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PARTNERSHIP FOR A PURPOSE:

Area companies reap benefits of UCSB engineering department

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In its effort to push more of its research into the commercial world, the College of Engineering at UCSB has discovered what every savvy business owner knows: It's all about the team.

That was the underlying message last week from several presenters at the college's corporate affiliates board meeting, which drew representatives from 20 companies prominent in technology and the sciences. Each touted successful research collaborations with area companies, most notably Raytheon and Novacoast.

Several affiliates are former faculty members who've launched high-tech companies. They're keeping the ties strong with UCSB instructors, grad students doing critical research and even undergraduates who provide the brainpower to help these companies advance their businesses on multiple fronts.

The collaboration aspect not only was a strong theme at the affiliates board meeting, but also for the college's "Engineering Insights: From Bench to Boardroom" program, a two-day affair, and the announcement/launch of its Energy Efficiency Institute.

"We're working to mutual benefit," said Leslie Edwards, director of corporate business development, describing the affiliates program, which was launched 18 months ago. She reviewed research partnerships, successful hiring sessions with students and offering continuing education opportunities to a host of local companies focused on engineering and the sciences. "What we're really trying to do is capture the spectrum of industrial input (in the region)" to further the educational and career goals of students and to help grow the companies, said Ms. Edwards of the assembled group.

In terms of the ties with UCSB, Edward Smith, principal engineer of advanced

programs at Raytheon, said half of all new hires at the 1,000-person facility in Goleta hail from the institution. The company, which develops infrared products for land- and space-based activities, said it was great having a staff member embedded at the school. "One of our materials engineers has an office at UCSB," Mr. Smith noted. As such, the staff member has access "to state-of-the-tooling" to help in product development. He said the partnership with the school has also prompted the company to move some work to the institution, mostly in the microscopy facilities.

Of the UCSB students doing internships at Raytheon, Mr. Smith said students, some as young as sophomores, "are enormously productive" when given a focused project.

Eron Howard, vice president of development for Novacoast and a UCSB computer science grad, detailed student intern contributions to his firm, an IT software development company. "UCSB is critical to Novacoast's (continued) success," Mr. Howard said. "Without new software developers, we can't grow."

Later in the day, the college hosted 300 attendees at the Engineering Insights program. Keynote speakers at the research review and technology transfer expo were James Kelly, vice president of engineering and technical services, Southern California Edison; and Jeong Kim, Ph.D., president of Bell Labs at Alcatel-Lucent. Insights covered innovations in energy-efficient electronics and building systems.

Matt Tirrell, dean of the college of engineering, said the attendees not only included "relevant" industry players, but also people from the investment community, citizens interested in this aspect of technology and academics from other universities. "That's quite a compliment," said Dr. Tirrell, referring to the latter.

While college staff was hopping with all the activities, the launch of the Energy Efficiency Institute was perhaps the most momentous piece of news last week.

The school said the new institute, which will be headed by John Bowers of the electrical and computer engineering department, will focus on accelerating the development and commercialization of energy-saving technologies.

According to UCSB, the funding for the institute was provided by a set of individual donors; the effort is expected to involve more than 50 faculty members from multiple disciplines on the campus.

Dr. Bowers said the college is already spending more than \$10 million a year on energy efficiency research, and the effort is expected to triple research funding over the next three years.

He said the approach is innovative in that it isn't looking primarily at alternative energy sources (although there is a solar component), and it's not calling for conservation. In essence, "We're looking to help slow the growth in demand," said Dr. Bowers.

Again, the work will have a strong tie to business and industry partners. "The goal is to hand these (technological) innovations off to companies that know how to develop them," Dr. Bowers noted.

However, the education take-away for students will be much more than academic. Like the affiliates program model, "the value of their education is seeing the commercialization of these technologies in the real world, how they can produce jobs," Dr. Bowers said.

While he agreed that the lion's share of any manufacturing resulting from these energy innovations would probably not occur in Santa Barbara County, he said the infrastructure to launch any enterprise was already here, referring to venture capital, intellectual property and business formation expertise.

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