

**Bachelor of Science in Mechanical Engineering
2023-2024**

Freshman Year

Fall Semester	Hrs	Spring Semester	Hrs
CHEM 1011, Lab. for General Chemistry I	1		
CHEM 1013, General Chemistry I	3	CHEM 1023, General Chemistry II	3
ENG 1003, Composition I	3	ENG 1013, Composition II	3
ENGR 1402, Concepts of Engineering	2	ENGR 1412, Software Applications for Engineers	2
MATH 2204, Calculus I	4	MATH 2214, Calculus II	4
COMS 1203, Oral Communication	3	PHYS 2034, University Physics I	4
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Sophomore Year

Fall Semester	Hrs	Spring Semester	Hrs
ENGR 2401, Applied Engr. Statistics	1	ENGR 2411, Lab. for Mechanics of Materials	1
ENGR 2403, Statics	3	ENGR 2413, Mechanics of Materials	3
ENGR 2421, Lab. for Electric Circuits I	1	ENGR 3423, Dynamics	3
ENGR 2423, Electric Circuits I	3	MATH 4403, Differential Equations	3
MATH 3254, Calculus III	4	ME 2502, Solid Modeling for Mechanical Engineers	2
+Fine Arts elective	3	PHYS 2044 University Physics II	4
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Junior Year

Fall Semester	Hrs	Spring Semester	Hrs
ENGR 3433, Engineering Economics	3	ME 3513, Mechanical Vibrations	3
ME 4543, Machine Design	3	ME 3533, Engineering Thermodynamics II	3
ENGR 3443, Engineering Thermo. I	3	+Social Science elective	3
+Humanities elective	3	ME 4573, Mechanical Systems Design	3
ENGR 3471, Lab. for Fluid Mechanics	1	ENGR 4453, Num. Meth. for Engineers	3
ENGR 3473, Fluid Mechanics	3	ME 4553, Heat Transfer	3
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Senior Year

Fall Semester	Hrs	Spring Semester	Hrs
ENGR 4463, Senior Design I	3	ENGR 4482, Senior Design II	2
ME 4504, Process Monitoring and Control	4	++ME Elective	3
ENGR 4401, Senior Seminar	1	***Professional Development Elective	3
ME 4503, Fluid and Thermal Energy Systems	3	++ME Elective	3
ME 4613, Introduction to Mechatronics	3	ME 4603, Control Systems for ME	3
ME 4563, Intro. To Man. Processes	3		
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Total

128

+ See General Education requirements for the College of Engineering.

++ List of approved electives is given on page 2 of this document.

*** Approval of advisor required. Partial list of approved Professional Development Electives given in the catalog.

General Education Curriculum for Engineering Baccalaureate Degrees

			Semester Hours
Communication			9
	ENG 1003, Composition I	ENG 1013, Composition II	COMS 1203, Oral Communication
Mathematics			4
	MATH 2204, Calculus I		
Arts and Humanities			6
	Fine Arts. Select one of the following:		Humanities. Select one of the following:
	MUS 2503, Fine Arts – Musical		ENG 2003, World Literature to 1660
	THEA 2503, Fine Arts – Theater		ENG 2013, World Literature since 1660
	ART 2503, Fine Arts – Visual		PHIL 1103, Introduction to Philosophy
Social Sciences			11
	Select one of the following:		
	HIST 2763, The United States to 1876,		
	HIST 2773, The United States since 1876 ,		
	POSC 2103, Introduction to United States Government		
	Substitution of Higher Math (8hrs required): MATH 2214, Calculus II AND MATH 3254, Calculus III		
Science.....			8
	CHEM 1013, General Chemistry I, and CHEM 1011, Laboratory for General Chemistry I,		
	PHYS 2034, University Physics I		
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			38
Other rules:	A course may be counted in satisfaction of only one area requirement. With the exception of English courses (ENG), no more than two selections may have the same prefix.		
Additional required support courses:			
	MATH 4403, Differential Equations		3
	CHEM 1023, General Chemistry II		3
	PHYS 2044, University Physics II.....		4
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			10
Engineering Core Courses:			
	ENGR 1402, Concepts of Engineering		2
	ENGR 1412, Software Applications for Engineers		2
	ENGR 2401, Applied Engineering Statistics.....		1
	ENGR 2403, Statics		3
	ENGR 3433, Engineering Economics.....		3
	ENGR 4401, Senior Seminar.....		1
	ENGR 4453, Numerical Methods for Engineers		3
	ENGR 4463, Senior Design I		3
	ENGR 4482, Senior Design II		2
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Mechanical Engineering Major Courses:			
	ENGR 2413 and ENGR 2411, Mechanics of Materials and Lab. for Mechanics of Materials		4
	ENGR 2423 and ENGR 2421, Electric Circuits I and Laboratory for Electric Circuits I.....		4
	ENGR 3423, Dynamics		3
	ENGR 3443, Engineering Thermodynamics I.....		3
	ENGR 3473 and ENGR 3471, Fluid Mechanics and Lab. for Fluid Mechanics		4
	ME 2502, Solid Modeling for Mechanical Engineers.....		2
	ME 3513, Mechanical Vibrations		3
	ME 3533, Engineering Thermodynamics II.....		3
	ME 4503, Fluid and Thermal Energy Systems		3
	ME 4504, Process Monitoring and Control		4
	ME 4543, Machine Design		3
	ME 4553, Heat Transfer.....		3
	ME 4563, Introduction to Manufacturing Processes		3
	ME 4573, Mechanical Systems Design		3
	ME 4603, Control Systems for Mechanical Engineers.....		3
	ME 4613, Introduction to Mechatronics.....		3
	++ Mechanical Engineering Electives.....		6
	Professional Development Elective.....		3
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			60

++ List of approved ME electives: ME 3523, Introduction to Robotics Laboratory; ME 4523, Introduction to Finite Element Analysis (FEA); ME 4583, Energy Conversion; ME 4593, Heating, Venting and Air Conditioning (HVAC); ME 4553 Fundamentals of Acoustics and Noise Control