

Access and Excellence

**Robert J. Birgeneau,
Chancellor, University of California, Berkeley**

Fall 2008

“If you look west from the Berkeley hills as the sun sets framed by the Golden Gate, you will see what was once the far edge of the western frontier. Today Berkeley is positioned at the leading edge of new frontiers — the frontiers of knowledge and education.”

**—Chancellor Robert J. Birgeneau
April 15, 2005**



As I enter my fifth year as Chancellor of UC Berkeley, I believe that it is time to reflect again upon these words with which I opened my inaugural address. I saw Berkeley then as the model for public education in this state and in the nation, continuing to break new paths on the frontiers of knowledge and education, a view that has deepened and intensified through my experience as Chancellor. As I meet with Berkeley faculty, students, staff, and alumni, I see every day the profound impact that this university has on the economic development, cultural life, and well-being of our state and beyond. Berkeley draws the best minds from around the world to join our community. The brilliant and accomplished scholars on our faculty extend the frontiers of knowledge about ourselves and our world, and point the way to the future. The discoveries they make — working with our exceptionally talented students in our laboratories and classrooms, and supported by a proud, deeply loyal, and hard-working staff — ignite the California economy and make breakthroughs that transform our world.

Our Mission and Values

With its long and distinguished history, Berkeley is a preeminent academic leader among the world's finest universities, one whose values make it both great and unique. At the core of its mission of research, education, and public service is the fulfillment of the public trust. This is demonstrated through the 35,000 students who are receiving a world-class education at Berkeley, and through over 450,000 living alumni who are proud and distinguished graduates. Commitment to excellence is ensured in all of its endeavors in testament to the public spirit and vision of the people of California, who held that "properly constituted, a University would contribute even more than California's gold to the glory and happiness of advancing generations."

Among Berkeley's hallmarks is an unmatched breadth and depth of academic programs, driven by a passion for inquiry and discovery, and marked by the integration and synergy of teaching and research. Our programs are supported by a library collection that ranks as one of the best in the nation and by a system of world-class research museums and field stations. This comprehensive educational excellence is accessible and affordable to large numbers of students of exceptional talent from all socioeconomic backgrounds. Berkeley thus forms a truly unique setting for stimulating creative thought, with a vital and diverse intellectual community committed to the advancement and diffusion of knowledge and innovation of benefit to the state, the nation, and the world. Accordingly, our goals are succinctly stated in the mantra: "Access and Excellence."

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These values that describe "the essence of Berkeley" are articulated in the UC Berkeley Strategic Academic Plan (Spring 2002), which addresses key challenges

facing UC Berkeley as it entered the new century. The plan was written to ensure that our investments in both academic programs and physical improvements reflected a sound, coherent, and ambitious vision for the Berkeley campus. In my inaugural address, I expounded on these values and on my vision for Berkeley, consonant with the directions of the Strategic Academic Plan, as themes of *leadership*, *connections*, and *inclusion* — *leadership* in research, education, and public service and what is required to support excellence in our faculty, students, and staff; *connections* that we make inwardly among our disciplines as we address great intellectual and global challenges, and outwardly as we give back to society our gifts of knowledge; and *inclusion*, as we strive to produce equal opportunity for all and the social and intellectual benefits to our community that this equality provides.

Recent Progress

Over the last four years, we have made significant progress toward these goals, with a number of outstanding successes. We have made more secure the future of our faculty and graduate students by the creation of a new endowment seeded by a \$113 million gift from the Hewlett Foundation for one hundred endowed chairs. We have won an unprecedented \$500 million grant from the global energy corporation BP to create the Energy Biosciences Institute (EBI) which, in partnership with the Lawrence Berkeley National Laboratory and the University of Illinois at Urbana-Champaign, and a further \$70 million in state support, has created a new model of university-government-industry partnership that places us at the forefront of clean alternative energy research. We have created the first-ever position of Vice Chancellor for Equity and Inclusion in the UC system, placing responsibility for this important initiative at the highest level of accountability within our senior administration. A number of new multidisciplinary initiatives identified through the 2002 Strategic Academic Plan (nanoscience, computational biology, new media, metropolitan studies, and environment) have been seeded and joined by vibrant new efforts such as the Berkeley Center for Stem Cell Research, the Berkeley Diversity Research

Initiative, and the Blum Center for Developing Economies, the latter funded by a \$15 million gift and challenge grant from one of our alumni.

A new Stanley Hall, built through partnership with government and private support, is now home to the California Institute for Quantitative Biosciences (QB3), one of two multi-campus California

Institutes for Science and Innovation located on the Berkeley campus. A new building is in the final stages of construction for the other,

our very active and thriving Center for Information Technology Research in the Interest of Society (CITRIS).



UC Berkeley's landmark campus includes the classic Hearst Memorial Mining Building (left) and the cutting-edge laboratories of new Stanley Hall (right).

The campus is now graced by the new C.V. Starr East Asian Library, the largest freestanding such library outside of Asia. The Bancroft Library has just celebrated its reopening, having been magnificently refurbished to hold our special collections and rare scholarly materials. We are beginning construction of the new Li Ka Shing Center for Biomedical and Health Sciences (the replacement for old Warren Hall) and are finally able to begin construction of a new Student-Athlete High Performance Center, for which we have raised more than \$100 million. All of these capital construction initiatives have involved partnerships and have been substantially funded by private donors and, as such, are testimony to the passion felt for UC Berkeley by our alumni and friends, who believe deeply in our future.

