

BIOLOGY MAJOR CHECKLIST

Class of 2024 and beyond

NAME: _____
ADVISOR: _____

CLASS: _____

REQUIREMENTS: To complete a Biology major, students should complete the following requirements:

- I. ***Introductory courses:*** BIOL-181 and BIOL-191.
- II. ***Four advanced courses in Biology,*** three of which must include laboratories. NOTE: It is strongly recommended that the advanced core courses (one from each of two core areas of Biology) be completed by the end of the junior year. Special Topics and courses numbered below BIOL-181 do not fulfill this requirement.
- III. ***Seminar or Honors Thesis Research:*** At least one course above the 400-level.
- IV. ***General Science Requirements***
- V. ***STEM Diversity, Equity, and Inclusion Requirement***
- VI. ***Biology Comprehensive Requirement***

Note regarding off campus courses:

To count toward the major, courses taken off campus must be approved by the Department (written permission to be submitted to the student's Advisor to be evaluated by the Department). At least three of the five advanced courses (i.e., those in Categories II and III) must be completed at Amherst College, unless approved in advance by the Department.

UPDATE for the class of 2024: BIOL-330 and BIOL-331 can count toward the Cellular/Molecular Core requirement. This applies to the class of 2024 during the 2022-2023 academic year only.

UPDATE for the classes of 2024, 2025, and 2026: BIOL-221 can count toward the Cellular/Molecular Core requirement.

- I. **Introductory courses:** Two introductory courses (BIOL-181 and BIOL-191) taken in either order. BIOL-191 requires completion or concurrent enrollment in CHEM-161/165.

Placing Out: Students with a Biology AP score of 5 who feel prepared to place out of either Introductory Biology course must first seek permission from the Biology Department. Placing out will not reduce the number of courses required for the major. Students placing out of BIOL-181 must substitute a course from the *Ecology & Evolution Core*; students placing out of BIOL-191 must substitute a course from the *Cellular/Molecular Core*. Students who place out must take a minimum of four semesters of laboratory work (Placing out of 1: 1 Intro + 3 advanced labs; Placing out of both: 4 advanced labs).

If placing out of BIOL-181: Additional Course (*Ecology & Evolution Core*): _____

If placing out of BIOL-191: Additional Course (*Cellular /Molecular Core*): _____

- II. **Advanced courses:** At least four advanced courses that have a pre-requisite of BIOL-181 and/or BIOL-191, three (or more) of which include laboratory experiences.

a) **Cellular/Molecular Core:** (completed by end of junior year: ____)

Cell Structure and Function (BIOL-291) or *Molecular Genetics* (BIOL-370/371) or *Developmental Biology* (BIOL-221): _____

Class of 2024 only: BIOL-330/331 can count toward Cellular/Molecular Core requirement during the 2022-2023 academic year only.

Classes of 2024, 2025, and 2026: BIOL-221 can now count toward the Cellular/Molecular Core requirement.

BIOLOGY MAJOR CHECKLIST (continued)

b) Ecology & Evolution Core: (completed by end of junior year: ___)

Ecology (BIOL-230) or *Evolutionary Biology* (BIOL-320/321): _____

It is strongly recommended that "core" courses be completed by the end of junior year to prepare you for the Biology Comprehensive Exam.

c) Two Additional Advanced Courses: 1. _____ 2. _____

List your three advanced lab courses: 1. _____ 2. _____ 3. _____

III. 400-Level Course (Seminar or Honors Thesis Research): _____

IV. General Sciences: Students are required to take two courses in chemistry (CHEM-151/155 and CHEM-161/165 or above) *and* two courses in mathematics, statistics, and/or physics at the level of MATH-111, STATS-111, and PHYS-116 or above. Students with Advanced Placement (AP) scores may satisfy the requirement by taking upper-level courses.

- Chemistry 151/155 or equivalent: _____
- Chemistry 161/165 or equivalent: _____
- MATH-111, STAT-111, or PHYS-116/123 or equivalent: _____
- MATH-111, STAT-111, or PHYS-116/123 or equivalent: _____

V. STEM Diversity, Equity, and Inclusion requirement: Biology Majors must take one science-oriented course that is approved by the department and that focuses on structural and systemic issues of diversity, equity, and inclusion.

List your course: _____

VI. Final Comprehensive Requirements for the Biology Major:

1. Senior year attendance at the Monday Biology Seminars is required.
2. Successful completion of the Senior Comprehensive Exam administered by the department during Senior year.

Passed: _____ Date: _____

Please note:

- Seminar courses count as Biology major courses.
- Non-majors courses: 104, 106, 108, 110, 114 and 131, and *Special Topics* courses do not count toward the major.
- Honors students must still satisfy lab requirements.
- Majors are expected to take at least 3 of the 5 courses beyond BIOL-181/191 at Amherst College unless approved in advance by the Department.
- It is strongly recommended both advanced "core" courses be completed by the end of junior year in order to have a strong background for the Biology Comprehensive Exam, which usually takes place the first semester of your senior year. Please discuss any exceptions with your academic advisor in the Biology Department.
- Please note that courses taken as pass/fail cannot be counted toward the major. This includes biology courses as well as ancillary courses (e.g., chemistry, physics, and math).
- A maximum of one Biology course may be counted towards the Biology major if it is also being used to meet the requirements of another major. Double counting more than one Biology course is not allowed, unless the course in question is specifically required by both majors.

BIOLOGY MAJOR CHECKLIST (continued)

- In order to count toward the major, all courses taken off campus must be approved by petitioning the Department and cannot be approved by your Advisor alone.** It is better to do this in advance. For off-campus courses note the institution, course name and number, and when approval was granted. In petitioning, indicate which AC course you want to substitute and your reasons. For the course you are substituting, include a copy of the catalog description and any additional pertinent information (syllabus, credit hours, lab hours etc.). If your Honors project is done off campus, you are expected to follow the same guidelines as students working on campus, and assignment of levels of Latin Honors and grades will be made by the Department, taking into consideration recommendations by your Advisor.

The Biology Major, with place-out options:

	2 Semesters of Intro	1 Semester of Intro	0 Semesters of Intro
Distribution Requirement:	2 core areas	2 core areas	2 core areas
Minimum Lab Requirement:	2 Intro + 3 Upper = 5 labs	1 Intro + 3 upper = 4 labs	0 Intro + 4 upper = 4 labs
Advanced Course Requirements:			
a) No Honors	5	6	7
b) With Honors	4 + 3 thesis	5 + 3 thesis	6 + 3 thesis