Affirming the Vision

With this special edition of Cal Poly Magazine, we are pleased to present Cal Poly’s inaugural annual report. The report shares highlights from the past year, and also a status update on Cal Poly’s progress toward attainment of critical, long-term goals. I believe you will agree, after reviewing the report, that the university is on track toward a bright future, carrying its learn-by-doing educational traditions into a new century.

The year 2002 saw the culmination of Cal Poly’s Centennial Celebration. Among its highlights, the 18-month Celebration started in March 2001 with a “History Day” commemoration of Cal Poly’s founding legislation. This was followed by the gala September 2001 Founders Celebration, a second History Day in March 2002 (devoted to the university’s growing environmental stewardship role), and the April 2002 Baker Forum, established by the Cal Poly President’s Cabinet and devoted to the “Future of Polytechnic and Science and Technology Universities.”

Since the April 2001 kick-off of the university’s comprehensive Centennial Campaign, Cal Poly has closed in rapidly on its $225 million campaign goal. Several major gifts have hastened our progress toward this goal. Perhaps as significant, we have seen an increase in annual giving at all levels, dedicated to “Strengthening Cal Poly’s Advantage.”

Aided by the Campaign, and by the historic 2002 College-Based Student Fee Initiative, the university made significant advances over the past year in supporting students, faculty, and staff; enhancing learning programs and campus facilities; and developing instructional technology.

Captured through the words and stories of Cal Poly students, faculty, staff, alumni, friends, and supporters, this very eventful year is chronicled here. I trust that, as part of the Cal Poly family, you will take pride in this record of outstanding progress and achievement.
Honoring the Tradition:
The Centennial Celebration

Fireworks blazing on bright banners campuswide set the tone for Cal Poly’s yearlong Centennial Celebration, launched March 8, 2001, the 100th anniversary of the university’s founding legislation.

The showcase event was “Celebrating the Century,” a campus colloquium reviewing Cal Poly’s progress from a polytechnic high school to a nationally renowned university. Other highlights included:

- An exhibit of historical photographs and memorabilia illustrating a century of university achievements, displayed in the Rossi Grand Lobby of the Performing Arts Center’s Christopher Cohan Center
- A multimedia exhibit chronicling Cal Poly’s past and present in the Capitol Building in Sacramento
- *Cal Poly: The First Hundred Years*, a retrospective volume of campus life and academic development
- A time capsule prepared by College of Architecture and Environmental Design students

The Founders Celebration in fall 2001 featured a Colloquium, Convocation, and All-University Picnic and Centennial Celebration, attended by more than 1,000 faculty members, students, staff, alumni, and invited guests, with academic representatives from around the world celebrating Cal Poly’s place in California and U.S. higher education.

President Warren J. Baker moderated the colloquium, “Educating a Diverse Population for the Nation’s Science- and Technology-Based Economy,” with panelists David Baltimore, Nobel Prize laureate and Caltech president; Gary Bloom (CSC ’82), Veritas Software chairman, president, and CEO; Rita Colwell, National Science Foundation director; and Richard DeMillo, Hewlett-Packard vice president and chief technology officer.
As part of Cal Poly's Centennial Celebration, Art and Design Professor Crissa Hewitt was commissioned to create a new ceremonial mace, a symbol of office for the Cal Poly president. During university ceremonies, the chair of the Academic Senate is the mace bearer.

The 10-pound mace, which took more than 250 hours to create, is constructed of sterling silver, bocote (a Mexican rosewood), crushed malachite, and cast gold (the last two representing Cal Poly’s colors). The sterling and wood were hand formed, and on the handle’s end a reversed version of the Cal Poly seal can be used to stamp impressions.

Hewitt, who earned her MFA in metalsmithing from Michigan’s Cranbrook Academy of Art in 1975, began teaching at Cal Poly in 1976. She has studied silversmithing in Denmark and sculpture in Italy. From the beginning of her degree work at Cal State Northridge she has been fascinated with combining materials. Although she especially enjoys using fine hardwoods in her metal pieces, she has begun to add carved marble as well.

Cal Poly is fortunate to have two other pieces of Hewitt’s art. A mural of metal, clay, and wood displayed in the entrance to the Robert E. Kennedy Library was created, under her supervision, by 15 students. At the entrance to the Performing Arts Center’s Christopher Cohan Center is a marble sculpture she created during one of her trips to Pietrasanta, Italy. The sculpture commemorates recipients of the President’s Arts Award, established to recognize student and community arts activists.

Hewitt has exhibited nationally, receiving several first-place awards in juried competitions. For 16 years she has created the honoree gifts presented at the KCBX Central Coast Wine Classic. The majority of her one-of-a-kind pieces and limited editions are commissioned works.
While History Day 2001 celebrated the road traveled by Cal Poly to its centennial anniversary, History Day 2002 looked forward to the university's second century and its increasing role in environmental stewardship, research, and education.

Physicist, environmentalist, and energy expert Amory Lovins (co-founder, CEO, and research director of the Rocky Mountain Institute, a nonprofit resource policy center) gave the keynote speech on “Sustainability and the Future of the Polytechnic University.”

