

OCEAN ENGINEERING - Class of 2018

Total Credits = **126**

Freshman Year *Fall Semester*

| Course Code | Description | Cr | |
|-------------|--|----|--|
| CHM 101 | General Chemistry I Lec [GE-N] | 3 | |
| CHM 102 | General Chem I Lab | 1 | |
| EGR 105 | Foundations of Engineering I | 1 | |
| MTH 141 | Intro Calculus w/Analytic Geom [GE-MQ] | 4 | |
| PHY 203 | Elementary Physics I Lect [GE-N] | 3 | |
| PHY 273 | Elementary Physics I Lab [GE-N] | 1 | |
| | General Education Elective* | 3 | |

16

Freshman Year *Spring Semester*

| Course Code | Description | Cr | |
|-------------|--|----|--|
| ECN 201 | Principles of Microeconomics [GE-S] | 3 | |
| EGR 106 | Foundations of Engineering II | 2 | |
| MTH 142 | Intermed Calc with Analytic Geom [GE-MQ] | 4 | |
| OCE 101 | Intro to Ocean Engineering | 1 | |
| PHY 204 | Elementary Physics II Lec [GE-N] | 3 | |
| PHY 274 | Elementary Physics II Lab [GE-N] | 1 | |
| | General Education Elective* | 3 | |

17

Sophomore Year *Fall Semester*

| Course Code | Description | Cr | |
|-------------|--|----|--|
| MCE 262 | Statics | 3 | |
| MTH 243 | Calculus for Functions of Several Vars | 3 | |
| OCE 205 | Ocean Engineering Design Tools | 4 | |
| PHY 205 | Elementary Physics III Lec [GE-N] | 3 | |
| PHY 275 | Elementary Physics III Lab [GE-N] | 1 | |

14

Sophomore Year *Spring Semester*

| Course Code | Description | Cr | |
|-------------|------------------------|----|--|
| CVE 220 | Mechanics of Materials | 3 | |
| MCE 263 | Dynamics | 3 | |
| MTH 244 | Differential Equations | 3 | |
| OCE 206 | Ocean Instrumentation | 4 | |
| | Free Elective | 3 | |

16

Junior Year *Fall Semester*

| Course Code | Description | Cr | |
|-------------|---------------------------------|----|--|
| MCE 354 | Fluid Mechanics | 3 | |
| OCE 301 | Fundamentals of Ocean Mechanics | 4 | |
| OCE 310 | Basic Ocean Measurement | 3 | |
| | Professional Elective** | 3 | |
| | General Education Elective* | 3 | |

16

Junior Year *Spring Semester*

| Course Code | Description | Cr | |
|-------------|--|----|--|
| OCE 408 | Intro to Engineering Wave Mechanics and Littoral Processes | 4 | |
| OCE 311 | Coastal Measurements and Applications | 4 | |
| OCE 471 | Underwater Acoustics | 4 | |
| | General Education Elective* | 3 | |
| | Professional Elective** | 3 | |

18

Senior Year *Fall Semester*

| Course Code | Description | Cr | |
|-------------|-----------------------------------|----|--|
| CHE 333 | Engineering Materials | 3 | |
| OCE 416 | OCE Professional Practice | 2 | |
| OCE 421 | Marine Structure Design | 3 | |
| OCE 495 | Ocean Systems Design Project I*** | 3 | |
| | Professional Elective** | 3 | |

14

Senior Year *Spring Semester*

| Course Code | Description | Cr | |
|-------------|------------------------------------|----|--|
| OCE 496 | Ocean Systems Design Project II*** | 3 | |
| OCG 451 | Oceanographic Science | 3 | |
| | Professional Elective** | 3 | |
| | Professional Elective** | 3 | |
| | General Education Elective* | 3 | |

15

* Note the following *specific* requirements and restrictions for General Education [GE] electives:

-Refer to *specific* Ocean Engineering General Education *course requirements* (see 2018 OCE Check Sheet).

-[GE-ECw] *Must* take at least *one (1)* General Education course in *writing* [GE-ECw].

-[GE-ECw] Can only take *one (1)* of the following **100-level** writing courses for General Education credit [GE-ECw]: WRT 104, WRT 105, WRT 106.

** **Professional Electives:** Any engineering, mathematics, physics, or oceanography courses at the 300-, 400-, or 500-level.

A minimum of two (2) professional electives must be in OCE.

