THE DAIRY SCIENCE PROGRAM GIVES STUDENTS REAL WORLD EXPERIENCE

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DEAR FRIENDS:

Learn-by-doing means getting a taste of how the real world works – taking what is learned from books and lectures and applying it to real-life situations.

It’s the essence of the Cal Poly education. It’s why our graduates leave campus ready to contribute their first day on the job – because what they find in the workplace, they’ve already experienced in the classrooms, dairy, workshops, studios, vineyards and other living laboratories at Cal Poly.

In this issue, our six recently-named Honored Alumni tell you how this aspect of the Cal Poly education led to their professional successes.

Elsewhere, graduate Arvin Daeizadeh explains how it led him first to Dubai to work on the world’s tallest building and then to Afghanistan to build structures for the troops. And Robert C. Tapella discusses how at a Congressional hearing on his confirmation as the nation’s 25th Public Printer, his Cal Poly Graphic Communications degree nailed down the job.

Making a difference, though, isn’t only for our graduates. Our students, as part of their studies, have ample opportunity to contribute their first day on the job – because what they find in the workplace, they’ve already experienced in the classrooms, dairy, workshops, studios, vineyards and other living laboratories at Cal Poly.

Every year, students in the Orfalea College of Business learn how to manage a stock portfolio, investing real Cal Poly Corporation money in real companies. Biology students and faculty are helping to determine the source of chronic high bacteria levels in the ocean that prompt regular closures of the waters off Pismo Beach. Dairy Science students are producing delicious ice cream, butter, eggnog and more, turning profits as they sell their goods in local stores.

And please visit the middle of the magazine for a list of our friends who have given generously this year to ensure that this year’s gift of education continues every day at Cal Poly.

Thank you for reading Cal Poly Magazine. We hope these features and photos help you remain connected to Cal Poly. As always, if you have comments, questions or concerns, please e-mail me at mlazier@calpoly.edu.

— Matt Lazier, Editor (B.S., Journalism, 1997)

P.S.: For more content and multimedia features on impressive activities underway at Cal Poly, be sure to visit the online version of Cal Poly Magazine at www.magazine.calpoly.edu.
NASA SIGNS ON WITH CAL POLY’S PICOSATELLITE DEPLOYER

IN LATE SEPTEMBER, NASA announced a five-year con­tract award to Cal Poly to provide a broad range of Pico­satellite Orbital Deployer (P-POD) services for NASA's CubeSat program. The contract’s maximum cumulative po­tential value is $5 million.

THE CONTRACT ENSURES OUT-OF-THIS-WORLD, HANDS-ON OPPORTUNITIES FOR CAL POLY STUDENTS, WHO WILL BE INVOLVED IN ACTUAL LAUNCH CAMPAIGNS

The contract ensures out-of-this-world, hands-on opportu­nities for Cal Poly students, who will be involved in actual launch campaigns working with launch providers, the NASA launch team and all universities developing Cubesats. Cal Poly and Stanford University created the Cubesat Standard to provide developers with guidelines to interface with the P-POD, which is a tubular, spring loaded mecha­nism easily integrated into any launch vehicle. Cubesats are research spacecrafts measuring 10 cm square with a mass of up to 1 kg.

FRED SWEENEY TO LEAD ALUMNI ASSOCIATION

FRED SWEENEY, A CAL POLY ARCHITECTURE graduate and principal with PMSM Architects in Santa Barbara, is the new president of the 14,000-member Cal Poly Alumni Associa­tion, the voice of more than 144,000 living university alumni.

Sweeney received his bachelor's degree in architecture from Cal Poly in 1974. He is currently a member of the Deans Lead­ership Council for the College of Architecture and Environ­mental Design. He led the $1.5 million fundraising campaign for the George Haslam Endowed Chair in the college.

Sweeney has more than 20 years experience designing higher education projects and is a member of the Santa Barbara His­panic Achievement Council and the Santa Barbara Art Mu­seum's Collectors Council. He is the founding president of the Architectural Foundation of Santa Barbara and has served as past president of the Santa Barbara Chapter AIA and past direc­tor of the California Council AIA.

He will serve as the CPAA president until June 2012.

ATHLETIC DIRECTOR ALISON CONE TO RETIRE

ALISON CONE, CAL POLY’S DIRECTOR of athletics since 2004, announced that she will retire in Decem­ber after 16 years at Cal Poly.

“This is the right time in our execution of our strategic plan for me to move on,” Cone said. “We have reached a stable po­sition within the NCAA at the Division I level, we have great coaches in place, and they have the right focus on developing our student-athletes for success on the field, in the classroom and in their professional lives.

