Biology (BS) - Senior Thesis Concentration

Degree Requirements

Majors in Arts and Sciences may be completed with a minimum of 120 semester hours unless designated otherwise. At least 30 hours of course work, which represents 25% of the required 120 hours, must be at the upper division level in order to fulfill the University’s residency requirement. At least 15 of the 30 upper-division hours must be in the major or concentration area. An overall grade-point-average (GPA) of 2.0 is required for graduation. In addition, a minimum GPA of 2.0 is required in the student’s major or concentration area.

Effective for fall, 2016, Major Milestones are used in all concentrations of the Biology Bachelor of Science major to help students stay on track for timely graduation. Each regular semester in the Biology major is a tracking term. In order to remain on track, students must complete the milestone requirements for each tracking term. These requirements are viewable on the Major Milestone tab above.

Major milestone requirements apply only to full-time, degree-seeking students who first entered Fall 2016 or later. Milestone requirements do not apply to transfer students in the Biology program.

The sample academic plan viewable on the Major Milestone tab above is designed to ensure graduation in the Biology major in four years. Several academic plans are available -- consult with your academic advisor for the plan that is the best fit for you. For specific course requirements, refer to the program requirements above and the General Education requirements of the College of Arts and Sciences.

Requirements For A Major In Biology

Students desiring to major in biology must meet the general requirements for a degree of Bachelor of Science in addition to the following requirements.

<table>
<thead>
<tr>
<th>Biology (BS) with a Senior Thesis Concentration</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. At least 37 hours of biology, including:</td>
<td></td>
</tr>
<tr>
<td>BLY 121 (L) and BLY 122 (L).</td>
<td>8 hrs</td>
</tr>
<tr>
<td>BLY 301, 302, 303</td>
<td>9 hrs</td>
</tr>
<tr>
<td>Upper level courses</td>
<td>20 hrs</td>
</tr>
</tbody>
</table>

The upper-level choices will be based on counseling provided by advisors for career paths including (but not limited to) Botany, Ecology and Evolution, Environmental Science, Marine Biology, Cell/Microbiology, and Zoology (see department website for examples).

NOTE: A “C” or better in BLY 121, BLY 121L, BLY 122, BLY 122L, or the equivalents, are prerequisites to all courses numbered 300 or above except by permission of the Chair of the Department of Biology. A year of college chemistry, or advanced high school preparation in biology and chemistry is highly recommended for these two introductory courses. Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L, and BLY 102, BLY 102L) and the major/minor sequence (BLY 121, BLY 121L, BLY 122, BLY 122L.)

A “C” or better is required in BLY 301, BLY 302, and BLY 303 before any other BLY 300-400 level courses can be taken.

Upper level courses not listed here will count towards a biology major, but do not satisfy the requirements above.

2. Chemistry (CH 131, CH 132, CH 201)
   CH 131
   CH 132
   CH 201

3. A year of Physics (PH 114, PH 115) or Geology (GY 111 and GY 112)

4. Mathematics through Calculus (MA 115 and 125) or Statistics (MA 115 and ST 210)
General Education Requirements For Biology Majors

Areas I, II, and IV of the General Education Requirements for Biology are specified in the College of Arts and Sciences section. Note that Area III requirements (Mathematics and Natural Sciences) are fulfilled by the major requirements specified above.

Undergraduate Senior Thesis In Biology

The Biology Senior Thesis Program offers bright, academically motivated undergraduate students the opportunity to develop research and communication skills in preparation for a graduate or professional career. To apply for admission into the program, a student must:

1. have completed BLY 121, 121L, BLY 122, 122L, CH 131, CH 132, plus one more upper division biology course.
2. have earned a 3.25 GPA or better in biology courses attempted.
3. have earned a 3.0 GPA or better overall.
4. obtain a recommendation from a faculty member.

In addition to fulfilling the requirements of the standard biology program, senior thesis students must:

1. participate in the Undergraduate Senior Thesis in Biology program for four terms; this may include summer terms.
2. complete a minimum of six credits of directed research, three credits of which must be Honors Research in Biology (BLY 499).
3. complete a research prospectus including an introduction, proposed methods, and relevant literature citations. The prospectus must be submitted and approved by their advisory committee during the first term of participation in the program.
4. complete a written thesis, which must be approved by the advisory committee.
5. present a public oral defense of the research project.
6. complete a poster presentation at the USA Annual Research Forum or the UCUR Annual Research Forum.

Students participating in the Biology Senior Thesis Program who have a 3.5 GPA will also be eligible for Departmental Honors status.

Biology students who are part of the University Honors College will meet requirements for the Undergraduate Biology Senior Thesis as well as those of the University's program.

Department Information

Department of Biology website
https://www.southalabama.edu/biology

Undergraduate Studies

The program of the Department of Biology is designed to contribute to a scientific background as part of a liberal education. The department offers a diversified, broadly based program, which can be designed to satisfy many areas of study. Our multitrack major can provide the traditional student with a well-rounded background in biology, or students may select courses to prepare them for a particular area of study. The multitrack curriculum can prepare students for graduate study, pre-health professional fields (such as medicine or dentistry), marine biology, or environmental science. The department has persons trained to advise in each of these areas. A list of advisors for a specific track or area of study can be obtained from the departmental office.

All first-time freshmen must successfully complete CAS 100: First Year Experience as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students, who must enroll in the fall semester following entry.

Biology majors are required to take CIS 150, BLY 304 or ST 210 to fulfill the technology proficiency requirement, which was formerly known as the computer proficiency requirement.

Effective for fall, 2016, Major Milestones are used in all concentrations of the Biology Bachelor of Science major to help students stay on track for timely graduation. Each regular semester in the Biology major is a tracking term. To remain on track, students must complete the milestone requirements for each tracking term. These requirements are viewable on the Major Milestone tab above.
Major milestone requirements apply only to full-time, degree-seeking students who first entered Fall 2016 or later. Milestone requirements do not apply to transfer students in the Biology program.

The sample academic plan viewable on the Major Milestone tab above is designed to ensure graduation in the Biology major in four years. Several academic plans are available -- consult with your academic advisor for the plan that is the best fit for you. For specific course requirements, refer to the program requirements above and the General Education requirements of the College of Arts and Sciences.