Center for Leadership Education Cultivates Business Skills

By Bob Gray

One of the great things about a university community is how ideas are generated through collaboration. The newly formed Center for Leadership Education (CLE) exemplifies that approach as it guides students in developing the business skills needed to invent the future. Once graduates move into the working world—whether as entrepreneurs, researchers, managers or other professionals—success comes to those who can master budgets, corporate politics, and the nuanced market place.

When John C. Wierman was chair of Mathematical Sciences (now Applied Mathematics and Statistics) in the Whiting School of Engineering, he would often attend alumni receptions and talk to graduates. “Most with a decade or more of experience had moved up into management positions,” he says. Alumni told him that they wished they could have learned more about the corporate world, how to manage people, speak and write effectively, champion an idea, and sway a decision. “There was a clear endorsement from alumni for some form of business education,” he explains. “Yet there were no programs.”

In response, Wierman developed support for and founded the W. P. Carey Program in Entrepreneurship & Management. It was funded through a $2 million gift by William Polk Carey, a Johns Hopkins University trustee and founder and chairman of W. P. Carey & Co. LLC. Since its inception in 1996, “the program has grown steadily and significantly,” says Wierman. It was popular from the beginning, and in eight years participation has more than quadrupled. The CLE was created a year ago, at the suggestion of then-Associate Dean Ed Scheinerman, with the merger of the Entrepreneurship & Management Program to provide students with a broad range of courses with which to build their leadership abilities.

Like a growing, entrepreneurial business, the CLE has to work smart to stay ahead of growth and change. “To put it in perspective,” Wierman says, “these two programs together teach more than 1,000 students per semester. That’s one in every four undergraduates.”

With the Entrepreneurship & Management minor so successful, Wierman is exploring the possibility of adding a leadership minor in the near future.

One way students test the business skills they learn in CLE classes is to try them out on campus. “We collaborate with the Career Center a great deal,” says Wierman. “As a semester project in our marketing course, students wrote a marketing plan to help the Career Center learn how to attract more participation from students,” he notes. Leslie Kendrick, who teaches marketing, had students write a marketing plan for the W. P. Carey Program.

A crucial component of business leadership is understanding the business—and the culture—of Wall Street. One popular January Intersession trip, “Day on the Street,” takes Whiting School and Krieger School of Arts and Sciences students to New York City for a two-day tour of investment banks and other financial institutions. Students meet Wall Street executives (including many Johns Hopkins alumni), circulate résumés, and participate in mock interviews. In the annual Johns Hopkins Business Plan Competition, sponsored by the CLE and judged by business owners and venture capitalists, Whiting and Krieger undergraduates compete for cash prizes (this year totaling more than $12,000), with the finalists going on to represent Johns Hopkins in other competitions (see page 28).

Another program, the Marshal L. Salant Student Investment Program, puts full responsibility for investment decisions into the hands of a team of Whiting and Krieger undergraduates. The fund was launched in 2000 with a generous gift from Marshal L. Salant ’80, a managing director at Morgan Stanley. Salant, who serves on the Whiting School’s National Advisory Council, also was instrumental in creating the Wall Street trip.

The investment fund is a joint program with CLE, the Department of Economics in the Krieger School, and the University’s Treasurer’s Office. “Our intent, and that of the donor, is to give students a real responsibility” with real money, says Wierman, one of the team’s three advisers. While a few other schools have similar funded programs, most are reserved for MBA students. The first 5 percent in positive returns each year is put in an account for undergraduate scholarships. Anything above that is to be reinvested in the fund, which recently made its first payout of more than $5,000 for scholarships.

In addition to Salant, other Whiting School alumni have greatly contributed to the success of these leadership ventures. They have taken time to speak to classes, help students with their business plans, and sit in on student presentations. Joseph R. Reynolds Jr. ’69, inaugural chair of the Society of Engineering Alumni, and his wife, Lynn C. Reynolds, provided a generous endowment to fund...
the Intersession course “Invitation to Entrepreneurship.” Another extraordinary volunteer, Harvey Kushner ’51, played a key role with Wierman in the original planning for Intersession and has remained active in its offerings.

As the number of undergraduates in CLE-sponsored programs attests, the desire for business skills is a bull market. There are specific benefits for Engineering students, says Wierman, who also is a professor of Applied Mathematics and Statistics. “When I was an undergraduate, you got your degree and went to work in a big company; lab, or government agency,” he recalls.

Today, the corporate trend is toward downsizing and outsourcing. “Businesses outsource many aspects of their work to small companies,” Wierman says. “In a sense, every engineer has to become an entrepreneur. You don’t just go into a company and work at your bench. You respond to requests for proposals, market yourself, and manage your project. The skills we teach are essential across the board.”

With the establishment of the new Center to oversee more business-oriented programs and experiences on campus, Wierman foresees an unleashing of entrepreneurial energies, as early as this spring. “One of the hot new things we are doing is pairing our entrepreneurial, business-oriented teams with biomedical engineering teams working on new devices or products,” he says. The teams explore the viability of commercializing these ideas. From this effort, he says, “patents and grants have already resulted.”

