

University of Washington
Center for Nanotechnology

Collaboration with the
Center for Workforce Development

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Objectives of Collaboration

- ◆ Track student progress and experiences in an interdisciplinary degree program
- ◆ Document student perceptions of the impact of interdisciplinary study on career goals
- ◆ Encourage the growth of interdisciplinary interaction within Nanotechnology by pairing students with mentors



Tracking & Mentoring Program Student Eligibility Criteria

- ◆ Funded by the Center for Nanotechnology
 - IGERT
 - UIF
 - JIN
- ◆ Advisor is a faculty member associated with the Center for Nanotechnology
- ◆ Graduate student member of the Nanotechnology Student Association



Student Tracking

- ◆ Nanotechnology Initial Interview (NIIF)
- ◆ Nanotechnology Continuing Information (NCIF)
- ◆ Nanotechnology Exit Information (NEIF)



Nanotechnology Initial Interview (NIIF)

- ◆ Cohort I (AY 2001-02) has twenty-nine students
- ◆ Cohort II (AY 2002-03) has seventeen students
- ◆ All students from Cohort I and 15 of 17 from Cohort II completed interviews
- ◆ Interview combines demographic data, academic information, student perceptions about Nanotechnology

Nanotechnology Continuing Information (NCIF)

- ◆ Administered in years following the initial interview to update original information and track issues identified in the initial interview
- ◆ 26 of 29 students from Cohort I completed the NCIF





Nanotechnology Exit Information (NEIF)

- ◆ Administered to graduating students through email
- ◆ 4 students from Cohort I and 2 from Cohort II completed the NEIF
- ◆ Addresses outcome issues such as duration of job search, annual income, sector of employment and student perceptions about influence of interdisciplinary education on career outcomes



Nanotechnology Mentoring Program

- ◆ Match students with mentors (faculty and industry)
- ◆ Provide networking opportunities
- ◆ Offer all students affiliated with the Center access to professional development seminars and workshops regardless of participation in mentoring program



Mentoring Program Structure

- ◆ Center for Nanotechnology recruits mentors
- ◆ CWD trains mentors and students on what to expect from mentoring relationship
- ◆ CWD manages programs and administers surveys



Mentoring Pairs

- ◆ Industry and faculty mentors
- ◆ Faculty mentors cannot be from student's home department
- ◆ 20 students in the program in 2002-03, half of whom remain unmatched due to lack of industry mentors



Findings from Interviews, Surveys & Mentoring Program Evaluation



Student Demographics

- ◆ Cohort I 10/29 Female
- ◆ Cohort II 2/15 Female

- ◆ No African American, Hispanic or Native American students in Cohort I or II

- ◆ Cohort I 65% Caucasian, 28% Asian, 7% other
- ◆ Cohort II 60% Caucasian, 20% Asian, 20% other



Student Demographics

- ◆ Most students are from Chemistry, Physics, Bioengineering and Materials Science & Engineering
- ◆ Students are funded through a variety of programs including IGERT, Graduate Research positions, UIF, JIN and faculty grants

Key Findings

- ◆ Students come with interdisciplinary backgrounds and value the exposure to different disciplines
- ◆ While good advising is critical to student attraction and retention to the field, poor advising is viewed as a barrier





Key Findings

- ◆ Most students are collaborating with faculty members outside their home departments and many co-author papers as a result of their interdisciplinary experiences.
- ◆ While students value the opportunity to have interdisciplinary experiences, they are concerned about time-to-degree



Key Findings

- ◆ Most students plan to work either in industry or an academic setting after graduation. Those who are undecided are most often trying to choose between private industry or academic institutions.
- ◆ Students would like more industry contacts, interaction and mentors



Key Findings


- ◆ Many graduates currently working as post-doctoral fellows
- ◆ Family issues can be barriers while in school and are critically important to graduates in the workplace

Key Findings

Interdisciplinary work offers:

1. Increased variability in coursework opportunities
2. Increased amount of scientific networking
3. More applicability to the “real world”
4. Increased opportunities for career development





Summary of Plans for 2003-04

- ◆ Increase numbers of mentoring events, i.e. seminars, workshops and networking events
- ◆ Continuous recruitment of industry and faculty mentors
- ◆ Strengthen collaboration with Nanotechnology Student Association
- ◆ Continue tracking student progress through the Nanotechnology Program and career outcomes