

Preparing Future Faculty (PFF) at UCLA
A seminar for graduate and post-doctoral students planning on careers in academia

Chemistry 272G ID# 542-506-200
Tuesday 11:30 – 1:00 (bring lunch if you wish)
Molecular Science Building 3440

Instructor: Arlene A. Russell
russell@chem.ucla.edu

As part of an HHMI grant to UCLA, the Department of Chemistry and Biochemistry will again offer a program for preparing graduate and post-doctoral students in the physical and life sciences for academic careers. This PFF program is designed to help you understand and experience the three key activities—research, teaching, and service—that define the academic career and to guide you in developing an informed position on the responsibilities that you will carry as a faculty member in higher education.

The Fall quarter addresses advanced topics in teaching Science at the college and university level. You will begin to formulate a personal teaching philosophy statement, which is often required in application packets. The Winter quarter focuses on the diverse expectations and obligations in schools and provide opportunities for you to meet veteran and new faculty who will discuss their experiences in a variety of types of institutions. During this quarter you will prepare a CV and have an opportunity to review others. The emphasis of the Spring quarter is on the challenges and opportunities in conducting and mentoring undergraduate research—a critical function of higher education. Participants will have the opportunity to submit a proposal for mentoring a science teacher or community college student during summer 2007.

Fall Quarter Syllabus

- Oct 2 The PFF program: Opportunities for teaching and service. The United States higher education system: Where should I teach? (University? College? Community College?)
 - Oct 9 Teaching philosophies: Designing and teaching a course (Goals, content, audience, articulation, tradition, flexibility)
 - Oct 16 Developing a syllabus and choosing a text book
 - Oct 23 Learning theories: What do we know about how students learn? Aligning instructional methods (research, lecture, lab, discussion, texts, IT, projects, demonstration) with educational research
 - Oct 30 *The Scholarship of Teaching*: The design and development of instructional innovation and educational research. Research in the “social sciences” (pilot testing, flexibility, formative evaluation, "human subjects," implementation, institutional support)
 - Nov 6 Special Lecture: Rick Moog, Project Director POGIL Process-Oriented Guided-Inquiry Learning: POGIL and the POGIL Project
 - Nov 13 Student assessment: Are you measuring what students have learned? (Test structure and design, lab assessment, essay evaluation, norming, mastery grading, portfolios)
 - Nov 20 Special Lecture: Chandra Srinivasan, CSUFullerton “The road to tenure: Reflections of a former PFFer”
 - Nov 27 *The Scholarship of Service*: Department, institution, profession, society, discipline
 - Dec 4 *The Scholarship of Research*: Nuts and bolts decisions. (Funding, resources, workloads, undergraduate or graduate, M.S.or Ph.D.)
- Text: *And Gladly Teach: A Resource Book for [Scientists] Considering Academic Careers*, Schwartz, Archer, El-Ashmawy, Lavalley, Eikey, American Chemical Society (2005)

Readings: Handed out in class