“And with football’s coming entrance into the Big Sky Con­ference, we will have all of our teams competing in appropri­ate conferences in order to give our student-athletes the best possible competitive opportunities,” said Cone, 57, who came to Cal Poly in 1994 as senior associate director of athletics.

Interim President Robert Glidden said a national search will be conducted over the next few months and timed so the next Cal Poly president, expected to be named by year’s end, can se­lect Cone’s successor.

CAL POLY ALUMNI ASSOCIATION ESTABLISHES AWARD IN HONOR OF SANDRA GARDEBRING OGREN

THE CAL POLY ALUMNI ASSOCIATION Leadership Award is being established in memory of its inaugural recipient Sandra (Sander) Gardebring Ogren, who memorably served the university as Vice President, Advancement.

Ogren came to Cal Poly from Minnesota, where she had worked as vice president for institutional relations for the University of Minnesota. Before her career in higher education, Ogren served on the Minnesota Supreme Court from 1991 to 1998 and on a state appeals court from 1989 to 1991. Her public service in the state also included service as a commissioner with the Minnesota Department of Human Services, director of the EPA’s enforcement division, and commissioner with the state’s Pollution Control Agency. Ogren personified the values and accomplishments the Alumni Association seeks to honor and celebrate. Throughout her life as an accomplished jurist, dedicated public servant and leader of philanthropic endeavors, Ogren blended high ideals with a pragmatic focus on achieving results.

ENGINEERING DONOR ENDS PROJECT-BASED LEARNING

PAUL R. BONDERSON, JR. is such a staunch supporter of Cal Poly’s learn-by-doing educational focus that he donated the money for the $8 million Bonderson Projects Center dedicated solely to student projects. Now, the 1975 electrical engineering grad has given Cal Poly an additional $550,000 to generate ongoing funds for those projects.

The gift establishes an endowment that will provide salary support for technicians who staff the Bonderson Projects Center, as well as grants for equipment and materials, faculty expenses and team travel to conferences and competitions such as the National Concrete Canoe Competition, the Shell Eco-Marathon, the Formula Hybrid Competition and the Solar Decathlon.

Cal Poly teams consistently perform well in these contests. The Cal Poly Concrete Canoe team, for example, won a national championship in June.

“I believe students get so much out of these national contests,” Bonderson said. “I love coming back to campus and seeing all the great student projects, especially the cutting­edge vehicles,” Bonderson said. “And I’m especially interested in supporting club projects.”

FIND ALUMNI IN POLYLINK, AND MAKE SURE THEY CAN FIND YOU

THERE ARE MORE THAN 66,000 ALUMNI in Polylink (www.calpolylink.com), Cal Poly’s free, private, online alumni direc­tory. If you’re a Cal Poly alumnus, current senior or faculty or staff member, you can find and e-mail all 66,000 alums there. You can also find additional career, contact, and personal information – including photos – from nearly 17,000 alums who have expanded their directory profile.

Help them find you by expanding your profile in the Polylink alumni directory. Once you’ve set up your profile, you can use the “Locate a Classmate” database in the directory to find one alum or a whole major or class year. You can also browse the directory’s interactive Google map (www.calpolylink.com/alumnimap) to find alumni worldwide.

If you have never logged in to the Polylink alumni directory, you can find your personalized first login code next to your name on this Cal Poly Magazine label. Take it to www.calpolylink.com, follow the prompts and log in today.

For illustrated directions on the three-step, secure first login process, visit www.calpolylink.com/1stlogin.

For additional University News items, photos and links, check out the online edition of Cal Poly Magazine at www.magazine.calpoly.edu.
CAL POLY’S DAIRY SCIENCE PROGRAM PROVIDES REAL WORLD EXPERIENCES AND SOLUTIONS

BY STACIA MOMBURG

CAL POLY’S “GOT MILK” AND A LOT OF IT – about half a million gallons a year, in fact, from a herd of 160 Jersey and Holstein cows.

Half a million gallons of milk that, for Cal Poly Dairy Science students, equal real-world experience in fields as diverse as animal husbandry, milk production, dairy processing, research and food development.

Half a million gallons that, for students such as Maci DePaoli, can add up to years of professional experience already under their belts when they enter the workforce.

DePaoli, a 2009 graduate of the Dairy Sciences program, now works for Dryer’s Grand Ice Cream, the nation’s largest ice cream producer. She was initially hired into the company’s nine-month training program to learn about its various production departments. And when she finished the program, Dryer’s moved her to its quality control department.

DePaoli credits her Cal Poly education to her quick ascent. “My internships, course work and hands-on learning I received at Cal Poly provided me with five years of industry work experience,” she said. “I came to Dryer’s well above entry level.”

