University of California

THE FEASIBILITY OF YEAR-ROUND INSTRUCTION WITHIN THE UNIVERSITY OF CALIFORNIA

April 2000

University of California

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EXECUTIVE SUMMARY

The Supplemental Report of the 1999 Budget Act requested that the University of California submit to the Legislature by April 1, 2000, a report regarding the feasibility of year-round operation. The University has considered carefully the challenge it faces in accommodating an additional 63,000 FTE students between 1998-99 and 2010-11, and concludes that it can accommodate a sizeable portion of this growth (39,000 FTE) under existing campus Long Range Development Plans. However, to make room for the remaining portion—about 24,000 FTE—UC has determined that while there are several potentially promising solutions, conversion to a State-funded summer—with substantial increases in summer enrollment—is the most essential of these solutions. Indeed, without a State-funded summer, the University would find it extremely difficult to meet its commitment to enroll these students. Year-round instruction addresses many critical needs:

- It responds to concerns about impacts on local communities by shifting some students away from the traditional Fall-Winter-Spring attendance patterns.

- Similarly, year-round instruction decreases some of the impacts of large and rapid enrollment growth on the campuses themselves, including crowding that will occur if new construction cannot keep pace with growth.

- Year-round instruction makes better use of existing classroom and class laboratory facilities, avoiding capital costs of $200 to $240 million and associated maintenance costs, thereby freeing up funds for construction of other new core academic space that will be needed.

While year-round instruction poses a serious challenge to the traditional academic structure, it does have the advantage of being able to build on existing summer programs and use existing instructional facilities, faculty space and student housing. The University must pursue it aggressively.

Year-round instruction requires both a commitment from the State and investment of State resources. First, if the University is to provide year-round instruction, the State will have to change current budgetary policies and agree to fund all enrollments regardless of when they occur. Second, the University is seeking full marginal cost for existing summer FTE, for a total buyout of $54 million. These new funds will bring the existing summer enrollment of UC students into the permanent base of funded enrollments, providing the faculty salaries and instructional and institutional support required to offer programs in the summer that are equivalent in quality and breadth to other regular terms bringing student fees in line with the rest of the year, and providing

equivalent financial aid. Without this buyout of existing summer enrollments, the University will not be able to use the summer as an effective means of accommodating increased summer enrollments.

In order to increase summer enrollments and the proportion of regular faculty that teach during the summer, the University will have to provide incentives. Campuses will create such incentives as they design their own summer programs, and are working together to identify systemwide programs that might be implemented to increase summer enrollments.

As campuses develop their summer instructional plans, they must carefully integrate the increased enrollments into a thriving set of existing summer programs dedicated to outreach for K-12 students, professional development programs for K-12 teachers, University Extension courses for both local and international participants, and orientation and research programs for UC students.

While summer instruction is a crucial element in enabling the University to meet the coming enrollment demand, campuses' plans for growth will also include other approaches. These will include growing during regular terms, increasing off-campus enrollments, and improving time to degree. It is unlikely that any two campus solutions for accommodating future growth in faculty and students will look alike because campus plans must reflect local academic and community circumstances. Throughout the planning process, campuses will work cooperatively with their local communities to minimize the impacts of growth.

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INTRODUCTION

The Supplemental Report of the 1999 Budget Act requested that the University of California and California State University submit to the Legislature by April 1, 2000, a report regarding the feasibility of year-round operation, as described in the paragraph below. (The full text of the language is attached as Appendix A.)

> ***Year-Round Operations (YRO)***. It is the intent of the Legislature that the California State University (CSU) and University of California (UC) conduct feasibility studies to examine the advantages and disadvantages of implementing year-round academic programs as one means of helping to accommodate significant projected enrollment growth over the next 10 to 15 years and improving student progress to degree. The segments' feasibility studies should include consideration of the cost-effectiveness of implementing YRO in a higher education setting and the degree to which YRO can help expand access to higher education, reduce time-to-degree, and maximize the use of existing instructional facilities. The feasibility studies shall include consideration of the complexities involved in implementing year-round operations and recommendations for the resolution of identified problems, such as the impact on the segments' capital needs, scheduling routine, and deferred maintenance that usually occurs during low-occupancy periods, student housing, and the implications for current campus long-range development plans, among other issues. The segments' studies should also include consideration of incentives that should be implemented to encourage students to attend school year round.

The attached report responds to the Legislative language in three parts. The first section describes why the University of California believes that State-funded summer instruction is an essential component of a number of solutions that will help accommodate growing enrollments. It delineates the costs and benefits, and what it will take from the State to make summer a viable option. The second part describes the actions the University believes will be necessary on its own part in order to make State-funded summer instruction successful. The third section concludes with the principles guiding the University's planning and suggestions for alternative solutions if those currently being developed do not meet the enrollment challenge.

PART I

THE ENROLLMENT CHALLENGE AND WHY A STATE-FUNDED SUMMER IS NECESSARY TO HELP MEET IT

A. The Enrollment Challenge

California's institutions of higher education are facing large growth in enrollments in the coming decade. Whether or not one accepts the nomenclature of Tidal Wave II, as some have called this secondary effect of the Baby Boom, there is general agreement that enrollment growth will be significant.[1] The Department of Finance (DOF) projects the number of high school graduates to peak in 2008, which leads to a corresponding peak in colleges and universities several years later as students pursue postsecondary education. DOF, the California Postsecondary Education Commission, and UC staff have independently developed very similar projections of enrollments at the University of California.

At the beginning of 2000, California is experiencing a robust economy, and the State is faced with an unprecedented financial surplus. The economic fortunes of California bode well for supporting the projected enrollment growth, at least in terms of operating support.

On the other hand, the State also faces still-unresolved challenges of how to improve and expand the many components of the State's infrastructure, from schools to water systems, parks to prisons. Competing for the limited capital resources that can be made available within the State's debt limits are the three public segments of higher education—UC, CSU and the Community Colleges. There is general agreement that it will be a challenge to stretch these capital resources sufficiently to provide the segments with all the facilities they need to provide their academic programs.[2] Segments are therefore exploring ways to maximize the use of existing facilities.

