

GENETICS (PHD)

Graduate School

Program Website (<https://cals.cornell.edu/molecular-biology-genetics/academics/graduate/genetics-genomics-and-development/>)

CIP: 26.0801 | HEGIS: 0422.00 | NYSED: 13168

Graduate Field

Genetics, Genomics and Development (<https://catalog.cornell.edu/graduate-school/genetics-genomics-development/>)

Program Description

The graduate program in the Field of Genetics, Genomics, and Development (GGD) offers a Ph.D. degree only. The goal of our program is to introduce and educate students about the fascination of this scientific area, as well as provide them with the tools necessary to succeed in it. The program offers the opportunity to undertake forefront research with access to the latest technology and equipment. Our program includes both core and flexible coursework that intends to provide a depth and breadth of knowledge in the scientific areas encompassed by the field, develop written communication skills, and inform on research ethics. In addition to coursework, students are required to complete three research rotations in the first year and a one-semester teaching experience (in the second year).

Students in the Field of GGD will select the Genetics PhD degree during the application process. Core curricular requirements are maintained across the GGD and BMCB degree programs. The Genetics PhD offers coursework and research opportunities that focus on understanding the genetic and genomic basis of biological activities at the levels of cells, organisms, and population. More details can be found on the GGD program website (<https://gendev.cornell.edu/>). Degree selection during the application process should be informed by an applicant's current area of research interest. The flexibility of our training program allows students to move between the GGD-BMCB degree programs at the end of the first year if their research interests evolve.

Concentrations

- Developmental biology
- Genetics
- Genomics

Program Information

- Instruction Mode: In Person
- Location: Ithaca, NY
- Minimum Credits for Degree: 154

Program Requirements

- Minimum Semesters for Degree: 10

Graduate School Milestones

- Responsible Conduct of Research Training: Required
- Open Researcher and Contributor ID (ORCID): Required
- Student Progress Reviews (SPR) begin: Second Year

- Examination for admission to candidacy (A Exam): Spring of second year
- Defense of Dissertation (B Exam): Spring of fifth year

Field Specific Milestones

- One semester teaching assistantship required

Course Requirements

Additional course requirements may be set by the student's Special Committee. Program specific requirements that apply to all students are included below.

Year 1 (Fall)

- BIOMG 8369 Foundational Skills for Graduate School and Beyond
- BTRY 6010 Statistical Methods I

Year 1 (Spring)

- BIOMG 7810 Critical Thinking Molecular Biology and Genetics

Year 2 (Fall)

- BIOMG 7510 Ethical Issues and Professional Responsibilities
- BIOMG 8375 Scientific Communication: Research Proposal Writing

Year 2 (Spring)

- BIOMG 6980 Graduate Student Teaching Assistant Experience in Molecular Biology and Genetics

University Graduation Requirements Requirements for All Students

In order to receive a Cornell degree, a student must satisfy academic and non-academic requirements.

Academic Requirements

A student's college determines degree requirements such as residency, number of credits, distribution of credits, and grade averages. It is the student's responsibility to be aware of the specific major, degree, distribution, college, and graduation requirements for completing their chosen program of study. See the individual requirements listed by each college or school or contact the college registrar's office (<https://registrar.cornell.edu/service-resources/college-registrar-directory/>) for more information.

Non-academic Requirements

Conduct Matters. Students must satisfy any outstanding sanctions, penalties or remedies imposed or agreed to under the Student Code of Conduct (Code) or Policy 6.4. Where a formal complaint under the Code or Policy 6.4 is pending, the University will withhold awarding a degree otherwise earned until the adjudication process set forth in those procedures is complete, including the satisfaction of any sanctions, penalties or remedies imposed.

Financial Obligations. Outstanding financial obligations will not impact the awarding of a degree otherwise earned or a student's ability to access their official transcript. However, the University may withhold issuing a diploma until any outstanding financial obligations owing to the University are satisfied.

Learning Outcomes

Upon completion of a Ph.D., students will be able to:

- Make an original and substantial contribution to the field.
- Demonstrate in-depth knowledge of one area of expertise.
- Demonstrate a broad knowledge of theory and research across several sub-disciplines in the field.
- Learn and follow ethical guidelines for working in the field.
- Write and speak effectively to professional and lay audiences about issues in the field.