Her Cal Poly coursework is still providing her with a foundation for success, she said. “We worked with other consultants and universities previously with little success,” Pinkberry President Shelly Hwang wrote in a thank you letter to Dairy Science Professor Phil Tong. “The advice you gave and the test trials you performed enabled us to continue with our development of the Pinkberry business and are positioning us for larger-scale production.”

And through the Cal Poly Dairy’s food production program, students are learning how to create dairy products from ice cream to eggnog and also how to package, market and sell them. With guidance from creamery manager Jerry Mattas, students produce seven different cheeses, ice cream, eggnog and now chocolate milk.

Dairy Science Department Head Bruce Golden said he works to find new and better ways to continue the self-sustaining program. So far, he’s been successful. “We’ve seen revenue increase by 80 percent over the last four years,” he said. “As we develop more products and increase our outreach to industry partners, I can see us continuing to grow exponentially.”

Students package Cal Poly cheeses to sell at Campus Market and at Spencer’s Fresh Markets in the San Luis Obispo area. Holiday cheese packs are sold online – and sell out every year. In addition, students package ice cream year round and eggnog for the holidays, and they work with third-party cheese producers and ice cream makers to package Cal Poly products under those labels.

Spencer’s owner John Spencer loves selling local products to local families and calls Cal Poly cheese “second to none.”

“Last year, we couldn’t keep the holiday eggnog on the shelves,” Spencer said. “Bruce, Jerry and the students are sending the message that good things are going on at the Cal Poly Dairy.”

Third-year Dairy Science major David Valenzuela is capitalizing on the program’s success. He makes cheese in the creamery daily and has helped with ice cream and eggnog production. “The Dairy Science program is providing me with a solid foundation and job experience that will ultimately help me do more for my world,” said Valenzuela, who wants to help improve dairy industries around the world in his career.

Valenzuela said he’s been well prepared since his first day at Cal Poly. “My first day in class, the professor lectured for 30 minutes, and then we went out to the dairy to apply what we had just learned,” he said. “I knew about learn by doing at Cal Poly, but the speed of it still just blew me away.”
Cleansing the Waves

Cal Poly Science Students Examine DNA to Solve a Bacteria Problem in Pismo Beach

By Mary McNally

Since San Luis Obispo County health officials began testing coastal water for contamination in 2001, an alarming number of safety advisories have been issued warning people of high levels of potentially dangerous bacteria at Pismo Beach.

Pigeons were suspected to be the culprit, but officials couldn't develop a strategy to minimize contamination until they determined the source.

That's when they turned to Cal Poly's Environmental Biotechnology Institute (EBI) to solve the mystery – giving dozens of students and a handful of faculty members a chance to make a real-world difference.

The resulting study spanned three years. In the end, Cal Poly confirmed officials' first inclination about the source of the pollution.

"The preponderance of data indicates the pier is the physical origin of contamination and pigeons have been the main source," said Christopher Kitts, study supervisor and Biology Department chair.

Along the way, the hands-on experience conducting lab tests and statistical analysis in a multi-year study transformed participating students into accomplished field researchers and skilled lab technicians.

Intriguing Results

Volunteers, students and Cal Poly's Center for Coastal Marine Science were enlisted to collect samples from various sites along the beach, in the water and at the South County waste-water outlet. Samples were taken in hourly, daily and weekly intervals, while tides, wave direction and current were monitored to detect patterns.

Sampling done during a single summer indicated 43 out of 60 days had at least one site that exceeded safe bacterial levels. During incoming tides, at least one site per hour exceeded the safety level 96 percent of the time.

Two primary testing protocols were conducted, both of which challenged the students to perform complex lab studies using state-of-the art equipment.

To determine the source species, the students extracted DNA from E. coli in Pismo Beach sea water samples and matched it to strains from a national library of E. coli DNA fingerprints. "E. coli is a relatively large component of human intestinal flora, and that makes it a good indicator of fecal contamination," said Kitts.

They also extracted DNA from bacteria in fecal samples and matched that to DNA from bacteria known to inhabit the intestines of species including humans, dogs, cows and horses.

The research produced some intriguing results. Evidence of dog feces in the water was more common on the weekend. And human deposits were more common in the middle of the week and dramatically higher around the July Fourth holiday.

However, neither dogs nor people contributed enough contamination to trigger safety warnings.

Instead, birds were the only source of feces consistent with all the data collected. And pigeons were by far the most common birds on and around the pier.

Student Success

By virtue of its work in the program, the EBI has received a grant to develop a faster, cheaper library of E. coli DNA fingerprints. The project has already been integrated into course curricula, so students have the opportunity to develop what Kitts hopes will be a new resource for California watershed management.