The major challenge of this large and rapid growth in enrollment, therefore, is to provide adequate facilities so as not to compromise the quality of education. A second challenge facing several of the UC campuses is that they are located in communities that are concerned about growth that exceeds previously planned levels. Potential impacts on traffic and housing are primary issues that could cause communities to challenge UC's growth plans.

UC takes these issues of facilities and community concerns seriously. At the same time, UC is committed to taking the students that are expected to seek admission and to providing them an educational experience and environment that are of at least the same

[1] Department of Finance Demographic Unit California Public Postsecondary Projections, 1999 Series; "Providing for Progress: California Higher Education Enrollment Demand and Resources into the 21st Century," California Postsecondary Education Commission, February 2000.

[2] Ibid.; Initial State Infrastructure Report, May 1, 1999 and Interim Report to the Governor, August 2, 1999, The Commission on Building for the 21st Century,

quality as what today's students enjoy. To that end, the University is exploring several options for how to accommodate about 63,000 additional FTE students (over 1998-99 budgeted levels) by 2010, including options that do not increase on-campus enrollments during the regular academic year. This projected growth has been distributed among the nine UC campuses with general campus enrollments, with the request that they evaluate the feasibility of these possible enrollment levels (shown in Figure 1) in 2010-11. The table below compares these suggested enrollment targets with the enrollments planned for in campuses' Long Range Development Plans (LRDPs), which were developed in the late 1980s for enrollments projected to 2005-06.

Figure 1
Suggested Enrollment Targets
General Campus Budgeted and
Projected 12-Month, On and Off-Campus FTE
Compared to FTE Planned for in Long-Range Development Plans

	1998-99	2010-11	LRDP
Berkeley	27,800	31,800	27,800
Davis	20,300	26,400	23,400
Irvine	15,700	27,600	24,600
Los Angeles	28,500	32,900	28,900
Merced		5,000	
Riverside	9,550	19,900	17,400
San Diego	16,850	27,600	24,600
Santa Barbara	17,880	21,900	19,400
Santa Cruz	10,420	16,900	14,900
Total	147,000	210,000	181,000

Note: These 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 enrollments of approximately 6,550 FTE. The 2010-11 suggested enrollments 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 in the section that follows.

As the University considers both the magnitude of growth and the nature of the challenge to accommodate the additional students, it has been guided by several planning principles related to preserving access, quality and commitment to the University's multiple missions. In considering the options available for accommodating additional students, the University is committed to:

- **Sustaining Commitment to the Master Plan**
  The University is committed to ensuring access as the Master Plan for Higher Education in California has defined it–providing a place for each student in the top twelve and a half percent of California's high school graduates who wishes to attend UC, facilitating community college transfer programs, and sustaining

an active and significant graduate program. This commitment is essential if we are to serve California well, develop its future workforce, and contribute all UC can to the state's economic vitality and the culture and welfare of its citizenry.

- **Ensuring Quality**
  Academic plans for expanded enrollment, whether during the summer or during the regular academic year, must be designed to add value for students and the institution. Growth must not degrade the quality of the undergraduate, graduate, or faculty experience at any campus and should be used as an opportunity to enhance the quality and diversity of our academic programs and campus life. This will require careful academic planning and close attention to the deployment of the resources that come with growth.

- **Fostering Graduate Education and Research**
  Because the State of California and the nation need the cutting-edge research and graduate training UC produces, it will be essential to ensure that they, as well as programs for undergraduates, prosper and grow during the next decade.

B. Expanded Summer Instruction is One of the Best Options Overall for Meeting the Enrollment Challenge

In wrestling with the many difficult questions that arise about how to accommodate such a large increase in students within the framework these principles provide, within the realities of limited capital funding and the difficulties that growth presents to several local communities, the University has concluded that it must look beyond the traditional solution of increasing enrollments only on campus during the regular academic year.[3] While several options exist, and campuses will pursue them to varying degrees, overall only year-round instruction presents enough capacity for the University to accommodate the projected enrollments over the capacity provided by campus LRDPs and the Merced campus. Indeed, the University has concluded that without a significant increase in summer enrollments, it will be extremely difficult to meet its enrollment commitments. This section of the feasibility report describes the several options being considered by campuses.

Within the framework of the overarching principles presented in the previous section, the University has seriously considered the growth rates for each campus, the types of communities in which campuses are located, and academic needs of students. After concluding that it will be essential for all the campuses to participate in enrolling the projected students, the University is now considering how best to use a number of different options to accommodate growth, as described in the sections that follow.

[3] The regular academic year includes Fall, Winter and Spring quarters at each campus except Berkeley where it includes the Fall and Spring semesters.

Add students in the regular academic year

The traditional option for accommodating enrollment growth is simply to add new students to existing programs in the regular academic year (Fall-Winter-Spring at quarter-system campuses; Fall-Spring at semester campuses). In fact, UC campuses have had long-range development plans (LRDPs) since the late 1980s that are designed to accommodate at least 39,000[4] of the 63,000 students now expected. These plans have described the physical context for future facilities and infrastructure, and through their environmental impact reports have analyzed the impacts these enrollments will have on traffic, air quality, water and other environmental impacts.

Some campuses may be able to expand the scope of their LRDPs in order to accommodate more students during the regular academic year than were previously planned for, an option that would require revisions to their current LRDPs and new environmental impact analyses and reporting. However, expansion during the regular year is not an option all campuses are able to consider. Therefore, other options must be explored to provide capacity for up to an additional 24,000 students (i.e., that portion of the 63,000 that would exceed enrollments planned for in existing campus LRDPs).

Solutions that maximize the use of existing facilities and minimize community impacts

As noted, the probable shortfall of capital funding—or at least the inability of funding to keep pace with the rate of growth—and local conditions that make it difficult to increase enrollments at some campuses, challenge the University to expand its use of existing facilities. UC can avoid excessive crowding during the regular year by shifting some enrollments to other times and locations. An added benefit of these options is that impacts on the community are not as significant as they would be if all the additional students were accommodated only during the regular year at the campus itself. There are two solutions that minimize the need for additional facilities: off-campus enrollment and summer enrollment.

