BRIGHT IDEAS

Polishing Soft Skills for The Future HTM Professional

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The Biomedical Technology Department of the Tucson, AZ branch of Brown Mackie College (a family of 25 colleges in 15 states), offers an intensive two-year program leading to the degree of Associate of Applied Science in Biomedical Equipment Technology. According to the college website, the program focuses on technical training aspects, and provides “training in electronics and computer technology, with a special emphasis on medical applications, operations, and procedures.”

However, there is more to the program than meets the eye. Recognizing the importance of communication in the career of a healthcare technology management (HTM) professional, the department’s instructors have implemented an informal and innovative program to polish the soft skills of incoming students.

Challenge

The department team includes Anthony J. Offret, dean of academic affairs; Tim Bush, campus president; Scott Percy, department chair and director; and a group of instructors who teach a “range of topics including physics, business communication, writing, and everything in between” says Percy.

The two-year curriculum includes coursework on biomedical equipment and instrumentation, medical terminology, solid state electronics, and information technology. Students are, the college prospectus states, prepared for “entry-level employment in tertiary healthcare settings, the manufacturing industry, and service companies.”

The college encourages the development of practical skills by also including the option of an externship—described as an unpaid position for which the student garners college credit—and recruiting instructors with extensive field experience. For example, Percy is keen to hone his students’ technical skills and pass on crucial real-world experience in equipment management—gleaned from 34 years in the pharmaceutical industry designing medical equipment at Boehringer Mannheim (now Roche), Abbott Labs (MediSense), and Eli Lilly and Co.

“I usually meet prospective biomed students prior to their matriculation, take part in their orientation on the first day and see them routinely as they progress from class to class,” says Percy. When he joined the college several years ago, these initial meetings confirmed what he knew from talking to recruiters and hiring agencies: There has been a downward trend in the communication abilities and soft skills of new graduates. “Their technical skills are fine, but kids across the country and across programs cannot communicate,” he says.

The entrance requirements for the college’s biomed tech program include passing advanced mathematics, and achieving a required set of composition scores in the entrance examination, but do not specifi-

At a Glance

SUBJECT
Biomedical Technology
Department at Brown Mackie College

LOCATION
Tucson, AZ

SIZE
More than 700 students

STAFF
Core staff of seven
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The first problem instructors faced was how to structure classes for students with such a range of abilities: Would they have to formulate rules on behavior, interpersonal interactions, and professionalism? Would they need to develop a manual for students on how to become a professional in three days? “Teaching the students the science is the easy part. It’s what they missed the first 20 years of life that is the challenge,” Percy says. And soft skill development is a large part of that first 20 years.

Solution

“When I talk to professional agencies,” says Percy, “they are looking for biomeds who can dovetail into an organization, who can work in any environment.” The department began an intensive initiative to polish student’s soft and professional skills to prepare them for an HTM career, in addition to developing rigorous technical skills and instilling an extensive knowledge base.

It is not until after a class or two that the instructors can glean what drives that particular cohort of students. “All students are individuals. Not everybody needs this [soft skills] program,” he says. “There are some people we have to start from the ground up. Others are extraordinarily prepared, and we have to determine what we can do for each student: tutoring, professional assistance, or speech lessons.”

Instructors tackled the challenge by going back to basics with students lacking soft skills. The current incarnation of the initiative can be divided into the following six efforts:

1. Establishing trust and confidence—For students who are more withdrawn and lack focus, instructors provide praise and encouragement which, says Percy “are things that seldom come from home. This is important, because many have never been told anything positive about themselves.” Students prone to give up easily are taught techniques to foster drive and persistence both individually and in a classroom setting. In addition, time is set aside as needed for individual mentoring and counseling. Department chairs, for example, have flexible hours, but are available for mentoring and counseling from 8:00 a.m. until 10:00 p.m. daily if required. Mentors are available for students during any of the three daily class sessions. A sense of purpose and urgency is instilled in the students. Department chairs “walk about” during the day to talk with students during breaks, sit in on classes, and talk to instructors about students. “We stress how much easier college life will be, and how much more receptive hiring agencies will be when they graduate as confident individuals,” Percy says.

2. Instilling manners, dress skills, and a sense of professionalism—Manners, punctuality, e-mail etiquette, and a professional demeanor are important in any career. The college staff and instructors “all wear business attire to set an example,” says Percy. “I teach students how to dress appropriately, how to e-mail and voice mail a supervisor, for example, as well as how to sit, shake hands, and make eye contact.” Students are also schooled in interpersonal behavior and conflict resolution, to prepare for the situations they will eventually encounter in their own workplace department and others. “Each lab is a mini-hospital setting,” says Percy. “For some, this is very foreign, eclectic, multicultural, multicultural environment. So I teach what I call Sandbox 101: ‘Let Jimmy play with your sandbox once in a while,’ so that they can understand the position of others and engage in real teamwork.” Instructors clarify for students what it means to be a biomedical equipment technician (BMET). They emphasize that the position is an important and prestigious one, and represents an opportunity to contribute greatly to the medical community.

