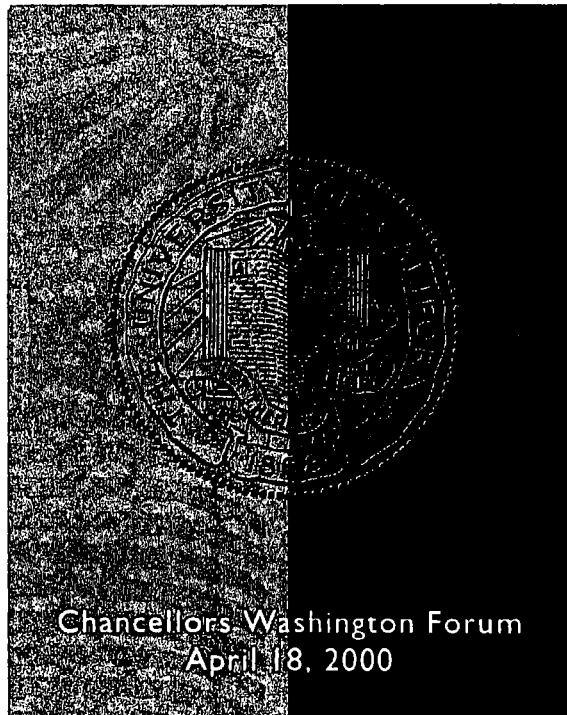
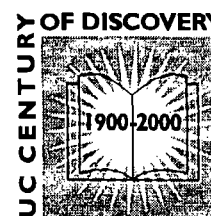


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UC ENROLLMENT GROWTH

The University of California is preparing to accommodate 63,000 additional students by 2010 – enrollment growth of 43 percent – as the state's college-age population swells. **UC is committed to keeping its promise of access to these students while continuing to provide high-quality instructional and research programs.** The university is pursuing a range of strategies for accommodating this enrollment growth, focusing on creative solutions tailored to local needs.

'TIDAL WAVE II'

According to the California Postsecondary Education Commission, California's public institutions of higher education can expect enrollments to rise by more than 700,000 students between now and 2010. This enrollment surge, dubbed "Tidal Wave II" by former UC President Clark Kerr, is attributable to growth in the college-age population and anticipated increases in college participation rates, among other factors.

Under the state Master Plan for Higher Education, UC enrolls students from the top 12.5 percent of California's high school graduating class each year. The university fully intends to continue accommodating these students who have earned a place at UC. As a result, the university expects enrollments on its general campuses to grow from approximately 147,000 full-time-equivalent students in 1998-99 to approximately 210,000 by 2010.

This increase equals the university's total enrollment growth over the last 30 years and also is equivalent to the existing enrollments of UC Berkeley and UCLA combined.

PLANNING FOR GROWTH

UC Merced is one part of the solution to the enrollment challenge. UC has been planning to open UC Merced, the university's first campus in the San Joaquin Valley, in 2005 and enroll 5,000 students there by 2010. Gov. Gray Davis has created a "Red Team" to expedite the approval process for UC Merced in hopes of opening it by 2004.

The university is working on creative strategies for accommodating the remainder of the enrollment growth, and each campus will pursue the solutions that work best given local needs and circumstances. The solutions include:

- **Offering more classes during the summer.** Currently, student fees are higher for the summer session because it is not state-supported. To help ease the enrollment crunch, the university will expand instructional offerings during the summer, a step that will require state funding.
- **Offering more off-campus opportunities** through the Education Abroad Program and new off-campus centers such as those in Ventura and Fresno. The university's 2000-01 budget proposal requests funding for development of another off-campus center in the Santa Clara Valley.
- **Expanding regular enrollments during the fall, winter and spring quarters,** with sensitivity to the concerns of the campuses' surrounding communities.
- **Continuing to improve students' time to graduation.** Currently, UC students graduate in 13 quarters on average. The university will continue working to facilitate students' ability to earn a diploma in 12 quarters.
- **Making use of technology.** Advances in educational technology will enhance the quality of instruction on UC campuses and may help expand off-campus learning opportunities.

