Retaining Probation Students in Engineering and Computer Science

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Abstract

The Engineering Student Programs Office (ESPO) in the School of Engineering (SOE) at the University of New Mexico (UNM) is responsible for advising students on both college and academic probation who have been admitted into the SOE in Pre-Major status. Linking traditional, innovative, and visionary initiatives has increased retention and matriculation for these students in Engineering and Computer Science Pre-Major status. Throughout this paper we will examine these initiatives. We believe in personalizing the requirements for each probation and re-admission at-risk student. We utilize the traditional requirements of having a written contract, requiring grade checks, and having an open door policy with "honest" conversations. We solicit faculty assistance in deciding exact requirements for admission or re-admission and defining specific and measurable goals and objectives for the students. We also request faculty to assess a student's potential for successful progress. We utilize technology by referring students to on-line tutorial services and encouraging constant one-on-one communication between faculty, students, and our office via phone, email, and frequent in person contacts.

Introduction

For the past 3 years the ESPO staff have attempted many techniques to increase our effectiveness in retaining students in their pursuit of an Engineering or Computer Science degree. We are tasked with preparing all incoming freshmen, transfer, and re-admission students, known as "Pre-Majors", to become eligible for admission into a degree program in the school. We are also responsible for all Pre-Major students placed on probation due to not meeting the Grade Point Average (gpa) requirement or non-progress in their degree. In 1999, the SOE probation requirements of a minimum cumulative gpa of 2.5 increased from the previously required 2.2, and the minimum semester gpa of 2.5 increased from 2.0, however the academic probation minimum cumulative gpa of 2.0 remained the same as before. We have also become more strict in the requirements of maintaining reasonable, "C", or better grades in all attempted courses, and showing progress towards their degrees.

To increase matriculation of Engineering and Computer Science students and to maintain retention at the University of New Mexico, it is vital to personalize the requirements for each probation student. It is also crucial to have common components and strategies in place for every student. This paper will specifically address three components for every student on probation - mandatory advising, faculty collaboration, and technology in advising.

Mandatory Advising Session

Mandatory academic advising allows the student and advisor to develop a holistic relationship. To begin with, each student that is placed on either academic or School of Engineering probation has an "administrative registration hold" placed on their registration account. This precludes the student from registering or changing their schedule without first having a conversation with their advisor. Second, the student and the advisor develop a written contract outlining the probation conditions. While the contracts are unique to the individual student, they typically involve turning in monthly grade checks, attending study groups or other on-campus tutoring, and developing a personal time management plan. Throughout the semester, the student and the advisor meet to discuss progress on the contract, suitable education plans, clarification of career goals and the selection of appropriate courses. The advisor also facilitates the student's understanding of the expected standard of achievement in an Engineering and or Computer Science degree. If the student decides to change majors out of the SOE the two work together to develop a plan for admission into another college or school with in the University.

The advisor also maintains a close relationship with at-risk re-admitted students. These students were suspended from the School of Engineering for either a low grade point average or not making progress towards an Engineering or Computer Science degree. To gain re-admission, students are required to submit a packet which includes an assessment of their own academic foundation and academic progress. They are also required to develop a personal statement and academic plan. The student/advisor relationship is a key factor in matriculation and retention.

Faculty Collaboration

Because the primary purpose of the Pre-Major program is to ensure that students complete the requirements for admission into department status, it is imperative for staff advisors to collaborate with faculty advisors. Often throughout the semester, the staff advisor refers the student to speak with a faculty advisor regarding course selection or clarification of education and career goals. The student and the faculty advisor begin to build an advisee/advisor relationship. Once a semester, staff advisors, a faculty advisor from each department, and the Associate Dean, meet to discuss every student on probation. During this meeting the group reviews each student's semester gpa, cumulative gpa, degree gpa, and department admission gpa. The group also monitors matriculation through courses required for admission into department status and accordingly sets specific and measurable goals for each student. Collaboration with staff and faculty advisors has increased matriculation into the departments.

Technology

While the advisors focus on creating a unique one-on-one advising relationship with each student, it is crucial to deliver advising referrals and resources through technology. Students gain access to on-line tutoring with the University's Center for Academic Program Support and to the SOE web sites which offer guidance with career and degree exploration, information on study groups and tutoring, and ways to get connected with technical student organizations. In

addition, throughout the semester, students are encouraged to communicate with their faculty advisors and staff advisors via email with questions and or concerns.

By strategically implementing the above mention three components with every student on probation we have decreased the total percentage of students who are continued on probation and significantly decreased the percentage of students suspended from the University of New Mexico. Additionally, the number of students who been removed from probation has increased. (Refer to table 1)

Pre-Major Students						
	97/98		98/99		99/00	.
		% of Total Pop.		% of Total Pop.		% of Total Pop.
Placed on Academic Probation	67	13%	54	11%	56	11%
Placed on SOE Probation	89	17%	71	14%	88	18%
Suspended /Dismissed	80	15%	50	10%	29	6%
Continued on Academic Probation	55	10%	36	7%	33	6%
Continued on SOE Probation	66	12%	69	14%	60	12%
Removed from Probation	13	2%	17	3%	33	7%

Table 1: Probation status data

Conclusion

Collaboration among staff and faculty advisors is necessary and plays an integral role in the matriculation and retention of probation students to the School of Engineering and to the University of New Mexico. We have developed a process that appears to be fulfilling our goals and leading to an increase in retention and matriculation.

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