



Need Statement – Example 3

Career Planning Workshops for Chemistry Graduates

Since 1995, the National Science Foundation (NSF) initiated a discussion questioning whether or not graduate education in the chemical sciences adequately prepares students for their careers. The main criticisms of graduate chemistry education are that students are overspecializing in an era when science is moving toward interdisciplinary approaches and that students are inadequately prepared in the soft skills areas such as written and oral communication, teamwork, and management—essential skills for career success. In addition, the graduate chemistry education system is not giving students a realistic picture of the career opportunities available to those with a Ph.D. In a recent NSF survey, 10,000 domestic physical science doctoral graduates were surveyed about their career aspirations. Only 10 per cent of the students intended to pursue careers neither in academia nor in industry. The same survey revealed that for the 3,000 students pursuing post-doctoral positions, the number one reason for remaining in academia was because they could not find jobs. Therefore, initiatives are needed to educate graduate chemistry students about both their career options and the need for soft skills in their future careers.

To help chemistry graduate students adapt to the changing job market, Women in Science and Engineering (WISE) at the University of Minnesota proposed a series of workshops dedicated to educating students in oral and written communication, teamwork, management, negotiation skills, and career opportunities in government, non-research areas, academia, and industry. Since 1995 the WISE team has successfully conducted career development workshops to address the specific needs of chemistry graduate students. Past workshops were devoted to interviewing skills, resume and curriculum vitae preparation, teaching skills, and nontraditional careers. Annually 50-75 chemistry doctoral students participate in these workshops. We propose to continue this workshop series over the next four years by offering two workshops per year: one dedicated to exploring a specific career sector and the other dedicated to an essential soft skill. WISE has received \$1,100 for the Careers in Government Workshop from the University of Minnesota's Office of University Women and the Department of Chemistry; however, this is not enough to advertise the workshops, rent facilities, prepare materials, and pay instructors. We are requesting \$12,000 over the next four years to implement this new workshop series to better prepare our students for chemistry careers in the 21st century.