- *Off-campus and new campus enrollments.* UC currently provides opportunities for students to spend time abroad (Education Abroad Program) and is exploring ways of increasing overseas enrollments substantially. In addition, UC operates a small program in Washington, D.C., which can be expanded. UCDC may also serve as a model for other off-campus programs that could be developed for UC students; the UC Santa Barbara off-campus center in Ventura County is another successful model. The Santa Cruz campus is proposing an off-campus center to be located in Santa Clara County, and UC Merced is creating a system of distributed education centers throughout the Central Valley. Enrollment growth in these programs has not been estimated; however, they will accommodate some portion of the anticipated enrollments.

  While projected growth is substantial, projections indicate that it will level off after 2012, following the peak of projected high school graduates in 2008. Given these

[4] Includes 5,000 FTE at UC Merced.

enrollment projections, on which University planning is currently based, and given the high cost and long timeframe required for planning a new campus, it appears that the most realistic and cost-effective approach is for the existing campuses (including UC Merced) to accommodate the enrollments.

- *Summer enrollments.* The State does not currently provide budget support for the instructional activity that takes place during the summer. Summer programs are currently supported by fees paid by the 52,500 students (headcount) who participate in them. 42,200 of these students are UC students, which is the equivalent of 6,550 FTE students enrolled during the regular academic year. Campuses currently believe that a realistic estimate for increasing summer enrollment in the next decade might be 15,000 FTE above current levels for a total of over 21,000 FTE.[5] UC estimates that in the next decade $200 to $240 million could be saved in capital funds for 15,000 to 17,500 FTE because these students would not need additional classroom, class lab or related instructional space.

Improved time to degree and the use of technology are options that make room for some students.

Half of UC students graduate in 12 quarters or less, which they are able to do by taking full academic loads each year and by not exceeding the 180 units required for graduation. Some students, however, do take more total units—e.g., students with double majors, students who change majors after having made substantial progress already, and engineering students. And, some students take more time by taking lighter loads some terms. By increasing the average number of units taken in a term and reducing on average those taken over an enrollment career, more students could graduate in four years making room for many more FTE.

Technology is very likely to play an important role in the University's future and many faculty are developing innovative ways of incorporating into instruction. At this point, however, expanded use of technology is not expected to increase directly the number of students that UC enrolls. That is, the University has no plans to provide a "virtual" or "on-line degree." However, the use of technology will be pursued aggressively as it can contribute indirectly as a solution to accommodating more students by making on-campus courses available to students at off-campus sites, thus making off-campus programs more attractive. On-line courses might also be available to students who have returned home for the summer.

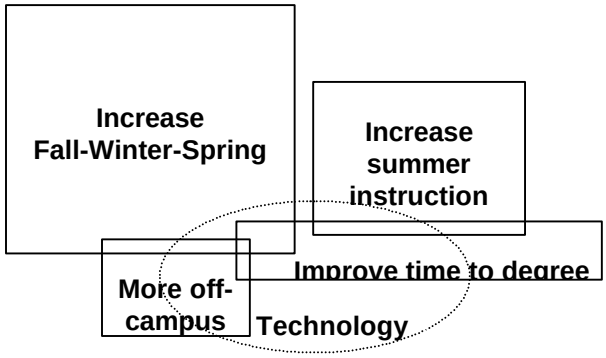
Summary

Expansion in the traditional year will accommodate the most students (at least 39,000 FTE). Careful evaluation of the remaining options have led the University to conclude that for academic, community and resource reasons, summer is an essential component of the University's plans to accommodate students and the one with the best potential for

[5] FTE are calculated on an annual (regular academic year) basis. One summer FTE therefore equals three full-time summer students taking a full load, or six half-time summer students. It takes a minimum of 63,000 headcount students in the summer to equal 21,000 summer FTE .

accommodating the most students. Figure 2 represents generally the relative contribution that each solution might contribute to accommodating all projected growth.

Figure 2
Universitywide Summary of Options for Accommodating Increased Enrollments
(*Relative Proportion of Each Option Will Vary by Campus*)



C. What Support is Needed from the State to Use Summer Instruction as a Solution for Accommodating More Students?

As noted in the previous section, Summer Session is currently a self-supporting program, paid for by per-course unit fees charged to students. While many excellent courses are offered, with a high degree of student satisfaction, the summer program does not provide the extensive and varied course array available during the regular academic terms nor are there large numbers of regular faculty teaching the summer courses. Students take fewer units during the summer—between 5 and 8 on average—so summer cannot be considered an academic experience comparable to the regular academic year. There are also fewer services available to the students. Figure 3 summarizes the size of UC's summer enrollment.

Figure 3
Summary of Summer 1999 Enrollments

Headcount Enrollment	
UC Undergraduates	40,695
UC Graduates	1,499
	42,194
Non UC Students	10,366
Total Headcount	52,560
Course Units – UC	291,767
FTE Enrollment	
UC Undergraduates	6,202
UC Graduates	352
Total FTE	6,554

If the summer program is to be equivalent to the regular academic year—and it must be to be considered a viable option for accommodating additional students—then it requires the same support for faculty salaries, instructional and institutional support and services for students. Two things are required to accomplish this: a change in State policy to one that funds enrollment growth at UC on a year-round basis, and a "buyout" of the existing summer enrollments to replace a self-supporting program with a State-supported program.

Change in State policy. Currently the State provides funding for increases in students enrolling in the fall, winter and spring quarters (or fall and spring semesters). Summer Session enrollments are not counted for State funding. If the University is to provide year-round instruction, the State would have to change current budgetary policies and agree to fund all enrollments regardless of when they occur. Such a change has already been implemented for funding summer teaching credential programs.

Buying out existing enrollments. In summer 1999, Summer Session enrollments produced 6,554 FTE. The State is providing funding for summer education credential students. In estimating the summer buyout, 175 FTE have been taken out of the equation. In order to provide a level of academic support equivalent to the regular academic year for the remaining 6,375 FTE, the University is seeking full marginal cost of about $8,600 per FTE, for a total buyout of $54 million. These new funds will merge the existing summer enrollment of UC students into the permanent base of funded enrollments, providing faculty salaries and instructional and institutional support required to maintain quality in the summer. Without this buyout of existing summer enrollments, the University will not be able to use the summer as an effective means of accommodating increased summer enrollments.

