



## **Joint Report of the 2020 Task Forces**

**Submitted to Provost and Executive Vice Chancellor Ralph Hexter**

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## EXECUTIVE SUMMARY

At the 2011 Fall Convocation, Chancellor Katehi proposed the idea of responding to the challenges facing the university through planned growth rather than further cuts; leveraging the infrastructure and capabilities of the campus to achieve greater financial stability while simultaneously enhancing the national and international diversity of our student body to the benefit of our academic mission. In introducing the idea of a 2020 initiative, Chancellor Katehi committed the campus to a comprehensive discussion of the issues involved, to ensure that all voices are heard and ideas shared before the campus decides whether to move forward with the initiative. To this end, three task forces comprised of faculty, staff and students were appointed and charged with examining the issues in depth. This report summarizes the discussions and findings of those three task forces, and is intended to serve as a framework for further discussions over the coming months. Comments and feedback on this report can be submitted to the Provost at the following email address: [future@ucdavis.edu](mailto:future@ucdavis.edu).

Each of the three task forces approached the task from a different perspective; Enrollment Management from the perspective of the student experience from admission to graduation; Facilities Planning from the perspective of the physical infrastructure of the campus and its capacity to handle growth, and Academic Resources from the perspective of the faculty and administration with a focus on how to distribute resources in ways that best serve the research and teaching missions of the university. Because of the interwoven nature of the various operations of the university, the three task forces of necessity overlapped in their discussions of many topics, and this report thus presents an integrated view of the findings of the three committees.

As noted in detail in the report, the task forces identified many areas that will require careful attention if the campus is to successfully grow by the approximately twenty percent suggested in some of the scenarios proposed. While recognizing the substantial benefits that might be realized from this growth, the task forces also noted that the infrastructure of the university is already under pressure from past growth and recent budget cuts and that there will need to be strategic investments up front to prepare for any growth that might be undertaken. Although the campus has the capacity to grow at this scale, it will be critical to combine investments with growth to ensure that there is no diminution in the excellence of the university and the experience offered to our students.

The task forces concluded that there are indeed several growth models that would lead to substantial benefits for the university, as discussed in the report, but that deciding between models will require a comprehensive campus discussion about the balance between a number of competing goals and ideas: increasing campus financial stability and national/international diversification of the student body while protecting our ability to continue to provide access to a growing population of California students; increased construction of expensive classrooms and research facilities while seriously considering alternative strategies for more effectively using extant space and preparing ourselves for the pedagogical approaches of the coming century; and continuing to build strength in areas of current

campus excellence while contemplating changes that might be needed to meet the challenges of the future and optimally align our growth with the interests of our students, faculty and society.

Given the gravity of the issues at stake, the task forces are not yet prepared to endorse a specific model among the several presented in this report, although there was general agreement that an initial model described at the Fall 2011 Convocation, which included substantial growth in the enrollment of California students, was financially unsustainable. However, the difficult choices inherent in alternative proposals, which differ in the degree to which they balance access with financial returns, will benefit from a broad campus discussion before initial decisions are made. It is ironic that these discussions will occur against a backdrop of increasing uncertainty about the future of state support for the university, which may well have an impact on the choices to be made. As stated in the Chancellor's Fall 2011 comments about the 2020 initiative, the goal is to continue creating a university that can "sustain its rising trajectory through its own best efforts, leveraging support from the state but rising above the fiscal limitations we now face." The task now at hand is to determine the best path forward to support that rising trajectory.

## **BACKGROUND AND CONTEXT**

We find ourselves at a defining moment in the history of UC Davis. While the campus is at the pinnacle of its success as an institution, with the highest research funding in its history, the highest rankings as a public university that it has ever achieved, and in the final stages of the largest capital campaign it has ever undertaken, it nonetheless faces perhaps the greatest challenge in its history due to the unprecedented and precipitous reductions in state support that have occurred in the last few years. Successive years of budget cuts have affected virtually all facets of the university's teaching, research and public service missions. Class sizes have increased and students experience increasing difficulty enrolling in some of the courses they require to graduate in four years. Workload has increased substantially in many areas due to budget-driven reductions in the numbers of staff. Faculty positions vacated by retirements have remained unfilled for extended periods of time. Deferred maintenance of the campus's buildings and infrastructure make it increasingly challenging to conduct leading edge research and provide a high quality student experience across the campus.

