REQUIREMENTS FOR THE IBG INTERDISCIPLINARY CERTIFICATE

Friday Journal Club: All students must participate in the weekly journal club and colloquia series at the Institute for Behavior Genetics. Each student must present at journal club at least three times (no more than once per semester) during the course of their training but yearly presentations are encouraged. At least one presentation should focus on the student’s own research; preferably early in the training program. This presentation should not be used to present final dissertation work or as an exit colloquium.

Psychiatry Grand Rounds: NIMH trainees are required to attend Psychiatry Grand Rounds at UC Denver. You are encouraged to attend ‘several’ talks of interest to you—but at least one per semester. Psychiatry Grand Rounds take place on Wednesdays at 12p at the Anschutz medical campus in Denver. See the UC Denver Department of Psychiatry website for the Grand Rounds schedule. Travel costs for attendance can be reimbursed from the NIMH training grant (trainees are encouraged to organize group attendance). Starting in 2012, NIMH trainees will organize a mini-conference every other year on the genetics of mental health, with external speakers who also review the training program.

Petitions: 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).

I. Course Requirements:

1. Physiological Genetics (PSYC 5200, IPHY 5200, 3 credits; Stitzel).

2. Behavioral Genetics (PSYC 5102, 2 credits; Rhee, Carey).

3. Statistics (PSYC 5741, 4 credits; PSYC 5751; IPHY 5800, 5 credits; PSYC 5541, 4 credits; or other approved course). This must be a graduate-level course in statistics (of at least one semester), approved by the student’s advisory committee.

4. Scientific Integrity/Ethics (PSYC 5112, 3 credits; Smolen; UC Denver Pharmacology 7605, or other approved course).

Students also must complete two courses from the following:

1. Quantitative Genetics (PSYC 5122, 3 credits; Stallings).

2. Molecular Genetics/Genomics (IPHY 5102, 2 credits; Johnson; IPHY, PSYC, MCDB 5232, 3 credits; MCDB 5220, Molecular Genetics, 3 credits; MCDB 5230, Gene Expression, 3 credits; MCDB 5471, Mechanisms of Gene Regulation in Eukaryotes, 3 credits).

4. Bioinformatics and Genomics (IPHY 5262, PSYC 5262, 3 credits; Ehringer).

5. Advanced Statistical Genetics (IPHY 5300, 3 credits; Keller, Vrieze).

6. Behavioral Neuroscience

   Examples of Behavioral Neurosciences courses are:
   
   NRSC 5100, Introduction to Neuroscience I, 2-5 credits
   NRSC 5110, Introduction to Neuroscience II, 3 credits
   NRSC 5032, Neurobiology of Learning and Memory, 3 credits
   NRSC 5052, Behavioral Neuroscience, 3 credits
   NRSC 5072, Clinical Neuroscience, 3 credits
   NRSC 5132, Neuropharmacology, 3 credits
   NRSC 5092, Behavioral Neuroendocrinology, 3 credits

   **Students must complete one course from the following seminar courses:**

1. Genetics of Psychopathology (PSYC 7102, 2 credits; Rhee, Carey).
   
   **Note: this course is required of NIMH trainees.**

2. Molecular Genetics of Addiction (e.g., IPHY 6010, 3 credits; Stitzel).

3. Genetics and Substance Use Disorders (PSYC 7102, 2 credits; Stallings).

4. Neurobiology of Addiction (NRSC 5545, 3 credits, Bachtel)
   
   **Note: Neuropharmacology, or one of courses 2 - 4 is required of NIDA trainees.**

5. Benchmark Papers in Behavioral Genetics (PSYC 7102, 2 credits; Hewitt).

6. Developmental Psychopathology (PSYC 5453, 3 credits, Willcutt)

7. Population Genetics in the Modern Genomics Era (PSYC 7102, 2 credits; Keller)

8. Other approved seminar courses on topics relevant to behavioral genetics

**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 -- see Petitions below.

**II. 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.)
III. 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.

IV. Examinations

Each student in the training program is examined at least annually by an advisory committee. Examination results are to be incorporated into the student’s training file by the Chairperson of each advisory committee.

V. 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).

VI. 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.