D. Summary of Savings and Costs Related to Increased Summer Instruction

Savings (Avoided Costs)

1. *Capital savings.* The primary benefit of creating a State-funded summer program as a means of accommodating increasing enrollments is in the capital savings associated with not having to build all the classrooms and class labs that would otherwise be required. These savings are in fact avoided costs. The University's total capital need for both growth and other needs (seismic and life-safety renovations, modernization and capital renewal) is estimated at about $500 million per year. This estimate covers only the types of facilities and infrastructure the State typically supports, including the research and office space required for new faculty; it does not include estimates for new housing, parking structures, recreation/athletic facilities or medical centers.

   The University is hopeful that general obligation bond support can increase in future years from current level of about $210 million per year to some higher level,

but realizes that the State will probably not be able to meet the full need of $500 million per year. Therefore, any savings that can be brought about from increased summer instruction could be applied to meeting some of the unmet capital needs.

The University estimates that—given a maximum possible summer enrollment of 24,000 (17,500 enrollments above existing summer enrollments)—about $240 million in capital funding over a decade ($24 million per year) could be saved by not having to build some 531,000 ASF of classrooms and class labs if students attend in the summer instead of another quarter.

For 15,000 FTE, capital savings could amount to $200 million for 456,000 ASF. (Summer instruction does not change the need for space for new faculty.) The calculation that follows is the basis of this range of estimated capital savings; actual enrollments and costs per square foot could vary:

- 15,000 to 18,000 summer FTE (existing 6,550 summer FTE are not included)
- 30.44 assignable square feet (ASF) per FTE that would not have to be built: classroom, class lab and associated service space, library and other instructional support space[6]
- $450 per ASF

2. *Maintenance savings* (avoided costs) on the space that is not built equal about $3.5 to $4.2 million per year, at current levels of $7.96 per ASF**.**

Costs

1. *Buyout.* The most significant cost of converting to a State-funded summer program is the adding of $54 million to the University's permanent budget to fund the FTE currently produced during the summer. The University expects that, if approved, these funds would be phased in over a three- to four-year period of time, starting with funding that would allow the University to reduce student fees to be comparable with those charged in regular academic terms. The rest of the phasing period would possibly be based on the achievement of some agreed-upon levels of increases in summer enrollment.

2. *Financial aid.* Currently campuses generally provide minimal amounts of financial support to students enrolled in summer session. As a result, in contrast to the 53 percent of regular academic year students who receive need-based financial aid, only a small portion of summer students are supported. To allow equal access to summer for all UC students the following changes are required:

[6] Includes 19.84 ASF for classrooms and class laboratories, 6.25 ASF for libraries, and 4.35 ASF for other instructional support space (e.g. learning resource centers, specimen collections). Based on a combination of legislative standards for classrooms and class labs, national library standards, and actual instructional space and instructional support space at UC's growing campuses (excludes Berkeley and UCLA).

- One-third to one-half of summer fees paid by students will need to be returned to University financial aid programs. This amount will allow for University grant awards in summer that are equivalent to University support during regular academic terms. In addition, the support should be enough to recognize the additional aid needed for students attending year round who are thus unable to contribute to their educational expenses by working in the summer.

- Although Cal Grant awards are available for summer enrollment, modifications to the Cal Grant program are needed to ensure that use of such awards in the summer is not disadvantageous to students. Because most summer courses are compressed into short, nonstandard sessions, students can often use up a disproportional amount of their four years of Cal Grant eligibility relative to their units earned if they use their Cal Grant during the summer.

- Students attending UC on a year-round basis also face another problem. Pell Grant and federal loan programs have annual maximum awards that students normally reach during the regular academic year. Providing for additional summer awards from these programs will require both policy and budgetary changes by the federal government. It is not anticipated that the University or the State can or should compensate for this shortfall. However, it is unlikely UC and CSU can effect a change in federal policy without the assistance of the State.

3. *Operations, maintenance and utility costs.* The extent to which maintenance costs will increase due to summer enrollment is a complex subject still under study. There are three areas where costs will increase:

    - *Increases to normal costs*: The costs of purchased utilities and routine custodial work will increase due to more activity during the summer. For example, there will be greater use of air-conditioning, equipment and lights, and more frequent custodial service than is currently the case during summer months. Increased activity alone is estimated to add $2.8 to $4 million of costs ($1.3 to $2 million for utilities, at current tariff levels, and $1.5 to$2 million for custodial work). In addition, there are potentially significant increases due to the purchase of utilities during peak summer load periods in the market-driven utilities environment that UC campuses will become part of by 2002.

    - *Premium costs for summer-only work:* Campuses currently stretch their OMP funds[7] by using the summer to schedule large maintenance projects (e.g., classroom equipment repairs, elevator renewal, and electrical system

[7] Operation and maintenance of plant (OMP) is currently funded at $7.96 per square foot, an amount that falls short of actual need and which is gradually being increased through a multi-year budget strategy.

replacements). They are able to take rooms and building wings out of service more easily during the summer and schedule work during daytime hours. As summer classroom scheduling begins to resemble regular year scheduling, these major maintenance projects will need to be done during the evenings, weekends and between sessions at a premium price. Much of the work is large enough in scope to be performed by outside contractors who can charge double for the same work when it is done after hours. The cost for this premium work could be about $6 million. The total increased costs for utilities, custodial services, and premium labor are expected to outweigh the operations and maintenance costs avoided by not building new space.

- *Increased wear and tear on building systems*. The University recognizes that there are significant facilities renewal costs that have not been fully taken into account in existing funding. Year-round instruction could add to existing renewal needs in four areas: built-in equipment such as class laboratory equipment and hardware, elevators, plumbing fixtures, and interior finishes.

4. *Construction costs.* Construction and renovation projects are usually scheduled during summer months to reduce disruption to students. Having to schedule around summer session can make construction projects more difficult and therefore more expensive.