His talk followed a slide show and display by staff of the Cal Poly Land Project, an interdisciplinary faculty effort exploring the intersections of nature, science, technology, agriculture, art, and recreation on Cal Poly’s 10,000 acres of land holdings. The Land Project showcased the course “Cal Poly Land: Nature, Technology, and Society” and *Cal Poly Land: A Field Guide*, a collaborative book of photos, drawings, maps, nature descriptions, and poetry.
Educating Tomorrow’s Science and Technology Leaders:  
The Baker Forum

In April 2002 the capstone of Cal Poly’s yearlong Centennial Celebration was the inaugural Baker Forum, established by members of the President’s Cabinet to honor more than two decades of distinguished service by President Warren J. Baker and his wife Carly.

The two-day forum brought together more than 100 leaders from higher education, business, and government to discuss the significant role that polytechnic and science-and-technology universities play in our global society and ways in which this vital role might be strengthened.

The keynote address, “California at Risk: The Imperative for Science and Technology Educational Reform,” was delivered by Susan Hackwood, executive director of the California Council on Science and Technology, with commentary provided by Walter Massey, Morehouse College president, and Gary Bloom (CSC ’82), president, CEO, and chairman of Veritas Software.

On the second day a panel moderated by Paul Zingg (Cal Poly provost and vice president for academic affairs) included Gary Bloom, Joseph Bordogna (deputy director, National Science Foundation), David Goodstein (vice provost and professor, California Institute of Technology), Susan Hackwood, Diana Natalicio (president, University of Texas at El Paso), and the late Keith W. Uncapher (senior vice president, Corporation for National Research Initiatives).

Panel and breakout sessions covered three main areas: defining the social/ethical responsibilities of polytechnic and science-and-technology institutions;
Baker Forum panelists (left to right): The late Keith W. Uncapher (senior vice president, Corporation for National Research Initiatives); Gary Bloom (president, CEO, and chairman, Veritas Software); Diana Natalicio (president, University of Texas at El Paso); Susan Hackwood (executive director, California Council on Science and Technology); David Goodstein (vice provost and professor, California Institute of Technology); Joseph Bordogna (deputy director, National Science Foundation).

preparing a new, diverse generation of innovators, problem-solvers, and leaders; and establishing partnership strategies to support faculty and students, provide applied learning and research opportunities, and sustain economic growth and development.

Final recommendations by forum participants included:

- Education, government, and industry fostering greater awareness among parents and students of available opportunities in mathematics, science, and engineering
- Business, industry, and higher education improving K-12 outreach programs, teacher education and retention, and fostering real-world applications in math and science
- The state increasing support to community colleges as training grounds for math, science, and engineering associate and baccalaureate students
- Community colleges and universities promoting academic success among math, science, and engineering students by evaluating student needs, setting high academic expectations, tracking student progress, providing mentoring support, and targeting degree completion
- Education/government/industry creating partnerships based on clear goals that rest on viable financial and organizational models, yielding definable and measurable benefits
- Universities/industry exposing students to real-world case studies

"Cultural and ethnic inclusiveness in science, engineering, and applied fields enriches the practice of science. Each individual perceives physical phenomena through a different lens of sensibility, enriching and broadening the way that we interpret and understand the physical universe."

- Walter Massey, president, Morehouse College, and recipient at the Baker Forum of an honorary doctorate of science (conferred by the California State University and Cal Poly) and of the Wiley Lifetime Achievement Award (established by John Wiley & Sons Inc.)
THE BAKER FORUM BENEFACTORS

President’s Cabinet

Cal Poly is grateful to the President’s Cabinet for their support and vision in creating the Baker Forum.

Wiley Lifetime Achievement Award

John Wiley & Sons Inc. have generously established the Wiley Lifetime Achievement Award, which recognizes a national leader whose work exemplifies extraordinary leadership and lasting contributions to American higher education and public life.

Baker Forum Patrons

We gratefully acknowledge this generous cornerstone gift providing sustaining support for the Baker Forum.

Clifford W. Chapman and Gene A. Shidler

Inaugural Baker Forum Benefactors

We would like to thank the following individuals for their support of the inaugural gathering of the Baker Forum.

M. Richard and Joyce Andrews
James and Joan Sargen
Wesley and Thelma Witten
Conrad and Christine Young

Baker Forum Endowment Founders

The following individuals are founding members of the Baker Forum Endowment, which supports this biennial assembly of leaders in education, science, and industry.

Alfred and Rose Amaral
M. Richard and Joyce Andrews
Robin and Barbara Baggett
Phillip and Christina Bailey
Warren and Carly Baker
Michael and Linda Bandler
William and Genene Boldt
William and Rose Marie Bowles
Everett and Arlene Chandler
College of Agriculture
R. James and Sally Considine
Carlos and Beth Cordova
H. David and Jan Crowther
Thomas and Linda Dalton
Donald and Jeannette Fowler
R. Ronald and Marlene Frazier
Juan Gonzalez and Irene Hoffman
Martin and Rosemary Harms
Richard Hartung and Carol Orme
Harry Hellenbrand and Donna Stone
Daniel and Paula Howard-Greene
John Wiley and Sons Inc.
Bill and Jean Lane
Frank and Sandra Lettens
Albert and Patricia Moriarty
Jaimie and Carolina Oaxaca
Fletcher and Harriet Phillips
B. L. and Susan Prince
James and Joan Sargen
Harry and Jacqueline Sharp
Warren and Carol Sinsheimer
Wesley and Thelma Witten
Paul Zingg and Candace Slater

With support from the President’s Cabinet, Cal Poly is actively participating in several initiatives, including:

• A proposed study of math and science teacher education and retention in California by the California Council on Science and Technology and a Business/Higher Education Forum initiative to strengthen math and science education nationwide

• Support for incorporation into the state’s education master plan of key recommendations regarding workforce preparation and education linkages to business

• A targeted “student success” study to identify and eliminate barriers to student progress to degree at Cal Poly

• Ongoing support through the Cal Poly College-Based Fee Initiative (see story on page 23) and the Cal Poly Plan for student access to classes, investments in new faculty and faculty professional development, acquisition of new equipment, and support for student projects.

