

**IEEE MENTORING OFFICE @ UTA
“FROM CONCEPT TO REALIZATION”**

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Abstract

This paper is about the ‘IEEE Mentoring Office’, which is a centrally located facility within the Department of Electrical Engineering Nedderman Hall at University of Texas at Arlington. The concept of mentoring future Electrical Engineering students at UTA has solidified into the primary role among IEEE officers and its members. The field of Electrical Engineering is a very challenging subject for most students, and is often perceived as too difficult. It was also observed that the retention rate was very poor for these students in their freshman and sophomore years. With the help of IEEE Officers and graduate as well as undergraduate students, the IEEE mentoring office was created. The IEEE mentoring office provides help to engineering students with their course work, lab work and career planning. This paper covers the concepts, details and difficulties faced associated with the creation and operation of an IEEE mentoring program.

Introduction

The mission of the Institute of Electrical and Electronics Engineers (IEEE) is to promote the engineering process of creating, developing, integrating, sharing, and applying knowledge about electro and information technologies and sciences for the benefit of humanity and the profession. In accordance with this mission, the Mentoring Office program was conceived in the spring of 2002 by members of the UTA-IEEE Student Branch and IEEE faculty advisor Dr. Wei Jen Lee.

Concept

The mentoring office is based on students being helped by their peers. Even though the instructors at UTA are very helpful and usually maintain an “open door” policy, peer mentoring offers a friendlier and less intimidating study environment. Peer mentoring is a proven method to help students improve their understanding of difficult concepts. Officers of IEEE-UTA chapter believed that the creation of central location that facilitated peer mentoring was in the best interest of all engineering students, the department, and the University. The program was to feature all the IEEE-UTA officers as mentors, volunteering at least two hours per week in the chapter’s local office. Since the IEEE-UTA office offered a large concentration of accomplished EE students, it was already a common place for students to seek help and advice. It was not long before word of our mentoring office propagated through the student ranks, and the program grew in popularity.

As our popularity increased it became evident that we were not equipped to handle the amount of students that came to us for assistance. In addition to homework help, students requested help with various computer software, hands on lab exercises, and exam review sessions. To fulfill these needs, Dr. Wei Jen Lee worked with us on the journey of expanding our possibilities by helping us discover means of acquiring computers, software programs such as Matlab, PSpice, Labview, Cadence, etc, and a larger facility. As students, accomplishing such tasks is no simple matter. Computers, software licenses, and especially real estate, are highly prized items on campus. To accomplish these tasks we would require help higher from authorities.

Dr. Lee helped us approach the student advisors, Dr. William Dillon, Mr. Bernard Svihel, and the chair of the EE department Dr. Raymond Shoults. These faculty members were involved in the Texas Technology Workforce Development Grant Program (TWD) whose guidelines paralleled our objectives. The TWP was conceived to increase the number of baccalaureate degrees awarded in the Department of Electrical Engineering, with the desired outcome of increasing the number of BSEE students placed in the technology industry of Texas. The grant from TWP could help propel our program to new levels. With this new union, the IEEE Mentoring Office and these faculty members were able to merge the two plans. Working together, with funds from the TWP and other grants from Dean’s office, we sought to create something unique that would make a lasting impact on the University.

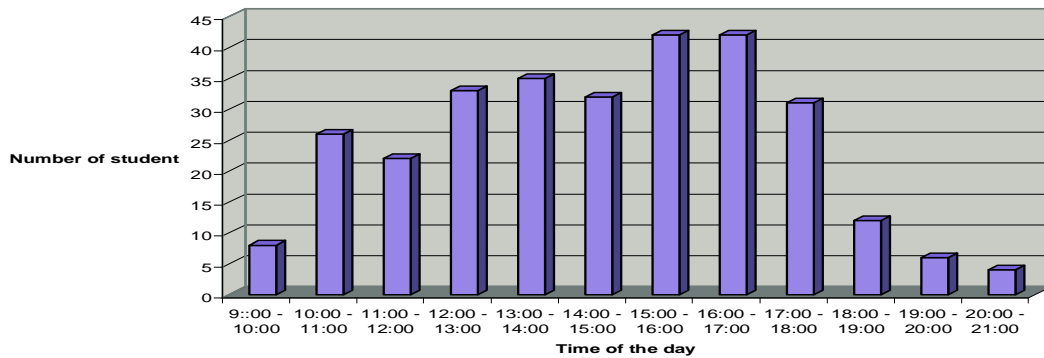
Difficulties

It now became the responsibility of the IEEE-UTA officers to turn these funds into a well conceived and fully functional, self-supervised mentoring facility. The first task was to interview and screen prospective mentors from the graduate and undergraduate ranks. The officers conducted over fifty one-on-one interviews and finally decided on a smaller number of selected students with qualities focusing on academic excellence as well as very pleasant demeanors. Next, the officers purchased and assembled eleven new computer stations from scratch in order to stretch the funds available.

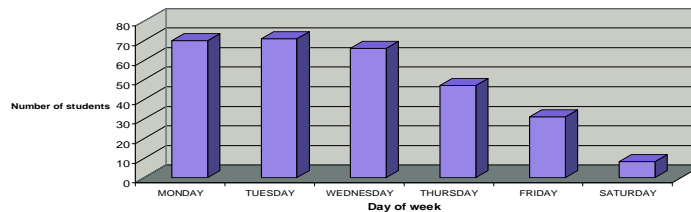
Following a software acquisition quest and software installation session, we shifted our attention into developing a time schedule that fit within the boundaries of our quarterly payroll budget. By the end of the first payroll period, we had continued to grow in popularity and had exceedingly outgrown our facility. The new formed union of IEEE-UTA student officers, and the before mentioned faculty members approached the dean of the engineering department and the president of the university, with the intention of renovating the IEEE Mentoring office. After several months of negotiations, and a few months of construction, we found ourselves with a facility that was five times the size of the original, and included a lab in which students are able to receive hands on help on design projects.

Statistics: Below are the statistics that have been collected during Fall 2003 and Spring 2003 at the IEEE Mentoring Office. Further information, photo galleries, and historical data on the IEEE-UTA officer team and mentoring office are available online at www.ieee.uta.edu.

Distribution of students Vs Time slots @ IEEE MENTORING OFFICE FALL 2003



Distribution of students coming on various days of week in Spring 2003



Conclusion

The IEEE Mentoring Office has helped recruit aspiring electrical engineering students and helped retain the ones that began the journey. The success of the IEEE Mentoring Office has been in gaining the support and trust of the UTA faculty and staff. This vital support helped us to acquire the funds to hire and train mentors, acquire computers and software programs, and establish a fully functional lab and workshop section. Our success is further reflected in the advice we provide to other departments within the university and other universities such as UNT and Tarleton State University, who aspire to create student supervised mentoring facilities such as ours.