



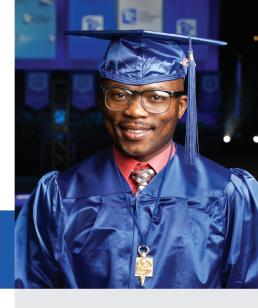
A.S. Mechanical Engineering at TCC B.S. Mechanical Engineering at OSU-Tulsa

# MECHANICAL ENGINEERING

Perhaps the broadest of all engineering disciplines, a degree in mechanical engineering offers a wide array of career paths in a multitude of industries. By starting at TCC and continuing to OSU-Tulsa, you'll gain excellent grounding in engineering fundamentals while experiencing flexibility in selecting technical electives to suit your interests. In addition to engineering fundamentals, we have solid elements of 'design' and 'hands-on' experience in our curriculum. From solving engineering problems provided by industrial firms to assisting smaller agencies with developing new products – whichever direction you choose, a degree in Mechanical Engineering can get you where you want to be.

My experience at TCC was great. They had good teachers and I learned a lot of basic engineering concepts before heading to OSU. Those basic requirement classes opened my mind and set me up for success for the upper engineering classes.

-Jonathan Akuma
TCC2OSU Engineering Student



#### Potential Careers

- Aerospace Engineer
- Architectural and Engineering Manager
- · Automotive Engineer
- Energy Engineer
- · Manufacturing Plant Manager
- Mechanical Drafter
- · Nuclear Engineer
- · Petroleum Engineer
- \* Extra training or education may be required.

## Median Wage in Tulsa

\$92,676 (Mechanical Engineers)

#### Support to Achieve Your Goals

- » Tutors, mentoring, and academic support throughout your program
- » Academic advising from TCC and OSU
- » Scholarship opportunities from TCC and OSU, including the Tulsa Achieves scholarship for Tulsa County high school graduates





OKLAHOMA STATE

Start today! New students, contact

Admission@TulsaCC.edu or 918-595-8000.

Current TCC students, contact

Tulsa.info@OKState.edu or 918-594-8355.

Learn more about other TCC2OSU pathways scan the QR code or visit TulsaCC.edu/TCC2OSU.



OSU-Stillwater OSU-Tulsa





# **Associate in Science in Mechanical Engineering (TCC) to Bachelor of Science in Mechanical Engineering (OSU)**

TULSA COMMUNITY COLLEGE (years 1 and 2) - 2021-22

Year One – Tulsa Community College						
Fall Semester*			Spring Semester*			
TCC Equivalent or Substitute	OSU Requirement	✓	TCC Equivalent or Substitute	OSU Requirement	<b>✓</b>	
ENGR 1111 – Intro to Engineering	ENGR 1111		ENGR 1242 – Intro to Engineering Computer Programming	ENGR 1412		
*CHEM 1365 – General Chemistry	CHEM 1414 + 1		ENGR 1132 – Engineering Design	ENGR 1332		
for Engineers	hour elective		w/CAD - Solidworks			
ENGL 1113 – Composition I	ENGL 1113		ENGL 1213 – Composition II	ENGL 1213		
*MATH 2114 – Calculus I	MATH 2144		PHYS 2034 – Engineering Physics I	PHYS 2014		
HIST 1483 – Am Hist 1492 – Civil War or HIST 1493 – Am Hist Civil War - Pres	HIST 1483 (H) or HIST 1493 (DH)		MATH 2124 – Calculus II	MATH 2153 + 1 hour elective		
Semester Credit Hours at TCC: 16			Semester Credit Hours at TCC: 15			

<sup>\*</sup>Students must have completed MATH 1513 and MATH 1613 or MATH 1715 or have demonstrated math competencies at the pre-calculus level through test scores prior to the first semester to complete this degree within two years/within the number of hours listed in the agreement. See an academic advisor to learn more about Math placement testing.