Cal Poly President
Warren J. Baker
(left) and CSU Board of Trustees Chair Laurence K. Gould (right) present an honorary doctorate to Walter Massey.
Generous donors to Cal Poly have been the prime agents of visible changes in the university’s evolving educational landscape throughout the university’s Centennial Campaign.

In 2002 nearly 30,000 alumni, parents, and university friends became part of a giving base of supporters who brought the total number of campaign gifts and pledges since 1998 to 130,288 and the total campaign funds raised to nearly $182 million.

At the highest giving levels, Cal Poly is being transformed by major gifts. Prime examples include:

- More than $25 million by Unocal to the College of Science (for an environmental studies chair, a marine pier, two marine science professorships, and a marine science research center, and a lead gift toward the college’s new Center for Science and Mathematics)
- Paul and Natalie Orfalea’s $15 million to the Orfalea College of Business to enhance learn-by-doing programs on global leadership, entrepreneurship, and technology, in addition to a $1 million gift for the campus children’s center
- More than $10 million from the Estate of Lorenzo and Judith McComie to the College of Agriculture’s Animal Science and Crop Science departments
- Paul and Sandra Bonderson’s $6 million to the College of Engineering for a new student projects facility and an endowed laboratory
- IBM’s $5.15 million to the College of Engineering to enhance industrial and manufacturing laboratories
- Clifford Chapman and Gene Shidler’s $4 million gift, comprising a $2 million endowment for the College of Liberal Arts, a $1 million endowment for Cal Poly Arts, and a $1 million endowment for the Baker Forum
- Bert and Candace Forbes’ $3 million to the College of Engineering for two endowed professorships in software engineering and an endowed laboratory fund.

The generosity of these and other top donors is amplified by the giving of organizations and individuals who have made single gifts of $100,000 and more during the campaign (see page 11).

And our advantage has been strengthened and made meaningful by campaign donations at all levels from alumni, parents, industry partners, and other Cal Poly friends.
Acknowledging Our Benefactors
A $6 Million Pledge Establishes A New Engineering Center

Donald Bently's latest gift is rooted in his respect for Cal Poly students and professors. In November 2002, Bently (CEO of Nevada's Bently Pressurized Bearing Co.) pledged $6 million to establish the Donald E. Bently Center for Engineering Innovation in Cal Poly's Mechanical Engineering Department and endow a director and two faculty positions.

The relationship between Cal Poly and Bently began in 1997, when Bently's former company, the Bently Nevada Corp., joined in sponsoring the Solar Turbines/Bently Nevada Vibrations and Rotor Dynamics Laboratory on campus. Bently also provided funds to establish the Bently Nevada Computational Facility, later adding a donation of $80,000 for 19 high-end workstations.

"Bently Nevada has hired a number of Cal Poly-educated employees and hosted student interns, and I've found those individuals to be of the highest quality," Bently says. "I also believe it's very important to endow outstanding faculty, and I've been extremely impressed with the way the Mechanical Engineering Department has used our rotor dynamics technology."

Mechanical Engineering Professor Jim Meagher has been named the first Bently Center director.

"Don's gift will profoundly impact our program at every level," Meagher says. "The endowment helps attract the best faculty members in the nation and provide resources to keep them at the cutting edge of their fields. It will also result in lab development as a natural outcome of applied research."
Donald E. Bently is a visionary, a pioneer, and a shrewd investor whose work has advanced the entire field of mechanical engineering. And with his $6 million dollar gift to the College of Engineering last fall, he has also stepped forward as one of Cal Poly's leading benefactors.

In the 1950s Bently worked out of his Berkeley garage to perfect an eddy current proximity transducer to measure vibration and other critical parameters in rotating machinery. The probe's commercial success led to the development of his first company – the initial step in what he has referred to as a "fantastic 50-year journey."

That company went on to become Bently Nevada Corporation (Minden, Nev.), which currently sells $200 million annually in products and services for assessing and ensuring the mechanical and thermodynamic stability of industrial and other critical equipment. Bently served as owner, CEO, and chairman of the board until he sold the company early last year to GE Power Systems.

Bently retained ownership of the bearing division and is now chairman and CEO of Bently Pressurized Bearing Co.

Bently's many awards include the American Society of Mechanical Engineers (ASME) Frederick P. Smarro Award (for his contributions to plant maintenance and engineering) and ASME's R. Tom Sawyer Award (for advancements in gas turbine engine development). He was also inducted into the Distinguished Engineering Alumni Academy in the School of Engineering at the University of Iowa, where he earned his bachelor's and master's degrees in electrical engineering and later an honorary doctorate.
Approaching Our Goal

Centennial Campaign Donors

We wish to thank the following donors who have made gifts and/or pledges of $100,000 or more from January 1, 1998, through February 26, 2003.

