

### Systems Science & Engineering Sample Curriculum

	WashU Course	Fall	Spring
<b>Home Institution (3-4 years)</b>			
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 Elective	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	<b>Subtotal</b>	<b>90+ to transfer</b>	
<b>First Year of Dual Degree Curriculum at WashU</b>			
Introduction to Engineering Design	ESE 205	3	
Matrix Algebra	MATH 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
	<b>Subtotal</b>	<b>15</b>	<b>15</b>
<b>Second Year of Dual Degree Curriculum at WashU</b>			
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
	<b>Subtotal</b>	<b>16</b>	<b>14</b>
60 units or more must be taken at Washington Univ.	<b>Total</b>	<b>60+ for WU degree</b>	

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.