What a difference a day makes. Or in this case, a weekend — a weekend late last spring, to be precise. That’s all it took for 25 industrial and manufacturing engineering students to renovate and transform an older, ordinary home into a brighter, more functional one for an elderly Nipomo man, who is disabled, and his wife.

The “extreme makeover,” also known as the Polyhouse Project, was part of Professor Roya Javadpour’s graduate-level technological project management course. Javadpour wanted to give students hands-on experience planning and managing a technical project that involved fund raising, scheduling, allocating resources, budgeting, assessing risk and monitoring progress.

“This worthwhile endeavor posed many challenges for the students,” Javadpour says, “including the need to plan and schedule the work and resources to assure that the entire project could be completed in only three days. The lessons learned were invaluable.”

The home belongs to Ed and Joyce Babros. Ed has been wheelchair bound for several years. Joyce is his main caregiver. Working from the Babros’s “wish list,” the students painted the inside of the house; widened doorways; installed new floors, ceiling fans, easy-access shelves and a shower large enough to accommodate Ed’s wheelchair.

“The renovation has changed and enhanced our lives,” Joyce says. “The biggest plus is the work the students did in the bathroom. The shower alone has helped b·emendously. The floors and carpeting are smooth and make it easier to push a wheelchair or for Ed to navigate his walker. The paint and ceiling fans add beauty and comfort to our home.”

The project proved valuable to all parties. “Theoretically, planning and managing a project is very easy,” says industrial engineering senior Brian Cameron. “In reality, it is difficult. The only way to really test a plan and gain the full experience is to put it to work. This is exactly what the Polyhouse Project allowed us to do. The project took learning by doing to a new level. It was very intense and time-consuming, but I got a great experience from it and also helped the community.”

More than 40 donors, including local businesses, individuals and fellow industrial and manufacturing engineering students, provided financial support for the project. For more information on the project, go online to www.polyhouse.org.
Celebrating Cells: International Award Named In Honor of Biology Researcher Paul Nakane

An international society gave double recognition recently to Paul Nakane, adjunct biology professor and researcher at Cal Poly, for his scientific work in the study of cells.

The International Federation of Societies for Histochemistry and Cytochemistry established the Paul Nakane Prize — and named him as its first recipient — in recognition of Nakane's "significant scientific accomplishments and leadership in scientific societies in the United States and Japan."

Histochemistry and cytochemistry are branches of science that focus on the study of the chemical composition and activities of tissues and cells.

The group presented the award to Nakane at its international congress in San Diego in July. The award consists of a plaque and a certificate, both bearing a portrait of Nakane, plus an all-expenses-paid trip to the federation's international congress.

"The prize recognizes the role you have played as a scientist and leader, and we can think of no person more deserving of the award," said IFSHC President Ron Van Noorden.

Future awards will go to professionals who demonstrate outstanding scientific contributions and international leadership in advancing the disciplines of histochemistry and cytochemistry.

Nakane, who has been at Cal Poly since 2003, said the award is a great honor. "I've received other awards before, but to receive an award named after me is different," he says. "To know that the Paul Nakane Prize will be given to someone long after I am gone is a strange feeling."

He is currently working to develop a clinical medical test to identify specific antibiotics effective against infectious bacteria and fungi within two hours after receiving clinical specimens from infected patients.

"Now, physicians wait two or three days for the results of antibiotic-susceptibility tests to come back from testing laboratories. The time required to obtain the information is too long, so patients are treated with broad-spectrum antibiotics prior to exact diagnosis. That practice is resulting in the emergence of drug-resistant strains of bacteria and fungi — something faster test results could combat," explains Nakane, who also holds a doctorate in medical sciences.

He says he became interested in cells and mutation during biology classes when he was a high school student in his native Japan.

Before coming to Cal Poly, Nakane served as professor of pathology at the University of Colorado School of Medicine, director of the Medical Research Institute at Tokai University in Japan, and chair of the Anatomy Department at Nagasaki University School of Medicine. ■
meeting of the American Society for Horticultural Science. The team placed first overall in the nursery and vegetable divisions, and team members placed in the individual competitions, as well.