5. *Conversion costs.* The magnitude of possible conversion costs has not been estimated; they are expected to be covered by the summer buyout. Examples of conversion costs include updating data systems to reflect a full-year of enrollment activity, conversion of largely manual summer financial aid processes to an automated financial aid delivery system that can handle a complicated, non-standard array of enrollment options available in the summer, and costs associated with creating new courses. It is not expected that campuses will change their admissions calendars, except to enroll some entering students during the summer. Any additional costs of admission/registration will be funded within the marginal cost associated with growth.

Figure 4
Summary of Potential Costs and Savings (Avoided Costs)

Costs	Savings
$54 million per year operating costs, added to permanent budget	$20 to $24 million per year capital savings, for 10 years
$3 to $4 million for additional purchased utilities and custodial services	$3.5 to $4.2 million annual savings for maintenance of space not built.
Additional costs for maintenance work performed at premium wages (estimated at $6 million) and for increased wear and tear (renewal) costs.	

Costs vs. Savings (Avoided Costs)

The savings that can be attributed to more efficient use of capital resources do not offset the costs of buying out summer enrollments. However, by creating a State-supported summer program, a number of important results ensue:

- the possibility of applying capital savings to other high priority capital projects;
- the ability for campuses to reduce the impacts of their enrollment growth on the community by spreading the enrollment surge over the entire year;
- the opportunity for students to enroll in high-quality, innovative courses made possible by a more flexible summer calendar taught by regular-rank faculty;
- reduced crowding as compared to enrolling everyone during the regular academic year;
- deferral of the need to open an 11^{th} campus before 2010, based on the University's enrollment estimates.

These are valuable benefits. Together with the recognition that the University must offer instruction on a year-round basis in order to meet its enrollment commitments, these benefits make clear the importance of instituting State-funded summer instruction.

PART II

WHAT WILL UC DO TO INCREASE SUMMER ENROLLMENTS?

Part One of this report describes why a State-funded summer program is necessary as one of several options the University must pursue in order to accommodate 63,000 new students by 2010. Part Two addresses the things that UC will do if State funding is provided for both existing and future summer enrollments. In the absence of any firm decision to fund summer instruction, campuses cannot develop specific plans. However, discussions both at campuses and across the system have generated a number of ideas and addressed policy issues, as well as more practical issues, about the impacts of increased, State-funded summer enrollments.

A. Summer as it is Now at UC Campuses

While there are fewer students on campuses during the summer than during the regular academic year, there are nevertheless many activities occurring throughout the summer months. In addition to traditional Summer Session programs, campuses host educational, social and recreational events, which extend the mission of the University to a broader audience and provide revenues to the campus.

Students traditionally use the summer period to work, although many attend Summer Session. Faculty use the summer for more concentrated research than is possible during the regular academic year, using extramural funds that they have generated, allowing them to extend their nine-month, State-funded appointment to a full year of University service. Many faculty and students travel for scholarly research to facilities they cannot access during the academic year. Any plans for increasing summer enrollments must take these factors into consideration.

Campus Activities – Summer Session

Each campus has a self-supporting Summer Session, serving both UC and non-UC students. Courses are available on a first-come, first-served basis. The 42,200 UC registrants represent about 27 percent of UC students enrolled during the regular year. Students pay per-course unit fees as well as registration fees. Calendars are more variable than during the regular academic year, with campuses typically offering two back-to-back sessions of five or six weeks. Some campuses also offer overlapping sessions ranging from three weeks to ten weeks.

About three-quarters of the enrollments at Berkeley and UCLA Summer Sessions are UC students, with higher percentages of UC students at the other campuses. It is estimated that about 12 percent of the UC enrollments are from a different home campus; it is likely that these are students who have returned to their family home for the summer.

Summer students take a considerably lighter courseload than during the regular academic year, ranging from about 5 to 8 units on average. Thus, the 42,200 UC registrants

translate into about 6,550 FTE.[8] Most students are upper division—at some campuses two-thirds to three-quarters are upper-division students. Anecdotal evidence shows that students are using summer school for a variety of reasons, including several listed below:

- *Improvement or remediation.* Some students use the summer to improve grades in courses previously taken, or to recover from missed/failed courses from previous terms.

- *Acceleration and catch-up.* Some students use the summer as a means to accelerate progress toward graduation. Others who may be taking less than a full courseload in the regular academic year use the summer to catch up.

- *Enhanced competitiveness.* Ambitious students, many of whom are trying to improve their admission prospects for graduate school or their entry into a career, take on a second major. This decision may require additional units, some of which can be fulfilled during summer.

- *Focused time.* Some students like to use the summer to satisfy certain requirements for which concentrated time allows better comprehension; languages and organic chemistry are two typical examples. Summer also allows better access to classes that are overly subscribed during the regular academic year.

Campuses use the revenue from student fees to pay the Summer Session faculty[9] and to cover administrative and student services. Some campuses share revenues with departments that provide courses, a popular incentive because it provides additional funds for departments to be used throughout the year.

The faculty mix during the summer is different from that during the regular academic year in that a much higher proportion of the faculty are lecturers and visiting faculty. Although each campus has its own mix of faculty, overall less than 20 percent of the summer faculty are from the regular ranks, and nearly 30 percent are lecturers. The remaining faculty are visitors, emeriti, and advanced graduate students who are given teaching responsibilities during the summer. On average, Summer Session faculty teach 1.1 to 1.4 courses in the summer.

Courses are presented that meet academic objectives of the departments offering them, but also with the objective of appealing to a large enough population to ensure, through fee revenues, the overall program's continuing viability. Despite high proportions of upper-division students, in general, about half the courses offered are lower-division courses. Student surveys show a high degree of satisfaction with the quality of summer instruction.

[8] This figure includes 175 teacher credential students who are already considered State-supported summer enrollments.

[9] Most State-funded faculty appointments are for nine-months--the regular academic year--with summer being a period of more intensive research, funded by extramural funds that they generate. Summer teaching is contracted and paid for separately.

Other Summer Campus Activities

UC campuses also provide a venue for educational, public service, social, and recreational activities for various public groups. Each campus has its own profile of activities, and this profile changes throughout the summer. The following are the primary types of activities:

- *K-12 outreach and other K-12 programs.* Each campus carries out extensive programs for K-12 students, some of which are tied directly to the mission of UC by offering academic experiences intended to prepare students for college. Campuses are planning to expand these programs as part of UC's educational outreach activities.

