

On-Campus Employment for Improved Retention of Electrical Engineering Students

Heinrich D. Foltz, Hamid Zarnani, and Edwin LeMaster

University of Texas - Pan American
Electrical Engineering Department
1201 W. University Drive, Edinburg, TX 78541

Abstract

This paper describes an on-campus employment program for electrical engineering students at the University of Texas - Pan American (UTPA), supported by the Texas Workforce Development program of the Texas Engineering and Technology Consortium. UTPA has a high proportion of at-risk students, with over 75% eligible for financial aid, and a campus-wide freshman retention rate of 65%. Many students are under pressure to contribute financially to their families, and thus take on outside employment regardless of whether they receive financial aid. Conflicts between work and school are frequently cited by students and appear to be a major negative factor, particularly for freshmen and sophomore students who have not yet developed realistic expectations about the amount of time required for successful engineering studies.

In the initial phase of our program, a group of sixteen electrical engineering students were offered part-time jobs within the department, under the condition that they agree not to accept outside jobs. The assigned tasks were related to electrical engineering and supervised by faculty and technical staff. The supervisors were instructed to work around the students' class and exam schedule. 100% of the students in the program were still in good academic standing at the end of the first year, and the overall retention rate as electrical engineering majors was over 90%.

The retention rates for the program appear to be significantly better than for conventional scholarship programs, at a comparable cost. We believe that the main reasons for this were elimination of time conflicts, engagement of the students' work ethic, and increased faculty mentoring.