

The Department of Biology

State University of New York at Fredonia, Fredonia, NY 14063

Curriculum Map: B.S. Degree in BIOLOGY

(Curriculum Code Number: 0313)

Student Learning Outcomes (SLOs)

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|---|--|
| 1 | <i>Majors in the Biology Degree Program should be able to communicate scientific observations, analyses, and arguments and to critically evaluate the scientific merit of articles and/or lectures.</i> |
| 2 | <i>Majors in the Biology Degree Program should possess a solid comprehension of basic principles in the biological sciences and of the nature of science and the basis of scientific laws and theories</i> |
| 3 | <i>Majors in the Biology Degree Program should be able to design experiments, collect, analyze and interpret data scientifically.</i> |

REQUIREMENTS FOR MAJOR IN BIOLOGY -- (25 hrs)

Students must maintain a minimum 2.00 GPA overall and in the major.

| COURSE NUMBER AND TITLE | CR. HRS | SLOs | | |
|---|------------|-------|--|--|
| BIOL 131 Principles of Biology I Lecture | 3 | 2 | | |
| BIOL 132 Principles of Biology I Lab | 1 | 2,3 | | |
| BIOL 133 Principles of Biology II Lecture | 3 | 2 | | |
| BIOL 134 Principles of Biology II Lab | 1 | 2,3 | | |
| BIOL 237 Genetics Lecture | 3 | 2,3 | | |
| BIOL 238 Genetics Lab | 1 | 2,3 | | |
| BIOL 243 Biodiversity Lecture | 3 | 2 | | |
| BIOL 244 Biodiversity Lab | 1 | 2,3 | | |
| BIOL 330 General Ecology Lecture | 3 | 2,3 | | |
| BIOL 331 General Ecology Lab | 1 | 1,2,3 | | |
| BIOL 333 Biochemistry Lecture | 3 | 2,3 | | |
| BIOL 334 Biochemistry Lab | 1 | 1,2,3 | | |
| BIOL 431 Senior Seminar | 1 | 1,2,3 | | |

GROUP III: BIOLOGY ELECTIVES --

(12 hrs)

BIOL 300-, 400-, 500-level courses. No more than 3 cr. hrs. of UG Research, Lab Supervision, or Internship, and can use ONLY one of The Human Genome, Emerging Infectious Diseases, or AIDS and STDs in this section.

| COURSE NUMBER AND TITLE | HRS | SLOs | | |
|-------------------------|-----|------|--|--|
| 1. BIOL | | | | |
| 2. BIOL | | | | |
| 3. BIOL | | | | |
| 4. BIOL | | | | |
| 5. BIOL | | | | |

GROUP IV: SUPPORTING COURSES --

(27 hrs)

| COURSE TITLE AND NUMBER | HRS | SLOs | HRS | SLOs |
|---|---------------|---|--------------------------------------|----------|
| *General Chemistry I Lecture & Lab CHEM 115 | 3 | <u>2,3</u> | CHEM 125 1 | 1,2,3 |
| General Chemistry II Lecture & Lab CHEM 116 | 3 | <u>2,3</u> | CHEM 126 1 | 1,2,3 |
| Organic Chem I Lecture & Lab CHEM 215 | 3 | <u>2,3</u> | CHEM 225 1 | 1,2,3 |
| Organic Chem II Lecture & Lab CHEM 216 | 3 | <u>2,3</u> | CHEM 226 1 | 1,2,3 |
| <i>(Circle one)</i> | | <i>For 3/4 Dental & 3/4 Optometry choose MATH 120 BELOW</i> | | |
| *Statistics for Scientists STAT 250 | 3 | 3 | <i>or</i> MATH 120 3 | 1,2 |
| *Physics I Lecture & Lab PHYS I 121 <i>or</i> 230 | 3 <i>or</i> 4 | 2,3 | <i>and</i> PHYS I 123 <i>or</i> 232 | 1 2,3 |
| Physics II Lecture & Lab PHYS II 122 <i>or</i> 231 | 3 <i>or</i> 4 | 2,3 | <i>and</i> PHYS II 124 <i>or</i> 233 | 1 2,3 |