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 65 credits, with a minimum grade of C required in all courses counted toward the major requirements.

SECTION 1: All Biology majors must fulfill the following requirements for a total of 40 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 year)

4. Mathematics requirement
   Math 127 or Math 128 (Freshman year)

5. Physics requirement
   Physics 131 and 132 (Sophomore 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 397D 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 597A Cancer Genetics

(choose one of these lab courses)
   Biol 477H Bioimaging [lab]
   Biol 486 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