MECHANICAL ENGINEERING (2017-18)

Suggested Four Year Plan

1st Year	Session	Course	Course Title	SH	GRADE	Pre-Requisite or Co-Requisite
1st Semester (includes triad)	ALL	COMM 1311	Foundation of Communication *(Core Curriculum Req.)*	3		n/a
	ALL	HIST 1301	US History to 1865 *(Core Curriculum)*	3		n/a
	F	UCCP 1101	First Year Seminar	1		n/a
	ALL	MATH 2413	Calculus I	4		Placement
	ALL	CHEM 1411	General Chemistry I	4		MATH 1314 College Algebra or beyond
	F/S	ENGR 1211	Foundations of Engineering I	2		n/a
			TOTAL HRS	17		
2nd Semester	ALL	ENGL 1302	Composition II *(Core Curriculum)*	3		Engl 1301
	ALL	HIST 1302	US History since 1865 *(Core Curriculum)*	3		n/a
	S	UCCP 1102	First Year Seminar	1		n/a
	ALL	MATH 2414	Calculus II	4		Math 2413
	F/S	ENGR 1312	Foundations of Engineering II	3		n/a
	F/S	PHYS 2425	University Physics I	4		Math 2413
			TOTAL HRS	18		
2nd Year	**Session**	**Course**	**Course Title**	**SH**		**Pre-Requisite or Co-Requisite**
1st Semester	F/S	ENGR 2325	Statics	3		Phys 2425 Univ Phys I
	ALL	COSC 1330	Programming for Scientist, Engineers & Mathematicians	3		MATH 1314 College Algebra or beyond
	F/S	MATH 2415	Calculus III	4		Math 2414 Calculus II
	F/S	PHYS 2426	University Physics II	4		Phys 2425 Univ Phys I
	All	CREATIVE ARTS CORE	Choose one: Arts 1301 or 1303 or Musi 1306 or 1307 or Thea 1310 or 1351 or Comm 1305 *(Core Curriculum)*	3		n/a
			TOTAL HRS	17		
2nd Semester		ENGR 2326	Dynamics	3		Engr 2325 Statics & Math 2414 Cal II
		ENGR 2316	Thermodynamics	3		Math 2414 & Phys 2425 *Cal III and Dynamics ideal
	F/S	MATH 3315*	Differential Equations	3		Math 2414 Calculus II
		ENGR 2322	Materials Science	3		Chem 1411 Gen Chem I & Phys 2425 Phys I & Engr 1211 Found I
	ALL	POLS 2305	US Govt & Politics *(Core Curriculum)*	3		n/a
			TOTAL HRS	15		
3rd Year	**Session**	**Course**	**Course Title**	**SH**		**Pre-Requisite or Co-Requisite**
1st Semester		ENGR 2460	Circuit Analysis	4		Phys 2426 University Physics II
		ENGR 3315*	Fluid Mechanics	3		Engr 2326 Dynamics & Math 3315 Diff EQ & Math 3470 Cal III
	ALL	UPPER DIV ELECTIVE*	Must be in Math, Chemistry, Biology or Physics	3		Varies
		ENGR 3320*	Strength of Materials	3		Engr 2325 Statics & Engr 2322 Materials Science
	ALL	POLS 2306	State & Local Government *(Core Curriculum)*	3		n/a
			TOTAL HRS	16		
2nd Semester		ENGR 3350*	Manufacturing Processes	3		Engr 1312 Found of Engr II Engr 3320 Str of Matls & Engr 2326 Dynamics
		MEEN 3330*	Solid Mechanics for ME	3		Engr 3320 Strength of Materials
		MEEN 3230*	Solid Mechanics Lab	2		Pre-req or Co-req Meen 3330 Solid Mechanics
		MEEN 3345*	Heat Transfer	3		Engr 3315 Fluid Mech & Engr 2316 Thermodynamics
		MEEN 3310*	Engineering Analysis for ME	3		Math 3315 Diff EQ
	ALL	LANGUAGE, PHILOSOPHY, CULTURE	Choose one ENGL 2322,2333,2334 or 2335 or SPAN 3307, 3308, 3309 or 3310 or PHIL 1301 or 2306 *(Core Curriculum)*	3		Engl 1301 and 1302
			TOTAL HRS	17		
4th Year	**Session**	**Course**	**Course Title**	**SH**		**Pre-Requisite or Co-Requisite**
1st Semester		MEEN 4420*	Engineering Measurements	4		Engr 2460 Circuit Analysis
		MEEN 4240 *	Project Management	2		Meen 3330 Solid Mech & Meen 3345 Heat Transfer
		MEEN 4360*	Thermal Systems Design	3		Meen 3345 Heat Transfer
		MEEN 4365*	Mechanical Systems Design	3		Meen 3330 Solid Mechanics for ME
		MEEN 4351*	Dynamical Systems Analysis and Modeling	3		Cosc 1330 Programming for Engr, Engr 2460 Circuits, Meen 3345 Heat Transfer
			TOTAL HRS	15		
2nd Semester		MEEN 4370*	Capstone Project	3		Meen 4340 Project Mgmt & Coreq Meen 4360 & Meen 4365
		MEEN*	Technical Elective	3		Varies
		MEEN *	Technical Elective	3		Varies
	ALL	MEEN *	Technical Elective	3		Varies
	ALL	SOCIAL SCIENCE	Soci 1301 or Psyc 2301 or Econ 2301 or 2302 *(Core Curriculum)*	3		n/a
			TOTAL HRS	15		