Suggested Campus Enrollment Targets
General campus budgeted FTE *

Campus	1998-99	2010-11	Average annual growth rate
Berkeley	27,800	31,800	1.1 %
Davis	20,300	26,400	2.2 %
Irvine	15,700	27,600	4.8 %
Los Angeles	28,500	32,900	1.2 %
Merced		5,000	
Riverside	9,550	19,900	6.3 %
San Diego	16,850	27,600	4.2 %
Santa Barbara	17,880	21,900	1.7 %
Santa Cruz	10,420	16,900	4.1 %
TOTAL UC	147,000	210,000	3.0 %

* The campuses have been asked by the Office of the President to evaluate the feasibility of these possible enrollment levels in 2010-11. The figures reflect FTE (full-time equivalent) students rather than headcount. They exclude enrollments in the health sciences and in self-supporting programs, such as the existing summer session. The 2010-11 suggested enrollment targets are based on previous campus growth plans, judgments about feasible rates of additional campus growth, and UC's commitment to meeting the state's needs under the Master Plan for Higher Education. The campuses would accommodate these enrollments through a variety of means, such as those listed at left.

— continued

UC ENROLLMENT GROWTH — *CONTINUED*

A CHALLENGE FOR THE STATE

According to UC President Richard C. Atkinson, "The challenge of enrollment growth presents the University of California with a tremendous opportunity – an opportunity to serve the educational needs of a growing and diverse population, and thus to expand the university's contributions to the economic and societal well-being of California as a whole."

Meeting the challenge will, of course, require a sustained commitment of resources. For instance, UC campus growth, along with needed renovation and seismic projects, will require \$500 million per year in capital funding. The university will need to hire approximately 3,000 new faculty members for enrollment growth alone. Student services will likewise require expansion.

UC must also continue to receive the operating budget support and research funding necessary to preserve its high-quality instructional and research programs, which provide the educated workforce and research innovations that are critical to California's knowledge-based economy. And, as enrollments grow and summer instruction expands, UC will need flexibility and funding increases in the area of financial aid.

The university is committed to maintaining both access and quality as it enters the 21st century. But UC cannot do it alone. Educating the next generation of California's students is a challenge not just for the university, but for the state as a whole.

UC OUTREACH AND K-12 IMPROVEMENT PROGRAMS

EXAMPLES OF EXISTING K-12 PROGRAMS AND SERVICES

K-12 School-University Partnerships

In 1998-99, the State provided the University with \$15 million to expand its efforts to improve opportunities for educationally disadvantaged students in California through comprehensive partnerships with selected elementary, middle, and high schools. When developing partnerships, priority is given to schools where average student performance on the SAT has fallen into the lowest two academic quintiles of schools Statewide. Partnerships incorporate teacher-centered and curriculum-based programs aimed at training and developing teachers and strengthening the academic foundation at partner schools where students' performance is below the Statewide average.

The University campuses are now engaged in partnerships with 63 Californian high schools, and with 54 middle schools and 92 elementary schools that feed into these high schools. Through the work of the partnerships, the University plans to increase the number of UC eligible graduates from partner high schools by 100 percent, or to increase the eligibility rate by four percent, whichever is greater. Additionally, the University's goal is to increase the number of competitively eligible students from partner high schools by 50 percent, or to increase the competitively eligible rate by two percent, whichever is greater.

The following are descriptions of some programs UC initiated to focus on specific aspects of these partnerships:

Community Education and Resource Center (CERC) Initiative

These centers are intended to create a physical presence within disadvantaged communities to make University services more accessible. They will serve as clearinghouses for brokering program-specific services to communities based on the needs of its student population such as tutoring, mentoring, SAT preparation, and internship opportunities.

Charter Schools

UC San Diego and the San Diego Unified School District have collaborated to establish a model charter school, called the Preuss School, on the San Diego campus. Designed as an intensive college preparatory school, attendees are first generation, low-income students in grades 6-8. The Preuss School currently enrolls 153 students, and is expected to reach its steady state of enrollment of 700 students in 2003-4.

UC College Preparatory Initiative (UCCP)

In 1998, UC established a pilot program to offer on-line college preparatory courses to high school students, including honors and advanced placement (AP) courses in high schools that do not currently offer AP courses or offer the lowest number of AP courses in California. Also, an AP Summer Institute has been developed, in conjunction with the College Board and software companies, to train teachers in the program. In partnership with the California Department of Education, individual high schools, and UC and CSU campuses, UC plans to develop "tele-mentoring" assistance for students enrolled in on-line courses to be conducted by advanced undergraduate students and graduate college students. As of early 2000, more than 200 students from 33 schools in 10 counties have participated in the program.

