

## Biology BS/MS 4+1 Program Description

The Biology Department offers an accelerated 4+1 BS/MS program in biology to allow well-qualified biology students to complete a Master's in Biology in two additional semesters plus one summer of enrollment. Students take graduate classes in their undergraduate senior year that can double-count towards both degrees upon successful completion of the MS degree in Biology.

Students apply to the program during their junior or first-semester senior year, after accumulating 75 credits, and admission to the program requires an SU gpa of 3.0 overall. Students seeking to enroll in the program must be admitted to the graduate program and maintain a 3.0 grade point average at the time they begin their final undergraduate semester, per PASSHE Policy 2016-25-A, "Guidelines to Accelerated Bachelor to Master's Degree Programs and Early/Dual Admission to First Professional Master Degree Programs".

Students enrolled in the program take two 3-credit graduate (400- or 500-level) biology courses as well as the 1-credit graduate seminar (BIO 515 Scientific Communication in Biology) during their senior year. Ideally one of the 3-credit courses should be at the 500 level, but this requirement is flexible. Students would then take nine credits in each of the following semesters, and 6 credits in the summer after the graduate year, or across the summers before and after the graduate year. Per PASSHE policy, the 7 graduate credits taken in the senior year would count toward the BS, and then on completion of requirements for the MS, would double-count in that program as well.

Students will thus complete 120 credits towards their undergraduate degree, and 31 credits towards their graduate degree, with seven credits shared among both degrees.

The accelerated program is best suited for non-thesis track students, though very well-prepared students may complete a thesis in this program with appropriate advisement.

### Typical course sequence (non-thesis track):

<b>Fall of Senior Year</b> <ul style="list-style-type: none"> <li>• 400 or 500-level graduate course (3 cr)*</li> <li>• BIO 515 Scientific Communication (1 cr)</li> <li>• Other undergraduate degree requirements</li> </ul>	<b>Spring of Senior Year</b> <ul style="list-style-type: none"> <li>• 400 or 500-level graduate course (3 cr)*</li> <li>• Other undergraduate degree requirements</li> </ul> <p>*Ideally, at least one of these is a 500-level course</p>
<b>Fall of Graduate Year</b> <ul style="list-style-type: none"> <li>• Biology 400 or 500-level electives (6 cr)</li> <li>• Biology or allied 400/500 elective (3 cr)</li> </ul>	<b>Spring of Graduate Year</b> <ul style="list-style-type: none"> <li>• BIO 593 Biometry [if not taken earlier] (3 cr)</li> <li>• Biology 400 or 500-level elective (3 cr)</li> <li>• Biology or allied 400/500 elective (3 cr)</li> </ul>
<b>Summer of Graduate Year</b> (or across the summers before and after the graduate year) <ul style="list-style-type: none"> <li>• Biology 400 or 500-level elective (3 cr)</li> <li>• Biology Capstone: BIO 605 Graduate Research <i>or</i> BIO 609 Internship (3 cr)</li> </ul>	

### Typical course sequence (thesis track):

<b>Fall of Senior Year</b> <ul style="list-style-type: none"> <li>• 400 or 500-level graduate course (3 cr)</li> <li>• BIO 515-Scientific Communication (1 cr)</li> <li>• Other undergraduate degree requirements</li> </ul>	<b>Spring of Senior Year</b> <ul style="list-style-type: none"> <li>• BIO 593 Biometry (3 cr)</li> <li>• Other undergraduate degree requirements</li> <li>• Prepare thesis proposal; meet with committee</li> </ul>
<b>Summer I of Graduate Year</b> <ul style="list-style-type: none"> <li>• Biology 400 or 500-level elective, or BIO 605 Graduate Research (3 cr)</li> <li>• Field-oriented students will complete most field research during this period</li> </ul>	
<b>Fall of Graduate Year</b> <ul style="list-style-type: none"> <li>• Biology 400 or 500-level electives (6 cr)</li> <li>• Biology or allied 400/500 elective (3 cr)</li> </ul>	<b>Spring of Graduate Year</b> <ul style="list-style-type: none"> <li>• BIO 612 Thesis I (3 cr)</li> <li>• Biology 400 or 500-level elective (3 cr)</li> <li>• Biology or allied 400/500 elective (3 cr)</li> </ul>
<b>Summer II of Graduate Year</b> <ul style="list-style-type: none"> <li>• BIO 613 Thesis II (3 cr) [this could be moved forward if student wants to complete internship, or if a desired elective is offered in the second summer]</li> </ul>	

Questions? Contact the Biology Graduate Coordinator, Dr. Theo Light, at [tsligh@ship.edu](mailto:tsligh@ship.edu)