interviewing, resume and cover letter preparation, job search techniques. Computer and manual applications will be presented. Lecture 2 hours. Laboratory 2 hours. Prerequisites: AH 1323, BIO 1314, and CSC 2013 or concurrent enrollment and program director approval.

\section*{MA 2333 - Medical Assistant Externship} 3 Credits
Supervised practical experience without remuneration (pay) in an ambulatory medical facility or physician's office. Laboratory 10 hours. Prerequisites: Successful completion of medical assistant certificate course requirements and program director approval.

\section*{MA 2346 - Clinical Laboratory Procedures}

\section*{6 Credits}

This course provides instruction in basic clinical laboratory techniques employed by the medical assistant. Topics include laboratory safety, OSHA \& CLIA regulations, quality control, collection and processing of specimens, and the performance of selective tests including urinalysis, hematology, blood chemistries, and microbiological and serological testing. The principles and performance of EKGs, spirometry, vision and hearing testing are also included. Medical emergencies and principles and techniques of phlebotomy will be reviewed. Lecture 3 hours. Laboratory 6 hours. Prerequisites: AH 1323, BIO 1314, CSC 2013, MA 1315, and program director approval.

\section*{MA 2393 - Medical Coding \& Insurance Billing for the Physician Office}

\section*{3 Credits}

A study of ICD-9-CM and CPT/HCPCS coding systems and guidelines used in the application of these codes to the CMS 1500 claim form or for medical reporting purposes in the physician's office or clinic setting. A review of third party payer reimbursement methodologies and HIPPA guidelines will be provided. CMS 1500 claims for Medicare, Medicaid, Blue Cross Blue Shield, Commercial,TRICARE and CHAMPVA, Worker's compensation and Disability Income Insurance claims will be prepared. Medical documentation, paper claim submission, electronic claims transmission, receiving and posting payments, office and insurance collections strategies, claim tracing, denials, appeals, and managed care will be presented. Lecture 2 hours. Laboratory 2 hours. Prerequisites: AH 1323, BIO 1314, CSC 2013 and program director approval.

\section*{MA 2990 - Selected Topics in Medical Assisting} 1-4 Credits
The study and/or analysis of a selected topic in Medical Assisting. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{MEDICAL LABORATORY TECHNOLOGY}

\section*{MLT 1203 - Phlebotomy}

\section*{3 Credits}

This course will cover the basic concepts and skills needed to prepare an individual to become a phlebotomist. Lecture 2 hours. Laboratory 2.5 hours. Requires MLT/Phlebotomy Program Director approval.

\section*{MLT 1212 - Introduction to Medical Laboratory Technology and Specimen Processing \\ 2 Credits}

This introductory course will emphasize basic laboratory skills and procedures in urinalysis, hematology, chemistry, microbiology, immunology, and blood bank. Lecture 1 hours. Laboratory 2 hours.

\section*{MLT 1222 - Phlebotomy Clinical}

\section*{2 Credits}

Students will be assigned to clinical laboratories for practical phlebotomy experiences. No Lecture. Laboratory 4* hours.
*Actual number of clinical lab hours is 10 hours per week for ten weeks. This clinical includes observation and laboratory procedures. Prerequisites: concurrent enrollment in MLT 1203, and MLT 1212 and of MLT Program Director approval.

\section*{MLT 2305 - Basic Hematology}

\section*{5 Credits}

Introduction to study of the cellular components of human blood. Emphasis on blood cell counting, hemoglobin, hematocrit, and reticulocyte determinations. Lecture 4 hours. Laboratory 4 hours. Prerequisite: Grade of "C" or better in MLT 1203, MLT 1222 and acceptance into the MLT program.

\section*{MLT 2344 - Clinical Chemistry I}

\section*{4 Credits}

This course will cover the basic theories of routine clinical chemistry procedures, including instrumentation. Emphasis will be placed on theory, clinical applications, and procedures. A brief review of laboratory mathematics will be included. Lecture 3 hours. Laboratory 4 hours. Prerequisites: Grade of "C" or better in MLT 1203, MLT 1222, and acceptance into the MLT program.

\section*{MLT 2365 - Clinical Chemistry II}

\section*{5 Credits}

Continuation of MLT 2344. Lecture 3 hours. Laboratory 4 hours. Prerequisites: Grade of "C" or better in MLT 2305, MLT 2344, MLT 2426.

\section*{MLT 2395 - Clinical Microbiology}

\section*{5 Credits}

This course will have primary emphasis on pathogenic microorganisms, their identification, and related disease processes. Laboratory will stress the identification of these from a clinical viewpoint. Lecture 3 hours. Laboratory 4 hours. Prerequisites: Grade of "C" or better in MLT 2305, MLT 2344, MLT 2426.

\section*{MLT 2426 - Urinalysis, Immunology and Blood Bank}

\section*{6 Credits}

This course will include a study of laboratory procedures for chemical and sediment in urine as well as immunological determinations, blood typing and cross-matching. Lecture 4 hours. Laboratory 4 hours. Prerequisites: MLT 1203, MLT 1222, and acceptance into the MLT Program.

\section*{MLT 2434 - Clinical Practicum I}

\section*{4 Credits}

Students will be assigned to clinical laboratories for practical experiences in various procedures and techniques. No Lecture. Laboratory 8 hours. Actual number of clinical lab hours is 40 hours per week for eight weeks. This clinical includes observation and laboratory procedures. Prerequisites: Completion of all Medical Laboratory courses with a grade of "C" or above.

\section*{MLT 2465 - Clinical Practicum II}

\section*{5 Credits}

This is a continuation of Clinical Practice I. Emphasis will be placed on clinical application and laboratory procedures. No Lecture. Laboratory 10 hours. Actual number of clinical lab hours is 40 hours per week for eight weeks. This clinical includes observation and laboratory procedures. Prerequisite: Completion of MLT 2434 with a grade of " \(C\) " or above.

\section*{MLT 2990 - Selected Topics in Medical Laboratory Technology}

1-4 Credits
The study and/or analysis of a selected topic in Medical Laboratory Technology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

MEDICAL RECORDS
(See Health Information Technology Program and Course Descriptions)

\section*{MEDICAL TRANSCRIPTION}

\section*{MTR 2303 - Medical Transcription I}

\section*{3 Credits}

A course designed to provide skills and applications for producing an accurate medical report from dictated and written material using a medical specialty approach. A brief overview of the profession and the ethical/legal responsibilities in medical transcription will be discussed. Emphasis will be on direct application transcribing dictated medical reports, spelling, abbreviations and use of reference materials. Lecture 2 hours. Laboratory 2 hours. Prerequisites: AH1323, CSC 2013, ENG 1083 or concurrent enrollment and program director approval.

\section*{MTR 2313 - Medical Transcription II}

\section*{3 Credits}

This course is a continuation of Medical Transcription I.A specialty approach will be used in transcribing dictated materials. The course will include proofreading and editing exercises, spelling, abbreviations, and transcribing tips. Lecture 2 hours. Laboratory 2 hours. Prerequisites: AH 1323, BIO 1314, CSC 2013, ENG 1083, MTR 2303, program director approval.

\section*{MTR 2373 - Medical Transcription III}

\section*{3 Credits}

This course is a continuation of Medical transcription II, using the medical specialty approach. Current articles on medications, sound-alikes, look-alikes, eponyms, and new medical terms will be addressed. Emphasis will be on accuracy and production times. Lecture 2 hour. Laboratory 2 hours. Prerequisites: Completion of all courses in the medical transcription certificate program, with the exception of the externship course.

\section*{MTR 2433 - Medical Transcription Externship}

\section*{3 Credits}

Supervised practical experience without remuneration (pay) in a medical transcription department of a hospital, a physician's office or a transcription service. Laboratory 8 hours. Prerequisites: Successful completion of all medical transcription certificate course requirements.

\section*{MUSIC}

\section*{MUS 1002 - Fundamentals of Music}

2 Credits
A course that places particular emphasis on the basic skills of reading and writing music. It assumes no prior knowledge of music. Lecture 2 hours. No Laboratory. Music majors must take this course or pass a theory proficiency test before taking MUS 1013.

\section*{MUS 1013 - Music Theory I}

\section*{3 Credits}

Development and cultivation of musicianship skills, especially in the areas of tonal and rhythmic perception and articulation. Presentation of the essentials of music; classification of triads and seventh chords and their inversions; introduction to analysis and part writing. Lecture 3 hours. No Laboratory. Music majors are required to take a theory proficiency test and may be required to take MUS 1002 as a prerequisite. Corequisites: Concurrent enrollment in Class Piano or Private Piano and MUS 1062 for music majors. Piano corequisite may be waived by demonstration of proficiency.

\section*{MUS 1023 - Music Theory II}

\section*{3 Credits}

Continuation of MUS 1013. Continued work in analysis, partwriting and harmonization with diatonic triads and seventh chords and their inversions. Introduction to modulation and dominant secondary and secondary leading tone chords. Introduction to binary and ternary forms. Lecture 3 hours. No Laboratory. Prerequisite: MUS 1013 and MUS 1062 or instructor approval. Corequisite: Concurrent enrollment in Class Piano or Private Piano and MUS 1072, for music majors. Piano corequisite may be waived by demonstration of piano proficiency.

\section*{MUS 1053 - Recording Studio Techniques I}

3 Credits
Designed to introduce students to the basic principles, techniques, and tools commonly used in modern sound recording. Open to anyone with an interest in sound or music. Lecture 2 hours. Laboratory 2 hours.

\section*{MUS 1062 - Aural Theory I}

\section*{2 Credits}

Development of aural skills related to sight-singing, rhythmic and melodic dictation, and keyboard harmony, using examples from the common practice period. Required for music majors. Open to non-music majors with approval of instructor. Taken concurrently with MUS1013 for music majors. Lecture 2 hours. No Laboratory. Prerequisite:MUS 1002 or instructor approval.

\section*{MUS 1072 - Aural Theory II}

2 Credits
Development of aural skills related to sight-singing, rhythmic and melodic dictation, and keyboard harmony, using examples from the common practice period. Required for music majors. Taken concurrently with MUS 1023 for music majors. Lecture 2 hours. No Laboratory. Prerequisite: MUS 1013 and MUS 1062 or instructor approval.

\section*{MUS 1113 - Music Appreciation (H)}

\section*{3 Credits}

A concise survey of the basic elements of music and their application in the music literature of Western civilization, particularly the Baroque era to the present. Relevant cultural influences upon the music of each era are observed. Lecture 3 hours. No Laboratory.

\section*{MUS 1121 - Community Chorus}

\section*{1 Credit}

Rehearsal and performance of a wide variety of music in all areas of choral literature. Membership is open by audition to music and non-music majors. No Lecture. Laboratory 2 hours. Enrollment by audition

\section*{MUS 1142 - Computer Music Techniques I}

\section*{2 Credits}

This course is designed to develop computer music skills and comprehension of MIDI with the use of Sibelius music composition software. It is designed to be a lab class. Requires intermediate computer skills. Lecture 1 hour. Laboratory 2 hours. Prerequisite: MUS 1013.

\section*{MUS 1190 - Private Lessons for Non-Majors}

\section*{1-2 Credits}

Private piano, voice and instrumental lessons are designed to help non-music majors improve their technique, sight reading skills and basic musicianship skills. An additional laboratory fee is required. Requires instructor approval.
1 credit hour private music instruction requires a weekly 30-minute lesson; 1.5 hours minimum weekly practice recommended. No Lecture. Laboratory 2 hours.

2 credit hours private music instruction requires a weekly 1hour lesson; 3 hours minimum weekly practice recommended. No Lecture. Laboratory 4 hours.
Private Piano
Private Voice
Private Guitar
Private Violin
Private Viola
Private Cello
Private Bass
Private Flute
Private Oboe
Private Clarinet
Private Saxophone
Private Electric Bass Guitar
Private Trumpet
Private Horn
Private Trombone
Private Tuba
Private Bassoon
Private Harp
Private Percussion

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MUS 1200 and 1240 - Private Piano and Voice Lessons 1-2 Credits
Technique, literature, number of performances and practice
hours are appropriate for college freshman level. An additional laboratory fee is required. Prerequisite: Enrollment by audition and/ or instructor approval.
1 credit hour private music instruction requires a weekly 30-minute lesson; 1.5 hours minimum weekly practice recommended. Designed for the music major on a secondary instrument. Placement for non-majors with instructor approval. No Lecture. Laboratory 2 hours.

2 credit hours private music instruction requires a weekly one 1-hour lesson; 3 hours minimum weekly practice recommended. Designed for the music major on their primary instrument. Performance examination (jury) will be required to proceed to sophomore level instruction. No Lecture. Laboratory 4 hours.

\section*{MUS 1250 to 1490 - Private Music Lessons}

\section*{1-2 Credits}

Private instrumental lessons are designed for music majors to improve their technique, sight reading skills and intermediate to advanced musicianship skills. An additional laboratory fee is required. Enrollment by audition and/or instructor approval.

1 credit private music instruction requires a weekly 30-minute lesson; 1.5 hours minimum weekly practice recommended. Designed for the music major on a secondary instrument. No Lecture. Laboratory 2 hours.

2 credit private music instruction requires a weekly 1-hour lesson; 3 hours minimum weekly practice recommended. Designed for the music major on their primary instrument. Performance examination (jury) will be required. No Lecture. Laboratory 4 hours.

An additional laboratory fee is required. Prerequisite: Audition and/or instructor approval.
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MUS 1250 - Private Guitar & \(1-2\) Credits \\
MUS 1310 - Private Violin & \(1-2\) Credits \\
MUS 1320 - Private Viola & \(1-2\) Credits \\
MUS 1330 - Private Cello & \(1-2\) Credits \\
MUS 1340 - Private Bass & -2 Credits \\
MUS 1350 - Private Flute & \(1-2\) Credits \\
MUS 1360 - Private Oboe & \(1-2\) Credits \\
MUS 1370 - Private Clarinet & \(1-2\) Credits \\
MUS 1380 - Private Saxophone & \(1-2\) Credits \\
MUS 1390 - Private Electric Bass Guitar & \(1-2\) Credits \\
MUS 1410 - Private Trumpet & \(1-2\) Credits \\
MUS 1420 - Private Horn & \(1-2\) Credits \\
MUS 1430 - Private Trombone & \(1-2\) Credits \\
MUS 1440 - Private Tuba & \(1-2\) Credits \\
MUS 1450 - Private Bassoon & \(1-2\) Credits \\
MUS 1460 - Private Harp & \(1-2\) Credits \\
MUS 1490 - Private Percussion &
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\section*{MUS 1512 - Voice Class}

\section*{2 Credits}

A course teaching the principles of breathing, voice production, tone control, enunciation, and phrasing. Two group lessons per week. Lecture 1 hour. Laboratory 2 hours.

\section*{MUS 1541 - Orchestra}

\section*{1 Credit}

Study and performance of concert literature for full orchestra. No lecture. Laboratory 3 hours. Prerequisite: Enrollment by audition.

\section*{MUS 1551 - Concert Choir}

1 Credit
A mixed choral ensemble that performs a wide variety of choral literature suitable for an advanced choir. Performances may include Madrigal programs, participation in state and local choral festivals, and combined choir performances with the Signature Symphony at TCC. No Lecture. Laboratory 3 hours. Enrollment by audition.

\section*{MUS 1562 - Musical Theatre}

2 Credits
A course designed to develop the musical and theatrical talents of students who either are interested in a degree in Musical Theatre or simply want to broaden their individual experiences on the stage. Course work consists of learning, blocking and presenting scenes from the major genres in musical theatre. Historical and cultural perspective on individual works will be included in abbreviated lecture form. Requires voice, dance and/or theatre experience. No Lecture. Laboratory 4 hours.

\section*{MUS 1612 - Class Piano I}

2 Credits
The electronic piano lab offers individualized as well as class instruction in learning and/or improving techniques in playing the piano. Lecture 1 hour. Laboratory 2 hours.

\section*{MUS 1622 - Class Piano II}

2 Credits
Continuation of Class Piano I. Lecture 1 hour. Laboratory 2 hours. Prerequisite: MUS 1612 or instructor approval.

\section*{MUS 1632 - Class Piano III}

2 Credits
Continuation of Class Piano II. Lecture 1 hour.Laboratory 2 hours. Prerequisite: MUS 1622 or instructor approval.

\section*{MUS 1642 - Class Piano IV}

2 Credits
Continuation of Class Piano III. Lecture 1 hour. Laboratory 2 hours. Prerequisite: MUS 1632 or instructor approval.

\section*{MUS 1651 - Concert Band}

1 Credit
Study and performance of concert literature for the wind band. No lecture. Laboratory 3 hours. Prerequisite: Enrollment by audition.

\section*{MUS 1661 - Jazz Band}

1 Credit
This course is designed to develop fundamental techniques in the artistry of jazz in an ensemble setting from swing to big band. This class incorporates many styles in the jazz idiom including improvisation. No Lecture. Laboratory 3 hours. Enrollment by audition.

\section*{MUS 1701 - String Orchestra}

\section*{1 Credit}

Study and performance of concert literature for string orchestra. No lecture. Laboratory 2 hours. Enrollment by audition.

\section*{MUS 1711 - Brass Ensemble}

1 Credit
Open by audition to a limited number of brass instrument players constituting a brass trio, quartet, quintet, sextet, or some other valid combination of brass instruments. No Lecture. Laboratory 2 hours.

\section*{MUS 1721 - Woodwind Ensemble}

1 Credit
Open by audition to a limited number of woodwind players constituting a woodwind trio, quartet, quintet, or some other valid combination of Woodwind instruments. No Lecture. Laboratory 2 hours.

\section*{MUS 1761 - String Quartet}

1 Credit
Designed to give students the experience of rehearsing and performing in a chamber ensemble. Students will be exposed to string quartet repertoire and a collaborative approach to problem solving. No lecture. Laboratory 2 hours. Enrollment by audition.

\section*{MUS 1771 - Percussion Ensemble}

1 Credit
The Percussion Ensemble is a performance class. The Ensemble provides an opportunity for musical development and exposure to percussion music from many different cultures. Students must be able to read music and have some experience playing percussion instruments. Each semester the students will perform in at least one concert. No lecture. Laboratory 2 hours. Enrollment by audition.

\section*{MUS 1781 - Chamber Ensemble}

\section*{1 Credit}

Designed to give students the experience of rehearsing and performing in a chamber ensemble. Students will be exposed to chamber repertoire and a collaborative approach to problem solving. No lecture. Laboratory 2 hours. Prerequisite: Enrollment by audition.

\section*{MUS 1801 - Jazz Lab}

\section*{1 Credit}

An instrumental performance ensemble that explores and performs jazz conception and structure with emphasis on individual improvisational technique. No Lecture. Laboratory 3 hours. Requires instructor approval.

\section*{MUS 2013 - Music Theory III}

\section*{3 Credits}

Analysis, part-writing, and harmonization, including chromatic harmonies and modulation. Introduction to fugue, sonata form, rondo form, and variation technique. Lecture 3 hours. No Laboratory. Prerequisite: MUS 1023 and MUS 1072 or instructor approval. Corequisite: MUS 2062 for music majors. Concurrent enrollment in Class Piano or Private Piano is required unless waived by demonstration of piano proficiency.

\section*{MUS 2023 - Music Theory IV}

\section*{3 Credits}

A continuation of MUS 2013. Introduction to extended harmonies and 20th century techniques. Lecture 3 hours. No Laboratory. Prerequisite: MUS 2013 and MUS 2062 or instructor approval. Corequisite: MUS 2072 for music majors. Concurrent enrollment in Class Piano or Private Piano is required unless waived by demonstration of piano proficiency.

\section*{MUS 2062 - Aural Theory III}

\section*{2 Credits}

Development of aural skills related to sight-singing, rhythmic and melodic dictation, and keyboard harmony, using examples from the common practice period. Required for music majors. Taken concurrently with MUS 2013 for music majors. Lecture 2 hours. No Laboratory. Prerequisite: MUS 1023 and MUS 1072 or instructor approval.

\section*{MUS 2072 - Aural Theory IV}

2 Credits
Development of aural skills related to sight-singing, rhythmic and melodic dictation, and keyboard harmony, using examples from the common practice period. Required for all music majors. Taken concurrently with MUS 2023 for music majors. Lecture 2 hours. No Laboratory. Prerequisite: MUS 2013 and MUS 2062 or instructor approval.

\section*{MUS 2122 - Percussion Class}

\section*{2 Credits}

This percussion methods/techniques class provides students an opportunity to develop beginning level performance skills on the major instruments of the percussion family, as well as an introduction to accessories, Latin percussion, and drum set. The course addresses methods for teaching percussion while providing an environment for students to learn how to diagnose common performance problems associated with percussion instruments and a variety of suggestions for solutions. Other topics to be covered include: equipment maintenance and repairs, suggestions for method books and repertoire, and organizational materials to maintain student's focus in a band class setting. Lecture 2 hours. No Laboratory.

\section*{MUS 2133 - Introduction to the History and Literature of Music}

\section*{3 Credits}

A detailed, one semester introductory study of the major music historical periods and representative works from the Middle Ages through the 20th Century. Emphasis on developing research, listening, and analytical techniques in preparation for undergraduate level music history survey courses. Required of all music majors; non-music majors admitted by permission. Lecture 3 hours. No Laboratory. Prerequisite: MUS 1013 or instructor approval.

\section*{MUS 2161 - Cello Choir}

\section*{1 Credit}

Open to beginning, intermediate and advanced cello players. No audition required. The choir rehearses and performs many styles of music, from the Renaissance, Baroque, Classical, Romantic and Contemporary eras. Lecture 1 hour. No Laboratory.

\section*{MUS 2171 - Beginning Guitar}

\section*{1 Credit}

Beginning Guitar is designed for beginning students who are not majoring in music. At the end of the semester students should expect to understand both written music and specialized system for writing guitar music called tablature. Basic chords in the first position, called open chords, will be used in simple song accompaniments. Students must provide their own instruments in good working condition. Acoustic guitars are preferred but not required. Amplifiers will not be provided. Lecture 1 hour. No Laboratory.

\section*{MUS 2181 - Show Choir}

1 Credit
A mixed choral ensemble designed to present vocal jazz standards as well as popular show tunes. Usually one to two formal concerts are presented a semester which may include presentation with the TCC Signature Symphony. Some musical numbers may be staged and/or choreographed. No Lecture. Laboratory 2 hours. Prerequisite: Enrollment by audition. Concurrent enrollment in MUS 1551 is required.

\section*{MUS 2200 and 2240 - Private Piano and Voice Lessons}

\section*{1-2 Credits}

Technique, literature, number of performances and practice hours are appropriate for college sophomore level. An additional laboratory fee is required. Prerequisite: Enrollment by audition and/or instructor approval.
1 credit hour private music instruction requires a weekly 30-minute lesson; 1.5 hours minimum weekly practice recommended. Designed for the music major on a secondary instrument. No Lecture. Laboratory 2 hours.

2 credit private music instruction requires a weekly 1-hour lesson; 3 hours minimum weekly practice recommended. Designed for the music major on their primary instrument. Performance examination (jury) will be required. No Lecture. Laboratory 4 hours.

\section*{MUS 2223 - Recording Studio Techniques II}

3 Credits
Designed to provide students with hands on digital editing, mixing, and mastering experience with the ProTools system. Lecture 2 hours. Laboratory 2 hours. Prerequisite: MUS 1053 or instructor approval.

\section*{MUS 2333 - Music Internship}

\section*{3 Credits}

Students work in a qualifying occupational setting where they receive practical training and experience toward their occupational objectives. No lecture Laboratory 6 hours. Requires instructor approval.

\section*{MUS 2990 - Selected Topics in Music}

1-4 Credits
The study and/or analysis of a selected topic in Music. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{NANOTECHNOLOGY}
(See Electronics Technology)

\section*{NST 1463 - Composite Materials}

3 Credits
This course explores the properties and the processes of manufacturing used with today's modern composite materials. Typical processes used in the Tulsa area will be reviewed along with site visits. Lecture 2 hours. Laboratory 2 hours.

\section*{NST 2632 - Introduction to Nanotechnology} 2 Credits
This course is designed to help the student develop an understanding of the fundamental concepts behind nano and micro technology. Topics include fabrication, clean-rooms, microscopy, lithograph, and materials used in the building of silicon devices. Other areas of study will focus on where and how this new technology is used. Classroom demonstration will be used. Lecture 2 hours. No Laboratory. Prerequisite: ELE 1212.

\section*{NST 2643 - Nanoelectronics}

3 Credits
Nanoelectronics covers the processes of developing micro and no scale electronics devices. The student will be introduced to carbon nanotubes, MEMS, memory, self-assembly, topdown and bottom-up techniques. Students will also be taken through the steps in building a micro-chip and how it applies to nano-structures. Equipment topics will include wet and dry etch, lithograph, deposition, evaporators, and vacuum systems. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ELE/NST 2632 or instructor approval.

\section*{NST 2653 - Nanoscience}

\section*{3 Credits}

Nanoscience explores the many possibilities for which nanostructures can and are being used. The study will include nanotube and nanopartical application in medicine, drug delivery and detection. Microscopy will include the scanning tunneling, atomic force and optical microscopes. Material and chemical make-up of micro and nano-structures will be introduced. Lecture 2 hours. Laboratory 2 hours. Prerequisite: ELE/NST 2632 or instructor approval.

\section*{NATIVE AMERICAN STUDIES} (See Liberal Arts)

\section*{NAS 1013 - Cherokee Language}

\section*{3 Credits}

The first course in a sequence designed to facilitate the acquisition of the language skills necessary to communicate effectively in Cherokee. Areas of linguistic consideration will include, but not be limited to, reading and writing the modern syllabary, vocabulary building, sentence construction, pronunciation, and basic conversational expression-assessed both orally and in writing. Students will also become acquainted with various aspects of Cherokee culture, particularly oral traditions. Lecture 3 hours. No Laboratory.

\section*{NAS 1023 - Cherokee Language II}

3 Credits
The second course in a sequence designed to facilitate the acquisition of the language skills necessary to communicate effectively in Cherokee. Areas of linguistic consideration will include, but not be limited to, reading/writing/typing the modern syllabary, vocabulary building, sentence construction, basic composition, translation, pronunciation, and basic conversational expression-assessed both orally and in writing. Students will continue to become acquainted with various aspects of Cherokee culture, particularly oral traditions. Lecture 3 hours. No Laboratory. Prerequisite: NAS 1013 or instructor approval.

\section*{NAS 1113 - Muscogee Creek Language I 3 Credits}

The first course in a sequence designed to facilitate the acquisition of the language skills necessary to communicate effectively in Muscogee. Areas of linguistic consideration will include, but not be limited to reading and writing transliterated texts, vocabulary building, sentence construction, pronunciation, and basic conversational expression -assessed both orally and in writing. Students will also become acquainted with various aspects of Creek culture, particularly oral traditions. Lecture 3 hours. No Laboratory.