Our academic enterprise is the most robust it has ever been. The number of students applying to Berkeley continues to grow, and indeed, this year, we had over 60,000 applicants for our 6,300 places (4,300 freshmen and 2,000 transfer students), with the highest average GPA ever. We have kept the doors of opportunity open by keeping the cost of attending as low as possible for the one-third of these very talented

students who come from low-income families. Our senior faculty continue to garner outstanding awards, including our twentieth Nobel Prize, won in physics by Professor George Smoot in 2006, our third Shaw Prize in Astronomy and Astrophysics, won this year by Professor Reinhard Genzel, and a Pulitzer Prize in Poetry, also won in 2008, by Professor Robert Hass, as well as many other major national and international awards. Importantly, our junior faculty also continue to show outstanding potential, consistently leading the country in the competition for Sloan Research Fellowships and garnering MacArthur Fellowships (known as the “genius” awards), two of the most prestigious honors awarded to young faculty in the country. The reputation of our faculty and graduate programs continues to bring the best graduate students to Berkeley. One out of every nine National Science Foundation Fellowship winners made Berkeley his or her first choice this year, more than any other university. Our athletics program continues to draw and train outstanding student athletes, and each year we have advanced our standing in the Directors’ Cup, a national ranking of intercollegiate athletic programs, this year finishing seventh in the country. This summer we proudly witnessed the outstanding achievements of our current and former student-athletes as they won seventeen Olympic medals.

Private support for the university remains exceptionally strong. Over the last four years we have been raising funds at a level that places us among the top fundraising universities in the country, excluding donations to medical faculties. During this time, both the Bancroft Library and Cal Performances have celebrated the completion of their centennial campaigns, raising record amounts. We have just launched the largest fundraising campaign in Berkeley’s history, The Campaign for Berkeley, with a goal of \$3 billion. This critical campaign, which had already raised \$1.3 billion at the time of its public announcement, will be central to our financial future.

Although we face very serious budgetary challenges as a result of the current economic climate, we should not shy away from articulating and extending our ambitions for this great university and its long-term future. The next two to three

years will undoubtedly be very difficult, but the hard choices that we will have to make should not have us lose sight of our ultimate goals for Berkeley. As we enhance Berkeley's academic preeminence and global leadership for the future, we will continue to enrich the extraordinary depth and breadth of Berkeley's excellence by attracting and retaining distinguished faculty. We will retain our unique public character by continuing to expand access and opportunities for exceptional students from all socioeconomic backgrounds. We will contribute to a better world by supporting the research and scholarship needed to address pressing global problems and to deepen our understanding of the human condition, and we will strengthen our core mission to serve the societal good. We look to the future with confidence and vision to excel by every measure, advance the frontiers of knowledge, and lead the way in learning, discovery, and service to the greater good. We are grateful for the faculty, students, staff, alumni, donors, and friends who have joined together to put Berkeley at the leading edge of new frontiers of knowledge and education.

Berkeley's Competitive Environment

Today, in a context of increasing competition from our private peers — an elite set of universities that includes Harvard, MIT, Princeton, Stanford, and Yale — our challenge is to sustain and enhance Berkeley's leadership excellence and to secure its future as a model public university. To ensure that we remain at the leading edge, we not only must continue to be competitive with the world's most preeminent universities, but we must do so while retaining our public character and serving as a place of opportunity for students from all backgrounds.

At the same time, our public character gives us a competitive edge, in that we are arguably the only university in the top echelon that combines comprehensive excellence with broad access to students from all socioeconomic levels. This makes us uniquely attractive to faculty who want to serve the public good. Further, our openness and inclusiveness mean that we provide a positive environment for diverse

faculty, students, and staff who might feel less of a sense of ownership at many other institutions.

It is self-evident that the solutions to many of the deepest and most challenging intellectual and societal problems that humankind faces require input from many different disciplines. Even compared to our elite private peers, UC Berkeley has exceptional depth and breadth. This gives us a distinct competitive edge over these institutions. To take advantage of this, we must ensure that such multidisciplinary research can occur as smoothly and effectively as possible.

Historically, Berkeley's operating revenue has been sufficient to preserve its position among the very top echelon of universities. Indeed, the 2002 Strategic Academic Plan noted that "Over the years, our performance has not only equaled but often outpaced the nation's elite private universities, despite their longer histories and far larger private endowments. The excellence of Berkeley is a testament to the public spirit and vision of the people of California, who have sustained us for over a century as a premier research university, while also ensuring a Berkeley education remains within reach of every deserving student." However, as the size of the elite private-university endowments has grown rapidly in recent years, as has income from their high tuitions, the pressure on faculty salaries, graduate-student funding, and all other costs of maintaining a preeminent university has significantly increased. Some other flagship public universities have enhanced their revenues by steadily and substantially increasing the number of out-of-state students who pay private-university-level tuitions. This has the unfortunate consequence of reducing the number of low-income in-state students at these institutions. Berkeley must follow a strategy that is more consistent with our public mission and character.

Our competitors, who have aggressively invested their endowments, are now, even during this economic crisis, enjoying the security of relatively large and stable revenue streams, while we are subject to the financial crisis facing our state budget.

Even in good economic times, state funding per student has not kept up with inflation. To secure our future, we must look at a stable and sustainable long-term funding model that relies on a variety of funding sources, including private funds and increased endowment. We must seek out public-private partnerships — with individuals, foundations, non-profit organizations, foreign governments, and corporations — that will increase our freedom to pursue new frontiers. Such partnerships will be essential to preserve our public character, and we must reach out to these partners constructively and with an open mind.

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Staying at the frontiers of knowledge and education requires competitive resources, but it also demands that we be responsive to the political, demographic, and societal changes around us. This year’s presidential campaign presented a more diverse set of contenders than ever before in our nation’s history, including a woman and an African-American, and we have elected the nation’s first black president. Our state is rapidly changing demographically and is now a society with no one ethnic majority. Our campus should reflect the majestic tapestry of the peoples of California and seize the opportunity to lead the nation in making our ethnic diversity and the study of multicultural societies subjects for rigorous intellectual pursuit.

