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ix students are making history at Cal Poly. In their 40s and 50s and with demanding full-time careers, they are in their second year of the Cal Poly-UC Santa Barbara joint doctoral program in Educational Leadership and Administration. It’s been a challenge, they say, juggling the demands of their professional and personal lives.

Holly Edds, principal of Joe Nightingale Elementary School in the Orcutt Union School District, found a dual challenge in starting the doctoral program and assuming a new position. “I’m trying to find a balance in my life and have given myself permission to spend the year learning,” she noted.

Jan Wellman, resource teacher at Nipomo and Dana elementary schools, explained that she researched many options that included significant travel or expense or both. She says she chose the program because it is “offered by two top institutions and designed for practitioners.”

The first year of the program is taught at UCSB and provides the research and methodological base. During the second year, offered at Cal Poly, method is tested using individual work environments. The third year is spent writing the thesis.

The program is creating a new graduate culture, where students blend Cal Poly’s mission of learn by doing with the strong research traditions of UCSB, according to Jim Gentilucci, Cal Poly associate professor of education and co-director of the doctoral program.

He hopes that this research-practice nexus will create new answers to educational problems that have plagued schools for decades. “We are creating roles for ‘teacher leaders’ who will work with administrators to become ‘change agents’ for improved schools,” he said.

The doctoral thesis will allow these future leaders to tackle specific issues in their educational settings. Patty Grady, assistant principal at Fesler Junior High School in Santa Maria, is developing a prevention program at the middle-school level to decrease high-school dropout rates.

Lynn Lamb, elementary school teacher at Branch Elementary in the Lucia Mar Unified School District, is studying the inclusion of special education students in classrooms and support needed by teachers. “I’m interested in how small school districts successfully cope with declining enrollment,” noted Jim Gracia, principal of St. Rose Catholic School in Paso Robles.

Kevin Bontenbal, instructional technology librarian at Cuesta College and the only student from higher education, will test and assess the effectiveness of community-college-degree programs to develop a profile of best practices. “I hope to enable Cuesta and other community colleges to implement reliable models of student learning and assessment.”

The students are uniformly enthusiastic about their pioneering experience in the joint doctoral program. For classroom teacher Lamb, the program provides a broader view of education, as well as opportunities to rethink directions in the classroom and in her own professional development.

“This historic, field-based program will have a significant impact on our local and statewide educational communities,” said Bonnie Konopak, dean of the College of Education.
Students from local elementary schools help Dean Phil Bailey make magic. (Photos by Chris Greene/ImageWest Photography)

THE MAGIC OF CHEMISTRY CAUGHT ON VIDEO

By Stacia Momburg

"The balloons popping was my favorite part," said fourth-grader Enrique Rico about the Chemistry Magic Show video he watched in his classroom at Mary Burem Elementary School in Guadalupe on California's Central Coast.

The privately funded video, designed for third-, fourth- and fifth graders, aims to stimulate and excite young students to learn more about science and math. It was sent to each of California's 5,465 public elementary schools and has the potential to be seen by nearly 1.5 million California kids.

The Chemistry Magic Show video and teacher's guide were funded by the Cotchett Foundation and produced in conjunction with Cal Poly.

The video was conceived and funded by Burlingame attorney Joseph W. Cotchett (ENGR '60) and his wife, Victoria, in collaboration with Philip S. Bailey, dean of the College of Science and Mathematics, and his wife, Christina A. Bailey, professor and chair of the Chemistry and Biochemistry Department.

Its purpose is to inspire students to become California's future science and math teachers, technology leaders and innovators.

"This hands-on instructional package will expose students to the wonders of science and mathematics," said Cal Poly President Warren J. Baker. "It will stimulate noble dreams and ambitions, as well as provide the knowledge and skills for
excelling in college and careers.”

The video features Phil and Tina Bailey performing colorful and awe-inspiring chemistry experiments with the help of dozens of fourth-grade students. An accompanying teacher’s guide includes brief explanations of the demonstrations and offers directions for additional experiments that could be done in class or at home.

The Baileys have performed chemistry magic show demonstrations for young people for more than 35 years. One recent group was the fourth-grade class of Jaime Cuello (LS ’93; M.A. EDUC & ELEM ED CREDENTIAL ’98) at Mary Buren Elementary School.

“The kids are really into science now. You can feel the excitement. Their participation in the experiments made the difference – it opened their eyes to the world of science,” Cuello said.

“It was cool,” Rico said. “We learned a lot about science and chemistry.”

Classmate Guadalupe Ayala agrees. “It was fantastic. I think children are going to learn from the video. I’ve been telling my parents that I want to be a teacher, but I don’t know what kind yet.”

The Cotchetts have donated $2 million and bequeathed an additional $5 million, creating a unique public-private partnership to support science and mathematics teacher education initiatives at Cal Poly.

