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HOW YOUR ENGINEERING AND ENGINEERING TECHNOLOGY ADVISORY BOARDS CAN AID IN FUNDRAISING FOR YOUR PROGRAMS

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Abstract

During these stressful economic times, institutions of higher learning are getting less of their budgets from gifts, in the case of private institutions, and less from their state legislatures, in the case of public institutions. The solution to this problem is for programs to get funding from alternate sources. Sources can include grants from government and private sources, patent royalties by the faculty, and grants from foundations. Due to their contacts with industry, engineering and engineering technology departments can work with these industries, especially members of their industrial advisory boards, to get both equipment and cash for their programs. These programs also have alums working in industry, who become members of the programs' industrial advisory boards, and want to help out the colleges from which they obtained their degrees. This is to their own enlightened self-interest. If the program from which they got their degrees becomes better, this can only increase the status of their degree. Shown here will be examples of how working with alums' industries can result in major donations.

1. Introduction

Industrial advisory boards can serve many useful functions. One function is providing input to programs on what they can do to make the curriculum more state-of-the-art. Another function is aiding the respective program in getting free or discounted equipment for laboratories and cash donations. [1] When one of the authors arrived at his current institution, he was impressed with the usefulness of the department's industrial advisory committees. Each committee in the department focused on their program and all were good with curriculum advising, and cash and equipment donations. [2] A decision was made to combine the development functions into one group and create a departmental development committee to concentrate purely on fundraising. It was felt that the sum would then be greater than what was being obtained separately. [3] To some extent this happened, but after a couple of years the department decided to create separate

development groups for each program, so that these groups could focus on their own individual needs. One result of the departmental development council, however, was that good relationships were developed with the individual industrial advisory committee members and this resulted in an increase in fundraising. [4] These donor relationships turned out to be the key to development activities that increased the ability of the department's programs to obtain state-of-the-art laboratories that would otherwise not have been possible with the resources that the department previously had. [5]

2. Resulting Examples

The first example was a fluid power laboratory dedicated in the fall of 2007. This laboratory has become a model for the integrated engineering business marketplace where a multitude of technologies converge to solve customers' problems. The donors for this facility allowed the blending of technologies taught in all programs of the department. The laboratory was endowed by a $1 million gift by a private donor for operation and support of the renovated, state-of-the-art facility. A global supplier of components and systems for industrial and factory automation then donated eight new fluid power trainers including pneumatic and hydraulic systems valued at $300,000. This laboratory has become a powerful teaching tool that provides students with hands-on experience to better prepare them for industry applications. The continuing relationship between the supplier and donor's company will continue to advance education for fluid power channels through cutting-edge teaching and new knowledge creation through research. The electrohydraulic and electropneumatic trainers will provide graduates of the department with skills necessary for career success and will also offer continuing education and executive development as the industry grows and changes. The donor's company is a wholesale distributor of industrial controls and automation solutions specializing in hydraulic and pneumatic equipment and supplies. Its three regional distribution centers supply individual components and complete systems to clients across the southwestern United States in a range of industries from energy and defense to agriculture and construction. The supplier's company provides a complete range of best-in-class products, systems, and services for drive, control and motion technologies. An added bonus is that students educated in this laboratory will have an excellent chance for jobs in either of these companies because they will be familiar with the equipment and how it is used.

The second example is a new full-scale pump facility dedicated in the fall of 2009. This laboratory will allow students to study in a controlled, safe, and realistic environment. The pump laboratory consists of industry-furnished pumps, speed controllers and data acquisition system similar to those in commercial and industrial applications around the world. These capabilities position the program to be a leading educator in an important area, both for our undergraduate and continuing education students. The three-part gift includes a $500,000 laboratory endowment, $75,000 in startup funds, and laboratory equipment valued at $75,000. The donor's vision was to provide a state-of-the-art learning center that combines classroom and 'hands-on' practical learning opportunities for students as well as their own employees, customers and suppliers. With the help of several of key manufacturers, the laboratory will be equipped with an appropriate combination of pumping equipment, instrumentation and controls which will allow students to test and confirm basic and advanced principles of fluid technology learned in the classroom. A curriculum has been developed for various levels of knowledge and experience, with instruction provided by the program's faculty. The company partnered with the college not

only because of their long association with a previous laboratory, but also because of the reputation and tradition of the program. Progress is now being made to continuously improve the learning environment and the capabilities of this facility. The endowment provides a setting where undergraduate students can gain hands-on skills and where practicing engineers, distributors, and managerial professionals can continue their education and be trained on real-world equipment.

Engineering technology and industrial distribution students conduct consultative and managerial processes for the providers or users of these technologies. A world-class laboratory like this gives the students the hands-on education necessary to develop such skills, and the education programs continually sharpen the faculty's skills in delivering an applied education. Manufacturing and mechanical engineering technology and industrial distribution undergraduates will be the primary student users of the facility. Representatives from five of the six corporate partners contributing a combined estimated value of $330,000 in equipment and technical support to the laboratory included companies that manufacture centrifugal pumps and controls, gear and vane pumps, air-operated double diaphragm pumps, bearings and condition-monitoring rotating equipment, and mechanical and cartridge seals. In addition to a lecture area with multimedia capability, the laboratory is equipped with four modular-style fluid system trainers and a separate pump room dedicated to real-world simulation of a complete pumping system. Each mobile trainer provides unique training opportunities for inspection, processing or troubleshooting of commercially available pumps in a real-world fluid transfer application. Six pumps in the pump room connect in parallel to two 500-gallon tanks. The pumps can be monitored remotely in real-time using a Web-based system. The combination of real-scale pumping system with Web-based condition monitoring equipment will put the program at the forefront of fluid systems undergraduate and continuing education for years to come. The pursuit and maintenance of the program's excellence would not be possible without the corporate partners that made the donation. It provides the margin of excellence that allows the program's students to get the experience needed in order to be successful in industry. The donor pump company operates nationwide as a leading provider to the industrial sector of maintenance, repair, operating and production products and services, innovative pumping solutions, and precision supply chain services. It has over 90 service centers and more than 70 supply chain service locations as well as three regional distribution centers and five fabrication centers. This will certainly give the program's graduates an opportunity to get great jobs.

3. Conclusion

The examples shown indicate that development efforts in a technical department can increase the quality of the programs in such a department and make possible course offerings that would not be possible without additional funds. In the present difficult economy and with stimulus aid due to dry up soon, development efforts that made these laboratories possible are certainly necessary if a program is to stay state-of-the-art. Therefore, other efforts are necessary to garner the resources necessary to have quality programs. Development, which can result from developing relationships with departmental supporters, is certainly one important way to achieve this quality. It therefore behooves administrators and faculty in a technical department to learn about fundraising techniques and apply these techniques to achieve a margin of excellence for the department's program curricula.

References

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