"With any lab technique, there are always little things that make a difference," said fifth-year microbiology student James Chen. "Like when you're doing a DNA extraction, how do you know you're getting the optimal amount of DNA? Those are the things you learn with hands-on experience."

Monica Reynoso (B.S., Microbiology, 2009) ran the tests and taught other students to do the procedures. "She understood why we needed the level of precision we did and how to get students to follow the protocols exactly," said Kitts. "If you're a clinical laboratory technician, precision is important. Your work affects someone else's life."

"I really enjoyed the detective work involved in research," Reynoso said. "It helped me realize what I wanted my career to look like."

Reynoso now works as a DNA sequencing lab technician at Elim Biopharmaceuticals. "I work with graduates from other universities," she said, "and that makes me realize the value of my learn-by-doing education. Many of my coworkers had never seen a sequencer before they started working here. My experience at EBI gave me an advantage in the real world."
WHAT WOULD YOU SAY if you were told a 22-year-old college student would manage your retirement account or your investment portfolio? If you weren’t that enthusiastic, you would be understimating a particular class of Cal Poly undergrads. A select group of senior finance students in the Orfalea College of Business has been managing every investment decision for the Student Managed Portfolio Project (SMPP) since its inception in 1992.

Initiated by now-retired professor John Lindvall, the SMPP was initially funded with $200,000 from the Cal Poly Corporation to give advanced finance students hands-on training as fund managers and investment professionals. The students have proven to have a keen understanding of the market: The SMPP has outperformed its benchmark, the S&P 500 index. The corporation has withdrawn investment earnings of $141,000. As of the last quarterly report, the trading account reflected a balance of $452,000.

“This is an example of Cal Poly’s commitment to hands-on education,” said Ron Weaver, investment adviser for the Cal Poly Corporation. “Trading on paper is one thing. But when the risks are real, the pressure is different and the learning is taught.”

REAL WORLD

The class is patterned after a real-world relationship between a client (the corporation) and its adviser (the SMPP students).

The students design an investment strategy and write a prospectus for the fund based on the client’s investment horizon, portfolio objectives and risk tolerance. For this client, the goal was to create a well-balanced, diversified portfolio to maximize growth and limit risk. To accomplish this, the class developed a strategy weighted heavily toward Exchange Traded Funds.

Class discussions, often led by visiting industry professionals such as long-term fund managers and college namesake and Kinko’s founder Paul Orfalea, include the effect of macro-economic factors, such as news in the world at large, and how that can impact the market.

“The last two years have been a once-in-a-century opportunity to see the world change in real time in a dizzying manner,” said SMPP supervisor and finance area chairman Cyrus Ramezani. The students managed the fund successfully while navigating the sub-prime credit crisis, failure of some of the nation’s largest financial firms, the health care debate, high unemployment, implementation of the federal stimulus package, and a surge in energy and commodity prices.

REAL RISK, REAL RETURNS

Each year, the new crop of student fund managers assesses the legacy fund from the previous year’s group. Fall quarter is dedicated to conducting due diligence while developing a strategy for the coming year. Before assuming responsibility for the real-world portfolio, they work the portfolio on paper:

“The paper portfolio shows spectacular success and great failure,” Ramezani said. But failure, he added, is one of the great teachers.

“The risk has to be at the forefront of your mind,” said 2009-10 SMPP student David Dudek. “The prior two years showed just how fast you can lose a large amount of money if you focus solely on maximizing returns.”

Through the course of the project, SMPP students learn to utilize the same techniques professionals use, including analyst reports and in-person interviews. They also master electronic information resources including Morningstar Direct, MergentOnline, Reuters and Bloomberg. By the end of the course, they can discount the fair value of stocks based on Monte Carlo simulations, Sharpe ratios, and regression and dividend discount models.

“The success of the program isn’t just reflected in the returns the portfolio generates,” Ramezani said. “It’s the confidence and experience the students gain from the experience.”

WITH SIX COLLEGES AND DOZENS OF degree programs, it’s no surprise that alumni have a variety of stories about how Cal Poly’s learn-by-doing experience launched them on their successful careers.

Nonetheless, through all of those stories, there run common themes, each deeper than any one discipline. These are the core lessons of learn-by-doing — the fundamental skills Cal Poly imparts that help alumni succeed. As they returned to campus for Homecoming, we asked this year’s six honored alumni about these deeper impacts.