“We want to motivate our young students, especially those who are disadvantaged, to look to science and math as career paths. We want to inspire their ambitions,” said Joe Cotchet.

The 50-minute, professionally produced video is an offshoot of the Cal Poly-Cotchet partnership and was funded separately by the Cotchetts from their other gifts.

“Science and math form a basic understanding of how the world works, which is necessary in every future endeavor – from balancing a checkbook to using computers – as well as understanding consumer products,” said Victoria Cotchet.
Spectacular Succulents,
Terrific Terrestrials
All Thriving at the Cal Poly Plant Conservatory

BY STACIA MOMBURG

Imagine a plant that retracts and appears dead the instant it's touched. Or a plant that survives on nothing but air, or one that makes a blanket to keep itself warm on a cold desert night.

Little Shop of Horrors? Not at all. These plants do exist and indeed are thriving at the Cal Poly Plant Conservatory.

Visitors to the conservatory will find a diverse mix of terrestrial, aquatic, succulent and epiphytic (air) plants, the likes of which are usually found only in Dr. Suess books.

Several hundreds of species of plants from every corner of the world inhabit the wonderfully rich living museum that lies in the center of the Cal Poly campus, including everything from average house plants to rare and endangered species.

Established in 2002 by Biology Professor Matt Ritter, the plant conservatory has a mission to maintain a diverse, well-documented and accurately labeled living-plant collection that enhances teaching and research for the faculty and students of Cal Poly.

The conservatory also works to foster education about plant biology and conservation of rare species through support of community outreach programs.

"The work and learning that take place in the conservatory is almost entirely hands-on, and the students seem to really enjoy it," he said.

The conservatory is supported primarily by the college-based fee initiative, voted in by College of Science and Mathematics students to support various programs that would not otherwise be funded. A portion of those fees helps pay for equipment, supplies and new plants.

"We wouldn't be able to do this work without the support of our students. Their willingness to contribute to their learning environment speaks volumes about their dedication to learning," Ritter says.

The conservatory is open to the public and special tours can be arranged. Visit http://www.plantconservatory.calpoly.edu for hours and more information.
You’re Hired!

BY JO ANN LLOYD

How many Cal Poly grads does it take to fill a position? Just one, because every Cal Poly student is educated to be job ready and tech savvy, no joke.

Employers large and small know the value of a hands-on education, returning to campus year after year to recruit some of the most sought-after engineers, scientists, educators and business graduates in the state.

Companies as varied as Alcon Laboratories, IBM, Raytheon and St. Jude Medical turn to Cal Poly’s Career Services to help fill positions.

Employers place a high value on Cal Poly’s experiential education and extra-curricular leadership activities, says Martin Shibata, interim director of Career Services. “Our students are valued for their skills in communication, teamwork, technology, interpersonal relations, problem solving and leadership, as well as work experience.”

Indeed, many consider Cal Poly students a breed apart. “A number of attributes distinguish Cal Poly students,” says Raul Muñoz Jr. of IBM University Recruiting in San Jose. “If I were to sum it up in one word, it would be ‘flexibility.’ Plus the university works closely with industry to maintain a curriculum that meets the needs of a rapidly changing marketplace.”

William H. Swanson (IE ’73), chairman and CEO of Raytheon Co., one of the nation’s largest defense contractors, employs more than 300 Cal Poly graduates. “My Cal Poly education prepared me well for the business world. I entered my first assignment with an advantage over my peers from other schools because the university’s learn-by-doing approach gave me the experience — along with a no-fear attitude — that has served me well in my 33-year career with Raytheon,” Swanson says.

Raytheon’s John Malanowski agrees. Cal Poly is one of a select number of universities that Raytheon has developed a long-term strategic relationship with, ranking in the top three percent of all schools they recruit from, based on the number of college-graduate hires, he says.

St. Jude Medical looks to Cal Poly for engineering graduates to hit the ground running. “Cal Poly’s high entrance standards help set it apart,” says Jon Whited, manager of technical recruiting at the company’s Cardiac Rhythm Management Division in Sylmar. “Classes largely reflect what is taking place in industry. Students are trained in a hands-on environment that assures they will be productive immediately. And finally, the staff and faculty work with our engineers and pay attention to the needs of our industry.”

John Mohns (OH ’78), president of Benchmark Landscape Inc. in Poway, employs about 300 people, including several Cal Poly graduates. His company actively recruits only Cal Poly graduates, who he says “stay for the long run.”

He senses a passion in Cal Poly graduates. “If you love what you do, work is fun, challenging and exciting. Every company needs a number of leaders who know horticulture inside and out and a number of managers who love the green industry. I think Cal Poly provides that.”

