



Associate in Science in Mechanical Engineering (TCC) to Bachelor of Science in Industrial Engineering and Management (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	✓
ENGR 1111 – Intro to Engineering	ENGR 1111		ENGR 1242 – Intro to Engineering Computer Programming	ENGR 1412	
CHEM 1365 – General Chemistry for Engineers	CHEM 1414 + 1 hour elective		MATH 2124 – Calculus II	MATH 2153 + 1 hour elective	
ENGL 1113 – Composition I	ENGL 1113		PHYS 2034 – Engineering Physics I	PHYS 2014	
MATH 2114 – Calculus I	MATH 2144		ENGL 1213 – Composition II	ENGL 1213*	
HIST 1483 – Am Hist 1492 – Civil War or HIST 1493 – Am Hist Civil War - Pres	HIST 1483 (H) or HIST 1493 (DH)		3 Hours Humanities (H/I/D)**	3 hours H (with I or D)**	
Semester Credit Hours at TCC: 16			Semester Credit Hours at TCC: 16		

*ENGL 3323 will be waived with completion of AS degree.

** Minimum 6 hrs (H). Of these, 3 hours must meet the International Dimension (I) and 3 hrs must meet the Diversity (D) requirements. Students who complete their A. S. at TCC are eligible to have the (S), (I) & (D) requirements waived per OSRHE policy.

Year Two – Tulsa Community College

Fall Semester			Spring Semester		
TCC Equivalent or Substitute	OSU Requirement	✓	TCC Equivalent or Substitute	OSU Requirement	✓
ENGR 1132 – Engineering Design with Computer Aided Design	ENGR 1332		ENGR 2143 – Strength of Materials ¹ ENGR 2523 – Elementary Dynamics ¹ ENGR 2613 – Intro Electrical Science ¹	ENSC 2143 ENSC 2123 ENSC 2613	
ENGR 2213 – Thermodynamics ¹	ENSC 2213		POLS 1113 – American Government	POLS 1113	
PHYS 2124 – Engineering Physics II	PHYS 2114		COMM 1113 – Public Speaking (Gen Ed Required Elective)	SPCH 2713 (S)	
MATH 2134 – Calculus III ² or MATH 2613 – Differential Equations ²	MATH 2163 or MATH 2233		3 Hours Humanities (H/I/D)**	3 hours H (with I or D)**	
ENGR 2103 – Statics	ENSC 2113				
Semester Credit Hours at TCC: 15 -16			Semester Credit Hours at TCC: 12		

¹ Only two of these ENGR courses are required for the BS IEM at OSU. TCC will substitute a course during reverse transfer for the AS.

² Either MATH 2134 or MATH 2613 is required for the BS IEM. TCC will substitute a course during reverse transfer for the AS. For students who take MATH 2613 and do not have additional electives or other hours to meet the total hours required may need one additional hour of elective.

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

Year Three – Oklahoma State University			
Fall Semester		Spring Semester	
OSU Requirement	✓	OSU Requirement	✓
ENSC 3313 – Material Science		IEM 3503 – Engineering Economics	
IEM 2903 – Introduction to Industrial Engineering		IEM 3523 – Engineering Cost Information and Control Systems	
IEM 3403 – Collaborative Engineering Project Management		IEM 3703 – Probability and Statistics for Engineers II	
IEM 3103 – Probability & Statistics for Engrs I		IEM 3813 – Work Design, Ergonomics, and Human Performance	
MATH 3013 – Linear Algebra ²		IEM 4013 – Operations Research	
		IEM 3713 – Software Programming for Data Analytics	
Semester Credit Hours at OSU: 15		Semester Credit Hours at OSU: 18	

***Action:** After semester five (first Fall semester at OSU-Tulsa) students should complete a reverse transfer to earn their A.S. Mechanical Engineering from Tulsa Community College. Contact reversetransfer@tulsacc.edu to complete this process.

Year Four – Oklahoma State University			
Fall Semester		Spring Semester	
OSU Requirement	✓	OSU Requirement	✓
IEM 3303 – Manufacturing Processes		IEM 4103 – Quality Control	
IEM 4113 – Industrial Experimentation		IEM 4203 – Facilities and Material Handling Systems Design	
IEM 4613 – Production Planning and Control Systems		IEM Elective – IEM 4163, 4783, 4953 or 4990(3)	
IEM 4723 – Information Systems Design and Development		IEM Elective – IEM 4163, 4783, 4953 or 4990(3)	
IEM 4713 – Systems Simulation Modeling		IEM 4913 – Senior Design Projects	
IEM 4623 – Supply Chain and Logistics			
Semester Credit Hours at OSU: 18		Semester Credit Hours at OSU: 15	

This plan is only one example of how a student may successfully complete degree requirements in four years. Students are responsible for completing the requirements as given in the official degree requirements sheet.