\section*{NAS 1123 - Muscogee Creek Language II 3 Credits}

The second course in a sequence designed to facilitate the acquisition of the language skills necessary to communicate effectively in Muscogee. Areas of linguistic consideration will include, but not be limited to reading/writing/typing transliterated texts, vocabulary building, sentence construction, basic composition, translation, pronunciation, and basic conversational expression - assessed both orally and in writing. Students will continue to become acquainted with various aspects of Creek culture, particularly oral traditions. Lecture 3 hours. No Laboratory.

\section*{NAS 1213 - Osage Language I}

3 Credits
The first course in a sequence designed to facilitate the acquisition of the language skills necessary to communicate effectively in Osage. Areas of linguistic consideration will include, but not be limited to reading and writing transliterated texts, vocabulary building, sentence construction, pronunciation, and basic conversational expression -assessed both orally and in writing. Students will also become acquainted with various aspects of Osage culture, particularly oral traditions. Lecture 3 hours. No Laboratory.

\section*{NAS 2013 - Images of Indians in American Culture 3 Credits}

An examination of the images of"Indians" found in American culture, specifically art and literature, old-time radio,TV, filmeven advertising and sports- leading to a critique of the persistence of stereotypes in contemporary social and political discourse. Lecture 3 hours. No laboratory.

\section*{NAS 2113 - Native American Cultures (H)}

\section*{3 Credits}

An interdisciplinary survey designed to strengthen students' appreciation of the rich Native American cultural heritages. Areas of consideration may include history, philosophy, religion/spirituality, cosmology, science, politics, literature, drama, film, story-telling, music, dance, painting, sculpture, crafts, and architecture, among others. Lecture 3 hours. No Laboratory.

\section*{NAS 2123 - Cherokee Culture}

\section*{3 Credits}

An interdisciplinary study of Cherokee Culture, emphasizing Cherokee perspectives. Areas of consideration may include history, philosophy, religion/spirituality, cosmology, science, politics, literature, drama, film, story-telling, music, dance, painting, sculpture, crafts, and architecture, among others. Lecture 3 hours. No Laboratory.

\section*{NAS 2133 - Muscogee Creek Culture}

\section*{3 Credits}

An interdisciplinary study of Muscogee Creek Culture, emphasizing Creek perspectives. Areas of consideration may include history, philosophy, religion/spirituality, cosmology, science, politics, literature, drama, film, story-telling, music, dance, painting, sculpture, crafts, and architecture, among others. Lecture 3 hours. No Laboratory.

\section*{NAS 2143-Osage Culture}

\section*{3 Credits}

An interdisciplinary study of Osage Culture, emphasizing Osage perspectives. Areas of consideration may include history, philosophy, religion/spirituality, cosmology, science, politics, literature, drama, film, story-telling, music, dance, painting, sculpture, crafts, and architecture, among others. Lecture 3 hours. No Laboratory.

\section*{NAS 2213 - Native American Spiritualities}

\section*{3 Credits}

An introduction to Native American spiritualities through the consideration of oral traditions, literatures, and ceremonial practices. Areas of consideration may include the customs, traditions, music, songs, and dances related to Stomp Dancing, the Seven Rites of the Lakota, the Native American Church, and Native American Christianity, among others. Lecture 3 hours. No Laboratory.

\section*{NAS 2223 - Native American Philosophies}

\section*{3 Credits}

A study of Native American philosophies as expressed in indigenous languages, social and ceremonial practices, storytelling traditions, oratory, literature, and art. Areas of emphasis may include epistemology, metaphysics, ethics, and aesthetics. Lecture 3 hours. No Laboratory.

\section*{NAS 2313 - Native American Literatures, Drama, and Film \\ 3 Credits \\ A study of the development of Native American traditional and contemporary oral and literary expressions through an}
examination of story-telling, non-fiction, fiction, poetry, drama and film. Lecture 3 hours. No Laboratory.

\section*{NAS 2343 - Native American History}

3 Credits
An introduction to the cultures, experiences, and conflicts of Native Americans from pre-history to the present. Lecture 3 hours. No Laboratory.

\section*{NAS 2513 - Native American Law}

\section*{3 Credits}

A historical analysis of the complex pattern of federal, state, and tribal laws that have affected Native Americans as individuals and as tribes. Areas of exploration may include federal treaties, federal policies, state compacts, and the principle of sovereignty. Lecture 3 hours. No Laboratory.

\section*{NAS 2613 - Native American Art}

\section*{3 Credits}

An introductory survey designed to cultivate a fundamental understanding of the diverse traditions of Native American arts. Areas of consideration may include, but not be limited to, painting and sculpture, pottery, basket-weaving, and crafts. Lecture 3 hours. No Laboratory.

\section*{NAS 2990 - Selected Topics in Native American Studies} 1-4 Credits
The study and/or analysis of a selected topic in Native American Studies. May be repeated with a different topic. Must have Native American Studies instructor approval for enrollment. Lecture 1-4 hours. No Laboratory.

\section*{NUMERICAL CONTROL/MACHINIST} TECHNOLOGY

\section*{NCM 1212 - Introduction to Machining}

2 Credits
Basic course in theory and operation of metal working machine tools and standard shop practices with special emphasis on shop safety. Exploration into the fundamentals of turning, milling, broaching and sawing, and the abilities of conventional machine tools. Practice in the use and care of engine lathes, milling machines, drilling machines, and power saws, as well as bench work assembly, precision measurement, and the characteristics of metallic materials. Lecture 1 hour. Laboratory 2 hours.

\section*{NCM 1223 - Blueprint Reading}

3 Credits
For students enrolled in manufacturing or industrial studies. Study includes principles of geometric dimensioning and tolerancing applied to hands-on interpretation of engineering drawings and manufactured components. Principles of standard drawing views, isometric and projected views and dimensional layouts. Students will utilize their knowledge of fractional and decimal mathematics to determine part geometrics. Lecture 3 hours. No Laboratory.

\section*{NCM 1324 - Machine Shop Technology I \\ 4 Credits}

Basic course in theory and operation of machine shop tools and power machines with special emphasis on shop safety. Fundamental practice in use and care of engine lathes, drilling machines, and saws. Introduction to bench work assembly, precision measurement, and the properties of metallic materials. Lecture 2 hours. Laboratory 4 hours. Prerequisite: NCM 1223 or concurrent enrollment.

\section*{NCM 1334 - Machine Shop Technology II}

4 Credits
Study and practice in the technology of machining metal. Manufacture of machined parts requiring increased skills in the operation of the machines used in machine shop technology, including introduction to the basic operation of the milling machine. A study of design and maintenance of machines and cutting tools, heat treatment, and basic metallurgy. Lecture 2 hours. Laboratory 4 hours. Prerequisite: NCM 1324.

\section*{NCM 1413 - Introduction to Smart CAM}

3 Credits
Three dimensional CNC programming utilizing SmartCAM Advanced 3D machining software. This course will acquaint the student with machining and NC code generators for CNC lathes and mills. Geometry construction as well as Computer Aided Design system interfacing will be included. Emphasis will be placed on file management and basic DOS skills required for using application software in the microcomputer environment. Lecture 2 hours. Laboratory 2 hours. Prerequisite: NCM 1324 or equivalent training or experience.

\section*{NCM 2213 - Advanced SmartCAM}

3 Credits
Advanced course in three dimensional CNC programming utilizing SmartCAM advanced 3D machining software. 3D surfacing and 3D surface modeling will be the main areas of instruction. Multiple surfaces as well as surface to surface editing also will be included. Introduction to three axis simultaneous NC code generation also will be covered. Lecture 2 hours. Laboratory 2 hours. Prerequisite: NCM 1413, or SmartCAM or instructor approval.

\section*{NCM 2333 - CNC Mill Programming}

3 Credits
Basic three dimensional programming of simple parts to specifications. Covers incremental and absolute programming of the NC and CNC milling machine, program entry on CNC mill and computer. Lecture 2 hours. Laboratory 2 hours. Prerequisite: NCM 1324 or concurrent enrollment, or instructor approval.

\section*{NCM 2363 - Programming with Esprit}

3 Credits
Three-dimensional CNC programming utilizing Esprit Advanced 3D machining software. This course will acquaint the student with machining and NC code generators for CNC lathes and mills. Geometry construction as well as Computer Aided Design system interfacing will be included. Emphasis will be placed on file management and basic computer skills required for using application software in the microcomputer environment. Lecture 2 hours. Laboratory 2 hours. Prerequisite: NCM 1324 or equivalent training or experience.

\section*{NCM 2453 - Cutter Grinding}

\section*{3 Credits}

Basic grinding of cutters, end mills, reamers, form tools, and other related tools will be introduced. Emphasis will be placed on grinding wheel safety as well as shop safety. Equipment operation and set-up instruction in the various cutting and clearance angles needed to make a good effective machine tool will receive special emphasis. Lecture 2 hours. Laboratory 2 hours. Prerequisite: NCM 1324.

\section*{NCM 2493 - CNC Lathe Programming}

3 Credits
Basic principles of how N/C machines operate. The student will learn both set-up and operation of CNC lathes. The student will program, set up and operate the N/C machine tools. Provides orientation, operation, and skill development when operating N/C machines. Lecture 2 hours. Laboratory 2 hours. Prerequisite: NCM 1324 or instructor approval.

\section*{NCM 2503 - Advanced CNC Programming} 3 Credits
Continuation of N/C machine operation principles. The student will work on more advanced set ups of N/C and CNC mills, lathes, and machining centers. The student will program, set-up, and operate the N/C-CNC machine tools. Provides orientation, operation, and skill development when operating N/C-CNC machines. Lecture 2 hours. Laboratory 2 hours. Prerequisite: NCM 2493 or instructor approval.

\section*{NCM 2990 - Selected Topics in Numerical Control Machinist Technology}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Numerical Control/ Machinist Technology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{NURSING}

\section*{NUR 1013 - Critical Thinking and Decision Making in Nursing}

3 Credits
This course is designed to introduce students to the concept of "critical thinking" in nursing. Students' thinking processes will be stimulated and they will learn to analyze situations/ problems in a manner that will expand and enhance their assessment and problem-solving skills. The course is open to all RNs, LPNs, pre-nursing and enrolled nursing students. Lecture 3 hours. No laboratory.

\section*{NUR 1103 - Beginning Nursing Process}

\section*{3 Credits}

This course is designed to introduce students to therapeutic communication skills, problem-solving techniques and critical thinking along with the steps of the nursing process. Assessment data collection, documentation skills and application of the nursing process will be introduced and utilized to resolve problems occurring on a day-to-day basis and in a clinical setting. Lecture 3 hours. No Laboratory. Prerequisites: LPN, student should have been admitted to an RN program, or instructor approval.

\section*{NUR 1133 - Long Term Care Nursing Assistant (LTCNA) Level 1}

3 Credits
This five (5)-week course is designed to teach basic nursing skills to individuals who wish to work or are working with adults and their caregivers in a variety of community-based acute and long term care settings. Students are required to enroll in the CNA Level II course which is part of the CNA Career Ladder progression proposed by the state of Oklahoma Continuum of Care Task Force. Students who successfully complete the course are eligible to take the state certification exam to become a Long Term Care Nursing Assistant (LTC-NA). Lecture 2 hours. Laboratory 9.6 hours (average over 5 weeks). Prerequisites: Admission to CNA Career Ladder Program and enrollment in NUR 1142.

\section*{NUR 1142 - Certified Nursing Assistant Level 2 (CNA II) 2 Credits}

This 32 hour, eight-week program consists of advanced education in the nine core competencies recommended by the Oklahoma Certified Nurse Aide Career Ladder: teamwork and cooperation, quality of life, dementia care, aging and illness, spirituality and dying, communication, safety, nutrition, and importance of the family and other caregivers. Upon completion of this program, students will receive a certificate of completion for the CNA II course. Lecture 2 hours. No Laboratory. Prerequisite: NUR 1133 or CNA certificate or equivalent.

\section*{NUR 1154 - Certified Nursing Assistant Level 3 (CNA III)} 4 Credits
The CNA Level III is the final step of the TCC Certified Nursing Assistant Career Ladder program. This course provides vertical and horizontal mobility for certified nursing assistants in the care of older adults and individuals with Alzheimer's disease or other related dementias and their caregivers. Students receive innovative classroom teaching strategies and "hands on" training in the clinical setting from experienced gerontologic nurses in a variety of community-based acute and long term care settings. Upon completion of this course, the graduate will be awarded the Geriatric Technician certification. Lecture 2 hours. Laboratory 12 hours (average per 8 weeks). Prerequisites: NUR 1142 and CNA certification or equivalent.

\section*{NUR 1206 - Patient Care Technician}

6 Credits
This course is designed to provide collaborative learning experiences to develop clinical skills that will be used in the role of the Advanced Unlicensed Assistant/Patient Care Technician (PCT). The PCT functions under the direction of the licensed nurse. Students successfully completing the course will be eligible to take the State Certification Exam of the Oklahoma Board of Nursing to become certified as an Advanced Unlicensed Assistant. Components of the class include didactic, laboratory, and clinical experience in an acute care setting. Laboratory 18 hours ( 8 week course at 36 hours per week). Prerequisite: Admission to the program.

\section*{NUR 1216 - Geriatric Technician}

\section*{6 Credits}

This course is designed to provide collaborative learning experiences that develop advanced skills which will be utilized in the care of older adults in a variety of long-term care settings. Students will receive specialized training in the care of individuals with Alzheimer's disease and other related disorders with an emphasis on the physical, social, and psychological aspects of providing care to older adults. Upon completion of the course, graduates will receive a certificate of achievement and will be prepared as a valuable member of the health care team in delivering quality care to older adults in the community. Applicants must have a current Long-Term Care Nurse Assistant (LTC-NA) certificate. The Geriatric Technician works under the direction of licensed nurses. Students must complete the Geriatric Technician course with a grade of "C" or higher which includes satisfactory demonstration of required skills. Lecture 4 hours. Laboratory 6 hours/ week (8-week course - Lecture 8 hours. Laboratory 12 hours/week). Prerequisites: Current LTC-NA certificate; admission to the Geriatric Technician Program.

\section*{NUR 1393 - LPN Bridge}

3 Credits
The change process is applied to facilitate the LPN student's transition into the Associate Degree Nursing roles. Communication theory, the nursing process, and competencies are applied in the classroom and clinical settings. Current issues and perspectives as related to accountability, values, ethics, and business are explored. Lecture 2 hours. 3 hours clinical. Prerequisite: Meet criteria for admission to LPN Advanced Placement Option. Corequisite: BIO2164.

\section*{NUR 1401 - Nursing Issues and Perspectives I}

1 Credit
Through the lens of professional accountability, students first examine nursing from a historical perspective, then consider issues that affect today's nurse. Discussion and writing centers on values, standards, legal/ethical concerns, and the scope of practice of the Associate Degree Nurse. Lecture 1 hour. No Laboratory. Prerequisite: Admission to the Nursing Program. Corequisite: NUR 1447.

\section*{NUR 1421 - Nursing Issues and Perspectives II}

1 Credit
Students discuss the values and ethics that influence practice trends and issues related to health-care across the continuum. Lecture 1 hour. No Laboratory. Prerequisite: NUR 1401. Corequisite: NUR 1457.

\section*{NUR 1431 - Introduction to Pharmacology and Dosage Calculations}

\section*{1 Credit}

This course introduces the beginning nursing student to the concepts of pharmacology and dosage calculations. An overview of drug actions and resources will be presented. Over-the-counter (OTC) medications and poisons will be discussed. The impact of aging and cultural practices on pharmacotherapy will be explored. The student will apply principles of dosage calculation. Lecture 1 hour. No Laboratory. Prerequisites: Admission to the Nursing Program, CHE 1114, BIO 2134, Corequisites: NUR 1401, NUR 1446, BIO 2154.

\section*{NUR 1446 - Foundations of Nursing Practice} 6 Credits
This course introduces students to the care of the client as an individual, with a focus on the older adult. Primary emphasis is on health promotion and maintenance within a human needs framework. Students employ principles of professional and therapeutic communication in class and in the clinical setting. Pharmacologic principles and interventions are applied to clients experiencing common, chronic conditions. With a focus on the nurse as a provider of care, students establish nurseclient relationships, and begin to apply the nursing process utilizing evidence-based practice. Basic skills competencies, including medication administration and a comprehensive assessment, are performed on clients in the long-term care setting. Lecture 3.75 hours. Laboratory 6.75 (average) hours. Prerequisites: CNA/PCT/GT certification or approved sub, admission to Nursing Program, PSY 1113, BIO 1224, BIO 2134, CHE 1114, ENG 1113. Co-requisites: NUR 1401,NUR 1431, BIO 2154, ENG 1213.

\section*{NUR 1457 - Nursing of Adults with Major Health Disruptions \\ 7 Credits}

The focus of this course is the acquisition of nursing theory and skills required to provide nursing care for adult clients who are experiencing common acute and chronic health alterations. In a variety of acute care and community environments, students integrate theory with practice as they perform system specific assessments, teach clients and families, and manage health alterations using evidenced-based nursing interventions and complex psychomotor skills competencies. In the acute care setting students are introduced to interdisciplinary teams. Group process and collaboration is emphasized in the community practicum experience. Lecture 3 hours. Laboratory 12 hours per week (average). Prerequisites: NUR 1446, NUR 1401, NUR 1431, BIO 2154, ENG 1213. Corerequisites: NUR 1421, BIO 2164, PSY 2023.

\section*{NUR 2303 - Pharmacology}

\section*{3 Credits}

This course expands on the principles of clinical pharmacology and therapeutics. Content will include physiology of drug effect, drug classification uses in common disorders, and current issues related to drugs. Emphasis is placed on accuracy and accountability in drug management. This course, if taken along with NUR 2403 (Dosage Calculations) will meet the TCC Registered Nurse Program requirements for the required course 1431. Lecture 3 hours. No Laboratory. Prerequisite: BIO 2154.

\section*{NUR 2403 - Dosage Calculations for Nurses}

\section*{3 Credits}

This course is designed to assist persons preparing to administer medications with mathematical instruction for calculating dosages. Course content includes review of fractions, decimals, Roman numerals, ratio proportions, introduction of medication symbols, and related abbreviations; interpretation of physician orders and medication labels; conversion of household, apothecary and metric equivalents, and dosage calculation formulas. This course, if taken along with NUR 2303 (pharmacology) will meet the TCC Registered

Nurse Program requirements for the required course NUR 1431. Lecture 3 hours. No Laboratory.

\section*{NUR 2423 - Nursing of the Childbearing Family} 3 Credits
The focus of this course is on the nursing care of mothers and newborns during the childbearing transition. Students practice the roles of manager of care, provider of care, and member within the discipline of healthcare during clinical experiences. The concepts of transition, growth and development, and health promotion are applied to the childbearing family in a variety of acute care and community environments. Lecture 1.75 hours. Laboratory 7.5 (average for 8 week class) hours. Prerequisites: NUR 1457, NUR 1421, BIO 2164, PSY 2023. Corequisites: NUR 2453, NUR 2433, and POS 1113.

\section*{NUR 2433 - Nursing Care of Children and Their Families}

3 Credits
The course focuses on the nursing care of children and their families utilizing the nursing process. While implementing the role of provider of care and member of the healthcare team, students practice complex competencies and implement communication strategies specific to children and their families. Growth and development, health promotion, and health problems of children are emphasized in a variety of community and acute care environments. Lecture 2.2 hours. Laboratory 5 (average per 8 week clinical rotation) hours. Prerequisites: NUR 1457, NUR 1421, BIO 2164, PSY 2023. Corequistes: NUR 2453, NUR 2423, and POS 1113.

\section*{NUR 2453 - Nursing Promotion for Quality of Life} 3 Credits
The focus of this course is the care of individuals who are experiencing changes in their quality of life and fluctuation in levels of health. Nursing theory and skills related to the specific needs of clients with long-term physical disabilities and terminal illnesses are presented. In a variety of rehabilitation and community-based settings, students collaborate with other healthcare professionals to plan and implement nursing care that assists clients and their families in the promotion and maintenance of health and end-of-life challenges. Lecture 1.5 hour. Laboratory 4.5 hours (average per 8 week clinical rotation). Prerequisites: NUR 1457, NUR 1421, BIO 2164, PSY 2023. Corequisites: NUR 2423, NUR 2433, and POS 1113.

\section*{NUR 2512 - Psychiatric/Mental Health Nursing} 2 Credits
The focus of this course is on the nursing care of clients with acute and chronic mental health disruptions across the lifespan. While practicing the roles of provider of care, manager of care, and member within the discipline of healthcare, students implement specific interventions modeled on psychiatric standards. Psychosocial interventions, neurobiological interventions, health promotion, restoration, and interdisciplinary team function are emphasized in a variety of acute care and community environments. Lecture 0.5 hours. Laboratory 9 (average for 8 week class) hours. Prerequisites: NUR 2423, NUR 2433, and NUR 2453. Corequisites: NUR 2543, NUR 2564, HIS 1483 or HIS 1493.

\section*{NUR 2543 - Transition to Novice Nurse}

\section*{3 Credits}

This course is designed to facilitate the transition of the student to become a novice nurse. Students develop nursing leadership and manager of care skills while collaborating with other health professionals in the delivery of care. Clinical emphasis is on providing and managing care for a group of clients. Lecture 1.5 hours. Laboratory 4.5 hours per week. Prerequisites: NUR 2423. NUR 2433, NUR 2543, POS 1113. Corequisites: NUR 2564, NUR 2512, HIS 1483 or 1493.

\section*{NUR 2564 - Advanced Medical-Surgical Nursing} 4 Credits
This is the final course in Medical-Surgical nursing. Clinical and didactic emphasis is on care for adults with acute, complex, multi-system disorders. The role of nursing in disasters is introduced. Lecture 2 hours. Laboratory 6 hours. Prerequisites: NUR 2423, NUR 2433, NUR 2453, POS 1113. Corequisites: NUR 2543, NUR 2512, HIS 1483 or 1493.

\section*{NUR 2765 - Clinical Nursing I}

\section*{5 Credits}

The focus of this course is on practical application and understanding of basic psychomotor, cognitive, and affective nursing skills. Emphasis is on implementation of therapeutic interventions with clients throughout the lifespan, with attention to health promotion, disease prevention and health maintenance in various settings Lecture 2 hours. Laboratory 9.2 hours (average). Prerequisite: Admission to OU/TCC CBSN Nursing program.

\section*{NUR 2774 - Human Experience in Health}

\section*{4 Credits}

The focus is on providing a theoretical basis for concepts of health promotion, disease prevention and health maintenance to individuals across the lifespan. Biological, psychosocial, cultural, environmental concepts are addressed with attention to health promotion, and development determinants of health. Lecture 4 hours. No Laboratory. Prerequisite: Admission to OU/ TCC CBSN Nursing program.

\section*{NUR 2783 - Health Assessment}

\section*{3 Credits}

This theory lab course is an introduction to basic concepts of health assessment of individuals across the lifespan. The student will be prepared for basic assessment of individuals in the community and clients in stable condition in health care facilities. Lecture 2 hours. Laboratory 3 hours. Prerequisite: Admission to OU/TCC CBSN Nursing program.

\section*{NUR 2792 - Introduction to Philosophy \& Logic of Nursing}

2 Credits
This course is an introduction to core concepts inherent to the University of Oklahoma College of Nursing Baccalaureate Nursing curriculum. Students will operationalize the concepts in simulated exercises and begin to develop a philosophy and approach to the practice of nursing. Lecture 2 hours. No Laboratory. Prerequisite: Admission to OU/TCC CBSN Nursing program.

\section*{NUR 2865 - Clinical Nursing 2}

\section*{5 Credits}

The focus of this course is on the nursing care of individuals with biopsychosocial conditions within the context of their family and social structure. Clinical experiences will be in a variety of settings. No Lecture. Laboratory 15 hours. Prerequisites: NUR 2765, NUR 2774, NUR 2783, NUR 2792.

\section*{NUR 2874 - Human Experiences an Acute \& Chronic Illness 1}

\section*{4 Credits}

This course provides a theoretical basis for selected acute and chronic illnesses across the lifespan. The focus is on the use of critical thinking to develop rationale for nursing care of individuals with selected pathophysiologic conditions. Lecture 4 hours. No Laboratory. Prerequisites: NUR 2765, NUR 2774, NUR 2783. NUR 2792.

\section*{NUR 2883 - Family Focused Nursing}

4 Credits
A theoretical course providing a basis for the health promotion, health maintenance, and health restoration of families. Emphasis is on nursing care relating to the family building childbearing process, common reproductive health conditions, and health concerns affecting infants. Lecture: 3 hours. No Laboratory. Prerequisites: NUR 2765, NUR 2774,NUR 2783, NUR 2792.

\section*{NUR 2892 - Human Experiences of disAblities}

\section*{2 Credits}

This theory course focuses on nursing care of individuals and families experiencing biopsychosocial and behavioral changes associated with disabilities. Critical thinking will be used to develop rationale for nursing care across the lifespan that maximizes restoration and healthy adaptation to these lifestyle alterations. Lecture 2 hours. No Laboratory. Prerequisites: NUR 2765, NUR 2774, NUR 2783, NUR 2792.

\section*{NUR 2902 - Pharmacology in Nursing}

2 Credits
This theory course focuses on the nurse's responsibilities involved in the administration of drugs and the monitoring and evaluation of clients receiving prescribed and or over the counter medications. The general principles of drug activities are explored using a prototype drug for each class. Accurate dosage calculation is required. Lecture 2 hours. No Laboratory. Prerequisites: NUR 2765, NUR 2774, NUR 2783, NUR 2792.

\section*{NUR 2990 - Selected Topics in Nursing}

1-4 Credits
The study and/or analysis of a selected topic in Nursing. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{OCCUPATIONAL THERAPY ASSISTANT}

\section*{OTA 1203 - Introduction to Occupational Therapy} 3 Credits
Overview of the profession with emphasis on its history, philosophy, and organization. Explores the role of occupational therapy personnel in various disability areas. Lecture 3 hours. No Laboratory. Open to non-majors.

\section*{OTA 1293 - Introduction to Occupational Therapy II} 3 Credits
Fundamentals of OT practice including: OT process, multicultural, and familial issues and factors, uniform terminology, written and verbal communication skills, selfawareness, ethics, values, and documentation. Lecture 3 hours. No Laboratory. Prerequisites: program director's permission.

\section*{OTA 1303 - Clinical Conditions, Terminology, and Skills} 3 Credits
This course serves as an introduction to conditions commonly referred to and treated by occupational therapy practitioners. In addition students will gain knowledge in medical terminology and competence in patient care skills. Lecture 2 hours.
Laboratory 3 hours. Prerequisite: program director's permission

\section*{OTA 1352 - Neuroanatomy and Physiology for OTAs} 2 Credits
A comprehensive review of both structure and function of the nervous system and its functional relevance to the practice of Occupational Therapy. Lecture 2 hours. No Laboratory. Prerequisites: BIO 1314 and program director approval.