  Some of the summer youth programs are in the nature of recreational camps, which serve the University by providing income to UC athletics programs, by offsetting UC student housing costs, and by creating goodwill for the University in the larger community.

- *K-12 professional development programs for teachers and staff.* UC presents a number of programs during the summer to improve the skills of K-12 teachers. For example, the California Subject Matter Projects operates 34 sites at UC campuses, with an important component of their year-round program occurring during the summer serving over 10,000 teachers. A new initiative developed by the CSMP, the Reading Professional Development Institutes for K-3 Teachers, served approximately 2,000 teachers during summer 1999. Campuses are planning to expand these programs significantly.

- *Orientation and other summer activities for UC students.* Throughout the summer, campuses mount programs for incoming students and their families. These programs meet a number of objectives: assessment and placement testing, information about campus policies, programs and student services, registration for classes, and academic preparation ("bridge" programs) to help targeted students successfully make the transition from high school (or community college) into UC's rigorous academic environment. Activities for registered UC students include such things as residence hall staff training, pre-season practice for sports and music groups, and meetings of student government representatives. Some students, including undergraduates, also participate in special summer research programs.

- *Other academic programs.* University Extension offers courses during the summer, many of them directed at "summer-only" populations such as K-12 schoolteachers, some of whom are completing credential courses. Other summer-based UNEX programs include intensive language programs, and programs for international visitors who are able to travel to the U.S. in the

summer (e.g., lawyers and judges, business travelers). In addition, academic departments offer conferences attended by members of their academic community from throughout the world.

- *Other activities.* Campuses also provide a location for groups not otherwise affiliated with University programs. Religious, cultural, and business groups often rent facilities for conferences, meetings, and retreats, providing revenue to the campus.

- *Maintenance and construction.* Summer provides a window of time for campuses to undertake certain types of maintenance and construction because the noise and dislocation will affect fewer campus occupants. It is a particularly good time to schedule work in classrooms and residence halls, because activities and occupants do not have to be relocated for the period of time the work is underway.

Student and Faculty Activity during Summer Months

Surveys[10] indicate that most UC students work during the summer: 70 percent of the undergraduates and 66 percent of the graduate students. The University's financial aid program, which provides support for 53 percent of UC's undergraduates, bases its awards on the assumption that students will work full time during the summer (and 12 hours a week during the regular academic year). Of those who do not work, the most common reason is that they were enrolled in summer school (47 percent of the undergraduates who were not working).

There are no surveys of faculty activity during the summer; however, most faculty devote the summer to research, writing, conferences, public service activities, and preparation for courses during the academic year.

Impact of Summer Activities on Classrooms and Housing

Most of the activities described in the preceding section use either campus housing or classrooms or both. Available data indicate the following use:

- *Classrooms.* Most campuses use at least half of their classrooms for academic courses when Summer Session programs are in operation. Classrooms are in use for Summer Session classes on average between two and six hours a day (depending on campus and session).

  Campuses that have measured classroom use by K-12 outreach activities show that these programs schedule between a quarter and a half of the available classrooms during an average week. The average number of scheduled hours each week is not known; however, sometimes classrooms and class labs are reserved exclusively for K-12 use because equipment, materials and room

[10] Student Expense and Resource Survey, Summer 1998.

arrangements must be kept in place for the duration of the program. Campuses indicate that the use of classrooms for K-12 outreach activities will increase given UC's growing emphasis on outreach activities.

The impacts on housing and classrooms of other activities, such as UC student orientation and UNEX classes, vary greatly throughout the summer. Campus schedulers note that there are times during the summer when no classrooms are available.

- *Housing.* Summer Session students occupy less than 10 percent of the available beds in dormitory-type residence halls. UC students—either Summer Session students or students with 12-month leases—are the primary occupants of campus-managed apartments.

  There are no data measuring use of housing specifically by K-12 programs; however, use of campus residence halls for all purposes other than Summer Session or maintenance activities can run as high as 60 percent of the available bednights at some campuses during some weeks. Use of residence halls by youth is carefully scheduled so that young people are not sharing facilities with other groups. Thus, even if a group of children are occupying only part of a hall, the remaining rooms are not available for use by other groups.

  Campuses with large conference programs also note that they must often turn away groups for lack of space. Scheduling of both housing and classrooms in the summer is similar to conference and hotel scheduling: groups are often segregated from each other and groups come and go on variable schedules. Rooms that are used on this flexible scheduling basis are therefore unavailable for uninterrupted, long term use.

- *Maintenance* activities in both housing and classrooms vary from campus to campus and from year to year, depending on the nature of the work and availability of workers. Some campuses schedule all their maintenance activities before and after Summer Session. Others take a few rooms off-line at a time throughout the summer. Major renovations may take entire buildings off-line for the better part of the summer.

Each campus is reviewing its current configuration of summer activities, the populations and missions that they serve, the costs of reducing or relocating them (if that becomes necessary) and the extent to which additional summer enrollments can be accommodated without compromising high-priority activities.

B. What Will UC Do to Increase Enrollments in a State-Funded Summer?

How will students be encouraged to attend?

If summer instruction receives State support, students will have the option of enrolling for a full year, with summer becoming a fourth quarter (third semester) of either part-time or full-time enrollment; or on a staggered-term basis, in which the summer term could be substituted for another term. It is conceivable that a student might choose both enrollment configurations in the course of a four-year education.

It is not part of student culture to attend full time during the summer, and it is therefore generally believed that incentives will be necessary to change traditional attendance patterns. The University has developed a list of possible inducements that will require more study, but that may be effective in increasing summer enrollments.

- *Financial incentives.* As noted previously, students receiving financial aid are expected to work full time during the summer in order to contribute to the costs of their education. Many students who are not receiving financial aid also work during the summer. If students attend on a staggered-term basis, it is assumed they will be able to work full-time during their quarter/semester off. However, it may be necessary to provide an incentive to employers to hire students during these periods. An expansion of the State Work-Study Program could be a vehicle for such assistance.

