

THE DEGREE OF BACHELOR OF SCIENCE WITH A COMPREHENSIVE MAJOR IN BIOLOGY

A student must complete the core requirements, an option, and the Essential Studies requirements. Students pursuing a comprehensive major in biology are encouraged to take MATH 232 APPLIED STATISTICS as their Essential Studies Math requirement.

NOTE: Students may earn only one option within the Biology Major, although they are encouraged to take additional courses to expand their scientific knowledge and abilities. Some courses require successful completion of prerequisite courses prior to enrollment, as articulated in the catalog course descriptions. Successful completion means earning a "C" or better in the prerequisite course(s).

Code	Title	Credits
Essential Studies (http://catalog.csc.edu/undergraduate/essential-studies-program/)		
Core Requirements		
BIOL 101 & 101L	GENERAL BIOLOGY I and GENERAL BIOLOGY I LABORATORY	4
BIOL 102 & 102L	GENERAL BIOLOGY II and GENERAL BIOLOGY II LABORATORY	4
BIOL 332 & 332L	GENETICS and GENETICS LABORATORY	4
BIOL 458	BIOLOGICAL EVOLUTION	3
Complete 4 credits of the following (see degree option for specific requirements):		
CHEM 131 & 131L	COLLEGE CHEMISTRY I and COLLEGE CHEMISTRY I LABORATORY	4
CHEM 140 & 140L	SURVEY OF CHEMISTRY and SURVEY OF CHEMISTRY LAB	
Complete 3 credits of the following (talk with your advisor about which one is most appropriate):		
BIOL 499	BIOLOGY CAPSTONE	3
CHEM 310 & CHEM 401 & CHEM 410	CAPSTONE I: RESEARCH SEMINAR and CAPSTONE II: SENIOR RESEARCH and CAPSTONE III: SENIOR RESEARCH/THESIS	
Select one of the following degree options:		
Biological Resources (p. 1)		34-35
General Biology (p. 1)		
Human Biology (p. 2)		
Molecular Biology (p. 2)		
Organismal Biology (p. 2)		
Total Credits		56-57

Biological Resources Option

Code	Title	Credits
Core Requirements (must complete CHEM 131/131L):		
BIOL 243 & 243L	BOTANY and BOTANY LABORATORY	4

BIOL 244 & 244L	ZOOLOGY and ZOOLOGY LABORATORY	4
BIOL 327 & 327L	ENVIRONMENTAL REMEDIATION and ENVIRONMENTAL REMEDIATION LABORATORY	3
BIOL 336 & 336L	GENERAL ECOLOGY and GENERAL ECOLOGY LAB	3
BIOL 337	ENVIRONMENTAL MANAGEMENT	3
BIOL 390	INTERNSHIP IN BIOLOGY ¹	1
BIOL 438 & 438L	TAXONOMY OF PLANTS and TAXONOMY OF PLANTS LAB	3
CHEM 132 & 132L	COLLEGE CHEMISTRY II and COLLEGE CHEMISTRY II LABORATORY	4
Select 9 credits of the following:		
BIOL 241 & 241L	MICROBIOLOGY and MICROBIOLOGY LABORATORY	9
BIOL 339 & 339L	COMPARATIVE ANATOMY AND PHYSIOLOGY and COMPARATIVE ANATOMY AND PHYSIOLOGY LABORATORY	
BIOL 347 & 347L	CRYPTOGAMIC BOTANY and CRYPTOGRAMIC BOTANY LABORATORY	9
BIOL 401 & 401L	ORNITHOLOGY and ORNITHOLOGY LAB	
BIOL 428	BIOINFORMATICS	9
BIOL 431 & 431L	ENTOMOLOGY and ENTOMOLOGY LAB	
BIOL 435 & 435L	MAMMALOLOGY and MAMMALOLOGY LAB	9
BIOL 439 & 439L	PLANT PHYSIOLOGY and PLANT PHYSIOLOGY LAB	
BIOL 444 & 444L	FRESHWATER ECOLOGY and FRESHWATER ECOLOGY LABORATORY	9
BIOL 446	REGIONAL FLORA	
CHEM 433 & 433L	ENVIRONMENTAL CHEMISTRY and ENVIRONMENTAL CHEMISTRY LABORATORY	9
GEOS 321	INTRODUCTION TO GPS	
Total Credits		56

¹ 1 credit is required; however, 3 credits is recommended. A student may do up to 6 credits of internship.