As the entire UC system endeavors to develop new strategies to sustain excellence in a changing world, each campus must rise to this challenge by identifying those unique attributes and capabilities that can work to its benefit in seeking solutions. In the case of UC Davis, one unique opportunity not available to many of our sister campuses is a physical footprint that gives us the potential to support carefully planned programs of strategic growth. Over the past three decades, average annual undergraduate enrollment on the Davis campus has grown steadily from over thirteen thousand students in 1981-1982 to almost twenty four thousand in 2011-2012. Under certain circumstances, growth can provide many opportunities to a university and the population it serves, including increased access for qualified students and the opportunity to develop new and exciting areas of research.

In the fall of 2011 Chancellor Katehi and Provost Hexter announced the 2020 Initiative to the campus community, proposing growth as one possible approach to addressing the challenges facing the university. In unveiling the 2020 Initiative, three overarching goals were defined:

- *Honor the California Master Plan for Higher Education, UC's land grant mission, and the UC Davis Vision of Excellence.* Our land-grant heritage gives us the responsibility to educate California's residents, to do research to expand knowledge in areas of societal need, and train the future leaders of California and beyond. In addition, we seek to accelerate the translation of basic research into productive commercial use for the economic benefit of our local community, region and the state of California.
- *Create a more diverse community of scholars.* UC Davis seeks to serve California residents while increasing the proportion of national and international students, encourage an international experience for all domestic students, and increase numbers of international faculty and graduate students.
- *Establish a more diversified and secure financial foundation.* UC Davis must expand and diversify its financial foundation by increasing our service to students from beyond California's borders, through new research collaborations, increased philanthropy and public-private partnerships as well as the continuous pursuit of efficiency in all our operations.

The 2020 planning process was designed to enable the campus community to think broadly and deeply about the future of UC Davis and to consider how enrollment growth might affect that future. Three task forces were appointed by the Chancellor and Provost, with input from the Academic Senate, to consider particular aspects of the initiative: Academic Resources, Enrollment Management, and Facilities Planning. Importantly, while each task force has delved into their areas of responsibility, they have also discovered that virtually all facets of the university will be affected by growth of this magnitude.

Significant growth in the number of students will present immediate challenges, but each of these is likewise an opportunity. The need to hire additional professors presents a rare opportunity to increase the diversity of the faculty, to build strength in new areas of research in all disciplines through strategic hiring, and to create new opportunities for graduate education. The need to add instructional space provides a rare opportunity to build classrooms that fit the demands of the pedagogy of the 21<sup>st</sup> century. Finally, meeting the needs for advising services for a larger, more international, group of students provides an outstanding opportunity to rethink and improve our strategies for improving the success of all of our students.

Budget pressures cannot and should not be the primary driver of how we envision the future of our university, but neither can they be ignored at this critical moment in our history as a university – too much is at stake. The financial crisis facing the university has the potential to cause lasting damage unless it is addressed quickly. Although the 2020 initiative is but one of many possible courses of action to address this crisis that may be considered over the coming years, it is perhaps the one that will have the longest lasting impact. A decision by a university to grow is not easily reversible, given the long-term

investments in faculty and infrastructure that must be made in support of that growth, and it is thus critical that we get it right. The choices to be made are in many cases complex, with arguments that can be made on both sides. For example, what should be the balance between:

- Increasing access to the university for California students and the financial stability of the institution?
- Costly construction of classrooms to handle expanded enrollments and the adoption of new approaches to pedagogy that move some learning outside of the classroom and might reduce the need for new classrooms?
- Continued growth in the disciplinary areas for which the campus is renowned but that may be among the most expensive to support and increased investments to build strength in other areas where more students can be served at lower cost?

None of these are simple decisions, yet each has a potential impact on the degree to which growth can succeed in addressing the budget issues we face.

It is with these issues in mind that we present for consideration the 2020 task force report, comprised of carefully considered advice to the Provost developed through extensive consultation with faculty, staff and students that describes an opportunity to improve the financial situation of the university while realizing the benefits mentioned above. One does not enter lightly into such an enterprise, and in this report are detailed many of the important considerations that must be carefully evaluated in making a final decision about whether to proceed. It is also the case that this initiative is not a panacea for all of the budget ills that challenge the university, in that the revenues potentially generated will make a significant contribution but will not completely address the looming gap between costs and revenues in the years ahead.

