REQUIRED BIOLOGY CORE COURSES:

BIOL 115N General Biology I  4  BIO 101*
BIOL 116N General Biology II  4  BIO 102*

BIOL 115N-116N must be passed with a C (2.0) or better to continue. Upon completion of Biology 116N, students must complete the following core of biology courses, some of which are pre-requisites or co-requisites for upper level biology courses (see catalog descriptions for individual courses). Biology 293 (Cell Biology) and 303 (Genetics) have Math 162 (Pre-calculus) and Chemistry 211 (Organic Chemistry) as pre- or co-requisites; STAT 130M (Elementary Statistics) is a pre-requisite for Biology 303. All core courses must be passed with a C (2.0) or better.

BIOL 292 Evolution       3 ______
BIOL 291 Ecology         3 ______
BIOL 293 Cell Biology    3 ______
BIOL 303 Genetics        3 ______
BIOL 405W Senior Seminar 3 ______

Prerequisites for 405W:
You must complete the required core courses listed above AND two Biology electives listed below (300-400 level).

UPPER DIVISION BIOLOGY ELECTIVE COURSES:
The biology major requires completion of 16 credit hours of electives from 300- and 400-level biology course offerings. A minimum of three of the courses must have a laboratory/field component; BIOL 367, 368, 369 and 498 cannot be used to satisfy the lab/field requirement but can be used to satisfy one (1) of the required 16 elective hours. A maximum of 4 credits of 200-level coursework may be counted toward the 16-hour total. Students must pass all Biology electives with a C (2.0) or better (P = Passing for courses graded Pass/Fail).

To complete the concentration in marine biology, students should fulfill the 16 credit hour, three lab requirement by choosing from the following list of recommended marine biology elective courses.

Marine Biology Electives - Asterisks (*) indicate laboratory courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Cr</th>
<th>Prerequisite(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>*BIOL 307 Invertebrate Zoology</td>
<td>4</td>
<td>BIOL 292</td>
</tr>
<tr>
<td>BIOL 331 Marine Biology</td>
<td>3</td>
<td>BIOL 115N/116N, BIOL 291</td>
</tr>
<tr>
<td>*BIOL 404 Conservation Biology</td>
<td>5</td>
<td>BIOL 291</td>
</tr>
<tr>
<td>BIOL 415 Marine Ecology</td>
<td>3</td>
<td>BIOL 331, BIOL 291, BIOL 442 (co-requisite)</td>
</tr>
<tr>
<td>*BIOL 419 Wetland Plants</td>
<td>5</td>
<td>BIOL 291, BIOL 308</td>
</tr>
<tr>
<td>*BIOL 420 Ichthyology</td>
<td>5</td>
<td>BIOL 292</td>
</tr>
<tr>
<td>*BIOL 424 Comparative Animal Physiology</td>
<td>5</td>
<td>BIOL 291</td>
</tr>
<tr>
<td>BIOL 435 Marine Conservation</td>
<td>3</td>
<td>BIOL 115N/116N and BIOL 331</td>
</tr>
<tr>
<td>*BIOL 441 Animal Behavior</td>
<td>5</td>
<td>BIOL 291, BIOL 292</td>
</tr>
<tr>
<td>*BIOL 442 Marine Ecology Laboratory</td>
<td>2</td>
<td>BIOL 415 (co-requisite)</td>
</tr>
<tr>
<td>*BIOL 444 Field Studies in Marine Ecology</td>
<td>5</td>
<td>BIOL 331</td>
</tr>
<tr>
<td>BIOL 368 Internship</td>
<td>1-3</td>
<td>BIOL 115N/116N, junior standing, permission of CDA</td>
</tr>
<tr>
<td>BIOL 369 Practicum</td>
<td>1-3</td>
<td>BIOL 115N/116N, junior standing, permission of CDA</td>
</tr>
<tr>
<td>BIOL 497 Undergraduate Research</td>
<td>1-3</td>
<td>BIOL 115N/116N, junior standing, permission of CDA and Instructor</td>
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<tr>
<td>(must complete 3 credit hours to earn lab credit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIOL 498 Independent Study</td>
<td>1-3</td>
<td>BIOL 115N/116N, junior standing, permission of CDA and Instructor</td>
</tr>
</tbody>
</table>
COGNATE MATH, COMPUTER SCIENCE, PHYSICAL SCIENCE REQUIREMENTS:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 121N/122N Foundational Chem I Lec &amp; Lab</td>
<td>4 CHM 111*</td>
<td>CHEM 123N/124N Foundational Chem II Lec &amp; Lab</td>
</tr>
<tr>
<td>CHEM 211 Organic Chemistry Lecture</td>
<td>3 CHM 241*</td>
<td>MATH 200 or MATH 163-211</td>
</tr>
<tr>
<td>CHEM elective 200-level or higher</td>
<td>5 CHM 242</td>
<td>STAT 130M or STAT 310</td>
</tr>
<tr>
<td>and CHM 243</td>
<td></td>
<td>CS 120G or 121G or 126G</td>
</tr>
</tbody>
</table>

