

Mechanical Engineering Major, Bachelor of Science (92 credit hours)

Students in Mechanical Engineering will learn the principles and skills necessary to understand how heat and mechanical power can be used in the design and operation of machines and other tools. Graduates of the Mechanical Engineering program will have a diverse background, with skills that can be ready for employment in industries such as automotive, aerospace, manufacturing, and consumer goods.

49 credit hours from the Common Engineering Core, Including Mathematics and Basic Sciences:

- ENGR 2001, Introduction to Engineering, 1 credit hour
- ENGR 2002, Introduction Mechanical Laboratory, 1 credit hour
- ENGR 2003, Introduction to Electrical and Computer Laboratory, 1 credit hour
- ENGR 2010, Statics, 3 credit hours
- ENGR 2030, Circuit Analysis, 3 credit hours
- ENGR 2080, Service Through Engineering and Technology, 3 credit hours¹
- ENGR 2090, Systems Engineering, 3 credit hours^{1,2}
- ENGR 2310, Computational Problem Solving, 3 credit hours
- ENGR 4950, Senior Design I, 2 credit hours²
- ENGR 4960, Senior Design II, 2 credit hours³
- CHEM 2110, General Chemistry I, 4 credit hours⁴
- MATH 2010, Calculus I, 4 credit hours⁵
- MATH 2020, Calculus II, 4 credit hours
- MATH 3010, Linear Algebra with Differential Equations, 4 credit hours
- MATH 3100, Differential Equations, 3 credit hours
- PHYS 2240, General Physics I, 4 credit hours
- PHYS 2250, General Physics, II, 4 credit hours

43 credit hours of major specific requirements:

- MATH 3020: Calculus III, 4 credit hours
- ENGR 2070: Thermodynamics, 3 credit hours
- ENGR 2110: Dynamics, 3 credit hours
- ENGR 3030: Signals and Controls, 3 credit hours
- ENGR 3100: Mechanics Lab, 2 credit hours
- ENGR 3110: Kinematics and Robotics, 3 credit hours
- ENGR 3160: Vibrations, 2 credit hours
- ENGR 3180: Materials and Processes, 3 credit hours
- ENGR 3190: Thermodynamics: Cycle Analysis, 2 credit hours
- ENGR 3510: Solid Mechanics, 3 credit hours
- ENGR 3850: Engineering Projects Lab, 1 credit hour
- ENGR 4100: Thermal-Fluids Lab, 2 credit hours
- ENGR 4110: Machine Design, 3 credit hours
- ENGR 4130: Fluid Mechanics, 3 credit hours
- ENGR 4160: Heat and Mass Transfer, 3 credit hours
- ENGR Breadth Elective, 3 credit hours: Take at least 3 hours from ENGR 3xxx or above

¹ This course fulfills the Global/Intercultural Ways of Knowing Requirement in the Liberal Arts Program.

² This is a Writing Intensive course in the Liberal Arts Program.

³ This is both a Writing and Speaking Intensive course in the Liberal Arts Program.

⁴ This course fulfills the Scientific Ways of Knowing requirement in the Liberal Arts Program.

⁵ This course fulfills the Quantitative Ways of Knowing Requirement in the Liberal Arts Program.

NOTE: All students must complete a minimum of 120 total credit hours to graduate from Anderson University.

Questions? Please contact the [Department of Physical Sciences & Engineering](#).

Proposed Course Sequence:

Freshman: MATH 2010, CHEM 2110, ENGR 2001, 2002, 2003; MATH 2020, PHYS 2240, ENGR 2310
 Sophomore: MATH 3010, PHYS 2250, ENGR 2010, 2080; MATH 3020, 3100, ENGR 2030, 2090, 2110
 Junior: ENGR 2070, 3110, 3180, 3510; ENGR 3190, 3850, 4110, 4130
 Senior: ENGR 3030, 3100, 3160, 4950; ENGR 4100, 4160, 4960, ENGR Elective

SEMESTER 1		SEMESTER 2	
Quantitative Reasoning, MATH 2010	4 Hours	MATH 2020	4 Hours
Scientific Ways, CHEM 2110	4 Hours	PHYS 2240	4 Hours
ENGR 2001, 2002, 2003	3 Hours	ENGR 2310	3 Hours
ENGL 1110	3 Hours	ENGL 1120	3 Hours
LART 1050	1 Hour	Personal Wellness	2 Hours

SEMESTER 3		SEMESTER 4	
MATH 3010	4 Hours	MATH 3020	4 Hours
PHYS 2250	4 Hours	MATH 3100	3 Hours
ENGR 2010	3 Hours	ENGR 2030	3 Hours
Global/Intercultural Ways: ENGR 2080	3 Hours	Global/Intercultural Ways: ENGR 2090 (Writing Intensive)	3 Hours
COMM 1000	3 Hours	ENGR 2110	3 Hours

SEMESTER 5		SEMESTER 6	
ENGR 2070	3 Hours	ENGR 3190	2 Hours
ENGR 3510	3 Hours	ENGR 4110	3 Hours
ENGR 3180	3 Hours	ENGR 4130	3 Hours
ENGR 3110	3 Hours	ENGR 3850	1 Hour
Language	4 Hours	Civic Ways of Knowing	3 Hours
		BIBL 2000	3 Hours

SEMESTER 7		SEMESTER 8	
ENGR 3030	3 Hours	ENGR 4100	2 Hours
ENGR 3160	2 Hours	ENGR 4160	3 Hours
ENGR 3100	2 Hours	ENGR 4960 (Speaking Intensive, WI)	2 Hours
ENGR 4950 (WI)	2 Hours	ENGR Elective	3 Hours
Christian Ways of Knowing	3 Hours	Aesthetic Ways of Knowing	3 Hours
Social/Behavioral Ways of Knowing	3 Hours	Civil Discourse and Critical Reasoning	2 Hours

Questions? Please contact the [Department of Physical Sciences & Engineering](#).