B. A. BIOLOGY
College of the Environment and Life Sciences

Department: Biological Sciences
Advisor Contact: Dr. Marian Goldsmith (Chair) E-mail: mrgoldsmith@mail.uri.edu
Website: http://www.uri.edu/cels/bio/index.html
Credits: 120

The Major. *The Bachelor of Arts in Biology* is a broad program of study for students interested in having a high degree of flexibility in their education. Students earn a liberal arts degree, which provides a basic foundation in biology together with the option to choose courses in other disciplines. Students may want to use this opportunity to obtain further in-depth training in a particular subdiscipline of biology, to participate in independent study or research with faculty members in Biological Sciences and other departments in the College of the Environment and Life Sciences, or to take courses in other degree programs to explore other fields and increase their choice of future careers.

Career Options. The B.A. in Biology directly serves students who wish to combine the study of biology with another major as a means of gaining broad training for careers in areas needing depth of scientific knowledge along with other background and skills. As an example, students wishing to teach science in primary or secondary school earn degrees in both education and biology. Similarly, students can prepare for careers like scientific illustration or technical writing by double majoring in biology and art, or biology and English or journalism. Combining a major in business administration with one in biology is excellent preparation to enter the growing field of hospital administration or the business sector of the pharmaceutical industry. And finally, students who wish to enter law school to practice environmental law, biotechnology patent law or forensic science find that a major in biology provides a strong background for advanced studies in these areas, with room in their schedules to explore related subjects. Although it is possible to meet the requirements for entering professional schools with a B.A. degree, most students aiming toward premedical, predental, or preveterinary study or graduate school in biology follow a B.S. curriculum, which requires the courses in math, chemistry, and physics expected for admission to such advanced degree programs.

The Faculty in the biology program are actively involved in many areas of research, including the evolution of animal body plans, algal genomes and plant cell walls, the role of mycorrhizal fungi in plant growth, the impact and ecology of predation in terrestrial and marine environments, functional morphology and sensory physiology of fishes, physiological adaptations of squids to extreme marine environments, and neurobiology of invertebrates.

Experiential Learning. Students are encouraged to perform research or independent study projects with faculty in Biological Sciences and other departments in the College of the Environment and Life Sciences for academic credit, participate in internships during the academic year or the summer (e.g., via the Coastal Fellows and EPSCoR Fellows Programs, or the Graduate School of Oceanography's REU SURFO Program), or study at other universities in national and international exchange programs arranged through URI's Office of International Education.

Program requirements. Majors must complete at least 28 credits in BIO/MIC, including 2 semesters of introductory biology (BIO 101, 102) and 1 semester of microbiology (MIC 201 or 211). Of the 28 credits, students must choose at least 3 credits each from the BIO plant, animal, and integrative course lists. The remaining 7 credits may include other BIO and MIC courses. Up to 3 credits of independent study/research (491, 492, 493, 494, or 495 in AFS, AVS, BCH, BIO, MIC, NRS, PLS, or OCG programs) may be used as a BIO elective. A minimum GPA in BIO/MIC courses used to satisfy the major is required. Students must take 2 semesters of chemistry with laboratories. General Education requirements are 6 credits of English Communication (including WRT 104, 105, or 106), 3 credits in Mathematics, 3 credits in Fine Arts, 3 credits in Literature, 6 credits each in Letters and Social Sciences (2 different course codes per area), and 2 semesters of a Foreign Language. At least 42 credits must be in courses numbered 300 or above.

BACHELOR OF ARTS
BIOLOGY

<table>
<tr><th colspan="3">B. A. in Biology – Program Requirements</th></tr>
<tr><td>Core Requirements
(8 credits)</td><td colspan="2">Required: Principles of Biology I and II (BIO 101, 102).</td></tr>
<tr><td colspan="3">Major Electives (16 credits): At least 3 credits must be selected from each of the following three areas. Choose 7 additional credits from BIO and MIC courses (other than MIC 211 or MIC 201). Minimum GPA of 2.0 in BIO/MIC courses required.</td></tr>
<tr><td>Plant Courses:</td><td>Animal Courses:</td><td>Integrative Biology Courses:</td></tr>
<tr><td>BIO 311
BIO 321
BIO 323
BIO 332
BIO 346
BIO 348
BIO 365 (465)
BIO 418</td><td>BIO 121
BIO 201
BIO 242
BIO 244
BIO 286
BIO 301
BIO 302
BIO 304
BIO 327
BIO 329
BIO 334
BIO 335
BIO 354
BIO 355
BIO 366
BIO 385
BIO 386
BIO 412
BIO 441
BIO 445
BIO 467
BIO 469*
BIO 475*</td><td>BIO 262
BIO 272
BIO 341
BIO 345
BIO 352
BIO353
BIO 360
BIO 396
BIO 437
BIO 453
BIO 455
BIO 457
BIO 458
BIO 472
BIO 480
BIO 491
BIO 492
BIO 495*</td></tr>
<tr><td>Mathematics</td><td colspan="2">General Education requirement (one course)</td></tr>
<tr><td>Chemistry</td><td colspan="2">One year with laboratories</td></tr>
<tr><td>Microbiology</td><td colspan="2">MIC 211 Introductory Microbiology or or MIC 201 Introductory Medical Microbiology</td></tr>
<tr><td>Foreign Language</td><td colspan="2">General Education requirement: Through 102-level if a new language; two courses through at least the 103-level if studied for 2 or more years in high school. Study abroad will not satisfy this requirement.</td></tr>
<tr><td>Remarks</td><td colspan="2">120 credits are required for graduation. 28 credits must be from BIO and MIC, with at least 17 credits from BIO. 42 credits must be 300-level or higher. General Education: ECw, 6 cr, including WRT 104, 105; or 106; Fine Arts, 3 cr; Literature, 3 cr; [1]Letters, 6 cr; [1]Social Sciences, 6 cr – [1]two course codes required.</td></tr>
</table>