Technological advances have linked us to a globalized world. We need to take advantage of our unique ability to make connections across disciplines to address some of the world’s most challenging problems. Multidisciplinary, collaborative

approaches are being used with great effectiveness by Berkeley professors across the physical and biological sciences, mathematics, engineering, social sciences, arts and humanities, and the professions. Discovering new clean energy resources, abating global poverty, mitigating life-threatening diseases, reducing conflict, and exploring other frontiers not yet imagined hold the promise of enhancing our contributions to a better world.

Excellence in multidisciplinary approaches depends upon sustained excellence in the individual disciplines. We will continue to support and celebrate great scholarship by individual faculty and students. Such work will always be at the core of our university. In contemporary society, universities have become the only places where knowledge can be pursued for its own sake. The basic research carried out at universities like Berkeley yields discoveries whose impact is revolutionary, not just evolutionary.

Although we continue to attract top students, both graduate and undergraduate, and fulfill our mission to educate future leaders in the sciences, business, and the arts, we cannot be complacent about their education. We must also lead at the frontiers of education in providing our students with an educational experience that is unique to Berkeley's mission of teaching, research, and public service, and that responds to and takes advantage of our students' desire to contribute proactively to human welfare. To stay at the leading edge, our teaching must also integrate current and future technologies into our classrooms, and our student services must respond to the changing needs and expectations for the support and well-being of today's students.

Goals and Strategies

The 2002 Strategic Academic Plan puts forth a broad set of principles and proposals that emphasizes faculty recruitment and retention; comprehensive research excellence, including support of new multidisciplinary initiatives; graduate student support; and the infrastructure required for these areas. Over the past four years, we

have extended our attention to several other areas: enriching the undergraduate experience; increasing opportunities for service learning; strengthening undergraduate need-based financial aid; developing our workforce; and fostering equity and inclusion. During this time we have created plans for a very ambitious fundraising campaign to support our many goals that are now all part of an interwoven tapestry to secure our place as the premier public teaching and research university in the country, serving the peoples of California, the nation, and the world.

Below are some of the key goals and strategies that we intend to pursue over the next five years to keep us at the leading edge, including, for some, an estimate of the annual income required to achieve the goal.

Academic Preeminence

Berkeley's most important responsibility is to recruit and retain top faculty in all of the disciplines across the campus to maintain our comprehensive excellence.

Competitive salaries are critical, but all aspects of the faculty environment are increasingly important, including, especially, support for start-up costs and infrastructure needs, as well as support for graduate students and for undergraduate



UC Berkeley undergraduates learn from the best, including physics professor – and Nobel Laureate – George Smoot.

teaching. In order to maintain competitive salaries and start-up costs, at present we are limiting the number of faculty we hire, which has, in turn, substantially increased our student-to-faculty ratio. This is not a sustainable long-term strategy and is

incompatible with our desire to keep improving the quality of undergraduate education for our students. To maintain the excellence of our faculty, we must:

- Produce a sustainable funding model for the size and cost of faculty needed to sustain teaching and research excellence.
- Increase faculty salaries to levels comparable with those at the elite private universities. At the assistant professor level, we are competitive with this market. The greatest lag is at the mid-career (associate and early full professor) level. Our goal is to be competitive with our elite peers at this level. Our major strategy is to secure endowed chairs using a model that will contribute to supporting faculty salaries. Our fundraising efforts thus far have resulted in a \$113 million challenge gift from the Hewlett Foundation to establish one hundred chairs, a challenge that is now more than half met. The Hewlett Challenge will provide a revenue stream of more than \$5 million annually for faculty salaries; the amount now needed to offer competitive faculty salaries is an additional \$10 to \$20 million a year.
- Develop affordable housing for new faculty, given the Bay Area's very expensive housing costs. Berkeley's housing-loan program is offered to all faculty who wish to purchase a house, but most junior faculty cannot take advantage of the program until well after they arrive. Our goal is to have one hundred or more units of rental housing that faculty can occupy during their early years of service. If Berkeley would use current university land leased to a private developer, there would be no incremental costs. We are currently evaluating a number of sites for development.
- Increase the diversity of the faculty through policies and programs that support equity and inclusion. For example, surveys indicate that support for family-work balance is a vital factor for keeping women — who will soon be the majority of doctoral degree recipients in the U.S. — in the faculty pipeline to tenure.

Attracting the top echelon of graduate students is of paramount importance to Berkeley's academic excellence and essential to recruiting and retaining top faculty, as well as to teaching our undergraduates. We must consider whether we should gradually rebalance our ratio of graduate to undergraduate students. We must also be competitive in the support that we offer graduate students. As a goal, we aim to:

- Ensure that all Ph.D. students have packages that provide full support for five years, up from, on average, 75% of our Ph.D. students currently. Funding packages include fellowships and research and teaching assistantships. Guarantees of five-year support are common among the universities with which Berkeley competes for the best graduate applicants. Due largely to their significant endowments, these universities extend such guarantees to between 90% and 100% of their doctoral students. To meet our objective, Berkeley has set a campaign goal of nearly \$350 million for graduate fellowship endowments. The university has also created a new funding model for the endowed Hewlett chairs, which will provide \$25,000 annually from each chair for graduate student support in perpetuity. Pre-existing chairs are also being converted progressively to the Hewlett payout model. Together, these initiatives will help enable Berkeley to realize its full potential to recruit the best graduate student talent from around the world.

Research and Discovery

Investment in university-based basic research is in large measure responsible for the phenomenal increase in output of the North American economy over the past five decades. At the same time, multidisciplinary is significantly shaping the profile of universities in the 21st century. As noted earlier, Berkeley's remarkable combination of breadth and depth gives us an important advantage in addressing major intellectual and societal issues that require a multidisciplinary approach. To capitalize fully on this advantage, we must make it possible for research to take place as effortlessly as possible across traditional disciplinary and institutional boundaries.

