

WEPAN

A Speaker Series to Patch the Pipeline for Women

Abstract

Women undergraduate students in science and engineering at a primarily undergraduate institution do not have many opportunities to interact with PhD students and therefore have a hard time visualizing themselves pursuing that path. A program created at this Hispanic Serving Institution will bring to campus talented women who are pursuing a doctoral degree or currently hold a post-doctoral fellowship to give departmental seminars to faculty and students. This program is funded by the National Science Foundation's ADVANCE program and seeks to also introduce the speakers to the possibility of seeking a faculty position at a primarily undergraduate institution.

To implement this program, one faculty member has been identified in each department as an ADVANCE Associate, serving as a liaison to the ADVANCE office and charged with arranging the speakers for their department. Sixteen departments, across three colleges, are involved with the program and have a goal of inviting one woman PhD/post-doc speaker per quarter. Many of the seminars are on multidisciplinary topics and are advertised in all of the STEM departments with attendance encouraged across department lines. As a result of this initiative, women who give the seminars have a better understanding of a primarily undergraduate institution as a career path, faculty have a wider pool of candidates to invite to apply for a faculty position, and undergraduate students see the possibility of pursuing an advanced degree.

Introduction

_____ University is a primarily undergraduate institution with a large and well-respected engineering program. Graduate programs are limited to the Masters level. The undergraduate programs pair a strong theoretical foundation with a strong emphasis on hands-on learning and practical applications of engineering. Graduates are well prepared for both industry and graduate school, but most students have never considered going beyond the bachelor's degree to graduate school. This may be due to the fact that many of the students are the first in their family to go to college and, being at a primarily undergraduate institution, they have no contact with PhD students.

In the fall of 2006, the university received an ADVANCE Institutional Transformation Award from the National Science Foundation to increase the number of women faculty in the Science, Technology, Engineering, and Mathematics (STEM) disciplines. The ADVANCE project is working with sixteen STEM departments across three colleges. Within the College of Engineering, there are seven departments.

In the current economic climate, very few faculty searches are actually occurring so one aspect of the project is focused on expanding the candidate pool for future faculty searches. A "Distinguished Doctoral and Post Doc Speaker Series" was established to

bring women speakers to campus to introduce them to the university and to allow the faculty and students in the host department to get to know them.

Distinguished Doctoral and Post Doc Speaker Series

The Distinguished Doctoral and Post Doc Speaker Series was designed to involve the sixteen academic departments directly in finding the speakers and hosting them during their visit to campus. One faculty member in each department is designated as the ADVANCE Associate to help with program implementation in that department. The ADVANCE Associate is released from some of their teaching responsibility to have time to devote to ADVANCE activities. The ADVANCE Associate is tasked with reaching out to research universities to find talented women in doctoral programs or currently in a post-doctoral fellowship and invite them to campus to give a seminar on her research.

This initiative was created with three goals.

1. To increase the awareness of _____ University as a place to seek employment in the future for the invited women speakers.
2. To infuse more women speakers into the engineering and science departments so that current faculty members become more aware of women that could be potential faculty candidates and to have the women speakers serve as role models for the undergraduate students.
3. To foster connections and collaborations between engineering and science faculty at _____ University and faculty at research universities.

Implementation

The ADVANCE Associates were selected by the ADVANCE Principal Investigator in consultation with the Department Chairs and Deans, and include both junior and senior faculty members. An initial training session was held with the Associates to outline the goals of the ADVANCE program and specifically their role in implementing the speaker program.

Each STEM department is allowed flexibility in how they implement the speaker program. Some of the departments have an established seminar series and incorporate the ADVANCE speaker into it; while other departments have the ADVANCE speakers give a talk at a student club meeting for students and faculty. By allowing the department faculty the flexibility to design what is best for their own circumstances, they have greater ownership of the program.

The speakers are identified in a number of different ways. Some of the Associates have contacted their former professors or classmates that are now faculty at other institutions for help in identifying speakers. A few of the speakers received their bachelor's degree at this institution and are now pursuing an advanced degree. And some of the connections have been made through other ADVANCE institutions.

The ADVANCE staff assists the Associates with some of the logistics and provides help in finding speakers, if needed. The grant covers the travel costs of the speakers and provides them with a small honorarium.

In addition to presenting a seminar on their research to department faculty and students, the speaker's visit also includes meetings with the ADVANCE PI, the Director of the Faculty Center for Professional Development, the Associate Vice President for Research & Graduate Studies, a tour of labs and the campus, and lunch with some of the department faculty. Additional meetings might be scheduled with other faculty with similar research interests and student groups.

Discussion

The ADVANCE speaker program is receiving accolades from faculty, students, and the speakers during its first year of implementation. Each of the sixteen STEM departments is targeting to invite 3 to 4 speakers per year. Attendance at the seminars has been excellent, sometimes drawing a crowd of 60 to 80 students and faculty. Invited speakers have made the following comments.

Thank you very much for your invitation to the campus and allowing me to be a part of your student speaker series. I think it is wonderful what you are doing for faculty through the ADVANCE Project and the Faculty Development Center. It demonstrates how much _____ University values good teaching and the quality of education you are giving to your students.

This was a great experience and I have learned so much. This has helped prepare me for the future because it was like a practice interview.

I live nearby, but I did not know anything about _____ University. Now I will consider this school when I apply for a faculty position.

The STEM departments and the ADVANCE Associates have embraced this initiative because they see direct benefits to their departments as promoting their department to a potential future candidate.

The ADVANCE Future Faculty Seminar program is accomplishing the originally stated goals and more. The seminars are an excellent professional development opportunity for the speakers as they learn about different educational settings, practice their interview and presentation skills, and establish a network with faculty at _____ University. In addition, the seminars are fostering collaboration across departments because students and faculty are attending seminars in other departments, and ADVANCE Associates are collaborating to co-host speakers when their research is interdisciplinary.