

Mechanical Engineering Sample Curriculum

	WashU Course	Fall	Spring
Home Institution (3-4 years)			
Calculus II, III	Math 132, 233	3	3
Differential Equations	Math 217	3	
General Physics I, II	Physics 197, 198	4	4
General Chemistry I	Chem 111A	3	
General Chemistry Laboratory I	Chem 151	2	
Computer Science (some MATLAB preferred)	CSE 131		3
Physical or life science			3
English Composition	CWP 100		3
Humanities and social science electives		9	9
Additional home institution degree requirements		varies	varies
90 units or more of transferable college credit	Subtotal	90+ to transfer	
First Year of Dual Degree Curriculum at WashU			
Computer Aided Design	MEMS 202 (Section 05)	3	
Mechanics I	MEMS 253	3	
Mechanics II	MEMS 255		3
Thermodynamics	MEMS 301	3	
Machine Elements	MEMS 3110		3
Fluid Mechanics	MEMS 3410	3	
Heat Transfer	MEMS 3420		3
Materials Science	MEMS 3610		3
Mechanics and Materials Science Lab	MEMS 205		2
Engineering Math A	ESE 318	3	
Engineering Math B	ESE 319	3	
Technical Writing	ENGR 310		3
Engineering Leadership and Team Building	ENGR 4502		1
	Subtotal	18	18
Second Year of Dual Degree Curriculum at WashU			
Mechanics III	MEMS 350	3	
Mechanical Engineering Design	MEMS 411	3	
Design of Thermal Systems	MEMS 412		3
Modeling Simulation and Control	MEMS 4301		3
Dynamics and Vibration	MEMS 4310	3	
Vibration and Machine Elements Lab	MEMS 405	2	
Intro to Circuits	ESE 230		4
Fluid and Thermal Science Lab	MEMS 305		2
Engineering Ethics and Sustainability	ENGR 4501	1	
Conflict Management and Problem Solving in Eng.	ENGR 4503		1
Engineering Probability and Statistics	ESE 326		3
MEMS electives (some transfer courses may apply)	See Approved List	6	3
	Subtotal	18	19
60 units or more must be taken at Washington Univ.	Total	60+ for WU degree	

Master's degree candidates should consult with their faculty advisor regarding graduate courses taken third year.

Note some graduate courses may be necessary second year. 84 minimum WashU residency units are required for the Master's degree. Updated March 2018