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Biology, B.S.



A Return to: Undergraduate & Graduate Degrees

Degree Awarded: Bachelor of Science

Total Credit Hours: 120-124

Career Opportunities: Pharmaceutical companies, federal and state government laboratories and

agencies, public health, nursing, pharmacy, food industry and biotechnology

companies, forensic laboratories, hospitals, public health facilities, professional schools of medicine, dentistry, veterinary medicine.

Note(s): To qualify for graduation, a student must earn a grade of "C" or better in all

BIOL courses that are applicable to the degree.

A minimum of 45 hours of 300 and 400 level courses must be taken to meet

graduation requirements.

General Education Core Curriculum

Core Curriculum

Freshman Year

Required Courses

- UNIV 100 First Year Seminar 3 Credit(s)
- BIOL 110 Fundamentals of Biology I 3 Credit(s)
- BIOL 112 Fundamentals of Biology I Lab 1 Credit(s)
- BIOL 111 Fundamentals of Biology II 3 Credit(s)
- BIOL 113 Fundamentals of Biology II Lab 1 Credit(s)
- CHEM 107 General Chemistry I 3 Credit(s)
- CHEM 108 General Chemistry II 3 Credit(s)
- CHEM 115 General Chemistry Laboratory 2 Credit(s)
- ENGL 101 Introduction to Academic Writing 3 Credit(s)
- ENGL 102 Writing and Research About Culture 3 Credit(s)
- MATH 143 Pre-Calculus Algebra and Trigonometry 3 Credit(s)
 Trigonometry 3 Credit(s)
- MATH 250 Survey of Calculus 3 Credit(s) ¹

Note:

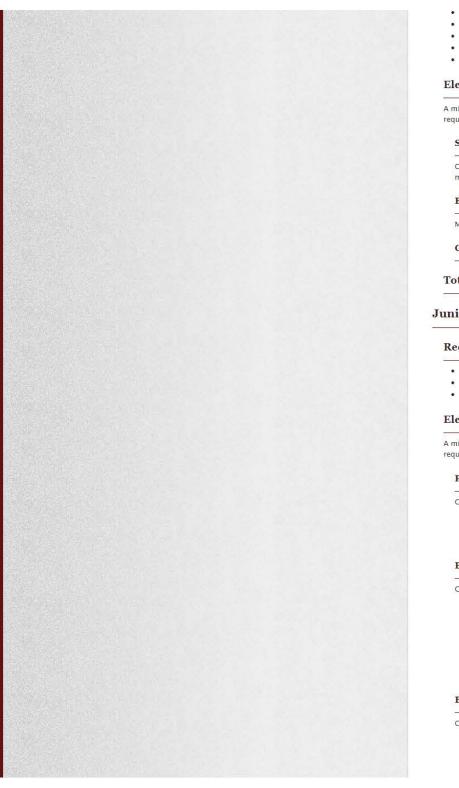
Total: 31 Credits

Sophomore Year

Required Courses

BIOL 230 – Fundamentals of Cell and Molecular Biology 3 Credit(s)

¹ Students not qualified for MATH 143 must take MATH 109 and MATH 110 before advancing to MATH 250. Qualified students should take MATH 270 in lieu of MATH 250.



- . BIOL 231 Fundamentals of Cell and Molecular Biology Laboratory 1 Credit(s)
- BIOL 233 Genetics and Evolution 3 Credit(s)
- CHEM 231 Organic Chemistry I 3 Credit(s)
- CHEM 232 Organic Chemistry II 3 Credit(s)
- CHEM 233 Organic Chemistry Laboratory | 1 Credit(s)

Electives

A minimum of 45 hours of 300 and 400 level courses must be taken to meet graduation requirements.

Social/Behavioral Sciences (3 Credits)

Choose from the General Education Core list of Social/Behavioral Science courses. Three hours must be at the 200-level or above.

Biology (7 Credits)†

Must be approved by the student's academic advisor.

General Electives (5 Credits)

Total: 29 Credits

Junior Year

Required Courses

- CHEM 317 Biochemistry I 3 Credit(s)
- PHYS 207 Introduction to Physics I 3 Credit(s)
- PHYS 208 Introduction to Physics II 3 Credit(s)

Electives

A minimum of 45 hours of 300 and 400 level courses must be taken to meet graduation requirements.