\section*{OTA 1363 - Applied Anatomy for OTAs}

3 Credits
A supplementary study of structure and function as it relates to the practice of occupational therapy. Kinesiology, musculoskeletal circulatory and nervous systems are emphasized. Lecture 2 hours. Laboratory 3 hours. Prerequisites: BIO 1314 and program director approval.

\section*{OTA 1403 - Therapeutic Media}

3 Credits
Theory and practice of selected activities used in occupational therapy to promote patient function. Includes: concepts of activity analysis, instruction of individuals and groups, problem solving, therapeutic applications, and laboratory and equipment maintenance. Various frames of reference used in occupational therapy will be applied. Lecture 2 hours. Laboratory 3 hours. Requires program director approval.

\section*{OTA 1443 - Psychosocial Theory and Practice}

3 Credits
Theory and application of occupational therapy in the evaluation and treatment of psychosocial dysfunction. Emphasis on the developmental continuum and major frames of reference for practice currently in use. Group dynamics and process. Psychosocial issues in other practice areas. Observation of treatment methods in various local settings. Lecture 2 hours. Laboratory 3 hours. Requires program director approval.

\section*{OTA 1483 - Physical Disabilities}

\section*{3 Credits}

Occupational therapy treatment techniques. Methods and adaptive equipment used with physically disabled. Observation of treatment methods under the supervision of practicing clinicians at various local clinical settings. Lecture 2 hours. Laboratory 3 hours. Requires program director approval.

\section*{OTA 1502 - Fieldwork I}

\section*{2 Credits}

Supervised work experience including observation and application of occupational therapy services. No Lecture. Laboratory: 40 hours per semester. Prerequisites: All previous OTA coursework with grade of "C" or better, and instructor permission.

\section*{OTA 2203 - Therapeutic Adaptations}

3 Credits
Theory and practice of therapeutic adaptations. Practical alterations to equipment, environment, and basic techniques, including mobility, orthotics, and electronics. Advanced activity analysis, therapeutic application, and resource development in this continuation of OTA 1403. Lecture 2 hours. Laboratory 3 hours. Requires program director approval.

\section*{OTA 2233 - Developmental Disabilities Therapy and Practice}

3 Credits
Theory and application of occupational therapy services for people with developmental disabilities. Emphasis will be on occupational therapy services provided from birth through school age and young adulthood. Frames of reference such as neurodevelopment treatment, sensory integration, developmental, and motor learning theory will be introduced and practiced. Students will develop treatment plans that take into account permeance areas, performance context, and performance components. Students will learn to give standardized assessments, and gain familiarity with the overall assessment process. Trends in special education and transition services will be explored. Lecture 2 hours. Laboratory 3 hours. Requires program director approval.

\section*{OTA 2263 - Current Trends in Occupational Therapy} 3 Credits
Selected readings and discussion of trends in current practice are offered. General topics include adult development and aging and activity programming. Community applied clinical practice is included. Lecture 2 hours. Laboratory 3 hours. Requires program director approval.

\section*{OTA 2356 - Fieldwork IIA}

\section*{6 Credits}

Provides practice experience under the supervision of qualified Occupational Therapists in affiliated healthcare facilities. No Lecture. Laboratory: 40 hours per week for 8 weeks. Prerequisites: Completed all OTA coursework with grade of "C" or better, and instructor approval. Fieldwork requirements must be completed within 18 months of didactic coursework.

\section*{OTA 2376 - Fieldwork IIB}

\section*{6 Credits}

Provides practice experience under the supervision of qualified Occupational Therapists in affiliated healthcare facilities. No Lecture. Laboratory: 40 hours per week for 8 weeks. Prerequisites: Completed all OTA coursework with grade of "C" or better, and instructor approval. Fieldwork requirements must be completed within 18 months of didactic coursework.

\section*{OTA 2493 - Advanced Therapeutic \\ Handling Techniques \\ 3 Credits}

Developmental processes provide a framework in determining strategies to reduce tone and improve motor control in neurologically impaired individuals. This course is a continuation of therapeutic exercise with theory and application in the areas of proprioceptive neuromuscular techniques, neurodevelopmental techniques, and other movement modifications. Lecture 3 hours. No Laboratory. Prerequisites: Concurrent enrollment in PTA 2384 or OTA 1483 and OTA 2233; graduate of a PTA/PT program or OTAVOT program; or instructor approval.

\section*{OTA 2990 - Selected Topics in Occupational Therapy Assistant \\ 1-4 Credits}

The study and/or analysis of a selected topic in Occupational Therapy Assistant. May be repeated with a different subject. Lecture 1-4 hours. No Laboratory.

\section*{PARALEGAL}

Students are required to earn a "C" or better in all PLG courses for graduation.

\section*{PLG 1213 - Introduction to the Legal System} 3 Credits
History and overview of the legal system, the role of the paralegal, legal ethics, unauthorized practice, the rules of professional conduct, importance of communications, judgment and analytical ability, terminology, sources, and works of the law. Lecture 3 hours. No Laboratory. Requires admission to the program.

\section*{PLG 1313 - Civil Procedure I}

3 Credits
A summary course of methods of pre-trial procedures, including interviewing, investigation, formal and informal discovery, and additional litigation support technology. Oklahoma and federal procedural rules will be covered. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1213 or instructor approval.

\section*{PLG 2303 - Civil Procedure II}

3 Credits
Analysis of civil procedure and instruction in preparation of documents used in lawsuits, covering pre- and post-trial matters evidentiary problems, and assistance during trials. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1213 and PLG 1313, or instructor approval.

\section*{PLG 2333 - Introduction to Legal Research and Writing} 3 Credits
Study of legal research and bibliography, research problems, legal drafting, and writing. Students will perform legal research and prepare memoranda. Lecture 1 hour. Laboratory 4 hours. Prerequisites: PLG 1113 and PLG 1213 or instructor approval.

\section*{PLG 2343 - Advanced Legal Research and Writing} 3 Credits
Advanced course in research and writing techniques, analysis, and strategies. Emphasis is on development of legal argument, format, and use of legal citations. Competency in WESTLAW, LEXIS, and the Internet as research tools will be achieved. Lecture 2 hours. Laboratory 2 hours. Prerequisites: ENG 1113, ENG 1213 and PLG 2333.

\section*{PLG 2353 - Contracts}

\section*{3 Credits}

A study of the law of contracts as it applies to the legal assistant. Drafting of contracts. Lecture 3 hours. No Laboratory. Prerequisite: PLG1313 or instructor approval.

\section*{PLG 2363 - Real Property Law}

\section*{3 Credits}

Study of general and Oklahoma law of real property. Drafting of documents for common real estate transactions. Also, various legal suits associated with real property. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1313 or instructor approval.

\section*{PLG 2373 - Computers in the Law}

\section*{3 Credits}

A beginning class covering the use of computer applications in legal organizations designed to introduce the use of computer software and hardware; word processing; databases; timekeeping and billing; docket control; case management; litigation support; computer-assisted research; courthouserelated applications; and specialized legal software. Lecture 2 hours. Laboratory 2 hours. Prerequisite: CSC1203 or instructor approval.

\section*{PLG 2403 - Principles of Family Law}

\section*{3 Credits}

Topics include divorce, separation, custody, adoption, change of name, guardianship, support, and settlement agreements. Study of District Court procedures. Lecture 3 hours. No Laboratory. Prerequisite:PLG 1313 or instructor approval.

\section*{PLG 2413 - Law Office Systems and Procedure}

3 Credits
Law office organization and theories of management; create systems; timekeeping and billing; law office equipment; preparation of forms and checklists; docket control; personnel problems; self-management; computer usage for management word processing, litigation support, and accounting. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1213 or instructor approval.

\section*{PLG 2423 - Corporations, Partnerships \& LLCs}

\section*{3 Credits}

A study of the formation and operation of proprietorships, partnerships, corporations, and other business operations, including a survey of the fundamental principles of law applicable to each. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1313 or instructor approval.

\section*{PLG 2433 - Bankruptcy}

\section*{3 Credits}

A study of the Bankruptcy Code and Rules of Procedure; the study and preparation of appropriate pleadings and schedules. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1313 or instructor approval.

\section*{PLG 2443 - Probate, Administration of Estates, and Trusts}

3 Credits
The fundamental principles of the law of wills and trusts, including simple will and trust forms; the organization and jurisdiction of an Oklahoma probate court; the administration of estates in Oklahoma probate court; practice in documentation. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1313 or instructor approval.

\section*{PLG 2453 - Administrative Law}

3 Credits
History and functions of administrative agencies, constitutional standards applied to agency operation, rulemaking by agencies, agency decision making and the scope of judicial review of agency decisions, and the manner of pursuing a claim through various federal and Oklahoma administrative agencies. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1313 or instructor approval.

\section*{PLG 2463 - Labor and Employment Law}

\section*{3 Credits}

Designed specifically for paralegals, with coverage of the National Labor Relations Act (labor union-management relations), employment discrimination laws, wrongful discharge, wage/hour laws, safety and health laws pertaining to the workplace, employment contracts, unemployment statutes. Emphasis will be given to research sources commonly used by labor attorneys. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1313 or instructor approval.

\section*{PLG 2473 - Torts and Insurance Law}

3 Credits
Coverage of both tort law and insurance law, and the overlap of the two. Torts coverage includes intentional torts, negligence and product liability, together with related legal doctrines and defenses. Insurance coverage includes insurable interests relating to the various torts, subrogation of the insured to the insurer, and various claims procedures. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1313 or instructor approval.

\section*{PLG 2483 - Native American Law}

\section*{3 Credits}

A historical analysis of the complex pattern of federal, state, and tribal laws that have affected Native Americans as individuals and as tribes. Areas of exploration may include federal treaties, federal policies, state compacts, and the principle of sovereignty. Practical application skills included. Lecture 3 hours. No Laboratory.
procedural criminal law, and the constitutional requirements pertaining to each. Lecture 3 hours. No Laboratory. Prerequisite: PLG 1313 or instructor approval.

\section*{PLG 2502 - Medical Record Analysis for Paralegals} 2 Credits
Basic medical terminology as contained in the medical record, analyzing the medical record in a litigation context, and creating a summary for the attorney's use in evaluating the case, both from a plaintiff's and defense standpoint. Lecture 2 hours. No Laboratory. Prerequisite: PLG 1313 or instructor approval.

\section*{PLG 2601 - Workers' Compensation for Paralegals} 1 Credit
An overview of the Oklahoma Workers' Compensation law, both substantive and procedural, including representation of the claimant and the respondent before the Workers' Compensation Court. Lecture 1 hour. No Laboratory. Prerequisite: PLG 1313 or instructor approval.

\section*{PLG 2611 - Social Security Disability}

1 Credit
Students will be introduced to topics in the law affecting securing disability payments through the social security system. Legal ethics involved in client representations will be emphasized. Lecture 1 hour. No Laboratory. Requires admission to the program.

\section*{PLG 2621 - Elder Law}

1 Credit
Students will be introduced to topics in the law affecting older persons. Such topics as financial and estate planning, health care, personal planning and protection, and consumer protection will be covered in the course. Lecture 1 hour. No Laboratory. Prerequisites: PLG 1213, PLG 1313, and PLG 2333.

\section*{PLG 2802 - Internship}

\section*{2 Credits}

A practicum course intended to provide the student with work experience as a legal assistant under the supervision of a practicing attorney. While the work experience will vary from internship to internship, legal ethics will be emphasized for all by a screening examination. No Lecture. Laboratory 8 hours per week. Prerequisites:PLG 1313, PLG 2333, and PLG 2413 or instructor approval.

\section*{PLG 2813 - Internship}

3 Credits
A practicum course intended to provide the student with work experience as a legal assistant under the supervision of a practicing attorney. While the work experience will vary from internship to internship, legal ethics will be emphasized for all by a screening examination. No Lecture. Laboratory 12 hours per week. Prerequisites: PLG 1313,PLG 2333, and PLG 2413 or instructor approval.

\section*{PLG 2493 - Criminal Law for Paralegals}

3 Credits
This course for paralegals includes both substantive and

\section*{PLG 2990 - Selected Legal Topics}

1-4 Credits
A study of varying legal topics (substantive, procedural, or skilloriented) of current interest to paralegals. Lecture 1-4 hours. No Laboratory. Prerequisite: PLG 1313 or instructor approval.
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PATIENT CARE TECHNICIAN
(See Nursing Program and Course Descriptions)

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\section*{PHARMACY TECHNOLOGY}

\section*{PHT 1318 - Pharmacy Technician I}

8 Credits
A study of the technical tasks, duties and responsibilities of a pharmacy technician with emphasis on professional conduct, ethics, job overview, department layouts, work areas, aseptic and sterile techniques, mathematical calculations, medical terminology, drug nomenclature, dosage forms, patient information and profile systems, third party payers, receiving and filling prescriptions, quality assurance and control, parenterals, assisting with processing health insurance forms and computer data processing. Lecture 8 hours. No Laboratory. Must have a grade of "C" or better to pass the course. Requires admission to the Pharmacy Technology Program.

\section*{PHT 1414 - Pharmacy Technician Practicum I}

\section*{4 Credits}

Introduction to the practical work site application for the technical tasks, duties, and responsibilities of a pharmacy technician. These may include communication skills, customer services and relations, professionalism and ethics, pharmacy law and rules, security and safety rules, record keeping, preparing, packaging and distributing medications, IV admixtures, quality assurance drug compounding, financial issues organization and duties of pharmacy environments. Lecture 3 hours. Laboratory 2 hours. Must have a grade of "C" or better to pass the course. Requires admission to the Pharmacy Technology Program.

\section*{PHT 1524 - Preceptorship I}

\section*{4 Credits}

Introduction to the practical work site application for the technical tasks, duties and responsibilities of a pharmacy technician and preparation for the National Pharmacy Technician Certification Examination. Work site skills may include basic biopharmaeceutics, factors affecting drug activity, drug routes and formulations, prescription processing, parenterals and IV admixtures, drug compounding, inventory management, financial issues, organization and duties of institutional pharmacies, and other environments. Lecture 3 hours. Laboratory 2 hours. Must have a grade of "C" or better to pass the course. Prerequisite: Admission to Pharmacy Technology Program and concurrent enrollment in PHT 1318, PHT 1414 or approval of instructor.

\section*{PHT 2990 - Selected Topics in Pharmacology Technology}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Pharmacy Technology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{PHILOSOPHY}

\section*{PHI 1113 - Introduction to Philosophy (H)} 3 Credits
A survey course designed to acquaint the student with some of the fundamental problems in philosophy and with methods used to deal with them. Some principal views, both ancient and modern, are examined as possible solutions. Recommended for second semester freshmen. Lecture 3 hours. No Laboratory.

\section*{PHI 1133 - Philosophy in Literature (H)}

\section*{3 Credits}

The analysis and relationship of ideas in literature (poems, plays, novels, and short stories) to philosophical themes. Course content to vary from semester to semester. Lecture 3 hours. No Laboratory.

\section*{PHI 1143 - Introduction to Ethics: Business Issues (H) 3 Credits}

An introductory level course in ethics, focusing on the types of situations that pose ethical problems in business. An attempt will be made to help the student develop an ethical framework which will allow the student to address ethical issues in the business world. Lecture 3 hours. No Laboratory.

\section*{PHI 1213 - Religions of the World: The Eastern Tradition ( \(\mathrm{H}, \mathrm{I}\) )}

3 Credits
A survey of the Oriental religious heritage of India, Japan, China, and others. Some of the specific religions examined are Hinduism Buddhism, Taoism, Confucianism, Shintoism, Jainism, and Sikhism. Lecture 3 hours. No Laboratory.

\section*{PHI 1223 - Religions of the World: The Western Tradition (H) \\ 3 Credits}

A survey of the Western religious heritage. Christianity, Judaism, Islam, Greek mythology, and others will be studied. Lecture 3 hours. No Laboratory.

\section*{PHI 2113 - Logic}

\section*{3 Credits}

A first course in logic using the study of language, semantics, deductive reasoning, the scientific method, and other processes of clear and precise thinking. Lecture 3 hours. No Laboratory.

\section*{PHI 2133 - Introduction to Ethical Thinking (H) 3 Credits}

An examination of moral and social problems from the philosophical perspective, including: responsibility to one's self and to society, moral and social values, and conflicts of values. Classical as well as current topics will be discussed. Lecture 3 hours. No Laboratory.

\section*{PHI 2143 - Introduction to Social and Political Philosophy (H)}

3 Credits
A survey of major philosophical theories concerning political and social organization, and discussion of such topics as the rights of humans, natural law, social contract, legitimate and illegitimate use of political force, and philosophical views of the "ideal society." Lecture 3 hours. No Laboratory.

\section*{PHI 2153 - Medical Ethics (H)}

3 Credits
An introductory level course in ethics with special emphasis on issues that arise in the allied medical professions. Such topics as abortion, birth defects, euthanasia, medical experimentation, and confidentiality will be discussed from the ethical perspective. Lecture 3 hours. No Laboratory.

\section*{PHI 2163 - Introduction to the History and Philosophy of Science (H)}

3 Credits
An introductory survey of the development of Western science, and some of the philosophical issues involved in this development. The development of the scientific method will be examined, as will the effect that this method has had on man's perception of himself and the world around him. Lecture 3 hours. No Laboratory.

\section*{PHI 2173 - Introduction to the Philosophy of Religion} 3 Credits
An introductory discussion in topics such as the existence of God, the problem of evil, the possibility and nature of religious knowledge, immortality, and the role of reason, faith, and authority in religion. Lecture 3 hours. No Laboratory.

\section*{PHI 2203 - Symbolic Logic}

\section*{3 Credits}

A study of symbolic logic as a method of analyzing propositions and arguments. Applications in science and other areas will be studied. Lecture 3 hours. No Laboratory.

\section*{PHI 2990 - Selected Topics in Philosophy}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Philosophy. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{PHLEBOTOMY}
(See Medical Laboratory Technology Program and Course Descriptions)

\section*{PHYSICAL EDUCATION}

\section*{PE 1002 - Physical Education Activity} 2 Credits
Participation in selected physical education activity events organized and conducted by Tulsa Community College, including, but not limited to, intramural activity sports. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1022 - Folk Dance}

2 Credits
A course which centers on the major national folk dances from around the world. Emphasis is placed on reproducing the style and attitude which characterizes the nations from which the dances originate. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1032 - Advanced Folk}

2 Credits
A course which centers on the complex and difficult folk dances from around the world. Emphasis is placed on reproducing the style and attitude which characterizes the nations from which the dances originate. Lecture 1 hour. Laboratory 2 hours. Requires instructor approval.

\section*{PE 1042 - Modern Dance for Fitness}

2 Credits
An activity course for students who want to achieve or retain physical fitness through dance. Develops flexibility, strength, endurance, and self-expression. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1062 - Ballet for Fitness}

2 Credits
An activity course for students who want to achieve or retain physical fitness through ballet. Develops flexibility, strength, endurance, and self- expression. No Pointe (toe) work. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1072 - Intermediate Ballet Technique}

2 Credits
Continuation of PE 1062. Beginning Pointe work will be introduced. Continuing emphasis on graceful movement with additional emphasis on technique. The development of appreciation of dance as an art form. Lecture 1 hour. Laboratory 2 hours. Prerequisite: Two semesters of PE 1062 or instructor approval.

\section*{PE 1082 - Advanced Ballet Technique}

2 Credits
Continuation of PE 1072 with strong emphasis on Pointe work for women and elevation for men. Stage presence, pantomime, and the art of pas de deux will be developed. Lecture 1 hour. Laboratory 2 hours. Prerequisite:Two semesters of PE 1072 or instructor approval.

\section*{PE 1092 - Karate}

2 Credits
An introduction of the basics of modern day American karate. Learn punches, kicks, blocks, throws, jointlocks, pressure points, falls, rolls, forms, musical weapons, open hand forms, and mind development. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1113 - Personal, School and Community Health 3 Credits}

A study in health for individuals and the community as to identification of various diseases, means of transmission, and prevention. Lecture 3 hours. No Laboratory.

\section*{PE 1143 - Foundations of Physical Education}

\section*{3 Credits}

Designed for professional orientation in physical education, health and recreation. Brief history, philosophy and modern trends of physical education, teacher qualification, vocational opportunities, expected competencies and skill testing comprise the contents of the course. For students majoring in Physical Education. Lecture 3 hours. No Laboratory.

\section*{PE 1192 - Handball/Racquetball}

2 Credits
Lecture 1 hour. (Requires 2 hours per week laboratory.)

\section*{PE 1202 - Bowling I}

\section*{2 Credits}

Students will be required to pay for shoe rental and number of games bowled. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1232 - Swimming I}

\section*{2 Credits}

Students may be required to pay for swim time. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1242 - Ballroom Dance}

\section*{2 Credits}

Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1252 - Weight Training I}

\section*{2 Credits}

This course is designed for men and women who wish knowledge and understanding of weight lifting as it applies to the conditioning, toning, and strengthening of the body. Students will learn how the body and certain muscle groups react to moderate exercise and workouts. Lab exercise will include workouts utilizing various types of weight training equipment. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1262 - Body Mechanics}

\section*{2 Credits}

The course consists of aerobic exercise routines, fitness testing, and assigned readings. Exercise includes a warm-up period; stretching; arm, leg, abdominal, and aerobic routines; and a cool down period. Routines are challenging, yet basic, adding benefits of improved flexibility, balance, agility, and cardiovascular fitness. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1282 - Tennis I}

\section*{2 Credits}

Footwork and eye to hand coordination skills required for forehand, backhand, volley, service, and overhead smash competency. Rules, scoring, and court etiquette for singles and doubles. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1292 - Golf I}

2 Credits
Students will be required to pay for green fees. Lecture 1 hour. (Laboratory 2 hours.

\section*{PE 1302 - Jogging}

\section*{2 Credits}

Basic skills for the beginner in acquiring knowledge and understanding of jogging, walking, running, and exercise, and the role these play for a healthier body. The session consists of warm-up exercises, walking/ jogging, and cool-off exercises. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1322 - Beginning Ice Skating}

2 Credits
Basic skills for the beginning skater. Student will be required to pay for skate rental and ice time. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1341 - Introduction to Rock Climbing}

1 Credit
This class will teach the basic techniques of safety and climbing.
Knots: rewoven figure eight, figure eight on a bight, bowline, double fisherman, clove hitch, square. Proper sizing of harness. Belay and Rappel technique. Discussion on the history of climbing in the U.S. and an overview of climbing styles (lead, top rope, aid, alpine). Rating systems both U.S. and European. Climbing techniques: flagging, cantilevers, cross-thru, high steps, back steps, drop knees, stemming, etc. No Lecture. Laboratory 2 hours.

\section*{PE 1352 - Irish Folk Dance}

2 Credits
This course is an introduction to step dancing and contemporary Irish dance. Timing, posture and technique will be areas of concentration. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1362 - Badminton I}

2 Credits
Footwork and eye to hand coordination skills required for forehand, backhand, volley, and service. Rules, scoring, and court etiquette for singles and doubles. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1401 - Introduction to Physical Education Activity} 1 Credit
Participation in selected physical fitness activities. Laboratory 2 hours.

\section*{PE 1412 - Yoga}

2 Credits
Physical exercise with techniques that integrate the mind, body and spiritual awareness. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1422 - Women on Weights}

2 Credits
Weight training and weight conditioning designed especially for women. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1501 - Fencing I}

1 Credit
A course that centers on the basic skills and movements of fencing. No Lecture. Laboratory 2 hours.

\section*{PE 1552 - Bicycling for Fitness}

\section*{2 Credits}

Basic skills for the beginner in acquiring knowledge and understanding of bicycling, both mountain and road, and the role these play for a healthier body. The sessions consist of warm-up, bicycling, and cool off exercises. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1622 - Water Safety Instruction}

2 Credits
Students may be required to pay for swim time. Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 1642 or instructor approval.

\section*{PE 1632 - Aerobics}

2 Credits
An exercise program of choreographed routines involving continuous rhythmic activity designed for the beginner. Each session consists of a warm up, routines designed for muscle tone and flexibility, an aerobic section, and a cool down with stretching. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 1642 - Life Guarding}

2 Credits
Students may be required to pay for swim time. Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 2232 or instructor approval.

\section*{PE 1652 - Cardio Kickboxing}

2 Credits
Exercise designed to condition the body for maximum health and fitness by movement involving punching and kicking. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 2011 - Intermediate Rock Climbing}

1 Credit
A continuation of PE 1341. This class will teach advanced techniques of safety and climbing. No Lecture. Laboratory 2 hours.

\section*{PE 2042 - Women on Weights II}

2 Credits
This advanced level course is a continuation of PE 1422 and includes topics such as muscle development, nutrition, assessment of body composition, fitness level testing, cardiovascular activity and weight training essential to increased body strength, muscle tone and loss of body fat. Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 1422 or permission of the instructor.

\section*{PE 2051 - Fencing II}

1 Credit
This is a continuation of PE 1501. No Lecture. Laboratory 2 hours. Prerequisite: PE 1501 or instructor approval.

\section*{PE 2092 - Bicycling for Fitness II}

2 Credits
This is a continuation of PE 1552. Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 1552 or instructor approval.

\author{
PE 2111 - Professional Careers in Nutritional Sciences \\ 1 Credit \\ Career opportunities in dietetics and food and nutrition. Roles and responsibilities of nutritional sciences professionals. Routes to professional memberships and current issues in professionalism. Lecture 1 hour. No Laboratory.
}

\section*{PE 2142 - Karate II}

2 Credits
This is a continuation of PE 1092. Lecture 1 hour. Laboratory 2
hours. Prerequisite: PE 1092 or instructor approval.

\section*{PE 2192 - Handball/Racquetball II \\ 2 Credits}

Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 1192 or instructor approval.

\section*{PE 2202 - Bowling II}

2 Credits
Students will be required to pay for shoe rental and number of games bowled. Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 1202 or instructor approval.

\section*{PE 2212 - First Aid}

2 Credits
The standard first aid course of the American Red Cross with special emphasis on resuscitation, control of bleeding and shock, poisons, choking, and transportation of injured persons. Training in emergency care of most acute illnesses and/or accidents included. CPR certification will be through American Heart Association and/or American Red Cross. Lecture 2 hours. No Laboratory.

\section*{PE 2232-Swimming II}

\section*{2 Credits}

Students may be required to pay for swim time. Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 1232 or instructor approval

\section*{PE 2252 - Weight Training II}

2 Credits
This course is a continuation of PE 1252. Lecture 1 hour.
Laboratory 2 hours. Prerequisite: PE 1252 or instructor approval.

\section*{PE 2263 - Principles in Health Education and Health Promotion}

3 Credits
Introduction to the field of health education and health promotion focusing on health principles, theories, career opportunities and a field experience. Lecture 3 hours. No Laboratory.

