

think outside the **BOOKS**



"Helping Hands" Help BME Students Succeed

Confused, nervous, full of anticipation. Common feelings for freshmen, and I was no different. I intended to major in biochemistry and pursue medical school. But I also had an interest in engineering. What to do? Thanks to the support of my freshman advisor and the superb biomedical engineering faculty, I soon declared a major in BME. But how many freshmen find a helping hand reaching out to help them make these difficult decisions?

I wanted more underclassmen to experience the guidance and support that benefited me, maybe even offered by their fellow students.

In the spring of 2002, I participated in a Biomedical Engineering Society (BMES) Town Hall meeting. We talked about how a student-to-student mentoring program could help promote unity and support among BME students. That summer BME junior Ashish Doshi and I set out to create the new BMES Mentoring Program.

The Undergraduate Biomedical Engineering Society Mentoring Program encourages academic and personal relationships among undergraduate BME students. Freshmen and sophomores benefit by having juniors and seniors to consult for advice, assistance, and career counseling. They can learn about research, co-op, and departmental opportunities from someone who's "been there." Upperclassmen benefit by learning how to nurture, advise and motivate new students. Best of all, new students can more quickly become acclimated to our department, meeting fellow students and faculty and learning the ropes.

Mary Ann Tai is a junior in Biomedical Engineering and CEC Representative and Mentoring Program Co-Chair on BMES.

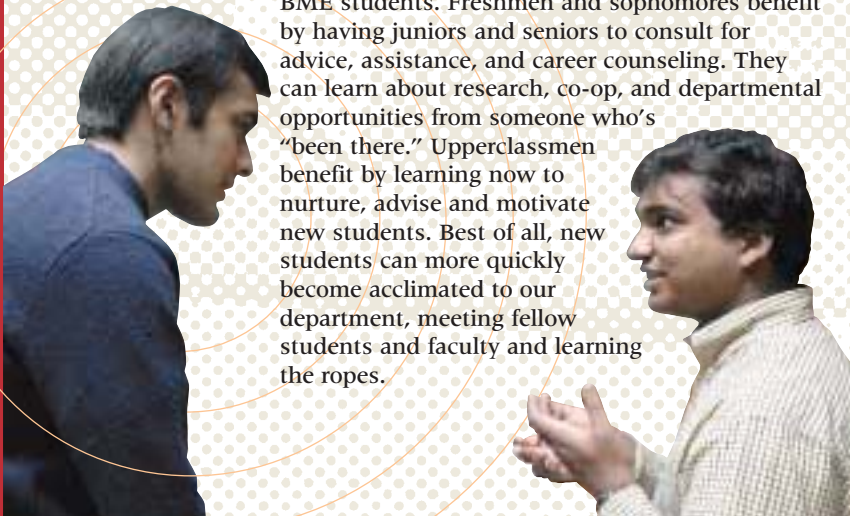
Introduced in the fall of 2002, "the interest in the program was overwhelming," says Ashish Doshi, with 127 underclassmen and 55 upperclassmen signing up to participate. The 22 mentoring groups consisted of 8-10 individuals with 1-2 members from each class level (freshman, sophomore, junior, senior). Groups were formed based on specialty sequences within the BME major as well as post-graduate plans. "The arrangement of the groups worked out perfectly," Doshi explains. "About one-third of the students were interested in medical school, another third wanted to pursue Master's or Ph.D. degrees, and the remaining third wanted to work in industry."

To encourage one-on-one relationships between mentors and mentees, we coordinated a pizza social where participants could meet their mentoring groups face-to-face. "We wanted the mentors to be more than just e-mail contacts for the mentees," says Doshi. Another event, a class selection panel, featured seven panelists from various sequences, career interests, and backgrounds discussing topics ranging from scheduling to pre-med requirements to planning for specialty programs such as co-op, Junior Year Abroad, and BS/MS.

**the first program
of its kind**



People like hearing from their peers



BIOMEDS GET A SHOT IN THE CAREER

Few academic programs can boast of doubling enrollment in one year.

Students are quite enthusiastic, however, about the real-world experience they gain through the Biomedical Engineering (BME) Department's Student Employment Program. During the summer of 2002, 97 BME students were placed in co-op and internship programs, up more than double the 44 placed one year prior. Students were lining up to get the industrial experience needed to stand out in a sea of job applicants after graduation.

That growth represents a new direction for the department, which was faced with a disconcerting trend just a few years ago: students were transferring to other majors because they were skeptical about finding co-ops and jobs.

As an undergraduate advisor, Dr. Patrick Crago was well aware of the frustrations expressed by BME students. Appointed chairman of the Biomedical Engineering Department in 1999, he set out to create opportunities for the department's students in industry.

Crago expected that by injecting more career experience into undergraduate education—co-ops, internships and research while still in school and job placement after graduation—Case could strengthen its position as a national leader in one of the hottest fields in the world.

In the quest to open doors for students, Crago went after an Industrial Internship grant from the Whitaker Foundation in 2001. Whitaker, the most prominent support organization in the field of biomedical engineering, offered a sustained grant program to foster the growth of BME education. And the Case BME department had enjoyed several million dollars in Whitaker funding over the last decade.

Whitaker was impressed and, armed with the grant, Crago set out to find a director. Shortly after, he found Kathy Gill, a 10-year veteran of industry with considerable experience in human resource management. Gill's business stance infused the embryonic office with a unique and energetic spin.

Gill has been quite successful in fostering a relationship between industrial employers and students. Nearly 900 companies were identified as prospects and more than 300 were contacted. Gill talked about Case's fourth-ranked BME program, its students and research. Her hard work has created a buzz about BME, and sixty-nine students declared BME as a major in May 2002. The number of industrial employers grew from 10 to 22.

The program has also impacted the problem that initially plagued Dr. Crago and his departmental colleagues: the department's retention rate turned around and increased with this year's junior class. Thanks to the success of the BME Student Employment Program, students who once thought that there were "no jobs left for BME's" have begun to think differently.

Gill isn't content to settle for the program's current achievements. Today, its momentum continues. Spring semester BME co-op placements are at an all-time high, with students working in cardiovascular biomaterials, computing and imaging devices, and orthopedic biomaterials and devices at companies like St. Jude Medical, DePuy Orthopedics (a Johnson and Johnson Company), Philips Medical Systems, Kensey Nash, and Forest Laboratories.

The department has applied for renewal of its Whitaker funding, hoping to institutionalize the program. And groups like the Undergraduate Biomedical Engineering Society and Graduate Student Association are strengthening student awareness and involvement on campus.

The BME Student Employment Program gives Case biomedical engineering graduates a shot at a future that's brighter than ever!



BME department chairman Dr. Patrick Crago explains the popularity of the program. "People like hearing from their peers, rather than authority figures," he says. "The Mentoring Program establishes a better sense of community among BME students and allows underclassmen to see how upperclassmen apply what they have learned."

In addition to the mentoring program, the BMES created another helping hand—a handbook to help new students navigate the department, with helpful advice from current students.

Through these two initiatives BMES members have reached out to incoming BME students to help them succeed as students in the department, and, ultimately, as career engineers. ◀



Photos by Cliff: Mike Sands.

to be created at CWRU