According to Career Services’ Shibata, many employers have indicated that Cal Poly is their No. 1 choice in universities. “That’s because Cal Poly students are highly motivated, possess competitive technical skills, and are able to transition into the workplace with a minimum of effort,” he says. “Another reason is our highly successful and active on-campus recruiting program.”

Employers are able to access Cal Poly students through Mustang Jobs, on-campus interviews, job postings, job fairs and career events. In addition, Career Services places a high value on employer relations, nurturing relationships with recruiters.

“Our Winter Job Fair points to the success of the program,” Shibata says. “It attracted representatives from 138 employers, recruiting students for co-op, internship, summer and career jobs.”
ALUM GARY ERICKSON CREATES COMPANY WITH A CONSCIENCE
In our sleep-deprived, overworked, snack-happy nation, energy bars have become as essential to survival as a nonfat cappuccino with extra foam.

That's good news for entrepreneur and author Gary Erickson (BUS '80), founder of Berkeley-based Clif Bar Inc., a multimillion-dollar enterprise that is as concerned about protecting the environment and giving back to the community as it is about making a quality product.

The self-styled "average student" says that many of the lessons he learned at Cal Poly were carried on his entrepreneurial journey. An avid cyclist, mountain climber and skier, Erickson wanted to create a better-tasting energy bar. Coming up with the magic formula and competing in the market were just the first two steps on his path to success.

"Visualizing your business goal - whatever it may be - and having the guts to go for it is 90 percent of the task," he says. "The rest is bringing the vision alive. I know it may sound mythical, but that's how most entrepreneurs work."

Although Erickson always felt he would one day own his own business, he did not initially realize that it would be in the food industry. He does, however, recall learning as a young boy how to bake from his mom.

Those early cooking lessons really paid off. After successfully starting a baking company where he invented the energy-bar recipe, Erickson founded Clif Bar with the modest goal of capturing 20 percent or so of the leading energy-bar market share, amounting at the time to $1 million to $1.5 million in annual sales.

"Who would have imagined that during the next 10 years we would grow to more than $100 million in annual sales?" he asks.

The company produces a range of products, from the Luna bar for women to the energy gel Clif Shot. As for Erickson's own favorite, he "loves the original Clif Bar, now a certified organic energy bar."

Erickson's recent book, Raising the Bar: Integrity and Passion in Life and Business - The Story of Clif Bar Inc., chronicles his company's success and reveals his philosophy on business and life. "Successful entrepreneurs take who they are and what they already know and create surprising combinations."

Erickson and his wife, Kit Crawford, are the only shareholders of the company. Their wish is to own a company that is defined by more than its bottom line. "Our return is about sustaining the business, as well as our brands, people, community and the planet," Erickson says.

To that end, Erickson and his company support causes that address environmental, social and cultural needs, both locally and globally. "We do business in a way that sustains natural resources and communities by using organic ingredients and adopting 'green' business practices," he says. He believes in putting values into action. He also believes in family values: both the company and Clif Bar are named after his father.
A recent report commissioned by The California State University, the largest four-year university system in the United States, shows the CSU plays a key role in California’s economy and workforce.

With roughly 443,000 students at 23 campuses, it awards more than 61,000 bachelor’s degrees every year – more than half of all bachelor’s degrees awarded by all public and private universities in California.

Together, the 23 campuses pumped a total of $7.46 billion into the state’s economy in 2002-2003 – the time period reviewed for the report. That included direct spending, wages and salaries, building projects, and student spending on textbooks, meals and housing.

When you add in the “economic multiplier” or “ripple” effect of those dollars once spent, the total impact on California’s economy is $53 billion.

The report also found that the CSU supports more than 527,000 jobs in California and creates more than $3.11 billion in tax revenue through employees and graduates.

That means the CSU generates $4.41 for every dollar the state invests in the system annually. That number rises to $17 for every dollar invested when the earning power of alumni are factored in.

The report estimates that 1.7 million CSU alumni live and work in California, earning $89 billion in income. Some $25 million of that is increased earning power directly tied to their CSU degrees.

When it comes to driving the state economy, the report shows, there’s plenty of Mustang horsepower. Cal Poly’s annual operating budget is roughly $245 million, and the university directly or indirectly supports almost 13,000 jobs.

Cal Poly’s 18,000-plus students spend more than $109 million annually in the local community, the report said. When you add in Cal Poly’s operating budget, building projects, spending by auxiliary groups like the Associated Students Inc., the Cal Poly Foundation, and student spending – then calculate the multiplier effect of all those dollars on the Central Coast – it adds up to almost $772 million annually and $43.6 million in state and local tax revenue.

Statewide, Cal Poly alumni account for another $1.4 billion in increased earning power annually, the report indicated.

In its look at Cal Poly, the report concluded that even without counting alumni spending and earning power, the university is among the top five CSU campuses when it comes to return on investment per tax dollar. Every tax dollar invested in Cal Poly brings a return of $5.04.
Nice Jewish boy meets homeboy. That's a pretty good description for some of the humor that stand-up comedian **Eric Schwartz (JOUR ’96)** uses in his routine.

"I'm the ultimate homeboy," he quips, "because I live at home, with my parents."

For at least a while, though, in the mid-1990s, he did not live with his parents. He was a student at Cal Poly, where he says he spent his free time lugging audio equipment up the hill from Media Services to Backstage Pizza to put on comedy shows. Now he is a rising star on the comedy-club circuit, winning comedy competitions, appearing on national TV shows, writing song parodies that have garnered international attention, and playing major comedy venues.

Schwartz got his start in radio on a Thousand Oaks station called KNJO, writing and performing comedy bits for "The Dick Whittington Show." Whittington is considered a legend in Los Angeles radio circles.

Schwartz continued to hone his skills at Cal Poly's radio station, KCPR, as a DJ and news director. As a senior at Cal Poly, he interned at KFI in Los Angeles, parlaying that gig into a part-time job further sharpening his writing and producing skills.

Schwartz recently placed second in the San Francisco International Stand-Up Comedy Competition — a competition that has helped jump-start the careers of comic greats Robin Williams, Ellen Degeneres, Kevin Pollack and Mark Curry, all of whom also placed second.

"It was amazing," Schwartz said of the competition. "I played 30 shows over three weeks to a variety of crowds. The diversity of the crowds made me realize the universal appeal of my comedy."

Schwartz already has a long list of credits, including appearances on such television programs as BET's "Comic View," "The Sharon Osbourne Show," SiTV's "Latino Laugh Festival," "Inside Joke" and "The Drop." He is also the host of the nationally syndicated show "Animal Atlas."

His song parody "Hanukkah Hey Ya!" and the accompanying flash animation were the buzz of the Internet and airwaves this past season, beating out Adam Sandler's "Chanukah Song" as the most-requested Hanukkah song.

Schwartz currently has two series in development that will showcase his musical and comedic talents. He also wants to add to his career credits by making more comedy records and playing larger roles on television and in movies. And, he'd like to come back and play Cal Poly.

"I do a mean impression of some of my old journalism professors," he says.

For more information about Schwartz and his shows go to [www.suburbanhomeboy.com](http://www.suburbanhomeboy.com).
THE FUTURE OF THE AEROSPACE INDUSTRY IS A HALF-BUILT ALUMINUM PLANE, SITTING IN PIECES IN A SMALL-TOWN HANGAR A FEW MILES SOUTHWEST OF SAN LUIS OBISPO. IT'S ALSO A RIP-THE-ENVELOPE, MULTI-MILLION-DOLLAR PRIZE-WINNING SPACECRAFT BASED HUNDREDS OF MILES AWAY IN THE MOJAVE DESERT. THE CONNECTION: CAL POLY.

By Susan McDonald
Students in Professor Dan Biezad’s aerospace classes are learning firsthand how an airplane flies — not just by reading about it — but by actually building one. It’s the first plane Cal Poly students have actually built in more than 50 years, Biezad said.

The plane project also demonstrates the strong influence Cal Poly alum Burt Rutan (AERO ’65) has on the university’s aerospace engineering education.

Rutan, renowned for his lightweight composite aircraft, designed SpaceShipOne, the plane that won the $10-million Ansari X prize last October when it became the first manned, private aircraft to travel into space.

Inc. Magazine named Rutan its top entrepreneur of 2004, not only for SpaceShipOne, but for Rutan’s methods of building aircraft “without an army of engineers and billions of dollars in government money. He did it the same way a fast-growing software or biotech company develops a product.”


It’s a dream come true that many of Professor Biezad’s students hope to imitate one day.

Biezad is quick to point out, though, that while most of his students are outstanding, Burt Rutans don’t come along every day. “Burt is a bona fide genius. You don’t find many people with his innate talent. We use him as an ideal. We give our students his vision and let them go out to reach their own potential.”

Such inspiration may lead to building their own planes or starting their own companies. “I’ve heard many times that Cal Poly students are ‘fearless.’ What we really try to give them is the full experience — the theoretical and the practical.”

Grad student Joon Kim, who follows Rutan’s adventures on the Internet, is impressed by his accomplishments. He has also met Rutan. “Our class had a field trip to his facilities, where we saw SpaceShipOne,” Kim said. “He gave us a real motivational talk. ‘Don’t give up on your dreams,’ he advised us. ‘Follow your passion.’”

Kim, who was born in South Korea and grew up in Bakersfield, dreams of becoming a flight test engineer at Edwards Air Force Base. His decision was influenced by Rutan and by Biezad, who also was a test pilot there until he retired in 1990. “Edwards — that’s the place to be,” Kim said.

