

## Five-Year BS Ocean Engineering & BS Marine Biology (September 2023)

<b>Freshman Year - Fall (16 cr.)</b>	<b>Freshman Year - Spring (17 cr.)</b>
EGR 105 Found of Engineering I (1) (A4)	EGR 106 Found of Engineering II (2) (A4)
CHM 101/102 Gen. Chem. Lec. I /Lab (4) (A1)	CHM 112/114 Gen. Chem. Lec. II/Lab (4)
MTH 141 Calculus I (4) (B3)	MTH 142 Calculus II (4)
PHY 203/273 Elem. Physics I /Lab (4)	OCE 101 Intro to Ocean Engineering (1)
General Education (3)	ECN 201 Prin. of Microeconomics (3)
	General Education (3)
<b>Sophomore Year - Fall (17 cr.)</b>	<b>Sophomore Year - Spring (18 cr.)</b>
CHM 227 Organic Chemistry I (3)	CHM 228/226 Organic Chemistry (4)
PHY 204/274 Elem. Phys. II/Lab (4)	PHY 205/275 Elem. Physics III/Lab (4)
BIO 101/103 Principles of Biology I/Lab (4)	BIO 102/104 Prin. Biol. II/Lab (4)
MTH 243 Calc. Funct. of Several Var. (3)	OCE 213 Comp. Prog. in OCE (3)
General Education (3)	General Education (3)
<b>Junior Year - Fall (17-18 cr.)</b>	<b>Junior Year - Spring (16-17 cr.)</b>
Marine Biology (MB Elective or Bio Core, 3-4)	Marine Biology (MB Elective or Bio Core, 3-4)
BIO 360 Marine Biology (4)	OCE 206 Ocean Eng. Instrumentation (3)
OCE 205 Ocean Eng. Design Tools (4)	CVE 220 Mechanics of Materials (3)
MCE 262 Statics (3)	MCE 263 Dynamics (3)
General Education or Free Elective (3)	MTH 244 Differential Equations (3)
<b>Junior/Senior - Summer/J-term (6-7 cr.)</b>	
General Education (3)	
Marine Biology (MB Elective or Bio Core, 3-4)	
<b>Senior Year - Fall (17-19 cr.)</b>	<b>Senior Year - Spring (18-19 cr.)</b>
MCE 354 Fluid Mechanics (3)	Marine Biology (MB Elective or Bio Core, 3-4)
Marine Biology (MB Elective or Bio Core, 3-4)	OCE 408 Wave and Littoral Processes (4)
Marine Biology (MB Elective or Bio Core, 3-4)	OCE 311 Coastal Meas. and Applications (4)
OCE 301 Ocean Engineering Mechanics (4)	OCE 471 Underwater Acoustics (4)
OCE 315 Hydro. Lab for OCE (1)	OCE 394 Design App. in Ocean Eng. (3)
ISE 311 Prob. & Stats for Eng. (3)	
<b>Senior/Fifth Year - Summer/J-term (3-4 cr.)</b>	
Mar. Bio Elec., Bio Core or Prof. Elective (3-4)	
<b>Fifth Year - Fall (17 cr.)</b>	<b>Fifth Year - Spring (15 cr.)</b>
OCE 495 Senior Design Project I (3)	OCE 496 Senior Design Project II (3) (B2, D1)
OCE 416 Ocean Eng. Professional Practice (2)	OCG 451 Oceanographic Science (3)
Professional Elective (3)	Professional Elective (3)
CHE 333 Engineering Materials (3)	Professional Elective (3)
Professional Elective (3)	General Education (3)
Technical Elective (3)	

**Open courses need to satisfy Gen Ed outcomes:** A2 (Social/Behav.), A3 (Humanities), B1 (Write), B4 (Info. Lit.), C1 (Civic), C2 (Global), C3 (Diversity), and G (Grand Challenge)

**Bio/Marine Biology credits:** 36 total; Bio 360 Marine Biology (4), Bio 352 Genetics (4); Bio Core - 3 courses; Marine Biology Electives - 7-9 credits depending on # of other BIO credits