² Students entering the Environmental Resource Management field are encouraged to pursue a minor in Applied Statistics, Chemistry, Geoscience, Water Resource Management, or Wildlife Management.

General Biology Option

Code	Title	Credits
Core Requirements (must complete CHEM 131/131L):		
BIOL 241 & 241L	MICROBIOLOGY and MICROBIOLOGY LABORATORY	4
BIOL 243 & 243L	BOTANY and BOTANY LABORATORY	4
BIOL 244 & 244L	ZOOLOGY and ZOOLOGY LABORATORY	4
BIOL 336 & 336L	GENERAL ECOLOGY and GENERAL ECOLOGY LAB	3

BIOL 449	MOLECULAR BIOLOGY OF THE CELL	3
CHEM 132 & 132L	COLLEGE CHEMISTRY II and COLLEGE CHEMISTRY II LABORATORY	4
MATH 232	APPLIED STATISTICS	3
Upper Division Biology or Chemistry Electives ³		10
Total Credits		57

³ BIOL 390: INTERNSHIP IN BIOLOGY (3 credit max) or BIOL 409 SENIOR BIOLOGY RESEARCH (3 credit max) is highly recommended.

Human Biology Option

Code	Title	Credits
Core Requirements (must complete CHEM 131/131L):		22
BIOL 241 & 241L	MICROBIOLOGY and MICROBIOLOGY LABORATORY	4
BIOL 340 & 340L	HUMAN ANATOMY and GROSS HUMAN ANATOMY LABORATORY	4
BIOL 342 & 342L	HUMAN PHYSIOLOGY and HUMAN PHYSIOLOGY LABORATORY	4
BIOL 449	MOLECULAR BIOLOGY OF THE CELL	3
CHEM 132 & 132L	COLLEGE CHEMISTRY II and COLLEGE CHEMISTRY II LABORATORY	4
Select 6 credits of the following:		6
BIOL 343 & 343L	PARASITOLOGY and PARASITOLOGY LAB	
BIOL 430	IMMUNOLOGY	
BIOL 432 & 432L	DEVELOPMENTAL BIOLOGY and DEVELOPMENTAL BIOL LAB	
Select 10 credits of the following, not to duplicate above:		10
BIOL 132	MEDICAL TERMINOLOGY	
BIOL 230	HISTOLOGY	
BIOL 323 & 323L	BASIC HEMATOLOGY and BASIC HEMATOLOGY LAB	
BIOL 333	HUMAN DISEASES IN THE RURAL ENVIRONMENT	
BIOL 343 & 343L	PARASITOLOGY and PARASITOLOGY LAB	
BIOL 430	IMMUNOLOGY	
BIOL 432 & 432L	DEVELOPMENTAL BIOLOGY and DEVELOPMENTAL BIOL LAB	
BIOL 433 & 433L	HUMAN BIOMECHANICS and HUMAN BIOMECHANICS LAB	
BIOL 456 & 456L	PATHOGENIC MICROBIOLOGY and PATHOGENIC MICROBIOLOGY LAB	
CHEM 333 & 333L	ORGANIC CHEMISTRY I and ORGANIC CHEMISTRY I LABORATORY	
CHEM 335 & 335L	BIOCHEMISTRY I and BIOCHEMISTRY LABORATORY	
CHEM 336	BIOCHEMISTRY II	
Total Credits		57