Last spring, four graduating Engineering students who had minored in Entrepreneurship & Management were hired at Foresight Science and Technology, a worldwide technology commercialization firm. “We are discussing with them the viability of starting a satellite office here on campus,” says Wierman. “That would be a major breakthrough. Other schools are talking about trying to do something like this and have not been successful, even with master’s students. We plan to do it with undergraduates.”

Also this spring, student-run businesses, called “student agencies,” should begin popping up on the Homewood campus. They are a fixture at Ivy League schools (for example, a student agency at Harvard University produces the popular Let’s Go travel guides). These ventures reward their student managers and their campuses. Successful models run the gamut from catering on campus to renting golf carts and refrigerators—and beyond. “There are plenty of opportunities” at Hopkins for student agencies, Wierman points out, and the CLE will help support these new businesses.

In keeping with the Whiting School’s goal of teaching for leadership, the CLE sets its sights high. Classes and programs help students gain skills to navigate the business world with the ultimate goal of professional leadership. “What colleges and universities typically do for students is give them assignments, a due date, and a grade,” says Wierman. This teaches them to be good employees. “What we need to do,” he explains, “is to teach them to be good employers.”

To learn more about the Center for Leadership Education, the W.P. Carey Program in Entrepreneurship & Management, the annual Business Plan Competition, the Wall Street trips, and how you or your company can become involved, visit the web site being developed (web.jhu.edu/leadership) or contact Marybeth Camerer, CLE administrative manager, at camerer@jhu.edu or (410) 516-7197.
A Bumper Crop of Research in Language Engineering

By Sarah Achenbach

Other workshops existed but did not involve such teams. CLSP inaugurated the summer workshop with funding from the Department of Defense. The National Science Foundation began support in 1998.

"Think of the workshop as the first feasibility studies for the field," Jelinek says. "There are various things developed here that will be used by the field forever." Contributions include data sets available to industry and academia via the CLSP web site (www.clsp.jhu.edu), numerous journal articles, conference presentations, and technological advances. The creation of Gazelle software for machine translation of natural languages was the 1999 workshop project led by Kevin Knight, senior research scientist at the Information Sciences Institute at the University of Southern California. "The main goal was to build a generic tool that the whole research community could use," says Knight. "Today, all kinds of research groups are using Gazelle in their translation projects. It's become a staple in the field."

The research community also values highly the two-week pre-workshop training session to bring undergraduates up-to-speed in language engineering. "It is considered so good that the Association for Computational Linguistics sends 10 students," says Jelinek.

To develop its workshop projects, CLSP sponsors an annual fall proposal submission and two-day presentation process at Hopkins. After two to four topics are chosen, each team leader selects approximately seven team members, including senior researchers, three graduate students (at least one from Hopkins), and two undergraduates. The undergraduate component was added in 1998; these students are chosen via a national search.

This past summer's workshop featured three projects. One team focused on developing a general framework to model phonetic, lexical, and pronunciation variability in dialectal Chinese automatic speech recognition. The project leader was Richard W. Sproat, professor of linguistics and of electrical and computer engineering at the University of Illinois at Urbana-Champaign (UIUC). Sproat's team explored techniques for improving recognition of accented speech by using a standard Chinese recognizer as a baseline system to study Shanghainese, the street dialect in China's largest city.

Team member David W. Kirsch, a double major in computer science and cognitive science at Lehigh University, was one of the six undergraduates last summer. "This workshop was the first time since I started college that I really felt academically at home," says Kirsch. "I was with the people I was supposed to be with and doing the work I was supposed to be doing."

Kirsch, who now intends to pursue doctoral studies in computational linguistics and plans to apply to Hopkins, is continuing his workshop research. "Some algorithms had occurred to me during the last two weeks of the workshop," he says. "We never got time to test them, so I presented my idea of finding a way to classify accents on a sliding scale." The workshop is funding his year-long research through the $100,000 it awards competitively each year, distributed among two to four undergraduate and graduate student participants.

"We’re making inroads into a problem that has defied us for decades."

—Sanjeev Khudanpur

The second workshop project last summer examined landmark-based speech recognition. By bringing together new ideas in linguistics, especially nonlinear phonology, with recent advances in artificial intelligence, the team explored how better to match human speech recognition performance. Mark Hasegawa-Johnson, assistant professor of electrical and computer engineering at UIUC, led the team. The technological goal was to create a model that would identify acoustic phonetic landmarks (the minimal elements that one needs to insert into a sound to make it intelligible) and piece them together to recognize words.

The third project, joint visual text models, took computer recognition of words and speech to the next step: recognizing objects and images. Giri Iyengar of the IBM T.J. Watson Research Center led the team. "We’re making inroads into a problem that has defied us for decades," observes Sanjeev Khudanpur, assistant professor of Electrical and Computer Engineering and a member of CLSP (the Recognition Speech vs. Wreck a Nice Beach title was from his workshop lecture in 2001). Current search engines can only look at how an image is named. This technology would enable image-driven web searches. "While none of the algorithms is perfect, retrieval is much better," says Khudanpur. "This is very far into the future, but the tool also could have national security implications by searching on names and faces.

"All research is gambling," adds Khudanpur, who first participated in the workshop as a graduate student in 1995 and now lends his expertise as a senior adviser. "You put ideas in and see what comes up and hope for the big pay-off. The sure bet of the workshop is to bring good people together who will continue to collaborate. It creates a lot of understanding."