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3. Fostering writing and communication skills—Instructors focus on all aspects of communication: nonverbal communication, speech, written and online correspondence, and grammar. Teaching by example, instructors also involve students in conversation, online correspondence, presentations, and meetings. Percy says that in the HTM field, “everything written is a legal document and it is therefore extremely important to write accurately and well.” The need for excellent speech and communication skills is emphasized during the two-year course, both formally, in writing classes, and informally, for example via hallway conversations with students to improve their dialogue skills. Colleen McIlroy, instructor of composition at the college, works very closely with other instructors to teach writing skills. “Our students benefit not only from an extremely small student-to-instructor ratio, but also from sound communication between department chairpersons and instructors towards the delivery of individualized instruction tailored to each student's requirements for success,” says McIlroy. “When the 'end game' or goal is in sight for our learners, they are invigorated in their pursuit of excellence,” she adds. Other instructors agree. “Biomed students enliven the classroom as they learn to unleash the power of the spoken word to become effective communicators” says team member and speech and communications instructor Don Edwards. “They are committed to excelling in verbal communications.”

4. Promoting well-rounded individuals—Exposure early in childhood to a wide range of ideas and activities promotes observation, critical thinking, a balanced approach to life situations, ease of conversation, as well as a sense of confidence. Percy notes, for example, that some students do not approach professors, and are unable to interact with different groups of people at different levels, limiting their ability to learn from others. “Rather than avoiding the professor, I like to tell them that regardless of position, we are real people!” he says. By encouraging interaction with new people and new situations, students can benefit both personally and professionally.

5. Career guidance—Students at Brown Mackie are linked to a mentor, usually a BMET IV or V, who provides students with long-term perspective and illustrates the importance of soft skills for career
advancement. Instructors note that a senior mentor can also give a student's coursework more relevance by “showing them that what they are doing now is valuable, and where it can lead.” In addition to testing technical know-how, the college externship program is an opportunity to continue students' soft skill development. The college partners with all the hospitals in Tucson to place students in externships. Each hospital has supervisory BMETs who understand the need for the “soft skills” and meet with students (advised by college staff) to determine the externship content. For example, one student might prefer a general overview, whereas another will request very detailed instruction in a particular area. All extern programs are, however, are required to emphasize punctuality, dress, communication with staff and the department chair, record keeping, and journal writing.

The final externship grade the student receives is based on an equal evaluation of technical and soft skills. In addition to mentors and an externship, students are monitored through the program and given career guidance by instructors. In classes, the relevance of a specific topic, such as information technology (IT) for an HTM job is discussed. Some students opt for joint biomedical and IT degrees, but others will understand the need for further IT training from guest instructor lectures during core classes.

6. Special issues—Some students may need special attention or help, particularly with issues that have not been identified at school or at home. “We had a student who was dyslexic,” notes Percy. “We didn’t know, the student didn’t know, but one of the teachers in composition had a feeling.” The instructors were able to enroll the student in a program to treat dyslexia, and the student is now more confident and successful. “None of us are psychologists,” Percy says, “but we care for our students, and want to see them succeed.” The soft skills initiative is not a formal one, and is not included in the curriculum. In the three years since its inception, however, the fledgling initiative has been adjusted and fine-tuned by the team of instructors and is now, says Percy, “a well-oiled machine.”

Results
The investment of time and energy on the part of the instructors is substantial: Instructors work overtime and go above and beyond the call of duty when necessary. For example, when one student became homeless, the instructors teamed up to help the student find temporary and then permanent lodging.

There are plenty of success stories. “It takes a while for our kids to realize the importance of the tools we are providing them,” Percy says, “but from the first day to the end of the two-year course, we see how much they grow and develop.” Instructors see the students transform into professionals.

Students have high praise for the program, instructors and college. Efrem Gardoni, who will graduate in 2013, remarks that prior to joining the program, he was “underemployed, depressed, and lacked confidence. Now, after finishing my three-month block of biomedical equipment repair, I have started down the final semester of my journey towards a new life. I have a newfound confidence.”

Mentors are valued by their students. George Speelman, a BMET V at the University of Arizona Medical Center Clinical Engineering Department in Tucson, mentored two students during their one-month externship at the medical center. The students praise Speelman as “one of their best friends, mentors, teachers, and role models.”

The college instructors too are recognized for their excellence by professionals in the field: “The staff’s commitment to further the biomedical engineering profession is evident in the quality of its graduates, as well as their desire to connect with the local biomedical community,” says Naomia M. Rivera, clinical engineering manager at St. Joseph’s Hospital, part of the Carondelet Health Network, in Tucson.

John Taylor is a former honors student who is now a BMET in the Clinical Engineering Department at St. Mary’s Hospital, also part of the Carondelet Health Network. He mentors externs at the hospital. “While mentoring/teaching the students, I’ve found the best way to get them to understand a lot of the concepts is to try to find a process that
they are familiar with and relate it to the work that needs to be done so they can understand the process”—an approach used by the college instructors.

The department at Brown Mackie has placed graduates in many of southern Arizona’s healthcare facilities, as well as in facilities across the nation. “Incoming students who never thought about life outside of Tucson are thinking nationally and globally when they graduate,” says Percy.

And what advice does he have for other biomed programs? “Walk the walk. Talk the talk. If you want professionalism, be professional. Show up on time. If you want people looking sharp, look sharp yourself. I shine my shoes everyday—an old military habit.”

And his most important piece of advice? “Laugh at yourself at least daily. It’s a soft skill. It humanizes you. And you really need it in our field.”

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