UC OUTREACH AND K-12 IMPROVEMENT PROGRAMS

K-12 Student Academic Development Programs

Early Academic Outreach Program (EAOP)

As one of the first outreach programs instituted by UC in 1975, EAOP offers high school students information on UC admissions requirements, the core subject requirements, financial aid, etc. While best known for its service to high school students, EAOP is increasingly reaching out to students in middle school and elementary school by teaching study habits and how to prepare for a challenging high school career. Campus tours, field trips, guest speakers, mentoring programs and services that generate enthusiasm about college among students and their families are important components of the EAOP experience. In 1999, 76,207 students participated in EAOP at more than 500 middle schools and high schools.

Mathematics, Engineering, Science Achievement (MESA)

Established in 1970, Mathematics, Engineering, Science Achievement programs are designed to strengthen the mathematics and science skills of educationally disadvantaged students. The goal of MESA is to increase the number of these students who ultimately make their careers in mathematics-and science-based fields, such as engineering, computer science, and the physical sciences. MESA services include academic preparation, tutoring, financial aid and academic counseling, parent involvement, collaborative study skills development field trips to campuses and career counseling. Because of MESA's success in producing highly qualified professionals urgently needed by California industry, over 100 corporations are actively involved in supporting the program. MESA's 63 programs throughout California will serve between 27,000 and 30,000 students in 1999-2000.

Puente

The Puente Project, established in 1981 to address the problem of low college persistence and transfer rates of Mexican American and Latino students to four-year colleges and universities, is now open to all students. The Puente program combines innovative teaching and counseling methods with community involvement to provide students with an accelerated writing class, sustained academic counseling, and role models and mentors from the professional community who inspire students to achieve academic and career goals. Puente is jointly sponsored by the University and the California Community Colleges and conducts programs in 43 community colleges and 33 high schools. It is anticipated that Puente will impact over 63,000 students in the 1999-2000 through its core and extended training programs.

Central Valley Outreach Efforts

Students from the Central Valley have eligibility and participation rates at about half the statewide average at the University of California. The University outreach programs for K-12 and community college students in the San Joaquin Valley are designed to help prepare students for UC and, more specifically for the Merced campus when it opens in 2005. While Central Valley outreach efforts will continue to include the successful student academic outreach programs, such as MESA, Puente and EAOP, a variety of new activities have been established. A comprehensive long-term student development and partnership plan will be fully implemented in 1999-2000 which will promote even greater increases in the level of UC enrollment of Valley students. The long-term plan also includes initiatives to develop school-university programs in Fresno County such as professional development activities for K-12 teachers; enhanced use of technology by students and teachers; and establishment of a network of learning centers in the Valley that are connected to UC Merced. From 1995-96 to 1998-99 the number of Central Valley students who enrolled at UC increased from 1,004 to 1,335, a 33 percent increase.

UC OUTREACH AND K-12 IMPROVEMENT PROGRAMS

K-12 Professional Development Programs for Teachers and Staff

California Subject Matter Projects

The California Subject Matter Projects are a UC-administered network of discipline-specific professional development projects. The program provides year-round direct services to teachers through intensive summer institutes as well as follow-up activities and through support during the academic year. The network currently consists of six projects -- writing, reading and literature, mathematics, science, history-social science, and world history and international studies. The University is funding three additional projects in the areas of foreign language, the arts, and physical education-health. Emphasis is placed on enhancing content knowledge of specific disciplines, sharing exemplary instructional practices, and developing teacher leaders. Seventy-five percent of program slots are reserved for teachers from low-performing schools.

Reading Professional Development Institutes

Newly established in 1999, these institutes are designed to serve teams of K-3rd grade teachers, specialists, and administrators from schools whose students have performed in the bottom 40% on the California STAR test in reading. The institutes provide an intensive training period for teachers to learn how to set goals, assess students' reading skills, work in school-site teams, and use standards-based adopted instructional materials. Institutes are research-based and designed by university faculty and practicing classroom teachers. During summer 1999, 6,000 teachers from 622 schools in 51 counties participated in 60 institutes. The program is expected to grow to serve 20,000 teachers in 2000-01.

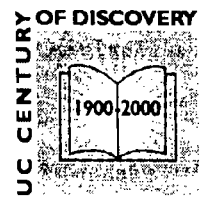
English Language Development Professional Institutes

The English Language Development Professional Institutes provide training for teachers of English language learners in grades 4-12 who do not hold cross-cultural or bilingual cross-cultural certificates. The program will serve 5,000 teachers in 1999-00.

