Department of Mechanical and Aerospace Engineering
Suggested Program of Study
Mechanical Engineering: 2024 - 2025

First Year

Fall (12 credit hours)		**Spring** (15 credit hours)		**Summer** (10 credit hours)	
ENC 1101: English Comp I – GEP 1	(3)	**ENC 1102**: English Comp II – GEP 2	(3)	Historical Foundation – GEP 4	(3)
EGS 1006C: Intro to the Engr Prof	(1)	**EGN 1007C**: Engr Concepts & Methods	(1)	**EGN 3310**: Engr Analysis Statics *(PR: MAC 2311C, PHY 2048C (or PHY 2048 & PHY 2048L), CR: MAC 2312)*	(3)
Pick One - **CHS 1440**: Principals of Chemistry ***or*** **CHM 2045C**: Chemistry Fundamentals I – GEP 11	(4)	**PHY 2048C** (or PHY 2048 & PHY 2048L): General Physics Using Calc I – GEP 11 *(PR: MAC 2311C)*	(4)		
MAC 2311C: Calculus I – GEP 7 *(PR: MAC 1114C, MAC 1140C)*	(4)	**MAC 2312**: Calculus II *(PR: MAC 2311C)*	(4)	**MAC 2313**: Calculus III *(PR: MAC 2312)*	(4)
		SPC 1608: Oral Communications – GEP 3	(3)		

Second Year

Fall (13 credit hours)		**Spring** (12 credit hours)		**Summer** (9 credit hours)	
EGN 3321: Engineering Analysis - Dynamics *(PR: MAC 2313, EGN 3310)*	(3)	**EGM 3601**: Solid Mechanics *(PR: MAC 2311C, MAC 2312, MAC 2313, PHY 2048C (or PHY 2048 & PHY 2048L), EGN 3310)*	(3)	**EML 3701**: Fluid Mechanics *(PR: MAC 2313, MAP 2302, PHY 2048C (or PHY 2048 & PHY 2048L), EGN 3321, EGN 3343)*	(3)
PHY 2049C (or PHY 2049 & PHY 2049L): General Physics Using Calc II *(PR: PHY 2048C (or PHY 2048 & PHY 2048L), MAC 2312)*	(4)	**EGN 3373**: Principles of Electrical Engr *(PR: PHY 2049C (or PHY 2049 & PHY 2049L); CR: MAP 2302)*	(3)	**COP 3223C**: Intro to Programming w/ C *(PR: COP 2500C or appropriate score in the CS Placement Test)*	(3)
MAP 2302: Differential Equations *(PR: MAC 2313)*	(3)	**EGN 3343**: Thermodynamics *(PR: MAC 2313, EGN 3310)*	(3)	Cultural/Historical Foundation – GEP 6	(3)
EGN 3365: Struct & Prop of Aerospace Matls. *(PR: CHS 1440 or CHM 2045C, MAC 2312)*	(3)	Cultural Foundation – GEP 5	(3)		

Third Year

Fall (15 credit hours)		**Spring** (15 credit hours)	
EML 3933: Career/Academic Advising I *(PR: MAP 2302)*	(0)	**EML 4142**: Heat Transfer *(PR: EML 3701, EML 3034C)*	(3)
EML 3034C: Modeling Methods in MAE *(PR: MAC 2313, MAP 2302, PHY 2048C (or PHY 2048 & PHY2048L), COP 3223C; CR: EGN 3321, EML 3933)*	(3)	**EML 4225**: Intro to Vibrations & Controls *(PR: EGN 3321, EGM 3601, EML 3034C, EGN 3373)*	(3)
EML 3500: Machine Components *(PR: EGM 3601)*	(3)	**STA 3032**: Prob. & Statistics for Engr – GEP 8 *(PR: MAC 2312)*	(3)
EML 3303C: Mechanical Engr Measurements *(PR: EGN 3343)*	(3)	Option Course (Choose 1 of 5) *(See List Below)*	(3)
Approved Technical Elective	(3)	Approved Technical Elective	(3)
Social Foundation – GEP 9	(3)		

Summer
Consider Internship
Make-up missed courses

Fourth Year

Fall (15 credit hours)		**Spring** (12 credit hours)	
EML 4931: Career/Academic Advising II *(PR: EML 3933, Department Consent)*	(0)	**EML 4502C**: Mechanical Design II *(PR: EML 4931, EML 4501C)*	(3)
EML 4501C: Mechanical Design I *(PR: EGN 3373, EML 3303C, EML 3701, EML 4142, EML 4225 and Department Consent; CR: EML 4931)*	(3)	Approved Technical Elective	(3)
		Laboratory Course (Choose 1 of 2) *(See List Below)*	(3)
Approved Technical Elective	(3)	Life Sciences Foundation –GEP 12	(3)
Approved Technical Elective	(3)		
Option Course (Choose 1 of 5, *See List Below*)	(3)		
Social Foundation – GEP 10	(3)		

IMPORTANT NOTICES:

Grade of "C" (2.0) or better is required in all major courses. All prerequisites require a "C" (2.0) or better.

Must complete Lecture and Lab components of Physics courses with a "C" (2.0) or better: PHY 2048C or (PHY 2048 & PHY 2048L) PHY 2049C or (PHY 2049 & PHY 2049L)

Courses should be taken in the noted term or in a previous term, if your schedule permits, and if all prerequisites have been met. Please meet with your advisor if you have any questions regarding your schedule. Do not drop any course before discussing this action with your advisor.

ALL Mechanical Students Will Select 2 of 5 Courses (6 Credit Hours):

EML 4143: Heat Transfer II *(PR: EML 4142)* **Fall Only**	(3)	**EML 3101:** Thermodynamics of Mech Systems *(PR: EGN 3343)* **Spring Only**	(3)
EML 4313: Inter Systems Dynamics & Controls *(PR: MAP 2302, EGN 3321, EGN 3373, EML 4225)* **Fall Only**	(3)	**EML 4504:** Design & Analysis of Mach Comp II *(PR: EML 3500)* **Spring Only**	(3)
EML 4703: Fluid Mechanics II *(PR: EML 3701)* **Fall Only**	(3)		

ALL Mechanical Students Will Select 1 of 2 Laboratory Courses (3 Credit Hours):

EML 4301C: Mechanical Systems Lab *(PR: EML 3303C, EGM 3601; CR: EML 4225)*	(3)	**EML 4306C:** Energy Systems Lab *(PR: EML 3303C; CR: EML 4142)*	(3)

Revised: 03/4/2024

MECHANICAL ENGINEERING FLOW CHART: 2024-2025