

Genetics Graduate Group
Plant Breeding and Biodiversity Focus Group

<http://www-ggc.ucdavis.edu/ggc/ggg/>

Overview

In the Genetics Graduate Group, doctoral students spend their first two years taking a mixture of core and specialized classes as well as assisting in teaching and gaining research experience in the laboratory. During the first two quarters, students are encouraged to rotate through three or four laboratories of their choice prior to selecting an area of research interest and a major professor. At the beginning of the third year, an oral qualifying exam is administered to ascertain each student's knowledge of genetics and proficiency in defending one or more research proposals. After successful completion of the exam, students advance to candidacy and devote the remainder of their graduate careers to scientific research. The study of plant breeding through this program is recommended for those students primarily interested in gene discovery; trait development; mechanisms of inheritance; and molecular breeding methods.

Genetics Graduate Group requirements

Core courses

201A (5 units Fall)
201B (3 units Spring)
201C (4 units Spring)
201D (5 units Winter)

Seminar

GGG291: History of Genetics (2 units Winter)

TA requirement

Required; enrollment in GGG300 (Methods in Teaching Genetics, 1-3 units) recommended

Qualifying Exam

A student should take the qualifying exam by spring quarter of the third year and must take it by the 9th quarter to remain eligible for GSRs, TAs. For more information, see:

<http://www-ggc.ucdavis.edu/ggc/ggg/courses/Guidelines%20for%20QE.pdf>

Additional Plant Breeding and Biodiversity Focus Group requirements

Elective courses

At least 2 from list A for specialization and 1 from list B for breadth (see below).

Required seminar

GGG297: Seminar in plant genetics (1-3 units), organized in alternation with Model Plant FG

Additional elective seminar

At least 1

Rotation

Required; enrollment in GGG207L (Research Methods in Plant Genetics Laboratory, 2-5 units)

List A -- Depth

Agronomy 205 (AGR). Experimental Design and Analysis (4)
Agronomy 206. Multivariate Systems and Modeling (4)
Agronomy 221. Advanced Plant Breeding (4)

Animal Genetics (ANG) 204. Theory of Quantitative Genetics (3)
Animal Genetics 208. Estimation of Genetic Parameters (3)
Animal Genetics (ANG) 212. Sequence Analysis in Molecular Genetics (2)
Genetics (GGG) 220. Genomics and Biotechnology of Plant Improvement (3)
Vegetable Crops (VCR) 221. Genomics and Breeding of Vegetable Crops (3)
Evolution and Ecology (EVE) 102. Population and Quantitative Genetics (4)

List B -- Breadth

Ecology (ECL) 207. Plant Population Biology (3)
Engineering: Computer Sciences (ECS) 289A Computational Functional Genomics (4)
Entomology (ENT) 123. Plant-Virus-Vector Interaction (3)
Evolution and Ecology 210. Molecular Phylogenetic Analysis (3)
Evolution and Ecology 211. Applied Phylogenetics (3)
Plant Biology (PBI) 210. Plant Ecophysiology (3)
Plant Biology 219. Reproductive Biology of Flowering Plants (3)
Plant Biology 220. Plant Developmental Biology (4)
Plant Biology 227. Plant Molecular Biology (4)
Plant Biology 229. Molecular Biology of Plant Reproduction (3)
Plant Pathology (PLP) 120. Introduction to Plant Pathology (4)
Plant Pathology 208. Ecology of Plant Pathogens and Epidemiology of Plant Diseases (4)
Plant Pathology 210. Biochemistry and Molecular Biology of Plant–Microbe Interaction (4)
Soil Science (SSC) 208. Soil-Plant Interrelationships (3)

Note: While effort has been made to represent this program as accurately as possible, for the latest and most reliable information regarding program requirements, be sure to contact the current program representative.