  While it seems important for fees and financial aid to be at least equivalent to the regular academic year, it may also be necessary to use financial incentives that make net price during the summer less than during the regular year. These incentives could be in the form of rebates and loan forgiveness.

- *Academic incentives.* Campuses are considering various programmatic ideas to appeal to specific populations. For example, they may offer courses beneficial to incoming freshmen and transfers; a "sophomore summer" of general education and high demand major preparation courses; or courses for seniors who are within a few units of graduating. A UC-wide catalog of courses would help students know about summer courses available at all the campuses. The Education Abroad Program (EAP) could expand to include UC faculty-directed summer programs for students.[11] Early discussions of summer courses have highlighted the potential for innovative course offerings that take advantage of enrollments that are smaller than those in the regular year. The possibility of unique, summer-only courses is expected to be attractive to many students.

[11] Currently students participate in EAP programs primarily during the regular academic year, in residence at universities abroad.

Another form of academic incentive is to continue to provide summer classes on a more compressed schedule than the regular academic year. More work each week is therefore required in order for the credit awarded to be equivalent with regular-term credit. Shorter calendars make it more difficult for students to take a full load, and therefore more difficult to use the summer as a complete replacement for another quarter. However, a shorter term might still allow students to work full time for part of the summer, and gives some time for faculty to do their research.

Incentives for summer enrollment must be in the context of policies that encourage progress toward a degree within four years (two years for transfers) with 180 units. Nothing will have been gained if students use the summer to accumulate more units than are needed or if summer attendance adds quarters to the normal time to degree.

In addition to incentives for attending in the summer, campuses may consider incentives for *not enrolling* another term. For campuses concerned about excessive crowding, diverting students to summer is an important strategy for reducing the regular-term population. To be most effective, financial incentives for summer-session enrollment should be paired with incentives to reduce the number of academic-year terms a student uses to graduate. An example would be a degree-completion financial award for graduating students who have completed at least some minimum number of units during summer session and have enrolled in no more than some maximum number of academic terms (e.g., 11 or 12). UC Berkeley is piloting a version of this idea in Summer 2000. Seniors who complete their graduation requirements by enrolling in summer, rather than the next fall, will receive a $500 degree completion award at graduation.

However, staggered attendance presents some challenges: departments will have to plan course schedules carefully because students off for a term may miss essential sequenced courses. A department may not be able to afford multiple offerings of sequenced courses to accommodate students on irregular schedules. In addition, students themselves may not want to miss activities in which they participate during the regular term (e.g., sports programs, club activities, student government, etc.), or they may not want to give up their housing and roommate arrangements for a term.

For now, no consideration is being given to mandating any attendance pattern. It is hoped that incentives will be enough to encourage students to change their attendance patterns in ways that help the University accommodate more students.

How will faculty be encouraged to teach during the summer?

Most faculty are appointed for nine months, with summer not included in the appointment. With State-funded summer instruction, faculty will continue to have nine-month State-funded appointments, but they may choose a different configuration of quarters. It is expected for some faculty that the summer is a more attractive time to dedicate to teaching because their intensive period of research can then be done in a different quarter.

For example, some may find it advantageous to travel to research sites, research institutes, or scholarly conferences during months with fewer tourists or with more temperate climate.

However, it may be necessary to develop incentives for faculty as well. Some suggestions have included improving salaries and making special retirement contributions for faculty who teach on an overload basis, and providing course-development funding for summer faculty. The issue of faculty availability will be settled by departments, once the summer becomes State-funded. As departments face staggered-term appointments they will have to take into consideration traditional organizational patterns that have concentrated certain decisions in the regular year, such as recruitment activities and other departmental business requiring faculty participation.

How will campuses manage concurrent high-priority activities?

Campuses are committed to maintaining, and even expanding, many of their summer activities. While the revenues received from summer programs help offset costs for UC students during the regular academic year, these funds are not a primary motivating factor for keeping the activities. Rather, many of the activities reflect strong commitments to the community, the State and to the University's own students, and campuses intend to continue offering them. Most cannot be rescheduled to different times of the year; they are possible because the participants are not involved in other conflicting activities, such as school. Since UC summer enrollment is not likely to exceed 40 percent of fall FTE enrollment at best, it is hoped that it will be possible to continue to accommodate at least the high-priority activities.

Implementation will vary by campus.

Each campus faces a different set of circumstances as it plans for increased summer instruction. Under the terms of their Long Range Development Plans, some have physical capacity to continue to enroll most of their new students during the regular academic year. Geographic areas in which campuses are located are factors that will affect planning: some have extremely hot summers, some have significant tourist activity, and some are home to a large number of students enrolled at other UC campuses during the regular year. Availability of local housing during summer months will also affect the type of summer program that is developed.

Given these and other local circumstances, and the extent to which they develop other options to accommodate students, campuses will devise summer plans that will undoubtedly vary from one another in terms of scope of offerings, period of time over which expanded summer programs are phased in, and incentives offered to students and faculty.

PART III

CONCLUSIONS

Campuses are giving considerable thought and analysis to increased summer instruction and other options (e.g., off-campus centers) as mechanisms for expanding their enrollments. To assist in the development of appropriate solutions, UC has developed a set of important principles based on those included in the Legislative language requesting this report (see Appendix A). These principles appear in the following section, the first three of which repeat the overarching planning principles that appeared in Part I.

It is possible that the solutions described here will fall short of their objective to make room for all of the projected growth. The University will explore additional options such as those listed after the planning principles as necessary.

A. Principles for Expanded Enrollment

1. Sustaining Commitment to the Master Plan

The University is committed to ensuring access as the Master Plan for Higher Education in California has defined it–providing a place for each student in the top 1/8 of California's high school graduates who wishes to attend UC, facilitating community college transfer programs, and sustaining an active and significant graduate program. This commitment is essential if we are to serve California well, develop its future workforce, and contribute all UC can to the state's economic vitality and the culture and welfare of its citizenry.

2. Ensuring Quality

Academic plans for expanded enrollment, whether during the summer or during the regular academic year, must be designed to add value for students and the institution. Growth must not degrade the quality of the undergraduate, graduate, or faculty experience at any campus and should be used as an opportunity to enhance the quality and diversity of our academic programs and campus life. This will require careful academic planning and close attention to the deployment of the resources that come with growth.