Biezad knew Rutan at Edwards. His favorite Rutan quote: “Don’t design anything you can’t build.”

The students will test out someone else’s design as they build a single-engine plane — an RV7A — which came in a kit. The total cost to build it will be nearly $50,000, about half the price of buying a similar factory-built plane. A student-fee initiative paid for the plane kit, a fact that impresses Biezad.

“Students told me they wanted to build an airplane,” he said. “I could see they had the drive and creativity it takes. Then they voted for a fee increase themselves. I’m humbled and impressed by them.”

Students have been putting parts of the plane together in a tiny hangar at the Oceano Airport for the past year. They first had to demonstrate their skills at reading plans, riveting and using a lathe, drill press and other tools at a lab on campus before they could go out to the hangar.

So far they have completed the fuselage, empennage and parts of the wings. It will take approximately 3,000 hours to complete the plane. That’s if things go according to plan.

But the students keep coming up with modifications. One has built a cover for the instrument panel out of composite materials.

Joon Kim is working on gauges to measure strain on the plane. “We’re taking advantage of this opportunity to experiment,” he said. “We won’t have another chance to do this unless we have millions of dollars.”

Taylor McClurg, a third-year aerospace major who wants to work for NASA someday, continues to work on the plane, though she’s already completed Biezad’s lab class. “I worked last spring riveting for endless hours,” she said. “I’m doing this now just for fun. It’s good to know how to use the tools and read the plans. Someday, I would really like to fly.”

Sky Sartorius is one of the few first-year students allowed to work on the plane. The project was designed for third-year students and higher, but Sartorius convinced Biezad he had the motivation and skills needed to join the team. Maybe it’s because he still builds model airplanes as a hobby, including his own designs. “I always knew I wanted to be an engineer,” he said.

So, what happens when the plane is finished?

“I’ll fly it,” answered Biezad. “I’ll have to actually sign off on what these guys are doing.”
Kevin Kennedy
Exercises His Right to Have Fun

BY JO ANN LLOYD

Kevin Kennedy (NRM '77), Cal Poly alumnus and health-club entrepreneur who puts the fun in fitness, claims he's really in the entertainment business.

This doesn't mean he's not serious about fun ... or about fitness. Just one look around his newest club -- a lavish facility that includes racquetball and squash courts, a 50-meter swimming pool, specially built group-fitness rooms, steam rooms, and several thousand square feet devoted to weights and other equipment -- tells visitors that he's quite serious about fitness.

For passive fun, there's a giant TV in a lobby filled with comfortable chairs and couches and a snack bar that serves a variety of food and beverages, including wine and beer. Friday evenings from 4:30 to 7 p.m. it's happy hour. What better way to unwind after a tough workout?

The idea to open a gym dates back to when Kennedy, a former Mustang football offensive tackle (1974, '75 and '76), was working on his senior project, a feasibility study for a downtown San Luis Obispo fitness center. He and some partners did open the Health Fitness Center in the old Sears building on Higuera Street in 1977, but Kennedy left that venture after a few years.

He did not, however, abandon his dream of owning a health club. In 1981 he opened Kennedy Nautilus® in Atascadero, focusing more on rehabilitation and injury prevention than on pumping iron and building muscles.

"Nautilus just took off," Kennedy says. "Our claim that all people need is 30 minutes of strength training, three times a week, appealed to the average person."

Kennedy has since opened an Arroyo Grande club and two in San Luis Obispo, including the Kennedy Multiplex, sometimes referred to as the Taj Mahal of health clubs in the area. He learned the formula for success from his senior project.

"People look for two things in a health club: convenience and enjoyment. They want to have fun. It's even better when they realize, 'Oh, by the way, I'm getting fit, too.'"

At his four facilities, he employs about 220 people who work with some 13,000 members in more than 100,000 combined square feet of space. But wait; there's more. He plans to break ground this spring for a health club in Paso Robles. "It's the last club I am going to do," he says. "My goal, my focus, was to be the best and the biggest in the county."

Kennedy has seen great changes in the fitness industry, most notably in the group fitness area. And although it appears he's had a pretty smooth run, he admits his predictions weren't always right on. "Remember when spin classes started?" he asks, referring to the group-cycling class so popular today. "My first reaction was, 'Who's going to sit in a room full of people and spin?' Lots of people, it turns out.

The lesson, he says, is to always be open to ideas and change. "Don't give up on your dreams. I really am not very smart, just persistent. I'm in the 24th year of my 10-year plan."
From tutoring students in local elementary schools to helping develop their own curriculum, Cal Poly honors students contribute to the community in which they live and enrich their own academic experience at the same time.

As part of the Kennedy Library’s new Learning Commons program, and with such recent changes to the Honors Program as new courses, leadership opportunities and campus relationships, “we are working to expand students’ opportunities for interdisciplinary interaction,” says program director Erika Rogers. “We have about 235 students from majors across the campus, and we hope to grow both in numbers and in activities over the next few years.”

On campus, freshmen honors students may live together in the Honors House residence hall, an environment that fosters academic success and personal relationships. “I love the Honors House,” says resident advisor Lynn Kendrick. “It’s cool seeing these creative minds at work.”

In the classroom, honors students are challenged by small class sizes in courses ranging from the politics of poverty and philosophical classics to calculus and physics.

Off campus, honors students assist elementary school children with their homework in an after-school program that helped propel Hawthorne Elementary School from an academically low-ranking school to a 2004 California Distinguished School, one of the state’s top educational designations.

History senior and aspiring high school teacher Jim Fredette has been involved with the tutoring program for four years. “When the program began five years ago, Hawthorne was the lowest-ranking school in the area. On the latest state standardized tests, the school earned a 10, the highest score possible,” Fredette says.

And there are other benefits, too. “I love the interaction with the children and am impressed with their progress and willingness to learn.”

Fredette is not the only one satisfied with the program. “We really appreciate the after-school club,” says Principal Kirt Collins. “The Cal Poly students have made a huge difference in the lives of our children.”

In a brand new component of the Honors Program, students are becoming activists, tackling local political issues in the Honors Civic Leadership Program.

The program is designed “to create engaged citizens who will make a difference wherever they go,” says Stephan Lamb, director of the university’s Community CENTER. “We aim to educate students about the different layers of government, to challenge them to come up with an issue that they are concerned about and try to make a local impact.

“We want the students to find something that they don’t agree with and give them the skill set to change it. It can be as simple as saying, ‘We need a stop light at that corner,’” Lamb explains.

Although still growing in scope and enrollment, the Honors Program has had a positive impact on those involved.

“The program has been a significant factor to my success as a student and a young professional,” says fifth-year architecture major Vivian Ngo. “The Honors House helped my transition from high school to college, and I am grateful for the experiences I gained from the freshman orientation program, challenging honors courses, and volunteer opportunities.

“I believe the Honors Program has helped me develop into a well-rounded individual.”
EARTH'S MAG

RESEARCH DATES NORTHERN MIGRATION OF EARLY HUMANS FROM EQUATORIAL AFRICA TO ASIA BACK NEARLY 1.7 MILLION YEARS.
A pioneer in the study of reversals of Earth's magnetic field, Cal Poly Physics Professor Kenneth Hoffman was part of a team of scientists shedding light on migration patterns followed by prehistoric man more than 1.5 million years ago.

The research findings were featured in the prestigious journal Nature in an article about new evidence on the earliest human presence at high northern latitudes in northeast Asia.

The team's research dates the northern migration of early humans from equatorial Africa to Asia back nearly 1.7 million years. This is the earliest find anywhere near this area, helping scientists understand the migration of people over time, Hoffman said.

He and the other researchers studied the magnetism held by ancient sediments that were found to contain primitive tools and bones in an uplifted area that was once a lake near Beijing in northern China.

Lake sediments become magnetized by Earth's field as they are deposited, offering a "fossil record" of magnetic directional changes that can later be analyzed by paleomagnetists. Using what is known about the timing of reversals in polarity of the field — a phenomenon that causes the North and South magnetic poles to exchange positions — Hoffman said they were able to determine the age of the artifacts, and hence, the time when early humans migrated to that part of the world.

Hoffman's most recent article, published in the Sept. 30, 2004, issue of Nature, was a collaboration involving Rixiang Zhu of the Institute of Geology and Geophysics at the Chinese Academy of Sciences in Beijing, Rick Potts from the Smithsonian Institution in Washington, D.C., and scientists from the Hebei Province Institute of Cultural Relics in Shijiazhuang.

Among his numerous journal articles, Hoffman has authored or co-authored nine papers that have appeared in Nature and has published several more with Chinese paleomagnetists. The Institute of Geophysics in Beijing has made him an honorary professor.

At Cal Poly, where he has taught for 30 years, he works both as a researcher and professor. He has received numerous research grants from the National Science Foundation.

He also takes students on trips to sample lava flow sequences at various locations around the world, studying the process by which Earth's magnetic field manages to reverse its polarity.

Richard Frankel, chair of the Physics Department, praised Hoffman as a "big believer" in the role of undergraduate research. "He has shown all of us that it is possible to be a good teacher and a good researcher," Frankel said. "There's a big difference between a lab course and real-life experience. The possibilities are open-ended."
Head Monster is Mad About Music

BY JOANNE EGLASH

Call the typical executive a "monster," and watch for a wince. For Noel Lee (ET '71), though, being referred to as the "Head Monster" is music to his ears.