*taught at the Bermuda Institute of Ocean Sciences (Study Abroad, Fall semester)

B.A. Biology Academic Worksheet

08/10

Biology and Microbiology Requirements* **[ ] credits**

Required BIO and MIC courses (12 credits)

BIO 101 _____ (4 credits)
BIO 102 _____ (4 credits)
MIC 211 or MIC 201 _____ (4 credits)

Additional BIO and MIC courses (16 credits, minimum)*

Plant biology course (list A) _____ (____credits)
Animal biology course (list B) _____ (____credits)
Integrative biology course (list C) _____ (____credits)
Additional BIO & MIC courses: _____ (____credits)
_____ (____credits)
_____ (____credits)
_____ (____credits)

*Up to 3 credits of independent study/research (491, 492,493, 494, or 495) in one of the following programs may be used: AFS, AVS, BCH, BIO, MIC, NRS, PLS or OCG.

Additional Science Requirements **[ ] credits**

Chemistry: 2 semesters with lab (8 credits)

_____, _____
_____, _____

Mathematics (3 credits)

_____

General Education Requirements **[ ] credits**

URI 101 _____ (1 credit)
English Communication (2) WRT_____, _____ (____credits) Diversity courses (2) can be
Fine Arts (1) _____ (____credits) fulfilled by courses listed in
Literature (1) _____ (____credits) the left column of this section.
*Letters (2) _____, _____ (____credits) _____
*Social Science (2) _____, _____ (____credits) _____
Foreign Language (2) _____, _____ (____credits)
Natural Science (not CHM) _____ (____credits)
Natural Science (CHM) _____ Course from "additional science requirements"
Math (1) _____ Course from "additional science requirements"
*Must include two different course codes

Free Electives (on back) **[ ] credits**

Credits in courses numbered 300 or higher (include ANY courses listed above)

_____ *(____credits)* _____ *(____credits)* _____ *(____credits)*
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Total credits in courses numbered 300 or higher (42 credits required) **[ ] credits**

TOTAL CREDITS – 120 required for graduation **[ ] credits**

5/11

Free Electives (pleases list courses and credits below)

_____ (credits)
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Free elective credits (transfer to other side) _____

B. A. BIOLOGY	
FIRST YEAR FALL	FIRST YEAR SPRING
BIO 101 (4) Language (3) MTH 108 or 111 or 131 (3) Gen Ed or elective (3-4) URI 101 (1)	BIO 102 (4) Language (3) Gen Ed (3-4) Elective (3-4) Optional: Gen Ed or elective (3-4)*
14-15 credits	15-17 credits
SECOND YEAR FALL	SECOND YEAR SPRING
BIO list A,B or C (3-4) CHM 103/105 or 101/102 (4) Gen Ed (3-4) Gen Ed or elective (3-4) Optional: Gen Ed or elective (3-4)*	BIO list A,B or C (3-4) CHM 124/126 or CHM 112/114 (4) Gen Ed (3-4) Gen Ed or elective (3-4) Optional: Gen Ed or elective (3-4)*
14-17 credits	14-17 credits
THIRD YEAR FALL**	THIRD YEAR SPRING**
BIO list A,B or C (3-4) MIC 201 or MIC 211 (4) Gen Ed (3-4) Elective (3-4) Optional: Elective (3-4)*	BIO/MIC elective (3-4) Gen Ed (3-4) Gen Ed or elective (3-4) Elective (3-4) Optional: Elective (3-4)*
14-17 credits	14-17 credits
FOURTH YEAR FALL**	FOURTH YEAR SPRING**
BIO/MIC elective (3-4) Elective (3-4) Gen Ed (3-4) Elective (3-4) Optional: Elective (3-4)*	BIO/MIC elective (3-4) Gen Ed (3-4) Elective (3-4) Elective (3-4) Optional: Elective (3-4)*
14-17 credits	14-17 credits

Note: 42 credits must be 300 or above. Elective courses may be applied to a minor or a second major.
*Consider including when fewer than 15 credits total for other courses.
**Study abroad /full-time internship, substitute required courses for electives in other semesters.

B. A. BIOLOGY--TRANSFER	
SECOND YEAR FALL	SECOND YEAR SPRING
BIO 101 (4) Language (3) MTH 108 or 111 or 131 (3) Gen Ed or elective (3-4) Optional: Gen Ed or elective (3-4)*	BIO 102 (4) Language (3) Gen Ed (3-4) Elective (3-4) Optional: Gen Ed or elective (3-4)*
14-17 credits	14-17 credits
THIRD YEAR FALL	THIRD YEAR SPRING
BIO list A,B or C (3-4) CHM 103/105 or 101/102 (4) Gen Ed (3-4) Gen Ed or elective (3-4) Optional: Gen Ed or elective (3-4)*	BIO list A,B or C (3-4) CHM 124/126 or CHM 112/114 (4) Gen Ed (3-4) Gen Ed or elective (3-4) Optional: Gen Ed or elective (3-4)*
14-17 credits	14-17 credits
FOURTH YEAR FALL	FOURTH YEAR SPRING
BIO list A,B or C (3-4) MIC 201 or MIC 211 (4) BIO/MIC elective (3-4) Elective (3-4) Optional: Elective (3-4)*	BIO/MIC elective (3-4) BIO/MIC elective (3-4) Gen Ed or elective (3-4) Elective (3-4) Optional: Elective (3-4)*
14-17 credits	14-17 credits

Note: 42 credits must be 300 or above. Elective courses may be applied to a minor or a second major.
*Consider including when fewer than 15 credits total for other courses.