Physics Laboratory (1 Credit)

Choose from:

- PHYS 215 Physics Laboratory I 1 Credit(s)
- or
- PHYS 216 Physics Laboratory II 1 Credit(s)

Biology Physiology (4-5 Credits)

Choose from:

- BIOL 325 General Physiology 4 Credit(s)
- BIOL 482G Comparative Environmental and Metabolic Physiology 4 Credit(s)
- BIOL 484G Integrative Physiology 4 Credit(s)
- BIOL 408G Plant Physiology 3 Credit(s)
- BIOL 409G Plant Physiology Laboratory 2 Credit(s)

Biology Systematics (3-4 Credits) †

Choose from:

- BIOL 321 Entomology 3 Credit(s)
- BIOL 322 Survey of Biological Diversity 3 Credit(s)
- BIOL 333 Local Flora 4 Credit(s)
- BIOL 351 Parasitology 3 Credit(s)

 BIOL 405G - Mammalogy 4 Credit(s) BIOL 413G - Herpetology 4 Credit(s) • BIOL 414G - Ornithology 4 Credit(s) • BIOL 445G - Ichthyology 4 Credit(s) BIOL 462G - Invertebrate Zoology 4 Credit(s) BIOL 480G - Marine Microbiology 3 Credit(s) BIOL 485G - Marine Botany 4 Credit(s) Biology (3-4 Credits) † Communication (3 Credits) Choose from: • ENGL 365 - Technical Writing 3 Credit(s) • CMCN 310 - Public Speaking 3 Credit(s) **English Literature (3 Credits)** History (3 Credits) Total: 29-31 Credits **Senior Year Required Courses** BIOL 452 - Senior Seminar 1 Credit(s) Electives requirements. Statistics (3 Credits) Choose from: STAT 417G - Biometry 3 Credit(s) Biology Lab (4-5 Credits) † Choose from: BIOL 308 - Plant Anatomy 4 Credit(s) BIOL 434G - Histology 4 Credit(s) BIOL 435 - Honors Histology 4 Credit(s) • BIOL 482G - Comparative Environmental and Metabolic Physiology 4 Credit(s) • BIOL 442G - Immunobiology 3 Credit(s) and BIOL 443 - Immunobiology Lab 1 credit

• BIOL 403G - Fundamentals of Virology 3 Credit(s) • BIOL 433G - Plant Systematics and Biodiversity 4 Credit(s) • BIOL 436G - Comparative Vertebrate Morphology 4 Credit(s) . BIOL 461G - Aquatic and Wetland Vascular Plants 4 Credit(s) Choose from any BIOL course for majors at the 300 or 400 level. Choose from the General Education Core list of Literature courses. Choose from the General Education Core list of History courses. A minimum of 45 hours of 300 and 400 level courses must be taken to meet graduation • STAT 325 - Introduction to Statistics 3 Credit(s) • STAT 427G - Statistical Methods for Researchers I 3 Credit(s) • BIOL 318 - Advanced Human Anatomy and Physiology 4 Credit(s) • BIOL 436G - Comparative Vertebrate Morphology 4 Credit(s)

 BIOL 354 - Pathogenic Microbiology 3 Credit(s) and

• BIOL 356 - Pathogenic Microbiology Laboratory 2 Credit(s)

• BIOL 408G - Plant Physiology 3 Credit(s) and

• BIOL 409G - Plant Physiology Laboratory 2 Credit(s)

 BIOL 423G - Neurobiology 3 Credit(s) and

• BIOL 424G - Neurobiology Laboratory 1 Credit(s)

BIOL 425G - Developmental Biology 3 Credit(s)
and

• BIOL 426G - Developmental Biology Laboratory 1 Credit(s)

BIOL 453G - Molecular and Cellular Engineering 3 Credit(s)
 and

• BIOL 454G - Molecular and Cellular Engineering Laboratory 2 Credit(s)

 BIOL 457G - Advanced Cell Biology 3 Credit(s) and

BIOL 458G - Advanced Cell Biology Laboratory 2 Credit(s)

Biology Field (3-4 Credits)†

Choose from:

• BIOL 307 - Field Techniques 3 Credit(s)

. BIOL 309 - Wildlife Ecology and Management 3 Credit(s)

BIOL 333 - Local Flora 4 Credit(s)

• BIOL 360 - Principles of Ecology 4 Credit(s)

BIOL 405G - Mammalogy 4 Credit(s)

BIOL 407G - Environmental Toxicology 4 Credit(s)

BIOL 413G - Herpetology 4 Credit(s)

• BIOL 414G - Ornithology 4 Credit(s)

• BIOL 427G - Experimental Design and Analysis 4 Credit(s)

• BIOL 440G - Estuarine Ecology and Coastal Marine Biology 4 Credit(s)

• BIOL 441G - Limnology and Oceanography 4 Credit(s)

• BIOL 445G - Ichthyology 4 Credit(s)

• BIOL 446G - Fish Ecology and Management 4 Credit(s)

BIOL 447G – Ecosystem and Landscape Ecology 4 Credit(s)

. BIOL 461G - Aquatic and Wetland Vascular Plants 4 Credit(s)

• BIOL 485G - Marine Botany 4 Credit(s)

Fine Arts (3 credits)

Choose from the General Education Core list of Fine Arts courses.

Social/Behavioral Sciences (3 Credits)

Choose from the General Education Core list of Social/Behavioral Science courses. Three hours must be at the 200-level or above.

General Electives (14 Credits)

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Must be approved by the student's academic advisor. This elective may be at the 200 level.

Total: 31-33 Credits

Note