We should be open to envisioning new and broad-scale research directions that leverage our unique breadth and depth, which extend through the arts and humanities, social sciences, physical and life sciences, and the professions. We should also expand further our relationship with the Lawrence Berkeley National Laboratory and the synergies between the lab and campus that historically have proven to yield exceptional results. Specifically, we aim to:

- Create a funding pool of \$500,000 annually that can seed new research ideas from individual faculty members. Funding ideas that do not fit into established federal research programs is critical for innovation and for expanding the boundaries of discovery. The Chancellor's Partnership Fund, which has been launched by a donor gift, is an example of this kind of program.
- Create a second funding pool of \$500,000 annually that will be used to enable faculty to make radical changes in their research programs.
- Continue to invest in and shepherd multidisciplinary initiatives that support promising new research directions. Of particular importance is the raising of an endowment for "glue money" to facilitate interactions within the initiatives.
- Support and enhance the impact of our research museums and field stations.
- Build and nurture productive relationships with the private sector. We need to continue to partner actively with the private sector to attain our goals in research and discovery. In all cases, we will partner in such a way that the rights and freedoms of our own faculty and students, as well as those of our private-sector partners, are properly protected. Such partnerships also must entail full cost recovery by the university.
- Explore new opportunities to partner with non-profits, including especially the major foundations. These foundations increasingly seem to be recognizing the importance of investing in flagship public, as opposed to private, universities. However, we must also work with the foundations to ensure that any such funding adequately covers the associated indirect costs.

Teaching and Learning

Berkeley faculty are internationally recognized researchers and dedicated teachers who bring their passion for cutting-edge discovery and learning into the classroom, transforming the lives of our students. Our alumni remember their favorite “superstar” teachers — many of them recipients of the campus’s highest teaching honor, the Distinguished Teaching Award — whose impassioned lectures were often met with applause. Many thrived in small faculty seminars or in discussion sections led by our brightest graduate student instructors — tomorrow’s faculty. To set the highest standard for teaching excellence and to keep pace with dynamic changes in disciplines, we must continue to fund innovative changes across the curriculum, including exciting new multidisciplinary approaches like our Global Poverty minor and Center for New Media courses. We also need to support and enhance all of our instructional offerings with a rich array of high-tech and high-touch enhancements — from technology tools like bSpace and webcasting to graduate student instructors who provide guidance and coaching in one-on-one and small group settings. We must also renovate and create new learning spaces — classrooms, studios, teaching laboratories, and informal learning “hubs” — to support Berkeley’s teaching excellence. Our goals include:

- Establish discovery-based learning as a signature educational experience for every undergraduate student. Such experiences afford students the opportunity to engage directly in inquiry that leads them to new discoveries based on their own construction and testing of ideas. These experiences include individual or team research projects; internships that provide practical applications of theory; field work in the larger community; and international study programs. Many discovery-based experiences currently exist, and many students take advantage of them. However, a large number of students, especially those from lower-income families, need financial support to participate in these programs. To ensure that this is a core aspect of a Berkeley

education for all students, it will be necessary to expand current opportunities, create new ones, and develop an appropriate program infrastructure, including student support. For example, a new educational opportunity that is being developed is the American Cultures Enhanced Pathway (ACEP) program, which will connect our nationally recognized American Cultures curriculum with a unique set of student internship opportunities; through these internships students will move beyond theory into “real world” practice by engaging in on-site, service-oriented ethnographic research. We may also want to create more opportunities for global internships and international public service by enhancing our programs for study abroad (see section on International Strategy below).

- Create a Center for Educational Excellence that will integrate and expand existing services and resources in support of Berkeley’s teaching mission. This center will provide programs to improve the quality of teaching, workshops in instructional design and educational assessment, training in new pedagogy and new uses of technology, and teaching grants for curricular innovation in both large lecture and small seminar formats. The center will leverage many of the program pieces that currently exist on campus and make the whole greater than the sum of its parts. In addition to some supplementary program costs, the greatest need is for funds to support curricular innovation grants. It would cost some \$500,000 annually to operate the center and support its programs.
- Develop a broad spectrum of new spaces to meet the expanding learning needs of our intellectual community. Educational excellence requires state-of-the-art classrooms with technology enhancements that are flexibly designed to support multiple approaches to pedagogy. Laboratory and studio spaces must constantly evolve to respond to the evolution of the disciplines they support, and to provide opportunities for problem-based and experiential learning. Learning commons spaces will combine formal and informal environments to create vibrant hubs for students, faculty, staff, alumni, and life-long learners in the larger community to come together in collaborative

ways. Permanent endowments will allow us to keep campus learning spaces up-to-date in a rapidly changing environment.

- Endow five to ten permanent, rotating chairs for faculty members who will make a significant contribution to the campus's teaching mission during a five-year appointment, both individually and as members of a consortium of elite teachers. These chairs will be modeled after the Hewlett chairs, but with a particular focus on undergraduate education.

At Berkeley, we choose students for their leadership capacity and take pride in developing them as future leaders. As well as classroom experience, students should have formal opportunities for developing their leadership skills outside the classroom. We should provide leadership training and opportunities that allow students to participate in extra-curricular programs that will prepare them to be more engaged citizens in a multicultural world and to develop the character and skills that will prepare them for life after university. Our goal:

- Have every Berkeley student participate in at least one educational leadership experience before graduation.

International Strategy

A fulsome description of the opportunities and challenges for Berkeley in the international arena would more than double the length of this document. Most members of our community would agree that while Berkeley has a myriad of successful international programs in research, education, and public service, the whole seems to be less than the sum of the parts. One of our greatest challenges is to bring more coherence and more direction to our international efforts, and this must be addressed over the next several years.

The goals for a university's international strategy are similar for most preeminent U.S. teaching and research universities. As succinctly stated by President Rick Levin of Yale, adapted to the Berkeley context, the goals include:

- Preparing UC Berkeley students, both undergraduate and graduate, for leadership and service in an increasingly interdependent world.
- Attracting the most talented students and scholars to UC Berkeley from around the world.
- Solidifying UC Berkeley's position as a global university of consequence.

