BEHAVIORAL GENETICS - GRADUATE CERTIFICATE

The Institute for Behavioral Genetics (IBG) offers a training program in behavioral genetics. The goal of the program is to train scientists in the study of genetic contributions to individual differences in behavior. This is accomplished by requiring students to obtain strong training in a primary academic discipline, by providing training in the interdisciplinary field of behavioral genetics, and by providing an atmosphere in which close interactions among scholars with different perspectives may be established.

Requirements

Admission Requirements

To train at IBG, students must be admitted to a PhD program at the University of Colorado (Boulder or Denver). To be considered for admission, the Graduate School requires an undergraduate GPA of at least 2.75. Additionally, the most competitive applicants should have verbal and math GREs >85th percentile. Subject GRE scores are not required but will be considered if they have been completed. We carefully consider all components of the application including undergraduate grades, letters of recommendation, previous research experience and GRE scores.

Required Courses and Credits

Deviations from the IBG certificate requirements may be requested by petition to the student's advisory committee. Specific requests for course substitution, resolution of an ambiguity, etc., should be made by written petition. A petition may be approved by a majority vote of both the advisory committee and the IBG Training Committee. Disapproval of a petition may be changed to approval by a majority vote of the IBG faculty. Students with sufficient backgrounds may also test out of required courses 1–2 (i.e., pass the final exam for the course).

Code	Title	Credit Hours
Required Courses		
PSYC/IPHY 5200	Physiological Genetics and Genomics	3
PSYC 5102	Introduction to Behavioral Genetics	3
PSYC 5741	General Statistics 1 [1]	4
or PSYC 5751	General Statistics 2	
or IPHY 5800	Advanced Statistics and Research Methods in Integrative Physiology	
or PSYC 5541	Special Topics in Psychology	
PSYC 5112	Concepts in Behavioral Genetics (Required Course: Responsible Conduct in Research)	3
Electives		
Complete two courses from the following:		6
PSYC 5052	Behavioral Neuroscience (May overlap with NRSC 5100)	
PSYC 5122	Quantitative Genetics	
IPHY 5102	Introduction to Physiology Genomics (MCDB 5230 or MCDB 5471 may replace IPHY 5102)	
PSYC 5242	Biometrical Methods in Behavioral Genetics	
IPHY 5262	Application of Bioinformatics and Genomics	
NRSC 5100	Introduction to Neuroscience I	
or NRSC 5110	Introduction to Neuroscience II	
or NRSC 5132	Neuropharmacology	
Complete one course from the following:		3
NRSC 5032	Neurobiology of Learning and Memory	
NRSC 5072	Clinical Neuroscience: A Clinical and Pathological Perspective	
NRSC 5092	Behavioral Neuroendocrinology	
IPHY 6010	Seminar (Aging and Neurodevelopmental Disorders)	
IPHY 6010	Seminar (Geroscience and Anti-Aging Medicine)	
PSYC 5541	Special Topics in Psychology (Statistical Programming in R)	
PSYC 5541	Special Topics in Psychology (Methods in Genetics of Complex Traits)	
NRSC 5545	Neurobiology of Addiction	
PSYC 5453	Developmental Psychopathology	
PSYC 5761	Structural Equation Modeling	
PSYC 6761	Topics in Advanced Structural Equations Modeling	
PSYC 7102	Seminar: Behavioral Genetics (Genetics of Substance Use Disorders)	
PSYC 7102	Seminar: Behavioral Genetics (Genetics of Psychopathology; this course is required for NIMH trainees)	
PSYC 7102	Seminar: Behavioral Genetics (Benchmark Papers in Behavioral Genetics)	
PSYC 7102	Seminar: Behavioral Genetics (Population Genetics in the Modern Genomics Era)	
Other approved seminar courses on topics relevant to behavioral genetics		
Total Credit Hours		**22**

[1]   Or other graduate-level course in statistics (of at least one semester) approved by the student's advisory committee.

NOTE: As some courses can only be taught every other year, it is each student's responsibility to take relevant courses when offered. Some equivalent courses may be offered at the Health Sciences Center or other venues. Course substitutions may be requested.

Teaching Requirements

Each of the students in the IBG Training Program must TA for at least one semester in a course judged by their advisory committee to be relevant to their professional specialty. (As part of their general responsibilities for the development of the student, advisory committees may sometimes require additional teaching.)

General Requirements

IBG students are required to conduct their doctoral dissertation research on topics of direct relevance to animal or human behavioral genetics, under the supervision of an IBG faculty member. A training file for each

student is maintained in the IBG office for tracking progress toward completion of program requirements. Each student is to assist in updating this file at least once per year.

Specific departmental and Graduate School requirements in addition to those listed here are the responsibility of each student, in consultation with his/her advisory committee.

Examinations

Each student in the training program must complete the comprehensive/ qualifying and dissertation exam requirements of their academic department (e.g. IPHY, PSYC, MCDB). Depending upon the academic program in which the student is enrolled, they may also have additional exam requirements including a dissertation proposal. Students are advised to check their academic department for specific requirements.

Annual Presentations at IBG Orientation

All continuing students are required to present a poster describing their research activity of the past year at the annual IBG Orientation—held each year in August (the last Friday before the beginning of the fall semester). Students are also expected to present their research at the annual IBG mini-conference held each spring.

Exit Colloquium

All students are expected to do an exit colloquium at the conclusion of their training program. This presentation should be modeled as a "job talk," not a repeat of the final defense.