New Teacher Center

The New Teacher Center is a collaborative effort led by UC Santa Cruz's Teacher Education Program with the Santa Cruz County Office of Education, and 16 school districts. The Center, housed at UC Santa Cruz is dedicated to providing the crucial support resources to new teachers, and to promoting new models of teacher professional development. The center's focus includes changing the way schools induct new teachers by assisting school districts to implement intensive, job-embedded support models, preparing new teachers for work with diverse populations, and creating opportunities for teacher leadership.

UC OUTREACH AND K-12 IMPROVEMENT PROGRAMS



NEW K-12 TEACHER DEVELOPMENT PROGRAMS PROPOSED IN THE 2000-01 GOVERNOR'S BUDGET

California Algebra Institutes

The California Algebra Institutes will be dedicated to providing intensive algebra specific training to teachers in grades 8-11 with a focus on hands-on instruction. The Institutes will provide summer and year round training. Algebra has been identified as a key "gateway" subject influencing subsequent academic progression and represents a central focus on the high school exit exam.

California Mathematics Specialists Institutes for Grades 4-6

The California Mathematics Specialists Institutes will build instructional leadership and capacity at schools to strengthen mathematics education by developing the talents, knowledge and skills of teachers in grades four through six. These teachers, with the support of the institute and follow-up experiences, would then be positioned to work effectively with fellow teachers at their school to design/refine curriculum/lessons, analyze instructional practices and diagnose/evaluate student work and performance.

Professional Development Institutes for High School Math and English Teachers

The Professional Development Institutes for High School Math and English Teachers in grades 9-12, modeled after the Reading Professional Development Institutes, will focus on teachers in non-math and non-English subjects to help incorporate basic English and math skills into their curriculum.

Algebra Academies (Grades 7 and 8) and Mathematics Academies (Grades 4-6)

These two programs are intended to link one-week Algebra Institutes for teachers with district-scheduled summer instructional programs for students. The overall goal of the program is to create an academic foundation in the basics of algebraic operations and algebraic thinking. The program will provide teachers with solid, content-based professional development via the institute and a practice-based opportunity to apply new skills. Students completing the summer school program would have the skills and understandings to successfully complete Algebra as part of their school's regular instructional program.

UC EDUCATIONAL PROGRAMS FOR TEACHERS AND ADMINISTRATORS

Teacher Scholars Program

The Teacher Scholars Program is designed to increase the numbers of well-qualified K-12 teachers by providing rigorous theoretical and practical preparation, grounded in the most current research related to subject matter and instruction. The 15-month program for prospective teachers will lead to a teaching credential and master's degree from UC. Full scholarships will be provided by UC for teachers who make a four-year commitment to teach in urban and hard-to-staff schools. At full capacity, the program will provide 400 students with scholarships to cover program fees.

Principal Leadership Institutes

The Principal Leadership Institutes at UCLA and UC Berkeley have as their mission the development of reform-oriented leaders committed to improving quality teaching and learning in the schools for which they are responsible. During a 15-month program including two summers of intensive work, students will study with university experts in education, management, law and public policy and with professional practitioners who have first hand experience with contemporary issues and their impact on education and schooling. UC will provide scholarships to cover all student fees. The institutes will enroll its first class in July 2000 and will accommodate 400 students once fully operational.



PARTNERING FOR INNOVATION AND DISCOVERIES

- California Governor Gray Davis has proposed to establish three Institutes for Science and Innovation at the University of California. \$300 million would be provided over four years, with a required match of \$2 in non-state funds for every \$1 in state support (a total of \$900 million).
- The Institutes will:
 - 1) create major new research capacity in science and engineering, drawing the best and brightest scientists, engineers, and students together to address problems that require multidisciplinary efforts of significant scale and complexity;
 - 2) educate the next generation of scientists and technological leaders;
 - 3) focus state, federal, UC and private research dollars, energy and talent on areas that will increase the competitiveness of California's R&D-intensive industries and, thereby, strengthen the California and national economy.
- Similar efforts are underway in other states.
- Given the potential benefits to the national economy, and given the relative health of most state economies, now is the time for the federal government to encourage such partnerships through federal support.

"I am very enthusiastic about Governor Davis' initiative to establish the California Institute for Science and Innovation. It builds on California's seminal role in developing the Biotechnology industry, and the economic and social benefit derived from it. The new institutes will provide more useful scientific knowledge, technical innovation and more trained personnel – precisely what is needed to support our leadership of this industry, and fuel the continued economic expansion of California and the Nation, and in so doing, improve the quality of life for all humans."