*Deceased
In 2002 Cal Poly broke all records for gifts, pledges, and total numbers of gifts. The university's endowment doubled from the Centennial Campaign's inception in 1998, and Cal Poly earned national recognition with another Circle of Excellence Award from the Council for Advancement and Support of Education—the only university in the country to do so for four consecutive years.

Cal Poly's endowment has grown dramatically, doubling to $90.1 million in 2002 since the Centennial Campaign's inception in 1998 through the synergy of generous support and prudent financial stewardship by the Cal Poly Foundation. The endowment—a collection of assets invested by the university to support its educational mission in perpetuity—includes endowed gifts (often earmarked for specific purposes) which sustain academic excellence by ensuring a continuing source of funding for hands-on learning, new laboratories, merit scholarships, and faculty research.

Gifts and pledges in 2002 peaked at more than $54.8 million, with the total number of gifts and pledges at 28,000-plus. Increasing the level of sustainable private support remained a priority to provide the margin of excellence for which Cal Poly is renowned, and raising funds for targeted high-priority projects was a related objective. Continuing to engage new friends, alumni, and parents in Centennial Campaign efforts and beyond continued to be critical in supporting these goals.

But the wider mission of the Centennial Campaign goes beyond fund-raising.

Gifts at all levels throughout the campaign have helped maintain Cal Poly's reputation as one of the best public undergraduate universities in the nation.

More than 100,000 alumni and students have benefited from a Cal Poly education and from the university's learn-by-doing philosophy, which defines how we teach, learn,
and live. It is the central theme of Cal Poly’s mission as a distinctive, hands-on, residential, polytechnic university education.

Through its Centennial Campaign, Cal Poly seeks to affirm these values, establish a solid base of financial support, and strengthen the university’s ability to plan and execute strategies that will make its programs more widely available to a new generation of students.

In the section that follows ("Advancing the Mission: The Year in Review") we focus on new and continuing programs in 2002 enhanced through giving in areas targeted by Cal Poly’s Centennial Campaign. These include supporting students, supporting faculty and staff, enhancing learning, enhancing and developing campus facilities, developing state-of-the-art instructional technology, and improving the library.

The initiatives of this past year are the foundation for sustaining Cal Poly’s development as an innovative institution and for enlarging the university’s creative efforts in the years to come.

Qualifying gifts and pledges include all distinct receipts for gifts or matching gifts of $1 or more, or active pledges of $5,000 or more, made since January 1, 1998.
During 2002 Cal Poly continued to dedicate itself to the mission at the heart of its educational enterprise: providing a distinctive, hands-on, polytechnic experience to the excellent students it attracts and graduates.

Cal Poly made progress in five targeted areas: supporting students, supporting faculty and staff, enhancing learning, developing campus facilities, and improving instructional technology and the library.

In this section we have selected a few examples in each category that were initiated or expanded in 2002, including:

- **Student support**: the Cal Poly Scholars Program and the university’s scholarship/internship program
- **Faculty/staff support**: new faculty hired and endowed positions filled
- **Enhancing learning programs**: the Gallo/Cal Poly vineyard partnership, an unprecedented undergraduate embryology lab funded by the student-voted College-Based Fee Initiative, and community-service opportunities and course credits for students
- **Enhancing campus facilities**: campus construction projects, including a new engineering facility and student housing
- **Developing instructional technology**: studio-classroom teaching.
Supporting Students

The Cal Poly Scholars Program

Cal Poly statistics major Rudy Angeles tutors students in calculus and serves as a grader for a statistics course. He plans to be an engineering consultant, focusing on biopharmaceutical research, or pursue a doctorate in statistics or mathematics.

Mika Sullivan chose to attend Cal Poly after being accepted at UC San Diego, UC Santa Barbara, UC Santa Cruz, and UC Davis. She is a business major in the Orfalea College of Business, interested in global law.

Mark Gabel was accepted at UC Berkeley but came to Cal Poly to study computer science and computer engineering. He plans to enter the College of Engineering's "4 + 1" program to earn a master's degree in five years.

All three of these students are National Merit finalists. And all three are Cal Poly Scholars.

Rated the No. 1 public, comprehensive undergraduate university in the West by U.S. News & World Report for the tenth consecutive year in 2002, Cal Poly drew more than 24,000 applicants for about 3,600 spaces. One way it competes with other respected institutions for America's most gifted students is through its Cal Poly Scholars Program, which provides $8,000 in annual support per student.

All Cal Poly students and faculty benefit from the program. Cal Poly Scholars stimulate classmates to more creative achievement, assist on faculty research projects, lead teams to victory in academic competitions, tutor fellow students, volunteer in community programs, and provide inspiration to the university community through profiles in campus publications and attendance at presidential events.
Supporting Students

Bob Leach: One Person’s Power

Bob Leach is on a mission for Cal Poly. He’s demonstrating the same energy he used when he was twice titled an All-American and national record holder in swimming.

It’s the same energy he showed as senior vice president at Cadence Design Systems – helping to lead Cadence’s impressive growth as the electronic design automation industry’s first full-line consulting services provider – and as partner-in-charge of Andersen Consulting’s (now Accenture) electronics consulting effort.

And it’s the same dedication he called upon to promote Cal Poly as a major source of new hires for Andersen, to personally fund the Andersen Outstanding Junior Awards in Cal Poly’s Industrial Engineering and Mathematics departments, to help establish support for Cal Poly’s joint business/engineering master’s program, and to serve with the President’s Cabinet and the College of Liberal Arts’ Centennial Campaign board.

