Biology, M.A.

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Arts in Biology.

About the Program

The M.A. in Biology emphasizes contemporary coursework for students to gain advanced understanding within the field of modern biology. The Biology M.A. degree program is designed for students seeking graduate studies in the biological sciences without experimental research in labs. In comparison with the Biology M.S., the M.A. in Biology program focuses primarily on coursework and independent research, which helps the student form expertise in one or more areas of biology. Students develop the analytical thinking skills necessary for biological research and literature review.

Time Limit for Degree Completion: 3 years

Campus Location: Main

Full-Time/Part-Time Status: The degree program can be completed on a full- or part-time basis. Many classes are offered in the evening to enable full-time working professionals to be enrolled in the program. International students are required to register as full-time students.

Interdisciplinary Study: The program encourages interdisciplinary coursework in Biochemistry, Chemistry, Computer Science, Environmental Science, Engineering, Mathematics, and Physics. Special interdisciplinary programs in which faculty from the Biology Department participate include the Center for Biotechnology, Center for Computational Genetics and Genomics, the Institute for Computational Molecular Science, the Institute for Genomics and Evolutionary Medicine, and the Environmental Studies and Neuroscience Programs.

Areas of Specialization: Faculty members specialize in the areas of aquatic and terrestrial ecology, biochemistry, biophysics, cell biology, computational genomics, developmental biology, evolutionary and organismal biology, genetics, molecular biology, molecular evolution, neurobiology, and virology.

Job Prospects: Graduates are prepared for professional schools or careers in fields related to the biological sciences, including academia, biotechnology, government, health professions, and pharmaceuticals.

Non-Matriculated Student Policy: Non-matriculated students may enroll in a total of three courses (9 credits) with permission of the instructor and the department.

Financing Opportunities: University Fellowships, Graduate Assistantships, and Academic Internships are normally reserved for Ph.D. students.

Admission Requirements and Deadlines

Application Deadline:

Fall: March 1
Spring: October 30

Late applications may be considered for admission.

APPLY ONLINE to this graduate program.

Letters of Reference:

Number Required: 3

From Whom: Letters should be obtained from college/university faculty, whenever possible.

Coursework Required for Admission Consideration: Applicants should have a solid background in Biology and should have taken at least eight undergraduate Biology courses and one year each of Calculus, Chemistry, and Physics. The Biology Department Graduate Committee may allow exceptions to these course requirements after review.

Bachelor’s Degree in Discipline/Related Discipline: A baccalaureate degree in a science field is required.

Statement of Goals: In approximately 500 to 1,000 words, describe your interest in Temple’s program, academic achievements, and research goals, and provide the names of up to three faculty with whom you would like to conduct your capstone master’s research thesis.

Standardized Test Scores:

GRE: Not required. If submitted, a combined minimum score of 300 on the quantitative and verbal reasoning sections is expected.
Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master’s degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:

- TOEFL iBT: 90
- IELTS Academic: 6.5
- Duolingo: 110
- PTE Academic: 61

**Transfer Credit:** Graduate credits from an accredited institution may be transferred into the Biology program. The credits must be equivalent to coursework offered by the Biology Department at Temple University. A grade of "B" or better must have been earned for the credits to transfer. The Biology Department Graduate Committee makes recommendations to the Department Chair for transferring credit on an individual basis. The maximum number of credits a student may transfer is 6.

