

**CALIFORNIA STATE UNIVERSITY, NORTHRIDGE
BACHELOR OF ARTS IN BIOLOGY**

Lower Division Core

COURSE	TITLE	UNITS	PREREQUISITES & CO-REQUISITES
Biol 106/L	Biological Principles I and Lab	3+1	Corequisite: Biol 106 and 106L must be taken concurrently
Biol 107/L	Biological Principles II and Lab	3+1	Corequisite: Biol 107 and 107L must be taken concurrently, Chem 102/L recommended
Chem 101/L	General Chemistry I and Lab	4+1	Prerequisite: Satisfactory score on the CPT or a grade of "C" or higher in Chem 100 taken at CSUN only Corequisite: Chem 101, 101L, and 101 Discussion must be taken concurrently
Chem 102/L	General Chemistry II and Lab	4+1	Prerequisite: Chem 101/L with a grade of "C-" or better in 101 Corequisite: Chem 102, 102L, and 102 Discussion must be taken concurrently
Phys 100A/AL	General Physics I	3+1	Prerequisite: Math 103, 104, 105 or Math 106 or a score on the MPT sufficient for entry into Math 255A
Phys 100B/BL	General Physics II	3+1	Prerequisite: Phys 100A
Math 102/L	Pre-Calculus I	3+1	Prerequisite: Category 1 or 16 on ALG of MPT (Full Prep) OR Category 2 or Math 196S or 14 on ALG of MPT (Conditional Prep) Corequisite: Math 102L (if Conditional Prep)
AND Math 105/L	Pre-Calculus II	5+1	Prerequisite: B- in Math 102 or 19 on ALG of MPT (Full Prep) OR C- in Math 102 or 17 on ALG of MPT (Conditional Prep) Corequisite: Math 105L (if Conditional Prep)
OR Math 106	Mathematical Foundations for Non-Calculus Physics	5	Prerequisite: Readiness for GE math without supplemental support

Upper Division Core

COURSE	TITLE	UNITS	PREREQUISITES & CO-REQUISITES
Biol 322	Evolutionary Biology	3	Prerequisite: Biol 106/L and Biol 107/L passed with grades of "C" or better
Biol 360	Genetics	3	Prerequisite: Biol 106/L and Biol 107/L passed with grades of "C" or better; Chem 101/L or Chem 103/L; Math 105 or Math 102+104
Biol 380	Cell Biology	3	Prerequisite: Biol 106/L and Biol 107/L passed with grades of "C" or better; Chem 102/L or Chem 104
Chem 333/L	Principles of Organic Chemistry I and Lab	4+1	Prerequisite: Chem 102/L with a grade of "C-" or better in Chem 102 Corequisite: Chem 333, 333L, and 333 Discussion must be taken concurrently
Chem 334/L	Principles of Organic Chemistry II and Lab	3+1	Prerequisite: Chem 333/L with a grade of "C-" or better in Chem 333 Corequisite: Chem 334 and 334L must be taken concurrently

SELECTIVE PROGRAM: 20 UNITS REQUIRED, 17 MUST BE UPPER DIVISION (300 or above)

<p>1. Molecular, Cellular and Physiological Biology Choose at least two courses – Seven units or more At least one course must have a lab "L" At least one course must be 400-level or above</p>
<p>2. Systematics and Comparative Biology Choose one course At least one course in either Section 2 or 3 must have a field studies component</p>
<p>3. Ecology and Environmental Biology Choose one course At least one course in either Section 2 or 3 must have a field studies component</p>
<p>4. Electives: Choose additional courses from one of the 3 sections above, or from the Elective section to bring the total number of units in the Selective Program to 20, with at least 17 of them upper division units (300 level or above)</p>

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SELECTIVE PROGRAM COURSES: 20 UNITS REQUIRED, 17 UNITS MUST BE UPPER DIVISION
(300 LEVEL OR ABOVE)

1. Molecular, Cellular, Physiological Biology: Choose at least one course with a lab and at least one course 400-level or above (7 units total)

300-Level "L" Courses

Biol 315/L Principles of Microbiology (2+2)
Biol 316/L Plant Biology (3+1)
Biol 382/L Human Anatomy & Physio I (3+1)

400-Level "L" Courses

Biol 408/L Applied Microbiology (2+2)
Biol 411/L Animal Histology (2+2)
Biol 417/L Microbial Physiology (2+2)
Biol 441/L Embryology (2+2)
Biol 442/L Developmental Biology (3+1)
Biol 472/L Recombinant DNA Techniques (2+2)
Biol 475/L Biological Imaging (2+2)
Biol 477/L Cell and Tissue Culture (2+2)
Biol 480/L Cellular Physiology (2+2)
Biol 481/L Plant Physiology (2+2)
Biol 482/L Animal Physiology (2+2)
Biol 483/L Principles of Neurophysiology (3+1)
Biol 485/L Immunology and Serology (2+2)
Biol 487/L Hematology (2+2)