Leach’s personal mission now is his support of current and future Cal Poly students through a series of donations to the Cal Poly Scholars Program. He and his wife, Maggie, have pledged gifts of $18,000 per year for the next five years to the Cal Poly Scholars Award in the College of Liberal Arts, for a total of $90,000.

Now they challenge all Cal Poly alumni and friends to add their contributions to the program.

The response envelope inserted in this Annual Report 2002 provides a section that can be checked for a Cal Poly Scholars Program gift to any college at the university.
Supporting Students

Scholarships, Internships Provide Educational Funding, Hands-On Experience

In 2001-2002, environmental horticulture science major Corwin Graves was one of the many Cal Poly students – 57 percent – who received a total of $65 million in financial aid.

Of this total, 59 percent of all aid awards were student loans; 30 percent were federal, state, and CSU grants; and 1 percent was federal work study. Only 10 percent of financial aid was for scholarships, and of this amount only 18 percent was privately funded.

To provide the gift of a Cal Poly education to more students, the university is especially committed to expanding private support of its scholarship and internship programs.

Scholarship gifts are held in trust and administered according to the donor’s wishes in three main areas: need-based, merit-based, and (the primary award) need- and merit-based. These awards strengthen Cal Poly’s advantage in both recruiting and retaining exceptional students.

Internships provide practical work experience that reinforces the academic curriculum, enabling students to work on special faculty projects, participate in community or governmental agencies, or gain direct industry experience in a career-related field, as Corwin Graves has.

“Through my experience in Cal Poly’s internship program,” Graves says, “I have been able to examine on a small scale how the horticulture industry operates. And,” he adds, “I’ve experienced the types of responsibilities I will have when I graduate.”

For more information on making tax-deductible gifts to the Cal Poly Scholars and Cal Poly scholarship/internship programs, contact the Scholarship Giving Office, Advancement Programs, Cal Poly, San Luis Obispo, CA 93407 (phone 805/756-6553 or toll free 877/727-7659); e-mail scholarship-gifts@calpoly.edu; or visit the Web site at http://giving.calpoly.edu/.
Cal Poly saw the continuing expansion of a new generation of faculty with the hiring in 2002 of professors for a variety of colleges, departments, and specialties.

Among the new faces on campus are a specialist in poultry science, an expert in business management systems, a mechanical engineering expert in heat transfer and thermodynamics, and a political science professor who has written and taught extensively on public policy.

Elizabeth Koutsos (College of Agriculture) was appointed to the Foster Farms Professorship in Poultry Science. The new position is supported by the college and by Foster Farms, the largest poultry company in the western United States. Koutsos has served as a research associate in the Avian Immunology/Nutrition Laboratory of the UC Davis Animal Science Department, and collaborated with researchers at the Washington National Zoo Nutrition Laboratory, the Maryland Egg Council, the San Diego Zoo, and Pfizer Pharmaceutical Co.

Rosemary Wild (Orfalea College of Business) teaches MBA and undergraduate classes in management information systems, database management systems, quantitative analysis, and simulation modeling and analysis. She conducts research related to information technology’s role in knowledge management practices. Previously she taught at the University of Hawaii and San Diego State, working with the U.S. Naval Personnel Research and Development Center in San Diego and with executives from Qualcomm, SAIC, and Sony.

Kim Shollenberger (College of Engineering) teaches heat transfer and thermodynamics courses in the Mechanical Engineering Department. Previously, Shollenberger was part of a team at Sandia National Laboratories developing advanced diagnostics for gas-liquid-solid multiphase flows. Her goals at Cal Poly include developing new course material and experiments for laboratory-based courses and a course on multiphase flows.

Linda Valenty (College of Liberal Arts) brings expertise in the realm of public policy, political psychology, methodology, and political theory. She came to Cal Poly from San Jose State to teach an introductory course on political theory and a graduate course on public political analysis. She is currently working (with co-author Eric Shiraev) on Public Policy for the New Millennium, which explores the current state of public policy and public policy analysis in telecommunications, the environment, immigration, and terrorism.
As Cal Poly seeks to bring new faculty into the university community, endowments provide an important tool for attracting and retaining the best and brightest teachers and researchers.

In 2002 two new endowed faculty positions were filled by Chemistry and Biochemistry Professor Raymond Fernando and Crop Science Professor Jeffrey Wong.

Fernando was brought into the College of Science and Mathematics as the Arthur C. Edwards Chair for Coatings Technology and Ecology (and director of the Polymers and Coatings Program). The $1 million endowed chair – the first to be fully funded at Cal Poly – was made possible by gifts from 21 donors representing a broad spectrum of the polymers and coatings industry, with the lead gift of $500,000 contributed by Ken Edwards and Dunn-Edwards Corporation in honor of Arthur C. Edwards, the company’s co-founder.

Wong was appointed to the College of Agriculture’s J.G. Boswell Professorship, funded by a $1.2 million endowment from the James G. Boswell Foundation of Pasadena, the charitable arm of the Corcoran-based J.G. Boswell Co., California’s largest and most diverse cotton production and farming operation. Wong, who has been teaching classes in plant genetics, plans to design and teach a lab techniques class using the newest technologies to differentiate plant DNAs for selecting genes that would provide the best plant types for cultivation.
Previously endowed faculty positions at Cal Poly include the Unocal Chair for Environmental Studies, filled in 2000 by Raul Cano (professor of biological sciences and director of the Environmental Biotechnology Institute), and two Unocal Professor of Marine Science positions, filled in 2001 by Thomas Richards (professor emeritus) and Mark Moline (associate professor of biological sciences and winner of a 2001 Presidential Early Career Award for Scientists and Engineers, which carries funding to support student research studies at Cal Poly's new Marine Science and Education Research Center).