\section*{PE 2282 - Tennis II}

2 Credits
A continuation of PE 1282 with focus on improving skills, using tennis strategy, and encourages both doubles and singles tournament play. Lecture 1 hour. Laboratory 2 hours. Prerequisites: PE 1282 or instructor approval.

\section*{PE 2292-Golf II}

2 Credits
Students will be required to pay for green fees. Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 1292 or instructor approval.

\section*{PE 2302 - Substance Abuse I}

2 Credits
A general survey course designed for awareness of drug use and abuse in our society. Topics covered are trends in drug education various aspects of treatment, drugs on the job, smoking, properties of alcohol, stimulants, depressants, narcotics, psychedelics, and marijuana. Lecture 2 hours. No Laboratory.

\section*{PE 2312 - Body Conditioning}

\section*{2 Credits}

A course which develops the body for physical fitness, muscle toning, muscle strengthening and assistance in controlling excessive weight and maintaining correct body posture. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 2322 - Walking for Fitness}

2 Credits
This course is designed for those wanting to start a cardiovascular fitness program by walking. Students will meet three times over the class semester with the instructor and the group. Students will keep and submit weekly logs to the instructor. Lecture 1 hour. Laboratory 2 hours.

\section*{PE 2332 - Jogging for Fitness}

\section*{2 Credits}

This course is designed for those wanting to become more cardiovascular fit. Students should have been walking vigorously for six weeks or have completed the walking class (PE 2322). Students will meet three times over the class semester with the instructor and the group. Students will keep and submit weekly logs to the instructor. Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 2322 or instructor approval.

\section*{PE 2342 - Recreation Therapy/Rope Course Training} 2 Credits
Certified low sequencing of icebreakers, warm-ups, and initiative for low challenge course elements. Trained in belaying, repelling, high set-ups, rescues, and all technical aspects of running a high challenge course. Lecture 2 hours. No Laboratory. (Miscellaneous fees may be required.)

\section*{PE 2363 - Recreation Therapy/Outdoor Adventure} 3 Credits
Field based course to understand origins and components of involvement in outdoor pursuits. Numerous skills applied to various outdoor settings. Lecture 3 hours. No Laboratory. (Miscellaneous fees may be required.)

\section*{PE 2412 - Body Conditioning II}

\section*{2 Credits}

This is a continuation of PE 2312. Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 2312 or instructor approval.

\section*{PE 2422 - Walking for Fitness II}

2 Credits
This course is a continuation of PE 2322. Lecture 1 hour. Laboratory 2 hours. Prerequisite: PE 2322.

\section*{PE 2432 - Jogging for Fitness II}

2 Credits
This is a continuation of PE 2332. Lecture 1 hour. Prerequisite: PE 2332 or instructor approval.

\section*{PE 2513 - Introduction to Leisure Services}

3 Credits
The nature, scope and significance of leisure and recreation. Delivery systems for leisure services, major program areas and the interrelationship of special agencies and institutions serving the recreation needs of society. Lecture 3 hours. No Laboratory.

\section*{PE 2533 - Introduction to Therapeutic Recreation 3 Credits \\ Theory and application of therapeutic recreation with emphasis on types of illnesses and disabilities, delivery systems, programming and services. Lecture 3 hours. No Laboratory.}

\section*{PE 2603 - Total Wellness 3}

\section*{Credits}

Overview of individual, inter-personal, and socio-cultural issues that have an impact on health. Behavioral decision making, social relations, cultural diversity and environmental sensitivity. Lecture 3 hours. No Laboratory.

\section*{PE 2623 - Fitness Assessment and Programming 3 Credits}

Introduces fitness testing and exercise prescription for apparently healthy individuals and special populations. Covers cardiovascular fitness, muscular strength and endurance, flexibility, nutrition, body compositions, reassessment, exercise compliance and testing procedures. Further exploration with group assessments, individual and group exercise plans and progressions, and recreational program planning. Lecture 2 hours. Laboratory 3 hours. Prerequisites: BIO 2154 and PE 1113 or PE 2603 and PE 2263, PE 2653, or current enrollment.

\section*{PE 2653 - Applied Anatomy and Kinesiology} 3 Credits
Anatomical study of structure and function of musculoskeletal systems. Common anatomical injuries and diseases will be presented with each joint structure. Lecture 3 hours. No Laboratory.

\section*{PE 2662 - Care and Prevention of Athletic Injuries} 2 Credits
This is an introductory course in sports medicine. Topics covered will include anatomy, physiology, injury evaluation, recognition, treatment and prevention. Acute problems will be discussed. Lecture 2 hours. No laboratory.

\section*{PE 2772 - Health and Human Performance Internship} 2 Credits
This course is designed to give students field experience through a supervised work experience with an appropriate agency. This experience should relate to the student's area of concentration. In addition to the hours of on-site work experience, students will meet weekly in a lecture/discussion to discuss and analyze their experiences and concerns. Lecture 1 hour. Laboratory 8 hours per week. Prerequisites: BIO 1383, PE 2263, PE 2623 or can be concurrent enrollment, PE 2653, PE 1113 or PE 2603, and current First Aid/CPR Certification.

\section*{PE 2990 - Selected Topics in Physical Education}

1-4 Credits
The study and/or analysis of a selected topic in Physical Education. May be repeated with a different topic. Lecture 14 hours. No Laboratory.

\section*{PHYSICAL SCIENCE}

\section*{PSC 0123 - Basic Physical Science}

\section*{3 Credits}

This course is designed to provide a laboratory based science for students who have not met the lab science requirements for state college admissions standards. The primary objective is to provide knowledge of the basic principles and concepts of physics and chemistry involving physical and chemical properties and phases of matter, acids and bases, heat, motion, electricity, magnetism, and light. Lecture 2 hours. Laboratory 2 hours.

\section*{PSC 1114 - General Physical Science (L,N)} 4 Credits
A study of the basic principles and concepts of physics and nuclear science, chemistry, astronomy, meteorology, and geology. The course relates these basic sciences to man's physical world at an introductory level, and is intended primarily for the non-science major. Lecture 3 hours. Laboratory 2 hours. Prerequisite: One year of high school algebra, or MTH 0013 or equivalent.

\section*{PSC 2111 - Science Projects I: Project Wild}

1 Credit
Project Wild is an exciting wildlife curriculum that helps teachers and youth leaders teach math, science, social studies, art, language, and P.E.This is a supplementary, interdisciplinary, easy-to-use, hands-on program that develops skills in creative problem solving, critical thinking, evaluation, and research. Miscellaneous expenses may be incurred. Lecture 1 hour. No Laboratory.

\section*{PSC 2121 - Science Projects II: Project Learning tree 1 Credit}

PLT is a K-12 conservation education program that uses the forest as a "window" to the natural world, helping young people gain an awareness and knowledge of the world around them as well as their place in it. This is a supplementary, interdisciplinary, easy-to-use, hands-on program that develops skills in creative problem solving, critical thinking, evaluation and research. The course guides offer many new ideas for current
and previous participants. Miscellaneous expenses may be incurred. Lecture 1 hour. No Laboratory.

\section*{PSC 2131 - Science Projects III: Project Wet}

1 Credit
Project WET is an interdisciplinary water education program intended to supplement a school's existing curriculum. The goal of Project WET is to facilitate and promote awareness, appreciation, knowledge and stewardship of water resources. This course provides activities that are ready to be used. Miscellaneous expenses may be incurred. Lecture 1 hour. No Laboratory.

\section*{PSC 2141 Project Flying Wild}

\section*{1 Credit}

Developed by the Council for Environmental Education, this course focuses on bird migration and related habitat issues. This course is an interdisciplinary, hands-on program that develops skills in creative problem solving, critical thinking, research skills and service learning. The course provides standards-based learning opportunities to engage students. Some course components are taught outdoors. Lecture 1 hour. No Laboratory.

\section*{PSC 2151 The Nature of Science}

1 Credit
This course will introduce students to an approach to "doing" science by using the scientific method. This scientific inquiry method will be used to examine problems from several different areas of science including: biology, physics, chemistry, astronomy, and geology. Lecture 1 hour. No Laboratory.

\section*{PSC 2990 - Selected Topics in Physical Science} 1-4 Credits
The study and/or analysis of a selected topic in Physical Science. May be repeated with a different topic. Lecture 14 hours. No Laboratory.

\section*{PHYSICAL THERAPIST ASSISTANT}

\section*{PTA 1203 - Anatomy and Physiology for PTAs}

\section*{3 Credits}

A supplementary study of the human body's structure and function as these relate to the practice of physical therapy. Emphasis will be placed on musculoskeletal, circulatory, and nervous systems. Lecture 2 hours. Laboratory 3 hours. Prerequisite: Admission to the PTA program.

\section*{PTA 1231 - Clinical Practice I}

1 Credit
An orientation and observation of physical therapy services, including treatment preparation and assistance to the physical therapist, supervised application of selected basic treatment skills, and introduction to medical documentation. No Lecture. Laboratory 40 hours over a one (1) week time frame. Prerequisites: All previous PTA coursework with a grade of " C " or better, or instructor approval.

\section*{PTA 1242 - Human Growth and Development}

\section*{2 Credits}

Study and application of current theories regarding human growth in social, cognitive, behavioral and motoric domains as related to the practice of physical therapy. Lecture 2 hours. No Laboratory. Requires admission to the PTA program.

\section*{PTA 1303 - Introduction to Physical Therapy} 3 Credits
History, philosophy, ethics, settings, and trends in physical therapy. Delineation of roles of the health care team, and of physical therapy personnel, with interpersonal skills needed to function as a health care provider and team member. Principles and procedures of basic patient care skills and documentation. Lecture 2 hours. Laboratory 3 hours. Requires admission to the PTA Program,

\section*{PTA 1363 - Kinesiology for PTAs}

3 Credits
A study of anatomical structures and movement as related to physical therapy procedures. The basic principles of the relationship between joint motion and mechanical action. Application of principles with emphasis on the analysis and bio-mechanics of all human motion. For PTA students. Lecture 2 hours. Laboratory 2 hours. Prerequisites: All previous PTA coursework with a grade of "C" or better or instructor approval.

\section*{PTA 1383 - Pathophysiology for PTAs}

\section*{3 Credits}

A study of selected disease and injuries as they relate to clinical conditions seen in the practice of physical therapy. Lecture 3 hours. No Laboratory. Prerequisite: All previous PTA coursework with a "C" or better or instructor approval.

\section*{PTA 1392 - Clinical Procedures I}

2 Credits
Principles and techniques of massage, superficial thermal agents, and pulmonary rehabilitation. Emphasis on physiological changes and effects in commonly seen diagnosis and in response to treatments. Laboratory practice with emphasis on positioning and manual skills. Lecture 1 hour. Laboratory 3 hours. Prerequisites: All previous PTA coursework with a grade of "C" or better or instructor permission.

\section*{PTA 2113 - Rehabilitation}

3 Credits
A study of principles of functional training as they apply to a variety of diagnoses seen in Physical Therapy.Theory and therapeutic techniques involving gait, functional mobility, assistive devices, and the progression of rehabilitation. Lecture 2 hours. Laboratory 3 hours. Prerequisites: All previous PTA coursework with a grade of "C" or instructor approval.

\section*{PTA 2332-Clinical Practice II}

2 Credits
A supervised clinical experience; two concurrent weeks of full time clinical education exposure including observations and applications of physical therapy services. In addition, a weekly group discussion of selected topics, in a colloquium format. Lecture 1 hour. Laboratory 80 hours over a two week time
frame. Prerequisites: All previous PTA coursework with a "C" or better, or instructor approval.

\section*{PTA 2343 - Clinical Procedures II}

3 Credits
Theory, physiology, and application of heat, cold, light, water, electricity, and mechanical compression/distraction in therapeutic treatment of tissues. Overview of medical physics. Lecture 2 hours. Laboratory 3 hours. Prerequisites: All previous PTA coursework with a grade of " C " or better or instructor approval.

\section*{PTA 2373 - Therapeutic Exercise I}

3 Credits
General and specific exercises for conditions commonly referred to physical therapy. Principles involved in the theory and practical applications of specific therapeutic exercise and mechanical appliances. Lecture 2 hours. Laboratory 3 hours. Prerequisites: All previous PTA coursework with a grade of "C" or better or instructor approval.

\section*{PTA 2383 - Therapeutic Exercise II}

3 Credits
Continuation of Therapeutic Exercise I and additional theory and application of exercise techniques, with emphasis on treatment of long-term disabilities. Lecture 2 hours. Laboratory 3 hours. Prerequisites: All previous PTA course work with a grade of "C" or better or instructor approval.

\section*{PTA 2432 - Clinical Practice III}

2 Credits
A supervised clinical experience; two concurrent weeks of full time clinical education exposure including observations and applications of physical therapy services. In addition, a weekly group discussion of selected topics, in a colloquium format. Lecture 1 hour. Laboratory 80 hours over a two week time frame. Prerequisite: All previous PTA coursework with a grade of "C" or better or instructor approval.

\section*{PTA 2442 - Psychosocial Aspects of Physical Therapy 2 Credits}

A survey course explaining the psychological and sociological effects of physical therapy intervention on patients with various physical disabilities, including the impact of culture, and economics with regard to family and societal interaction. The student will also participate in 8 hours of community involvement in a selected service used to promote the awareness of social responsibility, citizenship and/or advocacy. Lecture 2 hours. No Laboratory. Prerequisites: All previous PTA coursework with a grade of "C" or better or instructor approval.

\section*{PTA 2486 - Clinical Practice IV}

\section*{6 Credits}

Supervised application of physical therapy procedures in the treatment of patients at a variety of selected physical therapy clinics. Successful completion of this course with a grade of "C" or better is required for graduation from the PTA program. No Lecture. Laboratory 40 hours per week for 12 weeks. Prerequisites: Completion of all PTA courses with a grade of "C" or better, or instructor approval.

\section*{PTA 2493 - Advanced Therapeutic Handling Techniques}

\section*{3 Credits}

Development processes provide a framework in determining strategies to reduce tone and improve motor control in neurologically impaired individuals. This course is a continuation of therapeutic exercise with theory and application in the areas of proprioceptive neuromuscular techniques, neurodevelopmental techniques, and other movement modifications. Lecture 3 hours. No Laboratory. Prerequisites: Concurrent enrollment in PTA 2383 or OTA 1483 and OTA 2233 graduate of a PTA/ PT program or OTA/OT program; or instructor approval.

\section*{PTA 2522 - Special Studies in Clinical Practice}

\section*{2 Credits}

Advanced study and application of physical therapy practices in a selected topic determined by the student and faculty in the areas of geriatrics, orthopedics, pediatric-neuro or acute care. Lecture 1 hour. Laboratory 2 hours. Prerequisites: All previous PTA coursework with a grade of "C" or better or instructor approval.

\section*{PTA 2543 - Neuroscience}

\section*{3 Credits}

A comprehensive review of the anatomy and physiology of the nervous system, with emphasis on the functional relationship between the nervous system and the musculoskeletal system. Basic review of the pathology of neurological disorders frequently encountered in the practice of physical therapy. Lecture 3 hours. No Laboratory. Prerequisites: All previous PTA coursework with a grade of " \(C\) " or above or permission of the instructor.

\section*{PTA 2551 - Pharmacology for PTAs}

1 Credit
General pharmacologic concepts for the physical therapist assistant student who has no background in pharmacology. The therapeutic effects, side effects, and clinical applications to physical therapy are stressed for drugs affecting the major systems of the body. Lecture 1 hour. No Laboratory. Prerequisites: All previous PTA coursework with a grade "C" or better or instructor approval.

\section*{PTA 2990 - Selected Topics in Physical Therapy} 1-4 Credits
The study and/or analysis of a selected topic in Physical Therapy. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory. Prerequisites: PTA 1203, BIO 1314, and PTA 1303 with a grade of "C" or better.

\section*{PHYSICS}

\section*{PHY 1014 - Conceptual Physics (L)}

\section*{4 Credits}

An introductory physics course intended for non-science majors. The general ideas of both Newtonian and Einsteinian physics will be discussed in relation to current philosophical and social topics. Emphasis will be put on the scientific method of investigation and on distinguishing science from
pseudo-science. Not recommended for students who intend to do major work in mathematics or science. Lecture 3 hours. Laboratory 2 hours.

\section*{PHY 1114 - General Physics I (L)}

\section*{4 Credits}

Physics for liberal arts students. Study of the principles of elementary physics involving mechanics, heat, fluids, waves, and sound. Lecture 3 hours. Laboratory 3 hours. Prerequisite: MTH 1513 or MTH 1454 or equivalent, or instructor approval.

\section*{PHY 1214 - General Physics II (L)}

4 Credits
A continuation of PHY 1114 involving electricity, magnetism, light, and modern physics. Lecture 3 hours. Laboratory 3 hours. Prerequisite: PHY 1114.

\section*{PHY 2034 - Engineering Physics I (L)}

4 Credits
Physics for engineering and science students. Principles of mechanics, thermodynamics, and wave motion based on the calculus development. Lecture 3 hours. Laboratory 3 hours. Prerequisite: MTH 2114.

\section*{PHY 2124 - Engineering Physics II (L)}

\section*{4 Credits}

Physics for engineering and science students. A continuation of PHY 2034 dealing with magnetism, electricity, and light. Lecture 3 hours. Laboratory 3 hours. Prerequisites: PHY 2034 and MTH 2124.

\section*{PHY 2990 - Selected Topics in Physics}

1-4 Credits
The study and/or analysis of a selected topic in Physics. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{POLITICAL SCIENCE}

POS 1113 - American Federal Government 3 Credits
A study of the principles, structure, processes, and functions of the United States federal government. Lecture 3 hours. No Laboratory.

\section*{POS 2013 - Introduction to Comparative Governments (S)}

3 Credits
A comparison of basic structures and functions of European governments; i.e., Great Britain, France, Germany, and Russia, a survey of their value systems and political institutions. Lecture 3 hours. No Laboratory. Prerequisite: POS 1113.

\section*{POS 2023 - Introduction to American Politics}

3 Credits
The course will explore the role of partisan politics within the American political system. Emphasis will be placed on elections, political parties, the presidency, and Congress. Lecture 3 hours. No Laboratory. Prerequisite: POS 1113.

\section*{POS 2033 - Introduction to Political Thought}

\section*{3 Credits}

A description and analysis of the development of American political thought from early American and European philosophies to contemporary theorists. Lecture 3 hours. No Laboratory. Prerequisite: POS 1113.

\section*{POS 2043 - Introduction to City Government}

\section*{3 Credits}

City government and politics; organization, structure, functions and administrative problems of the City of Tulsa; charter of the City of Tulsa; legislative function of the city council and administrative function of the mayor; fiscal and administrative systems. Lecture 3 hours. No Laboratory. Prerequisite: POS 1113

\section*{POS 2103 - Introduction to State and Local Government}

3 Credits
General features of state constitutions, powers of governor, state legislative structure and processes, state judicial systems, and structure and form of municipal and county governments - with emphasis on Oklahoma governmental and political structure. Lecture 3 hours. No Laboratory. Prerequisite: POS 1113 and sophomore standing, or instructor approval.

\section*{POS 2133 - Introduction to Public Administration} 3 Credits
Principles of public administration and the significance of administration in the modern state. Analysis of administrative theory, organization, and problems. A study of public relations, fiscal, personnel, and administrative responsibilities. Lecture 3 hours. No Laboratory. Prerequisite: POS 1113 and sophomore standing, or instructor approval.

\section*{POS 2153 - Introduction to the Constitution and Judicial Process \\ 3 Credits}

A history and interpretation of the federal constitution and judicial system, with a summary of the leading constitutional decisions by the courts. Lecture 3 hours. No Laboratory. Prerequisites: POS 1113 and sophomore standing, or instructor approval.

\section*{POS 2203 - Introduction to International Relations} 3 Credits
A survey of relations among nations; peace and peace-keeping; conflict and conflict resolution; basic concepts, theories and realities of national power, foreign policy, and international interactions. Lecture 3 hours. No Laboratory. Prerequisites: POS 1113 and sophomore standing.

\section*{POS 2893 - Government Internship}

3 Credits
Selected students will be assigned to work in governmental offices in the Tulsa area. Interns will accomplish specified learning and performance objectives. Each intern will analyze the major functions of the office and compare the practical experience with current governmental theories in a term paper. The internship may be repeated for up to six hours credit. No Lecture. Laboratory 12 hours. Prerequisites:POS 1113 or concurrent enrollment, and selection by Intern Coordinator.

\section*{POS 2990 - Selected Topics in Political Science 1-4 Credits}

The study and/or analysis of a selected topic in Political Science. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{PORTUGUESE}

\section*{POR 1103 - Portuguese I}

\section*{3 Credits}

A beginning course in understanding, speaking, reading, and writing Portuguese. The first in a sequence of two related course sections. See POR 1213. Lecture 3 hours. Self-paced laboratory may be required.

\section*{POR 1213 - Portuguese II}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Portuguese. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: POR 1103 or approval of instructor.

\section*{POR 2990 - Selected Topics in Portuguese}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Portuguese. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{PROCESS TECHNOLOGY}

\section*{PRT 1123 - Introduction to Process Technology}

\section*{3 Credits}

Introduction to process operations in the petrochemical industry including: operator roles, responsibilities and expectations; plant terminology; safety and environmental responsibilities; applied organic and inorganic chemistry; applied physics; plant equipment, utility systems; product handling; flow diagrams; general process overviews; basics of process control; and plan organizations. This course will expose students to an overview of the Process Technology certificate/degree program, including the mental and physical requirements of the Process Technician career. Plant tours will be conducted. Lecture 3 hours. No Laboratory.

\section*{PRT 1133 - Safety, Health \& Work Practices}

\section*{3 Credits}

Introduction to occupational safety, health and environmental practices and associated equipment including: safety mindset and attitude; personal safety equipment; general safety policies and procedures; hazards communications; HAZWOPER/ emergency response; first aid and CPR; industrial hygiene; exposure monitoring; and environmental compliance. This course will give students an overview of various governmental regulations mandated by OSHA, EPA, SARA, RCRA, DOT, NFPA, etc. Lecture 3 hours. No Laboratory.

\section*{PRT 2024 - Process Tech I (Equipment)}

\section*{4 Credits}

This course involves the fundamental and operating considerations of Process Equipment such as: valves and piping; pumps and compressors; generators; turbines; motors; lubrication systems; heat exchangers; furnaces and boilers; towers; drums; separators; and reactors. This course will examine thermodynamic and hydraulic aspects, as well as the mechanical characteristics of plant equipment. Lecture 3 hours. Laboratory 1 hour. Prerequisite: PRT 1123.

\section*{PRT 2034 - Industrial Instrumentation}

4 Credits
This course is designed to introduce the student to a simple pneumatic control loop. Specifically, the student will be introduced to pressure, temperature, level and flow transmitters and the various transducers used in the detection of changes in process variables; pneumatic controllers, valve positioners, control valve types, pneumatic relays and the null-balance system are also included as part of the control loop. Lecture 4 hours. No Laboratory. Prerequisite: PRT 1123.

\section*{PRT 2134 - Process Tech II (Systems)}

\section*{4 Credits}

A familiarization with the general types of processes found in the chemical and refining industry including: distillation and fractionation; reaction; absorption; adsorption; extraction; stripping; cracking; reforming; alkylation; delayed coking; hydroprocessing; and sulfur recovery. This course also includes an explanation of product blending and water treatment, as well as steam and electrical power generation. Lecture 4 hours. Laboratory 1 hour. Prerequisite: PRT 2024.

\section*{PRT 2224 - Process Tech III (Operations)}

4 Credits
This course will concentrate on the duties, responsibilities and expectations of the Process Operator with emphasis on understanding and adherence to procedures associated with start-up, shutdown, normal and temporary plant operations. Equipment monitoring, preventative maintenance, training and response to abnormal and emergency operating conditions are stressed as they apply to the work crew and operations team. Students will receive a "sense of reality" regarding the career of a Process Technician, including tips on adjusting to shift work, diversity in the workplace and communicating with the work team and customers. Lecture 4 hours. Laboratory 1 hour. Prerequisite: PRT 1123, PRT 2024 and PRT 2134.

\section*{PRT 2243 - Principles of Quality}

\section*{3 Credits}

The history of quality will be explored from Deming's theories to current applications in today's petrochemical industry. Internal and external customer/supplier relationships of a business which affect the qualitative aspects of quality and the statistical methods, which affect the quantitative aspects of measuring quality, will be stressed throughout this course. Students will be exposed to the benefits of continuous improvement and quality work as they pertain to developing a high performance work team. Lecture 3 hours. No Laboratory. Prerequisite: MTH 1454.

\section*{PRT 2324 - Process Troubleshooting}

\section*{4 Credits}

This course utilizes heat, mass and energy balances and operating data to identify and correct process abnormalities using techniques such as "cause and effect" and "root cause" analysis. Students will acquire and develop troubleshooting techniques associated with petrochemical processes through group exercises in a work team environment. Lecture 4 hours. Laboratory 1 hour. Prerequisite: PRT 2224

\section*{PSYCHOLOGY}

\section*{PSY 1023 - Psychology of Personal Adjustment} 3 Credits
A course designed to acquaint the student with some of the principles of psychology which will assist in understanding his or her own behavior and that of others. Five major topic areas are covered: personality theories, adjustment, stress, abnormal behavior, and therapy methods. Lecture 3 hours. No Laboratory.

\section*{PSY 1113 - Introduction to Psychology (S) 3 Credits}

A survey of the major areas of study in psychology such as: motivation, learning, physiology, personality theories and treatment social psychology, psychological disorders, perception, memory, and cognition thought. Lecture 3 hours. No Laboratory.

\section*{PSY 1313 - Human Relations (S)}

3 Credits
An experiential course involving the direct application of psychological principles to human relations problems. Special emphasis will be placed on group dynamics and personal adjustment factors as related to communication, decision making, and problem solving in human interchanges. Lecture 3 hours. No Laboratory.

\section*{PSY 2023 - Developmental Psychology}

3 Credits
A theoretical and research based psychology course that covers social, emotional, physical and cognitive aspects of human development throughout the life-span. Lecture 3 hours. No Laboratory. Prerequisite: PSY 1113 or instructor approval.

\section*{PSY 2053 - Social Psychology}

3 Credits
A study of the psychological basis of social interaction and change that covers the following topics: conformity, social influence, social cognition, prosocial behavior, prejudice, group processes, interpersonal attraction, and aggression. Lecture 3 hours. No Laboratory. Prerequisite: PSY 1113 or instructor approval.

\section*{PSY 2123 - Leadership Development (S) \\ 3 Credits}

This course is designed to provide emerging and existing leaders the opportunity to explore the concept of leadership and to develop and improve their leadership skills. The course integrates reading from the humanities, experiential exercises, films and contemporary readings on leadership. Lecture 3 hours. No Laboratory.

