Department of Mechanical and Aerospace Engineering
Suggested Program of Study
Mechanical Engineering: 2020 - 2021

FIRST YEAR

Fall (12 credit hours, 14 contact hours)

ENC 1101 English Composition I – GEP 1	3(3,0)
*EGS 1006C Intro to the Engr Prof	1(1,2)
*MAC 2311C Calc. I w/ Analytic Geometry – C1	4(4,0)
(PR: "C" (2.0) or better in MAC 1114C, MAC 1140C)	
Pick One - *CHS 1440 Principals of Chemistry ***or***	4(3,1)
*CHM 2045C Chemistry Fundamentals I – GEP 11	

Spring (15 credit hours, 19 contact hours)

ENC 1102 English Composition II – GEP 2	3(3,0)
SPC 1608 Oral Communications – GEP 3	3(3,0)
*EGN 1007C Engr Concepts & Methods	1(1,2)
*MAC 2312 Calculus II w/ Analytic Geometry	4(4,0)
(PR: "C" (2.0) or better in MAC 2311C)	
*PHY 2048C General Physics Using Calc I – GEP 11	4(3,3)
(PR: "C" (2.0) or better in MAC 2311C)	

Summer (10 credit hours, 11 contact hours)

*MAC 2313 Calc. III w/ Analytic Geometry	4(4,0)
(PR: "C" (2.0) or better in MAC 2312)	
*EGN 3310 Engr Analysis Statics	3(3,0)
(PR: "C" (2.0) or better in MAC 2311C, PHY 2048C, CR: MAC 2312)	
*COP 3223C Intro to Programming with C	3(3,1)

SECOND YEAR

Fall (13 credit hours, 15 contact hours)

*EGN 3321 Engineering Analysis - Dynamics	3(3,0)
(PR: "C" (2.0) or better in MAC 2313, EGN 3310)	
*MAP 2302 Differential Equations	3(3,0)
(PR: "C" (2.0) or better in MAC 2313)	
*PHY 2049C General Physics Using Calculus II	4(3,3)
(PR: "C" (2.0) or better in MAC 2312, PHY 2048C)	
*EGN 3365 Structure & Properties of Materials	3(3,0)
(PR: "C" (2.0) or better in CHS 1440 or CHM 2045C, MAC 2312)	

Spring (12 credit hours, 12 contact hours)

*EGN 3373 Principles of Electrical Engr	3(3,0)
(PR: PHY 2049C; CR: MAP 2302)	
*EGN 3343 Thermodynamics	3(3,0)
(PR: "C" (2.0) or better in MAC 2313, EGN 3310)	
*EGM 3601 Solid Mechanics	3(3,0)
(PR: "C" (2.0) or better in MAC 2313, PHY 2048C, EGN 3310)	
Historical Foundation – GEP 4	3(3,0)

Summer (9 credit hours, 9 contact hours)

*STA 3032 Prob. & Statistics for Engineers – C2	3(3,0)
(PR: "C" (2.0) or better in MAC 2312)	
Cultural Foundation – GEP 5	3(3,0)
Social Foundation – GEP 9	3(3,0)

THIRD YEAR

Fall (15 credit hours, 18 contact hours)

EML 3933 Career/Academic Advising I	0(0,0)
(PR: "C" (2.0) or better in MAP 2302)	
*EML 3034C Modeling Methods in MAE	3(3,1)
(PR: "C" (2.0) or better in MAC 2311C, MAC 2312, MAC 2313, MAP 2302, PHY 2048C, COP 3223C; CR: EGN 3321 and EML 3933)	
*EML 3701 Fluid Mechanics	3(3,0)
(PR: "C" (2.0) or better in MAC 2311C, MAC 2312, MAC 2313, MAP 2302, PHY 2048C, EGN 3321 and EGN 3343)	
*EML 3303C Mechanical Engr Measurements	3(2,3)
(PR: "C" (2.0) or better in EGN 3343)	
*EML 3500 Design & Analysis of Machine Components	3(3,0)
(PR: "C" (2.0) or better in EGM 3601)	
Life Sciences Foundation – GEP 12	3(3,0)

Spring (15 credit hours, 15 contact hours)

*EML 4142 Heat Transfer	3(3,0)
(PR: "C" (2.0) or better in EML 3701, EML 3034C)	
*EML 4225 Introduction to Vibrations & Controls	3(3,0)
(PR: "C" (2.0) or better in EGN 3321, EGM 3601, EML 3034C, EGN 3373)	
*Approved Technical Elective	3(3,0)
*Approved Technical Elective	3(3,0)
Social Foundation – GEP 10	3(3,0)

FOURTH YEAR

Fall (15 credit hours, 18 contact hours)

EML 4931 Career/Academic Advising II	0(0,0)
(PR: EML 3933, Department Consent)	
*EML 4501C Mechanical Design I	3(2,4)
(PR: "C" (2.0) or better in EGN 3373, EML 3303C, EML 3701, EML 4142, EML 4225 and Department Consent; CR: EML 4931)	
*Approved Technical Elective	3(3,0)
*Approved Technical Elective	3(3,0)
*Option Course (Choose 1 of 5, See List Below)	3(3,0)
Cultural Or Historical Foundation – GEP 6	3(3,0)

Spring (12 credit hours, 18 contact hours)

*EML 4502C Engineering Design II	3(2,4)
(PR: EML 4931 and "C" (2.0) or better in EML 4501C)	
*Approved Technical Elective	3(3,0)
*Laboratory Course (Choose 1 of 2)	3(2,3)
(See List Below)	
*Option Course (Choose 1 of 5)	3(3,0)
(See List Below)	

IMPORTANT NOTICES:

***Grade of "C" (2.0) or better is required in these courses.**

Courses should be taken in the noted term or in a previous term, if your schedule permits, and as long as all prerequisites for that course 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. There may be alternative options.

If you are not ready to begin the Calculus sequence upon entry to the Mechanical Engineering curriculum, it is imperative that you meet with your advisor to plan a personalized program of study. Mathematics and physics are cornerstones of a quality engineering program and it is important for your academic career that you proceed accordingly.

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

EML 4143 Heat Transfer II 3(3,0)
(PR: "C" (2.0) or better in EML 4142) Fall Only

EML 4313 Inter Systems Dynamics & Controls 3(3,0)
(PR: "C" (2.0) or better in MAP 2302, EGN 3321, EGN 3373, EML 4225) Fall Only

EML 4703 Fluid Mechanics II 3(3,0)
(PR: "C" (2.0) or better in EML 3701) Fall Only

EML 3101 Thermodynamics of Mech Systems 3(3,0)
(PR: "C" (2.0) or better in EGN 3343) Spring Only

EML 4504 Design & Analysis of Mach Comp II 3(3,0)
(PR: "C" (2.0) or better in EML 3500) Spring Only

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

EML 4301C Mechanical Systems Lab 3(2,3)
(PR: "C" (2.0) or better in EML 3303C, EGM 3601; CR: EML 4225)

EML 4306C Energy Systems Lab 3(2,3)
(PR: "C" (2.0) or better in EML 3303C; CR: EML 4142)

Revised: 04/08/2020