

ABOUT THE BS in MARINE BIOLOGY:

The B.S. Marine Biology allows students to explore the vast world of marine biology while providing an important foundation in modern biological sciences and other supporting sciences. It is designed for students who plan to work in marine biology, marine ecology, biological oceanography, marine conservation, or related fields at a professional level, or who wish to apply their training to a wide range of other exciting careers. We encourage students to participate in lab, field and shipboard research with faculty and other researchers and to develop and conduct original research in their areas of interest. Graduates get jobs in a variety of marine and environmental fields, or continue their education in graduate school in areas such as marine biology, oceanography and related fields; some students have gone on to Veterinary School. Please consult the Marine Biology website at: web.uri.edu/marbio.

Step 1: REVIEW YOUR PROGRAM REQUIREMENTS

Required BIO, Biology Core and Marine Biology Elective courses (36 credits required)

Must earn a 2.0 GPA in these 36 credits in order to graduate.

Required BIO Courses: (17 credits)

Must earn a C or better in BIO 101, 102, 103, 104

| Course | Semester | Credits | Grade |
|------------------|----------|---------|-------|
| *BIO 101 or 101H | | | |
| *BIO 102 | | | |
| *BIO 103 | | | |
| *BIO 104 | | | |
| BIO 130 | | | |
| BIO 352 | | | |
| BIO 360 | | | |

BIOLOGY CORE Requirement: (9-12 credits)

Pick a total of **THREE** courses; each course must be in a different category (5 categories are below).

Cell & Development: BIO 302, 311, 341

| Course | Semester | Credits | Grade |
|--------|----------|---------|-------|
| | | | |

Ecology & Evolution: BIO 262, 272

| Course | Semester | Credits | Grade |
|--------|----------|---------|-------|
| | | | |

Molecular Biology: BIO 437

| Course | Semester | Credits | Grade |
|--------|----------|---------|-------|
| | | | |

Organismal Biology: BIO 308, 310, 321, 323, 354, 365, 366, 385, 404, 412, 417, *425G, *CMB 211

| Course | Semester | Credits | Grade |
|--------|----------|---------|-------|
| | | | |

Physiology: BIO 201, 346

| Course | Semester | Credits | Grade |
|--------|----------|---------|-------|
| | | | |

MARINE BIOLOGY Elective Requirement:

(balance of 36 credits)

Choose from the following:

BIO: *256G, 308, 310, 345, 354, 355, 365, 412, 416, 422,

*425G, 441, 455, 457, 485, **469, **475, 563

AFS: 415, 486 **AVS:** 440 **NRS:** 475

OCE: 575 **OCG:** 420, 480, 561, 576

*****Directed Research/Special Problems from the following:**

AFS, AVS, BIO 491, 492, 495, CMB, NRS, OCE, OCG 493 or 494, PLS

Other Marine Biology Electives - by approved curriculum modification or pre-approval of transfer credit.

| Course | Semester | Credits | Grade |
|--------|----------|---------|-------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

LAB Requirement:

Students must take two lab courses in addition to BIO 103, 104, and 360, from among the courses used to satisfy BIO Core or Marine BIO elective requirements, but excluding Independent Study/Research. Example: BIO 201 (lecture/lab) can be used to satisfy the Core requirement AND the Lab requirement, but BIO 491, 492, and 495 cannot count towards the Lab requirement.

| Course |
|--------|
| |
| |

*Course approved for General Education credit.

**Courses taught at the Bermuda Institute of Ocean Sciences.

***No more than 3 credits of Directed Research/Special Problems (491, 492, 495) may be used towards the 36 credits of Biology and Marine Biology courses required for the major.

Step 1: REVIEW YOUR PROGRAM REQUIREMENTS CONTINUED

CHEMISTRY Requirement: (15-16 credits)

| Course | Semester | Credits | Grade |
|-----------|----------|---------|-------|
| *CHM 101 | | 3 | |
| CHM 102 | | 1 | |
| OR | | | |
| CHM 191 | | 5 | |

| Course | Semester | Credits | Grade |
|-----------|----------|---------|-------|
| CHM 112 | | 3 | |
| CHM 114 | | 1 | |
| OR | | | |
| CHM 192 | | 5 | |

| Course | Semester | Credits | Grade |
|-----------|----------|---------|-------|
| CHM 124 | | 3 | |
| CHM 126 | | 1 | |
| CMB 311 | | 3 | |
| OR | | | |
| CHM 227 | | 3 | |
| CHM 228 | | 3 | |
| CHM 226 | | 2 | |

MATH Requirement: (6-8 credits)

| Course | Semester | Credits | Grade |
|-----------|----------|---------|-------|
| *MTH 131 | | 3 | |
| OR | | | |
| *MTH 141 | | 4 | |

| Course | Semester | Credits | Grade |
|-----------|----------|---------|-------|
| MTH 132 | | 3 | |
| OR | | | |
| *MTH 142 | | 4 | |
| OR | | | |
| STA 308 | | 4 | |

The requirement for transfer to CELS from University College for Academic Success is:

Minimum 30 credits and a grade of C or better in the following: BIO 101, 103, 102, and 104; and min. of C- in CHM 101.