\section*{PSY 2130 - Crisis Intervention and Experience}

\section*{1-3 Credits}

The study of crisis intervention including models of responding, counseling techniques and community resources. Crisis intervention specialization areas include mental illness, substance abuse, suicide, homelessness, grief, and violence. Course includes lecture plus a supervised practicum in an approved social services agency. Lecture 1 hour. Laboratory 1-4 hours. Prerequisite: PSY 1113 or SOC 1113.

\section*{PSY 2143 - Guided Activities in Service Learning}

3 Credits
Service learning combines community service with classroom instruction, focusing on critical, reflective thinking, as well as personal and civic responsibility. This course is a directed study at self-selected sites within the Tulsa community. Within the context of field experiences, students are offered a reciprocal opportunity to develop skills and acquire knowledge while providing service and assistance to the community. Lecture/ Experiential-based learning 3 hours. No Laboratory.

\section*{PSY 2193 - Personality Theories}

3 Credits
A psychology course examining personality processes and the various theoretical approaches to the study of personality such as: psychodynamic, behavioral, phenomenological, trait, and social learning theories. Lecture 3 hours. No Laboratory. Prerequisite: PSY 1113 or instructor approval.

\section*{PSY 2203 - Mind and Behavior}

3 Credits
This course covers the cognitive basis of human behavior. It will focus on the study of recent research on the functions of the human brain, the development of the mind, and how our developing understanding of brain/behavior interactions might be used to solve human problems. The television series The Mind accompanies the texts. Lecture 3 hours. No Laboratory. Prerequisite: PSY 1113 or permission of the instructor.

\section*{PSY 2213 - Brain and Behavior}

\section*{3 Credits}

This course covers both the biological basis of human behavior (including the nervous system, homeostasis, biological clocks, etc.) and the psychological consequences of the biology of our species (feelings, learning and memory, thinking and consciousness, the malfunctioning brain, etc.). The course also includes speculation on future developments in brain research. Lecture 3 hours. No Laboratory. Prerequisite: BIO 1114, BIO 1224, BIO 1314, or PSY 1113. Cross listed as BIO 2213.

\section*{PSY 2223 - Behavioral Statistics}

\section*{3 Credits}

Application of descriptive and inferential analyses of data are major topics. Specific topics that are covered (but not limited to) are: central tendency, dispersion, the standard normal distribution, correlation, regression, probability theory, single-sample analyses, two-sample analyses, ANOVA and its variations, and a variety of nonparametric analyses, The student will be using the most current computer software available as a basis for these analyses. Lecture 3 hours. No Laboratory. Prerequisites: MTH 1513 or instructor approval, and PSY 1113.

\section*{PSY 2313 - Psychology and Law (S)}

\section*{3 Credits}

Consideration of the integration of psychology as a component of the law serves as a basis for the course. Attention will be paid to issues common to both psychology and the law. Students will investigate mental illness and legal issues which commonly occur as a result of mental illness. Insanity, legal competency, competency to stand trial, guardianship, as well as incarceration and its psychological results, and other pertinent topics are explored. Lecture 3 hours. No Laboratory.

\section*{PSY 2323 -Conflict Resolution}

\section*{3 Credits}

An experiential course aimed at the application of the principles of human relations to interpersonal conflicts. Emphasis will be placed on the nature of conflict and integrative methods of conflict resolution through third-party intervention. Specific areas of conflict commonly encountered in work and social situations (e.g., stress, sexism, racism, ageism) will be examined. Lecture 3 hours. No Laboratory.

\section*{PSY 2423 - Introduction to Abnormal Psychology 3 Credits}

A psychology class exploring the major categories of mental disorders, including their causes and treatment. Lecture 3 hours. No laboratory. Prerequisite: PSY 1113 or instructor approval.

\section*{PSY 2523 - Child Psychology}

\section*{3 Credits}

Child psychology is the systematic investigation of the psychological processes of childhood. The course surveys normal childhood from a theoretical and empirical base including the cognitive, social, emotional, and physical changes from conception to late childhood. Lecture 3 hours. No Laboratory. Prerequisite: PSY 1113 and PSY 2023 or permission of the instructor.

\section*{PSY 2533 - Adolescent Psychology}

3 Credits
Adolescent psychology is the systematic investigation of the psychological processes of adolescence. The course surveys normal adolescence from a theoretical and empirical base including the cognitive, social, emotional, and physical changes from youth into pre-adulthood. Lecture 3 hours. No Laboratory. Prerequisite: 1113 and PSY 2023 or permission of the instructor.

\section*{PSY 2613 - Adult Psychology}

\section*{3 Credits}

Adult psychology is the systematic investigation of the psychological processes of the adult years with an emphasis on the social emotional and cognitive changes which occur after adolescence. Lecture 3 hours. No laboratory. Prerequisites: PSY 1113 and PSY 2023 or instructor approval.

\section*{PSY 2633 - Industrial and Organizational Psychology (S)} 3 Credits
Applications of the principles of psychology to the problems of business and industry will be explored. Special attention will be given to the areas of communication, motivation, job satisfaction, personnel selection, placement, and training. Lecture 3 hours. No Laboratory. Prerequisite: PSY 1113 or instructor approval.

\section*{PSY 2713 - Aging and Behavior (S)}

\section*{3 Credits}

In the later adult years, we recognize age related sequential changes. These are physiological, psychological, and sociological. This course attempts to describe these changes, with an emphasis on optimal and satisfactory adaptations to them by the individual and by society. Lecture 3 hours. No Laboratory. Prerequisite: PSY 1113 or instructor approval.

\section*{PSY 2813 - Human Sexuality (S)}

\section*{3 Credits}

Human sexuality is presented as an ever-varying constant of the entire life span. Human sexuality involves biological, sociological, psychological, and behavioral components influenced by feelings, attitudes, and social institutions which make sexuality a unique experience. Lecture 3 hours. No Laboratory. Prerequisite: PSY 1113 or instructor approval.

\section*{PSY 2990 - Selected Topics in Psychology}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Psychology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory. Prerequisite: PSY 1113 or instructor approval.

\section*{PURCHASING AND MATERIALS \\ MANAGEMENT}

\section*{PMM 1303 - Basics of Supply Chain Management}

\section*{3 Credits}

A survey course designed to provide an introduction and overview to the field of material management and physical distribution. Topics covered include production and inventory control, purchasing, transportation, warehousing and materials handling, order processing, communications, and problems and issues related to the field. Lecture 3 hours. No Laboratory.

\section*{PMM 1313 - Fundamentals of Purchasing}

\section*{3 Credits}

Study of purchasing function, organization, policies, legal aspects, ethics, source of supply, quality concepts, and quantity and pricing determinations. Lecture 3 hours. No Laboratory.

\section*{PMM 1343 - Principles of Transportation}

3 Credits
An introduction to the factors governing the classification of freight, freight rate construction, pricing theory, freight tariffs, shipping documentation, freight claims, negotiation, international shipping, and special freight services and their relative importance one to the other. Lecture 3 hours. No Laboratory.

\section*{PMM 1363 - Intermediate Purchasing}

3 Credits
Study of traffic, surplus, storekeeping, budgets, international purchasing, cost improvement, forecasting, automation, make or buy decisions, and capital improvements. Lecture 3 hours. No Laboratory. Prerequisite: PMM 1313 with a grade of "C" or better, or permission of associate dean.

\section*{PMM 2323 - Negotiations and Contracts}

3 Credits
A course designed to familiarize the student with the principles of contract law which govern purchasing transactions and to assist the student in developing negotiation skills needed in the contract formation process. Lecture 3 hours. No Laboratory. Prerequisite: PMM 1363 or permission by associate dean.

\section*{PMM 2343 - Forecasting}

3 Credits
A course describing the nature and purpose of efforts directed toward forecasting material requirements. Content includes statistical and other forecasting techniques, simulation, linear programming, modeling, and mathematical techniques. Lecture 3 hours. No Laboratory. Prerequisites: MTH 2193 and PMM 1303 with a grade of "C" or better, or permission of associate dean.

\section*{PMM 2353 - Inventory Planning}

3 Credits
An overview of the dynamics of managing inventory in the constantly changing industrial and commercial environment. Topics include forecasting sales and inventory requirements, computer applications to inventory control problems, building inventory models, simulation, and the relationships of inventory control to marketing management and production control. Lecture 3 hours. No Laboratory. Prerequisites: MTH 2193 and PMM 1303 with a grade of " \(C\) " or better, or permission of associate dean.

\section*{PMM 2363 - Materials Requirements Planning (MRP)} 3 Credits
Manufacturing management techniques presented using bills of material, inventory, open order data and master production information to calculate requirements for materials, and to establish and maintain valid due dates on orders. Lecture 3 hours. No Laboratory. Prerequisite: PMM 1303 with a grade of " C " or better, or permission of associate dean.

\section*{PMM 2413 - Capacity Planning and Production Activity Control}

3 Credits
Techniques involved in the function of establishing, measuring, and adjusting limits or levels of capacity that are consistent with a production plan. Will also include techniques used by management to plan, schedule, and control material operations and to evaluate the effectiveness of shop production operations which will include master scheduling. Lecture 3 hours. No Laboratory. Prerequisite: PMM 1303 with a grade of " \(C\) " or better, or permission of associate dean.

\section*{PMM 2433 - Logistics Management}

\section*{3 Credits}

A general introduction course for the concepts of managing the efficient flow of raw material, parts, and finished products from point of origin to point of consumption. This course will cover design and control of a logistics system, customer service, order processing, financial control, transportation, warehouse management, and related activities for the corporate logistics manager. Prerequisite: PMM 1303 with a grade of "C" or better, or permission of associate dean.

\section*{PMM 2453 - Manufacturing Resources Planning ( MRP 11)}

\section*{3 Credits}

A course that presents a new approach and philosophy to the management of manufacturing concerns. This course shows the benefits of an integrated simulation of all business components for smoother and more efficient utilization of manufacturing resources through a coordinated company business plan. Lecture 3 hours. No Laboratory. Prerequisites: PMM 1303 and PMM 2363 with a grade of "C" or better, or permission of the associate dean.

\section*{PMM 2493 - CPM Review}

3 Credits
A review course for students studying for one or more modules of the CPM (Certified Purchasing Manager) exam. Topics discussed will be requirements needed prior to taking the exam, forms and other materials related to certification, and study materials. Lecture 3 hours. No Laboratory. Prerequisites: PMM 1313 and PMM 1363.

\section*{PMM 2990 - Selected Topics in Purchasing and Materials Management \\ 1-4 Credits}

The study and/or analysis of a selected topic in Purchasing and Materials Management. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{QUALITY CONTROL TECHNOLOGY}

\section*{QCT 1223 - Blueprint Reading}

3 Credits
For students enrolled in Quality Control studies. Study includes principles of geometric dimensioning and tolerancing applied to hands-on interpretation of engineering drawings and manufactured components. Principles of standard drawing views, isometric and projected views and dimensional layouts. Students will utilize their knowledge of fractional and decimal mathematics to determine part geometrics. Lecture 3 hours. No Laboratory.

\section*{QCT 1313 - Introduction to Quality Control}

\section*{3 Credits}

A survey of the fundamental concepts by which the quality of goods and services is evaluated and improved. The student will develop a basic understanding of the definitions, principles, and objectives of the quality field. Lecture 3 hours. No Laboratory.

\section*{QCT 1443 - Geometric Dimensioning \& Tolerancing} 3 Credits
An in depth study of dimensional tolerancing as identified in the American National Standards Institute, ANSI Y 14.5 specification. This course will explore the meaning of symbols used in the International Standard, their application and the processes necessary to achieve the specified geometry, as well as common practices used in Engineering drawings and practical limits and challenges in the manufacturing environment. Lecture 3 hours. No Laboratory. Prerequisite: NCM/QCT 1223 or any DRF class.

\section*{QCT 2153 - Lean, Six Sigma, Quality Systems}

\section*{3 Credits}

An introduction to the history, evolution and practice of advanced manufacturing and quality systems, including Lean Manufacturing, Kiazen, 5-S, Kanban, Toyota Production System and Six Sigma. Exploration into the theory and tools behind today's most advanced business philosophies. Lecture 3 hours. No Laboratory.

\section*{QCT 2333 - Inspection Principles}

3 Credits
Study of inspection techniques and requirements for receiving, in-process, and final inspection. Emphasis on quality planning and improvement of inspection and inspector efficiency, in both job-shop and mass production environments. Study will include reporting of vendor surveillance, quality characteristics, non-conformance, and costs. Lecture 3 hours. No Laboratory. Prerequisite: QCT 1313.

\section*{QCT 2343 - Statistical Process Control}

\section*{3 Credits}

Study of statistical methods used in quality, lean manufacturing, and six-sigma. Specific topics include sampling, probability, analysis of data, capability studies and control charts. This is a hands-on course that is spreadsheet based with minimum math and theory. Lecture 3 hours. No Laboratory. Prerequisites: MTH 1454 and QCT 1313.

\section*{QCT 2363 - Quality Standards and Specifications} 3 Credits
Introduction to codes and industry standards, with emphasis on interpretation through understanding of formats and organization of standards. Study will include methods for review of procedures and specifications. Lecture 3 hours. No Laboratory. Prerequisite: QCT 1313.

\section*{QCT 2373 - Quality Costs, Surveys and Audits} 3 Credits
A study of identifying and assigning the true costs of quality comprises the first one-third of the course. The remainder of the course involves defining, discussing and practicing principles of surveying and auditing of quality procedures and systems. Lecture 3 hours. No Laboratory. Prerequisite: QCT 1313.

\section*{QCT 2413 - ISO 9000/2000}

\section*{3 Credits}

A study of the system of customer driven International Standards that can apply to Engineering, Manufacturing, and Service Companies. This course includes an in-depth probe into the full meaning and intent of the standards, as well as the implementation methods to achieve compliance and certification to ISO 9001,9002, or 9003. It approaches the standards through auditing methods, which will provide the student with the knowledge to review procedures for compliance with standards. Lecture 3 hours. No laboratory.

\section*{QCT 2990 - Selected Topics in Quality Control Technology \\ 1-4 Credits}

The study and/or analysis of a selected topic in Quality Control Technology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{RADIOGRAPHY}

\section*{RT 1201 - Introduction to Radiographic Clinical Education}

1 Credit
This course enables potential Radiography students to become familiar with clinical education centers available to TCC students, and to observe duties performed by radiographers. Student will choose four separate clinical sites to visit. No lecture. Laboratory 16 hours.

\section*{RT 1212 - Introduction to Radiography}

2 Credits
An introductory course designed to acquaint the student to the field of medical radiography. Topics include patient care, ethics, radiation protection, positioning terminology, chest and abdomen radiography, and film critique. Lecture 2 hours. No Laboratory. Requires admission to the program or instructor approval.

\section*{RT 1224 - Radiographic Clinical Education I}

4 Credits
A clinical experience course to familiarize the student with the hospital and the radiology department. Experience will concentrate on office procedures, film filing, darkroom, routine positioning, and film critique. No Lecture. Laboratory 32 hours. Prerequisite: Admission to the program.

\section*{RT 1313 - Radiographic Anatomy and Positioning I} 3 Credits
Topics covered in this course include upper and lower extremities, complete spine, bony thorax, mammography, terminology, and film critique. Lecture 2 hours. Laboratory 3 hours. Prerequisites: RT 1212 and RT 1224.

\section*{RT 1324 - Radiographic Clinical Education II} 4 Credits
A continuation of clinical experience to develop positioning and technique skills related to routine and fluoroscopic exams. Film critique also will be covered. No Lecture. Laboratory 16 hours. Prerequisites: RT 1212, RT 1224, and concurrent enrollment in RT 1313 and RT 1372.

\section*{RT 1333 - Radiographic Anatomy and Positioning II} 3 Credits
Topics covered in this course include digestive, urinary, biliary, and reproductive systems, skulls, and pediatrics. Related terminology and film critique. Lecture 2 hours. Laboratory 3 hours. Prerequisites: BIO 1314 with a grade of "C" or better, RT 1313, RT 1324, and RT 1372.

\section*{RT 1344 - Radiographic Clinical Education III}

\section*{4 Credits}

A continuation of clinical experience to develop positioning and technique skills related to routine and fluoroscopic exams. Pediatric patient care will be developed. Film critique also will be covered. No Lecture. Laboratory 16 hours. Prerequisites: RT 1313, RT 1372, RT 1324, and concurrent enrollment in RT 1333 and RT 1382.

\section*{RT 1372 - Radiographic Technique}

2 Credits
An introductory course on radiographic exposure factors including radiation protection, films, screens, and film processing. Lecture 1 hour. Laboratory 2 hours. Prerequisites: RT 1212, RT 1224, and concurrent enrollment in RT 1313.

\section*{RT 1382 - Advanced Radiographic Technique} 2 Credits
An in-depth study of radiographic exposure factors and radiographic quality assurance. Lecture 1 hour. Laboratory 2 hours. Prerequisites: RT 1313, RT 1372, RT1324, and concurrent enrollment in RT1333.

\section*{RT 2301 - Radiographic Seminar}

1 Credit
A study of tomography, image intensification, trauma radiography, portable radiography, and surgical procedures. Lecture 1 hour. No Laboratory. Prerequisites: RT 1333, RT 1344, and RT 1382.

\section*{RT 2314 - Radiographic Clinical Education IV} 4 Credits
A continuation of clinical education in all areas of the radiology department including surgery. Film critique also will be covered. No Lecture. Laboratory 32 hours. Prerequisites: RT 1333, RT 1344, RT 1382, and concurrent enrollment in RT 2301.

\section*{RT 2323 - Radiographic Special Procedures}

\section*{3 Credits}

An introductory course on special procedures, digital imaging and related equipment. Other topics include CT, MRI, cross sectional anatomy and registry review. Lecture 2 hours. Laboratory 2 hours. Prerequisites: RT 2301, RT 2314, CSC 1203 or equivalent, and concurrent enrollment in RT 2343.

\section*{RT 2336 - Radiographic Clinical Education V \\ 6 Credits}

A continuation of clinical education in all areas of the radiology department including special procedures, CT, and MRI. Film critique will be covered. No Lecture. Laboratory 24 hours. Prerequisites: RT 2301, RT 2314, and concurrent enrollment in RT 2343 and 2383.

\section*{RT 2343 - Radiographic Biology and Pathology} 3 Credits
A study of radiation biology, radiographic pathology, and departmental administration. Lecture 2 hours. Laboratory 2 hours. Prerequisites: RT 2301, RT 2314, and concurrent enrollment in RT 2385.

\section*{RT 2356 - Radiographic Clinical Education VI} 6 Credits
The final course of clinical education in all areas of the radiology department. Clinical rotations will be structured to the students' areas of need. Film critique will be covered. No Lecture. Laboratory 24 hours. Prerequisites: RT 2343, RT 2336, RT 2383, and concurrent enrollment in RT 2323.

\section*{RT 2383 - Radiographic Physics}

\section*{3 Credits}

Topics covered include units of measurement, mechanics, structure of matter, electrostatics, magnetism, electrodynamics electromagnetism, rectification, \(x\)-ray tube, \(x\)-ray circuits, and equipment. Lecture 3 hours. No Laboratory. Prerequisites: MTH 0123 or equivalent, RT 2301, RT 2314, and concurrent enrollment in RT 2343.

\section*{RT 2990 - Selected Topics In Radiologic Technology 1-4 Credits}

The study and/or analysis of a selected topic in Radiologic Technology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{RELIGIOUS STUDIES}

\section*{REL 1113 - Introduction to Religious Studies (H)} 3 Credits
An introductory study of the major materials and methods for the systematic examination of the roles and functions of religion in human life. Examples of religion drawn from ancient and modern times, Western and Eastern traditions, and ritual and ethical behaviors are explored. Comparative, phenomenological, historical, literary, philosophical, and theological methods are used. Lecture 3 hours. No Laboratory.

\section*{REL 1213 - Religions of the World: \\ The Eastern Tradition (I)}

3 Credits
A survey of Oriental religious heritage of India, Japan, China, and others. Some of the specific religions examined are Hinduism, Buddhism, Taoism, Confucianism, Shintoism, Jainism, and Sikhism. Lecture 3 hours. No Laboratory.

\section*{REL 1223 - Religions of the World: \\ The Western Tradition (H)}

3 Credits
A survey of Western religious heritage. Christianity, Judaism, Islam, Greek mythology, and others will be studied. Lecture 3 hours. No Laboratory.

\section*{REL 2113 - Old Testament (H)}

\section*{3 Credits}

English translation of the Hebrew Scriptures (Christian Old Testament) with emphasis upon historical background, critical analysis, and theological interpretations. In addition, it will be shown how themes from these scriptures have been used in various forms of literature. Lecture 3 hours. No Laboratory.

\section*{REL 2123 - New Testament (H)}

\section*{3 Credits}

The writings of the New Testament in their historical contexts. Emphasis on interpreting selected New Testament passages and how these readings have affected subsequent forms of literature. Lecture 3 hours. No Laboratory.

\section*{REL 2173 - Religion and Society (H)}

\section*{3 Credits}

An introductory social scientific survey of religion viewed from the psychological, sociological, and anthropological perspectives. Patterns in the internal development of religious groups, as well as the relationships between religion and other social and cultural institutions will be examined. Lecture 3 hours. No Laboratory.

\section*{REL 2233 - Religion in America (H)} 3 Credits
A survey of the varieties of religious expression in America. The course includes an examination of various Protestant, Catholic and Jewish experiences in America, as well as the impact of Native-American, African-American, Hispanic, and Asian religions on American history and culture. The phenomenon of new cults and spiritualities will also be explored. Lecture 3 hours. No Laboratory.

\section*{REL 2243 - Christian Ethics and Social Thought (H)} 3 Credits
An examination of moral and social problems from the Christian perspective and discussion of practical applications in areas such as human rights, abortion, peace, justice, poverty, euthanasia, and the like. Lecture 3 hours. No Laboratory.

\section*{REL 2313 - Religion in Film (H)}

\section*{3 Credits}

An analysis of the treatment of religion in general, of particular religions, and of religious themes, ideas, and issues in popular film. The emphasis and films will vary from semester to semester. Lecture 3 hours. No Laboratory.

\section*{REL 2330 - Field Studies in Religion}

\section*{1-3 Credits}

This course is designed to provide students with on-site experiences of different religious expressions. The course includes lectures and readings to prepare students for the on-site experience and discussion and written field reports to evaluate the on-site experience. May be repeated with different on-site experiences for up to nine hours credit. Requires instructor approval.

\section*{REL 2990 - Selected Topics in Religious Studies 1-4 Credits}

The study and/or analysis of a selected topic in Religious Studies. May be repeated with a different topic. Lecture 1-4 hours No Laboratory.

\section*{RESPIRATORY CARE}
(Students are required to earn a "C" or better in
Respiratory Care courses in order to graduate.)
RES 1213 - Neonatal and Pediatric Respiratory Care 3 Credits
A study of the respiratory care of neonatal and pediatric patients, including the etiology, and pathophysiology of neonatal and pediatric respiratory disorders as well as the respiratory care procedures used in the management of these patients.Lecture 3 hours. No Laboratory. Prerequisites: RES 1232, RES 1353, and RES 1313 with a grade of " \(C\) " or better.

\section*{RES 1232 - Applied Sciences for Respiratory Care} 2 Credits
This course introduces the concepts and principles of basic mathematics, chemistry, physics, and microbiology as they apply to the practice of respiratory therapy. Lecture 1 hour. Laboratory 2 hours. Prerequisites: Admission to the Respiratory Care Program, and concurrent enrollment in RES 1313.

\section*{RES 1241 - Respiratory Care Patient Assessment 1 Credit}

This course is designed to introduce the fundamentals of respiratory care patient assessment. Topics that will be covered include patient communications, ethics, vital signs, physical examination of the patient, clinical laboratory studies, chest x-rays, assessment of older patients, and documentation in patient medical records. Lecture 1 hour. No Laboratory. Prerequisites: Admission to the Respiratory Care Program, concurrent enrollment in RES 1353 or instructor approval.

\section*{RES 1251 - Physician/Therapist Interaction}

1 Credit
This course is designed to improve communication skills with the physician through direct interaction. Students will present case reports to class which will be evaluated and critiqued by the physician. Lecture 1 hour. No Laboratory. Requires admission to the Respiratory Care Program.

\section*{RES 1313 - Respiratory Care Techniques and Theory I} 3 Credits
The fundamentals of respiratory care will be covered including various oxygen delivery equipment, oxygen cylinders, humidity and aerosol therapy, equipment cleaning techniques and patient assessment techniques. Lecture 2 hours. Laboratory 2 hours. Prerequisites: Admission to the program and concurrent enrollment in RES 1511.

\section*{RES 1353 - Cardiopulmonary Anatomy and Physiology 3 Credits}

A comprehensive study of the structures and functions of the respiratory and cardiovascular systems. The principle in which cardiopulmonary physiology is integrated with renal function and acid-base balance are introduced. Lecture 2 hour. Laboratory 2 hours. Prerequisites: Admission to the program and BIO 1314 with a grade of "C" or better or instructor approval.

\section*{RES 1403 - Respiratory Care Techniques and Theory II} 3 Credits
A study of oxygen therapy and oxygen administering devices. IPPB therapy, chest physiotherapy, the therapeutic use of gas mixtures, and airway management. Clinical time will deal with observing and performing the procedures learned. Lecture 2 hours, Laboratory 2 hours. Prerequisites: RES 1241, RES 1313, RES 1511 with a grade of " \(C\) " or better.

\section*{RES 1413 - Clinical I}

3 Credits
Introduction to practical clinical application of oxygen therapy, humidity and aerosol therapy, patient assessment, airway management, hyperinflation therapies and pulmonary function
studies under supervision. No Lecture. Laboratory 24 hours to include Clinical Skills Lab. Prerequisites: RES 1232, RES 1313, RES 1353, RES 1511 and concurrent enrollment in RES 1403.

\section*{RES 1443 - Respiratory Care Pathophysiology}

\section*{3 Credits}

This course provides a detailed study of primary and secondary cardiopulmonary disorders and disease states. Etiology, pathophysiology, clinical and functional manifestations and current treatment/management strategies will be covered in detail. Lecture 3 hours. No Laboratory. Prerequisites: RES 1241, RES 1232, RES 1353 with a grade of " C " or better.

\section*{RES 1461 - Introduction to Respiratory Care Science 1 Credit}

An introductory course designed to acquaint the student to the field of Respiratory Care Science. Covers such topics as Respiratory Care Sciences pertaining to patient care procedures, ethics, credentialing, professional organizations, program admission requirements and procedures. Lecture 1 hour. No Laboratory. Open enrollment for non-majors.

