### Biology Major (See below for various Tracks)

**Faculty**
- Dr. Harvey Babich: babich@yu.edu
- Dr. Anya Alayev: anya.alayev@yu.edu
- Dr. Amanda Katz: amanda.katz@yu.edu
- Dr. Brenda Loewy: loewy@yu.edu
- Mr. Jeffrey Mollin: mollin@yu.edu
- Dr. Alyssa Schuck: schuck@yu.edu
- Dr. Margarita Vigodner: vigodner@yu.edu
- Dr. Richard Weiss: rweiss1@yu.edu

**Required Courses for All Tracks**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1011C, 1012C</td>
<td>Biology Principles Lecture + Lab</td>
<td>8 Credits</td>
</tr>
<tr>
<td>CHEM 1045C, 1046C</td>
<td>General Chemistry Lecture + Lab</td>
<td>8 Credits</td>
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</tbody>
</table>

**Plus** two (2) courses chosen from the following:

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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>COMP 1001C OR 1300C</td>
<td>Introduction to Computer Science</td>
<td>4 credits</td>
</tr>
<tr>
<td>MATH 1410 OR 1412</td>
<td>Calculus I</td>
<td>4 credits</td>
</tr>
<tr>
<td>MATH 1413</td>
<td>Calculus II</td>
<td>4 credits</td>
</tr>
<tr>
<td>STAT 1021</td>
<td>Introduction to Statistics</td>
<td>3 credits</td>
</tr>
</tbody>
</table>

**All majors** must take the Math Placement Exam.

Up to 2 credits in approved Independent Research/Summer Internship may apply toward the Biology major.

**Recommended:** One year of Organic Chemistry, one year of Physics, and a semester of Biochemistry or Medical Biochemistry.

### Track 1 - General

This track requires **20-22 credits of Advanced Biology courses.**

<table>
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<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>BIOL 3207C</td>
<td>Cell Biology</td>
</tr>
<tr>
<td>BIOL 3513C</td>
<td>Genetics</td>
</tr>
</tbody>
</table>

**Plus** two (2) additional 4-credit lecture/lab courses and either an additional 4-credit lecture/lab course or two lecture-only courses. Chem 1376R - 1376L, Biochemistry Lec/Lab may count.
Track 2 – Molecular & Cellular

This track requires 24 credits of Advanced Biology courses including four 4-credit Lec/Lab courses with the following distribution:

- BIOL 3207C Cell Biology (4 credits) – Fall and Spring
- BIOL 3513C Genetics (4 credits) – Fall and Spring
- BIOL 3521 Molecular Biology (4 credits) – Spring
- The remaining 12 credits may be selected from the following:
  - BIOL 2601 Human Development (2 credits) - Spring
  - BIOL 3230 Immunology (4 credits) (Also offered as a 3 credit lecture-only course)
  - BIOL 3241 Pharmacology (2 credits) – Fall
  - BIOL 3730 Reproductive Biology (2 credits) – Fall
  - BIOL 3750 Medical Biochemistry (3 credits) – Spring
  - BIOL 4023C Microbiology (4 credits) – Fall and Spring
  - CHEM 1376R-L Biochemistry (lecture only, 3 credits; laboratory, 2 credits) – Lec - Fall; Lab - Spring

Track 3 – Neuroscience

This track requires 15-16 credits of Biology courses plus 19 credits of Psychology courses. 13 credits of Psychology may also apply toward the general requirements as indicated below. Students pursuing this track should meet with an academic advisor.

- BIOL 3830R Neurobiology (3 credits)
- 12-13 credits chosen from:
  - BIOL 3207C Cell Biology (4 credits)
  - BIOL 3241 Pharmacology (2 credits)
  - BIOL 3513C Genetics (4 credits)
  - BIOL 3728C Human Physiology (4 credits);
  - BIOL 3750 Medical Biochemistry OR BIOL1376R Biochemistry (3 credits)
- PSYC 1010 Introductory Psychology*
- PSYC 2100C Experimental Psychology**
- PSYC 2150 Cognitive Psychology**
- PSYC 3804 Psychobiology
- PSYC 3810 Behavioral Neuroendocrinology
- PSYC 3815 Cognitive Neuroscience**

* May apply towards the Foundations category of the General Education requirements.
** These courses may also apply toward the Electives category of the General Education requirements.

Biology Minor  Total Credits: 18-19

Required Courses

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<th>Course</th>
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<tbody>
<tr>
<td>BIOL 1011C, 1012 C</td>
<td>8 credits</td>
</tr>
<tr>
<td>Biol Principles Lecture + Lab</td>
<td></td>
</tr>
</tbody>
</table>

Plus ten (10) additional BIOL credits including two (2) Lecture/Lab courses of 4 credits each and one (1) Lecture-only course (2-3 credits); Courses cross-listed in the Department of Biology AND in the Department of Psychology cannot be counted towards the Biology Minor. 10-11 Credits

Note: “Journal Club” courses of 1 credit each do not count towards the Biology Major or Minor. BIOL 3221, Nutrition, does not apply toward the Biology Major or Minor.