The Undergraduate Research Opportunity Program: Involving Undergraduates in the University's Research Mission

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Abstract

The Undergraduate Research Opportunity Program (UROP) was originally developed to increase the retention and improve the academic performance of underrepresented minority students at the University of Michigan. The program's history, components and expansion will be covered. This session should particularly benefit those interested in learning about the structure of the program or are interested in developing their own such program.

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Over the years predominantly White University's across the United States have sought to increase retention rates, particularly for underrepresented students of color and women in the sciences, by creating special programs. These programs have had a variety of structures and formats: residential, living-learning environments, remedial, basic skill based programs, faculty and peer mentoring programs, etc. The Undergraduate Research Opportunities Program (UROP), uses a variety of strategies, including some of those mentioned above, and has been shown to positively affect both student retention and academic performance.

The Undergraduate Research Opportunity Program (UROP) was originally developed in 1988 to increase the retention and improve the academic performance of underrepresented minority students at the University of Michigan. Today, the program includes minority and majority students, with a continued emphasis on underrepresented minority students and an emerging focus on women in science students. Given the changing face of higher education, particularly at predominantly white four-year institutions, the structure and purpose of retention programs become increasingly important. UROP is one of many ways to involve and retain underrepresented students of color and women in the sciences.

The original program was based, in part, on a critical observation from the higher education literature. This literature cites the important role student integration into the intellectual mission of universities plays in student retention. For a variety of reasons, historically underrepresented students often are not invited into academic activities, which help them to integrate and identify with the intellectual mission of the university, as other students are. This lack of being welcomed and included in the academic mission and integration can lead to higher attrition rates for minority students. The emphasis on
women in science students comes out of the mounting evidence regarding the high attrition of young women interested in science to non-science fields. UROP also was developed to engage lower-division students at the University of Michigan more directly with faculty so they can benefit from the wealth of research activity taking place at the University and foster more interest in research-related or academic careers. The growth and expansion of UROP acknowledges the valuable educational benefits students achieve through participation in faculty research.

UROP offers first and second year students individual interactions with faculty through the creation of research partnerships. Students in UROP collaborate with faculty on faculty research projects, thereby learning firsthand about academic research and developing computer, library, laboratory, and other research skills. During the 2001-02 academic year, over 900 students were engaged in research projects in virtually all University of Michigan schools and colleges and across most academic disciplines.

In addition to the research partnerships, UROP provides academic support services for students enrolled in the program. These include an extensive peer advising program. We currently have groups in the Biomedical and Allied Health Sciences, Women in Science and Engineering, Social Science, Physical Science, Engineering, and Natural and Environmental Science. Another program feature is a series of special workshops focusing on skill development (time management and library research for example). We also sponsor several research symposia to showcase student research.

Students participate in UROP for either academic credit or work-study pay. A limited number of grants are given each year to students with demonstrated financial need. Students who have received a work-study award as part of their financial aid package can apply this award to UROP. Currently, through various external and internal funding sources UROP covers all work-study costs. UROP faculty sponsors can apply for supplementary research funds to cover student-related costs such as small laboratory equipment or materials, publications, or copying costs. The average award is $300.

Funding to start the pilot UROP program came from several university sources: the Office of the Vice President for Research, the Office of Minority Affairs, and the Office of the Vice for Student Services. Outside funding sources include the State of Michigan's Office, the Department of Education's Fund for the Improvement of Post-secondary education, the Howard Hughes Medical Institute, W.K. Kellogg and Coca Coal Foundations. The program also receives support from private donors and was part of the University of Michigan last Capitol campaign to establish a 3- million dollar endowment. UROP received a 1997 National Science Foundation Recognition Award for the Integration of Research and Education.

**Presenters**

*Angela M. Locks* is currently an Assistant Director for the Undergraduate Research Opportunity Program at the University of Michigan, Ann Arbor. Her responsibilities...
include collaborating with senior staff on the annual selection, training and supervision of 30 member peer advising staff, training new program associates on department policy, philosophy and procedures regarding fellowship programs and student and faculty recruitment. Angela has been a member of the evaluation team for the program since 1995. As such she disseminates information on the program's evolution including presentations at national conferences. She has completed a manuscript to be submitted for publication on the program's first major qualitative study. Angela is committed to working with a diverse set of students and advocating for those students with less privilege and access to higher education.