Achieving the first of these three goals means that we must continue to enhance our undergraduate and graduate educational programs that address international issues. The remarkable success of the new educational programs associated with the Blum Center for Developing Economies illustrates the interest of our students in such international matters as alleviating poverty in developing countries. We also need to enhance our programs for study, internships, and public service abroad; this may well require establishing our own UC Berkeley Education Abroad Program, in partnership with, but not dependent on, the rest of the UC system.

For the second goal, UC Berkeley has already demonstrated that we are very attractive to scholars and graduate students from around the world. The challenges here are very similar to those for domestic graduate students and scholars: competitive salaries and stipends, high-quality infrastructure, a stimulating research environment, world-leading colleagues, etc. The situation is more complex for undergraduates. By tradition about 5% of our undergraduate body is international, but it has recently been rather less than this. This means that our native undergraduate students have limited exposure to fellow students from other countries, who may have very different viewpoints on national and international political, economic, societal, and religious issues. Thus, both to expand the reach and influence of our undergraduate education and to improve the educational experience

for our Californian students, we need to increase, perhaps even double, the number of full-time undergraduates from other countries.

For the last of these three goals, UC Berkeley is already a “global university of consequence,” as shown by the large number of research collaborations between our faculty and scholars abroad and by the prestige of UC Berkeley throughout the world. Yet the ways in which UC Berkeley can strengthen its already significant position are nearly endless. We have recently formed a partnership with the global energy corporation BP to address the challenges of energy self-sufficiency and global climate change. Our Department of Mechanical Engineering has formed a partnership with King Abdullah University of Science and Technology to assist in creating a world-class, western-style graduate university in Saudi Arabia. We have formed a broad-based partnership with Tsinghua University in Beijing, China, and would like to expand this to other Chinese universities, including Beijing and Fudan. We also are currently formalizing our partnership with the University of Tokyo in Japan. New partnerships are appearing with various research and educational institutions in India, where we have learned from government officials, beginning with Prime Minister Singh himself, that the creation of a post-secondary educational system that mimics California’s famed Master Plan could be transformational for that country. This represents an incredible opportunity for Berkeley. We belong to a limited number of international university consortia, namely the International Association of Research Universities (IARU) and the Asian-Pacific Rim Universities (APRU). We need to figure out how to use these organizations more effectively.

Currently, many of our international educational, research, and outreach programs are organized under the auspices of International and Area Studies (IAS) under decanal leadership. This structure differs from that at many of our peer institutions where there is a Vice President or Vice Chancellor for International Relations who plays a broad leadership role in international matters for the entire university. Clearly, one of the issues that we must address in the near future is the optimal structure for our international programs and partnerships given their ever-increasing

importance; we must also decide what fraction of our discretionary resources we are willing to invest in them.

Accessibility and Affordability

We have an obligation to the people of California to remain accessible to qualified students from low- and middle-income families, as well as to those from upper-income households. The socioeconomic diversity of our undergraduate student

body is a hallmark of Berkeley and contributes to our vitality as a diverse community of thinkers and learners. Currently, Berkeley enrolls more Pell Grant recipients — students whose family incomes are less than about \$45,000 a year — than all of the Ivy League universities



Students stream through Sather Gate.

combined. These students, who represent more than 30% of our 25,000 undergraduates, are also disproportionately from California's underrepresented minority communities. For example, more than half of our African American and Chicano/Latino students are eligible for Pell Grants. At present, low-income students attending Berkeley must contribute \$8,200 on their own each year, through a combination of loans and work-study. This is referred to as the "self-help level." Families with incomes of about \$90,000 or more pay the full cost of attending Berkeley, which currently totals around \$26,500 and includes fees, room and board, books, etc. The cost of university attendance will continue to rise, even if tuition increases are limited to the rate of inflation. Projections indicate that without changes in the resources available for financial aid, the self-help level could double from \$8,200 to \$16,400 in ten years. This could make Berkeley unaffordable to many low-

and middle-income families. It would unalterably change the unique character of Berkeley.

Clearly, over the next decade we must increase significantly the resources available for need-based financial aid, and this must be done on a permanent basis, not year by year. Ideally, we would like to build up an endowment for need-based aid that would guarantee for the foreseeable future accessibility for low- and middle-income families. We hope through The Campaign for Berkeley to raise at least \$300 million in endowed funds for need-based undergraduate scholarships, a goal that would more than double the endowment level prior to the campaign. Our experience with the Hewlett chairs shows that this will be most effectively realized by a challenge-grant program. Specifically, a Hewlett-sized grant from either a foundation or an individual would be transformational. We might hope that the state would participate in such a challenge program, as it has in other jurisdictions with great success.

Currently, one-third of all fee increases are returned to student aid. Other strategies, such as increasing the return-to-aid portion of fee increases from 33% to 40%, will also be required. To be specific, if this increase in the return-to-aid were implemented, it would generate about \$10 million per year in undergraduate financial aid for Berkeley students after ten years.

Berkeley's goals for student access include the following:

- Ensure accessibility for students from low-income families with incomes under \$45,000 by maintaining current levels (in constant dollars) of work and loan requirements of \$8,200 per student per year. Current funding sources for financial aid are federal grants and loans, state grants, return-to-aid from fees, and private support. Meeting the goal will require, by the year 2018, an incremental \$25 million annually for undergraduate need-based financial aid.

- Limit family and self-help contributions to 20% of family income for students from middle-income families with incomes up to \$130,000. Our current cut-off for need-based financial aid is about \$90,000. A federally-defined guideline to assess the family's ability to pay college expenses is unrealistic when applied to the Bay Area's cost of living. Our goal would increase this upper cut-off to \$130,000. We are currently estimating the net cost of such an ambitious program.

Success in our campaign of raising an endowment of at least \$300 million for undergraduate need-based scholarships, added to our existing endowment, plus increasing the return-to-aid, would take us a long distance toward meeting these two goals and securing, for the foreseeable future, access for low- and middle-income students to UC Berkeley.