Additional faculty positions partly supported by endowment funds were established in the College of Engineering through the Lockheed Martin Endowed Professorship and the Bert and Candace Forbes Endowment.

The Lockheed Martin grant provides $20,000 per year for two years to support young faculty in their research efforts. For 2002-2004 the funding will help Dianne DeTurris (Aerospace Engineering) create a research-quality supersonic wind tunnel for use in undergraduate aerothermodynamics lab classes. DeTurris’s research has garnered ongoing support since 2000 from NASA for the development and launchings by Cal Poly's Space Systems group of a reusable flyback rocket booster.

Computer Engineering faculty Diana Keen and Albert Liddicoat are sharing professorship funds provided by the Bert and Candace Forbes Endowment as part of the Forbeses' $3 million gift to the College of Engineering, one of the largest cash gifts the university has ever received.

Keen, an expert in computer-chip design, hopes to take her students
Additional faculty positions partly supported by endowment funds were established in the College of Engineering through the Lockheed Martin Endowed Professorship and the Bert and Candace Forbes Endowment.

Beyond building a simple chip to understanding the tradeoffs of different design decisions and to becoming excited about how hardware and software work together to run quickly. She is particularly appreciative of the collaborative nature of the Computer Engineering Department, which is shared by Computer Science and Electrical Engineering.

Liddicoat (EE '89) returned to his alma mater with the goal of conducting research and teaching in computer architecture, arithmetic, and networks. He will teach digital design, computer architecture, microprocessor system design, digital computer systems, and other electrical engineering/computer engineering courses.
Cal Poly's partnership with E&J Gallo flourished in 2002 as the company planted another 50 acres of wine grapes on the university's Chorro Creek Ranch west of campus. The plantings were sauvignon blanc grapes, a new varietal for Gallo on the South Central Coast.

In 2000 Gallo planted the first 50 acres of grapes at the Cal Poly vineyard: 25 acres of pinot noir and 25 acres of chardonnay. Cal Poly's partnership with Gallo, announced in 1999, calls for the winemaker to plant a total of 150 acres of grapes on Cal Poly land.

The university is providing the land and water for the vineyards, with Gallo overseeing vineyard development and operation. Cal Poly students benefit by using the vineyards as an outdoor classroom to learn vineyard management practices, including the latest environmentally friendly irrigation and cultivation techniques. And both Gallo and Cal Poly are using the vineyards for applied research involving Cal Poly faculty and students.

"While the new sauvignon blanc vines planted in 2002 are setting down roots, the first crop of pinot noir and chardonnay grapes in the Gallo vineyard should be harvested during the fall 2003 season," says Mark Shelton, associate dean for the College of Agriculture.

In 2002 Gallo set up an official internship program, beginning this summer, offering Cal Poly students six-month paid internships at its Modesto headquarters. "Students will gain experience in everything from vineyard management to wine making to marketing," says Shelton. "It's really exciting to be able to establish this kind of internship program with Gallo."
Enhancing Learning
Students Vote for Themselves with College-Based Fees

For some students, it was about getting the right class at the right time; for others, it was the desire to support top-flight equipment and technology.

In a spring 2002 election that boasted the second-highest turnout in Cal Poly election history, students in all six colleges voted themselves a fee increase of $125 to $200 per quarter, beginning in fall 2002, to pay for additional course offerings, computer lab updates, and equipment purchases.

"Cal Poly students are to be congratulated for the thoughtful attention they have given to the fee initiative," President Warren J. Baker said. "Their strong turnout at the polls is evidence of their commitment to our polytechnic mission and learn-by-doing educational tradition."

The initiative – unique within the California State University system – is being implemented across campus and is already having an impact.

One notable example is the newly renovated Biotechnology and Embryology Teaching Laboratory in the College of Agriculture's Animal Science Department. The lab is a technologically advanced facility where students get hands-on experience in molecular biotechnology and embryology techniques.

The state-of-the-art lab allows students to get involved in such projects as splitting and transferring embryos and identifying genetic markers, and provides a real boon to Cal Poly's pre-vet students, who gain rare practical experience.

"Undergraduates almost never get their hands on this caliber of equipment," says Animal Science Department Head Andy Thulin. "Our students perform techniques in this lab that are usually done by graduate students and professors. The lab gives all our students an edge, whether they are planning to pursue graduate degrees or enter the work force."

The Animal Science Department's newly renovated Biotechnology and Embryology Teaching Laboratory
Enhancing Learning

Students in Cal Poly’s community-based learning program are using classroom knowledge to address local needs, gain valuable experience, and earn academic credit in courses ranging from volunteer income tax assistance to technology application.

“Service learning is a powerful pedagogical tool with the potential to change the lives of students, teachers, and community members,” says Kinesiology Professor Kevin Taylor, Cal Poly’s nominee for the Thomas Ehrlich Award for Service Learning (sponsored by Campus Compact, a U.S. coalition of colleges and universities committed to encouraging student citizenship, campus/community partnerships, and the integration of teaching and research with public engagement).

