MARINE SCIENCE Major (Bachelor of Science Degree only – 2016/17 JU Catalog Degree Requirements)

Created & maintained by the Advising Center, approved by: C. Miller 8/16

- Use this major checksheet as a guide for selecting classes
- REFER to DEGREE AUDIT in Webadvisor to review and monitor degree and graduation requirements.

Core Curriculum:

Economics: 3 hours. Choose one of the following courses:
- ECON 189 Core Seminar in Economics
- ECON 201 Principles of Macroeconomics

History: 3 hours. Choose one HIST course at the 100 or 200 level:

English/Writing: 3 hours.
- ENGL 103 Introductory Writing

Humanities: 3 hours. Choose one HUM course (pre: ENGL 103 & ENGL/literature core requirement).

English/Literature: 3 hours. Choose one of the following courses:
- ENGL 189 Core Seminar in Literature (pre: ENGL 103)
- ENGL 202 American Literary Experience (pre: ENGL 103)
- ENGL 203 World Literature (pre: ENGL 103)
- ENGL 204 British Literary Experience I (pre: ENGL 103)
- ENGL 206 British Literary Experience II (pre: ENGL 103)

Laboratory Science: 4 hours. Requirement fulfilled in major.

Mathematics: 3-4 hours. Requirement fulfilled in major.

Fine Arts: 3 hours. Choose a single course or combination of courses from the following disciplines to total a minimum of three credit hours, includes core seminars:
- Art (ART)
- Art History (ARH)
- Dance (DANC)
- Film (FVA)
- Music (MUS)
- Theatre Arts (THEA)

Philosophy: 3 hours. Choose one of the following courses:
- PHIL 101 Introduction to Philosophy
- PHIL 189 Core Seminar in Philosophy
- PHIL 212 Ethics

Laboratory Science: 4 hours. Requirement fulfilled in major.

Global Studies: 3 hours. Choose one of the following options:
- Bachelor of Science degree:
  - Option #1 - One (1) foreign language course or equivalent at the 102 level
  - or
  - Option #2 - One (1) International Studies (IS) course at the 300-level (pre: ENGL 103 & soph status)

Social Science: 3 hours. Choose one of the following courses:
- GEOG 189 Core Seminar in Geography
- GEOG 200 World Geography
- POL 189 Core Seminar in Political Science
- POL 205 American National Government & Politics
- POL 208 International Politics
- PSYC 189 Core Seminar in Psychology
- PSYC 201 Introductory Psychology
- SOC 189 Core Seminar in Sociology
- SOC 203 Introductory Sociology

Technology: 3 hours. Choose one of the following courses:
- CS 150 Personal Productivity Using Technology
- DSIM 203R Applied Business & Economic Analysis
- MUS 150 Intro to Music Technology (pre: MUS 141; co: MUS 142)
- XXX xxx Technology Intensive (TI) course in the major approved by the department as an equivalent

Notes:
- Students must earn a minimum grade of “C-” in ENGL 103 and should complete this introductory writing course in their 1st year of enrollment.
- All students enrolled in ENGL 103 must pass an Exit Exam at the end of the term. Students not passing this exit exam are required to enroll in ENGL 214WI prior to reaching 60 hours. It is not necessary to pass this exam in order to pass ENGL 103. ENGL 214WI counts as an elective course.
- Students not qualified to begin at the ENGL 103 level may be required to take ENGL 101 prior to enrolling in ENGL 103. The hours earned for ENGL 101 will count as elective hours in the degree program.
- It is recommended that students complete the Technology, Mathematics, and foreign language (if applicable to degree chosen) requirements by end of their sophomore year.
- Placement in a “Core” Mathematics course assumes the student is qualified beyond the MATH 104 level. If not, students may be required to take MATH 100 and/or MATH 104 prior to enrolling in a higher level Mathematics course. The hours earned for MATH 100 and/or MATH 104 will count as elective hours in the degree program.
- Placement in foreign language is determined by previous college background and/or foreign language placement test.
## Marine Science – BS Degree

### Major Requirements

**Marine Science Major Core Courses:** 18 hours.

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<th>Course</th>
<th>Hours</th>
<th>Grade</th>
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<tbody>
<tr>
<td>MSC 111 Intro to Oceanography</td>
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<td>MSC 112 Intro Oceanography Lab</td>
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<td>MSC 113 Intro to Marine Biology</td>
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<td>MSC 114 Intro Marine Biology Lab</td>
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<td>BIOL 223SI Oral Presentations</td>
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(Pre: "C" or better in CHEM 104; & either BIOL 170, or MSC 101, or BIOL 180, or MSC 111 & 112, or MSC 113 & 114) (fulfills speech intensive requirement)

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<th>Course</th>
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<tr>
<td>MSC 470 Capstone: Biology &amp; Marine Science</td>
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(Pre: "C" or better in MSC 111 & MSC 112, MSC 113 & MSC 114, BIOL 223SI, & 10 hours of upper division MSC courses)