**Program Requirements**

**General Program Requirements:**

*Number of Credits Required Beyond the Baccalaureate: 30*

**Required Courses:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BIOL 8003</td>
<td>Introduction to Graduate Research</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Two 3-credit Graduate Seminar Courses</td>
<td>6</td>
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<tr>
<td>Electives 1</td>
<td>Select courses from the following to total a minimum of 15 credits:</td>
<td>15</td>
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- BIOL 5101 Evolution
- BIOL 5111 Genomics in Medicine
- BIOL 5112 Fundamentals of Genomic Evolutionary Medicine
- BIOL 5114 Evolutionary Ecology
- BIOL 5128 Genomics and Infectious Disease Dynamics
- BIOL 5241 Genomics and Evolutionary Biology of Parasites and Other Dependent Species
- BIOL 5254 Animal Behavior
- BIOL 5275 Ecology of Invasive Species
- BIOL 5301 Cell Biology
- BIOL 5307 Conservation Biology
- BIOL 5312 Biostatistics
- BIOL 5321 Plant Community Ecology
- BIOL 5325 Research Techniques in Molecular Biology
- BIOL 5358 Cellular/Molecular Neuroscience
- BIOL 5403 Genomics
- BIOL 5411 Structural Bioinformatics I
- BIOL 5416 Tropical Marine Biology: Belize
- BIOL 5428 Virology
- BIOL 5429 Developmental Genetics
- BIOL 5433 Advanced Techniques in Microscopy
- BIOL 5436 Freshwater Ecology
- BIOL 5452 Systems Neuroscience
- BIOL 5454 Neurological Basis of Animal Behavior
- BIOL 5456 Organization and Development of the Nervous System
- BIOL 5465 Mammalian Development
- BIOL 5466 Contemporary Biology
- BIOL 5469 Molecular Biology
- BIOL 5471 Cell Proliferation
- BIOL 5474 Physical Biochemistry
Biology, M.A.

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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BIOL 5475</td>
<td>General Biochemistry I</td>
</tr>
<tr>
<td>BIOL 5476</td>
<td>General Biochemistry II</td>
</tr>
<tr>
<td>BIOL 5479</td>
<td>Biotechnology</td>
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<tr>
<td>BIOL 5501</td>
<td>Analytical Biotechnology</td>
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<td>BIOL 5502</td>
<td>Microbial Biotechnology</td>
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<td>BIOL 5505</td>
<td>Ethics Regulation and Policy in Biotechnology</td>
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<td>BIOL 5506</td>
<td>Professional Development Seminar for PSM in Biotechnology</td>
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<tr>
<td>BIOL 5509</td>
<td>Computational Genomics</td>
</tr>
<tr>
<td>BIOL 5511</td>
<td>Ethics in Bioinformatics</td>
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<tr>
<td>BIOL 8985</td>
<td>Teaching in Higher Education: Life Sciences²</td>
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**Capstone Course**

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 9995</td>
<td>Capstone Project</td>
<td>3</td>
</tr>
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**Total Credit Hours** 30

1. Electives may include BIOL 5000-level courses from the Professional Science Master's programs. Up to 9 credits may also be taken in non-biology graduate courses in a related field such as chemistry, computer science, education, psychology, and the like. All non-biology electives must be approved by the graduate chair and the student's advisor.
2. This course may only be taken for 3 credits.
3. This course requirement may be satisfied by completing a library thesis.

**Additional Requirements:**

All graduate-level courses must be passed with a "B-" or better.

**Culminating Events:**

*Capstone Project:*

The capstone project, BIOL 9995, is typically completed by conducting an M.A. library thesis. This is an original study that demonstrates the student's knowledge of the literature, mastery of her/his primary area of interest, and an advanced knowledge of research methods. The thesis should be limited to a specific problem in the biological sciences and investigated under the direct supervision of a major advisor. The thesis is evaluated by the student's advisor and one other graduate faculty member.

**Contacts**

**Department Web Address:**

https://www.temple.edu/academics/degree-programs/biology-ma-st-biol-ma

**Department Information:**

Dept. of Biology
255 Biology-Life Sciences Building
1900 N. 12th Street
Philadelphia, PA 19122-6078
grad.bio@temple.edu
215-204-8877

**Submission Address for Application Materials:**

https://cst.temple.edu/academics/graduate-programs/apply-now

**Department Contacts:**

*Admissions:*  
Sandhya Verma  
grad.bio@temple.edu  
215-204-8854

*Program Coordinator:*  
Richard Waring  
waring@temple.edu  
215-204-8877

*Graduate Chairperson:*  
Richard Waring
waring@temple.edu
215-204-8877

Department Chairperson:
Robert Sanders
robert.sanders@temple.edu
215-204-8851