\section*{RES 1492 - Cardiopulmonary Diagnostics I}

2 Credits
A course designed for the study, practice and interpretation of pulmonary function studies. Areas include basic instruction in the measurement of lung volumes and capacities, timed testing, volume-time curves and flow-volume loops. Advanced instruction includes DLCO, nitrogen wash-out and helium dilution studies, body plethysmography and ventilation/ perfusion lung scans. Lecture 1 hour. Laboratory 2 hours. Prerequisites: Admission to the Respiratory Care Program and RES 1353.

\section*{RES 1511- Clinical Procedures Laboratory}

1 Credit
Introduction to the theory and application of selected respiratory care procedures. No lecture. Laboratory 2 hours. Prerequisites: Admission to the Respiratory Care Program and concurrent enrollment in RES 1313.

\section*{RES 1522 - Introduction to Mechanical Ventilation}

\section*{2 Credits}

This course introduces the theory and practice of mechanical ventilation as well as an overview of mechanical and physiological concepts. Topics covered include indications for mechanical ventilation, current types of ventilators, and general principles of ventilator management. Lecture 2 hours. No Laboratory. Prerequisites: RES 1232, RES 1313 and RES 1353.

\section*{RES 2103 - Clinical II}

\section*{3 Credits}

This course is a continuation of practical clinical application of therapies previously presented with an introduction to the intensive care unit and pulmonary function laboratory under supervision. In addition this course will include the Clinical Skills laboratory. No Lecture. Laboratory 24 hours. Prerequisites: RES 1403, RES 1413, RES 1443, RES 1492 and RES 2352 with a grade of "C" or better.

\section*{RES 2203 - Clinical III}

3 Credits
Continuation of practical clinical application of the critical respiratory care patient in the ICU with emphasis on ventilator management. Emphasis will also be placed on the respiratory care management of patients in the home and rehabilitation setting with the student rotating through both a rehab hospital and a respiratory home care company. No Lecture. Laboratory 24 hours. Prerequisites: RES 2103, and concurrent enrollment in RES 2462, RES 2323 and RES 2392.

\section*{RES 2323 - Advanced Topics in Mechanical Ventilation} 3 Credits
This course is a continuation of RES 1522. Topics covered include hazards and complications of mechanical ventilation. Monitoring of mechanically ventilated patients, ventilator troubleshooting, invasive vs. non-invasive ventilation and novel modes of ventilation. Lecture 3 hours. No Laboratory. Prerequisite: RES 1522.

\section*{RES 2352 - Respiratory Care Pharmacology} 2 Credits
This course includes an introduction to the total scope of pharmacology, the general classifications, uses, and responses to drugs, with a detailed presentation of drugs specific to respiratory care. Lecture 2 hours. No Laboratory. Prerequisites: BIO 1314, RES 1353 and RES 1313 with a grade of " \(C\) " or better in each course.

\section*{RES 2392 - Respiratory Care Case Management} 2 Credits
A study of intensive respiratory care management using clinical patient assessment and intervention techniques. Students select patients on clinical rotations, conduct a case study and present the report orally to the class. Lecture 2 hours. No Laboratory. Prerequisites: RES 1353, RES 1442, RES 1403.

\section*{RES 2413 - Clinical IV}

3 Credits
This course is a continuation of respiratory care management of the critical respiratory patient in the ICU with emphasis on hemodynamic monitoring and ventilator management. In addition, the students will experience respiratory care management of critically ill newborns and infants through rotations in the neonatal intensive care unit. No Lecture. Laboratory 24 hours. Prerequisites: RES 2203, RES 2323, RES 2462 and concurrent enrollment in RES 1213, and RES 2493.

\section*{RES 2433 - Clinical V}

3 Credits
Continued emphasis on intensive respiratory care management in the ICU and an elective rotation selected by the student to include NICU, PFT lab, respiratory home care/rehab or sleep studies lab. No Lecture. Laboratory 24 hours. Prerequisites: RES 1213, RES 2413, RES 2493.

\section*{RES 2452 - NBRC Exam Review}

2 Credits
This course is designed to review all didactics and clinical materials relative to the discipline of respiratory care and
prepare students for the National Board for Respiratory Care (NBRC) CRT and RRT examinations. Computerized practice exams will be utilized during the review. The NBRC, CRT, and RRT Self-Assessment examinations will be administered during this course. Lecture 2 hours. Laboratory 1 hour. Prerequisites: All previous respiratory care courses and concurrent enrollment in RES 2433.

\section*{RES 2493 - Respiratory Critical Care}

3 Credits
A study of cardiopulmonary critical care procedures. Covers diverse topics such as: intensive care patient monitoring procedures, cardiopulmonary resuscitation, invasive pulmonary techniques, transport of the critically ill patient and hyperbaric respiratory care. Lecture 3 hours. No Laboratory. Prerequisites: RES 2203, RES 2323, and RES 2562.

\section*{RES 2562 - Cardiopulmonary Diagnostics II}

2 Credits
A study of advanced laboratory and clinical diagnostic procedures, including arterial blood gases, electrocardiograms, hemodynamics and non-invasive monitoring. Lecture 1 hour. Laboratory 2 hours. Prerequisites: RES 1232, RES 1353, RES 1443 and RES 1492 with a grade of "C" or better.

\section*{RES 2990 - Selected Topics in Respiratory Therapy 1-4 Credits}

The study and/or analysis of a selected topic in Respiratory Care. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{ROBOTICS AND AUTOMATION}

TECHNOLOGY
(See Electronics Technology Program Course Descriptions)

\section*{RUSSIAN}

\section*{RUS 1001 - Russian for Communication I}

\section*{1 Credit}

A companion course to RUS 1103 with emphasis on speaking and comprehension skills. Recommended that it be taken simultaneously with RUS 1103 or after. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: RUS 1103 or approval of instructor or Dean of Global Education.

\section*{RUS 1031 - Russian Pronunciation}

1 Credit
A beginning course in Russian with special emphasis on pronunciation. Lecture 1 hour. Self paced laboratory may be required. Prerequisite: RUS 1103 or approval of instructor or Dean of Global Education.

\section*{RUS 1061 - Russian for Biblical Study}

1 Credit
Introduction to Russian with special emphasis on vocabulary/ structure for Bible study. Lecture 1 hour. Self-paced laboratory may be required.

\section*{RUS 1103 - Russian I}

\section*{3 Credits}

A beginning course in understanding, speaking, reading, and writing Russian. The first in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.

\section*{RUS 1201 - Russian for Communication II}

1 Credit
Continued instruction in basic language concepts and beginning conversational skills. Conducted in Russian. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: RUS 1103 or approval of instructor or Dean of Global Education.

\section*{RUS 1213 - Russian II}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Russian. The second in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: RUS 1103 or approval of instructor or Dean of Global Education.

\section*{RUS 1301 - Russian for Communication III}

1 Credit
Continued instruction to develop oral fluency and
conversational skills. Conducted in Russian. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: RUS 1213 or approval of instructor or Dean of Global Education.

\section*{RUS 1313 - Russian III}

\section*{3 Credits}

Continued instruction in understanding, speaking, reading, and writing Russian. The third in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required.
Prerequisite: RUS 1213 or approval of instructor or Dean of Global Education.

\section*{RUS 1401 - Russian for Communication IV}

1 Credit
Continued instruction to develop oral fluency and conversational skills. Conducted in Russian. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: RUS 1313 or approval of instructor or Dean of Global Education.

\section*{RUS 1413 - Russian IV}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Russian. The fourth in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: RUS 1313 or approval of instructor or Dean of Global Education.

\section*{RUS 2033 - Russian Literature in Translation}

\section*{3 Credits}

Readings of literary works in translation selected to increase the student's knowledge of Russian societies. Conducted in English. Lecture 3 hours. Self-paced laboratory may be required.

\section*{RUS 2041 - Russian - Introduction to the Arts 1 Credit}

An introduction to the Russian arts with an attempt to develop an aesthetic awareness and an understanding of the role that the arts play in modern day Russian activities. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{RUS 2071 - Russian History and Geography Introduction 1 Credit \\ A survey of Russian history and geography as it relates to modern day Russian societies and language with an awareness of the relationship between the physical, political, and linguistic regions. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.}

\section*{RUS 2113 - Intermediate Russian I}

3 Credits
An intermediate course in understanding, speaking, reading, and writing Russian. Taught in Russian. Lecture 3 hours. No Laboratory. Prerequisite: RUS 1413 or approval of instructor or Dean of Global Education.

\section*{RUS 2121 - Intermediate Russian Communication}

1 Credit
Practice in speaking Russian at the Intermediate level covering a wide range of subjects; i.e., everyday language, intermediate literature samples, other publications, and current events. Conducted in Russian. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: Russian 1413 or approval of instructor.

\section*{RUS 2143 - Russian Civilization and Culture}

3 Credits
Conversations and readings concerning Russian culture and civilization. Conducted in Russian. Lecture 3 hours. No Laboratory. Prerequisite: RUS 2113 or approval of instructor or Dean of Global Education.

\section*{RUS 2213 - Intermediate Russian II}

3 Credits
An intermediate course in understanding, speaking, reading, and writing Russian. Taught in Russian. Lecture 3 hours. Selfpaced laboratory may be required. Prerequisite: RUS 1413 or approval of instructor or Dean of Global Education.

\section*{RUS 2320 - International Work and/or Study Seminar 1-3 Credits \\ Practicum with an international firm and/or study abroad. Focus on application and enhancement of language skills (oral and written forms). Lecture and/or laboratory equivalent. Prerequisite: Approval of Dean of Global Education and Associate Dean before enrollment and in advance of work/ study abroad experience.}

\section*{RUS 2413 - Russian Translating}

\section*{3 Credits}

Translating skills course with focus on translating the written language of Russian to English with some English to Russian. Lecture 3 hours. Self- paced laboratory may be required. Prerequisite: RUS 1413 or approval of instructor or Dean of Global Education.

\section*{RUS 2421 - Russian Culture Comparisons}

\section*{1 Credit}

Focus on the cultural aspects of the people of Russia. Includes a comparison with the American culture as well as other culture groups. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{RUS 2523 - Intermediate Russian Grammar and Composition}

3 Credits
This course includes a thorough review of syntax and grammar and the development of composition skills. Conducted in Russian and English. Lecture 3 hours. Self-paced lab may be required. Prerequisite: RUS 2213 or 18 hours of Russian or instructor approval or Dean of Global Education.

\section*{RUS 2990 - Selected Topics in Russian}

1-4 Credits
The study and/or analysis of a selected topic in Russian. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{SIGN LANGUAGE}
(See Interpreter Education Curriculum and Course Descriptions)
SMALL BUSINESS MANAGEMENT/

\section*{ENTREPRENEURSHIP}
(See Business Program and Business Course Descriptions)

\section*{SOCIAL WORK}
(See Human Services Course Descriptions)

\section*{SOCIOLOGY}

\section*{SOC 0613 - Deaf Studies for the Deaf and Hard of Hearing \\ 3 Credits}

This course is designed for deaf and hard of hearing students. Course content will include units on Deaf Heritage, Deaf Culture, American Sign Language, identity, education, and social changes in our society that affect today's deaf and hard of hearing individuals. Lecture 3 hours. No Laboratory.

\section*{SOC 1073 - Human Service Techniques}

3 Credits
A supervised field experience for volunteers in the public school systems.Lecture 1 hour.Laboratory 4 hours. Prerequisite: Acceptance as volunteer in participating public school system.

\section*{SOC 1113 - Introduction to Sociology (S)}

3 Credits
This is a general survey of the field of Sociology. The course examines the basic concepts, theories and perspectives in sociology. Topics include the nature of society and the foundations of social life, along with such specialized areas as groups, culture, social class, social institutions and social change. Sociological concepts are used to help students to understand the social influences in everyday life.Lecture 3 hours. No Laboratory.

\section*{SOC 1130 - Crisis Intervention and Experience 1-3 Credits}

The study of crisis intervention including models of responding, counseling techniques and community resources. Crisis intervention specialization areas include mental illness, substance abuse, suicide, homelessness, grief, and violence. Course includes lecture plus a supervised practicum in an approved social services agency.Lecture 1 hour. Laboratory 1-4 hours. Prerequisite: PSY 1113 or SOC 1113.

\section*{SOC 2013 - Marriage and Family (S) 3 Credits}

Historical background of the family as a social institution and analysis of marriage and family, with special emphasis on contemporary American marriage and family. Lecture 3 hours. No Laboratory. Prerequisite: SOC 1113 or instructor approval.

\section*{SOC 2043 - Juvenile Delinquency}

3 Credits
A study of the nature, extent, and cause of juvenile delinquency. Primary emphasis is placed on the role of social and environmental factors in the origin of these activities. Also included are an examination of the nature of law as it pertains to delinquent behavior, both historically and in contemporary society, and the role of police, courts, and juvenile institutions in relation to these behaviors. Lecture 3 hours. No Laboratory. Prerequisite: SOC 1113.

\section*{SOC 2053 - Social Psychology}

\section*{3 Credits}

A study of the psychological basis of social interaction and change that covers the following topics: conformity, social influence, social cognition, prosocial behavior, prejudice, group processes, interpersonal attraction, and aggression. Lecture 3 hours. No Laboratory. Prerequisite: SOC 1113.

\section*{SOC 2113 - Social Problems in America}

\section*{3 Credits}

A systematic analysis of some of the major social problems of contemporary America. Lecture 3 hours. No Laboratory.

\section*{SOC 2123 - Introduction to Cultural Anthropology} 3 Credits
An introduction to the peoples of the world with emphasis upon nonliterate cultures. The course is designed to demonstrate the interrelationships of ethnology to anthropology and the social sciences, and to survey the various culture areas and culture types of the world. Lecture 3 hours. No Laboratory.

\section*{SOC 2133 - Introduction to Deviant Behavior (S)} 3 Credits
Description, analysis, and comparison of forms and sources of deviant behavior. Lecture 3 hours. No Laboratory. Prerequisite: SOC 1113 or PSY 1113 or instructor approval.

\section*{SOC 2143 - Minorities in America (S) (D)}

\section*{3 Credits}

An examination of the nature of inequality, the causes and consequences of prejudice and discrimination, and the varying patterns of majority-minority interactions in society. Lecture 3 hours. No Laboratory. Prerequisite: SOC 1113 or instructor approval.

\section*{SOC 2173 - Religion and Society (S)}

3 Credits
An introductory social scientific survey of religion viewed from the psychological, sociological, and anthropological perspectives. Patterns in the internal development of religious groups, as well as the relationships between religion and other social and cultural institutions will be examined. Lecture 3 hours. No Laboratory.

\section*{SOC 2223 - Behavioral Statistics (S)}

3 Credits
Application of descriptive and inferential analyses of data are major topics. Specific topics that are covered (but not limited to) are: central tendency, dispersion, the standard normal distribution, correlation, regression, probability theory, single-sample analyses, two-sample analyses, ANOVA and its variations, and a variety of nonparametric analyses. The student will be using the most current software available as a basis for these analyses. Lecture 3 hours. No Laboratory. Prerequisite: MTH 1513, and SOC 1113 or instructor approval.

\section*{SOC 2243 - Introduction to Social Work}

3 Credits
Survey of the field of social work, introducing the major methods and representative agencies of social work. Lecture 3 hours. No Laboratory. Prerequisite: SOC 1113.

\section*{SOC 2713 - Aging and Behavior (S)}

\section*{3 Credits}

In the later adult years, we recognize age related sequential changes. These are physiological, psychological, and sociological. This course attempts to describe these changes with an emphasis on optimal and satisfactory adaptations to them by the individual and by society. Lecture 3 hours. No Laboratory. Prerequisite: SOC 1113 or instructor approval.

\section*{SOC 2813 - Human Sexuality}

3 Credits
Human sexuality is presented as an ever-varying constant of the entire life span. Human sexuality involves biological, sociological, psychological, and behavioral components influenced by feelings, attitudes, and social institutions which make sexuality a unique experience. Lecture 3 hours. No Laboratory. Prerequisite: PSY 1113 or SOC 1113.

\section*{SOC 2990 - Selected Topics in Sociology \\ 1-4 Credits}

The study and/or analysis of a selected topic in Sociology. May be repeated with a different topic. Lecture 14 hours. No Laboratory.

\section*{SPANISH}

\section*{SPA 1001- Spanish for Communication}

1 Credit
A companion course to SPA 1103 with emphasis on speaking and comprehension skills. Recommended that it be taken simultaneously with SPA 1103 or after. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: SPA 1103 or approval of instructor or Dean of Global Education.

\section*{SPA 1031 - Spanish Pronunciation}

\section*{1 Credit}

A beginning course in Spanish with special emphasis on pronunciation and the oral skills. May be taken simultaneously with SPA 1103. Lecture 1 hour. No Laboratory. Prerequisite: SPA 1103 or approval of Instructor or Dean of Global Education.

\section*{SPA 1061- Spanish for Biblical Study}

1 Credit
Introduction to Spanish with special emphasis on vocabulary/ structure for Bible study. Lecture 1 hour. Self-paced laboratory may be required.

\section*{SPA 1103 - Spanish I}

3 Credits
A beginning course in understanding, speaking, reading, and writing Spanish. The first in a sequence of related courses. Lecture 3 hours. Self-paced laboratory is required.

\section*{SPA 1201 - Spanish for Communication II}

1 Credit
Continued instruction in basic language concepts and beginning conversational skills. Conducted in Spanish. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: SPA 1103 or approval of instructor or Dean of Global Education.

\section*{SPA 1213 - Spanish II}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Spanish. The second in a sequence of related courses. Lecture 3 hours. Self-paced laboratory is required. Prerequisite: SPA 1103 or approval of instructor or Dean of Global Education.

\section*{SPA 1301 - Spanish for Communication III}

\section*{1 Credit}

Continued instruction to develop oral fluency and conversational skills. Conducted in Spanish. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: SPA 1213 or approval of instructor or Dean of Global Education.

\section*{SPA 1313 - Spanish III}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Spanish. The third in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: SPA 1213 or approval of instructor or Dean of Global Education.

\section*{SPA 1401- Spanish for Communication IV}

1 Credit
Continued instruction to develop oral fluency and
conversational skills. Conducted in Spanish. Lecture 1 hour. Selfpaced laboratory may be required. Prerequisite: SPA 1313 or approval of instructor or Dean of Global Education.

\section*{SPA 1413 - Spanish IV}

3 Credits
Continued instruction in understanding, speaking, reading, and writing Spanish. The fourth in a sequence of related courses. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: SPA 1313 or approval of instructor or Dean of Global Education.

\section*{SPA 2033 - Spanish Literature in Translation}

\section*{3 Credits}

Readings of literary works in translation selected to increase the student's knowledge of Hispanic societies. Conducted in English. Lecture 3 hours. Self-paced laboratory may be required.

\section*{SPA 2041 - Spanish - Introduction to the Arts}

1 Credit
An introduction to the arts of Spanish-speaking countries with an attempt to develop an aesthetic awareness and an understanding of the role that the arts play in modern day Spanish activities. Conducted in English. Lecture 1 hour. Selfpaced laboratory may be required.

\section*{SPA 2071 - Spanish-Mexican History and Geography Introduction}

1 Credit
A survey of Mexican history and geography as it relates to modern day Mexican societies and language with an awareness of the relationship between the physical, political, and linguistic regions. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required.

\section*{SPA 2113 - Intermediate Spanish I}

\section*{3 Credits}

An intermediate course in understanding, speaking, reading, and writing Spanish. Taught in Spanish. Lecture 3 hours. No Laboratory. Prerequisite: SPA 1413 or approval of instructor or Dean of Global Education.

\section*{SPA 2121 - Intermediate Spanish Communication}

\section*{1 Credit}

Practice in speaking Spanish at the intermediate level covering a wide range of subjects; i.e., everyday language, intermediate literature samples, other publications, and current events. Conducted in Spanish. Lecture 1 hour. Self-paced laboratory may be required. Prerequisite: SPA 2113 or approval of instructor or Dean of Global Education.

\section*{SPA 2143 - Latin American Civilization and Culture 3 Credits \\ Conversations and readings concerning Hispanic culture and civilization. Conducted in Spanish. Lecture 3 hours. No Laboratory. Prerequisite: SPA 2113 or approval of instructor or Dean of Global Education.}

\section*{SPA 2213 - Intermediate Spanish II}

\section*{3 Credits}

An intermediate course in understanding, speaking, reading, and writing Spanish. Taught in Spanish. Lecture 3 hours. No Laboratory. Prerequisite: SPA 1413 or approval of instructor or Dean of Global Education.

\section*{SPA 2263 - Intermediate Spanish Literature}

\section*{3 Credits}

Development of reading skills in the target language using intermediate level literary texts. Conducted in Spanish. Lecture 3 hours. No Laboratory. Prerequisite: SPA 2113 or approval of instructor or Dean of Global Education.

\section*{SPA 2320 - International Work and/or Study Seminar}

\section*{1-3 Credits}

Practicum with an international firm and/or study abroad. Focus on application and enhancement of language skills (oral and written forms). Lecture and/or laboratory equivalent. Prerequisite: Permission of Dean of Global Education and Associate Dean before enrollment and in advance of work/ study abroad experience.

\section*{SPA 2330 - Spanish International Seminar and/or Field Studies \\ 1-3 Credits \\ This course is designed to provide an on-site experience in the selected Spanish speaking country. Includes lectures, readings, oral interactions, and written reports. All or a portion of instruction and activities are conducted at the international site. Focus on language (oral and written forms) and culture development. Prerequisite: Permission of Dean of Global Education and Associate Dean before enrollment and in advance of in-country experience.}

\section*{SPA 2413 - Translating Spanish to English}

\section*{3 Credits}

This is a translating skills course with focus on translating the written language of Spanish to English. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: SPA 2113 or proficiency certification or approval of Dean of Global Education.

\section*{SPA 2421 - Spanish Culture Comparisons} 1 Credit
Focus on the cultural aspects of the Hispanic people. Includes a comparison with the American culture as well as other culture groups. Conducted in English. Lecture 1 hour. Self-paced laboratory may be required. No Prerequisite.

\section*{SPA 2443 - Interpreting Spanish to English 3 Credits}

Student will be given opportunities to develop oral interpreting skills for escort, consecutive, simultaneous and court interpreting. Participants need to have advanced fluency in English and Spanish. Prerequisite: SPA 2113 or certification of skill level through TCC proficiency Certification exam. Lecture 3 hours No laboratory.

\section*{SPA 2453 - Interpreting English to Spanish}

\section*{3 Credits}

Students will be given opportunities to develop oral interpreting skills for escort, consecutive, simultaneous and court interpreting. Participants need to have advanced fluency in Spanish. Prerequisite: SPA 2213 or certification of skill level through TCC Proficiency Certification exam. Lecture 3 hours. No laboratory.

\section*{SPA 2463 - Courtroom Interpreting Skills Introduction} 3 Credits
An aid to developing interpreting skills, this course will address consecutive, simultaneous and sight interpretation. It will also cover the interpreter's role in and out of court and include an on-site visit to a courtroom. Lecture 3 hours. On-site lab required. Prerequisite: Oral fluency in English and native/nearnative fluency in Spanish, SPA 2443 \& SPA 2453 or equivalent or instructor approval.

\section*{SPA 2473 - Medical Interpreting Skills Introduction} 3 Credits
This course will address the attitudinal differences between the Latino and Anglo-American cultures and how the affect health care decisions. It will increase vocabulary needed to interpret for Spanish-speaking patients by using vocabulary related to illness and symptoms, necessary medical language, and cultural cues. Lecture 3 hours. On-site lab required. Prerequisite: Oral fluency in English and native/near-native fluency in Spanish, SPA 2443 \& SPA 2453 or equivalent or instructor approval.

\section*{SPA 2523 - Intermediate Spanish Grammar and Composition \\ 3 Credits}

This course includes a thorough review of syntax and grammar and the development of composition skills. Conducted in Spanish and English. Lecture 3 hours. Self-paced lab may be required. Prerequisite: SPA 2113 or 18 hours of Spanish or proficiency certification or permission of Dean of Global Education.

\section*{SPA 2533 - Advanced Spanish Conversation} 3 Credits
This course is intended for students who have studied Spanish structure through the intermediate level and have gained a basic oral fluency and proficiency. Class activities will focus on acquiring sufficient speaking skills to interact with native speakers and the use of Spanish as the main language of communication without the aid of an interpreter. Conducted in Spanish. Lecture 3 hours. Self-paced lab may be required. Prerequisite SPA 2213 or 18 hours of Spanish.

\section*{SPA 2543 - Translating English to Spanish}

\section*{3 Credits}

This is a translating skills course with focus on translating the written language of English to Spanish. Lecture 3 hours. Self-paced laboratory may be required. Prerequisite: SPA 2113 or proficiency certification or approval of Dean of Global Education.

\section*{SPA 2660 - Spanish Service Learning}

\section*{1-3 Credits}

This course is designed for active participation in communitybased organizations that require the use of Spanish with clients. Students will have the opportunity to encounter reallife experiences that will afford them opportunities to expand their knowledge and develop critical thinking and problem solving skills. The intention of this approach is to place an emphasis on diversity and pluralism that lends itself to student empowerment by developing camaraderie among students, faculty, and the community. The Service Learning experience will be reflected in written class assignments for journals and compositions. Conducted in Spanish and English. Lecture 1-3 hours. No Laboratory. Prerequisite: instructor approval.

\section*{SPA 2773 - Spanish for Native Speakers}

3 Credits
This course addresses cultural misconceptions or confusion concerning cross-cultural leaning which may not portray either culture accurately or misrepresent and oversimplify interactions. Special emphasis is given to writing and reading and to certain grammatical structures that tend to present difficulties to native speakers. Lecture 3 hours. Self-paced laboratory may be required.

\section*{SPA 2990 - Selected Topics in Spanish}

1-4 Credits
The study and/or analysis of a selected topic in Spanish. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{SPEECH}

\section*{SPE 1013 - Fundamentals of Listening 3 Credits}

This course is designed to teach fundamental listening techniques and to improve listening skills through a combination of lecture and practical experiences. Actual listening situations will be provided which center on listening experiences commonly encountered in business professions, educational fields, and numerous occupational areas. Lecture 3 hours. No Laboratory.

\section*{SPE 1113 - Speech Communication I}

3 Credits
An introductory course in oral communication, emphasis is on improving applied communication skills. Special attention is given to critical thinking skills and the anatomy of the communication process: audience analysis, research, organization, logic, ethical use of evidence, delivery, and listening. Required for B.A. and B.S. degrees in most professional majors; i.e. Business, Law, Education, Medical, English. Lecture 3 hours. No Laboratory.

\section*{SPE 1151 - Effective Communications}

\section*{1 Credit}

This course is designed to study the principles and the theories of communication in one-on-one and group settings. Emphasis will be on increasing student awareness of verbal and nonverbal communication behavior. Focus will be directed toward establishing improved communication skills. Lecture 1 hour. No Laboratory.

\section*{SPE 2053 - Intercultural Communication}

\section*{(H,I) 3 Credits}

An introductory course in intercultural communication: the study of communication among people from different cultures. Emphasis is on increasing students' understanding of cultural theories of communication and of cultural issues that affect communication effectiveness especially in educational and business contexts. Lecture 3 hours. No Laboratory.

