

### **Degree Requirements**

Candidates for the degree in Biology with a specialized field of study in Marine Biology must complete the following requirements. All courses must be taken for a letter grade unless otherwise noted. The Marine Biology field of study will be noted in the program section of the student's transcript, but not on the diploma.

#### **1. Core Courses**

Three lecture courses:

- BIO 41 – Genetics, Biochemistry, and Molecular Biology
- BIO 42 – Cell Biology and Animal Physiology
- BIO/BIOHOPK 43 – Plant Biology, Evolution, and Ecology

One lab course:

- BIO 44X (Core Molecular Biology Laboratory) or BIO/BIOHOPK 44Y (Core Plant Biology & Eco Evo Laboratory)

#### **2. Required Foundational Breadth Courses** - Students may take up to two of these courses with the CR/NC grading option.

CHEM 31A and 31B (or 31X), 33, 35, 36, 130, 131

PHYSICS 21, 22, 23, 24; or 41, 43, 45; or 28, 29

MATH 19, 20, 21; or 41, 42; or 51 (refer to <http://math.stanford.edu/undergrad/whatcourse.html> to determine which is appropriate.)

STATS 60, BIO 141, or BIOHOPK 174H

#### **3. Required Biology Courses**

BIO 101 – Ecology

OR BIOHOPK 172H – Marine Ecology\*

BIO 118 – Genetic Analysis of Biological Processes

BIO 143 – Evolution

\*Please note that this course cannot also count in section 4 below.

#### **4. Four of the following:**

BIO/EARTHSYS 116 – Ecology of the Hawaiian Islands

BIOHOPK 161H – Invertebrate Zoology

BIOHOPK 162H – Comparative Animal Physiology

BIOHOPK 163H – Oceanic Biology

BIOHOPK 166H – Molecular Population Genetics

BIOHOPK 167H – Nerve, Muscle, and Synapse

BIOHOPK 171H – Ecology and Evolutionary Physiology

BIOHOPK 172H – Marine Ecology

BIOHOPK 173H – Marine Conservation Biology (must be taken for 3 units)

BIOHOPK 182H – Stanford at Sea

BIOHOPK 184H – Holistic Biology: Monterey Bay and the Sea of Cortez

BIOHOPK 185H – Ecology and Conservation of Kelp Forest Communities

OSPAUSTL 010, 020, and 030 – Coral Reef Ecosystems, Coastal Resource Management and Coastal Forest Ecosystems\*\*

\*\*these three courses as a whole count as one of the four required courses in this section.

**5. Writing in the Major** – One of the following: BIO 145, 196A, 197WA, 197WB, 199W, BIOHOPK 44Y or 184H. May overlap with other requirements.

#### **6. Research and Honors Requirements**

Students in the Marine Biology field of study must fulfill the equivalent of the requirements for graduation with honors in Biology.

Following are the requirements:

**A.** Approved honors proposal

**B.** 10 units of BIO 199/X or BIOHOPK 199H from the same lab

**C.** Poster/Oral Presentation

**D.** Honors Thesis on a marine biology topic. One Hopkins Marine Station faculty member must be a reader on the thesis.

