

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:

Code	Title	Credit Hours
Core Courses		
BIOL 8003	Introduction to Graduate Research	3
Two 3-credit Graduate Seminar Courses		6
Electives ¹		15
Select courses from the following to total a minimum of 15 credits:		
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	

BIOL 5475	General Biochemistry I	
BIOL 5476	General Biochemistry II	
BIOL 5479	Biotechnology	
BIOL 5501	Analytical Biotechnology	
BIOL 5502	Microbial Biotechnology	
BIOL 5505	Ethics Regulation and Policy in Biotechnology	
BIOL 5506	Professional Development Seminar for PSM in Biotechnology	
BIOL 5509	Computational Genomics	
BIOL 5511	Ethics in Bioinformatics	
BIOL 8985	Teaching in Higher Education: Life Sciences ²	
Capstone Course		
BIOL 9995	Capstone Project ³	6

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