

BIOL 101---104

For Deans & Advisers

BIOL 101-104 is a full year interdepartmental biology sequence, which replaced the previous introductory biology courses, MCDB 120a and EEB 122b. The foundational sequence, which must be taken in order, is made up of half-semester modules that are paired in a given term:

1. BIOL 101: Biochemistry and Biophysics, **and** BIOL 102: Cell Biology and Membrane Physiology
2. BIOL 103: Genes and Development **and** BIOL 104: Ecology and Evolutionary Biology

BIOL 104 in the Fall 2014 term is writing intensive (1/2 WR); BIOL 104 will not be writing intensive in Spring 2015 term.

Who Should Take BIOL 101---104?

The sequence (or place-out) is required for all students majoring in

- Molecular Biophysics & Biochemistry (MB&B)
- Molecular, Cellular and Developmental Biology (MCDB)
- Ecology & Evolutionary Biology (E&EB).

It is recommended for pre-med students.

Why were changes undertaken to offer the modules in both terms?

- Nearly 400 students enrolled in BIOL 101-102 in fall 2012
- Feedback from deans, masters, students and others reflected the difficulties that many students encountered with trying to start their studies in chemistry and biology simultaneously
 - o some students struggled through taking both chemistry and biology
 - o some decided to wait and begin the biology sequence in the fall semester of their sophomore year
 - o many people expressed hopes that, by offering the sequences in both semesters, the departments might be able to
 - reduce the class size
 - increase flexibility for students
- Offering BIOL 101-104 in both semesters means
 - o doubling the number of faculty members teaching in the course
- That the three participating departments decided to make this investment is a reflection of
 - o their shared commitment to providing a quality experience for the students
 - o their confidence that a spring semester start will lay an excellent groundwork for future studies

Placement Tests

Unlike in previous years, for students majoring in biology, scores from standardized tests taken at

the high school level are no longer considered in placing out of the introductory biology sequence.

- Students with suitably high test scores are now eligible to take Yale-developed placement exams, where their performance may exempt them from up to four of the introductory modules (<http://yalecollege.yale.edu/biology-1>).
- Students with lower test scores on high school-level standard exams are expected to enroll in all four of the introductory modules.

Please note: Students in the class of 2015 remain under the previous guidelines.

Please note: The modules must be taken in order. For example, students will not be permitted to take BIOL 102 without taking BIOL 101, unless they placed out of 101.

Enrollment Cap and Registration

The Fall 2014 BIOL 101 & 102 modules will be **capped at 220 students**. First priority will be given to students of Sophomore standing or higher. Once a section has been assigned to all students that are Sophomores or higher, the remaining seats will be distributed to Freshman via a lottery system. There will not be a cap on enrollment for BIOL 101 & 102 in Spring 2015.

All students interested in taking BIOL 101/102 this Fall 2014 term must sign up for a discussion section using Preference Selection, **regardless of class standing**. Students must sign up for a discussion section via Preference Selection sites for **both** BIOL 101 and 102, which can be accessed using the following links:

BIOL 101 (F14): <https://students.yale.edu/ocs-preference/select/select?id=10711>

BIOL 102 (F14): <https://students.yale.edu/ocs-preference/select/select?id=10870>

Both sites will be open from Wednesday, August 20, 2014 @ 9:00 a.m. through Thursday, August 28, 2014 @ 11:00 a.m. When signing up for a discussion section, students will be asked to rank their **top 5** section preferences, and students should rank sections in the **same order** for both BIOL 101 and BIOL 102 if they want to take both modules. *If a student misses the Preference Selection sign-up window, they will not be able to take BIOL 101/102 this Fall term.*

Students will know by Friday, August 29, 2014 @ 9:00 a.m. if they have received a seat or not. BIOL 101/102 discussion section seats assigned via the Preference Selection system will be added directly to their OCS worksheet. Students must register for the assigned section seat via online registration, or they will forfeit their seat (in which case they can waitlist for another section this term, but there are no guarantees that they will get into it).

On Advising Students to Start BIOL 101---102 in the Spring Semester

As of the Spring 2014 term, **BOTH** two-module sequences are now offered each semester. For freshmen, delaying start of the series until the Spring term is fine — and may be ideal for those students who are starting chemistry, a language or math courses.

Freshmen who did not get a spot in BIOL 101/102 in Fall term should **not** be anxious about their ability to complete major or premedical requirements:

- they will not be disadvantaged by starting BIOL 101/102 in the spring (or Fall of their sophomore term)
- indeed, for most freshmen, it is better to start BIOL 101/102 in the spring: this gives students the ability to start chemistry and math in the fall

Not being able to start the 101-4 sequence in fall 2014 should in no way should hamper a student's ability to pursue a major in MB&B, MCDB, or E&EB.

Incoming freshmen should:

- take no more than 2.5 credits of science and/or math
- (if interested) use the fall and/or spring terms to work towards major requirements in
 - o chemistry
 - o physics
 - o math
 - o if interested in med school, fulfill the new med school requirements for
 - psychology
 - sociology

Moreover students may also begin to fulfill their

- language requirement
- distributional requirements
 - o potentially a problem if most such requirements postponed until sophomore year

If a student decides to take BIOL 101/102 this spring 2015

- it will **not** be capped for freshmen
- students may elect to take
 - o several upper-level courses starting fall 2015
 - physiological systems
 - MBB biochemistry
 - o or spring 2016
 - cell biology
 - molecular biology

Some General Guidelines for Incoming Students Interested in Majoring in the Biological Sciences

- These students should take the highest level **chemistry** course for which they qualify, and typically also take one additional **science/math** course plus perhaps one 0.5-credit lab course.
- We do not advise that students take more than 2 (or at most 2.5) credits in the sciences in the first semester of freshman year.

For Advisers in Particular

Many freshmen will have the choice of taking both introductory chemistry and biology simultaneously. Whether this choice is prudent will vary and advisers may want to consider

- whether the student needs to begin a foreign language

- needs to start in a lower-level mathematics course

In addition, the advisor may take into consideration concerns regarding the student's study habits based on his or her high school performance.

Websites with helpful information

General info: <http://yalecollege.yale.edu/content/biological-sciences-and-biomedical-engineering>

Placement exam info: <http://yalecollege.yale.edu/biology-1>

Contact

Please do not hesitate to contact the BIOL 101-104 course coordinators Kathryn Gardner (kathryn.gardner@yale.edu) (Fall 2014 BIOL 101/102; Spring 2015 BIOL 103/104) or Surjit K. Chandhoke (surjit.chandhoke@yale.edu) (Fall 2014 BIOL 103/104; Spring 2015 BIOL 101/102) with any questions regarding the course sequence.

This document was originally prepared by MCDB and was subsequently edited for advisers with input from Dean William Segraves and Professors Surjit K. Chandhoke, Kathryn Gardner and Mark Mooseker.
