

Cell, Molecular, & Genetics Course Guide

Here is the suggested sequence of biology classes for students with primary interests in the fields of Cellular and Molecular Biology and Genetics.

The Biology major requirements consist of at least 67 credits, with a minimum grade of C required in all Biology courses counted toward the major requirements.

SECTION 1: All Biology majors must fulfill the following requirements for a total of 42 credits. Suggested semesters for taking the courses are listed in parentheses.

1. Required courses in the Biology department
Biol 151 and Biol 152/153 (Freshman year)
Biol 312 (Junior year)
2. Chemistry requirement
Chem 111 and 112 (Freshman year)
Chem 261, 262, and 269 (Sophomore year)
3. Statistics requirement
Statistics 240 or Res Econ 211 (Freshman or Sophomore year)
4. Mathematics requirement
Math 127 or Math 128 (Freshman year)
5. Physics requirement
Physics 131 and 132 (Junior year)

SECTION II: Suggested Course Sequence Cell, Molecular, & Genetics

25 credits must be taken; 13 of these credits must be at the 300 level or above. These elective credits must include 2 courses with a laboratory or field component and at least one course related to plant biology and one course related to animal biology.

1. Sophomore year
(strongly recommended courses)
Biol 283 Genetics
Biol 285 Cell and Molecular Biology I

(choose at least one of these lab courses)
Biol 383 Gene and Genome Analysis [lab]
Biol 284 General Genetics Lab [lab]
Biol 397MH Cellular and Molecular Biology Lab [lab]

(alternative or additional courses)

- Biol 280 Evolution
- Biol 288 Physiology
- Biol 335 Topics in Plant Biology

2. Junior and Senior year

- Biol 580 Developmental Biology
- Biol 583 Advanced Genetics
- Biol 559 Cell and Molecular Biology II
- Biol 475 Plant Cell Biology
- Biol 483 Cancer Genetics

(choose one of these lab courses)

- Biol 477H Bioimaging [lab]
- Biol 486H Molecular Biology of Model Systems [lab]
- Biol 523 Histology [lab]

(alternatives or additions)

- Biol 568 Endocrinology
- Biol 572 Neurobiology
- Biol 571 Biological Rhythms
- Biol 510 Plant Physiology
- Biol 514 Population Genetics

Section III: Suggested courses in other departments (Permission needed)

1. Biochemistry and Molecular Biology
 - 471 Elementary Physical Chemistry
 - 523 General Biochemistry I
 - 524 General Biochemistry II
2. Microbiology
 - Microbio 330 Microbial Genetics
 - Microbio 540 Immunology
 - Microbio 590B Bioinformatics Lab