\section*{SPE 2073-Oral Interpretation}

\section*{3 Credits}

A beginning course in oral performance of dramatic literature including selection, analysis, rehearsal, and performance of poetry, prose, and drama. Lecture 3 hours. No Laboratory.

\section*{SPE 2093 - Business and Professional Speech} 3 Credits
A study of the principles and theory of business and professional communication. Specific emphasis will be given to the organization of business presentations, sales and persuasive presentations, small group organizational presentations, interviewing strategies, specialty speeches, and concepts of parliamentary procedure. Lecture 3 hours. No Laboratory. Prerequisite: SPE 1113 or instructor approval.

\section*{SPE 2103 - Interpersonal Communication}

\section*{3 Credits}

A study of the principles and theories of communication in dyadic (one-to-one) and human interactive situations. Emphasis will be on increasing student awareness of verbal and nonverbal communication behavior. Focus will be directed toward improving interpersonal communication skills. Lecture 3 hours. No Laboratory. SPE 2103 may not be taken in lieu of SPE 1113.

\section*{SPE 2203 - Phonetics}

3 Credits
The analysis and description of speech at the segmental and suprasegmental levels. Development of students' perceptual and analytic skills in speech sound production. Practice using the International Phonetic Alphabet (IPA) for broad and narrow transcription. Overview of the speech production mechanism and process. Lecture 3 hours. Requires sophomore standing or instructor approval.

\section*{SPE 2313 - Voice and Diction I}

3 Credits
A study of the human voice process by which speech sounds are produced and articulated. Course is designed to improve voice and articulation through a program of exercises and study, to include preliminary examination of the I.P.A.,
improvement of voice usage, regionalism, and diction. Lecture 3 hours. No Laboratory.

\section*{SPE 2323 - Voice and Diction II}

\section*{3 Credits}

A continuing study of the human voice process by which speech sounds are produced and articulated. The student will demonstrate a working knowledge of the phonetic alphabet as it applies to well-spoken English. This works to strengthen the students' use of standard stage speech and is appropriate training for other professional speakers. Also the student will learn to apply phonetics to the creation of accurate stage dialects. Lecture 3 hours. No Laboratory. Prerequisite SPE/THE 2313 or permission of the instructor.

\section*{SPE 2333 - Forensics}

\section*{3 Credits}

The class focuses on forensic techniques including facial and vocal expression, characterization, and script analysis. Participation includes preparation, practice, and class performance. Students will perform various individual events including oral interpretation events (dramatic and humorous interpretation, interpretation of prose and poetry, and duo interpretation) and platform speaking events (persuasive and informative speaking, impromptu and extemporaneous speaking, after dinner speaking, communication analysis and debate). This is available for credit to both majors and nonmajors. SPE 2333 may not be taken in lieu of SPE 1113. Lecture 3 hours. No Laboratory.

\section*{SPE 2343 - Forensics Performance Competition} 3 Credits
This course includes preparation, practice, and travel to intercollegiate forensic tournaments. Students will compete in various individual events including platform speaking events (persuasive and informative speaking, impromptu and extemporaneous speaking, after dinner speaking, and communication analysis), and oral interpretation events (dramatic and humorous interpretation, interpretation of prose and poetry, duo interpretation and debate). The TCC Forensic Team will travel to regional competition throughout the year. This is available for credit to both majors and non-majors. SPE 2343 may not be taken in lieu of SPE 1113. Lecture 3 hours. No Laboratory.

\section*{SPE 2351 - Forensics Competition Practicum}

\section*{1 Credit}

May be repeated; maximum credit six hours. This class is open to all students who will be competing with the forensic team. This class will develop performance materials (speeches, interpretive cuttings and debate) for use in speech contests. Practice sessions with critiques of performances are given. SPE 2351 may not be taken in lieu of SPE 1113. Lecture 1 hour. No Laboratory.

\section*{SPE 2990 - Selected Topics in Speech}

\section*{1-4 Credits}

The study and/or analysis of a selected topic in Speech. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

STAGE PRODUCTION TECHNOLOGY (See Theatre)

\section*{SURGICAL TECHNOLOGY}

\section*{SRT 1102 - Surgical Technology Orientation} 2 Credits
This course serves as an orientation to the program's philosophy, rules, and regulations. Students should be able to identify and implement basic and workplace safety concepts, and occupational hazards. Lecture 2 hours. No Laboratory.

\section*{SRT 1112 - Surgical Technology Introduction 2 Credits}

This course provides orientations to the operating room environment, specialized equipment and furniture, and is an introduction to the professional responsibilities of the surgical technology profession. The essentials of medical legal aspects, ethical conduct and interpersonal communication skills are studied. Lecture 2 hours. No Laboratory

\section*{SRT 1124 - Surgical Case Management}

4 Credits
This course is an introduction to the specialized supplies and equipment that are an integral part of the surgical environment. Students are required to perform all lab skills at one-hundred percent (100\%) proficiency. Lecture 2 hours. Laboratory 8 hours. Prerequisite: SRT 1112.

\section*{SRT 1211 - Medical Terminology}

1 Credit
An introduction to the foundations of medical terminology including root words, suffixes, prefixes, word elements, and word terminals. Emphasis is placed on correct pronunciation and spelling. Lecture 1 hour. No Laboratory.

\section*{SRT 1222 - Microbiology and Wound Healing}

\section*{2 Credits}

Provides a background in microbiology enabling the student to achieve a better appreciation of the relationship between micro-organisms and the maintenance of health and/or prevention of disease. The course of study includes a general introduction to microbiology, the infectious process, body defenses against disease and wound healing. Lecture 2 hours. No Laboratory. Prerequisite: SRT1211.

\section*{SRT 1324 - Anatomy and Physiology}

\section*{4 Credits}

This course is designed to present concepts from the biological sciences of human body structure and function. Microbiology and the physical science of chemistry are also introduced. Vocabulary included in the content of the course is designed to provide an opportunity for students to understand and use medical terminology. Lecture 4 hours. Prerequisite: SRT 1222.

\section*{SRT 1333 - Aseptic Technique and Skills}

\section*{3 Credits}

This course is an introduction to the principles and practices of aseptic technique, scrubbing, gowning, gloving, sterilization
and disinfection. Students are required to perform all lab skills at one-hundred percent (100\%) proficiency. Lecture 2 hours. Laboratory 2 hours. Prerequisite: SRT 1324.

\section*{SRT 1341 - Surgical Technology Clinical Practicum I}

\section*{1 Credit}

Provides clinical observation experience in the surgical environment. Emphasis is on major surgical procedures. Professional practice insurance required. Laboratory 4 hours. Prerequisites: SRT 2313 and SRT 1124.

\section*{SRT 2221 - Surgical Pharmacology}

1 Credit
This course familiarizes the student with the various drugs used in surgery and the mode of administration. The student should also attain an understanding of basic anesthesia equipment, drugs, and methods, in order to function effectively in the surgical setting, and to efficiently assist the anesthesia personnel if required. Lecture 1 hour. Prerequisite: SRT 1324

\section*{SRT 2312 - Surgical Patient Care and Skills} 2 Credits
This course provides the student with an awareness of the total needs of the surgical patient (physical, emotional, social, spiritual). It enables the student to develop an understanding of the preoperative preparation, techniques used to safely transport patients, the mechanics of positioning, prepping and draping the patient for surgery, proper care of surgical specimens, as well as, the responsibilities of the surgical personnel in providing this care. Students are required to perform all lab skills at one-hundred percent (100\%) proficiency. Lecture 1 hour. Laboratory 4 hours. Prerequisite: SRT 1333.

\section*{SRT 2323 - Surgical Procedures I}

3 Credits
Introduction to operative routine. Included is the study of special instruments and equipment necessary to provide optimum intraoperative care. Also provided is a basic understanding of the diagnosis, common complications, operative pathology, and regional anatomy. Lecture 3 hours. No Laboratory. Prerequisite: SRT 2221.

\section*{SRT 2332 - Surgical Technology Clinical Practicum II 2 Credits}

Provides clinical experience in the surgical environment. The student assumes more responsibility as the first scrub person, handling instruments, supplies, and equipment necessary during a surgical procedure. Emphasis is on major surgical procedures. Professional practice insurance required. Clinical Laboratory 8 hours. Prerequisite: SRT 1341

\section*{SRT 2434 - Surgical Procedures II}

4 Credits
A continuous study of operative procedures for surgical specialties. Included is the study of special instruments and equipment necessary to provide optimum intraoperative care. Also provided is a basic understanding of the diagnosis, common complications, operative pathology, and regional anatomy. Lecture 4 hours. No Laboratory. Prerequisite: SRT 2323.

\section*{SRT 2442 - Surgical Technology Clinical Practicum III} 2 Credits
Provides advanced clinical experience in the surgical environment. The student assumes more responsibility, handling instruments, supplies, and equipment necessary during a surgical procedure. Emphasis is on major surgical procedures. Professional practice insurance required. Clinical Laboratory 8 hours. Prerequisite: SRT 2332.

\section*{SURVEYING TECHNOLOGY \\ (See Civil Engineering Technology program)}

\section*{SUR 1324 - Surveying I}

4 Credits
Course covers fundamental concepts of survey techniques and uses of surveying equipment. Includes basic mathematical concepts, field notes, distance measuring, traversing and traverse computations, construction surveys, leveling and use of the level, and horizontal and vertical angle measurement with calculations. GPS is introduced. Students complete field exercises with basic surveying equipment. Lecture 3 hours. Laboratory 2 hours. Prerequisites: MTH 1454 or MTH 1715 or MTH 1513 and MTH 1613.

\section*{SUR 2262 - Professional EGR/SUR Ethics}

\section*{2 Credits}

This course covers an introduction to contemporary ethics and provides an overview of professional issues dealing with responsibility and professionalism. It delves into everyday problems encountered by professional land surveyors and engineers. Lecture 2 hours. No Laboratory.

\section*{SUR 2334 - Surveying II}

4 Credits
Classes and laboratories include use of total station, GPS and data collector instruments. Measurements and calculations are performed in the study of boundary surveys, route locations, topographic surveys, layout and calculations of simple compound, vertical, reverse, parabolic, spiral curves, astronomical observations, and earth work volumes. Lecture 3 hours. Laboratory 2 hours. Prerequisite: SUR 1324 or equivalent.

\section*{SUR 2344 - Introduction to Geographic Information Systems \\ 4 Credits}

An introductory course designed to acquaint students with the theory and uses of Geographic Information Systems to capture, store, query, and analyze data referenced to a location on the Earth's surface. Topics include history and applications, map projections, coordinate systems, data sources, structures, and models, along with methods of data acquisition, management, manipulation, analysis, and visualization. The lab component will provide students hands-on experiences with ArcGIS software. Lecture 3 hours. Laboratory 3 hours.

\section*{SUR 2363 - Land Law I}

\section*{3 Credits}

Classes study history of land surveying and law development as it applies to Oklahoma. It includes legal boundaries, title to the land, public land surveys, and general principles for
subdivisions of a section. Lecture 3 hours. No Laboratory. Prerequisite: None.

\section*{SUR 2373 - Land Law II}

\section*{3 Credits}

This is an intensive study of the basic principles of land, boundary agreement, boundaries adjacent to bodies of water, environmentally sensitive areas, highway and street right-of-ways, and deeds. Discussion includes both Oklahoma and Federal law applications. Lecture 3 hours. No Laboratory. Prerequisite: SUR 2363.

\section*{SUR 2393 - Surveying Exam Topics}

\section*{3 Credits}

This course is designed to cover topics from the Fundamental of Surveying (FS) examination that are not included in other surveying courses. These topics may include geographic information systems, advanced survey computations, photo/ image data acquisition and reduction and other topics from the FS examination. Lecture 3 hours. No Laboratory. Prerequisite: Completion of, or concurrent enrollment in, SUR 2334 and SUR 2373.

\section*{SUR 2990 - Selected Topics of Surveying Technology 1-4 Credits}

The study and/or analysis of a selected topic in Surveying Technology. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

TEACHER ASSISTANT
(See Child Development Program and Course Descriptions)

\section*{TEACHING}

\section*{TCH 2990 - Selected Topics in Education} 1-4 Credits
The study and/or analysis of a selected topic in education. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{TELECOMMUNICATIONS TECHNOLOGY} (See Convergence of Information Technology)

\section*{THEATRE}

\section*{THE 1033 - Stagecraft I}

\section*{3 Credits}

A study of the technical skills and practical application of techniques in the constructing, painting, handling, and lighting of scenery. Lecture 2 hours. Laboratory 2 hours.

\section*{THE 1043 - Stagecraft II}

3 Credits
Exploration of the technical aspects of play production with emphasis on individual projects in design and construction. Lecture 2 hours. Laboratory 2 hours. Prerequisite:THE 1033 and THE 1093 or instructor approval.

\section*{THE 1053 - Acting I}

\section*{3 Credits}

This course establishes the fundamentals of stage acting by exploring the three tools of the actor that include imagination, voice and body. Course work includes theory, methodology, terminology, character analysis, and presentation of scenes and monologues. Students are required to participate in outside homework assignments, including production activities in the theatre department. Lecture 3 hours. No Laboratory

\section*{THE 1061 - Tulsa Community College Community Theatre}

1 Credit
The rehearsal and performance of a theatre production. May be repeated. Participation is open to TCC students and any member of the community. No Lecture. No Laboratory.

\section*{THE 1073 - Entertainment Electrical Fundamentals} 3 Credits
This course provides the foundations of electrical theory including atomic theory, resistors, safety, basic AC circuits, single and three phase circuits. Students will be required to participate in outside projects. Lecture 3 hours. Self-paced Laboratory.

\section*{THE 1081 - Theatre Practice I}

1 Credit
This course is a freshman level practical experience for each component of the departmental season in performance or production. Course may be repeated. Participation is required for majors and open to all students. No Lecture. Laboratory 3 hours.

\section*{THE1093 - Introduction to Theatre (H)}

3 Credits
A survey of theatre history, literature, and practices from the Greek period to the contemporary, relating the relevance of the theatre as a social force in and a reflection of the human conditions since ancient times. Students will be required to participate in outside homework assignments that include production activities in the theatre department. Lecture 3 hours. Laboratory TBA.

\section*{THE 1113 - Theatre Graphics}

\section*{3 Credits}

From conception to three dimensions, students develop the modes of visual communication through this introduction to drafting, rendering, and model building skills with an introduction to Mini Cad Seven. Lecture 3 hours. No Laboratory.

\section*{THE 1123 - Introduction to Sound Reinforcement} 3 Credits
This course is an introduction to the application of the principles of stage sound. Training in the use and maintenance of sound equipment, recording/editing sound effects tapes and training in electronic sound reinforcement. Lecture 2 hours. Laboratory 2 hours.

\section*{THE 1133 - Costume Techniques I}

\section*{3 Credits}

This course is a study of costume construction techniques. The course will cover proper measuring skills, various construction techniques, and understanding of fabrics, costume cutting skills, and dyeing. Additional Laboratory fee is required. Lecture 2 hours. Laboratory 2 hours.

\section*{THE 1143 - Introduction to Rigging and Fly Systems}

3 Credits
An introduction to rigging for the entertainment industry. Training for the use of counter-weight systems, hemp systems, and simple rigging. This course will emphasize safety and will examine OSHA, ESTA, LATSE and USITT standards and regulations. Lecture 2 hours. Laboratory 2 hours.

\section*{THE 1163 - Welding I}

3 Credits
This course covers the basis of metal and welding techniques for the entertainment industry. Lecture 3 hours. Self-Paced Laboratory. Prerequisite:THE 1033.

\section*{THE 1240 - Private Acting}

1-2 Credits
Student works one-on-one with an acting coach to help improve basic acting techniques including character analysis, movement and vocal interpretations in classes, auditions or performances. An additional laboratory fee is required. Requires instructor approval.

1 credit hour private acting instruction requires a weekly 30minute lesson on average; 1.5 hours minimum weekly work with material in preparation for lessons recommended. No Lecture. Laboratory 2 hours.

2 credit hours private acting instruction requires a weekly 1hour lesson on average; 3 hours minimum weekly work with material in preparation for lessons recommended. No lecture. Laboratory 4 hours.

\section*{THE 1343 - Stage Movement I}

3 Credits
This course offers a beginning study of the physical component of acting and is designed to give the actor an understanding of the use of the body as an expressive instrument through development of flexibility, strength, and coordination. Explore an integration of breath work, body awareness, and imagination in relation to the physical self, neutral alignment, physical creativity, and relaxation. Lecture 3 hours. Laboratory 1 hour.

\section*{THE 1353 - Stage Movement II}

\section*{3 Credits}

This course strengthens the basic skills developed in Movement 1 as it relates to the process of acting through independent work, consideration of environmental factors, and relating to others. The focus concentrates on creating a character, physicalizing text and establishing an awareness of kinesthetic movement patterns. Lecture 3 hours. Laboratory 1 hour. Prerequisite:THE 1093 and THE 1343 or instructor approval.

\section*{THE 1411 - Musical Theatre Dance for Performance I} 1 Credit
Introduction to the art of Musical Theatre dance. This course is designed to complement a theatre program or enhance other degree disciplines. Coursework consists of Musical Theatre dance terminology, Musical Theatre dance steps, rehearsed choreography, and an introduction to important people in Musical Theatre dance history. An end of semester performance is required. Lecture 1 hour. Laboratory 1 hour.

\section*{THE 1421 - Ballet for Performance I}

1 Credit
Introduction to the art of Ballet dance. This course is designed to complement a theatre program or enhance other degree disciplines. Coursework consists of Ballet terminology, proper body alignment, execution of Ballet steps, rehearsed choreography, and an introduction to important people in Ballet history. An end of semester performance is required. Lecture 1 hour. Laboratory 1 hour.

\section*{THE 1431 - Jazz Dance and Movement for Performance I}

1 Credit
Introduction to the art of Jazz dance. This course is designed to complement a theatre program or enhance other degree disciplines. Coursework consists of Jazz terminology, execution of Jazz steps, rehearsed choreography, and an introduction to important people in Jazz dance history. An end of semester performance is required. Lecture 1 hour. Laboratory 1 hour.

\section*{THE 1441 - Modern Dance for Performance I}

1 Credit
Introduction to the art of Modern dance. This course is designed to complement a theatre program or enhance other degree disciplines. Coursework consists of Modern dance terminology, execution of Modern dance steps, rehearsed choreography, and an introduction to important people in Modern dance history. An end of semester performance is required. Lecture 1 hour. Laboratory 1 hour.

\section*{THE 1562 - Musical Theatre}

\section*{2 Credits}

A course designed to develop the music and theatric talents of students who either are interested in a degree in Musical Theatre or simply want to broaden their individual experiences on the stage. Course work consists of learning, blocking and presenting scenes from the major genres in musical theatre. Historical and cultural perspectives on individual works will be included in abbreviated lecture form. Prerequisite: Requires voice, dance and/or theatre experience. No Lecture. Laboratory 4 hours.

\section*{THE 2013 - Make-Up I}

3 Credits
Study of principles and techniques of make-up, and practice application. Lecture 3 hours. No Laboratory.

\section*{THE 2043 - Costume History}

\section*{3 Credits}

This course informs the student of the historical aspects of costuming in society and how this costuming can be used on the stage. Additional Laboratory fee is required. Lecture 3 hours. No Laboratory. Prerequisite: THE 1093 or instructor approval.

\section*{THE 2053 - Acting II}

3 Credits
This course builds on the basic skills developed in Acting 1 and further hones the students' dexterity in applying specific techniques to the acting craft. Students are required to participate in outside homework assignments including production activities in the theatre department. This course may be repeated; maximum credit 9 hours. Lecture 3 hours. No Laboratory. Prerequisite:THE 1053 and THE 1093 or instructor approval.

\section*{THE 2063 - Fundamentals of Stage Lighting 3 Credits}

This course provides students with a fundamental approach to stage lighting, experience in handling lighting equipment, and theories of lighting as they apply to the stage production. Lecture 2 hours. Laboratory 2 hours.

\section*{THE 2073 - Introduction to Production Design} 3 Credits
This course informs the student of the three design areas in theatre production and the basic theories behind the design techniques. Use of lecture and practical lab work. Lecture 3 hours. Self-Paced Laboratory.

\section*{THE 2081 - Theatre Practice II}

1 Credit
This course is a sophomore level practical experience for each component of the departmental season in performance or production. Course may be repeated. Participation is required for majors and open to all students. No Lecture. Laboratory 3 hours.

\section*{THE 2093 - Make-Up II}

\section*{3 Credits}

The most effective method of creating most three-dimensional make-up additions for the artist or actor is the use of molded prosthetic pieces. After developing your skills in Theatre MakeUp I and the use of the same Corson text, delve deeper into the art of facial molds, special effects, and prosthetic makeup for television and stage. Lecture 3 hours. No Laboratory. Prerequisites:THE 1093 and THE 2013 or instructor approval.

\section*{THE 2123 - Theatrical Health and Safety 3 Credits}

This course addresses the unique health and safety problems that entertainment technicians face every day. Paints, makeup, pigment, dyes, plastics, solvents, woodworking, and other potential hazards will be discussed to inform the student how to work safely in this environment. Lecture 3 hours. No Laboratory. Prerequisite:THE 1033.

\section*{THE 2133 - Advanced Lighting for the Stage}

\section*{3 Credits}

This course is a continuation of Fundamentals of Stage Lighting. It will examine control and instrumentation of intelligent lighting systems and will place more emphasis on design. Work outside of class on productions is required. Qualified students will be given design assignments. Additional Laboratory fee is required. Lecture 2 hours. Laboratory 2 hours. Prerequisite:THE 1093 and THE 2063 or instructor approval.

\section*{THE 2143 - Costume Techniques II}

\section*{3 Credits}

This course will cover the costuming process from patterning to the completion of a wearable period costume complete with footwear, headgear and accessories. An additional laboratory fee is required. Lecture 2 hours. Laboratory 2 hours. Prerequisite:THE 1133 or pass a sewing skills proficiency test.

\section*{THE 2153 - Advanced Sound Reinforcement}

\section*{3 Credits}

This course covers power requirements, fly systems, sight line fundamentals, special effects, monitor systems, stage wiring, and other "tricks of the trade." Additional Laboratory fee is required. Lecture 2 hours. Laboratory 2 hours. Prerequisite:THE 1093 and THE 1123 or instructor approval.

\section*{THE 2163 - Welding II}

3 Credits
This course is a continuation of Welding I with more individualized projects and further exploration of materials. Lecture 3 hours. Self-paced Laboratory. Prerequisites:THE 1033 and THE 1163.

\section*{THE 2173 - Arena Rigging}

\section*{3 Credits}

A continuation of rigging, counter weight systems, and hemp systems. This course will also examine chain motor systems and wire rope winch systems with an emphasis on safety. This course will also take a look at flying people with an eye to the ESTA report. As in the first course OSHA, LATSE, ESTA, and USITT standards will be taught. Lecture 2 hours. Laboratory 2 hours. Prerequisite:THE 1143.

\section*{THE 2213 - Summer Theatre}

3 Credits
Workshop in all areas of theatrical production. Emphasis on acting, stagecraft, lighting, make-up, and publicity. Participation in TCC Community Theatre production may be required. Lecture 3 hours. No Laboratory.

\section*{THE 2233 - Entertainment Computer-Aided Design}

\section*{3 Credits}

Basic introduction to computer-aided design drafting. Hands-on experience to include basic mechanical drafting terminology and techniques. An introduction to user specific third party software as related to drafting and designing of scenery for productions. Additional Laboratory fee is required. Lecture 2 hours. Laboratory 2 hours. Prerequisite:THE 1093 and 1113 or instructor approval.

\section*{THE 2253 - Stage Management}

\section*{3 Credits}

Emphasis on interpersonal skills in people management through the rehearsal and performance process and theatre decorum including union regulations for professional and artistic insight into the role of stage manager. Lecture 3 hours. No laboratory. Prerequisite:THE 1093 or instructor approval.

\section*{THE 2273 - Stage Production Technology Internship 3 Credits \\ Students work in a qualifying occupational setting where they receive practical training and experience toward their occupational objectives. Laboratory 6 hours. No lecture. Requires instructor approval.}

\section*{THE 2313 - Voice and Diction I}

\section*{3 Credits}

This course develops the actors voice for effective communication and performing for the stage through an awareness of inner space, alignment, breath, resonance, articulation, expressive intonation, awareness of General American Dialect, and a beginning look at Phonetics and the IPA (International Phonetic Alphabet). Lecture 3 hours. Laboratory 1 hour.

\section*{THE 2323 - Voice and Diction II}

3 Credits
This course expands on the basic skills developed in Voice and Diction I to develop the actor's voice for effective communication in performing for the stage, creating a character while vocalizing the text, and a continued understanding of Phonetics and the IPA (International Phonetic Alphabet). Lecture 3 hours. Laboratory 1 hour. Prerequisite:THE 1093 and THE 2313 or instructor approval.

\section*{THE 2333 - Improvisation for the Theatre}

3 Credits
This course is designed to prepare students for using improvisational techniques in rehearsal and performance. We will explore the nature of intuition (intuitive knowledge) by freeing ourselves of all preconceptions, interpretations and assumptions relating to human behavior. Lecture 3 hours. No Laboratory.

\section*{THE 2343 - Introduction to Costume Design}

3 Credits
Basic theories, techniques, and procedures of costume design for stage, film, and television. Practical training in college productions. Additional Laboratory fee is required. Lecture 3 hours. No Laboratory.

\section*{THE 2393 - Introduction to Drama (H)} 3 Credits
Introductory study of the performance of dramatic literature. Lecture 3 hours. No Laboratory. Prerequisites: ENG 1113 or THE 1093 or instructor approval.

\section*{THE 2453 - Creative Writing: Scriptwriting}

\section*{3 Credits}

This course teaches screenplay writing techniques. Attention is given to subject and character development. Students learn the basic components of plot development, scene building and screenplay formats. Lecture 3 hours. No Laboratory.

\section*{THE 2990 - Selected Topics in Theatre}

1-4 Credits
The study and/or analysis of a selected topic in Theatre. May be repeated with a different topic. Lecture 1-4 hours. No Laboratory.

\section*{VETERINARY TECHNOLOGY}

\section*{VT 1125 - Veterinary Anatomy and Physiology} 5 Credits
A comparative, systems approach to the study of mammalian life processes and the related body structures. Includes gross and microscopic study of selected organ systems from the cat, dog, horse and cow. Dissections are performed on fixed and fresh specimens. Examination of normal and abnormal structures histologically and pathologically. Emphasis will be placed on the use of applied anatomy and physiology. Includes a systematic study of word parts and their combinations to form terms used in veterinary medical practice. Lecture 4 hours. Laboratory 3 hours. Prerequisite: Admission to VT program or permission of Coordinator.