For the third straight year the Cal Poly Flower Judging Team won the National Intercollegiate Floral Crop Quality Evaluation and Design Contest. Cal Poly is tied with two other universities — Ohio State and the University of Wisconsin-River Falls — for the national record for consecutive victories. Student Jon-Paul Williams was named top overall judge.

NEWS
The Agribusiness Department has a new Master of Science in agribusiness to fill a long-standing, student-expressed need. Students complete extensive coursework involving international agricultural business issues, as well as agricultural technology, policy and international marketing.

• Cal Poly was granted developmental accreditation for a new Dietetic Internship program “to help meet the need for registered dietitians and to prepare graduates to meet the requirements for dietetic registration,” says Program Director Susan S. Swadener, an instructor in the Food Science and Nutrition Department.

• The Natural Resources Management Department has a new Bachelor of Science degree program in environmental management and protection. The program is an expansion of an existing concentration within the Forestry and Natural Resources Management program.

College of Architecture & Environmental Design

STUDENTS
City and regional planning students Jason Gavin and Andrew Rubin created VirtualSLO.com, a Web site that gives 360-degree views of locations throughout San Luis Obispo. The site won second place in a five-state student entrepreneurial leadership competition sponsored by Loyola Marymount University.

Orfalea College of Business

STUDENTS
A team of business administration students took the Rookie of the Year and First Runner-Up awards in the national Students in Free Enterprise competition, completing

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U.S. News Ranks Cal Poly ‘Best in West’ For 12th Straight Year

For the 12th straight year, U.S. News & World Report rated Cal Poly as the best public largely undergraduate university in the West.

Cal Poly also retained its No. 5 position overall in the magazine’s list of the West’s best universities, including private institutions, that “provide a full range of undergraduate and master’s-level programs but few, if any, doctoral programs.”

U.S. News also recognizes “programs to look for,” defined as “outstanding examples of academic programs that are believed to lead to student success.” Cal Poly is included in two categories: Internships/Co-ops and Undergraduate Research/Creative Projects.

Also earning a top spot in the magazine’s Best Undergraduate Engineering Programs — for schools whose highest degree is a bachelor’s or master’s — is Cal Poly’s College of Engineering, ranking as the No. 3 program at a public school.

Additionally, a number of College of Engineering programs ranked high in the Best Undergraduate Engineering Programs in their individual specialty categories. Computer, electrical and industrial/manufacturing were each ranked as the top program at a public university in their respective specialty categories. The aerospace program ranked No. 3.


2004 Baker Forum Examines Ways to Improve K-12 Science, Math Education

The 2004 Baker Forum brought together leaders in education, industry and government to discuss “Expanding the Pathways to Science and Engineering Careers: Exploring the Multiple Roles That Industry and Higher Education Can Play in Support of Preschool-12th-Grade Science and Mathematics Education.”

The event was held in conjunction with the President’s Cabinet meeting last April. William C. Harris, director general of the Science Foundation Ireland, delivered the forum’s keynote address, “Learn or Lose: U.S. Education Threatens Economic Prosperity.” His talk presented “radical ideas on issues requiring urgent attention.”

“I will paint a stark picture of the divide between success and failure in American education and research,” Harris said. “Unless we change our approach to education, we will leave too many of our citizens out of the future of America. And if we do, innovation in America, in fact the nation as a whole, will suffer.”

The text of Williams’ talk is online at http://www.calpolynews.calpoly.edu/news_releases/2004/baker-forum/keynote.html.

David P. Christy, former associate dean for undergraduate programs at Penn State University's Smeal College of Business and an expert in production planning and manufacturing strategy, is the new dean of the Orfalea College of Business.

"I am very impressed with Dean Christy's experience, ability to work with diverse constituents, and professional exuberance," says Cal Poly President Warren J. Baker. "He will be a great asset to the Orfalea College of Business and to the university as a whole."

With extensive experience in creating programs to benefit students and a strong background in operations and information systems, he brings a wide range of expertise to Cal Poly.

