

BIOLOGY

When advising a student interested in the Biology major, please note:

The **MAJOR** in Biology has six main components:

1. **Three introductory biology courses** (Biology 220, 221, and FS Bio 201).
2. **Three 300-level biology courses**, one in each of three main areas of biology (Cellular/Molecular Biology, Organismal Biology/Physiology, and Population Biology/Ecology).
3. A **Junior Seminar** (Biology 580).
4. A two-semester, six-credit **Senior Project and Seminar** (Biology 600 and 610).
5. **Required foundation courses in Mathematics and Chemistry:** Mathematics 160 (or 157/158), Chemistry 110/112, and one semester of Organic Chemistry (Chemistry 231).
6. **Two additional four-credit courses** in **Biostatistics** (Bio385), **Chemistry** (Chem 200 or higher, except 231), **Computer Science** (100-level or higher), **Geology** (100-level or higher), **Mathematics** (Math 170 or higher), **and/or Physics** (Physics 101 or higher). These courses should be chosen to complement career goals or specific curricular interests. Courses numbered 190 do not qualify.

It is important to **BEGIN THE REQUIRED MATH AND CHEMISTRY COURSES AS EARLY AS POSSIBLE**, in order to complete the prerequisites for the Introductory Biology courses and for the 300-level Biology courses.

Placement in Mathematics 170 or higher satisfies the Mathematics 160 requirement for the major, and placement in Chemistry 112 satisfies the Chemistry 110 requirement for the major. However, students interested in the health professions may need to take additional courses in Mathematics and Chemistry if they place in either Mathematics 170 (or higher) or Chemistry 112. See the Health Professions Advising Guidelines for further details.

The three introductory Biology courses, Mathematics 160 (or 157/158), Chemistry 110/112, and Chemistry 231, should be completed by the end of the sophomore year, if mathematics and chemistry placement permits this.

Students interested in the health professions should take Chemistry 232 and 234, as well as Physics 101 and 102. Students interested in Biochemistry or Molecular Biology may wish to consider the Biochemistry major.

Prerequisites for the Biology Major and Minor:

Chemistry 110 is a prerequisite for Biology 220.

Biology 220 is a prerequisite for Biology 221 **and** for FS Bio 201.

Biology 220, 221, **and** a grade of C or higher in FS Bio 201 are prerequisites for Biology 300-500 level courses.

Biology 580 is a prerequisite for Biology 600. Biology 600 is a prerequisite for Biology 610.

The **MINOR** in Biology has three main components:

1. **Three introductory biology courses** (Biology 220, 221, and FS Bio 201).
2. **Two 300-level biology courses**, at least **one** of which must be a laboratory course.
3. **Required foundation courses in Chemistry:** Chemistry 110/112, and one semester of Organic Chemistry (Chemistry 231).

Suggested Schedule for **Biology Majors**:

	placed into Math 160		placed below Math 160	
year	Fall	Spring	Fall	Spring
1	Fs 101 Math 160 ⁽¹⁾ Chem 120 ⁽²⁾ -	Fs 102 Bio 220 Chem 122 ⁽³⁾ -	Fs 101 Math 157 / Math 159 ⁽⁹⁾ - -	Fs102 Math 158 / Math 160 Chem 110 -
2	Bio 221 / FsBio201 Chem 231 ⁽⁴⁾ - -	Bio 221 / FsBio201 Chem 332 ⁽⁵⁾ Physics 101 ⁽⁶⁾ -	Chem 112 ⁽³⁾ Bio 220 - -	Bio 221 FsBio201 Physics 101 ⁽⁶⁾ -
3	Bio 580 ⁽⁷⁾ Bio3XX Physics 102 ⁽⁸⁾ -	Bio 580 ⁽⁷⁾ Bio 3XX - -	Chem 231 ⁽⁴⁾ Bio3XX (Area C) Physics 102 ⁽⁷⁾ -	Bio 580 Bio 3XX Chem 332 ⁽⁵⁾ -
4	Bio 600 Bio 3XX - -	Bio 610 - - -	Bio 600 Bio 3XX - -	Bio 610 - - -

(1) Co-requisite for Chem 110.

(2) Should be taken first semester to enable students to take Bio220 in Spring and to complete Chem 231 by the end of sophomore year. Chem 231 is offered only in Fall, so taking Chem 110 second semester instead of Chem 120 first semester results in postponement of Chem 231 until junior year, which will preclude students from enrolling in certain upper-level biology courses and may delay taking of the MCAT for pre-medical students.

(3) Pre-requisite for Chem 231, which is only offered in Fall.

(4) Only offered in Fall. Pre-requisite for most Area A and Area B upper-level biology courses.

(5) Optional; offered in Spring only.

(6) Optional; offered in Spring only.

(7) Can be taken either semester of junior year.

(8) Optional; offered in Fall only.

(9) Pre-requisite for Chem 110.