**Allied Courses:** 24 hours.

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<th>Course</th>
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<tr>
<td>CHEM 103 General Chemistry I</td>
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<td>CHEM 104 General Chemistry II</td>
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<td>MATH 140 Calculus I</td>
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<td>MATH 206 Statistical Methods Sci</td>
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(Pre: "C" or better in MATH 110 or 112)

Choose one of the following Physics combinations:

- PHYS 111 Principles of Physics I (co: MATH 110 or 112)  
  and PHYS 112 Principles of Physics II (pre: PHYS 111)

- OR

- PHYS 151 General Phys: Mechanics (pre: MATH 140; co: MATH 141)
  and PHYS 152 General Physics: Electricity & Magnetism
  (pre: MATH 141 & "C" or better in PHYS 151)

- OR

- PHYS 151 General Phys: Mechanics (pre: MATH 140; co: MATH 141)
  and PHYS 112 Principles of Physics II (pre: PHYS 111)

**Additional required courses:** 8 hours. Choose two of the following courses:

- CHEM 301/L, Organic Chemistry I/Lab
  (pre: "C" or better in CHEM 104; co: CHEM 301L)

- CHEM 302/L, Organic Chemistry II/Lab
  (pre: "C" or better in both CHEM 301 & 301L; co: CHEM 302L)

- CHEM 322 Analytical Chemistry
  (pre: "C" or better in CHEM 104)

- MSC 340 Applied Chemical Oceanography
  (pre: "C" or better in CHEM 104 or permission of instructor)

**Notes:**
- For students that double major in Marine Science and either Biology and Chemistry (Biochemistry track), only courses that are required for both majors may be counted towards both majors. Upper division electives may not be counted toward both majors simultaneously.
- Students double majoring in Biology and Marine Science must take all of the required courses for each major.
- Two writing intensive (WI or WR) courses must be completed with a minimum grade of “C-“. One must be a 300- or 400-level MSC course; the other WI course may be from any discipline.
- Upper division MSC or BIOL (300-level and above) courses: 10 hours.

**Required Emphasis in Oceanography or Marine Biology:**

### Oceanography Emphasis: 18 hours.

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<th>Course</th>
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<tr>
<td>MSC 306 Marine Geology</td>
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<td>(Pre: &quot;C&quot; or better in MSC 101, or MSC 111 &amp; MSC 112)</td>
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<td>MSC 308 Physical Oceanography</td>
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<td>(Pre: &quot;C&quot; or better in MSC 111 &amp; 112)</td>
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<tr>
<td>MSC 431 Oceanographic Tech*</td>
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| (Pre: "C" or better in MSC 111 & MSC 112, MSC 113 & MSC 114, BIOL 223SI)  
  * MSC 431 is a variable 1-4 cr. hour course |

**Upper division MSC or BIOL (300-level and above) courses: 11 hours.**

**Marine Biology Emphasis: 18 hours.**

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<th>Course</th>
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<td>BIOL 190 Biological Unity</td>
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<tr>
<td>MSC 310WR Marine Ecology</td>
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<td>(Pre: &quot;C&quot; or better in CHEM 223SI, MATH 206; &amp; either BIOL 204 &amp; BIOL 207, or BIOL 280, or MSC 113 &amp; MSC 114)</td>
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**Upper division MSC or BIOL (300-level and above) courses: 11 hours.**

- Two (2) of these courses must be organismal. Organismal courses offered are: MSC/Biol 302, MSC/Biol 304WI, MSC/Biol 335, MSC 408, BIOL 301WR, BIOL 303, BIOL 305, BIOL 307, BIOL 312, BIOL 380, BIOL 382, and BIOL 406.

### Notes:
- Students double majoring in Biology and Marine Science must take all of the required courses for each major.
- Two writing intensive (WI or WR) courses must be completed with a minimum grade of “C-“. One must be a 300- or 400-level MSC course; the other WI course may be from any discipline.
- Upper division MSC or BIOL (300-level and above) courses: 10 hours.

**2nd Writing Intensive course:**

2nd Writing Intensive course from any discipline if student does not choose both from Biology.
Continued…..

## General Electives

Additional hours needed to total 120 hours for degree: **approximately 19 hours for Marine Science majors.**

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### Experiential Learning Requirement: 3 hours.

Experiential Learning course is defined as one of the following:
- Undergraduate research, Departmental Honors, or Research Intensive (RI).
- Internship
- Study Abroad, JU 409 required co-requisite
- Service Learning, JU 408 required co-requisite

A grade of "C" or better is required in the Experiential Learning course.

The Experiential Learning course may be a course from the University Core Curriculum, major, minor, or elective courses.

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### Additional General Requirements for all Baccalaureate Degrees

Indicate with "( √ )" that requirement is met.
- 120 hours(minimum) required for degree
- Final 30 hours must be completed at JU
- 12 hours in major courses 300 level or above must be completed at JU
- 42 hours must be 300 level or above
- QEP-Experiential Learning course (3 hours) required for all majors, satisfied by a core, major, minor or elective course
- Cum 2.00 GPA in all coursework at JU
- Cum 2.00 GPA in major area coursework at JU
- Cum 2.00 GPA in minor area coursework at JU