Taylor’s Adapted Physical Activity course comprises the Friday Club (students – in collaboration with the San Luis Obispo County office of Special Olympics – teaching sports skills to people with developmental disabilities); the EyeCycle program (students taking people who are visually impaired on tandem bicycle rides); and the Adapted Paddling Program (students introducing people with mobility impairments to kayaking). Both EyeCycle and the paddling program are offered in collaboration with SLOCO Access, a local nonprofit devoted to advocacy for people with disabilities.

In 2001 the paddling program (sponsored by Necky Kayaks, Aquabound Paddles, and Perception Kayaks) received a $5,000 Quality of Life award from the Christopher Reeve Paralysis Foundation. With further Necky sponsorship, the program’s resources now include 14 boats, a trailer, paddles, and life jackets.

“Service learning is a pure form of teaching that truly binds the university to its local community,” says Taylor. “Teachers increase the effectiveness of their teaching and ensure that it remains culturally relevant, while students see the profound impact that their knowledge can have on others.”
Fans of Cal Poly athletics see all the passes, the receptions, the shots, the spikes, the saves, the swings, the slam dunks, the wrestling moves, the swimming strokes, the sprints, and the pitches.

They watch athletes on the field, court, track, mat, and in the pool.

What Mustang followers don't see very often, however, are what Cal Poly student-athletes do in the classroom or in the community.

One such student, volleyball player Kristen O'Halloran, is completing Cal Poly's general engineering program in four years.

O'Halloran hopes to continue her studies toward a Ph.D. in biomedical engineering with a focus on cardiovascular engineering. She has applied to such schools as the University of Arizona, UC San Diego, Duke University, the University of Texas, Purdue, and Washington University in St. Louis.

"I haven't taken ridiculous class loads, and I haven't gone to summer school," the senior outside hitter says. "I have good time-management skills, especially during the volleyball season. You have to prioritize things. Everything has to be structured. I always take textbooks on volleyball trips. You never know when you will have an extra 20 or 30 minutes for studying."

O'Halloran also has been involved in the fee committee for the College of Engineering. She holds a 3.97 grade-point average.
Thanks to long-term strategic planning and the confidence of California voters, campus construction continued at Cal Poly during 2002.

Cal Poly's new master plan, approved in spring 2001, paved the way for facilities that will be needed to meet the needs of a projected growing enrollment for the next 20 years.

At the top of the list of construction projects is the first phase of on-campus student housing, designed to help ease the community housing crunch. The 804-bed facility features furnished, four-bedroom, two-bath suites targeted for sophomore students.

Scheduled for occupancy this fall, the complex expands on-campus student housing by 22 percent, for a total of approximately 3,580 students. It is financed through housing revenue bonds.

Also under way is a 41,000-square-foot building for the College of Engineering, which will house part of the Aerospace Engineering and Materials Engineering departments, all of Manufacturing Engineering, and one Environmental Engineering laboratory.
The shell of the $10 million Engineering III facility, funded through an education bond passed in 1998, is near completion.

In November 2002, California voters approved another education bond – Proposition 47 – that will provide Cal Poly some $37.3 million over two years.

"Even in a difficult economy, California voters clearly recognized that an investment in education is a sound
investment,” said President Warren J. Baker. “Their support will allow us to tear down outdated structures to make room for modern facilities designed and equipped to produce tomorrow’s engineers and architects.”

The bond funds will complete the interior of Engineering III, which is expected to be occupied in summer 2004. They will also finance all costs for a new 112,000-square-foot Engineering IV facility that should be completed in 2006. This building will house the rest of the Aerospace Engineering and Materials Engineering departments, all of Industrial Engineering and some Civil and Mechanical Engineering labs.

These two new buildings will include high-tech labs for aero thermodynamics, controls and flight simulation, materials engineering microelectronics fabrication, and civil engineering semiconductor fabrication safety.

New high-tech equipment will include lasers for mapping, visualization, and velocity measurement in the wind and water tunnel laboratories; scanning electron and optical microscopes for the materials engineering laboratories; and helicopter controls and gyroscope controls test systems for the aeronautical engineering control laboratories.

These facilities will help maintain the engineering college’s ranking as one of the top public, undergraduate programs in the nation, according to U.S. News and World Report.

Cal Poly’s architecture program will also benefit from the education bond. It includes money to design, through the schematic drawing stage, a new multi-story building in the heart of campus for the College of Architecture and Environmental Design.

The college educates approximately one in every five architects in California. In a recent poll of practicing professionals conducted by DesignIntelligence magazine, Cal Poly’s architecture program was ranked as the No. 2 architecture school in the nation, second only to Harvard University.

The new architecture building will house the college’s construction management and architecture programs and provide added lecture space. It will rise on the site of the existing Heating and Air Conditioning facility in the campus core. That complex is a conglomeration of small one-story buildings ranging from 40 to 60 years old.

Finally, the education bond includes funds to prepare plans for remodeling and renovation of the 30-year-old Engineering West building that currently houses architecture laboratories and offices, engineering laboratories, and the Industrial Technology program. The 165,000-square-foot remodel would improve lighting, wiring, and classroom and lab space. Bond funds will also be used to renovate the Engineering, Engineering East and Computer Science buildings.