At Penn State, Christy worked with faculty to develop curriculum reforms that enabled timely degree completion. "By streamlining electives and examining required courses, it is far more likely that students can complete degree requirements during any semester," Christy says.

He also significantly expanded and refined opportunities for international studies, so that one of four business undergraduates at Penn State now completes a study-abroad experience. Christy is also credited with improving undergraduate advising services at Penn State by providing students with the guidance and support necessary to make sound academic decisions.

With advancement and reinforcement of academic excellence as his No. 1 goal at Cal Poly, Christy sees faculty development and student-centered educational experiences as significant objectives.

"My challenge is to continue to engage the alumni and friends of Cal Poly to assist me in investing in our superb faculty and deserving students. We must support faculty to explore leading ideas in research and business practice, and to enable students to have the very richest learning environment that we can imagine. These are essential goals that can only be realized with the continued support of our friends," Christy says.

As dean, Christy oversees the college's six academic areas - accounting, economics, finance, industrial technology, management, and marketing. The Orfalea College of Business has approximately 65 faculty members, more than 2,300 undergraduate majors, and some 90 graduate students.

Christy joined the Penn State faculty in 1983 as an assistant professor of management science. He served as chair of the Management Science and Information Systems Department from July 1999 until October 2000, when he became associate dean for undergraduate programs.

Christy earned a Bachelor of Science degree in biology from the University of Dayton and a Master of Education and a Doctorate in Business Administration from the University of Georgia.
Music Professor Clifton Swanson
Leaves on a High Note

Music Professor and Department Chair Clifton Swanson retired at the end of spring quarter after 37 years of service, leaving an indelible mark on the campus and the community for numerous musical and cultural contributions.

Swanson came here to teach in 1967. He served as department chair almost continuously for 19 years. In addition to his teaching and administrative responsibilities, he founded and directed the Cal Poly Symphony.

Swanson is widely known – and lauded – for co-founding the San Luis Obispo Mozart Festival and serving as its music director and conductor since its inception in 1971. What began as a modest two-day event has evolved into one of the nation’s premier music festivals, lasting some 10 days and attracting world-class musicians.

Those accomplishments might be considered enough for some, but not for Swanson. He played an integral part in turning the Performing Arts Center into a reality, serving as a member of the steering committee for design and construction of the center. He was also a member of the advisory board for the Performing Arts Center and a member of the board of directors of Cal Poly Arts.

Swanson served as conductor of the San Luis Obispo Symphony from 1971 to 1984. Currently he is principal bass for the San Luis Obispo Symphony. He has also performed with several organizations and at numerous festivals.

It’s no wonder that he has garnered numerous awards, including the 1991 Cal Poly President’s Award for Contributions to the Arts of San Luis Obispo County.

“Not only did Clif understand that he needed to nourish the minds and the intellect of our students, but he also know we needed nourishment,” President Warren J. Baker said in remarks at Swanson’s retirement reception. “Very quietly, very successfully, he has nourished the entire community, well beyond the university.”

In recognition of all he has done, friends have established the Clifton Swanson Music Building Enhancement Fund to help realize one of his biggest dreams – a complete renovation of the Davidson Music Center, including the addition of an electronic music studio and practice rooms, as well as faculty offices, a recital hall and library.

Also in his honor, the Orchestra Rehearsal Room will be renamed the Clifton Swanson Orchestra Room. To make a contribution to the building enhancement fund, call the Music Department at (805) 756-2607 or the College of Liberal Arts Advancement Office, (805) 756-7022.
Graphic Communication Has ‘Reason’ to Brag

Reason magazine’s 40,000 subscribers got a big surprise when their June 2004 issue arrived. Each cover had been personalized with a photograph of the subscriber’s house circled, an aerial map of the subscriber’s neighborhood, and an individualized message.

Sound impossible?

Not at all. With the help of industry partners and technology that invokes vague recollections of Orwell’s classic book 1984, the Graphic Communication Department conducted a week-long experiment in digital printing that could very well have a dramatic impact on the print media’s role in communication, says Department Head Harvey Levenson.

