

## NEUROSCIENCE GRADUATE SEMINARS – NEUROSC290 SERIES

The course of study in the Neuroscience Graduate Program at UC Berkeley is designed to expose graduate students to a wide range of laboratory research in the fields of neuroscience. As a means of providing an in-depth view of the research areas available and methodologies used in the neuroscience faculty laboratories, as well as exposing students to the broad range of disciplines and up-to-date literature surveys, each graduate student has to progress through several seminar and laboratory courses.

### First year seminar/laboratory courses:

**Neurosc290**, (2 units) or Neuroscience First Year Research, SRPS (Student Research Presentation Seminar), is an introductory seminar for first year neuroscience graduate students. This course must be taken during the Spring Semester of the 1<sup>st</sup> year. During this course, first year graduate students present original research results from the laboratory work performed by them in the laboratory rotation course (Neuro291A/B-see below) in which they are concurrently enrolled. Each weekly meeting is facilitated and mentored by the graduate adviser or a delegated faculty member, and its main purposes are exposing new graduate students to the research opportunities on campus, and introducing new students to the concepts of presenting original work as well as receiving and incorporating feedback.

**Neurosc291A/B**, (4-12 units) or Neuroscience Introduction to Research, is a two-semester core course requirement for first year graduate students. Each graduate student goes through a 10-week-long rotation in three faculty laboratories (total of 30 weeks, or 2 semesters, spread evenly over the academic year). Student's placement occurs according to student request and space availability in faculty laboratories. Each 10-week period, the student is working under close faculty supervision in laboratory setting. At the end of the three rotations, graduate adviser collects and compiles evaluations for each student from the three faculty members involved in student's rotations and assigns grade at the end of spring semester for the entire course series.

As a means of complementing the intensive laboratory research, adding to the student's knowledge of available research choices on campus, and expanding student's presentation of original research skills, students are expected to enroll in Neuro290 (see above) concurrently.

### Second year and beyond: research laboratory course

**Neurosc292**, (3-12 units) or Neuroscience Graduate Research, is the basic directed research course. Students work in faculty laboratories where they perform the research and preparation for the doctoral thesis and dissertation. Students are placed in their thesis laboratory at the end of the first year (after successfully completing Neuro291A/B). Placement occurs according to student request and availability of space in faculty laboratory. After placement, students work in the thesis laboratory under close faculty mentoring for the remainder of their graduate study period in the program until the successful completion and filing of their dissertations. Course is repeated for credit each semester.

### Journal Club course

**Neurosc294**, (1 unit) or Neuroscience Journal Club, encompasses three important facets of graduate education in the neurosciences: 1) Development of research presentation skills: fourth year graduate students will present seminars based on their ongoing dissertation research. Preparation and critiques of presentations will focus on organization of conceptual issues, data presentation, and summarization. 2) Exposure to current topics in neuroscience: faculty speakers will present on current issues and topics relevant to scientific development in the neurosciences, such as technical methods, application of analytical and statistical techniques, and organization and preparation of competitive fellowship and other grant applications. 3) Seminar preparation: a crucial aspect of graduate education is the interaction of students with invited seminar speakers. In order to facilitate preparation for visits by outside speakers – who are often leaders in their fields – a selected number of class meetings will be devoted to the review of scientific articles published by upcoming seminar speakers and/or other related articles in the field. This course can be taken multiple times for S/U credit; taken for letter grade during 4<sup>th</sup> year presentation; NIH Neuroscience Training Grant appointments must take course one semester during each year of their appointment.