Here’s what they said:

COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENTAL SCIENCES

Kenneth Q. Volk, III (B.S., Fruit Science, 1983)

I just remember hands-on experience in agriculture at Cal Poly. I experienced a very nurturing environment where it was easy to bounce ideas off professors and have immediate feed back. It’s why I’ve embraced learn-by-doing my entire life, and it’s why I’m committed to developing a Center of Excellence for the Wine and Viticulture students at Cal Poly. I want future students to experience learn-by-doing with the latest technology, in the same way I did.

COLLEGE OF ARCHITECTURE AND ENVIRONMENTAL DESIGN

James E. Grant (B.S., Construction Engineering, 1980)

Cal Poly taught me the importance of time management and not being a procrastinator. Being organized is in my DNA, and if I had to list the three or four themes, each deeper than any one discipline. These are the core lessons of learn-by-doing — the fundamental skills Cal Poly imparts that help alumni succeed. As they returned to campus for Homecoming, we asked this year’s six honored alumni about these deeper impacts.

Here’s what they said:

COLLEGE OF ENGINEERING

Ronald S. Smith (B.S., Electronic Engineering, 1983)

Fundamentally, my Cal Poly education was about learning how to learn. My coursework and my professors pushed me to go beyond the basics to the underlying principles driving the results and then apply those principles in a hands-on lab environment. Doing that helped me gain a deeper, broader understanding of my field. I find myself applying these learning principles beyond engineering into every aspect of my life.
FROM DUBAI TO AFGHANISTAN:
BUILDING AND REBUILDING THE WORLD

B Y T E R E S A M A R I A N I H E N D R I X

ARVIN DAEIZADEH (B.S., Construction Management, 2004) grew up in Los Angeles, but right now you’ll find him half a world away – splitting time between his apartment in Dubai and his new job in Kabul.

Daeizadeh spent 2007-09 on the team overseeing the construction of the $20 billion Burj Khalifa (originally Burj Dubai) skyscraper and surrounding master-planned area in the United Arab Emirates. When it opened in January, Burj Khalifa became the world’s tallest structure. At 160 stories, it’s 2,716 feet high – taller than two Empire State buildings.

Daeizadeh is now working for ACCL International (Afghan-yar Construction Company Limited) and has been on the job since April. The civilian company is owned by Afghans and based in Kabul and includes a team of top American project managers.

Daeizadeh stopped by Cal Poly while visiting to family and friends in California in September and took time to answer questions for Cal Poly Magazine.

Q: WHAT ARE YOU BUILDING IN AFGHANISTAN?
A: We build projects from small warehouses and perimeter walls to full-size camps for local and expatriate police and soldiers.

Q: WHAT ATTRACTED YOU TO THE JOB?
A: My current boss had worked with me on the Burj Khalifa project. I was drawn to the opportunity, because I knew him and respected him and because the company was created with the purpose of helping the Afghans. The job lets me serve the international forces, who are our clients, and help the locals by giving them jobs and training, buying local products and helping them build a successful Afghan company.

Q: IS IT DANGEROUS THERE?
A: It is, but Kabul is one of the safer places in Afghanistan. Our company employs its own security team, which we train; they are local Afghans. Whenever any of us Westerners are traveling, we are accompanied by former U.S. military or with one of our Afghan armed guards.

Q: DO YOU WORK AT PROJECTS ALL OVER THE COUNTRY OR JUST ONE REGION?
A: Our main office is in Kabul, and I spend most of my time there. But I had a three-week project in Herat, near the border of Iran. I also have an assignment that will require me to travel to half a dozen camps on the borders of Afghanistan.

Q: WHICH ACCOMPLISHMENT HAS BEEN THE MOST FUN IN YOUR CAREER?
A: Entering the international job market; there is so much opportunity. American expertise is in high demand internationally, but most Americans are not comfortable with international work. I’ve been able to work on larger and more interesting projects while traveling and seeing more of the world.

Q: AND WHAT’S BEEN THE TOUGHEST THING SO FAR?
A: Staying abreast of the industry and the rapid advancements in construction on an international scale.

Q: WHAT PROMPTED YOU TO MAJOR IN CONSTRUCTION MANAGEMENT?
A: I kind of stumbled into it. I had to choose a major when I applied to Cal Poly, since there was no “undecided” option. My stepfather was in construction in L.A., and I liked the times I worked with him as a kid. Once I got started in the program and worked alongside architecture, city and regional planning, landscape architecture and architecture engineering majors, I really started to like it.

Q: WHY DID YOU PICK CAL POLY AS AN UNDERGRAD?
A: It is an amazing school. Poly is very well recognized in my industry, and learn-by-doing was very much in place in every one of my major courses. Cal Poly fulfilled my check list – a top school, out of my hometown, with no overcrowded classes, and something I could afford. I attribute a lot of my successes to Cal Poly. The learn-by-doing education and the real-world experience helped shape me to be ready for a career and life in general.