<p><b>CORE COURSES:</b> Lecture courses letter-grade only</p>	<p>3 lecture courses: <input type="checkbox"/> BIO 41    <input type="checkbox"/> BIO 42    <input type="checkbox"/> BIO/BIOHOPK 43                  1 lab course:    <input type="checkbox"/> BIO 44X    or    <input type="checkbox"/> BIO/BIOHOPK 44Y</p>														
<p><b>REQUIRED FOUNDATIONAL BREADTH COURSES:</b> Students may take up to two foundational breadth courses with the CR/NC grading option.</p>	<p>CHEMISTRY  <input type="checkbox"/> 31A    <input type="checkbox"/> 31B    or    <input type="checkbox"/> 31X  <input type="checkbox"/> 33    <input type="checkbox"/> 35    <input type="checkbox"/> 36  <input type="checkbox"/> 130  <input type="checkbox"/> 131</p> <p>PHYSICS  <input type="checkbox"/> 21    <input type="checkbox"/> 22    <input type="checkbox"/> 23    <input type="checkbox"/> 24    or    <input type="checkbox"/> 41    <input type="checkbox"/> 43    <input type="checkbox"/> 45    or    <input type="checkbox"/> 28    <input type="checkbox"/> 29</p> <p>MATH  <input type="checkbox"/> 19    <input type="checkbox"/> 20    <input type="checkbox"/> 21    or    <input type="checkbox"/> 41    <input type="checkbox"/> 42    or    <input type="checkbox"/> 51</p> <p>ADDITIONAL FOUNDATIONAL BREADTH  <input type="checkbox"/> BIO 141    or    <input type="checkbox"/> STATS 60    or    <input type="checkbox"/> BIOHOPK 174H</p>														
<p><b>REQUIRED BIOLOGY COURSES:</b> Letter-grade only</p>	<p><input type="checkbox"/> BIO 101    or    <input type="checkbox"/> BIOHOPK 172H*  <input type="checkbox"/> BIO 118  <input type="checkbox"/> BIO 143</p> <p><small>*if taken for this requirement, cannot also count below.</small></p>														
<p><b>REQUIRED MARINE BIOLOGY COURSES:</b> Letter-grade only</p>	<p>Students must take <u>four</u> of these courses.</p> <table border="0"> <tr> <td><input type="checkbox"/> BIO/EARTHSYS 116</td> <td><input type="checkbox"/> BIOHOPK 171H</td> </tr> <tr> <td><input type="checkbox"/> BIOHOPK 161H</td> <td><input type="checkbox"/> BIOHOPK 172H</td> </tr> <tr> <td><input type="checkbox"/> BIOHOPK 162H</td> <td><input type="checkbox"/> BIOHOPK 173H (must be taken for 3 units)</td> </tr> <tr> <td><input type="checkbox"/> BIOHOPK 163H</td> <td><input type="checkbox"/> BIOHOPK 182H</td> </tr> <tr> <td><input type="checkbox"/> BIOHOPK 166H</td> <td><input type="checkbox"/> BIOHOPK 184H</td> </tr> <tr> <td><input type="checkbox"/> BIOHOPK 167H</td> <td><input type="checkbox"/> BIOHOPK 185H</td> </tr> <tr> <td></td> <td><input type="checkbox"/> OSPAUSTL 010, 020 and 030</td> </tr> </table>	<input type="checkbox"/> BIO/EARTHSYS 116	<input type="checkbox"/> BIOHOPK 171H	<input type="checkbox"/> BIOHOPK 161H	<input type="checkbox"/> BIOHOPK 172H	<input type="checkbox"/> BIOHOPK 162H	<input type="checkbox"/> BIOHOPK 173H (must be taken for 3 units)	<input type="checkbox"/> BIOHOPK 163H	<input type="checkbox"/> BIOHOPK 182H	<input type="checkbox"/> BIOHOPK 166H	<input type="checkbox"/> BIOHOPK 184H	<input type="checkbox"/> BIOHOPK 167H	<input type="checkbox"/> BIOHOPK 185H		<input type="checkbox"/> OSPAUSTL 010, 020 and 030
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	<input type="checkbox"/> OSPAUSTL 010, 020 and 030														
<p><b>WRITING IN THE MAJOR:</b> One course. May overlap with other requirements.</p>	<p>BIO    <input type="checkbox"/> 145    or    <input type="checkbox"/> 196A    or    <input type="checkbox"/> 197WA    or    <input type="checkbox"/> 197WB    or    <input type="checkbox"/> 199W                  BIOHOPK    <input type="checkbox"/> 44Y    or    <input type="checkbox"/> 184H                  prior to 2011-12: <input type="checkbox"/> BIO 44X    or    <input type="checkbox"/> BIO 44Y</p>														
<p><b>RESEARCH &amp; HONORS REQUIREMENTS:</b></p>	<p><input type="checkbox"/> 10 Units of BIO 199/X or BIOHOPK 199H  <input type="checkbox"/> Poster/Oral Presentation    <input type="checkbox"/> Thesis on a Marine Biology topic</p>														

Name: \_\_\_\_\_ Email: \_\_\_\_\_ SU ID#: \_\_\_\_\_ Date: \_\_\_\_\_

<p>Unfinished Requirements:</p>
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