REU PROGRAM AT THE UNIVERSITY OF WASHINGTON

The National Science Foundation supports Research Experiences for Undergraduates in various disciplines at selected universities. The University of Washington Mathematics Department has been an REU site since 1988. This program is directed by Ed Curtis and Jim Morrow. The students in the program are undergraduates selected in a competitive process from universities throughout the United States. Each year eight to ten students are selected and are given a stipend from the NSF grant that supports an eight week stay during the summer in which they participate in research projects under the direction of Professors Curtis and Morrow.

The projects are in the general area of "inverse problems for electrical networks." After a week of lectures and reading, students start to work on projects. The students in this program are exceedingly strong. In summer, 2000, students came from UW, Montana, Cal Irvine, Pomona, University of Florida, Florida State, and Notre Dame. A student from summer, 1999, presented a paper at the January, 2000, meeting of the MAA. Recent graduates have received NSF Fellowships, a Sloan Fellowship, honorable mention in the Alice T. Schafer Contest, first place in the SIAM modeling competition, and have gone on to become faculty at such universities as UCLA, Washington State, Courant Institute, and MIT. There are frequently two or more University of Washington undergraduates in the program. Our experience is that the UW students are always among the best of this talented group. Both Christopher Twigg and Thomas Carlson (see page 1) were students in our REU program. Three REU students are continuing their research work at the University of Washington and are supported by the VIGRE grant.

COMMUNITY COLLEGE SYMPOSIUM

The first annual Community College Symposium at the University of Washington was held on Friday, November 17, 2000. The purpose of the symposium was to facilitate communication between the Mathematics Department of the University of Washington and the Mathematics Departments of the Community Colleges. This first meeting concentrated on recent and proposed changes in first and second year courses at the University of Washington. We hope to make the symposium an annual event to promote discussion of common issues.

At the plenary session an overview of recent and planned changes to our undergraduate courses and degrees was presented. The individual sessions contained more details on some of the changes. For example the session on Math 124-5-6 discussed changes in syllabus, text, and format in the standard calculus course. The session on Math 111 offered a chance to attend a class and then discuss objectives and methods used to achieve them. In the session on 300 level courses, changes in the 300 level offerings, some of which are dictated by the change in the syllabus of Math 124-5-6, were discussed. More information on this Symposium is available from Professor Jim Morrow, morrow@math.washington.edu. Beginning next year, we will offer a sabbatical program for community college math teachers to develop closer ties to ease the transition for students moving from community colleges to the University of Washington.

CALCULUS CHANGES UNDER WAY

Significant changes are being implemented in the teaching of calculus by the Mathematics Department at the University of Washington. These changes are the culmination of three years of reviewing the calculus program, visiting other departments around the country, and experimenting with many formats.

Math 111/112 (Business Calculus) is starting its third year with reduced class size. The Math Study Center has been remodeled and expanded to include Math 111/112. The university administration provided the funding for the remodel.

The standard three-quarter calculus sequence is being revamped in a number of ways. The first change is the addition of two new calculus sequences, Math 127-8-9 and Math 144-5-6, which are being offered now for the second year. Math 127-8-9 is designed for students interested in the mathematical sciences. Math 144-5-6 includes some probability, and is designed for students interested in the biological sciences and psychology. A Math Services Committee has been formed to help us keep in touch with and address the needs of our client departments and their students.

In addition to introducing two new calculus sequences, our basic service course, Math 124-5-6, is being revised substantially. Math 124-5-6 is designed for students interested in the physical sciences and engineering. The content is changing as are the text books. With these changes our syllabi will align better with those of other institutions, making the transition into our courses easier for transfer students. The syllabi will continue to emphasize a problem solving approach to teaching calculus, which has been one of the strong points of our courses.

The other major change involves class size and the organization of quiz sections in our three-quarter calculus sequences. The goal will be to offer these courses with a maximum lecture size of 80 instead of 160, and a maximum quiz section size of 27 instead of 40. In addition, one of the two weekly quiz section meetings will be extended from 50 to 75 minutes, giving much greater flexibility to the quiz sections. Many of these longer quiz sections will use more extensive worksheets, which are currently being developed. We will start using this format in some test sections of the first two quarters of the three-quarter sequences in Spring 2001, and then convert all of Math 124-5, Math 127-8, and Math 144-5 to the new format by Autumn 2001. The Mathematics Department has submitted a "Tools for Transformation" proposal to help support these changes. The department is very pleased with the encouragement and support it has received from many parts of the university administration to proceed with these changes.

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Did You Know That You Can Now Earn Tyee Points by Contributing to the Mathematics Department?

Members of the Tyee program who currently receive priority seating in Husky Stadium (Tyee seats) and Hec-Edmundson Pavilion (Key 100 and Fast Break seats) can receive Tyee points for contributions to academic programs within the University if they give at the President's Club level ($2000 and above). These points are transferred to the Tyee account each January for the previous calendar year's gifts.

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