Student ID:_____
Student Name:_____
Adviser Name:_____

Catalog: 2021-22 College of Liberal Arts
Program: Biology Major
Minimum Credits Required:_____

Biology Major

Meet the Faculty

The biology major exposes students to a wide variety of field, laboratory, and classroom experiences fundamental to the life sciences. Through selected electives, students may concentrate on specific areas of interest such as marine biology, ecology, microbiology, botany, zoology, or molecular biology. The major also offers the flexibility for students to minor in another area or to fulfill requirements for secondary teaching certification. Students have excellent opportunities to engage in independent research projects. Graduates are prepared to pursue employment in biological laboratories, and for further study in the health professions or graduate research institutions. **Students may not simultaneously major or minor in biology and marine biology, or biochemistry/molecular biology.**

Students with AP Biology scores of 5, or IB scores of 5, 6, or 7 (on the higher level IB exam), can be given the option of exemption from either BIO 120 or BIO 121 upon department chair approval.

Major Requirements

Eleven (11) courses and an additional 10 semester hours of BIO prefix elective course credit are required: seven (7) core biology courses, four (4) core physical science courses, 10 semester hours of elective courses, and satisfactory performance on a comprehensive standardized examination. At least seven (7) of the eleven (11) courses required for the biology major must be taken at Rollins College or as part of a Rollins-sanctioned program (e.g., Duke Marine Laboratory, University of London). Of these seven (7), at least five (5) must be ***BIO*** courses beyond *BIO 120*/*BIO 121*. To declare this major, a student must have a minimum 2.0 GPA in at least two (2) of the courses listed on the major map.

Core Biology Courses (seven courses)

BIO 120 and BIO 121 Required

Course Name	Crs:	Term Taken	Grade	Gen Ed
BIO 120 - General Biology I				
BIO 121 - General Biology II *Prereq(s):* BIO 120 and CHM 120				

One course in molecular biology/genetics

Course Name	Crs:	Term Taken	Grade	Gen Ed
BIO 308 - Genetics *Prereq(s):* BIO 121 and CHM 121 or CHM 131.				
BIO 310 - Microbial Genetics *Prereq(s):* BIO 121 and CHM 121 or CHM 131				
BIO 341 - Molecular Biology *Prereq(s):* BIO 121 and CHM 220/220L.				

One course in Ecosystems/field study

Course Name	Crs:	Term Taken	Grade	Gen Ed
BIO 210 - Introduction to Marine Science and BIO 388 Marine Biology Lab *Prereq(s):* BIO 121 or ENV 225 .				
BIO 316 - Ecology *Prereq(s):* BIO 121 or ENV 225.				
BIO 330 - Field Botany and Florida Ecosystems *Prereq(s):* BIO 121 or ENV 225.				

One course in Physiology

Course Name	Crs:	Term Taken	Grade	Gen Ed
BIO 311 - Plant Physiology *Prereq(s):* BIO 121 and CHM 121 or CHM 131.				
BIO 312 - Animal Physiology *Prereq(s):* BIO 121 and CHM 121 or CHM 131.				
BIO 329 - Microbial Physiology *Prereq(s):* BIO 229 and CHM 121 or CHM 131				
BIO 360 - Cell Biology *Prereq(s):* BIO 121 and CHM 121 or CHM 131.				

Additional Required (2 courses)

Course Name	Crs:	Term Taken	Grade	Gen Ed
BIO 344 - Biology Journal Club *Prereq(s):* BIO 121				
BIO 440 Senior Seminar: Topics in Biology or BIO 499 Independent Study: Biological Research				

Biology Electives (10 credits)

Complete any biology course from *BIO 210* and above; courses from the core groupings, other than those used to satisfy the core, may be used as electives.

Plants play a central role in our biosphere; however, our modern society often fails to recognize the significance of plants in biological systems, the scientific contributions of plant-based research, and the importance of plants in human affairs. Therefore, the department recommends that at least one (1) of the courses taken to fulfill the requirements for a major in biology be a plant-oriented biology course.

Core Chemistry Courses (three courses)

Course Name	Crs:	Term Taken	Grade	Gen Ed
CHM 120 - Chemistry I or CHM 130 Advanced Chemistry I *Prereq(s):* Completion of Math Skills Inventory				
CHM 121 - Chemistry II or CHM 131 Advanced Chemistry II *Prereq(s):* CHM 120 or CHM 130 or consent.				
CHM 220/220L - Organic Chemistry I *Prereq(s):* C- in CHM 121 or CHM 131 or consent.				
CHM 221/221L - Organic Chemistry II *Prereq(s):* CHM 220/220L.				

Additional Required Elective (6 credits minimum)

Complete one course of at least six (6) semester hours selected from the following:

- PHY 120 or above
- CHM 301 or above
- PSY 250 or above
- MAT 111, MAT 112, MAT 140, MAT 211 or above

Satisfactory Performance on a Comprehensive Standardized Examination is Required of All Majors.

Recommendations

Students preparing for graduate programs in biology or professional schools, in health-related areas such as medicine, dentistry, veterinary medicine, or pharmacy need a thorough introduction to chemistry, physics, and mathematics. Therefore, they are advised to take *CHM 221/221L* and *PHY 120* and *PHY 121* or *PHY 130* and *PHY 131*, (a) calculus course(s), and a statistics course. In addition, some professional schools now require biochemistry. Students should be aware that requirements of different programs can vary and that they should seek guidance from advisors and program directors.

Off-Campus Experiences

Rollins College, has an agreement with Marine Biological Laboratories at Duke University enabling students to spend a semester there. Courses taken at the Duke lab can be used to fulfill two courses in the biology major (any combination of core and electives). Students need to petition and receive approval from the Department of Biology for this and any other off-campus program.

Education - Secondary Education Minor

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Notes: