



## **Why Bloomsburg University's Accelerated Program leading to both a Bachelor's and a Master's Degree in Biology in only 5 years is very good for students.**

The Master of Science Degree is rapidly becoming *the* professional working degree in Biology. Professional biologists work in positions such as Microbiologist, Zoologist, Wildlife Biologist, Biological Technician, to highlight but a few of the diverse job opportunities. Although the US Department of Labor (2012) list a Bachelor's Degree as the *minimum* qualification for entry-level positions in these fields, they quickly amend this to state that many positions expect a Master's Degree, and that a Master's Degree is universally expected to advance in these professions. The professions named above are expected to experience better than average growth, adding *ca.* 23,600 new jobs to a 2012 base of *ca.* 210,400 jobs, for an 11% projected growth during the decade following 2012. The US Department of Labor (2012) reports median pay for jobs in these areas ranges from \$39,750 to \$66,260 per year. However, to enter and advance in these jobs generally requires training beyond the baccalaureate. To be competitive, professional biologists often need more laboratory and field experience, and a greater diversity of areas of competence, than can easily be encompassed in a traditional 4-year undergraduate program. Answering the growing need for advanced graduate-level preparation for students pursuing careers as technicians, laboratory managers, research assistants, and etc., the Accelerated Combined Bachelor's and Master's curriculum in Biology implements a focused career development tract emphasizing the development of a broad diversity of advanced laboratory, field, and career skills.

The Department of Biological and Allied Health Sciences offers Bachelor of Science and Bachelor of Arts degrees in several curriculum-options reflecting sub-disciplines, levels of biological organization, and areas of interest within the life sciences. A seamless progression of coursework, culminating in both a Bachelor's and a Master's Degree, is extremely attractive to the best students because it affords them the opportunity to pursue graduate work early in their academic career, and allows them to enter the job market with the credentials most likely to allow them to secure a position and advance in their career. Pursuing these credentials in a traditional, stand-alone Bachelor's and Master of Science degree programs would require a minimum of 6 years of study. In contrast, the Accelerated Program at Bloomsburg University can be completed in only 5 years.

### 3+2 BACHELOR OF SCIENCE / MASTER OF SCIENCE in BIOLOGY: General Option and Thesis Tract

*Concepts in Biology 1* (BIOLOGY 114) and *Concepts in Biology 2* (BIOLOGY 115) should be taken during the freshman year; *Microbiology* (BIOLOGY 242) and *Cell Biology* (BIOLOGY 271) should be taken during the sophomore year. Students must complete  $\geq 90$  credit hours and maintain a  $\geq 3.0$  GPA in order to enroll in graduate courses in their 4<sup>th</sup> year. In addition to the specified courses listed on this page, the student selects 21 credit hours of approved graduate elective courses in biology and marine science.

Chemistry and mathematics courses should be scheduled as early as possible in the program of study. *Basic Statistics* (PSYCH 160) may be substituted for *Introduction to Statistics* (MATH 141).

<p><b>Biology Core Requirements</b> (29 cr hrs) <input type="checkbox"/></p> <p>BIOLOGY 114 Concepts in Biology 1 4 <input type="checkbox"/></p> <p>BIOLOGY 115 Concepts in Biology 2 4 <input type="checkbox"/></p> <p>BIOLOGY 242 Microbiology 4 <input type="checkbox"/></p> <p>BIOLOGY 271 Cell Biology 4 <input type="checkbox"/></p> <p>BIOLOGY 332 Genetics 3 <input type="checkbox"/></p> <p>BIOLOGY 351 Ecology 4 <input type="checkbox"/></p> <p>BIOLOGY 593 Master of Science Thesis 6 <input type="checkbox"/></p>	<p><b>Chemistry Requirement</b> (16/20 cr hrs) <input type="checkbox"/></p> <p>CHEM 115 Chem for the Sciences 1 4 <input type="checkbox"/></p> <p>CHEM 116 Chem for the Sciences 2 4 <input type="checkbox"/></p> <p>CHEM 230 Fund of Org Chem 4 <input type="checkbox"/></p> <p style="text-align: center;"><b>OR</b></p> <p>CHEM 231 Organic Chemistry 1* <b>AND</b> 4 <input type="checkbox"/></p> <p>CHEM 232 Organic Chemistry 2* 4 <input type="checkbox"/></p> <p>CHEM 341 Biochemistry 1 4 <input type="checkbox"/></p>
<p><b>Physiology Requirement</b> <input type="checkbox"/></p> <p>(4 cr hrs; select BIOLOGY 479 <b>AND</b> one lecture course from among BIOLOGY 472, 474, 477, 478, and 480)</p> <p>BIOLOGY 479 Integrated Physiology Lab. 1 <input type="checkbox"/></p> <p style="text-align: center;"><b>AND</b> one of the following:</p> <p>BIOLOGY 472 Animal Cell Physiology 3 <input type="checkbox"/></p> <p>BIOLOGY 474 Human Physiology 3 <input type="checkbox"/></p> <p>BIOLOGY 477 Plant Physiology 3 <input type="checkbox"/></p> <p>BIOLOGY 480 Comparative Animal Physiol. 3 <input type="checkbox"/></p>	<p><b>Physics Requirement</b> <input type="checkbox"/></p> <p>(8 cr hrs; select one pair)</p> <p>PHYSICS 111 Introductory Physics 1 <b>AND</b> 4 <input type="checkbox"/></p> <p>PHYSICS 112 Introductory Physics 2 4 <input type="checkbox"/></p> <p style="text-align: center;"><b>OR</b></p> <p>PHYSICS 211 General Physics 1 <b>AND</b> 4 <input type="checkbox"/></p> <p>PHYSICS 212 General Physics 2 4 <input type="checkbox"/></p>
<p><b>Biology Elective Requirement</b> <input type="checkbox"/></p> <p>(21 cr hrs of biology and/or marine science graduate electives selected from the lists on p. 2. Enter them below.)</p> <p>_____ 3 <input type="checkbox"/></p> <p>_____ 3 <input type="checkbox"/></p> <p>_____ 3 <input type="checkbox"/></p> <p>_____ 3 <input type="checkbox"/></p> <p>_____ 3 <input type="checkbox"/></p> <p>_____ 3 <input type="checkbox"/></p> <p>_____ 3 <input type="checkbox"/></p>	<p><b>Mathematics Requirement</b> <input type="checkbox"/></p> <p>(9 cr hrs)</p> <p>MATH 141 Introduction to Statistics 3 <input type="checkbox"/></p> <p>MATH 546 Biostatistics 3 <input type="checkbox"/></p> <p style="text-align: center;"><b>AND</b></p> <p>MATH 123 Essentials of Calculus 3 <input type="checkbox"/></p> <p style="text-align: center;"><b>OR</b></p> <p>MATH 125 Calculus 1 3 <input type="checkbox"/></p>