

MECHANICAL ENGINEERING (2023-2024)

Suggested Four Year Plan (Updated 11 Apr 2023)

1st Year	Session	Course	Course Title	SH	GRADE	Pre-Requisite or Co-Requisite
1st Semester (includes triad)	ALL	COMM 1311 or ENGL 1301	Foundation of Communication or Writing and Rhetoric I <i>(Core Curriculum Req.)</i>	3		n/a
	ALL	HIST 1301	US History to 1865 <i>(Core Curriculum)</i>	3		n/a
	F	UNIV 1101	University Seminar I	1		n/a
	ALL	MATH 2413	Calculus I	4		Prereq: MATH 1316 or MATH 2312 or minimum score of 640 in 'SAT MATH SECTION' or minimum score of 27 in 'ACT1 Math'
	ALL	CHEM 1411	General Chemistry I	4		Co-req: SMTE 0093.
	F/S	ENGR 1201	Introduction to Engineering	2		Prereq: MATH 1314 - College Algebra or equivalent academic preparation
			TOTAL HRS	17		
2nd Semester	ALL	ENGL 1302	Writing and Rhetoric II <i>(Core Curriculum)</i>	3		Prereq: ENGL 1301
	ALL	HIST 1302	US History since 1865 <i>(Core Curriculum)</i>	3		n/a
	S	UNIV 1102	University Seminar II	1		n/a
	ALL	MATH 2414	Calculus II	4		Prereq: A grade of C or better in MATH 2413 Calculus I
	F/S	ENGR 1312	Engineering Graphics I	3		Prereq: MATH 1314 - College Algebra or equivalent academic preparation
	F/S	PHYS 2425	University Physics I	4		Prereq: MATH 2413 Calculus I; Co-req: SMTE 0095
			TOTAL HRS	18		
2nd Year	Session	Course	Course Title	SH		Pre-Requisite or Co-Requisite
1st Semester	F/S	ENGR 2325	Statics	3		Prereq: PHYS 2425 University Physics I; prereq or co-req: MATH 2414 - Calculus II
	ALL	COSC 1330	Programming for Scientist, Engineers & Mathematicians	3		
	F/S	MATH 2415	Calculus III	4		Prereq: A grade of C or better in MATH 2414 Calculus II
	F/S	PHYS 2426	University Physics II	4		Prereq: PHYS 2425 University Physics I and MATH 2414 Calculus II; co-req: SMTE 0095
	All	CREATIVE ARTS CORE	Choose one: ARTS 1301 or 1303 or MUSI 1306 or 1307 or THEA 1310 or 1351 or COMM 1305 <i>(Core Curriculum)</i>	3		n/a
			TOTAL HRS	17		
2nd Semester	F/S	ENGR 2326	Dynamics	3		Prereq: ENGR 2325 - Statics
	F/S	ENGR 3316	Thermodynamics	3		Prereq: PHYS 2425 University Physics I and MATH 2414 Calculus II
	F/S	MATH 3315*	Differential Equations	3		Prereq: A grade of C or better in MATH 2414 Calculus II
	F/S	ENGR 3322	Materials Science	3		Prereq: CHEM 1411 General Chemistry I & PHYS 2425 University Physics I
	ALL	POLS 2305	US Government & Politics <i>(Core Curriculum)</i>	3		n/a
			TOTAL HRS	15		
3rd Year	Session	Course	Course Title	SH		Pre-Requisite or Co-Requisite
1st Semester	F/S	ENGR 2460	Circuit Analysis	4		Prereq: PHYS 2426 - University Physics II and MATH 2414 - Calculus II; prereq/coreq req MATH 3315 - Differential Equations or equivalent; co-req: SMTE 0099
	F/S	ENGR 3315*	Fluid Mechanics	3		Prereq: ENGR 2326 - Dynamics and MATH 2415 - Calculus III and MATH 3315 - Differential Equations
	ALL	Statistics elective	MATH 3342 Applied Probability and Statistics or MATH 3345 Statistical Modeling and Data Analysis	3		Prereq: MATH 2413 Calculus I (for MATH 3342) or MATH 2413 and (COSC 1330 Programming or COSC 1435 Problem Solving with Computers I) (for MATH 3345)
	F/S	ENGR 3320*	Strength of Materials	3		Prereq: ENGR 2325 - Statics and ENGR 3322 - Materials Science
	ALL	POLS 2306	State & Local Government <i>(Core Curriculum)</i>	3		n/a
			TOTAL HRS	16		
2nd Semester	F/S	ENGR 3350*	Manufacturing Processes	3		Prereq: ENGR 1312 Engineering Graphics I and ENGR 3322 Materials Science; co-req: SMTE 0099
	F/S	MEEN 3330*	Design of Machine Elements	3		Prereq: ENGR 3320 - Strength of Materials
	F/S	MEEN 3230*	Solid Mechanics Lab	2		Prereq/coreq: MEEN 3330 - Design of Machine Elements; co-req: SMTE 0099
	F/S	MEEN 3345*	Heat Transfer	3		Prereq: ENGR 3316 - Thermodynamics and ENGR 3315 - Fluid Mechanics
	F/S	MEEN 3310*	Engineering Analysis for ME	3		Prereq: MATH 3315 - Differential Equations
	ALL	LANGUAGE, PHILOSOPHY, CULTURE	Choose one ENGL 2322,2333,2334 or 2335 or SPAN 3307, 3308, 3309 or 3310 or PHIL 1301 or 2306 <i>(Core Curriculum)</i>	3		varies
			TOTAL HRS	17		
4th Year	Session	Course	Course Title	SH		Pre-Requisite or Co-Requisite
1st Semester	F/S	ENGR 4420*	Engineering Lab Measurements	4		Prereq: PHYS 2426 University Physics II and (MATH 3342 Applied Probability and Statistics or MATH 3345 Statistical Modeling and Data Analysis); co-req SMTE 0099
	F/S	ENGR 4240 *	Project Management	2		Prereq: MEEN 3330 - Design of Machine Elements and MEEN 3345 - Heat Transfer; co-req: SMTE 0099
	F/S	MEEN 4360*	Thermal Systems Design	3		Prereq: MEEN 3345 - Heat Transfer
	F/S	MEEN 4365*	Mechanical Systems Design	3		Prereq: MEEN 3330 - Design of Machine Elements and ENGR 3350 - Manufacturing Processes
			Technical Elective	3		Varies
			TOTAL HRS	15		
2nd Semester	F/S	ENGR 4370*	Capstone Project	3		Prereq: ENGR 4240 - Project Management; co-req SMTE 0099
	F/S	MEEN 4351*	Dynamical Systems Analysis and Modeling	3		Prereq: ENGR 2460 Circuit Analysis, MEEN 3310 Engineering Analysis, ENGR 2326 Dynamics, and COSC 1330 Programming
			Technical Elective	3		
			Technical Elective	3		Varies
ALL	SOCIAL SCIENCE	Soci 1301 or Psyc 2301 or Econ 2301 or 2302 <i>(Core Curriculum)</i>	3		n/a	
			TOTAL HRS	15		
		*Upper division credit	FOREIGN LANGUAGE			Met if had 2 years in HS or 2 college level courses (128 if no UCCP required)
			TOTAL HOURS FOR DEGREE PLAN	130		
			TOTAL UPPER DIVISION HOURS	53		