

Systems Science & 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 117A, 118A	4	4
General Chemistry I	Chem 111A	3	
General Chemistry Laboratory I	Chem 151	2	
Computer Science I	CSE 131		3
Outside concentration (in one science/math area)		6	6
English Composition	ECMP 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			
Introduction to Engineering Design	ESE 205	3	
Intro to EE & SSE or Matrix Algebra	ESE 105 or MTH 309	3	
Engineering Mathematics A	ESE 318	3	
Engineering Mathematics B	ESE 319		3
Probability and Statistics for Engineering	ESE 326		3
Signals and Systems	ESE 351	3	
Operations Research	ESE 403	3	
Control Systems	ESE 441		3
Systems Engineering Laboratory	ESE 448		3
Computer Science elective from the approved list	CSE 132 or CSE 247		3
	Subtotal	15	15
Second Year of Dual Degree Curriculum at WashU			
SSE electives with engineering topics units	ESE 3XX-4XX	6	6
SSE elective laboratory	ESE 447	3	
Systems Science & Engineering Capstone Design Project	ESE 499	3	
Engineering course with engineering topics units			6
Engineering Ethics and Sustainability	ENGR 4501	1	
Technical Writing	ENGR 310	3	
Engineering Professional Practice* or Free Elective	ENGR 4502, 4503		2
	Subtotal	16	14
60 units or more must be taken at Washington Univ.	Total	60+ for WU degree	

In selecting elective courses, make sure to select enough courses with engineering topics units so that the total engineering topics units exceeds 45.

*Engineering Professional Practice suggested if student did not complete a social science course at the 300-400 or junior/senior level at their home institution.

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 2018