Molecular Biology Option

Code	Title	Credits
Core Requirements (must complete CHEM 131/131L):		22
BIOL 241 & 241L	MICROBIOLOGY and MICROBIOLOGY LABORATORY	4
BIOL 428	BIOINFORMATICS	3
BIOL 449	MOLECULAR BIOLOGY OF THE CELL	3
CHEM 132 & 132L	COLLEGE CHEMISTRY II and COLLEGE CHEMISTRY II LABORATORY	4
Select 4 credits of the following		4
CHEM 231 & 231L	SURVEY OF ORGANIC CHEMISTRY and SURVEY OF ORGANIC CHEMISTRY LAB	
CHEM 333 & 333L	ORGANIC CHEMISTRY I and ORGANIC CHEMISTRY I LABORATORY	
CHEM 335 & 335L	BIOCHEMISTRY I and BIOCHEMISTRY LABORATORY	4
CHEM 342	INSTRUMENTAL ANALYSIS	3
PHYS 151 & 151L	COLLEGE PHYSICS I and COLLEGE PHYSICS I LABORATORY	4
Select 6 credits of the following: ⁴		6
BIOL 243 & 243L	BOTANY and BOTANY LABORATORY	
BIOL 244 & 244L	ZOOLOGY and ZOOLOGY LABORATORY	
BIOL 390	INTERNSHIP IN BIOLOGY or BIOL 409 SENIOR BIOLOGY RESEARCH	
BIOL 323 & 323L	BASIC HEMATOLOGY and BASIC HEMATOLOGY LAB	
BIOL 432 & 432L	DEVELOPMENTAL BIOLOGY and DEVELOPMENTAL BIOL LAB	
BIOL 439 & 439L	PLANT PHYSIOLOGY and PLANT PHYSIOLOGY LAB	
BIOL 447 & 447L	PLANT PHYLOGENY and PLANT PHYLOGENY LABORATORY	
CHEM 334 & 334L	ORGANIC CHEMISTRY II and ORGANIC CHEMISTRY II LABORATORY	
CHEM 336	BIOCHEMISTRY II	
PHYS 152 & 152L	COLLEGE PHYSICS II and COLLEGE PHYS II LAB	
Total Credits		57

⁴ BIOL 409 SENIOR BIOLOGY RESEARCH or other research/internship experience is recommended.

Organismal Biology Option

Code	Title	Credits
Core Requirements		22
BIOL 243 & 243L	BOTANY and BOTANY LABORATORY	4
BIOL 244 & 244L	ZOOLOGY and ZOOLOGY LABORATORY	4
BIOL 336 & 336L	GENERAL ECOLOGY and GENERAL ECOLOGY LAB	3

BIOL 431 & 431L	ENTOMOLOGY and ENTOMOLOGY LAB	3
BIOL 435 & 435L	MAMMALOGY and MAMMALOGY LAB	3
BIOL 438 & 438L	TAXONOMY OF PLANTS and TAXONOMY OF PLANTS LAB	3
Select 15 credits of the following: ⁵		15
BIOL 241 & 241L	MICROBIOLOGY and MICROBIOLOGY LABORATORY	
BIOL 337	ENVIRONMENTAL MANAGEMENT	
BIOL 339 & 339L	COMPARATIVE ANATOMY AND PHYSIOLOGY and COMPARATIVE ANATOMY AND PHYSIOLOGY LABORATORY	
BIOL 343 & 343L	PARASITOLOGY and PARASITOLOGY LAB	
BIOL 347 & 347L	CRYPTOGAMIC BOTANY and CRYPTOGRAMIC BOTANY LABORATORY	
BIOL 390 or BIOL 409	INTERNSHIP IN BIOLOGY SENIOR BIOLOGY RESEARCH	
BIOL 401 & 401L	ORNITHOLOGY and ORNITHOLOGY LAB	
BIOL 428	BIOINFORMATICS	
BIOL 439 & 439L	PLANT PHYSIOLOGY and PLANT PHYSIOLOGY LAB	
BIOL 447 & 447L	PLANT PHYLOGENY and PLANT PHYLOGENY LABORATORY	
CHEM 231 & 231L	SURVEY OF ORGANIC CHEMISTRY and SURVEY OF ORGANIC CHEMISTRY LAB	
CHEM 335 & 335L	BIOCHEMISTRY I and BIOCHEMISTRY LABORATORY	
GEOS 322	INTRODUCTION TO GIS	
Total Credits		57

To enhance employment potential the student is strongly recommended to complement this degree with a minor in Applied Statistics, Chemistry, Geoscience, or Wildlife Management.