Note: Prerequisite courses in Chemistry and Mathematics must be passed with a C (2.0) or better for the student to continue to higher-level courses.

LOWER DIVISION GENERAL EDUCATION REQUIREMENTS:

Written Communication: 6 cr
- ENGL 110C
- ENGL 111C

Oral Communication: 3 cr
- COMM 101R, 103R, 112R

Mathematics: 3 cr
- MATH 162M

Foreign Language: 6 cr or met in High School
- ARAB 111F, CHIN111F
- FARS 111F, FR 101F-102F
- GER 101F-102F, HEBR 111F
- ITAL 101-102F, JAPN 111F
- LATN101F-102F, RUS 101F-102F
- SPAN 101F-102F, 121F

Human Creativity: 3 cr
- ARTH 121A, ARTS 122A,
- COMM/THEA 270A,
- DANC 185A, MUSC 264A,
- THEA 241A

Interpreting the Past: 3 cr
- HIST 100H, 101H, 102H, 103H, 104H, 105H

Literature: 3 cr
- ENGL 112L, 114L, FLET 100L

Philosophy & Ethics: 3 cr

Human Behavior: 3 cr
- AAST 100S, ANTR 110S,
- COMM 200S, CRJS215S,
- ECON 200S, 201S, 202S
- FIN 210S, GEOG 100S, 101S,
- POLS 100S, 101S, 102S,
- PSYC 201S, 203S,
- SOC 201S, WMST 201S

Impact of Technology: 3 cr
- COMM 372T, CS 300T, DNTH 440T,
- ENGL 307T, GEOG 306T, HIST 300T;
- HIST 304T, HIST 386T/SCI 302T;
- HIST 389T, IT 360T, MUSC 335T,
- STEM 110T, STEM 370, PHIL 383T,
- POLS 350T, WMST 390T, EET 370T

UPPER DIVISION GENERAL EDUCATION REQUIREMENT:

Upper division fulfillment options are completion of (A) a disciplinary minor, second major or second degree, (B) an interdisciplinary minor, (C) International Business and Regional Courses or an approved Certification Program such as teaching licensure; or (D) two upper-division courses from another college outside of and not required by the major. See catalog for details.

Notes:
Completion of the University Writing Requirement, University Assessment, and Department Assessment Exam (if offered) are required for graduation. Students must have a total of 120 credit hours to graduate. No grade below a C (2.0) may be earned in any Biology course for that course to satisfy the requirements of the program. Students must have a 2.0 overall, 2.0 in the major, and a 2.0 in the minor in order to graduate. A student who seeks a bachelor's degree from Old Dominion University must, in addition to meeting other requirements of the University, earn a minimum of 25% of the total number of credits required for the degree (30 credits in a 120-credit degree program) through on- or off-campus instruction. This must include a minimum of 12 hours of upper-level courses in the department of the declared major. Students, not advisors, are ultimately responsible for knowing whether or not they have completed their degree requirements. Students are expected to use Degree Works to monitor their progress each semester, identify problems as they arise, and seek assistance in a timely fashion. Students are expected to read, understand, and follow the policies and regulations outlined in the University Catalog for the year in which they enroll at ODU. Exceptions to the curriculum requirements, policies and procedures outlined on this sheet must be petitioned to and approved by the Department Chair.