ANDERSON UNIVERSITY

Academic Advising

Mechanical Engineering Major, Bachelor of Science (83 credit hours) **2018-2019**

20 credit hours from the Common Engineering Core:

- CPSC 2320: C++ Programming, 1 credit hour[1]
- ENGR 2001: Introduction to Engineering, 1 credit hour
- ENGR 2002: Introduction to Mechanical Laboratory, 1 credit hour
- ENGR 2003: Introduction to Electrical and Computer Laboratory, 1 credit hour
- ENGR 2010: Statics, 2 credit hours
- ENGR 2030: Circuit Analysis, 3 credit hours
- ENGR 2090: Systems Engineering, 2 credit hours
- ENGR 2110: Dynamics, 2 credit hours
- ENGR 2310: Computational Problem Solving, 3 credit hours
- ENGR 4950: Senior Design I, 2 credit hours[2]
- ENGR 4960: Senior Design II, 2 credit hours[3]

31 credit hours of Mathematics and Basic Sciences:

- CHEM 2110: General Chemistry I, 4 credit hours[4]
- MATH 2010: Calculus I, 4 credit hours[5]
- MATH 2020: Calculus II, 4 credit hours
- MATH 3010: Linear Algebra with Differential Equations, 4 credit hours
- MATH 3020: Calculus III, 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

32 credit hours of major specific requirements:

- ENGR 2070: Thermodynamics, 3 credit hours
- ENGR 3030: Signals and Controls, 3 credit hours
- ENGR 3110: Kinematics and Robotics, 4 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, 4 credit hours
- ENGR 4110: Machine Design, 3 credit hours
- ENGR 4130: Fluid Mechanics, 4 credit hours
- ENGR 4160: Heat and Mass Transfer, 4 credit hours

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[1] May also be fulfilled with CPSC 2500.

[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.

Common Engineering Core Suggested Course Sequence

SEMESTER 1		SEMESTER 2	
MATH 2010	4 Hours	MATH 2020	4 Hours
CHEM 2110	4 Hours	PHYS 2240	4 Hours
ENGR 2001, 2002, 2003	3 Hours	ENGR 2310	3 Hours
ENGL 1100/ENGL 1110	4-3 Hours	ENGL 1120	3 Hours
LART 1050	1 Hour	LART 1100	2 Hours

SEMESTER 3		SEMESTER 4	
MATH 3010	4 Hours	MATH 3020	4 Hours
PHYS 2250	4 Hours	MATH 3100	3 Hours
CPSC 2320	1 Hours	ENGR 2030	3 Hours
ENGR 2010	2 Hours	ENGR 2110	2 Hours
ENGR 2090	2 Hour	ENGR Skills Lab	0-1 Hour
ENGR Skills Lab	0-1 Hour	ECON 2010[6]	3 Hours
COMM 1000	3 Hours		

Mechanical Engineering Major Suggested Course Sequence

SEMESTER 5		SEMESTER 6	
ENGR 2070	3 Hours	ENGR 3110	4 Hours
ENGR 3030	3 Hours	ENGR 3190	2 Hours
ENGR 3160	2 Hours	ENGR 3510	4 Hours
ENGR 3180	3 Hours	ENGR 4130	4 Hours
ENGR Skills Lab	0-1 Hour	ENGR Skills Lab	0-1 Hour
BIBL 2000	3 Hours	Personal Wellness	2 Hours

SEMESTER 7		SEMESTER 8	
ENGR 4110	3 Hours	ENGR 4960	2 Hours
ENGR 4160	4 Hours	ENGR Skills Lab	0-1 Hour
ENGR 4950	2 Hours	Foreign Language	4 Hours
ENGR Skills Lab	0-1 Hour	PHIL 3250[7]	3 Hours
POSC 2100[8]	3 Hours	ENGR 2080[9]	3 Hours
COMM 2550[10]	3 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.

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[6] This course fulfills the Social/Behavioral Ways of Knowing requirement in the Liberal Arts Program.

[7] This course fulfills the Christian Ways of Knowing requirement in the Liberal Arts Program.

[8] This course fulfills the Civic Ways of Knowing requirement in the Liberal Arts Program.

[9] This course fulfills the Global/Intercultural Ways of Knowing requirement in the Liberal Arts Program.

[10] This course fulfills the Aesthetic Ways of Knowing requirement in the Liberal Arts Program.