500-Level "L" Courses

Biol 551/L Computer Modeling in Biology (2+2)

Biol 383/L Human Anatomy & Physio II (3+1)
Biol 381 Cell Biology Lab (1 unit)
This course does NOT count towards "L" lab requirement

400-Level Lecture Courses

Biol 444 Biology of Viruses (3)
Biol 461 Molecular Genetics of Microorganisms (3)
Biol 462 Molecular Genetics of Eukaryotic Organisms (3)
Biol 464 Human Biochemical Genetics (3)
Biol 466 Genetics of Bacteria and their Viruses (3)
Biol 468 Human Genetics (3)
Biol 469 Medical Genetics (3)
Biol 470 Biotechnology (3)
Biol 471A Molecular Diagnostics (3)
Biol 473 Clinical Cytogenetics & Cancer Genetics (3)
Biol 476 Topics in Stem Cell Biology (3) #
Biol 479 Endocrinology (3)
Biol 489 Cellular Immunology (3)
Biol 493 Mechanisms of Bacterial Pathogenesis (3)

2. Systematics and Comparative Biology: Choose one course. One course from Section 2 or 3 must be a Field Studies Course

Non-field Studies Courses

Biol 410/L Medical Microbiology (2+2)
Biol 418/L Bacterial Diversity (2+2)
Biol 432/L Comparative Anatomy (2+2)
Biol 433/L Biology of Marine Tetrapods (2+1)
Biol 435/L Parasitology (2+2)
Biol 452/L Molecular Markers in Evolutionary Studies (2+2)

Field Studies Courses

Biol 312/L + 392F Vertebrate Biology (2+1+1)
Biol 313/L + 392B Invertebrate Zoology (2+1+1)

Biol 404/L + 492Y Phycology (2+1+1)
Biol 406/L + 492K Flowering Plant Systematics (2+1+1)
Biol 409/L + 492J Non-Flowering Plants (2+1+1)
Biol 412/L + 492E Herpetology (2+1+1)
Biol 413/L + 492AA Entomology (2+1+1)
Biol 415/L + 492M Mammalogy (2+1+1)
Biol 430/L + 492BB Ichthyology (2+1+1)
Biol 437/L + 492V Fungi (2+1+1)
Biol 438/L + 492R Tropical Botany (2+1+2)*
Biol 446/L + 492T Biology of Tropical Vertebrates (2+1+2)*
Biol 448 + 492U Tropical Biodiversity & Field Studies (2+1)*

3. Ecology and Environmental Biology: Choose one course. One course from Section 2 or 3 must be a Field Studies Course

Non-field Studies Courses

Biol 422/L Physiological Ecology (2+2)

Field Studies Courses

Biol 407/L + 492N Plant Ecology (2+1+1)
Biol 414/L + 492A Avian Ecology (2+1+1)
Biol 419/L + 492C Microbial Ecology (2+1+1)
Biol 421/L + 492B Marine Biology (2+1+1)
Biol 423 + 492F Field Ecology (2+2)
Biol 425 + 492D Animal Behavior with Field Studies (3+1)

Biol 426/L + 492P Biology of Deserts (2+1+1)
Biol 427/L + 492H Principles of Ecology (2+1+1)
Biol 427A/AL + 492L Biology of Pelagic Organisms (2+1+1)
Biol 428/L + 492W Wildlife Ecology & Management (2+1+1)
Biol 429/L + 492I Marine Ecology (2+1+1)
Biol 434/L + 492Q Ecology of Marine Fishes (2+1+1)
Biol 439/L + 492S Tropical Ecology & Conservation (2+1+2)*
Biol 451 + 326 Tropical Biology & Regional Excursions (3+1)*
Biol 453/L + 492Z Behavioral Ecology (2+1+1)
Biol 456 + 492O Conservation Biology (3+1)

4. Elective Requirements: Choose additional courses if needed to total 20 units, at least 17 upper division units

Lecture Courses

Math 255A Calculus for Life Sciences I (3)
(Prerequisite: "C-" in Math 105)
Chem 461 Biochemistry I (3)
Chem 464 Principles of Biochemistry (3)
Biol 449 Seminar on Topics in Tropical Biology (3)*
Biol 490, 495, 499, 526 (1 to 3)
(No more than 3 units of Biol 490, 495, 499 and 526 combined may be used)

Lab Courses

Chem 461L Biochemistry I Lab (1)
Chem 464L Principles of Biochemistry Lab (1)
Biol 330/L Design & Analysis of Experiments (2+1)
Biol 431/L Food Microbiology (2+2)
Biol 447/L Full Immersion Research Experience (FIRE) (2+2)
Biol 502/L Biometry (3+1)
Biol 503/L Bioinformatics (3+1)
Geol 322/L Introductory Oceanography and Lab (3+1)
Geol 351/L Fundamentals of Paleontology (3+1)

#: Available only to students in Bridges Stem Cell Research Program

*: Available only to students participating in Tropical Semester (Spring of even years)