3. Fostering Graduate Education and Research

Because the State of California and the nation need the cutting-edge research and graduate training UC produces, it will be essential to ensure that they, as well as programs for undergraduates, prosper and grow during the next decade.

4. Implementing Growth Systemwide

Every campus will participate in the coming decade's growth to the greatest extent possible. Each campus will have the latitude to design new programs to accommodate this growth that are appropriate for that campus's particular academic environment and location. Programs, including summer curricula, will differ from one campus to another.

5. Ensuring Affordability

All newly designed programs, including summer offerings, must be at least as affordable as enrollment during the regular year, and must incorporate appropriate levels of need-based aid. Fees charged to students attending all state-supported programs, whenever they are offered, will be no more than the fees paid during the regular academic term.

6. Acquiring Adequate Operating Funds from the State

State funding for expanded enrollment and the academic and non-academic staffing that supports it is fundamental and essential. The University will work assertively to ensure that the State provides adequate resources to support existing summer enrollment and all enrollment growth and to maintain the quality of academic programs, regardless of the term in which they occur. That funding will be based on the agreed-upon marginal cost of instruction and will include funding for plant maintenance and utility costs associated with increased facility usage.

7. Providing Adequate Space

The University will also make its case assertively to ensure that the State provides adequate capital outlay support for classrooms, class laboratories, faculty offices, instructional support, and research in accordance with appropriate standards. The University will seek funds from other sources for additional needed facilities and will ensure that all facilities are cost effective, well planned, and well utilized.

8. Expediting Time to Degree

The University's students will expedite time to degree by finishing their bachelor's degree programs closer to the norms of four years and 180 units. The University's faculty will ensure that challenging and timely academic programs that can be completed within that timeframe are available to students, and campus faculty and administrators will design incentives to encourage student progress, within the bounds of academic quality. In addition, care must be taken to make sure that students continue to experience University life at its best by attending to their needs for advising and counseling, as well as extracurricular activities.

9. Protecting Important Public Service Programs

Important public service, outreach, and teacher professional development programs now offered in the summer and in off-hours during the regular year must be preserved. They should be included in estimates of utilization of facilities and should not be displaced by implementation of state-supported summer programs.

10. Working Well With Local Communities

In planning and implementing this enrollment expansion, each campus will work with its community in positive ways to minimize the adverse impacts of increased enrollments to the extent possible while honoring the University's commitments to the state's youth.

B. Evaluating the Success of Options for Accommodating Increased Enrollments

It will take several years to develop and implement programs to accommodate enrollment in new ways, particularly through expanded summer instruction and off-campus activities. Campuses are working in largely uncharted waters and will have to try a variety of approaches without assurance of their potential for success. If campuses discover their attempts are unsuccessful, they may have to try more extreme options. Some that have been suggested include putting a cap on the number of units that can be earned on campus during the regular academic term, mandating attendance for at least one summer, asking the State for more financial aid, or considering the need for an 11^{th} campus.

C. Conclusion

UC is committed to enrolling all eligible students who choose to attend, and believes that it will take a State-funded summer—along with other options—to accommodate them during this next decade of rapid growth and limited capital resources. While there are tremendous challenges in changing a pervasive culture and adapting complex organizational structures, the benefits can be real: high quality education throughout the year, some savings on capital expenditures, and some amelioration of the impacts of growth on local communities.

Appendix A

Supplemental Report of the 1999 Budget Act 1999-00 Fiscal Year

Item 6440-001-0001--University of California

Year-Round Operations (YRO). It is the intent of the Legislature that the California State University (CSU) and University of California (UC) conduct feasibility studies to examine the advantages and disadvantages of implementing year-round academic programs as one means of helping to accommodate significant projected enrollment growth over the next 10 year to 15 years and improving student progress to degree. The segments' feasibility studies should include consideration of the cost-effectiveness of implementing YRO in a higher education setting and the degree to which YRO can help expand access to higher education, reduce time-to-degree, and maximize the use of existing instructional facilities. The feasibility studies shall include consideration of the complexities involved in implementing year-round operations and recommendations for the resolution of identified problems, such as the impact on the segments' capital needs, scheduling routine, and deferred maintenance that usually occurs during low-occupancy periods, student housing, and the implications for current campus long-range development plans, among other issues. The segments' studies should also include consideration of incentives that should be implemented to encourage students to attend school year round.

The segments' feasibility studies should be based on at least the following assumptions:

- Campuses shall be of sufficient size to warrant the addition of a summer term; new campuses, small campuses with enrollments of less than 5,000 full-time equivalent students, and off-campus centers shall create sufficient academic infrastructure, both in terms of instructional facilities and teaching capabilities, before implementing significant year-round academic programs.

- Input should be received from interested groups, including students, faculty, and staff, regarding the implementation of year-round academic programs.

- The segments should maintain flexibility to implement year-round academic programs differently on individual campuses, recognizing the differences in circumstances among the campuses.

- That fees charged to students attending state-supported summer programs shall be equivalent to the fees paid during the regular academic year.

- The state will provide adequate resources to support existing summer enrollment and all enrollment growth and maintain the quality of the academic programs, regardless of the term in which it occurs based on the agreed-upon marginal cost of instruction, as well as funding for plant maintenance and utility costs associated with increased facility usage, capital outlay support to provide adequate space for

classrooms, class laboratories, faculty offices, instructional support, and research in accordance with appropriate standards.

- The state will provide financial aid, similar to that provided in other academic terms, to summer-term students in order to ensure accessibility and affordability.

- Assume that important public service programs, such as summer outreach, teacher training, new student orientation, and extension programs should be included in estimates of utilization of facilities and should not be displaced by implementation of state-supported summer programs.

Further, it is the intent of the Legislature that the CSU and UC each submit their feasibility studies on or before April 1, 2000, to the Governor, the Department of Finance, the Joint Legislative Budget Committee, the appropriate policy committee and budget subcommittees of each house of the Legislature with higher education subject matter jurisdiction, the Legislative Analyst, and the California Postsecondary Education Commission.