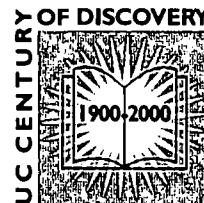
William J. Rutter
Chairman Emeritus
Chiron Corporation

"The new R&D-driven economies of the world are dependent upon continuing cycles of new business formation. Governor Davis' initiative for launching the California Institutes for Science and Innovation will expand the essential substrate for our economy."

Sanford R. Robertson
Principal
Francisco Partners

HIGH TECH FACTS

- High tech comprises 5.6% of US jobs, and 9.4% of California jobs.
- As of 1998, payrolls of high tech industries in California averaged \$60,100 per worker compared to \$30,400 average pay for all other California industries.
- In the last 50 years alone, technological innovation has been responsible for as much as half of the nation's growth in productivity. The information technology sector alone has accounted for one-third of our economic growth.



CALIFORNIA INSTITUTES FOR SCIENCE AND INNOVATION

Gov. Gray Davis has proposed the creation of three California Institutes for Science and Innovation, to be located at campuses of the University of California. Each institute would focus on scientific and engineering research in a sector key to the future of the California economy, bringing together faculty, undergraduates, graduate students and business partners to work in cross-disciplinary teams aimed at developing the next generation of knowledge in the field.

UC strongly supports this proposal as a means of fostering scientific and engineering research that will broaden the frontiers of knowledge and provide the foundation for California's continued competitiveness in the technology-based global economy.

The governor's proposal is subject to legislative approval and will be discussed further as the 2000-01 state budget is developed. Below is a conceptual overview.

RESEARCH BENEFITING THE CALIFORNIA ECONOMY

The California Institutes for Science and Innovation would be devoted to basic and applied cross-disciplinary research in a mission-oriented environment, focusing on problems of significant scale and on scientific advances that may provide the underpinnings of future economic activity in California. Additionally, the institutes would provide educational programs for undergraduate and graduate students to help train the state's next generation of scientists and technological innovators.

These world-class institutes would be designed to foster technical breakthroughs in areas where the complexity of the research agenda requires the advantages of scope, scale, duration, equipment and facilities that a comprehensive center can provide.

"The research innovations and skilled workforce provided by UC have played a critical role in the success of the California economy in the 20th century," said UC President Richard C. Atkinson. "These centers will help California remain competitive in the 21st century by mobilizing the state's best scientists and engineers to stimulate innovation in fields critical to our collective future."

Each institute would engage corporate entities, and possibly faculty from other academic institutions, as partners in collaborative research. The purpose of this partnering provision is to ensure cross-fertilization and cultural exchange in education and research, and to introduce students to the culture and objectives of industry.

"Our institutes will concentrate intellect, experience and entrepreneurial talent in focused areas of scientific inquiry to discover and apply the breakthroughs necessary for the next generation of technologies," Gov. Davis said in his State of the State address.

FUNDING AND IMPLEMENTATION

The governor's 2000-01 state budget proposal offers \$75 million in capital funding for the Institutes for Science and Innovation. This state funding would be matched by funds from private and federal sources on a 2:1 basis. If approved by the Legislature, planning and development of the institutes would begin in the 2000-01 fiscal year.

Specific sites for the institutes would be selected through a competitive process based on proposals submitted by the UC campuses. The campuses could collaborate on individual proposals, and a single campus could submit more than one proposal. Only one institute could be located on a given campus, however.

In his State of the State address, Gov. Davis indicated that proposals in a variety of fields would be considered – among them medicine and bioengineering, telecommunications and information systems, energy resources, and space and agricultural technology.

"Fifty years ago, there was no Silicon Valley," the governor said. "Thirty years ago, there was no biotech industry. Ten years ago, there was no Internet. Who knows what new enterprises will be created or what medical breakthroughs will result because of our institutes? But this we do know: Breakthroughs will occur. And I want to make sure they will occur right here in California."



PARTNERING FOR INNOVATION AND DISCOVERIES

WHY SCIENCE AND TECHNOLOGY MATTERS

Science and Technology Employment High-Tech Jobs, CY 1998

INDUSTRY	U.S. TOTAL (in thousands)	CA TOTAL (in thousands)	CA AS % OF U.S.
Computer Manufacturing & Data Processing	1,978	333	16.8%
Communications Equipment, Electronic Components & Communications	2,431	367	15.1%
Aircraft and Missiles	612	114	18.6%
Scientific & Medical Instruments	1,138	228	20.0%
Pharmaceuticals	274	31	11.3%
Motion Pictures	564	186	33.0%
High Tech Total	6,997	1,259	18.0%
Non-Farm Total	125,832	13,584	10.8%

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