

Biological Systems Engineering 5 Year Plan of Study for ROTC Students

First Year					
FALL			SPRING		
Course	Course Title	Credits	Course	Course Title	Credits
CHEM 1035	General Chemistry <i>Co: MATH 1025 or MATH 1225</i>	3	ENGE 1216	Foundations of Engineering (C-) <i>Pre: ENGE 1215 (C-)</i>	2
CHEM 1045	General Chemistry Lab <i>Co: CHEM 1035</i>	1	ENGL 1106	First-Year Writing <i>Pre: ENGL 1105</i>	3
ENGE 1215	Foundations of Engineering (C-)	2	MATH 1226	Calculus of a Single Variable <i>Pre: MATH 1225 (C-)</i>	4
MATH 1225	Calculus of a Single Variable (C-) <i>Pre: Math Ready</i>	4	PHYS 2305	Foundations of Physics I w/lab <i>Pre: (MATH 1205 or MATH 1205H or MATH 1225) or (MATH 1206 or MATH 1206H or MATH 1226); Co: 2325 or (MATH 1206 or MATH 1206H or MATH 1226)</i>	4
ENGL 1105	First Year Writing	3			
	ROTC	Varies		ROTC	Varies
Total Credit Hours		13 - 18	Total Credit Hours		13 - 18
Second Year					
FALL			SPRING		
Course	Course Title	Credits	Course	Course Title	Credits
BIOL 1105	Principles of Biology	3 [F,S,I]	BIOL 1106	Principles of Biology	3 [S, SII]
MATH 2114	Intro to Linear Algebra <i>Pre: MATH 1225 (B) or MATH 1226</i>	3	ESM 2304	Dynamics <i>Pre: (2104 or 2114), (MATH 2224 or MATH 2224H or MATH 2204 or MATH 2204H); Co: MATH 2214</i>	3
MATH 2204	Multivariable Calculus <i>Pre: MATH 1226</i>	3	MATH 2214	Intro to Differential Equations <i>Pre: (MATH 1114 or MATH 2114 or MATH 2114H), MATH 1226</i>	3
BSE 2004	Intro to BSE <i>Pre: ENGE 1024 or ENGE 1215 or ENGE 1414</i>	3 [F]	CHEM 1036	General Chemistry <i>Pre: 1035 or 1055 or 1055H</i>	3
ESM 2104	Statics <i>Pre: MATH 1226; Co: MATH 2204 or MATH 2204H or MATH 2224 or MATH 2406H</i>	3	BSE 3144	Engr Analysis for Biol Systems <i>Co: MATH 2214</i>	2 [S]
	ROTC	Varies		ROTC	Varies
Total Credit Hours		15 - 19	Total Credit Hours		14 - 18
Third Year					
FALL			SPRING		
Course	Course Title	Credits	Course	Course Title	Credits
ESM 3024	Intro to Fluid Mechanics <i>Pre: 2304</i>	3 [F,W,SII]	BIOL 2604	General Microbiology <i>Pre: (1005 or 1105 or 1205H or ISC 2105), (1006 or 1106 or 1206H), (CHEM 1036 or CHEM 1036H or CHEM 1056 or CHEM 1056H or ISC 2105)</i>	3 [F,S,SII]
PHYS 2306	Foundations of Physics I w/lab <i>Pre: (MATH 1206 or MATH 1206H or MATH 1226), PHYS 2305</i>	4	BSE 3504	Transport Process in BSE <i>Pre: 3154, ESM 3024</i>	3 [S]
BSE 3154	Thermodynamics of Biol Systems <i>Pre: ESM 2304, (MATH 2204 or MATH 2204H); Pre/Co: Fluid Mechanics</i>	3 [F]	ISE 2014	Engineering Economy	2
	CHEM Elective	3		Pathways 2/7	3
	ROTC	Varies		ROTC	Varies
Total Credit Hours		13 - 19	Total Credit Hours		11 - 17
Fourth Year					
FALL			SPRING		
Course	Course Title	Credits	Course	Course Title	Credits
	BSE or Technical Elective <i>Take BSE 3324 if planning to take BSE 3334</i>	3	BSE 3334	Nonpoint Source Pollution <i>Pre: 3324</i>	3 [S]
	Technical Elective	3	OR	OR	
	Pathways 6a	3	BSE 3524	Unit Operations in BSE <i>Co: 3504 and 3534</i>	
	Pathways 3	3		BSE or Technical Elective <i>Take BSE 3534 if planning to take BSE 3524</i>	3 [S]
			ISE 3034	Technical Communication <i>Pre: ENGL 1106</i>	3 [S]
				BSE Elective	3
	ROTC	Varies		ROTC	Varies
Total Credit Hours		12 - 18	Total Credit Hours		12 - 18
Fifth Year					
FALL			SPRING		
Course	Course Title	Credits	Course	Course Title	Credits
BSE 4125	Comprehensive Design Project <i>Pre: 3334 or 3524</i>	2 [F]	BSE 4126	Comprehensive Design Project <i>Pre: 4125</i>	3 [S]
STAT 3704	Statistics for Engr Applications <i>Pre: MATH 2224 or MATH 2224H or MATH 2204 or MATH 2204H or MATH 2406H</i>	2 [F,S,SII]		Engineering Topics Elective	3
	Pathways 2	3		Engineering Topics Elective	3
	BSE Elective	3		Pathways 3	3
	Engineering Topics Elective	3			
	ROTC	Varies		ROTC	Varies
Total Credit Hours		13 - 15	Total Credit Hours		12 - 14