In fact, the founder of Monster Cable Products Inc. (Monster®) was passionate about music growing up, recalling that his musical interests were "much more diverse than other kids."

He was drawn to Cal Poly because of its standing in the engineering world—and because it's a "great campus, great setting." In a move that foreshadowed Lawrence-Livermore National Laboratory in Northern California, Lee continued to experiment with ways to inexpensively improve his own music sound system, using varieties of wire and methods of winding them.

Out of that hobby, Monster Cable Products developed into a garage start-up. Then Lee quit his job as an engineer to focus on his company. Despite his "lack of a business background," Lee succeeded where many entrepreneurs have failed: Monster celebrated its 25th anniversary last year.

Lee is particularly proud of the more than 200 U.S. and international patents held by the company.

"There's a lot of creativity evident there," he says. "We're not as serious as many companies, and job titles such as 'Head Monster' help break the ice. Everyone in the company has 'Monster' in their job title."

The emphasis on creativity and diversification has been key to Monster's success in revolutionizing the potential of music audio systems, Lee explains, pointing with pride to Monster's latest venture, a high-end home theater furniture and sound system from M•Design.

The achievements by Lee and Monster have been recognized by others, too. He was named Northern California Entrepreneur of the Year by Ernst & Young and Supplier of the Year by The Evolution Group.

And he continues to have a monstrous—good time with it all.
New Director of Athletics Alison Cone Brings Leadership, Values to Post

Director of Athletics Alison E. Cone, named to the post in late January, brings a fresh approach and proven leadership to the department.

With the appointment, Cone becomes one of 19 female athletic directors at the NCAA Division I level, which includes more than 300 colleges and universities. She is one of 13 women heading athletic departments with football programs (I-A and I-AA). At Cal Poly, she will direct all university intercollegiate athletic programs, which involve more than 500 student-athletes and 20 Division I teams.

"Alison has provided excellent leadership both on and off campus," said President Warren J. Baker. "I'm delighted that she is going to lead Cal Poly's athletics programs. She has tremendous experience, and her first-rate leadership skills will help us move our athletics programs forward.

"She has represented the Big West conference at the NCAA extraordinarily well; she has a proven track record and a strong commitment to the success and well-being of our student-athletes - in the classroom as well as on and off the field. We see the fruits of her leadership and hard work in the continued positive academic records of our fine female and male scholar-athletes," Baker added.

Cone has been at Cal Poly since 1994, serving as interim director since 2004.

"I'm excited about the prospect of continuing to work with the talented coaches and staff we have in the department," Cone said. "The department has a very bright future.

"I look forward to providing outstanding opportunities for our student athletes - opportunities that include competing at the highest level - and supporting and enhancing their academic success."

Cone earned a bachelor's degree in physical education from Washington State University and a master's degree in education from Cal State Dominguez Hills. Her coaching and teaching career spans 30 years.
Architecture Professor Emeritus Ken Schwartz, former San Luis Obispo mayor and city councilman, was honored by the city for 50 years of service. Approximately 170 people turned out for Ken Schwartz Appreciation Day to applaud his leadership and the sweeping impact he has had on the city.

Anyone who has ever strolled the streets of downtown San Luis Obispo knows it’s a special place. And to many, Schwartz, who served five terms as mayor, is largely responsible for that feeling. His creativity and foresight is clearly evident throughout the city, from Mission Plaza and the creek walk to the urban tree program and sign ordinances.

Schwartz also brought his leadership abilities to Cal Poly’s College of Architecture and Environmental Design, where he served from 1952 until 1988. During his tenure, he served as an architecture faculty member, associate dean and dean of the college. “Ken was highly instrumental in helping to shape and incorporate the city and regional planning degrees within the college,” said K. Richard Zweifel, associate dean of the college. “He initiated a comprehensive articulation process with all community colleges to ease the transition of students to the college. Always student-centered in his teaching and administrative duties, Ken was a leader in establishing the strong, professionally oriented curricula base that exists today for all five programs in the college.”

Schwartz was a recipient of Cal Poly’s 1970-1971 Distinguished Teaching Award, and The American Institute of Architects accorded him its prestigious Fellowship status for his work in education and government.
Howard C. Brown (OH '43), dean emeritus of the College of Agriculture and former head of the Ornamental Horticulture Department, died Jan. 13 in San Luis Obispo.

He served Cal Poly for 40 years, from 1943 until 1983, garnering affection and admiration from all who knew him.

"Howard Brown will be missed on campus, in the community, throughout the state and beyond," said Cal Poly President Warren J. Baker. "He was the consummate educator, horticulturist, advisor and friend. He passed on his enthusiasm for the horticulture industry to literally thousands of people, young and old, and that passion will thrive for generations."