Q: WHAT’S YOUR ADVICE FOR CAL POLY STUDENTS (OR ALUMNI) WHO WANT TO GET INTO CONSTRUCTION MANAGEMENT?
A: Anyone interested in building should look into the area of sustainable construction and building. The construction industry has a significant role to play in sustainability, and I see it being a big part of how we build in the future rather than just being a trend today.

Q: WHEN YOU’RE NOT WORKING HARD IN EXOTIC PLACES, WHAT DO YOU LIKE TO DO?
A: I really like motorsports and have shipped my motorcycle out from L.A. to Dubai. I take it for a ride with the local Emirati bike crew whenever I get a chance – as long as it’s not during the summer.

FROM DUBAI TO AFGHANISTAN: BUILDING AND REBUILDING THE WORLD

BY TERESA MARIANI HENDRIX

ARVIN DAEIZADEH (B.S., Construction Management, 2004) grew up in Los Angeles, but right now you’ll find him half a world away – splitting time between his apartment in Dubai and his new job in Kabul.

Daeizadeh spent 2007-09 on the team overseeing the construction of the $20 billion Burj Khalifa (originally Burj Dubai) skyscraper and surrounding master-planned area in the United Arab Emirates. When it opened in January, Burj Khalifa became the world’s tallest structure. At 160 stories, it’s 2,716 feet high – taller than two Empire State buildings.

Daeizadeh is now working for ACCL International (Afghan-yar Construction Company Limited) and has been on the job since April. The civilian company is owned by Afghans and based in Kabul and includes a team of top American project managers.

Daeizadeh stopped by Cal Poly while visiting to family and friends in California in September and took time to answer questions for Cal Poly Magazine.
fit for me, and the reputation of the Graphic Communication Department made my decision to attend that much easier.”

Tapella found his way to Cal Poly via a junior high calligraphy class and an innate sense of entrepreneurship. “I was required to take calligraphy twice a week, and I realized I was good at it,” he said.

At 13, the Sunnyvale native parlayed his talent into a job at New Scribes, a San Jose menu design shop. From there, he began to build his business. “When New Scribes closed, I took some of their customer base and opened Tapellagraphics,” he said.

By the time he got to Cal Poly, Tapella had tried his hand at direct mail and print brokerage, as well as broadcast ad purchasing. It was during Cal Poly’s Week of Welcome that Tapella entered the political fray.

“One of my WOW counselors was a College Republican member,” he said. Joining the club himself, Tapella saw an opportunity to shift his business from menus to political collateral.

In 1985, still running a successful print business, he became a full-time field representative in Congressman Bill Thomas’ Pismo Beach office, where he worked until 1993.

In 1996, Thomas asked Tapella to move to Washington, D.C., to work on the Committee for House Oversight. And in 1998 the Clerk of the House invited him to help develop and rework the infrastructure behind the legislative process.

“I was involved in retooling the electronic voting system, standing the legislative process and navigating the political arena,” Tapella said.

In 2007, Janus retired – and asked Tapella to continue what their team had begun, digitizing and streamlining the processes for printing federal documents. Tapella threw his hat in the ring to become the next public printer.

Three years later, as he prepares to retire, Tapella said he’s grateful his alma mater provided him with a solid foundation for his career.

“Cal Poly taught me how to work well with others and how to be involved – qualities that helped me tackle real-world challenges throughout my career.”

For additional photos and links to more information on Public Printer and Cal Poly alum Robert C. Tapella, check out the online edition of Cal Poly Magazine at www.magazine.calpoly.edu.
MECHANICAL ENGINEERING GRAD DESIGNS A PRESIDENTIAL RIDE

When President Obama and his family traversed Martha’s Vineyard on vacation in August, they did some of their touring on bikes designed by Cal Poly graduate Amber Lucas (B.S., Mechanical Engineering, 2007). According to the Gilroy Dispatch, Lucas, who lives in Morgan Hill, Calif., is one of 20 designers working for the company Specialized. She is the only one designing urban bikes and said her designs are immediately recognizable.

Lucas said she is a lifelong bicyclist who does all her commuting and errands on two wheels and doesn’t even own a car.

PERSISTENCE PAYS OFF FOR FORMER MUSTANG BASKETBALL FORWARD

It wasn’t an auspicious start, being the manager of the team, not when he wanted to play. But Ryan Darling (B.S., Business Administration, 2010) earned a spot on the Mustang basketball team as a walk-on and was cut twice before becoming the starting forward his senior season.

And his story didn’t end there. As ESPN reported in September, the 6-foot-8 Darling has signed a one-year contract with a pro basketball league in Germany.

