Washington University in St. Louis
JAMES MCKELVEY SCHOOL OF ENGINEERING

Dual Degree Engineering Program

Electrical 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 191, 192	3	3
General Physics Lab I, II	Physics 191L, 192L	1	1
General Chemistry I	Chem 111A	3	
General Chemistry Laboratory I	Chem 151	2	
Introduction to Computer Science	CSE 131		3
English Composition	CWP 100		3
Engineering & Science breadth electives		3	6
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 Numbers in **bold** denote courses typically offered in both fall and spring semesters			
Introduction to Electrical and Systems Engineering	ESE 105	4	
Introduction to Electrical and Electronic Circuits	ESE 230	4	
Engineering Mathematics A	**ESE 318**	3	
Probability and Statistics for Engineering	**ESE 326**	3	
Computer Science elective from the approved list	**CSE 132** or **CSE 247**	3	
Engineering Mathematics B	**ESE 319**		3
Introduction to Electronic Circuits	ESE 232		3
Introduction to Digital Logic and Computer Design	**ESE 260**		3
Signals and Systems	**ESE 351**		3
Introduction to Engineering Design	ESE 205		3
	Subtotal	**17**	**15**
Second Year of Dual Degree Curriculum at WashU			
Engineering Electromagnetics Fundamentals	ESE 330	3	
Technical Writing	**ENGR 310**	3	
Engineering Ethics and Sustainability	**ENGR 4501**	1	
Electrical Engineering electives**	See approved list	6	9
Electrical Engineering laboratory	See approved list	3	3
Electrical Engineering Capstone Design Projects	**ESE 498**		3
	Subtotal	**16**	**15**
60 units or more must be taken at Washington Univ.	**Total**	**60+ for WU degree**	

*The WashU degree requires 3 H/SS credits at level 300 or higher. If these credits are not taken at the home institution, the requirement can be satisfied at WashU with ENGR 4501 (required for EE) + ENGR 4502 + ENGR 4503.

**In selecting elective courses, make sure to select enough courses with engineering topics units so that engineering topics units total at least 45.

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 May 2022