Minimum 2.0 GPA required in the 36 credits in BIO/Marine Biology for graduation.

Minimum overall 2.0 cumulative GPA required in the total 120 credits required for graduation.

PHYSICS Requirement: (8 credits)

| Course | Semester | Credits | Grade |
|-----------|----------|---------|-------|
| *PHY 111 | | 3 | |
| *PHY 185 | | 1 | |
| OR | | | |
| *PHY 203 | | 3 | |
| *PHY 273 | | 1 | |

| Course | Semester | Credits | Grade |
|-----------|----------|---------|-------|
| *PHY 112 | | 3 | |
| *PHY 186 | | 1 | |
| OR | | | |
| *PHY 204 | | 3 | |
| *PHY 274 | | 1 | |

OCEANOGRAPHY Requirement: (3 credits)

Pick 1 of the following:

| Course | Semester | Credits | Grade |
|-----------|----------|---------|-------|
| OCG 301 | | 3 | |
| OR | | | |
| OCG 451 | | 3 | |

WRITING Requirement: (3 credits)

Pick 1 of the following:

| Course | Semester | Credits | Grade |
|-----------|----------|---------|-------|
| *WRT 104 | | 3 | |
| OR | | | |
| *WRT 106 | | 3 | |

General Education Guidelines:

General education is 40 credits. Each of the twelve outcomes (A1-D1) must be met by at least 3 credits. A single course may meet more than one outcome, but cannot be double counted towards the 40 credit total. At least one course must be a Grand Challenge (G). No more than twelve credits can have the same course code. General education courses may also be used to meet requirements of the major or minor when appropriate. <https://web.uri.edu/general-education/>.

Step 2: LIST COURSES THAT MEET GEN ED

Step 3: LIST COURSE AS EACH OUTCOME IS MET

| General Education Credit Count | | | | | | |
|--|---------|-------|----------------------|---------|-------|--|
| At least 40 credits, no more than 12 credits with the same course code | | | | | | |
| Course | Credits | Grade | Course | Credits | Grade | |
| *BIO 101 or 101H | 3 | | | | | |
| *BIO 103 | 1 | | | | | |
| *BIO 102 | 3 | | | | | |
| *BIO 104 | 1 | | | | | |
| *CHM 101 | 3 | | | | | |
| *MTH | | | | | | |
| *PHY 111 | 3 | | | | | |
| *PHY 185 | 1 | | | | | |
| *PHY 112 | 3 | | | | | |
| *PHY 186 | 1 | | | | | |
| *WRT | 3 | | | | | |
| | | | Total Gen Ed Credits | | | |

| General Education Outcome Audit | | |
|---|--------|-------|
| | Course | Grade |
| KNOWLEDGE | | |
| A1. STEM | | |
| A2. Social & Behavioral Sciences | | |
| A3. Humanities | | |
| A4. Arts & Design | | |
| COMPETENCIES | | |
| B1. Write effectively | | |
| B2. Communicate effectively | | |
| B3. Mathematical, statistical, or computational strategies | | |
| B4. Information literacy | | |
| RESPONSIBILITIES | | |
| C1. Civic knowledge & responsibilities | | |
| C2. Global responsibilities | | |
| C3. Diversity & Inclusion | | |
| INTEGRATE & APPLY | | |
| D1. Ability to synthesize | | |
| GRAND CHALLENGE | | |
| G. At least one course of your 40 credits is an approved "G" course | | |

NOTE: BECAUSE MOST COURSES MEET MORE THAN ONE OUTCOME, YOUR OUTCOME AUDIT MIGHT BE COMPLETED BEFORE YOU REACH YOUR 40 CREDITS. HOWEVER, YOU MUST STILL COMPLETE 40 CREDITS OF GENERAL EDUCATION

*course fulfills general education and a major requirement

The requirement for transfer to CELS from University College for Academic Success is:

Minimum 30 credits and a grade of C or better in the following: BIO 101 or 101H, 103, 102, and 104; and min. of C- in CHM 101.