ENGRAVISSIMO CIRCUS CHAMPIONSHIP

From the streets of Berkeley to the dinner table of the White House, electronic engineer and former UC Berkeley student Paul Sirkulis is used to an audience.

Sirkulis, 2008 recipient of the Engineering Science Circle of the Americas Engraving Award, is the recipient of an Emmy Award for Best Technical Direction and was named the first Columbus Ringling Family International Circus Champion. The award is given to the overall champion each year at the International Circus Festival in Barcelona.

The 6-foot-5 Sirkulis is a professional engineer and works as a software manager for Micron and formerly worked as a Senior Manufacturing Engineer at Intel. He is also the founder of the X-Apps Design Studio and a co-founder of the UC Berkeley Student Circus.

How an Egret Saved Me

Chris (Weygandt) Alba (B.S., English, 1978) won first place in the California State Poetry Society’s annual contest with the poem “How an Egret Saved Me.” Alba finished atop a field of 169 entries.

“His wings were spread out on both sides of his back, and it was the most graceful thing I’ve ever seen,” Alba said. “I just started crying.”

BrINGS STATEWIDE hoNor

Joaquin County.

A teacher at Hawkins School, Beltran stood out as an after-school book club for middle school girls. She also serves on several committees in the Jefferson School District, whose superintendent, Dana Eaton, describes her as “the kind of teacher that makes her classroom better, makes her grade level better, makes her school better and makes our district better.

San Joaquin County Teacher of the Year

Krista Beltran (B.S., Liberal Studies, 2001; Elementary Credential, 2002) was named 2010-11 Teacher of the Year in San Joaquin County. A teacher at Hawkins School, Beltran stood out among hundreds of teachers in 14 districts in the county, according to the Patterson Irrigator.

Beltran is the student council adviser at Hawkins and also runs an after-school book club for middle school girls. She also serves on several committees in the Jefferson School District, whose superintendent, Dana Eaton, describes her as “the kind of teacher that makes her classroom better, makes her grade level better, makes her school better and makes our district better.

ALUMNS’ START-UP HELPS AIR FORCE WITH UNMANNED FIGHT CONTROLS

AirMech, a San Luis Obispo engineering firm started by Cal Poly graduates Thomas Akers (B.S., Aerospace Engineering, 2001) and Norm Timbs (B.S., Mechanical Engineering, 1988; B.S., Engineering Technology, 1992), is partnering on a project contracted by the U.S. Air Force to develop an alert system that will prevent unmanned aircraft from flying into other drones or manned aircraft.

According to a report in the San Luis Obispo Tribune, the product could be used to help unmanned aircraft and commercial aircraft operate safely in congested areas at major airports around the world.

EUROPE MAKES MUSIC

Prior to playing professionally in Germany, Darling found some success playing college basketball in Europe. He played in the Italian basketball league and the German basketball league.

MANY PEOPLE AREN’T AWARE that the assets in their retirement accounts may be taxable at death. The good news is that changing beneficiaries may help eliminate some or all of those taxes. (Note: For the purpose of this article, we are referring to retirement accounts that are funded with pre-tax dollars, that excludes Roth IRAs.)

In general, Congress allows estates valued below a certain dollar amount to pass to heirs free of estate and income taxes after death (generally referred to as a lifetime exclusion). As of this writing, the specific amount hasn’t been set for the years 2010 and beyond.

Many people incorrectly assume the value of their retirement account can be added to the value of other assets and, if the total is less than the lifetime exclusion, it will pass to heirs tax-free. Although some people assume their retirement accounts are treated similarly to other assets in their estate, they are not.

It makes sense. When you make a contribution to a non-Roth IRA retirement account, you don’t pay taxes on the contribution. Effectively, you reduce your taxable income for that year.

The catch is that the taxes are deferred, not waived. Taxes are due at the time the funds are distributed from the retirement account. That may be when someone retires and withdraws the funds for living expenses, or after death, when the funds are withdrawn by his or her heirs.

In the latter case, federal income and estate taxes, if applicable, can erode up to 70 percent of the assets in those retirement accounts.

There is good news, though. For those who want to include charitable giving in their estate planning, changing the beneficiary on a retirement account can eliminate some or all of those taxes, ensuring that more of your money goes to the people and institutions you care about.

Designating a qualified charity – such as Cal Poly – as your retirement account beneficiary eliminates both estate and income taxes on the portion of the retirement account assets bequeathed to the charity. To illustrate, let’s look at a simple example with estimated estate and income tax rates applied.
If a charitable donation appeals to you, there are some important things to consider. For instance, it's important to establish the funds destined for the charity in a retirement account that is distinctly separate from any retirement account designated for other heirs. Each retirement account must be distributed within a certain interval after death.

