

MECHANICAL ENGINEERING UNDERGRADUATE CURRICULUM
For Students Starting in Fall 2021, Graduating in 2025

FIRST SEMESTER			SECOND SEMESTER		
		credits			credits
APMA 1110	Single Variable Calculus II	(4)	APMA 2120	Multivariable Calculus	(4)
CHEM 1410	Intro to College Chemistry	(3)	CS 111X	Intro to Programming	(3)
CHEM 1411	Intro to College Chem Lab	(1)	PHYS 1425	General Physics I	(3)
ENGR 1624	Introduction to Engineering	(4)	PHYS 1429	General Physics I Workshop	(1)
STS 1500	Sci, Tech, Contemporary Issues ¹	(3)	_____	Math-Science Elective ²	(3)
			_____	HSS Elective 1 ³	(3)
	Total	(15)			(17)

THIRD SEMESTER			FOURTH SEMESTER		
		credits			credits
APMA 2130	Ordinary Differential Eq.	(4)	APMA 3140	Applied Partial Differential Eq.	(3)
MAE 2020	Intro to Mechanical Engr	(2)	MAE 2100	Thermodynamics	(3)
MAE 2040	Computer Aided Design	(1)	MAE 2310	Strengths of Materials	(3)
MAE 2300	Statics	(3)	MAE 2320	Dynamics	(3)
PHYS 2415	General Physics II	(3)	MAE 2330	Mechanics Laboratory	(2)
PHYS 2419	General Physics II Workshop	(1)	_____	Unrestricted Elective 1 ⁵	(3)
STS 2XXX/3XXX	STS Elective ⁴	(3)			
	Total	(17)			(17)

FIFTH SEMESTER			SIXTH SEMESTER		
		credits			credits
APMA 3110	Applied Statistics & Prob	(3)	MAE 3140	Elem Heat & Mass Transfer	(3)
MAE 3210	Fluid Mechanics	(3)	MAE 3420	Computational Methods	(3)
MAE 3230	Thermal Fluids Laboratory	(2)	MAE 3620	Machine Elem & Fatigue	(3)
MAE 3310	Aerospace Structures	(3)	MAE 3840	Mechanical Engineering Lab	(2)
MAE 3710	Mechanical Systems	(3)	MAE 4710	Mechatronics	(4)
_____	Unrestricted Elective 2 ⁵	(3)			
	Total	(17)			(15)

SEVENTH SEMESTER			EIGHTH SEMESTER		
		credits			credits
MAE 4xxx	Mechanical Engineering Design I ⁶	(3)	MAE 4xxx	Mechanical Engineering Design II ⁶	(3)
STS 4500	STS and Engineering Practice	(3)	STS 4600	Engineer, Ethics, Prof. Resp.	(3)
_____	Math-Science/Tech Elective 1 ⁷	(3)	_____	Math-Science/Tech Elective 3 ⁷	(3)
_____	Math-Science/Tech Elective 2 ⁷	(3)	_____	HSS Elective 3	(3)
_____	HSS Elective 2	(3)	_____	Unrestricted Elective 3 ⁵	(3)
	Total	(15)			(15)

- NOTE: STS 1500 and HSS Elective 1 may be taken in any order in Semesters 1 and 2.
- Chosen from: BIOL 2100, 2200; CHEM 1620; MSE 2090; PHYS 2620; and any APMA course 2000 or higher not already required by a student's major and does not duplicate material from another APMA course.

3. Chosen from the approved Humanities and Social Science list available in A122 Thornton Hall and in the SEAS Undergraduate Handbook.
4. Any course which meets the Second Writing Requirement as specified in the College of Arts & Science (CLAS) may be substituted for STS 2XXX/3XXX.
5. Unrestricted electives may be chosen from any graded course in the University except mathematics courses below MATH 1310 and courses that substantially duplicate any other offered for the degree, including PHYS 1010, 1020, 2010, 2020; CS 1010; or any introductory programming courses. Students in doubt as to what is acceptable to satisfy degree requirements should get the approval of their advisor and the Dean's Office located in A122 Thornton Hall.
6. Capstone sequence chosen from: 4610/4620, 4620, 4650/4660, and 4690/4700.
7. Chosen from Mechanical and Aerospace Engineering Approved Math-Science/Technical Electives list (see website).