Others remember him with equal fondness. "Howard was an amazing man who touched many lives," says Environmental Horticultural Science Professor Emeritus Steve Angley. "If you were to poll a thousand people in the horticulture industry in California, and ask them what one person has had the greatest influence on our industry and profession, you would hear Howard Brown's name again and again," Angley says.

Professor Emeritus Joe Sabol calls Brown "a great teacher and leader for Cal Poly," who "clearly knew the importance of Cal Poly's history and wanted all of us to appreciate the traditions and early challenges that faced the college and university."

Larry Rathbun, former head of the Agricultural Education Department and associate dean of the College of Agriculture, said Brown was "a role model in connecting student learning with contemporary industry practices. His service on many state and national industry and professional committees provided fresh stories and illustrations for our students. Internships and employment opportunities grew from all his contacts. Howard was a teacher without equal."

Alumna Jacqueline (Jacquie) Williams Courtright (OH '70) remembers the dean well. "Dr. Brown's intuitive nature, remarkable memory and great communication skills served us all well. He coached us and challenged us. You simply wanted to do your very best for him. He would bring lessons to life with his personal experiences. He instilled in me a love of learning."

More than 250 former students, friends and colleagues paid tribute to Brown last fall at Howard Brown Appreciation Day on campus.

Ever the horticulturist, his obituary in the local newspaper read: "Dr. Brown requests that in lieu of a gift to your favorite charity flowers are acceptable."
The California State University Agricultural Research Initiative has awarded two grants to Cal Poly's Dairy Products Technology Center to research new and improved dairy food products, processes and technologies.

One grant, for $490,000, will support research in “laser tweezers,” an instrument that measures certain properties of milk components to advance understanding of their health benefits, according to Professor Rafael Jimenez-Flores, who, along with DPTC Director Phil Tong, is leading the three-year project.

Tong was also awarded $150,000 for a study to improve the quality and increase the shelf life of dairy foods and beverages.

MILK: HOW IT DOES A BODY GOOD

Laser tweezers are used to measure properties of certain components of milk-fat that are abundant in milk, buttermilk, cream and whey.

These important yet unexplored components contain proteins, lipids and a host of other compounds that are important for human health, in addition to serving as key ingredients in other foods, Tong said.

Using a strongly focused laser beam to trap small particles and objects, the tweezers manipulate individual cells and bits of matter to measure the interactive forces with great precision, Jimenez explained.

The special lipids and proteins found in milk-fat are known to be potent anti-cancer components.

The researchers also suspect they contain elements to which beneficial lactic acid bacteria bind.

When these compounds are better understood, it will be possible to better preserve these properties during processing, Tong added. “Such knowledge can be used to formulate more nutritious foods for the increasingly health-oriented consumer. I’m sure many still remember the slogan ‘Milk: it does a body good.’ With these new scientific tools we can fully substantiate why that is so,” he said.

Professor John Sharpe of the Physics Department’s Dynamical Systems Imaging Laboratory is building the infrastructure and systems required to set up the equipment and research module for the project.

CREAM OF THE CROP

Tong is leading another research team looking at how dairy-food-processing techniques impact the quality and shelf life of dairy foods and beverages.

One key to producing a wider variety of high-quality dairy foods and beverages with a longer shelf life is to ensure that dairy ingredients remain stable during the food processing stage, Tong said. Some products during high-temperature processing will coagulate, resulting in undesirable flavor, texture and appearance.

Understanding this instability will allow the researchers to identify processing conditions and other ingredient innovations to ensure high product quality.

This grant will also expose students to a leading-edge, real-world project that will likely impact the foods consumers will shop for in the near future, Tong said.

“The project findings should lead to the development of more value-added uses for milk and milk products, as well as more-effective strategies to create products with the convenience and variety demanded by today’s consumers,” he added.
ONE OF THE MOST meaningful ways to impact the university beyond your lifetime is through a bequest gift. Planning for the distribution of your estate provides an opportunity to reflect on your life and your dreams for future generations.

Cal Poly's planned giving staff can work with you and your advisors to develop a long-term gift plan that best reflects your financial situation and your personal commitments. Bequest gifts can benefit a designated program or department of your choice at Cal Poly.

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Web site: www.giving.calpoly.edu
HELPING HELMETS... Glenn Perry (BUS '85) helps Joseph Malone of the Orfalea Family and Associated Students Inc. Children's Center try on an autographed Oakland Raiders team helmet, one of three that Perry has donated to raise funds for Cal Poly student-athlete scholarships. While attending Cal Poly, Perry was a seven time All-American swimmer. As owner of Pacific Security Real Estate Services (www.pacificsecurity.us) in Walnut Creek and Fairfield, he works with professional athletes, including Oakland Raiders.