

## Mechanical Engineering Curriculum Mapping

Student Learning Outcomes in Courses Mapped to Program Outcomes Listed Below.

Semester	Course	1	2	3	4	5	6	7	8	9
Freshman Fall	Math 150	X							X	
	Chem 202	X				X			X	
	ME 190	X	X	X	X				X	
	GE, Written Communication		X	X	X					
	GE, Life Science		X							
Freshman Spring	Math 151	X							X	
	Phys 195	X							X	
	Phys 195L	X		X			X		X	
	GE, Critical Thinking		X	X	X					
	GE, Arts & Humanities		X							
	GE, Social & Behavioral Sciences		X	X	X					
Sophomore Fall	Math 252	X						X	X	
	Phys 196	X							X	
	Phys 196L	X		X			X	X	X	
	ME 200	X					X		X	
	ME 202	X		X					X	
	ME 240	X	X	X	X				X	X
	GE, Arts & Humanities		X	X						
Sophomore Spring	AE 280	X							X	
	EE 204	X					X		X	
	Phys 197	X							X	
	ME 220	X							X	
	ME 241		X	X		X	X			
	GE, Arts & Humanities		X	X						
	GE, Social & Behavioral Sciences/Ameri		X	X	X					

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Junior Fall	ME 360	X	X				X	X	X	X
	AE 341	X		X		X	X	X		
	ME 304	X		X						X
	ME 310	X	X	X	X	X	X	X	X	X
	ME 350	X		X			X		X	X
	GE, Lifelong Learning & Self-Development				X			X		
	GE, Social & Behavioral Sciences		X		X					
Junior Spring	ME 314	X		X	X		X	X		X
	ME 330	X		X		X		X	X	X
	ME 351	X							X	X
	ME 452	X							X	X
	GE Explorations/Cultural Diversity		X		X					
Senior Fall	ME 490A	X	X	X	X	X	X	X	X	X
	ME 495	X		X		X	X		X	X
	GE Explorations/Ethnic Studies		X		X					
	Prof. Elec.	See List of Professional Electives Below								
	Prof. Elec.	See List of Professional Electives Below								
Senior Spring	ME 490B	X	X	X	X	X	X	X	X	X
	ME 520	X						X	X	
	ME 555	X	X	X	X				X	
	GE Explorations		X	X	X					
	Prof. Elec.	See List of Professional Electives Below								
Professional Electives	AE 515	X							X	
	ME 420	X						X	X	X
	ME 430	X						X	X	X

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	ME 499	X						X	X	X
	ME 530	X						X	X	X
	ME 532	X						X	X	X
	ME 535	X						X	X	X
	ME 540	X						X	X	X
	ME 543	X						X	X	X
	ME 552	X						X	X	X
	ME 554	X						X	X	X
	ME 556	X						X	X	X
	ME 580	X						X	X	X
	ME 585	X					X	X	X	X

### Mechanical Engineering Program Outcomes

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
8. An ability to apply principles of engineering, basic science, and mathematics (including multivariate calculus and differential equations); to model, analyze, design, and realize physical systems, components or processes.
9. An ability to work professionally in either thermal or mechanical systems areas.