The technique involved satellite aerial photography and other sophisticated technology and equipment, including a digital printing press, valued at about $250,000, donated to Cal Poly by Xeikon America.

Each cover of Reason magazine – a publication that focuses on issues of free enterprise, marketing and entrepreneurship – also carried, in large type, the subscriber’s name, followed by “They Know Where You Live! – The benefits of a database nation.”

The inside front cover included information specific to each subscriber and his or her neighborhood, including a street map of the neighborhood and related demographics. The back cover carried additional personalized text.

“Each magazine was targeted to a ‘market of one,’” Levenson says. “The building of a file and the individualized printing of satellite aerial photography is unique and original in this first-time attempt.”

The experiment was conducted by University Graphic Systems, a student-run and student-managed printing and publishing enterprise of the Graphic Communication Department.

A Southern-California company provided the digital files with the names, addresses and satellite aerial neighborhood maps of the subscribers. The files also included population, median income, median age, people per household, plus numerous additional details – from the number of children living with their grandparents to the percentage of neighbors with college degrees. The information was gathered from free Internet sites such as the U.S. Census Bureau.


Nick Gillespie, editor-in-chief of Reason magazine, said in the Los Angeles Times article, “The customization of the magazine was a nifty experiment and a great promotional opportunity for everyone involved. A team of a dozen people in six states, from Connecticut to Arkansas to California, spent several months collating data and publishing test copies before realizing the final product. It was a very difficult task of orchestration. None of the main people involved were in the same time zone, much less the same office.”

UCTE Renamed College of Education

The University Center for Teacher Education has been renamed the College of Education, the final move in a three-year restructuring effort intended to expand educational and career opportunities.

The name change culminates work spearheaded by Bonnie Konopak when she was hired as the center’s first dean in 2000.

“Professional education has become a focal point on campus because of shortages of K-12 educators in critical areas such as science, math and technology education,” Konopak says. “I am very pleased that Cal Poly has recognized us as the seventh college on campus. This recognition is a tribute to educational faculty and staff from across campus who worked tirelessly to develop this new organization.”

The former UCTE offered credential programs and a master’s degree in education. The expanded college has elementary and secondary education programs in the Division of Teacher Education and all graduate programs in the Department of Graduate Studies in Education. A recent addition is an educational doctorate for aspiring administrators offered in collaboration with UC Santa Barbara. It is Cal Poly’s first doctoral program.

Other changes under way include the expansion of the teaching credential programs in math, biology, chemistry and physics; the addition of a new master’s degree specialization in math and science education in conjunction with the College of Science and Mathematics; the appointment of Shirley Magnusson as the Cotchet Endowed Professor; the recent addition of Cotchet Scholarships; and the construction of the Cotchet Math and Science Education teaching lab.
How 'Green' Is Our Campus?

Swanton Pacific Ranch
Touted as 'Model of Responsible Forestry Practices'

The international Forest Stewardship Council has given the Swanton Pacific Ranch a top designation for its responsible forestry practices, making Cal Poly only the fourth university in the United States – and the first on the West Coast – to earn the honor.

The Forest Stewardship Council, an international nonprofit environmental group headquartered in Bonn, Germany, has designated the ranch in Santa Cruz County a "well-managed forest." The designation came after a year-long evaluation.

The 3,200-acre Swanton Pacific Ranch and nearby 600-acre Valencia Creek property were donated to Cal Poly by the late Al Smith, an alumnus and founder of Orchard Supply Hardware. The College of Agriculture uses the ranch as a living lab for students in several departments and programs.

"Basically the well-managed forest designation means we have sustainable forestry practices, and all of our timber products are 'green' and 'green harvested,'" explains Interim Dairy Science Department Head Walter Mark, former director of the ranch. "We consider this very significant, given that our main objective at Swanton is to demonstrate sustainable forestry and natural resources management practices, and to give our students hands-on, learn-by-doing experience in those practices," Mark says.

