

Ocean 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
ENGL 1105	First-Year Writing	3	PHYS 2305	Foundations of Physics <i>Pre: (MATH 1205 or MATH 1205H or MATH 1225) or (MATH 1206 or MATH 1206H or MATH 1226); Co: 2325, (MATH 1206 or MATH 1206H or MATH 1226)</i>	4
MATH 1225	Calculus of a Single Variable (C-) <i>Pre: Math Ready</i>	4			
	ROTC	Varies		ROTC	Varies
Total Credit Hours		13 - 19	Total Credit Hours		13 - 19

Second Year					
FALL			SPRING		
Course	Course Title	Credits	Course	Course Title	Credits
AOE 2204	Intro to Ocean Engineering <i>Pre: PHYS 2305; Co: MATH 2204</i>	3 [F,SII]	AOE 2024	Thin Walled Structures <i>Pre: ESM 2114 or (ESM 2104, ESM 2204), (MATH 2224 or MATH 2224H or MATH 2204 or MATH 2204H); Co: MATH 2214</i>	3 [F,S]
ESM 2114	Statics and Structures <i>Co: MATH 2204 or MATH 2204H or MATH 2406H</i>	3	AOE 2074 <i>(ESM 2074)</i>	Computational Methods <i>Pre: ENGE 1114 or ENGE 1216 or ENGE 1434 or ENGE 1414</i>	2 [F,S,II]
MATH 2204	Multivariable Calculus <i>Pre: 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 2114	Intro to Linear Algebra <i>Pre: MATH 1225 (B) or MATH 1226</i>	3	MATH 2214	Differential Equations <i>Pre: (1114 or 2114 or 2114H or 2405H), 1226</i>	3
	ROTC	Varies		ROTC	Varies
Total Credit Hours		12 - 16	Total Credit Hours		11 - 15

Third Year					
FALL			SPRING		
Course	Course Title	Credits	Course	Course Title	Credits
AOE 2054	Electronics for AOE Systems	3 [F]	AOE 3054	AOE Experimental Methods <i>Pre: 2024, 2054, 3014, 3034</i>	3 [S]
AOE 3014	Fluid Dynamics for AOE <i>Pre: (2104 or 2204), ESM 2304, MATH 2214</i>	3 [F]	AOE 3264	Thermodynamics and Marine Prop. <i>Pre: 2204, 3014</i>	3 [S]
AOE 3034	Sys. Dynamics and Control <i>Pre: ESM 2304, (MATH 2214 or MATH 2214H)</i>	3 [F]	GEOS 3034	Oceanography	3
AOE 3224	Ocean Structures <i>Pre: 2024</i>	3 [F]	STAT 4705	Probability & Stat for Engineers <i>Pre: MATH 2224 or MATH 2204 or MATH 2204H or MATH 2406H</i>	3
	ROTC	Varies		ROTC	Varies
Total Credit Hours		12 - 18	Total Credit Hours		12 - 18

Fourth Year					
FALL			SPRING		
Course	Course Title	Credits	Course	Course Title	Credits
AOE 3214	Ocean Wave Mechanics <i>Co: 3014, MATH 4564</i>	3 [F]	AOE 3234	Ocean Vehicle Dynamics <i>Pre: 3014, 3034, 3214</i>	3 [S]
PHYS 2306	Foundations of Physics <i>Pre: (MATH 1206 or MATH 1206H or MATH 1226), PHYS 2305</i>	4		Track Technical Elective	3
	Technical Elective	3		Technical Elective	3
MATH 4564	Operational Methods <i>Pre: (2214 or 2214H) or 2406H or CMDA 2006</i>	3		Pathways 2	3
	ROTC	Varies		ROTC	Varies
Total Credit Hours		13 - 19	Total Credit Hours		12 - 18

Fifth Year					
FALL			SPRING		
Course	Course Title	Credits	Course	Course Title	Credits
AOE 4205	Experiments for OE Design I <i>Pre: 3054; Co: 4265</i>	1 [F]	AOE 4206	Experiments for OE Design II <i>Pre: 4205; Co: 4266</i>	1 [S]
AOE 4265	Ocean Vehicle Design I <i>Pre: 2204, 3214, 3224, 3234, 3264; Co: 4205</i>	3 [F]	AOE 4266	Ocean Vehicle Design II <i>Pre: 4265; Co: 4206</i>	3 [S]
	Track Technical Elective	3		Track Technical Elective	3
	Technical Elective	3		Pathways 6a	3
	Pathways 2/7	3		Pathways 3	3
ECON 2005	Principles of Economics <i>Pathways 3</i>	3			
	ROTC	Varies		ROTC	Varies
Total Credit Hours		16 - 18	Total Credit Hours		13 - 15