

SEES Research and Mentoring Program (S-RaMP)

Project Personnel

Total Award Amount \$ 60,000

Project Director

Name: Barbara Burke
Title: Professor
Department: Chemistry

Co-Project Director

Name: Michael Page
Title: Assistant Professor
Department: Chemistry

Co-Project Director

Name: H. Sadaghiani
Title: Assistant Professor
Department: Physics & Astronomy

Project Description

The goal of our project is to further increase the retention/graduation rates of SEES students. The project will consist of: 1) Introduction to Research program for upper division SEES students, and 2) STEM Transfer Student Mentoring program for our incoming SEES transfer students.

Introduction to Research activities will include carrying out projects, writing reports, presenting research results in public forums, attending professional conferences, and support for graduate/professional school exams and application costs. Specifically, students will participate in research projects for at least two successive quarters, turn in quarterly research reports to the project director, and be required to present their results at local, regional, or national professional conferences. In addition to individual group research meetings, the entire cohort of students and their faculty mentors will meet twice each quarter as a group to share their research and gain more insights about the research process itself. It is well documented that students who are engaged in their major and have strong relationships with faculty have higher retention/graduation rates. These activities will ensure that our students are better prepared to move into the professional STEM work force.

STEM Transfer Student Mentoring activities will include an adaptation of the successful SEES freshman Faculty Student Mentoring Program (FSMP), biweekly informational and community building seminars, and, after one quarter at CPP, eligibility for our Introduction to Research program. Specifically, incoming transfer students will be mentored by upper division CPP students (ratio of 3:1) who in turn are mentored by faculty members (ratio of 3:1). Transfer students will meet individually with their upper-division mentors weekly and the mentors will meet weekly in groups of three with their faculty mentor. Weekly journal entries will be turned into the project director quarterly. We will use the book "The Elements of Mentoring" (W. B. Johnson, et al, 2004) for discussions for the faculty-student mentoring meetings. Included in this program will be biweekly seminars by faculty on their research, presentations about cooperative education opportunities, professional/graduate school application process, scholarship and summer research opportunities, and community building exercises. We believe this program will enable our incoming STEM transfer students to decrease the time needed for academic and social integration in the CPP milieu, resulting in greater retention/graduation rates.

After reaching junior status, about 50% students (FTF or transfer) graduate from the College of Science. WEEA program data show that of the 62 women participating in activities such as those described above, 74% graduated by the end of the

program 23% were on track to graduate and only 2 left STEM majors. We believe similar results will be obtained for students participating in the proposed S-RaMP program.