Cal Poly joins Yale, Duke and Paul Smith's College in attaining the designation. "Independent certification confirms that the Swanton Pacific Ranch is being managed in the long-term interest of both the environment and the educational mission of the property," says Robert Hrubes, senior vice president of Scientific Certification Systems, an accreditation agency.

The agency’s evaluation determined that the ranch-management plans are comprehensive, are based on detailed resource inventories, and have safeguards in place to protect rare, threatened and endangered species.

For more information on the Swanton Pacific Ranch, visit its Web site at www.spranch.org.

Campus Pledges Environmental Responsibility

Cal Poly has officially embraced environmental responsibility. At a special Earth Day convocation on "Education for Sustainability," Cal Poly President Warren J. Baker announced that the university had signed the Talloires Declaration, a 10-point pledge to make the campus a place where sustainable resource use and environmental protection are practiced, improved and taught.

"Cal Poly has already begun much of the work detailed in the Talloires Declaration," Baker says. "The Cal Poly Master Plan, the Cal Poly Land project, and the Campus Sustainability Initiative bear witness to our dedication to creating an institutional culture of sustainability, and we pledge to continue that work. As a polytechnic university, Cal Poly is uniquely positioned to focus the attention of our many disciplines on environmental responsibility."

The international movement began in 1990, when Tufts University convened a conference in Talloires, France, where educational leaders voiced their concerns about the accelerating depletion of the world's natural resources. In answer, the group developed the Talloires Declaration, spelling out key actions that institutions of higher education can take to ensure a sustainable future.

"Cal Poly is committed to solving problems created by outdated technologies and to promoting innovative solutions and successful traditional alternatives," says Linda Dalton, Cal Poly's executive vice provost for planning. "Students, faculty and staff are working together to operate the university more sustainably through energy conservation, recycling and the use of alternative transportation."

Computer Training is Central to Valley Economy

The California State University Commission on the Extended University has awarded Cal Poly Continuing Education and University Outreach a $50,000 grant to expand applied technology training programs in Tulare County. The program, known as the Central Valley Technology Initiative, is intended to identify areas where such training is needed, develop and implement computer and technology training programs for the agricultural business and corporate sector, and design new programs if deemed necessary, says Dennis "Skip" Parks, dean of Continuing Education.

"Continued economic development in Tulare County will depend on all industries' ability to utilize technology in their operations," Parks explains. "CVTI aims to train the local work force in various technology applications, allowing the Central Valley to expand economic and business development."

John Houser (MBA, M.S. ENGR '94) was recently named the project's coordinator. This initiative is just the beginning of a larger push to start a multi-university center in Tulare. "We are investigating options for how institutions can partner to better serve the lifelong learning needs of the Central Valley," Parks says.

For details, visit the Web at www.continuing-ed.calpoly.edu.

Arts Programs Take Center Stage at Local Schools

A brighter picture is emerging for budding Central Coast artists, thanks to the establishment of two new programs offered through the Liberal Studies Department.

One program, administered through the recently established Cal Poly Central Coast Center for Arts Education, provides elementary and secondary schoolteachers with supplemental professional-development instruction in dance, theater, music and visual arts.

The center will also give teacher-education students opportunities to attend professional workshops that address California's visual and performing arts content standards for kindergarten through high school.

The center is a tribute to the work being done by Liberal Studies faculty members, who in the last three years received nearly $500,000 in grants to oversee county arts education programs.

"The need for more professional-development locations on the Central Coast, where teachers, artists and art educators can come together for education and discussion in and of the arts, is critical," says Liberal Studies Department Chair Susan Duffy. "The new center will position Cal Poly as a leader in this educational area."

The second program, Cal Poly Agricultural Literacy and the Arts, helps teachers find connections between agriculture and the arts. It was established with a $30,000 grant from the Kellogg Foundation.

Through the project, 4th- through 12th-grade teachers attend professional development workshops and summer institutes that demonstrate ways to raise public awareness about the importance of agriculture in California's economy.

"The project trains teachers to address agricultural issues in new and creative ways," Duffy says. "Professional art educators will lead workshops and discuss how artists across the centuries have conveyed the importance of agriculture through literature, visual arts, theater and music."