

UC SANTA BARBARA

# THE *Current*

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## **UC Santa Barbara's Technology Management Program to Offer Graduate Degrees**

Joined onstage by a live falcon to help prove their product, the team of UC Santa Barbara alumni behind bird-identification app Birdeez took a top award at last fall's DEMO conference, a prestigious Silicon Valley pitch competition.

So landed another proverbial feather in the cap of UCSB's Technology Management Program (TMP). The Birdeez group -- at the time still students -- won TMP's New Venture Competition mere months earlier, earning acclaim and cash to go with their potentially viable business. Future TMP-bred winners of the popular campus start-up contest may walk away with another prize still: a master's degree.

After a years-long push, the 1998-launched TMP has been granted academic-unit status, and will begin offering graduate degrees as soon as 2014. The one-year master's track is described as "akin to an MBA for engineers."

"It's going to be very similar to a degree you'd get at a business school, but we're not creating a copycat program. We're trying to do something very innovative," said Bob York, TMP's director and a professor of electrical and computer engineering. "This is a management program for scientists and engineers. We're living in a real technical world with a real need for tech leaders -- people who are not just creating the technologies but actually delivering them to market -- and we feel this is a

space that's not being served right now. This is a real opportunity for us to create a very unique program that will be training the technical leaders of the future.

"We're empowering the scientists and engineers to become the leaders and innovators," York added. "I think that's a big step, and an important one."

The new endeavor formalizes what TMP has been doing all along: breeding such leaders -- and start-ups -- by instilling in students of all levels, and from all disciplines, the savvy and skills required to run a business. Offering courses, lectures, networking events, and mentoring, TMP provides tech-specific education in entrepreneurship and management. The New Venture Competition (NVC) is perhaps its most high-profile component, and catalyst to UCSB success stories past and present.

Mature companies including Phone Halo, which develops Bluetooth-based tracking devices for personal items such as keychains and wallets, and portable-oxygen innovator Inogen made their first splash as NVC winners. Phone Halo was a 2009 awardee; Inogen came even earlier, in 2001.

Besides Birdeez, 2012 NVC champs (the contest has multiple categories) brightblu and aPEEL Technology recently earned some wider-world accolades of their own. Home automation company brightblu finished in the top three at the fall Plug and Play Expo, an esteemed, investor-attended start-up contest. And aPEEL creator James Rogers scored a \$100,000 grant from the Bill & Melinda Gates Foundation to advance his invention -- a molecular, water-based camouflage for crops that can extend the shelf life of fruits and vegetables.

"It just goes to show that the entrepreneurs we graduate aren't just prepared -- they can go toe to toe with anyone," said Mike Panesis, TMP's manager. "The word technology means what you do with what you know. It's not about electronics or chemistry or being able to build things, but taking what you've learned, the knowledge you've gained, and doing something with it. And that's what we specialize in."

By helping to prepare student founders to not only interface with investors, but to actually run a business that gets off the ground, TMP is often central to the early success of such start-ups. Its vibrant training program fosters the acumen and varied skill set required of entrepreneurs. In short, TMP plays a key role in getting student start-ups and their creators ready for a larger stage.

"TMP teaches teamwork, which is what much of corporate business is all about in product development today. It used to be individual contributors. Now it's teams," said Stephen Cooper, an alum, a trustee of the UC Santa Barbara Foundation, and a longtime member of TMP's advisory board, who has had a successful career as an entrepreneur. "That's a great contribution by TMP, and it's been beneficial in many ways, especially in science and engineering, where communication skills tend to be less emphasized.

"It doesn't matter if you're going to be an entrepreneur or work in a large corporation -- the skills that you learn here give you an understanding of business that's invaluable," added Cooper, who provided the seed money on which Inogen was founded, and remains on the company's board. "I believe that the degree program will bring financial resources to the university that otherwise would not be invested. I think we have something to promote for the university that makes it stand out and will attract donors."

Enterprise has long thrived at UC Santa Barbara, where scholars past and present have created or contributed to scores of businesses over the years. The campus has a tradition of entrepreneurship, and a rich history of impacting industry with its research-based innovations. In this era of technology-driven entrepreneurship and industry's incessant search for the next big thing, UCSB is fostering exactly the kind of innovation that fits the bill.

From birds to Bluetooth, and produce to polymers, start-up culture has taken hold here with newfound fervor, as student-shepherded efforts take center stage and even fledgling companies stockpile accolades, contest wins, grants, and investors. The greatest success stories are taking their inventions to market, creating new revenue streams and new jobs. For many of them, TMP has been an irreplaceable -- if under-the-radar -- launch pad.

"The approval of this graduate program is a huge thing, and I think it's going to be a turning point," said Craig Cummings, a 1972 engineering grad and regular TMP entrepreneur-in-residence, who now chairs the Central Coast chapter of the MIT Enterprise Forum. "It's been a good program all along but never really had much recognition. This gives it that, and provides much greater incentive to students to want to pursue this because they'll have something to show for it. That's huge. And I think it will be huge from a community standpoint as well. UCSB has always been the center of activity for tech-driven startups on the central coast. Their list of

success stories is already long and impressive, and with this degree, it will just become more so."

And that's the hope for TMP and all the aspiring entrepreneurs it serves -- that they leave UCSB with a degree as well as the necessary skills to succeed in business, if not a budding business of their own.

"Students at UCSB are forward-thinking and excited to commercialize their technology ideas," said Rod Alferness, the Richard A. Auhll Professor and Dean of Engineering. "TMP has been enabling this innovation for years, and now the official academic TMP unit and the master's program provide a critical element that integrates engineering and business fundamentals so our students can make an impact in the world."

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† Top image: Left to right: Alex Eisenhart, Cassity Ming, Irina Tolpygo, Diana Doyle, director Bob York and manager Mike Panesis of UCSB's Technology Management Program.

Credit: Rod Rolle

†† Middle image:

Jeff Simeon, at lectern, Thomas Kuo, left, and Patrick Toerner, right, together founded Birdeez, a bird-identifying iPhone app that won the 2012 New Venture Competition.

Photo courtesy of TMP

††† Bottom image: The Birdeez app helps users identify some 80 species of birds in California, with national support soon to follow.

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## **About UC Santa Barbara**

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.