Equity and Inclusion

As part of ensuring a vital and diverse community, we must also create a campus where each person can thrive while maintaining his or her own individual identity. Berkeley has a long tradition of pioneering and supporting rights and services for persons with disabilities, for celebrating and supporting sexual diversity, and for championing affirmative action. Although we are slowly recovering from the setbacks of Proposition 209, which ended affirmative action in hiring and admissions, we still fall far short of being a truly inclusive institution. We have created the portfolio of Vice Chancellor for Equity and Inclusion, whose first task is to prepare a strategic plan for equity and inclusion that can produce transformational and lasting change. The Vice Chancellor for Equity and Inclusion is leading our efforts to:

- Prepare a ten-year strategic plan to model our efforts for equity, diversity, and inclusion for all members of our community — faculty, students, and staff. These include the Berkeley Diversity Research Initiative (BDRI) to study

multicultural societies and the Berkeley Initiative for Leadership on Diversity (BILD) to model excellence and diversity in the workplace. We estimate the total cost of the multi-year plan to be \$40 million, and anticipate significant private support for this critical program.

Engagement and Public Service

As a land-grant institution, UC Berkeley has a long-standing commitment to serving the public good, and it achieves this lofty goal through many small and large initiatives by its faculty, staff, and students. This spirit of public service is manifested very directly in the fact that, historically, UC Berkeley has produced more Peace Corps volunteers than

any other university in the country. The Cal Corps Public Service Center connects our students with the many campus programs that serve the community and provide



Chancellor Birgeneau meets with new students.

service-learning opportunities. Our staff have made contributions varying from creating new programs for students who are former foster children and thereby face special challenges, to playing a leadership role along with our students on sustainability initiatives both on and off campus. Our faculty make a broad range of public service contributions at the national, state, and local levels; these vary from chairing government committees to contributing to teaching in CAL Prep, our Oakland charter school.

Our public service profile is quite impressive, but there is opportunity to increase significantly our impact on our local communities, including especially Berkeley, Oakland, Richmond, Emeryville, and Albany. It is clear, for example, that Oakland faces innumerable challenges. We have met with the current mayor and have discussed ways in which the city of Oakland and UC Berkeley can partner. We now

need to move forward and put together a comprehensive plan for this public service partnership with Oakland, and with the other communities listed above.

Overall, to develop further our commitment to public service and enhance the university's educational mission of civic responsibility, we need a mechanism to better coordinate disparate work from across the campus. Currently, there are twenty campus units and centers responsible for managing civic engagement programs, with many new projects under development, all of which address a broad range of social and community issues through service activities. However, there is little coordination or collaboration among these many units, which can result in duplication of effort and a waste of resources. Moreover, there is no clear process by which collaborative connections between the larger community and the Berkeley campus can be initiated, vetted, and implemented. To address these issues, we have proposed the Berkeley Engaged Scholarship Initiative (BESI), which has developed the following objective:

- Establish a Center for Engaged Scholarship that will coordinate all civic engagement activities on campus and infuse university life with a public service component. This center would oversee the public service programs that are currently provided for students, offer more service-learning activities, and support the campus and larger community in developing meaningful campus and community partnerships on a local and global scale. Importantly, the center will provide service stipends to financially needy students, thereby addressing two campus objectives: sustaining access for extraordinary young people without regard to their financial means, and maintaining Berkeley's history as a leader of change in our society. The center would cost approximately \$500,000 annually; in addition, it will be seeking a \$10 million endowment for the student service stipends.

K-12

It is widely accepted that our public school system is broken. There are huge education gaps for California's underserved communities in lower-income neighborhoods. The question that I am most frequently asked by legislators is "What is the university doing to help solve the K-12 problem?" A quick web search would direct inquiries to "Kindergarten to College: UC Berkeley in the Schools," a web portal providing listings, descriptions, and links for more than sixty campus educational outreach programs. Our Graduate School of Education is actively engaged with our K-12 schools and provides an undergraduate minor in education that is suitable for students who are considering a career in education or teaching. It mounts a Principal Leadership Institute that prepares leaders for our public schools. Berkeley participates in the UC Cal Teach program to prepare and support math, science, and engineering students who are interested in becoming K-12 math and science teachers. The Lawrence Hall of Science, which is also a partner in the Cal Teach program, is an outstanding resource center for preschool through high school science and mathematics education. It is a national leader in the development of innovative materials and programs for students, teachers, families, and the public at large.

Berkeley has numerous outreach programs, many of them under the umbrella of the Center for Educational Partnerships, which reaches over 22,000 K-12 students annually. Programs are also supported by 501(c)(3) organizations such as Stiles Hall, the Level Playing Field Institute, and the California Alumni Association. Many very dedicated people, including students, faculty, and staff, are passionately involved in these efforts, and programs to address education equity concerns are launched from every corner of the campus. Unfortunately, we continue to face a landscape that is often disjointed, easily disrupted, and hindered by community distrust of the university. Our efforts become diffused, there is a lost opportunity for synergy, and our resources are not used as effectively as they might be.

The Vice Chancellor for Equity and Inclusion is leading a proposal to establish a Community Gateway for Education Equity: a state-of-the-art, fully accessible and highly visible entity that embraces UC Berkeley's commitment to education access and success. Through the gateway, UC Berkeley will improve linkages with local educational institutions (including pre-schools, K-12 schools, and community colleges) and work to assist them with their missions. The gateway will similarly empower local groups like faith-based and community-based organizations to ensure that they have the tools and knowledge they need to inspire and support students as they pursue their educational paths. The university recognizes that it will not be primarily a service provider, but instead will work in partnership with those on the ground, helping build community capacity for improved education access and success.