\section*{VT 1132 - Introduction to Veterinary Technology \\ 2 Credits}

An introduction to the profession and practice of veterinary technology. The role of the technician within a veterinary health care team, professional opportunities, organizations and continuing education for graduate technicians. Economics, ethics, regulatory organizations, and laws governing technicians. Humane care practices, sanitation and prevention of zoonosis, animal behavior, pet loss-grief issues, and client relations. Lecture 2 hours. No laboratory.

\section*{VT 1183 - Principles of Small Animal Care} 3 Credits
An introduction to management, husbandry, and basic veterinary care for small animal species, emphasizing the dog and cat. A survey of signs and treatments of commonly encountered diseases. Principles of basic dietary requirements, sanitation, handling and housing procedures. Techniques in restraint, taking of vital signs, administering medications, grooming and sample collection for basic laboratory tests. Additionally, each student will rotate sanitation and nursing care for resident Program animals. Lecture 2 hours. Laboratory 3 hours. Prerequisite: Admission to VT program or permission of Coordinator.

\section*{VT 1193 - Principles of Large Animal Care} 3 Credits
An introduction to the management, husbandry, and basic veterinary care for large animal species; including the horse, cow, pig, sheep, and goat. Principles of basic dietary requirements, sanitation, handling and housing of
large animals. Techniques in restraint, taking of vital signs, administering medications, grooming and sample collection for basic laboratory tests. Additionally, each student will rotate sanitation and nursing care for resident Program animals. Lecture 2 hours. Laboratory 3 hours. Prerequisites: Admission to the VT Program or permission of Coordinator.

\section*{VT 1223 - Veterinary Hospital Technology I}

\section*{3 Credits}

Anesthesiology is the emphasis of this course with intensive study and application of a wide range of anesthetics; including commonly used injectable and inhalant protocols. Surgical preparation and assistance, patient monitoring, postoperative procedures, parenteral fluid administration, blood transfusion, and many other nursing techniques will be practiced. Additionally each student will rotate sanitation and nursing care for resident Program animals. Lecture 2 hours. Laboratory 4 hours. Prerequisites: All prior VT courses with a grade of "C" or better.

\section*{VT 1234 - Clinical Pathology I}

\section*{4 Credits}

Introduction to laboratory procedures which will include: parasitology emphasis, fecal analysis, urinalysis, and hematology, including blood cell counts and blood cell identification. Lecture 3 hours. Laboratory 3 hours. Prerequisites: All prior VT courses with a grade of " C " or better.

\section*{VT 1263 - Veterinary Office and Computer Skills 3 Credits}

Office management principles and procedures relevant to veterinary medicine are surveyed. Includes practical interpersonal communication and customer relations skills, professional correspondence, appointment scheduling, financial record keeping, and the orientation to and application of veterinary practice management software. Legal and ethical considerations regarding medical records and office organization are introduced. Hands-on microcomputer training will be provided. Lecture 2 hours. Laboratory 2 hours. Requires admission to VT program or Coordinator approval.

\section*{VT 2126 - Practicum: Animal Clinics and Nursing 6 Credits}

Practical veterinary technical skills development in an approved work site. Students must work a total of 384 hours directly under the supervision of a licensed veterinarian while applying skills acquired from previous academic preparation. The student, employer, and program coordinator will develop a written competency-based learning plan with specific learning objectives. Laboratory 24 hours. Prerequisites: All prior VT courses with a grade of "C" or better.

\section*{VT 2224 - Microbiology and Sanitation}

4 Credits
Introduction to microorganisms. Consideration will be given primarily to pathogenic microorganisms related to veterinary medicine; including bacteria, viruses, fungi, and protozoa. Emphasis will be placed on sanitation, disinfectants, aseptic technique, sterilization techniques, zoonosis, and related public health concerns. Lecture 3 hours. Laboratory 3 hours. Prerequisite: All prior VT courses with a grade of " C " or better.

\section*{VT 2234 - Clinical Pathology II}

\section*{4 Credits}

Continuation of VT 1234 laboratory procedures which will include blood chemistry analysis, cytology, specialized blood testing techniques, as well as a review of parasitology, urinalysis, and hematology. Lecture 3 hours. Laboratory 3 hours. Prerequisites: All prior VT courses with a grade of "C" or better.

\section*{VT 2254 - Laboratory, Wild, and Exotic Animal Technology}

4 Credits
Techniques required to assist the veterinarian in the care and treatment of laboratory animals, birds, exotic, and wild animals. Restraint and handling, identification, blood collection, medication, anesthesia, and specimen collection. Supervisory skills for laboratory animal research are covered. Additionally, each student will rotate sanitation and nursing care for resident Program animals. Lecture 3 hours. Laboratory 3 hours. Prerequisites: All prior VT courses with a grade of " C " or better.

\section*{VT 2313 - Veterinary Hospital Technology II}

3 Credits
Administration of anesthetics, surgical assisting, and continued practice of techniques in radiology, bandaging, casting, intravenous and urinary catheterization, surgical preparations, postoperative procedures, as well as application of many other common nursing techniques will be practiced. Additionally, each student will rotate sanitation and nursing care for resident program animals. Lecture 2 hours. Laboratory 4 hours. Prerequisites: All prior VT courses with a grade of "C" or better.

\section*{VT 2333 - Veterinary Pharmacology}

3 Credits
Basic principles of drug therapy in the veterinary practice are studied. Coverage of the major classes of drugs, drug interactions, delivery routes, dosage calculations, dispensary protocols and inventory control. Lecture 3 hours. No Laboratory. Prerequisites: All prior VT courses with a grade of " \(C\) " or better.

\section*{VT 2352 - Radiology, Ultrasound and Diagnostic Imaging}

2 Credits
Intensive study and practice in medical diagnostic imaging techniques. Includes radiographic exposure techniques, film processing, contrast radiography, and ultrasonography. Lecture 1 hour. Laboratory 3 hours. Prerequisites: All VT courses with a grade of "C" or better.

\section*{VT 2364 - Large Animal Technology}

4 Credits
Techniques required to assist the large animal or mixed practice veterinarian. Studies and applications will include the use of the horse, cow, pig, sheep, and goat. Practice of restraint, sampling techniques, anesthesiology, radiology, medication administration, and other nursing techniques. Additionally, each student will rotate sanitation and nursing care for resident Program animals. Lecture 2 hours. Laboratory 6 hours. Prerequisites: All prior VT courses with a grade of "C" or better.

\section*{VT 2382 - Board Review for Veterinary Technicians} 2 Credits
This course is designed to prepare veterinary technology students and graduate technicians for the National Veterinary Technician Examination (NVTE) and the Oklahoma State Veterinary Technician Examination. Lecture 2 hours. No Laboratory.
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\section*{TC Tulsa Community College Professional Staff}


\section*{President and Chief Executive Officer \\ ...CC 626,Telephone: 918-595-7868 \\ Executive Vice President and Chief Financial Officer
......................................... 620, Telephone: 918-595-7895 \\ Executive Vice President and Chief Academic Officer \\ .CC 610, Telephone: 918-595-7980 \\ Associate Vice President for Academic Affairs \\ ..........................................CC 623,Telephone: 918-595-7841 \\ Associate Vice President for Student Affairs \\ ........................................CC 621,Telephone: 918-595-7901 \\ Vice President for External Affairs \\ ..CC 616, Telephone: 918-595-7977 \\ Admissions and Records
.......................................SE 1310,Telephone: 918-595-8634}

Alumni \& Friends Association
.CC 608, Telephone: 918-595-7977

\section*{Campus Police}

\section*{Campus Stores}

MC S130,Telephone: 918-595-7027

\section*{Comptroller - Bursar}
.CC 512,Telephone: 918-595-7801

\section*{Continuing Education}
........................................CC 202,Telephone: 918-595-7833

\section*{Distance Learning}
.MC 2009,Telephone: 918-595-7143

\section*{Diversity and Civic Engagement}
..CC 605,Telephone: 918-595-7838

\section*{Global Education}
.CC 609,Telephone: 918-595-7851

\section*{Grant Development}
.CC 408, Telephone: 918-595-7881

\section*{Human Resources}
..CC 501,Telephone: 918-595-7856

\section*{Learning Resources Center}
.SE 7200, Telephone: 918-595-7728

\section*{Marketing Communications}

CC 400, Telephone: 918-595-7884
Physical Facilities
CC 613,Telephone: 918-595-7865
Planning and Institutional Research
.CC 408, Telephone: 918-595-7925
Purchasing

\section*{Student Recruitment Services}
....................................... CC 400,Telephone: 918-595-7834
TCC Foundation
.CC 627,Telephone: 918-595-7836
The Eighth Floor
.CC 800,Telephone: 918-828-5341
University Transfer Programs
.CC 201D, Telephone: 918-595-7962

\section*{Workforce Development Programs}
......................................CC 201B, Telephone: 918-595-7976

\section*{The following College offices are located at the TCC Conference Center, unless otherwise indicated \\ PRESIDENT AND CHIEF EXECUTIVE OFFICER}

Thomas McKeon B.S., M.S., Ed.D.
President and Chief Executive Officer
California Polytechnical State Institute,
Oklahoma State University
Norma Rodgers B.S.,M.S.
Assistant to the President and CEO
University of Houston, Southern Nazarene University

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Director, Management Information Systems
Oklahoma State University
John Bruce B.S.
Technology Administrator
Tulane University
Darlene Thompson A.S. (Metro Campus)
Client Services Supervisor
Tulsa Community College

\section*{EXECUTIVE VICE PRESIDENT AND CHIEF FINANCIAL OFFICER}
C. Gary Crooms A.A., B.A., M.E., M.S.M., Ph.D.

Executive Vice President and Chief Financial Officer
Independence Community College, Southwestern College, Wichita State University, Southern Nazarene University, Kansas State University
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Director, Administrative Services
Shepherd College, Bowie State University
Jane Fleming B.S., M.S., Ed. D.
Director, Grant Compliance and Accounting
East Central Oklahoma State, Oklahoma State University
Ron Long
Campus Safety and Compliance Coordinator
Tulsa Community College

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Dean of Workforce Development Programs
Oklahoma State University
Doug Price B.S., M.A., Ed. D.
Dean of Global Education
University of Wyoming, The University of Tulsa,
Oklahoma State University
Sharon Wright B.S., M.S., Ed. D.
Dean of University Transfer Programs
Oklahoma State University

Michael Autrey B.S., M.S.
Alliance Program Coordinator
Northeastern State University, The University of Oklahoma

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Associate Vice President for Student Affairs
The University of Oklahoma, Oklahoma State University
Timothy Fernandez B.A., M.H.R.
(Northeast Campus)
Tulsa Achieves Program Director
Langston University, The University of Oklahoma

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Vice President for External Affairs
The University of Oklahoma
Deidra Kirtley B.S.
Special Project Coordinator
Oklahoma State University
Trevor C Lane B.A.
Student Recruitment Manager
Drake University

\section*{ADMISSIONS AND RECORDS}

Leanne Brewer A.A., B.S., M.S. (Southeast Campus)
Director, Admission Records and Registration
Tulsa Junior College, Northeastern Oklahoma State
University, Oklahoma State University
Carroll Jones, J. B.S., M.B.A. (Metro - Distance Learning)
On-Line Registrar
Oklahoma State University, Oklahoma City University

\section*{CAMPUS POLICE}

William Horton B.S., M.H.R. (Metro Campus)
Director, Campus Police
American University, The University of Oklahoma

\section*{CAMPUS STORES}

Ken Jones B.S. (Metro Campus)
Director, Campus Store Operations
Oklahoma State University

\section*{COMPTROLLER-BURSAR}

Lonnie Hobbs A.A., B.S.
Comptroller
Northeastern Oklahoma A \& M, Oklahoma State University
Yvonne McBride B.S.
Bursar
Northeastern State University

\section*{CONTINUING EDUCATION}

Cheryl Marrs B.S.,M.S., Ed.D.
Dean of Continuing Education
Oklahoma State University

Judy Tarpley B.B.A., M.H.R. (Business and Industry)(Metro Campus) Director, Continuing Education
Northeastern State University, The University of Oklahoma
Marquetta Finley B.A., M.S. (Youth and Academic Enrichment) (Northeast Campus)
Director, Continuing Education
Northeastern State University
Barbara Slagle B.S., M.S.
(Personal Enrichment and Developmentally Disabled)
(Southeast Campus)
Director, Continuing Education
The University of Tulsa, Oklahoma State University
Lou Ann Marlar B.S., M.E. (Business and Industry)
(Metro Campus)
Education Specialist
The University of Oklahoma, Northeastern State University
Lee Anne Morris B.A., M.H.R.
Assistant Professor/Coordinator of Technology
Northeastern State University , The University of Oklahoma
Christopher Tsotsoros B.A. (Youth and Academic Enrichment)
(Northeast Campus)
Education Specialist
Oklahoma State University

\section*{DISTANCE LEARNING}

Randy Dominguez B.S., M.S.(Metro Campus)
Dean of Distance Learning
Oral Roberts University
Reatha Blackburn B.S., M.S. (Metro Campus)
Assistant Professor/Coordinator of Instructional Technology Bartlesville Wesleyan College, The University of Oklahoma
Lynnda Brown B.S., M.S. (Southeast Campus)
Assistant Professor/Coordinator of Instructional Design Oklahoma State University

Jennifer Campbell B.S., M.Ed. (Metro Campus)
Associate Professor/ Coordinator of Instructional Design
Boston University, The University of Oklahoma
Loren Farr B.S. (Metro Campus)
Media/ITV Manager
University of Wisconsin

\section*{DIVERSITY \& CIVIC ENGAGEMENT}

Tony Alonso B.S., M.S.
Dean of Diversity and Civic Engagement
The University of Tulsa, Oklahoma State University
Diane Bostic B.A., M.Ed. (Northeast Campus)
Clinical Rotation Coordinator
Iowa Wesleyan College, Iowa State University
Penny Coberly B.A.
Academic Counselor
Northeastern State University
Janis Farr B.S., M.H.R. (Northeast Campus)
Academic Counselor
Oklahoma State University, The University of Oklahoma

Amy Gilbert B.A., M. Ed., LPC (Southeast Campus)
EOC Program Director
Southeastern Oklahoma State University, The University of Oklahoma

Wanda Holmes B.S., M.A. (Northeast Campus)
Upward Bound Program Director
Bennett Women's College, University of the Philippines
Eugene Johnson B.A., M.A. (Northeast Campus)
Education Specialist
PACE University, University of Chicago
Jodi Jones B.A.,M.H.R. (Southeast Campus)
Academic Counselor
Northeastern State University, The University of Oklahoma
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\section*{Campus Maps}


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- Counseling and Testing

Advisement
Assessment
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New Student Intake
- Bursar Services
- Distance Learning
- LRC
- Financial Aid and Scholarships
2. Alfred M. Philips Health Sciences Center
- Auditorium
- Dental Hygiene Clinic

\section*{3. Student Union}
- Campus Cafe/Vending Services
- Campus Store
- Fitness/Wellness Center
- Student Activities Office





1. Corporate Learning Center - 2nd Floor Continuing Education
2. Human Resources - 5 th Floor
3. The Eighth Floor* -8 th Floor
'Technology Learning Center for Teachers


Tulsa Community College 918-595-7373

TULSA COMMUNITY COLLEGE
Admissions/Enrollment Services Metro Campus
909 S. Boston
Tulsa, Oklahoma 74119
Phone: 918-595-7226
FAX: 918-595-7347

TULSA COMMUNITY COLLEGE
Admissions/Enrollment Services Northeast Campus
3727 E. Apache Street
Tulsa, Oklahoma 74115
Phone: 918-595-7526
FAX: 918-595-7594

TULSA COMMUNITY COLLEGE
Admissions/Enrollment Services Southeast Campus
10300 East 81st Street South
Tulsa, Oklahoma 74133
Phone: 918-595-7726
FAX: 918-595-7748

TULSA COMMUNITY COLLEGE
Admissions/Enrollment Services West Campus
7505 West 41st Street
Tulsa, Oklahoma 74107
Phone: 918-595-8126
FAX: 918-595-8130

\section*{APPLICATION PROCEDURES}

\section*{APPLICATION INSTRUCTIONS}
1. Provide ALL information requested on the application. (Your Social Security Number is used for Tulsa Community College identification of records only and will not be released, unless required by law, without your permission). A student ID will be assigned once your application is entered in the TCC system. When you log-in to the student web you will recieve a message displaying your new login ID. Please make note of your SID and change your pin at the same time or you may get your SID by showing a photo ID in any Admissions/Enrollment Services Office. Some major programs may require special admissions or an additional application*.
2. FEE NOTICE - A \(\$ 20\) one-time non-refundable application processing fee will be added to your first semester's tuition and fee statement. (When mailing, DO NOT submit any money with your application)*.
3. Apply on-line, by mail, in person, or via the TCC homepage:
www.tulsacc.edu. Click on Student Web. You may also print the TCC application from TCC homepage \& mail or fax to a Admissions/Enrollment Services Office on any campus. See phone, faxes and addresses listed above.
4. First-time college students are encouraged to participate in the student orientation program and be assessed for placement in courses.

\section*{INFORMATION REQUESTS}

For college information or class schedules contact Student Recruitment Services, call 918-595-7834 or email srecruitment@tulsacc.edu. Schedules and catalogs are available at the Tulsa City-County libraries and Tulsa Community College campuses or see www.tulsacc.edu.

\section*{INTERNATIONAL STUDENTS}

Complete the Tulsa Community College application as well as the International application packet. Mail to the address indicated in the packet. The TOEFL exam is required for those for whom English is a second language. Contact the International Student Services Office, 3727 East Apache,Tulsa, OK 74115-3151, (918) 595-7478 or view w ww.tulsacc.edu/iss.

\section*{FINANCIAL AID}

For forms or more information about TCC scholarships, tuition waivers, or financial assistance, contact any TCC campus Financial Aid and Scholarship Office, e-mail faid@tulsacc.edu or visit the website at www.tulsacc. edu/finaid/. Students seeking financial aid must use their Social Security Number.

\section*{ADVISEMENT/ COUNSELING}

Advisement Centers are located on each campus to assist students with assessment, college orientation, program curriculums, course content, transfer credit, advanced standing credit, planning a course schedule, placement testing, career guidance, and disabilities support services.

\section*{ADMISSIONS OPTIONS}

Find the category that identifies you. Provide credentials prior to enrollment. Have credentials mailed directly from the high school, college or testing center to any TCC Campus Admissions/Enrollment Services Office. Degree seeking students meet the federal ability to benefit criteria.

HIGH SCHOOL GRADUATES/GED GRADUATES— Provide an official high school transcript with graduation date (and/or passing GED scores - high school class must have graduated). Students 20 years of age or less, submit ACT, SAT or CPT test scores.

\section*{HOME STUDY/UNACCREDITED HIGH SCHOOL GRADUATES}

Provide credentials and meet same criteria as high school graduates. Degree seeking peer high school class must have graduated. (ACT required)

\section*{COLLEGE TRANSFER OR COLLEGE GRADUATE (Associate or higher) -}

Provide an official transcript from each college or university previously attended.

ADULTS Non-High School Graduates - Degree seeking adults whose high school class has graduated may be admitted to the college on a provisional basis and must demonstrate an ability-to-benefit from a program at TCC. College placement test (CPT) is required.

NON-DEGREE STUDENTS - Students who wish to enroll without intending to pursue a degree may enroll without transcripts. Students' peer high school class must have graduated and student must meet proficiency requirements. (a student may earn no more than 9 credit hours under this classification. A 9 hrs, non-degree form is required prior to enrollment.)

CONCURRENT HIGH SCHOOL -ACE- High School Juniors or Seniors Provide high school transcript, ACT (using Oklahoma norms) and Concurrent Enrollment Form with appropriate signatures each semester of attendance. Contact the Admissions/Enrollment Services Office on the campus you plan to attend to apply and to enroll. Students eligible for concurrent enrollment are eligible for the ACE waiver.

SENIOR CITIZEN FEE WAIVER - Fee waivers are available for Oklahoma residents, ages 65 or older, who wish to audit a course. Enrollment in this category is contingent on space available the day class begins.

OTHER SPECIAL ADMISSION OPTIONS - Opportunity Admissions (academically accelerated young person), International Students, Students for Whom English is a Second Language, should contact the Admissions/Enrollment Services Office on any campus for specific admission criteria.
* Omission or falsification of information on the application is grounds for rejection of the application and/or disciplinary action of an enrolled student.

All credentials submitted in support of this application become and remain the property of TCC.

Before Mailing: Please be sure you have: (1) answered all questions completely (2) signed and dated this application (3) verified your social security number (4) ordered official copy of your transcript(s) reflecting credits completed to date
\(\qquad\) \(\square\) Summer \(\qquad\) \(\square\) Fall \(\qquad\)
\begin{tabular}{l} 
2. Social Security Number \\
3. Student's Full Legal Nam \\
4. Current Address \\
All TCC correspondence prior t t \\
beginning of classes will be mail \\
5. Current Phone \\
6. Student's Date of Birth \\
7. Gender \\
8. Race / Ethnic Background \\
9. Citizenship / Residency \\
\begin{tabular}{|l|}
\hline \begin{tabular}{l} 
International Student Services \\
Tulsa Community College \\
3727 \\
Tulsa, Ok Appache S-128
\end{tabular} \\
Telephone: \(9118-595-7478\) \\
Fax: 918 -595-8451 \\
Email iss@tulsacc.edu
\end{tabular} \\
\hline
\end{tabular}
10. International Applicants
Do you have permanent resident alien status? \(\square\) Yes \(\square\) No Country of Birth
If yes, please include a photocopy of your permanent resident alien registration card. (Front and Back)
If applying on-line fax a copy to ISS office. (Original will be required)
Country of Citizenship
Have you taken the Test of English as a Foreign Language (TOEFL)? \(\square\) Yes \(\square\) No

\section*{11. Educational Goal}

Which college major do you plan to pursue? Indicate below desired college major or area of interest. Major name: \(\qquad\) Major code: \(\qquad\)
My objective while attending Tulsa Community College is to:
\(\square\) Complete a certificate program \(\quad \square\) Complete an associate degree \(\quad \square\) Not seeking a certificate or degree
TCC receives federal funding for services to students with the following special characteristics. Please check all that apply.
\(\square\) I will receive financial aid based on need \(\quad \square\) I am a foster child \(\quad \square\) I am a single parent with dependent children/child
\(\square\) I am a displaced homemaker \(\square\) I have a documented physical, learning or mental disability \(\square\) I have limited English proficiency
Are you planning to receive financial aid \(\square\) Yes \(\square\) No If yes, a major must be declared and transcripts provided.
Did either of your parents attend college? \(\square\) Mother \(\square\) Father \(\square\) Both \(\square\) Neither Did either of your parents complete a four-year college degree? \(\square\) Mother \(\square\) Father \(\square\) Both \(\square\) Neither
12. All Applicants - Please fill out all information pertaining to your high school and/or career/vo-tech as completely as possible.
\begin{tabular}{|c|c|c|}
\hline HIGH SCHOOL & & DATE ATTENDED \\
\hline CITY & STATE & \\
\hline CAREER / VO-TECH & & DATE ATTENDED \\
\hline CITY & STAT & PROGRAM \(\square\) ADULT \(\square\) HIGH SCHOOL \\
\hline Are you a high school g & igh school & \\
\hline
\end{tabular}

If no, do you have a GED? \(\square\) Yes \(\square\) No If yes, date awarded mo. Yr. (Please submit a copy of your GED score report.)
13. Have you taken the ACT?YesNo If yes, when? \(\qquad\) Were scores sent to TCC?№ \(\square\)
Have you taken the SAT?YesNo If yes, when? \(\qquad\) Mo. \(\quad\) Yr. Were scores sent to TCC? No \(\square\)

\section*{14. COLLEGE INFORMATION}
List below all colleges attended or currently attending. You must submit official transcripts from EACH college attended, even if no credit was earned at the institution. If readmission, please indicate semester of last enrollment.
\begin{tabular}{|c|c|c|c|c|c|}
\hline LIST ALL COLLEGES & NDED IN ORDER OF & O FIRST & & & DEGREE RECEIVED \\
\hline College & Location (City/State) & Attended From & Attended To & GPA & (Yes or No) \\
\hline
\end{tabular}
\begin{tabular}{llll} 
15. Employment & Employer: & & \(\square\) Full time \\
& Employer Adress \\
& \(\square\) Part time
\end{tabular}
Work phone: \(\quad\) Area Code \(\quad\) Number email: \(\qquad\)
\(\square\) Yes \(\square\) No or convicted of a felony Have you ever been convicted of a felony? \(\square\) Yes \(\square\) No
If yes, for either write a description of the circumstances and attach. Include full legal name and SSN.
\begin{tabular}{llllll} 
17. Next of Kin/ & \(\square \mathrm{Mr} . \quad \square \mathrm{Mrs}\). & Last & First & Middle &
\end{tabular}

\section*{REQUIRED SIGNATURE (All Applicants) BY MY SIGNATURE BELOW, I:}
1. Understand that withholding information requested or giving false information may make me ineligible for admission to, or continuation in, Tulsa Community College.
2. Authorize any high school, university or college I have attended to furnish enrollment and/or grade information as may be requested by TCC. TCC is authorized to provide TCC enrollment or grades as requested by another school or college.
3. If currently enrolled in high school or college, will furnish the College with final transcripts within two weeks of the end of the semester. Failure to do so may result in difficulty with academic advising, a delay in admission decision, financial aid packaging, and, if provisionally admitted, an enrollment hold.
4. Promise to fulfill all financial obligations to the institution which I may incur and will comply with all Board of Regents and institutional policies or standards.

ALL CREDENTIALS SUBMITTED IN SUPPORT OF THIS APPLICATION BECOME AND REMAIN THE PROPERTY OF TULSA COMMUNITY COLLEGE.

\section*{SIGNATURE}

\section*{PRINT NAME HERE}

\section*{DATE}

Please review your application carefully to make sure all information is complete. An incomplete application will result in a delay of our admission decision. Return completed form to the "Attention" of any Admission/Enrollment Services Office. See campus addresses at the top of the Admission Procedures instruction page.```


[^0]:    *Classes of a duration less than a regular semester will have different enrollment dates, refund policies, etc.
    Schedule adjustment or $100 \%$ refund on a drop: 8 -week terms - the first week of the term and for short courses it is prior to the second class meeting
    **College Closed - Use automated systems to add, drop or pay 7 AM - 11 PM daily. Go to TCC home page: www.tulsacc.edu, click on Student Web or use the TCC Touch Tone Phone system dial: 595-7373.
    Note:Last day for return of Title IV funds on complete drops, Fall 2008-October 23, Spring 2009 - March 11, Summer 2009- July 2.

[^1]:    - College for Kids \& Teens •Career Academies • Academic Enrichment •College for Young Scholars

