

Mission Statement

In the last two decades there have been seismic changes in the Biological Sciences. The mission of the Department of Biology at The City College of New York is to conduct research in these areas, to enable students from diverse backgrounds to further their intellectual development and to prepare them to enter professions in the biological and biomedical sciences. We also contribute to the broader community by continuing collaborations with community colleges and K-12 schools.

Consistent with recent scientific breakthroughs, we provide comprehensive biological training that focuses on core content and principles, using an array of approaches and an evolving set of intellectual tools. Our core curriculum emphasizes learning about the many principles of biology and the ability to use the scientific method to gain new understanding. Evolution is emphasized as an organizing theme throughout the curriculum. Most core courses and many electives include laboratory sections, which are inquiry-based to promote learning, practicing, and refining scientific analytical skills. A wide range of elective courses allows the student to investigate a variety of biological processes and phenomena and to explore the relationships among organisms. One of the Biology Department's strengths is the integration of undergraduate students into faculty research programs. As biological research becomes increasingly collaborative and interdisciplinary, we endeavor to train students to apply their knowledge in new contexts. Qualified advanced students are encouraged to take Independent Study or Honors (research) and may also take selected graduate courses.

Learning Outcomes

Students with a B.A. in Biology will

1. Learn and utilize a professionally applicable theatrical vocabulary.
2. Explore and extend the students' creative capacity.
3. Develop basic skills and some expertise within a number of sub-specializations.
4. Gain aptitude in applying theatrical concepts in performance.
5. Learn, understand, and interpret knowledge about the theatrical past.
6. Apply knowledge gained as a practitioner and an audience member.
7. Develop and improve speaking and presentation skills.
8. Utilize writing as a tool for building a persuasive argument.
9. Explore ways that academic and practical skills learned in the courses can be translated to the professional world.

Learning Outcome Grid

(Outcomes are numbered from 1 to 11 as listed below)

1. Summarize lecture content and identify key principles
2. Formulate questions, design experiments, test hypothesis and interpret results
3. Perform experiments using lab equipment used in research
4. Represent data with graphs or maps
5. Demonstrate concept of statistical significance
6. Write reports in the format of a scientific paper
7. Make oral presentation of scientific topic
8. Search and understand primary literature
9. Relate course content to clinical or ecological case studies or current research
10. Explain modern biological concepts to a non-biologist
11. Use mathematical models or computer simulations

	Courses	Learning Outcomes										
		1	2	3	4	5	6	7	8	9	10	11
YRS 1,2 AND EVERY FALL (206 AND 207 YRS)	10000 Biology (Non-Science Majors)	X			X			X		X	X	
	10100 Biological Foundations I	X	X	X	X	X		X		X		
	10200 Biological Foundations	X	X	X	X	X	X					X
	20600 Introduction to Genetics	X	X		X	X					X	
	20700 Organismic Biology	X	X	X	X		X	X		X	X	
YRS 3 AND 5	22800 Ecology and Evolution			X		X	X	X				X
	22900 Cell and Molecular Biology		X	X	X	X	X		X		X	
	28000 Biomolecular systems	X	X					X	X	X	X	
	33000 Natural History of Vertebrates											
YRS 2,4,5 AS OFFERED	34000 Biology of Invertebrates	X			X					X	X	X
	34500 Botany		X	X	X		X	X		X		
	35000 Microbiology	X	X	X			X		X	X		
	35400 Introduction to Neurobiology				X	X	X		X	X		X
	35500 Analysis of Scientific Literature		X		X	X		X				
37500 Dev. Biology	X			X		X	X	X				
37900 Dev. Neuroscience	X	X		X			X	X				

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	1	2	3	4	5	6	7	8	9	10	11
38000 Eukaryotic Genetics	X	X	X	X	X	X	X	X	X	X	
40000 Physiol. & Functional Anat. I	X	X	X	X	X		X	X	X		X
40100 Physiol. & Functional Anat. II											
40200 Physiol. & Functional Anat. III				X							
41000 Cell Dev. & Cellular Senescence	X	X	X	X	X	X	X	X	X		
42500 Cancer Biology	X			X	X				X	X	
44300 Insect Ecology	X	X	X	X	X	X		X	X		X
44900 Biology of Birds	X	X	X			X	X	X	X		
45100 Muscle and Movement											
45300 Conservation Biology	X	X		X	X	X	X	X	X	X	X
45400 Sensory Perception	X	X		X	X	X		X	X		X
45500 Advanced Ecology	X	X		X	X	X	X	X	X	X	X
45800 Biogeography	X	X	X	X		X	X		X		X
45900 Biological Oceanography	X			X	X		X	X	X		X
46000 Animal Behavior				X			X				
48300 Laboratory in Biotechnology		X			X						
48500 Evolution	X	X		X	X		X	X	X		

YRS 2,4,5
AS OFFERED