BIOLOGY (PHD)

Department Website (http://as.nyu.edu/biology/)

NYSED: 07754 **HEGIS:** 0401.00 **CIP:** 26.0101

Program Description

NYU Biology offers an integrated environment where students pursue cutting edge research with a world class faculty. The department is home to a wealth of scientific expertise, state-of-the art labs and core facilities, the Center for Genomics and Systems Biology, and the Center for Developmental Genetics. We are located in Greenwich Village, the best neighborhood in the world's most influential city. Our students are encouraged, in addition to their academic science training, to take advantage of all that NYC has to offer, including interacting with the legal, entertainment, pharma, world-health, and tech industries, as well as unique Global Opportunities for study at NYU's Portal Campuses in Abu Dhabi and Shanghai.

The full-time Doctor of Philosophy Program in Biology is designed to develop independent research scientists. Students undertake independent research under the guidance of faculty mentors at state-of-the-art laboratories, with sophisticated instrumentation, advanced computer facilities, and extensive library and e-journal holdings. Weekly pre-doctoral colloquia enable students to present their own work to a broad audience, while symposiums and seminars by distinguished visitors, speaking on a variety of topics, add breadth to the educational programs offered by the department. Students enrolled in the PhD program are guaranteed a paid stipend for living expenses. Program details are available in the Biology Graduate Student Handbook (https://as.nyu.edu/content/dam/nyu-as/biology/documents/Graduate%20Student%20Handbook%20-%20NYU%20Biology.pdf).

Admissions

All applicants to the Graduate School of Arts and Science (GSAS) are required to submit the general application requirements (https://gsas.nyu.edu/nyu-as/gsas/admissions/arc.html), which include:

- Academic Transcripts (https://gsas.nyu.edu/nyu-as/gsas/admissions/arc/academic-transcripts.html)
- Test Scores (https://gsas.nyu.edu/nyu-as/gsas/admissions/arc/test-scores.html) (if required)
- Applicant Statements (https://gsas.nyu.edu/nyu-as/gsas/admissions/arc/statements.html)
- Résumé or Curriculum Vitae
- Letters of Recommendation (https://gsas.nyu.edu/nyu-as/gsas/admissions/arc/letters-of-recommendation.html), and
- A non-refundable application fee (https://gsas.nyu.edu/admissions/arc.html#fee).

See Biology (https://gsas.nyu.edu/admissions/arc/programs/biology.html) for admission requirements and instructions specific to this program.

Program Requirements

Course	Title	Credits
Major Requirements		
BIOL-GA 2003	Bio Core III: Molecules & Cells/Discussion Based	4
BIOL-GA 2004	Bio Core IV: Genes, Systems & Evolution	4
BIOL-GA 2030	Statistics in Biology	4
BIOL-GA 3001	The Art of Scientific Investigation	2
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3034	Predoc Col Srvy Lab Mthd	2
BIOL-GA 3035	Predoc Col Srvy Lab Mthd	4
Electives		
Biology Electives (by advisement)		8
Other Elective Credits		32
Total Credits		**72**

Students who are admitted into the specialized track in Developmental Genetics, which is offered by the Department of Biology with faculty from NYU's School of Medicine, participate in a DG curriculum that consists of core cores, a special two-semester course in developmental systems, laboratory rotations, seminars, student research symposia, journal clubs, and thesis-related research.

Additional Program Requirements

Qualifying Examination

The written PhD qualifying examination (preliminary examination) is generally taken at the end of the first year of full-time study, that is, in the spring semester of a student's first year. The examination consists of two parts: a written research proposal and an oral presentation of the proposal that is defended before a committee of three faculty members. Committee members are assigned to each student by the director of graduate studies, PhD program, in collaboration with the instructors of record from Bio Core 3 and 4. The proposal may not be in the area of the student's thesis research. This examination tests the student's skills in scientific writing, reasoning, analysis and interpretation of data in the literature, integration of scientific concepts, and creativity in the design of new experiments.

Thesis Proposal

By the end of the spring semester of their first year, doctoral students must secure a faculty sponsor and a thesis advisory committee of at least three faculty members from within the department who have formally agreed to supervise the dissertation research. A thesis proposal should be presented to the thesis advisory committee and defended orally before May 31 of the second year. When PhD students pass their thesis proposal examination, they become PhD candidates. Additionally, PhD students are required to convene annual meetings with their thesis committee by May 31 of each year.

Dissertation Defense & Submission

When the student has completed at least one year in residence and all course and language requirements, passed the qualifying examinations, proposed an acceptable subject for the dissertation, and been recommended by the program, he or she is formally admitted to candidacy for the doctorate, and an advisory committee is appointed. While most committees are comprised of members from the program faculty, students are permitted to work with any appropriate member of the NYU faculty. Approval of the dissertation by the committee and a

defense of the dissertation examination complete the requirements for the degree.

Departmental Approval

All Graduate School of Arts & Science doctoral candidates must be approved for graduation by their department for the degree to be awarded.

Sample Plan of Study

Course	Title	Credits
1st Semester/Term		
BIOL-GA 2003	Bio Core III: Molecules & Cells/Discussion Based	4
BIOL-GA 2030	Statistics in Biology	4
BIOL-GA 3001	The Art of Scientific Investigation	2
BIOL-GA 3034	Predoc Col Srvy Lab Mthd	2
	Credits	**12**
2nd Semester/Term		
BIOL-GA 2004	Bio Core IV: Genes, Systems & Evolution	4
BIOL-GA 3035	Predoc Col Srvy Lab Mthd	4
BIOL-GA 1--- or 2--- Elective		4-6
	Credits	**12**
3rd Semester/Term		
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3--- Elective		4
BIOL-GA 1--- or 2--- Elective		4-6
	Credits	**10**
4th Semester/Term		
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3--- Elective		4
BIOL-GA 3--- Elective		4
	Credits	**10**
5th Semester/Term		
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3--- Elective		4
BIOL-GA 3--- Elective		4
	Credits	**10**
6th Semester/Term		
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3--- Elective		4
	Credits	**6**
7th Semester/Term		
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3--- Elective		4
	Credits	**6**
8th Semester/Term		
BIOL-GA 3015	Pre-Doctoral Colloquium	2
BIOL-GA 3--- Elective		4
	Credits	**6**
	Total Credits	**72**

Following completion of the required coursework for the PhD, students are expected to maintain active status at New York University by enrolling in a research/writing course or a Maintain Matriculation (MAINT-GA 4747) course. All non-course requirements must be fulfilled prior to degree conferral, although the specific timing of completion may vary from student-to-student.

Learning Outcomes

Upon successful completion of the program, graduates will:

1. Be well-trained in quantitative and computational methods that can be applied to biological research questions.
2. Be actively trained in various aspects of research integrity.
3. Be able to communicate science more effectively to diverse audiences.
4. Be educated in fields in skills relevant to broad career opportunities in the biomedical research enterprise.
5. Take individualized coursework in the Biology Ph.D. program that accommodates a range of educational experiences.

Policies

NYU Policies

University-wide policies can be found on the New York University Policy pages (https://bulletins.nyu.edu/nyu/policies/).

Graduate School of Arts and Science Policies

Academic Policies for the Graduate School of Arts and Science can be found on the Academic Policies page (https://bulletins.nyu.edu/graduate/arts-science/academic-policies/).