The Community Gateway would manifest the university's commitment and unique ability to combine its research, teaching, and service missions to improve education outcomes for underserved students by co-constructing and sustaining a model secondary school. UC Berkeley has partnered with Aspire Public Schools and Berkeley City College to create a highly successful early college charter secondary school. CAL Prep is currently housed in a former small elementary school and needs to expand to allow for a complete 6-12 secondary school. The notion behind the school is that it would serve as an instructive example of how stakeholders across a region can work together to create innovative, high-quality experiences for young people, and UC Berkeley is committed to this vision — to extend their work to other sites and contexts to help reverse the trend of educational underachievement in urban communities.

As a university, our commitment to helping solve the K-12 problem is both intellectual and practical. Our Warren Institute on Race, Ethnicity, and Diversity is continuing its work to make education a fundamental right protected by an enforceable guarantee of adequacy or equality or both, to level the playing field for every child. By focusing through the BDRI on issues of race and educational policy

in California, and supporting the research and education that takes place in our Graduate School of Education, we hope to put our intellectual investment where society needs us. No social problem is more important and difficult for California.

Institutional Effectiveness

We must maintain and expand our dedication to being one of the world's best values in higher education and to providing effective stewardship of our resources, led by professional staff of the highest caliber, who bring expertise and best practices from both the private and public sectors. We are committed to improving productivity, eliminating waste, and improving internal processes to become as lean and efficient as possible. To support our institutional effectiveness



Chancellor Birgeneau (seated second from right) and his senior leadership team.

and advance our mission and goals, we must invest in an effective, stable, and sustainable infrastructure of people, technology, facilities, and funding, and commit to institutional processes and data that will support accountability, transparency, and the smooth operation of our campus. We welcome President Yudof's challenge to improve markedly accountability and transparency at our campus.

Staff

Berkeley staff have an impressive record of successfully and loyally supporting the teaching, research, and public service missions of the university. Together with students and faculty, staff work to sustain the preeminence of Berkeley. We must continue to nurture and develop an exemplary staff. The campus currently faces several challenges, most notably changing demographics, including increasing our diversity and replacing an aging workforce. Over 40% of our staff are eligible for

retirement, 80% at the leadership level. Taken together, we face loss of talent and institutional memory, and a changing workforce fueled by changing technologies and different employee expectations. However, we also have the opportunity to remodel our workforce and plan succession, and have a renewed emphasis on growing our employees' careers and experience at Berkeley. One of our highest priorities is to cultivate an integrated human resources system that supports the recruitment, development, advancement, and recognition of a motivated, high-performing, and engaged workforce. The university is committed to investing in its staff, and our goals are to:

- Bring the salary and benefits package to a competitive level over the next five to seven years.
- Create expanded development opportunities for staff and implement an integrated learning management system through the Center for Organizational and Workforce Effectiveness. This comprehensive approach will track staff development and training, set targets for development, and provide comprehensive information on career development opportunities.
- Foster employee engagement through focused attention on the orientation of new employees, and on individual development plans for all employees in annual performance reviews.
- Implement new job standards, including remapping all staff positions into a market-sensitive structure that will clarify expectations, training opportunities, and career paths, and help staff navigate their careers at Berkeley.
- Increase access to services and employment via targeted outreach to underserved populations, to enhance the recruitment and advancement of a diverse staff population.
- Give continued attention to improving the salaries of our lowest-paid workers, given the high cost of living in the Bay Area.

Our staff, in turn, must take responsibility to improve productivity and identify ways to reduce costs in the years ahead. This is particularly important in our current era of severely constrained resources.

Physical Infrastructure

Berkeley is an old campus. In addition to ensuring the life-safety of our buildings through seismic upgrade programs, one of our greatest needs and challenges is providing the physical infrastructure to enable the work of our faculty, including renewal of existing infrastructure and deferred maintenance as well as construction of new buildings. We must also continue to provide a secure, reliable, and accessible technology infrastructure that supports and advances Berkeley's preeminence.

Among our top priorities:

- Construct new buildings for the Community Health Campus, the Li Ka Shing Center for Biomedical and Health Sciences, the EBI/Helios facility, the Student-Athlete High Performance Center, and the law and business schools; build a new art museum; and increase the number of teaching laboratories. These new projects, along with our seismic upgrade program, are at the top of our capital funding priorities. Current funding sources for capital projects are private support, state funds (which are almost exclusively dedicated to seismic and life-safety improvements), student fees, enterprise debt, and campus funds. Going forward, we must ensure that we receive our fair share of federal indirect-cost recovery for capital expenses. The projected capital-cost budget for these facilities over the next ten years is well over \$1 billion.
- Renovate and build new facilities that are required for teaching, learning, and the student experience, including classrooms, the undergraduate library, sites for student activities, and student gathering places. Both Lower Sproul Plaza, including Eshleman Hall, and Hearst Gym are in need of a long-overdue update to accommodate today's student needs. Once the Student-Athlete High Performance Center is completed, we must proceed to refurbish and

seismically upgrade Memorial Stadium. The capital cost for these improvements over the next ten years is approximately \$1 billion.

- Work toward becoming a more sustainable campus and institutionalize campus sustainability.

Information Technology

The reach of Berkeley's mission, and indeed society at large, has been dramatically changed through the advent of the information technology revolution, much of which was advanced by research conducted here on the Berkeley campus. Today, course lectures and research initiatives reach communities around the world through web-based video, audio, and telepresence solutions. The success of inter-institutional and multidisciplinary research now relies on the collaborative powers of information technology, while computation has emerged as the third pillar of scientific discovery. To ensure that every segment of the Berkeley community maintains access to and benefits from the breathtaking advances in information technology, we must:

- Develop a sustainable funding model to close the approximately \$10 million annual gap and ensure that all segments of the campus participate in the future waves of information technology advances.
- Expand our research computing initiatives to be inclusive of all disciplines.
- Provide an academic and administrative computing environment that meets the needs of the increasingly sophisticated student community.
- Expand high-performance networking to all campus locations and provide ubiquitous wireless service.