<sup>\*\*</sup> Students must complete 60 hours from a '4 year' school in order to meet all bachelor degree requirements. Students without any 4-year credits (AP, CLEP or University credit) will want to reverse transfer Humanities requirements to TCC from OSU to ensure the '60 hours from a 4-year school' rule is met. The BSME only has 49 hours upper division requirements. The (S), (I) and (D) requirements are waived with completion of the AS degree.

Year Two – Tulsa Community College						
Fall Semester*			Spring Semester*			
TCC Equivalent or Substitute	OSU Requirement	✓	TCC Equivalent or Substitute	OSU Requirement	✓	
ENGR 2103 – Statics	ENSC 2113		ENGR 2523 – Elementary Dynamics	ENSC 2123		
ENGR 2213 – Thermodynamics	ENSC 2213		ENGR 2143 – Strength of Materials	ENSC 2143		
PHYS 2124 – Engineering Physics II	PHYS 2114		ENGR 2613 – Intro to Electrical Science	ENSC 2613		
POLS 1113 – American Government	POLS 1113		MATH 2134 – Calculus III	MATH 2163 + 1 hour elective		
MATH 2613 – Differential Equations	MATH 2233		General Education Required Elective	3 hrs Social Science		
Semester Credit Hours at TCC: 16			Semester Credit Hours at TCC: 16			

Before transferring to OSU, have the TCC Registrar send an official transcript to the OSU Admissions Office with any degrees earned noted on the transcript. If you have not completed the requirements for an associate degree, talk with your OSU Academic Advisor about Reverse Transfer options to use OSU coursework to complete your TCC associate degree.





### OKLAHOMA STATE UNIVERSITY (years 3 and 4) – 2021-22

Year Three – Oklahoma State University					
Fall Semester		Spring Semester			
OSU Requirement	<b>√</b>	OSU Requirement	<b>√</b>		
MAE 3333 – Fundamental Fluid Dynamics		MAE 3233 – Heat Transfer			
MAE 3153 Introduction to MAE Design		MAE 3724 – Dynamic Systems Analysis & Controls			
MAE 3013 – Engineering Analysis		MAE 3403 – Computer Methods			
MAE 3113 – Measurements & Instrumentation		ENSC 3313 – Material Science			
3 Hrs Humanities (with I or D) @ OSU*		3 Hrs Humanities (with I or D) @ OSU*			
Semester Credit Hours at OSU: 15		Semester Credit Hours at OSU: 16			

<sup>\*</sup>Action: After semester six (first Spring semester at OSU-Tulsa) students should complete a reverse transfer to earn their A.S. Mechanical Engineering from Tulsa Community College. Contact <a href="mailto:reversetransfer@tulsacc.edu">reversetransfer@tulsacc.edu</a> to complete this process.

Year Four – Oklahoma State University					
Fall Semester		Spring Semester			
OSU Requirement	✓	OSU Requirement	✓		
MAE 3324 – Mechanical Design I		MAE CAT I Elective (3 Hrs)			
MAE 3524 – Thermal Fluids Design		MAE CAT II Elective (4 Hrs)			
3 Hrs Technical Elective (Varies)		3 Hrs MAE Elective (Varies)			
3 Hrs MAE Elective (Varies)		3 Hrs from Natural Science course options			
IEM 3503 – Engineering Economics					
Semester Credit Hours at OSU: 17		Semester Credit Hours at OSU: 13			

<sup>\*\*</sup> Students must complete 60 hours from a '4 year' school in order to meet all bachelor degree requirements. Students without any 4-year credits (AP, CLEP or University credit) will want to reverse transfer Humanities requirements to TCC from OSU to ensure the '60 hours from a 4-year school' rule is met. The BSME only has 49 hours upper division requirements. The (S), (I) and (D) requirements are waived with completion of the AS degree.

This plan is only one example of how a student may successfully complete degree requirements in four years. Course rotations may vary between the Stillwater and Tulsa campuses. Students are responsible for completing the requirements as given in the official degree requirements sheet.