All of these upcoming construction projects fulfill the mission of Cal Poly’s master plan and allow the university to strengthen its advantage as one of the nation’s top polytechnic universities by offering students up-to-date facilities and the latest high-tech equipment.

Student demand for those programs is high, and graduates of those programs are in equally high demand among California’s expanding technology-based employers.
Advancing the Mission: The Year in Review

Developing State-of-the-Art Instructional Technology
The Studio Classroom: A Lab for Active Learning

In the words of veteran Chemistry Professor Christina Bailey, studio classrooms provide the best of two worlds.

An instructional design concept that originated in the fields of architecture and art, studio classrooms combine both lecture and lab activities.

"We do everything in the same classroom," explains Bailey, who designed the studio classroom where she now teaches after visiting Rensselaer Polytechnic Institute in Troy, N.Y., to observe its physics and mathematics studio classrooms. "We have computers for computer-assisted research and experiments, as well as all equipment for wet chemistry," she says.

The melding of lecture and lab into one extended classroom experience provides for better learning, Bailey firmly believes. "In a traditional lecture and lab setting, it's discontinuous," she says. A lecture may take place days from when students attend the actual lab session on the lesson at hand – and students may even have a different instructor for the lab sections.

"Chemistry is an empirical science. We depend on observation when we work in a lab to enforce what we teach during lectures. As an instructor,
you’re always wondering, ‘Did my students get that?’ In a studio classroom, an instructor knows exactly where the students are.”

Cal Poly has helped pioneer the use of studio classrooms in the chemistry arena, says Bailey. She has published papers and made presentations nationwide on teaching chemistry in a studio setting, and has been contacted by other universities interested in studio-classroom development and teaching.

Studio-classroom use is expanding at Cal Poly as well. The university now has studio classrooms available for classes in physics, chemistry, developmental math, statistics, and calculus in addition to art and architecture.

Teaching in a studio classroom is not without its challenges, however. “There are 64 students in the class,” Bailey says, “and you’re doing a lab as well as a lecture for more than two hours, so the instructor can’t just stand up front and lecture in traditional mode. You have to do a lot more planning to put together workbooks for the students to work along with you. You have to have your activities and experiments planned as part of your lecture.

“It is not a passive environment for the students or the instructor,” she says.
Developing State-of-the-Art Instructional Technology
Two Initiatives Upgrade Computer Infrastructure

In 2002 Cal Poly brought its computer facilities one step further into the 21st century with two initiatives supporting teaching and research.

In January Cal Poly joined the national Internet2 network, a consortium of 180-plus universities working in partnership with industry and government.

As part of Internet2 Cal Poly can connect to other Internet2 universities and industry partners to enhance education—enabling professors and students to operate high-powered telescopes in the Andes and Hawaii via computer from Cal Poly classrooms, for example, or to use the Internet to connect to and operate electron microscopes and other high-tech equipment at 12 partner universities.

After joining the consortium, Cal Poly assembled a team of "Internet Champions"—instructors charged with educating fellow faculty and students on how to take advantage of Internet2 in research and in the classroom. The team, led by Hugh Smith (Computer Science), includes Rollin Strohm (BioResource and Ag Engineering), Walt Bremer (Landscape Architecture), Ken Griggs (Management), Ned Schulz (Psychology), Francis Villablanca (Biology), Rosemary Bowker (Biological Sciences), and John Pietsch (University Center for Teacher Education).

Later in the year Cal Poly launched Telecomm, a major upgrade of the campus telecommunications system's wiring and infrastructure to bring video, voice, and data-transfer improvements to all buildings on campus.

Part of the California State University System’s 23-campus Technology Infrastructure Initiative component of its Integrated Technology Strategy, Telecomm's purpose is "to ensure all CSU students, faculty, and staff access to the broadest possible range of information resources and related technology in order to advance excellence in teaching and learning, quality of student experience, administrative productivity, and personal productivity."
When veteran journalist and key Cal Poly advisor Herb Kamm passed away last September, he was celebrated by media titans nationwide, by the hundreds of students he mentored, and by community members who benefited from his generosity of spirit, time, and support of the arts.

After "retiring" to the Central Coast in 1985, Kamm put his then-50 years of experience as a writer/editor in New York and Cleveland to work at Cal Poly, teaching journalism and working closely with the President's Office on special projects, most notably the seven media forums he produced that drew hundreds of people to campus to hear from national and local media and film and television writers, critics and directors, and political commentators.

Kamm was also a member of the editorial board of the San Luis Obispo Tribune, mentoring the newspaper's young reporters, many of whom he had taught at Cal Poly. Among them was higher education reporter Ryan Huff (JOUR '02), who wrote, "When I grow up, I want to be like Herb Kamm: to be utterly honest with people, but not deflate their spirits; to have the rapport to woo some of the giants of government, Hollywood, and media to speak at campus forums. To live to be 85, yet still act like I'm 35."

In the words of Cal Poly President Warren J. Baker, "Herb cannot be replaced, but he will long be remembered."

Memorial contributions may be made payable to the Cal Poly Foundation for the benefit of the Herb Kamm Journalism Scholarship Endowment and sent to Cal Poly, College of Liberal Arts Advancement Office, Building 47, Room 31, San Luis Obispo, CA 93407.

_Herb Kamm at the November 2001 Journalism Gala with (left) Kim Kaney (JOUR '99) and Teresa Mariani Hendrix (JOUR '85)._