Processes

Our commitment to responsible stewardship of our resources must be supported by effective institutional processes and consistent, reliable, and secure data that are readily accessible. We must strive to achieve efficiencies where commonality exists

while maintaining the uniqueness, autonomy, and entrepreneurial spirit of the research and academic mission. To that end, we embrace UC's systemwide objectives of accountability and will:

- Develop processes and standards to ensure that we are providing clear metrics and effective guidance on the important institutional measures in research achievement, academic excellence, student access and accomplishment, and public benefit.
- Improve our data management and institutional processes to reduce duplication, confusion, and inefficiencies within and between central campus, academic units, and auxiliary enterprises.

Berkeley's Revenue Objectives

In order to achieve our goals, we have identified a number of revenue objectives, which, of course, include our major fundraising campaign with a goal of \$3 billion. The campaign alone is not sufficient to realize our goals to remain at the frontiers of education and knowledge, and we must look at a variety of measures to maximize our revenues.

- Maintain state funding for our annual budget at least commensurate with the current rate of inflation in the higher-education sector, through new approaches by the UC President's office and increased activity by our campus government-relations group.
 - The recent appointment of Mark Yudof as President of the UC system and of a new systemwide Associate Vice President and Director of Government Relations present new opportunities for advocacy. Our campus's government-relations effort is organizing itself to take advantage of these opportunities.

- Increase funding through partnerships between private corporations, individuals, major foundations, and the State of California for specific initiatives.
 - The model for such partnerships is the Energy Biosciences Institute (EBI), which has been funded by a \$500 million grant from BP, \$70 million from the state, and ongoing support from the university and other donors. The success of EBI was based on the alignment of university, state, and corporate interests in addressing a major set of societal problems, namely, energy resources and climate change. A second major initiative for private-state partnership that we are working to effect is financial aid for low-income students at the University of California. We have proposed that the State of California provide for UC as a whole over the next ten years a \$1 billion endowment for financial aid that will be matched by private donors. Other initiatives will also be based on mutual interests between the state, the university, and private institutions, such as those encountered in public health and K-12 education.

- Increase fees progressively over the next several years, with a commensurate return to financial aid.
 - Currently, undergraduate fees are fixed by the UC Regents at a single number at all nine undergraduate UC campuses. We believe that it is time for UC to consider a more flexible model. To be concrete, we would suggest that UC consider a methodology in which the Regents fix the mean fee level for the system, but allow individual campuses to deviate from the Regents' number by plus or minus 25%. Some campuses might choose a lower number to enhance their economic competitiveness, while others, like Berkeley, might choose a higher number. These increased revenues would substantially strengthen our financial aid programs. For example, if Berkeley were able to institute a fee increase of \$2,000 per student for its 35,000 undergraduate and

graduate students, it would generate revenue of up to \$70 million per year. A \$2,000 fee increase would increase the total cost of attending Berkeley by less than 10% and preserve Berkeley as one of the great education values in the country. This increased revenue alone would reduce the debt burden of Pell Grant undergraduate students by many thousands of dollars and address, in part, the middle-class financial aid challenge. It would also allow us to ameliorate the faculty salary conundrum, at least in the near term. In effect, only students from higher-income families — that is, families with incomes over \$130,000 — would pay the full amount of any such fee increase. Because Berkeley has far more applicants, both in-state and out-of-state, than it can admit, we are confident that any such fee increase would not change Berkeley's current socioeconomic mix of students, which is almost evenly distributed as one-third low-income, one-third middle-income, and one-third high-income students. In fact, such an increase would dramatically improve Berkeley's ability to maintain its valuable and successful socioeconomic character. It should also be noted that, currently, the in-state fees at Berkeley are several thousand dollars lower than those at other flagship publics such as the University of Michigan, Penn State, Rutgers, and Virginia.

- Increase discretionary resources available to the campus by \$20 million annually through better management of our balance sheet, greater administrative efficiencies, and more effective management of business enterprises. These include:
 - Better investment of short-term assets
 - Strategic use of debt capacity
 - Increased administrative efficiencies
 - Best business practices for campus enterprises that have significant business features within their operations, such as Athletics, University Extension, Cal Performances, and Recreational Sports.

- Increase private support through The Campaign for Berkeley with a gift/pledge goal of \$350 million each year.
 - The Campaign for Berkeley entered its public phase in September 2008 with a goal of \$3 billion, of which more than 40% has already been raised. The campaign will raise approximately \$1.6 billion for faculty, including support for salaries through endowed chairs, graduate fellowships, research funds, and facilities. It will also raise approximately \$1 billion for students, including scholarships, educational programs, and facilities, as well as approximately \$500 million for other programs that form part of a comprehensive university. Our target during the campaign is to establish an annual floor of \$350 million in gifts and pledges.

- Increase total endowment by 50% within the next five years through private gifts and by increasing returns through professional investment management.
 - It is our hope that approximately one-half of the total for The Campaign for Berkeley will be raised for endowment. This year, the UC Berkeley Foundation will establish a subsidiary investment company with a professional investment staff to manage the endowment. The history of other institutions that have established such investment companies has shown that such a step has a positive effect on returns in the long term. Just as importantly, by raising confidence in the Foundation's ability to invest well, we encourage donors to make gifts to endowment.

Conclusion

We have presented a very ambitious plan for Berkeley. Implementation, particularly in these difficult economic times, will require difficult choices among priorities, but we will strive to continue to make progress on all fronts. Four years ago, I

committed myself to ensuring that UC Berkeley meets the demands of leadership, connection, and inclusion. Berkeley continues to lead as a preeminent teaching and research university. By summoning ourselves to its highest aspirations, and with the engagement of our faculty, staff, students, alumni, donors, and friends, I am confident that we will remain on the leading edge of the frontiers of knowledge and education.

Chancellor Birgeneau welcomes your comments on this document. To send feedback, go to newscenter.berkeley.edu/chancellor/access/comments.shtml on the web or send e-mail to access-feedback@berkeley.edu.