*** **OCE 495 and OCE 496:** An *approved* off-campus experience, usually between the junior and senior years, can be substituted for OCE 495 and 496.

| SPECIFIED MATH, SCIENCE, AND ENGINEERING COURSES | | | | | | | | | | | |
|---|-----------------------------|----|-------|-----|------|---|--------------------------------------|----|-------|-----|------|
| INTRODUCTORY ENGINEERING | | | | | | ENGINEERING SCIENCE AND DESIGN | | | | | |
| Sem | Course | Cr | Grade | QP | Note | Sem | Course | Cr | Grade | QP | Note |
| | EGR 105 | 1 | | | | | CHE 333 | 3 | | | |
| | EGR 106 | 2 | | | | | CVE 220 | 3 | | | |
| | | 3 | | | | | MCE 262 | 3 | | | |
| MATHEMATICS | | | | | | | MCE 263 | 3 | | | |
| | MTH 141 [GE-MQ] | 4 | | | | | MCE 354 | 3 | | | |
| | MTH 142 [GE-MQ] | 4 | | | | | OCE 101 | 1 | | | |
| | MTH 243 | 3 | | | | | OCE 205 | 4 | | | |
| | MTH 244 | 3 | | | | | OCE 206 | 4 | | | |
| | | 14 | | | | | OCE 301 | 4 | | | |
| NATURAL SCIENCES | | | | | | | OCE 310 | 3 | | | |
| | CHM 101 [GE-N] | 3 | | | | | OCE 311 | 4 | | | |
| | CHM 102 | 1 | | | | | OCE 408 | 4 | | | |
| | PHY 203 [GE-N] | 3 | | | | | OCE 416 | 2 | | | |
| | PHY 273 [GE-N] | 1 | | | | | OCE 421 | 3 | | | |
| | PHY 204 [GE-N] | 3 | | | | | OCE 471 | 4 | | | |
| | PHY 274 [GE-N] | 1 | | | | | OCE 495* [capstone] | 3 | | | |
| | PHY 205 [GE-N] | 3 | | | | | OCE 496* [capstone] | 3 | | | |
| | PHY 275 [GE-N] | 1 | | | | | | 54 | | | |
| OCEANOGRAPHY | | | | | | **PROFESSIONAL ELECTIVES | | | | | |
| | OCG 451 | 3 | | | | | | 3 | | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 3 | | | |
| | | | | | | | | 3 | | | |
| | | 16 | | | | | | 3 | | | |
| GENERAL EDUCATION [GE] COURSES | | | | | | | | | | | |
| BREADTH At least one course in <i>each</i> of the Gen Ed Areas | | | | | | DEPTH At least one additional course in 3 <i>different</i> Gen Ed Areas Remainder are taken in <i>any</i> Gen Ed Area/AreaS | | | | | |
| Sem | Course | Cr | Grade | QP | Note | Sem | Course | Cr | Grade | QP | Note |
| ***English Communication-Writing [GE-ECw] | | | | | | Natural Sciences [GE-N] | | | | | |
| | WRT | 3 | | | | --- | <i>Satisfied by Required Courses</i> | 12 | --- | --- | --- |
| Mathematical and Quantitative Reasoning [GE-MQ] | | | | | | Mathematical and Quantitative Reasoning [GE-MQ] | | | | | |
| | <i>Satisfied by MTH 141</i> | 4 | --- | --- | --- | | <i>Satisfied by MTH 142</i> | 4 | --- | --- | --- |
| Fine Arts & Literature [GE-A] | | | | | | ***One additional course from: EC/ECw; A; FC; L; S | | | | | |
| | | 3 | | | | | [GE-ECw; A; FC; L; S] | 3 | | | |
| Foreign Language/Culture [GE-FC] | | | | | | Free Elective | | | | | |
| | | 3 | | | | | | 3 | | | |
| Letters [GE-L] | | | | | | Other Courses (<i>not for degree credit</i>) | | | | | |
| | | 3 | | | | | | | | | |
| Natural Sciences [GE-N] | | | | | | | | | | | |
| | <i>Satisfied by CHM 101</i> | 3 | --- | --- | --- | | | | | | |
| Social Sciences [GE-S] | | | | | | | | | | | |
| | ECN 201 | 3 | | | | | | | | | |

* OCE 495 and OCE 496: An *approved* off-campus experience, usually between the junior and senior years, can be substituted for OCE 495 and 496.

** Professional Electives: Any engineering, mathematics, physics, or oceanography courses at the 300-, 400-, or 500-level.

A *minimum of two (2) professional electives must be in OCE.*

*** Note the following *specific* requirements and restrictions for General Education [GE] electives:

-[GE-ECw] Requirement: *Must* take at least *one (1)* General Education course in *writing* [GE-ECw].

-[GE-ECw] Restriction: Can only take *one (1)* of the following 100-level writing courses for General Education credit [GE-ECw]: WRT 104, WRT 105, WRT 106.