Advising Notes:

EXAMPLE

**B.S. Marine Biology
Sample 4 Year PLAN - Effective Fall 2022
College of the Environment and Life Sciences**

Freshman Year Fall Semester

| Course Code | Description | Cr |
|-------------------------|-----------------------------------|--------------|
| *BIO 101, 103 | Principles of Biology, Lab | 4 |
| *CHM 101, 102 | General Chemistry, Lab | 4 |
| *MTH 111 or *MTH 131 | Precalculus or Applied Calculus 1 | 3 |
| | *General Education Course | 3-4 |
| BIO 130 | Topics in Marine Biology | 1 |
| | | 15-17 |

Freshman Year Spring Semester

| Course Code | Description | Cr |
|------------------------------|--|--------------|
| *BIO 102, 104 | Principles of Biology II, Lab | 4 |
| CHM 112, 114 | General Chemistry II, Lab | 4 |
| MTH *131, 132, or STA 308 | Applied Calculus, Applied Calculus II, or Statistics | 3-4 |
| | *General Education Course | 3-4 |
| | | 15-17 |

Year 1 Milestones: Complete BIO 101, 103, 102, 104, CHM 101, 102, 112, 114, MTH 131, and MTH 132 or STA 308

Sophomore Year Fall Semester

| Course Code | Description | Cr |
|------------------------------------|---|--------------|
| BIO 360 or Marine BIO core | Marine Biology or Biology Core | 3-4 |
| CHM 124,126, or 227 or 112,114 | Intro to Organic Chem., Lab, or Organic Chemistry Lecture or General Chemistry Lecture 2, Lab | 4 |
| Elective or *MTH 132 or STA 308 | Elective, or Applied Calculus II, or Statistics | 3-4 |
| | *General Education Course | 3-4 |
| | | 15-17 |

Sophomore Year Spring Semester

| Course Code | Description | Cr |
|--|--|--------------|
| BIO 360 or Marine BIO Core | Marine Biology or Biology Core | 3-4 |
| BIO Core or Marine Biology Elective | Biology Core or Marine Biology Elective | 3-4 |
| CHM 124,126 or 227 or 228 or CMB 311 | Intro. to Organic Chem., Lab, or Organic Chem. Lecture 1, or 2, or Intro. Biochemistry | 3-5 |
| | *General Education Course | 3-4 |
| | | 15-17 |

Year 2 Milestones: Complete BIO 360 and begin organic chemistry sequence. Meet with faculty advisor to discuss Year 3 courses, research and internship opportunities.

Junior Year Fall Semester

| Course Code | Description | Cr |
|---|---|--------------|
| BIO 352 or Marine Biology Elective | General Genetics or Marine Biology Elective | 3-4 |
| PHY 111, 185 | General Physics, Lab | 4 |
| CHM 226 and/or 228 or CMB 311 or Elective | Organic Chemistry Lecture, Organic Chemistry Lecture 2, or Introductory Biochemistry, or Elective | 3-5 |
| | *General Education Course | 3-4 |
| | | 15-17 |

Junior Year Spring Semester

| Course Code | Description | Cr |
|----------------------------|---|--------------|
| BIO 352 or Biology Core | General Genetics or Biology Core | 3-4 |
| | Marine BIO Elective | 3-4 |
| PHY 112, 186 | General Physics 2, Lab | 4 |
| *Gen Ed or CMB 311 | *General Education Course or Introduction to Biochemistry | 3-4 |
| | | 15-17 |

Year 3 Milestones: Complete PHY 111, 185, 112, 186, finish organic chemistry sequence. Prepare intent to graduate with professional advisor for fall submission.

Senior Year Fall Semester

| Course Code | Description | Cr |
|------------------------|----------------------------------|--------------|
| | Marine Biology Elective | 3-4 |
| | Marine Biology Elective | 3-4 |
| | *General Education Course | 3-4 |
| OCG 301 or Elective | General Oceanography or Elective | 3-4 |
| | | 15-17 |

Senior Year Spring Semester

| Course Code | Description | Cr |
|------------------------|---------------------------------------|--------------|
| | Marine Biology Elective | 3-4 |
| | Marine Biology Elective | 3-4 |
| | *General Education Course or Elective | 3-4 |
| OCG 451 or Elective | Oceanographic Science or Elective | 3-4 |
| | | 15-17 |

Year 4 Milestones: OCG 301 or 451, finish Marine Biology electives and general education.

Minimum of 120 credits to graduate.

Minimum 2.0 cumulative GPA required in the 36 credits in BIO/Marine Biology for graduation.

Minimum overall 2.0 cumulative GPA required for graduation.