BIOLOGY MAJOR CHECKLIST
Class of 2022 and forward

NAME: ___________________________________________      CLASS: __________
ADVISOR: _________________________________________

REQUIREMENTS:
To complete a major, students should take the following biology courses:

1. **Introductory courses**: BIOL-181 and BIOL-191.

2. **Five advanced courses in Biology**, three of which must involve laboratories and one of which must be at the 400 level, including Seminars or Honors, but not Special Topics. One advanced course in each of two core areas of Biology (below) must be completed by the end of the junior year. Note that Special Topics and courses numbered below BIOL-181 do not fulfill this requirement and at least three of the five advanced courses must be completed at Amherst College, unless approved in advance by the Department.

3. **Off Campus**: to count toward the major, courses taken off campus must be approved by the Department

INTRODUCTORY COURSES:
Two Introductory courses can be taken in either order. BIOL-191 requires completion or concurrent enrolment in CHEM-161.

**Placing Out**: Students with a Biology AP score of 5 who wish 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 **Organismal 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 upper-level labs; Placing out of both: 4 upper-level labs).

If placing out of BIOL-181: Additional Course (Organismal Core) __________________________
If placing out of BIOL-191: Additional Course (Cellular /Molecular Core) __________________________

UPPER-LEVEL COURSES: All have pre-requisite of BIOL181 or BIOL191 (or both)

**Course Requirement**: AC Course or Off Campus Course (must have department approval)

**I. Cellular/Molecular Core**:  
Cell Structure and Function (BIOL-291) or Molecular Genetics (BIOL-370/371). __________________________

**II. Organismal Core**:  
Ecology (BIOL-230) or Evolutionary Biology (BIOL-320/321). __________________________

**III. Two Additional Upper-level Courses**   __________________________  __________________________

**IV. Seminar or Honors**    __________________________

Which are your three lab courses: __________________________  __________________________

Comprehensive Exam: 1. Attendance at the Monday Biology Seminars is required.
2. All Biology Majors must successfully complete the Senior Comprehensive Examination administered by the department in the fall semester.

Passed: __________________________  Date: __________________________
**Physical Sciences:** Students are required to take two courses in chemistry—Chemistry 151/155 and Chemistry 161 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 scores may satisfy the requirement by taking upper-level courses.

1. Chemistry 151/155 or equivalent: ________________________
2. Chemistry 161 or equivalent: ________________________
3. Mathematics 111, Statistics 111, or Physics 116/123 or equivalent: ________________________
4. Mathematics 111, Statistics 111, or Physics 116/123 or equivalent: ________________________

**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 distribution and 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.
- A Biology course cannot be counted towards the Biology major if it is also being used to meet the requirements of another major, unless the course in question is required by both majors.
- 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, number and course name and when approval was granted. In petitioning, indicate which AC course you want to substitute and your reasons. Include a copy of the catalog description of the course you are substituting and any additional pertinent information. 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 Honors and grades will be made by the Department, taking into consideration recommendations by your Advisor.

### The Biology Major, with place-out options:

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<thead>
<tr>
<th></th>
<th>2 Semesters of Intro</th>
<th>1 Semester of Intro</th>
<th>0 Semesters of Intro</th>
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</thead>
<tbody>
<tr>
<td><strong>Distribution Requirement:</strong></td>
<td>2 core areas</td>
<td>2 core areas</td>
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<tr>
<td><strong>Minimum Lab Requirement:</strong></td>
<td>2 Intro + 3 Upper = 5 labs</td>
<td>1 Intro + 3 upper = 4 labs</td>
<td>0 Intro + 4 upper = 4 labs</td>
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<tr>
<td><strong>Upper-Level Course Requirements:</strong></td>
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<tr>
<td>a) No Honors</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>b) With Honors</td>
<td>4 + 3 thesis</td>
<td>5 + 3 thesis</td>
<td>6 + 3 thesis</td>
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