

Neurosci 290A: Neuroscience Research Methods and Professional Development

Fall 2020

September 14 – November 30

Organizer

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Goals

The purpose of this class is to provide a broad overview of modern research methods in neuroscience, as well as career skills relevant to first-year PhD students. We will have a mix of class meetings on research methods, professional development and advising, and presentations by program alumni.

In the Methods meetings, a wide range of modern methods will be presented in didactic lectures by Neuroscience faculty. For each method, we will discuss the underlying theory, how new methods compare with classical approaches, examples of discoveries, analysis methods, issues related to interpretation, and limitations.

The professional development meetings will focus on topics relevant to beginning PhD students. These include the mentor-student relationship and principles of scientific rigor and reproducibility. These will be led by Neuroscience faculty Academic Advisors and other faculty.

Alumni presentations will be discussions with graduates of the Berkeley Neuroscience program that represent a wide range of post-PhD career paths. Alumni will share their career decisions and experiences and provide information about career options.

Practical issues

This class should be taken for a satisfactory/unsatisfactory grade by all first-year Neuroscience PhD students and students supported by the NIH Neuroscience Training Grant. Grades are assigned based on attendance and on participation in the professional development discussion sessions.

Textbook

There is no required text for this class. A useful background book that provides an introduction to a wide range of research techniques is M. Carter & J. Shieh, “Guide to Research Techniques in Neuroscience”, Elsevier 2015.