Mentoring the Undergraduate Research Experience

“I have the pleasure of mentoring undergraduates who are not only exceptionally talented, but want to change the world. They bring passionate, heart-felt intelligence to what becomes collaborative scientific research.”

Professor Peter Kahn, Psychology

“The students have made valuable contributions to our procedures, finding resources that we did not know existed and making our work more efficient. They have co-authored a paper that is now in press.”

Professor Stewart Tolnay, Sociology

“Undergrads bring a fresh perspective and level of enthusiasm to my lab and they show me my own research through their eyes, and it always looks better that way! Giving undergrads the opportunity to settle into a small group and see the importance of personal interactions and application of science puts their formal education in context.”

Professor Carol Sibley, Genome Sciences

These faculty members, like many others at UW, have found that mentoring undergraduates to become productive scholars is a teaching and learning opportunity that can have valuable benefits for all participants. This Bulletin, a collaboration between CIDR and the Undergraduate Research Program (URP), offers guidelines for faculty on how to make an undergraduate research experience successful for both students and mentors.

GETTING STARTED

• Identify the nature, scope, and methodology of the project from the beginning. Either you or the student may initiate the project. In the project description, clearly describe the context for the project as well as student responsibilities and time commitment. For student-initiated projects, direct students to relevant resources and help them develop a research focus outline. Assist with getting Human Subjects Approval if necessary.
• Advertise your position. Project descriptions may be posted in departments and on the Undergraduate Research Program website: www.washington.edu/research/urp/
• Request information that provides insight into the student’s experience, such as a resume or transcript.
• Meet with the student. Consider the student’s level of enthusiasm, goals, and reasons for wanting to do research with you. You might give prospective students a trial task to help you assess students’ initiative and follow-through.
• Select committed students who will be willing to persevere even in the face of inevitable difficulties.
AS YOU GO

• Help students learn to be effective researchers:
• Give students regular feedback on their work.
• Model research processes such as troubleshooting.
• Discuss ethical conduct of research with your students.
• Encourage students to become more involved in the field:
• Invite students to presentations, lab meetings, and other department events and introduce them to other members of the department.
• Direct students to the wider literature of the discipline.
• Help students learn about disciplinary meetings and academic conferences.
• Help students find funding (from UW or other sources): www.washington.edu/research/urp/students/funding.html

TAKING IT TO THE NEXT LEVEL

• Help students find opportunities to present their work, such as the annual UW Undergraduate Research Symposium: www.washington.edu/research/urp/symp/
• Have students document their learning by keeping a lab notebook, completing a portfolio of their experiences, and/or even contributing to publications.
• Suggest further areas of research that students might be interested in exploring.
• Help students think about post-graduation plans.

The Undergraduate Research Program can help you explore ways to engage students in learning through undergraduate research. For more information, call 543-4282 or send a message to urp@u.washington.edu.

To consult with CIDR on designing learning opportunities for your students, call 543-6588 or send a message to info@cidr.washington.edu.