

Contact Information

GGG Program Director

Cathy Ernst

ernstc@msu.edu

GGG Associate Director

Susanne Hoffmann-Benning

hoffma16@msu.edu

Academic Program Coordinator

Alaina Burghardt

genetics@msu.edu

Grad Student Organization President

Amanda Koenig

koenigam@msu.edu



<https://ggs.natsci.msu.edu/>



Join GGS!



Lugnuts Baseball Game



Art Prize in Grand Rapids



Griffins Hockey Game



Graduates with Program Director Dr. Cathy Ernst

The **Genetics and Genome Sciences Program** is an interdepartmental degree-granting program in the College of Natural Science at Michigan State University. The Program's mission is to train students for careers in research, teaching, and other science-related fields that rely on a deep understanding of the scientific method and the nature and significance of genetics and genomics.



Annual Student-Organized Mini-Symposium



Research Areas

- Plant Genetics & Genomics
- Animal Genetics & Genomics
- Microbial & Viral Genetics
- Cancer Genetics
- Genetics of Infectious Disease
- Computational Genomics
- Gene Expression & Regulation
- Organelle Genetics
- Metabolic Engineering
- Population Genetics & Evolution
- Epigenetics & Chromatin Structure
- Quantitative & Statistical Genetics

Coursework

As an **interdisciplinary** program, Genetics & Genome Sciences provides a **flexible** curriculum to accommodate diverse student research interests. Several optional dual major & certification opportunities are available.

- BMB 801 **OR** PLB/BMB 856 (3 credits)
- GEN 810 (1 credit)—1 required semester as a TA for IBIO 341
- a genetics course (3 credits)
- a genomics, quantitative, or computational biology course (3 credits)
- two additional elective courses (3 credits each)
- 4 semester of GEN 800 seminars (1 credit each)
- GEN 999—doctoral dissertation research (total of 24 credits)

Professional Development



USDA National Need Fellows Meet with Senator Stabenow

The Genetics & Genome Sciences Program offers numerous opportunities to enhance well-rounded PhD training. Students invite and host guest speakers for an annual mini-symposium. A student-led writing group is available weekly, and students organize a career panel each year to acquaint graduate students with a diversity of career paths. Furthermore, the weekly research forum offers student and faculty presentations, workshops, and Responsible Conduct of Research seminars.



Annual Networking & Career Panel

Outreach

The GGS Program is proud to support enthusiastic and engaged students, eager to share their science with their communities! Students participate in outreach activities like science nights at elementary schools and retirement homes, MSU Science Festival, Grandparents' University, Fascination of Plants Day, Girls' Math & Science Day, and Biology on Tap.



DNA Extractions at Elementary School Science Nights



Encouraging Science Literacy at Biology on Tap