

## EXAMPLE PATHWAYS FOR STUDENTS PLANNING A BIOLOGY MAJOR

The biology major is flexible and can be adjusted to fit individual needs. The greatest flexibility in course options is possible when students take the year-long introductory chemistry sequence in the first year because the Biology major requires 3 Chemistry courses which must be taken in order and must begin in a fall semester (CHEM 101 is only offered in the fall). The primary benefit is having more flexibility in scheduling 300-level courses in Biology that require Chemistry, and more semesters available to study abroad. You may wish to consult your academic advisor or a Biology department faculty member for assistance in planning your path through the major.

Below, we give a brief overview of three sample pathways through the Biology major described in this document.

### **Example Pathway 1: Chemistry before Biology**

For students who are certain of their interest in majoring in biology, one recommended approach is to begin with only introductory chemistry (CHEM 101 or CHEM 103) in the first semester, leaving introductory biology (BIOL 100) for the second semester. Many students experience a more successful college transition by beginning with only a single lab science course in the first semester.

### **Example Pathway 2: Biology before Chemistry**

Students who wish to explore biology as a potential major and prefer not to take two science courses during their first semester may enroll in BIOL 100 first semester, BIOL 200 second semester, then begin the introductory chemistry series in the following fall. Students certain of their interest in majoring in biology may also take this approach.

### **Example Pathway 3: Biology and Chemistry**

Students who are eager to enroll in introductory biology and have a strong science background may choose to register for both BIOL 100 and CHEM 101 in the first semester.

Notes:

- BIOL 103 does NOT count toward the Biology major. Students completing BIOL 103 must still begin the major with BIOL 100.
- Students interested in medical or other professional schools should consult a Health Career Advisor during the first year (Chair: Ms. Bianchi, [lynne.bianchi@oberlin.edu](mailto:lynne.bianchi@oberlin.edu)). Additional information for students considering medical school is available at <http://new.oberlin.edu/office/career-center/go/medical-school/index.dot>
- Some courses outside the Biology Department count toward the major in Biology. Consult the Biology Majors' Guidebook or the current College Catalog.
- Remember to check that you will have the necessary prerequisites for the courses you plan to take.
- Biology Department: <http://new.oberlin.edu/arts-and-sciences/departments/biology/>
- A limited number of BIOL 100 seats are available to first-year students in the fall semester. Additional sections are offered in the spring semester.

### **Example Pathway 1: Chemistry (and Math) before Biology**

Many students begin with only a single lab science course in the first semester. Beginning with only introductory chemistry (CHEM 101 or CHEM 103) in the first semester, and leaving introductory biology (BIOL 100) for the second semester offers several advantages. Introductory chemistry is required for the major in biology, and given that biology makes use of insights and tools from chemistry, as well as mathematics and statistics, starting with CHEM 101 (or CHEM 103), lays the foundation for a deep, conceptual understanding of biology.

Year	Fall Courses	Spring Courses
1	CHEM 101 +lab <i>MATH 133 or CSCI 140/150*</i> (2 Elective courses)	CHEM 102 +lab BIOL 100 +lab (2 Elective courses)
2	CHEM 205 +lab BIOL 200 or 213 +lab (2 Elective courses)	BIOL 200 or 213 +lab (3 Elective courses)

*\*MATH 133 or CSCI 140/150 may be delayed until a later semester for students not wishing to start with 2 NS courses in the first semester.*

Additional required major coursework includes:

- 1 cognate quantitative course (if MATH 133 or CSCI 140/150 not taken)
  - 4 BIOL 2XX or 3XX courses, at least two of which must have a lab. See the Biology Majors' Guidebook or the Course Catalog for details. Considerations:
1. Note that CHEM 205 can be taken concurrent with either BIOL 200 or BIOL 213. The material covered in CHEM 205 overlaps somewhat with BIOL 213, but there is little overlap with BIOL 200. Either BIOL 200 or BIOL 213 could be delayed, though this will reduce the number of fall semesters available to take fall-only 300-level courses for which the delayed course (200 or 213) is a prerequisite.

### **Example Pathway 2: Biology before Chemistry**

Students who wish to explore biology as a potential major and prefer not to take two science courses during their first semester may enroll in BIOL 100 first semester, BIOL 200 second semester, then begin the introductory chemistry series in the following fall. Students certain of their interest in majoring in biology may also take this approach. Beginning with biology and delaying chemistry will allow students earlier entry into upper-level elective biology courses that do not have chemistry prerequisites.

Year	Fall Courses	Spring Courses
1	BIOL 100 +lab (3 Elective courses)	BIOL 200 +lab (3 Elective courses)
2	CHEM 101 +lab (3 Elective courses)	CHEM 102 +lab (3 Elective courses)
3	BIOL 213 +lab (3 Elective courses)	CHEM 205 +lab (3 Elective courses)

Additional required major coursework includes:

- 1 cognate quantitative course,
  - 4 BIOL 2XX or 3XX courses, at least two of which must have a lab. See the Biology Majors' Guidebook or the Course Catalog for details. Considerations:
1. Note that CHEM 205 can be taken concurrent with BIOL 213. Some students may find this beneficial (some overlapping material) while others may wish to avoid this (both are challenging courses).
  2. Delaying CHEM 101 and 102 to the second year delays taking the required core course BIOL 213. This will leave only one fall semester to take fall-only 300-level courses that require BIOL 213 as a prerequisite. You should consult the Course Catalog for the prerequisites and semesters offered for the

- upper-level courses you are interested in taking.
3. Delaying the year-long introductory chemistry sequence to the second year also reduces the number of semesters during which study abroad is feasible.
  4. A limited number of BIOL 100 seats are available to first-year students in the fall semester.
- Additional sections are offered in the spring semester.

### **Example Pathway 3: Biology and Chemistry**

Students who are eager to enroll in introductory biology and have a strong science background may choose to register for both BIOL 100 and CHEM 101 in the first semester. Alternatively, some students choose to take CHEM 101 and a mathematics or computer science course in the first semester, delaying BIOL 100 to the second semester. Note that introductory chemistry may be started only in fall semester, whereas introductory biology may be taken in either semester.

Year	Fall Courses	Spring Courses
1	CHEM 101 +lab BIOL 100 +lab (2 Elective courses)	CHEM 102 +lab BIOL 200 +lab (2 Elective courses)
2	BIOL 213 +lab (3 Elective courses)	CHEM 205 +lab (3 Elective courses)

Additional required major coursework includes:

- 1 cognate quantitative course,
- 4 BIOL 2XX or 3XX courses, at least two of which must have a lab. See the Biology Majors' Guidebook or the Course Catalog for details. Considerations:

1. Note that CHEM 205 can be taken concurrent with BIOL 213. Some students may find this beneficial (some overlapping material) while others may wish to avoid this (both are challenging courses).
2. A limited number of BIOL 100 seats are available to first-year students in the fall semester. Additional sections are offered in the spring semester