*Upper division credit

FOREIGN LANGUAGE		Met if had 2 years in HS or 2 college level courses
TOTAL HOURS FOR DEGREE PLAN	130	(122 if no UCCP required)
TOTAL UPPER DIVISION HOURS	53	

TECH ELECTIVES

CHOOSE TWO FROM THE LIST BELOW:

MEEN 3340 SOLID MODELING & FINITE ELEMENTS - PRE-REQS MEEN 3310 & ENGR 2320

MEEN 4325 ENERGY CONVERSION - PRE REQS ENGR 2316

MEEN 4330 INTR TO PLASMA ENGR & APPL - PRE REQ: ENGR 2322 & ENGR 2460 & PHYS 2426

MEEN 4335 INTR TO AIRCRAFT AERODYNAMICS & PERFORMANCE - PRE REQS ENGR 2326

MEEN 4350 CONTROLS, AUTOMATION AND ROBOTICS PRE-REQS MATH 3315, ENGR 2360, ENGR 2326

MEEN 4345 SENSORS AND SYSTEMS - PRE REQS MATH 2414, PHYS 2426 &

MEEN 4355 MARINE FABRICATION PRE-REQS ENGR 2350

MEEN 4380 RENEWABLE ENERGY PRE-REQS ENGR 2316, MEEN 4325, ENGR 2360

MEEN 4385 OFFSHORE ENERGY MANGMENT PRE-REQS MEEN 3345

MEEN 4390 INTRO TO COMPUTATIONAL FLUID DYNAMICS PRE-REQ MEEN 3345

MEEN 4395 OFFSHORE WATER EXPLORATN &

* Students are responsible for achieving a 2.25 GPA in their major courses to graduate
* Any changes/exceptions to this Degree Plan must be filed on an Undergraduate Exception Form
* See your Faculty Mentor each semester and your Academic Advisor as needed
*Semesters courses are offered are subject to change
* Students are responsible for taking courses in the proper sequence to ensure orderly progression of work
* You must maintain a minimum GPA of 2.0 throughout your academic career to avoid Academic Probation or Suspension
* You must have at least 45 upper level hours to meet graduation requirements.

GENERAL ELECTIVES: (none required)

Technical Electives					
MEEN	3340	Solid Modeling and Finite Elements 4th year	MEEN	3310	Engineering Analysis for ME
			ENGR	2320	Strength of Materials
MEEN	4325	Energy Conversion 3rd year	ENGR	2316	Thermodynamics
MEEN	4350	Controls, Automation and Robotics 3rd year 2nd sem	MATH	3315	Differential Equations
			ENGR	2360	Circuit Analysis
			ENGR	2326	Dynamics
MEEN	4355	Marine Fabrication 4th year	ENGR	2350	Manufacturing Processes
MEEN	4380	Renewable Energy 3rd year	ENGR	2316	Thermodynamics
			MEEN	4325	Energy Conversion
			ENGR	2360	Circuit Analysis
MEEN	4385	Offshore Energy Management 4th year	MEEN	3345	Heat Transfer
MEEN	4390	Intro to Computational Fluid Dynamics 4th year	MEEN	3345	Heat Transfer
MEEN	4395	Offshore Water Exploration and Desalination Systems 3rd Year	ENGR	2316	Thermodynamics
FUTURE PROPOSED COURSES					
		Aerospace	ENGR	2326	Dynamics
		Fuel Cell	MEEN	3345	Heat Transfer
			CHEM	1311	Chemistry I
			CHEM	1111	Chemistry I Lab
		Plasma Engineering	PHYS	2426	University Physics II
			ENGR	2322	Material Science