Your heirs may be eligible for a step-up in basis on the non-retirement assets, which means they are likely to benefit from a tax savings when they do eventually divest themselves of the asset.

That interval is based on the life-expectancy of the heirs on that particular account. But charities have zero life expectancy, according to the IRS. If the charitable gifts are in the same account as the funds designated for other heirs, the arrangement can force other beneficiaries to liquidate assets sooner than may be optimal. Separating the funds into different accounts avoids that complication.

Or, if you have a mix of assets and other non-retirement assets, you may consider giving the assets in the retirement account to Cal Poly and bequeathing the non-retirement assets to your heirs. Non-retirement assets may not face the same tax liability. Your heirs may be eligible for a step-up in basis on the non-retirement assets, which means they are likely to benefit from a tax savings when they do eventually divest themselves of the asset.

Before making any changes, it's important to consult with your tax adviser and the planned giving officers at Cal Poly to determine the optimal strategy for your particular situation. For more information, contact the Planned Giving Department at (805) 756-7125 or plannedgiving@calpoly.edu.

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* Courtesy of University Archives, Cal Poly.
IN WITH A PEEP, OUT WITH A ROAR

FOUR CAL POLY SOPHOMORES TASTE SWEET VICTORY AT THE RED BULL FLUGTAG

BY MATT LAZIER

TO THE LIST OF GRACEFUL AND AERODYNAMIC birds of the world, we may now add the pEEP – thanks to four Cal Poly sophomores.

That’s right, the pEEP – the little yellow marshmallow chicks you see in stores around Easter. Only this particular pEEP wasn’t little – nearly 400 pounds, with a 24-foot wingspan. And it was made of styrofoam, PVC and aluminum.

Oh, and far from a flightless marshmallowfool, this pEEP soared 98 feet to defeat more than 30 competitors at the 2010 Red Bull Flugtag in Long Beach in August.

Nevermind the victory, just taking part in the Flugtag (or “flying day”), fulfilled a dream for math student Corinne Schnieders. “I saw a commercial for it three years ago,” she said, “and I thought ‘I need to do that.’”

In the event, teams build flamboyantly themed, human-powered flying machines, then push them off a pier and try to pilot them over the water. Teams are judged on how far they go and on their costumes and skits or dance routines done before “liftoff” (which for many teams and their contraptions simply involves plunging straight into the water).

Red Bull holds Flugtags worldwide. When Schnieders saw in May that there would be one in Southern California (where she and her team members are from), she rounded up fellow Trinity Hall residents Jyllian Smith (a friend from high school), Jamee Curran and Katie Morrow, along with high school friend and UCLA student Suzy Stratner.

After gaining entry into the contest (only 34 teams were picked out of more than 380), the Cal Poly crew spent the summer refining and building their contraption – something like a biplane with a pEEP-shaped base.

Taking the stage in Long Beach, the ladies found themselves the center of attention for a crowd of more than 105,000. “It was surreal. You’d look out, and you couldn’t see the ground, there were so many people” Morrow said. “There was a moment where I thought ‘I cannot do this.’”

But with Schnieders behind the wheel, the other four members gave a running push, and the pEEPcraft floated gently across the water and in the Red Bull history books.

The flight was such a cool feeling,” Schnieders said. “It wasn’t just falling. I could feel the air gliding under me.”

Perhaps the most surprising element of the victory: None of the students studies engineering (though Schnieders loves flying, wants to switch to mechanical engineering and aspires to be an astronaut). Curran is an art student, Morrow is majoring in social science, and Smith studies graphic communication.

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For additional photos and information on Cal Poly’s flugtag-winning team, check out the online edition of Cal Poly Magazine at www.magazine.calpoly.edu.
Change Service Requested

Parents, please note: If your son or daughter is no longer at this address, please send his or her current address to alumni-info@calpoly.edu.

BEFORE THEIR HOMECOMING MATCH Oct. 30 against St. Francis (Pa.), members of the Cal Poly Mustangs football team pause at Memorial Rock to reflect on the 16 players and six others killed in an airplane crash Oct. 29, 1960 in Toledo, Ohio.

Prior to each home game, Cal Poly football players pay tribute to the 1960 football team at the rock at the north end of Alex G. Spanos Stadium. For each road trip, the team loads up the buses near Mott Gym, drives to Spanos Stadium and walks to the rock.

Cal Poly marked the 50th anniversary of the crash during Homecoming with a memorial ceremony attended by some of the 26 survivors and their family members.

For more on Homecoming 2010, visit the online edition of Cal Poly Magazine at www.magazine.calpoly.edu.