RUTGERS
THE STATE UNIVERSITY OF NEW JERSEY

Scientists, Technologists, Engineers, & Mathematicians for Education Scholarship Program (STEM-ESP)

Noyce Annual Meeting 2013

Washington, DC

Overview

- Introductions
- About Rutgers
- About Noyce at Rutgers
- University Partnerships
- Scholars' Voice

Rutgers, The State University of New Jersey

- Rutgers is the 8th-oldest school in the U.S.
- Member of the Association of American Universities
- Total Faculty and Staff: 2700
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- Total Students: 52,500
  - Undergraduates: 39,000
  - Graduate and Professional: 13,500
  - 3 main campuses: Camden, Newark, and New Brunswick/Piscataway
- 100 bachelor's, 100 master's, and 80 doctoral and professional degree programs

Noyce at Rutgers (STEM-ESP)

- Collaboration of School of Engineering, Department of Physics & Astronomy, the Graduate School of Education, and the New Brunswick Public Schools

- Scholarships in the amount of $15,000 per year for up to three years to a total of 15 engineering and physics students who will pursue teacher certification and teach in a high-needs school district

- Providing meaningful opportunities that enhance Scholars' content and pedagogical content knowledge to include coursework and fieldwork at local school districts
  - Complete bachelor's degree in engineering or physics
  - Complete Master's of Education with concentration in either physics or mathematics

Noyce at Rutgers (STEM-ESP) (cont'd)

- Integrating the theme of "STEM for Humanity" by offering seminars and workshops engaging scholars in meaningful discussions on how science, technology, engineering, and mathematics impact society and ethical issues

- Establishing an e-mentor network between in-service teachers and pre-service Scholars

- Establishing continuing professional development opportunities in the form of discourse communities, lending libraries, and online support for Scholars as they begin their career

Recruitment

- The Office of Student Development in School of Engineering
  - Fosters the educational, personal and professional development of students while simultaneously working to increase the number of underrepresented populations in the SOE
  - Outreach through summer programming for students and educators, as well as academic year programming in- and out-of schools with the assistance of student volunteers
  - Engineering student hired and prepared to serve as residential peer mentors, instructors, teaching assistants, tutors, study group facilitators, and project team leaders
  - Motivation for Noyce came from ENGINEERING students

Recruitment (cont'd.)

- GSE and DPA Learning Assistant Program
  - Most recent cohort recruited mostly from Learning Assistant Program
- Emails
- Information Sessions
- Visit to Classrooms

- Cohort 1: 10 applications (8 engineers/2 physicists)
- Cohort 2: 10 applications (6 engineers/4 physicists)

Cohort 1

Preliminary Interview – Why education?

- "I started out as an engineer that lasted all of a year, and then I realized that I absolutely hated everything about it and then I became a physicists and I loved it. And I love my courses I love the department , I started doing education research actually, I helped rewrite the curriculum for physics 115 which is an engineering course during my sophomore year. I got to go to a conference for it , I got to present the work that I did with my professor… eventually I sat down with my parents, who are both involved in education, thought I was going to be an engineer or something or the other, I was like well I think I am going to be a teacher … and we had a talk about it" [Josh, 10/15/2012]

- "I really enjoy the engineering part but the bad part the [is the] corporate culture part… In high school, I started up a tutoring program at my local middle school… My first experience in front of a classroom was in the summer with the EOF program here [at Rutgers]… So yeah I see some of them now and [they say 'thanks so much!' it feels good!" [Mike 10/15/2012]

- "I really like my major [bioenvironmental engineering] a lot… I always wanted to teach, kind of, but I always thought of it like a side thing… I was part of the TARGET summer… and I loved it. I never really thought of it as my main thing, until last year when I started talking to Dean Laffey about the [STEM-ESP] program and thinking about my future as I was graduating because last year I was stressed out because even though I really like environmental engineering I wasn't entirely sure that I would get a job that I really liked." [Natalie, 10/15/2012]

- "I knew that I wanted to do something with math and sciences… exactly what I wanted to do, I wasn't sure. I just knew that engineering would probably guide me towards what I wanted to do… [Teaching] is kind of like where I envision myself anyway, I always envisioned myself going back to Newark… regardless of what capacity I was in, if I was in a classroom or… if I was starting up a company or if I was working with like a big company I would have wanted to go back to like a high needs place… especially somewhere from where I came from… In the capacity of teaching though… just being able to like be in there and kind of like bridge that gap as much as I can to like improve it… that's like one of the biggest things that I think I could really do for the high needs places." [Raheem, 10/15/2012]

Summary

- Linking with university staff and faculty who administer outreach and academic support programs is crucial to recruitment

- Educating students and parents/families about teaching a profession

- Providing diverse professional development: education research, teaching, tutoring, facilitating study groups, outreach

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Questions?

Thank you!