

# Suggested Course Map for Biology Majors

(AUGUST 2016)

Freshman Year	Sophomore Year	Junior Year	Senior Year
BIOL 111A* BIOL 111B* BIOL 111C* CHEM 111 CHEM 111L MATH 132B ENGL 111A CHEM 112 CHEM 112L MATH 140 or 161 GE CAT 1	BIOL 111A* or 111B* or 111C* (if not taken) CHEM 230 CHEM 231 PHYS 111 PHYS 111L GE CAT 2 (CI) BIOL 350* or 360 or 370 or 380* BIOL 391 PHYS 112 PHYS 112L MATH 162 (REC) GE CAT 10 (CI)	BIOL 350* or 360 or 370 or 380* (if not taken) BIOL 391 (if not taken) BIOL 400 Electives (2) BIOL 499 (REC) GE CAT 9 CHEM 330 (REC) CHEM 331 (REC) GE CAT 5	BIOL 400 Electives (2) BIOL 499 (REC) GE CAT 6 GE CAT 7 Electives (Any Dept.) (2) GE CAT 8 BIOL 491

## NOTES:

- Students should be aware that 300- and 400-level Biology courses have specific course prerequisites. Please consult the SVSU Undergraduate Catalog or the Department Chair for details.
- \*BIOL 111A, 111B, and 111C are typically offered in Spring and Summer sessions as well as Fall and Winter semesters. Biology 350 and 380 are frequently offered in Spring and Summer sessions as well as Fall and Winter semesters. The timing of all these courses varies from year to year. Please consult the Course Schedule on Cardinal Direct for details.
- ENGL 111 is a prerequisite to all GE courses. Two GE "CI" courses are required. Category 3, 9, and 10 courses must be completed prior to a student's first 75 credits.
- SVSU requires 124 credits to graduate, including a minimum of 42 upper division (300–400 level) credits.

## STRONGLY RECOMMENDED COURSES FOR PRE-MED, PRE-DENT, PRE-VET TRACK:

CHEM 330	Organic Chemistry Lecture II
CHEM 331	Organic Chemistry Lab II
CHEM 412	Biochemistry Lecture I
CHEM 413	Biochemistry Lab I
MATH 162	Calculus II
BIOL 232	Physiology & Anatomy I
BIOL 233	Physiology & Anatomy II
BIOL 236	Human Nutrition
BIOL 499	Special Topics Research

### *Biology 400 Level Courses:*

Choose a minimum of 4:

BIOL 431	Microbiology
BIOL 437	Immunology & Hematology
BIOL 451	Human Genetics
BIOL 461	Endocrinology
BIOL 462	Comparative Physiology and Anatomy
BIOL 463	Neurobiology
BIOL 472	Parasitology

## STRONGLY RECOMMENDED COURSES FOR GRADUATE SCHOOL TRACK:

CHEM 330	Organic Chemistry Lecture II
CHEM 331	Organic Chemistry Lab II
MATH 162	Calculus II

### *Biology 400 Level Courses:*

Choose 4–6 courses: See courses on back.

BIOL 499	Special Topics Research
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It is strongly recommended that students consult a biology faculty member before registering each semester. Please note that course availability is subject to change.

# Biology Department Courses – 2016-2017

(Numbers in parenthesis indicate credit hours earned in course.)

## BIOLOGY 100 LEVEL COURSES:

BIOL 111A	Principles of Biology (4)
BIOL 111B	Principles of Zoology (3)
BIOL 111C	Principles of Botany (3)

## BIOLOGY 200 LEVEL COURSES:

BIOL 232	Physiology & Anatomy I (4)
BIOL 233	Physiology & Anatomy II (3)
BIOL 237	Introduction to Microbiology (4)

## BIOLOGY 300 LEVEL COURSES:

BIOL 350	Genetics (4)
BIOL 360	Cell Biology (4)
BIOL 370	Developmental Biology (4)
BIOL 380	Ecology (4)
BIOL 391	Developing Professionals in Biology (1)

## BIOLOGY 400 LEVEL ELECTIVES:

### Molecular and Cell Biology Emphasis:

BIOL 423	Electron Microscopy (4)
BIOL 431	Microbiology (4)
BIOL 437	Immunology and Hematology (4)
BIOL 442	Molecular Biology (4)
BIOL 451	Human Genetics (3)
BIOL 452	Evolution (3)
BIOL 455	Evolutionary Genetics (3)
BIOL 455L	Evolutionary Genetics Laboratory (1)
BIOL 456	Icons and Ideas of Biology (3)
BIOL 453	Genetics of Cancer (3)
BIOL 45X	Bioinformatics (3)
BIOL 461	Endocrinology (3)
BIOL 461L	Endocrinology Laboratory (2)
BIOL 463	Neurobiology (3)
BIOL 464	Plant Physiology (4)
BIOL 465	Cardiovascular Physiology and Disease (3)

### Organismal Emphasis:

BIOL 423	Electron Microscopy (4)
BIOL 452	Evolution (3)
BIOL 456	Icons and Ideas of Biology (3)
BIOL 461	Endocrinology (3)
BIOL 461L	Endocrinology Laboratory (2)
BIOL 462	Comparative Physiology and Anatomy (4)
BIOL 470 *	Ichthyology (3)
BIOL 471	Invertebrate Zoology (4)
BIOL 472	Parasitology (3)
BIOL 475	Vertebrate Zoology (3)
BIOL 476	Mammalogy (3)
BIOL 477 *	Ornithology (3)
BIOL 478 *	Entomology (4)
BIOL 481 *	Natural History of Freshwater Invertebrates (4)
BIOL 483	Biogeography (3)
BIOL 484	Ethology (4)

<u>Other:</u>	BIOL 491	Undergraduate Seminar in Biology
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\*Course Includes Field Studies