



Bachelor of Science Degree in Biology

Major Requirements: 77-86 credits

Major Requirements (“C” Grade minimum, not C-)

A. Biology Core Courses (20 credits):

- **BIOL 171 & 171L Introduction to Biology I & Lab (3/1)** (Offered Fall, Summer)
- **BIOL 172 & 172L Introduction to Biology II & Lab (3/1)** (Offered Spring, Summer)
- **BIOL 265 & 265L Ecology & Evolutionary Biology & Lab (3/1)** (Offered only in Fall)
- **BIOL 275 & 275L Cell & Molecular Biology & Lab (3/1)** (Offered Spring, Summer)
- **BIOL 375 & 375L Concepts of Genetics & Lab (3/1)** (Offered only in Fall)

B. Additional Required Courses (10 credits minimum)

In addition to the Biology Core Courses (see above), you are also required to take at least one course from each of the following areas: Physiology, Biochemistry, and Morphology & Systematics. You must also take at least: 1 upper division lab, 1 upper division botany, 1 upper division microbiology, and 1 upper division zoology. Note: Upper division is defined as any course above 300 and MUST be on the list of approved courses (separate sheet).

- **1 Physiology course** (BOT 470/470L; MICR 431; PHYL 301, 302; ZOOL 430/430L, 432, or 442)
- **1 Biochemistry course** (BIOL 402, MBBE 402, PEPS 402, or BIOC 441)
- **1 Morphology & Systematics course** (BOT 410, 430, 461, 462, 480; MICR 351/L; ZOOL 320/L, 330, 416, 460, 465, 475/L, or 480)
- **1 upper division laboratory course**
- **1 upper division course in Botany**
- **1 upper division course in Microbiology**
- **1 upper division course in Zoology**
- **Above courses have pre-requisites, be sure to check the current UHM Catalog**

C. Directed Research (1 credit minimum)

- **Directed Research (BIOL 499)**

Note: Research project proposal must be submitted and approved by the Biology Director BEFORE starting project and registering for credit. Refer to the Guidelines for Directed Research.

For more information contact us at:

Biology Program - University of Hawaii at Manoa
2450 Campus Road, Dean Hall Room 02
Honolulu, HI 96822 U.S.A.
Phone: (808) 956-8303
Fax: (808) 956-4745
Email: bioadvise@hawaii.edu
Website: <http://www.hawaii.edu/biology>

D. Concentrations (15 credits):

- Within these 15 credits, you must choose one of the five concentrations:
 - Cell and Molecular Biology
 - Ecology, Evolution & Conservation Biology
 - Organismic Biology
 - Marine & Aquatic Biology
 - General Biology
- These 15 credits CANNOT be used to fulfill the requirements for Physiology, Biochemistry and Morphology & Systematics courses listed in Part B.
- These 15 credits may be used to fulfill the upper division laboratory course, upper division botany, upper division microbiology and upper division zoology requirements in Part B.
- Refer to the Approved Courses for B.S. Biology Concentrations

Note: These concentrations will not appear on your diploma.

Related Requirements (31-36 credits minimum):

(“C” grade minimum, not C-)

- **1 Year Calculus:** MATH 215 and 216 (or 241 and 242 or 251A and 252A)
- **1 Additional Math course:** ECON 321 or MATH 243, 304,305 or NREM 310
- **1 Year General Chemistry:** CHEM 161/161L and 162/162L (or 181A/181L*)
*CHEM 181A/L may not meet JABSOM requirements for 8 credits of General Chemistry
- **1 Year Organic Chemistry:** CHEM 272/272L and 273 (273L recommended)
- **1 Year Physics:** 151/151L and 152/152L (or 170/170L and 272/272L)