This course covers 12-14 papers that trace the exciting advances in molecular biology, microscopy and physiology that have revolutionized neuroscience in the last two decades. Starting with the cloning of GFP, which enabled cells and proteins to be visualized in vivo, through development of optogenetics and super-resolution microscopy, we will trace how this new technology has impacted the study of neuroscience. Each week a different student will present one of the papers listed below and will be responsible for explaining the technology used in the paper and the experiments that were performed. In addition, the student will lead a discussion on the relative merits of the paper.

The following papers will be presented:


**Course Coordinator:** Don Arnold  
**RRI 204b**  
P: 821-1266  
F: (213) 821-1818  
darnold@usc.edu  
Office Hours: M 2:00-3:00 PM

**Pre-requisites:** BISC 320 or BISC 421

**Textbook:** None

**Time and Place:** 4:00-5:50 PM, RRI 221.

**Grading:** The grades for the course will be determined by the presentation (50%), class participation (10%) and questions (40%). Every student must bring a question about the paper to be discussed to each class. After the class, the questions will be collected and graded.

**Disabilities.** Students requesting academic accommodations based on a disability are required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP when adequate documentation is filed. Please be sure the letter is delivered to Dr. Arnold as early in the semester as possible. DSP is open Monday-Friday, 8:30-5:00. The office is in Student Union 301 and their phone number is (213) 740-0776.
Disclaimer: It may be necessary to make some changes in the syllabus during the semester.