Any multi-year plan in an era of rapidly changing circumstances must be subject to constant reevaluation and revision. It is thus with the 2020 initiative, which should be seen as a statement of intent rather than a precise roadmap to a final destination. This should be an iterative process involving successive rounds of growth, assessment, consultation and revision that will allow constant realignment of plans for the next year with the experiences of the previous year.

It is clear that the growth of the university has impacts both within and beyond the boundaries of the campus, and the campus must commit itself, should it pursue this course of action, to act in partnership with the campus community and with our regional stakeholders in the city of Davis, the surrounding county and the Sacramento metropolitan region. The success of this effort will depend on contributions from all members of the university community, who must rise to the challenges presented, and whose wisdom and experience will be essential to the success of this endeavor. We expect that implementation of the 2020 process will be influenced significantly by the outcome of discussions with our campus stakeholders and consultation with the Academic Senate that will occur during Fall 2012.

In this report, the discussions and conclusions reached by the three separate task forces, representing a broad cross-section of the faculty, students and staff of the university, are presented. Each task force contemplated the issues raised by the 2020 initiative from a different starting perspective, but with a common purpose of trying to anticipate and bring to the attention of the campus and the administration those issues that must be considered as we contemplate whether to proceed with implementation of this complex process of growth. It is our hope that this document will provide a framework for the broad campus and community discussion that will inform and guide the campus in its decision.

## **The 2020 PROCESS**

The 2020 planning process began by presenting to a joint meeting of the three task forces a hypothetical scenario that involved an approximately 20% increase in the entire scope of the campus. This initial model included an increase in undergraduate enrollment by approximately 5,000 undergraduate students – including about 2,000 California residents and 3,000 national and international students – and increasing by approximately 300 the number of full-time equivalent (FTE) faculty. This preliminary and somewhat arbitrary scenario enabled all three task forces to begin to think more concretely about the implications of growth within their areas of focus even as they considered the advantages of varying one or more parameters inherent in the initial scenario.

After the joint kick-off meeting in December 2011, each task force met individually approximately every other week beginning in January and concluding in June. In addition to addressing issues within their formal purview, each task force also reviewed the financial models underlying the 2020 initiative to better understand cost drivers and tradeoffs of various policy choices the campus might need to consider as it determined the best path forward.

The Academic Resources task force met 12 times during the winter and spring quarters of 2012, and discussed issues including present and historical allocation of faculty FTE resources among Schools, Divisions and Colleges; data on current UC Davis international students' origin and majors; financial modeling; and how the Provost might consider implementing future calls for new teaching resources, including new ladder rank faculty positions. A summary of the AR task force meeting schedule is included as Appendix 1.

The Enrollment Management task force met 12 times during the winter and spring quarters of 2012, and discussed issues including enrollment modeling and policies, recruitment and admissions, holistic review, financial models of academic activities and other costs of enrollment growth, impacts of growth and how to support student academic success, specific factors impacting international students, issues surrounding ESL courses, and the status of student advising services. Input was received from Budget and Institutional Analysis, Admissions, large course instructors, Services for International Students and Scholars, the ESL program, a student panel and a panel of student advisory staff. A summary of the EM task force meeting schedule is included as Appendix 2.

The Facilities Planning task force met 12 times during the winter and spring quarters of 2012, and discussed issues including student housing; classroom utilization, technology and quality; student services facilities (with a focus on undergraduate students), and international student characteristics. Importantly, the task force did not devote time and study to issues surrounding research facilities, graduate student facility needs, campus infrastructure systems, or the environmental and sustainability implications of potential campus growth. These topics will require additional analysis as the 2020 process proceeds. A summary of the FP task force meeting schedule is included as Appendix 3.

## **TASK FORCE FINDINGS AND RECOMMENDATIONS**

The fundamental question that each task force addressed might be stated most simply as “Can a plan be developed that would increase the excellence of the university through growth?” To answer this question, it was necessary to consider all of the many impacts of growth; including the revenues associated with various models involving different numbers of California and national/international students, as well as the costs and benefits of all the investments that would be necessary to maintain or increase excellence in the face of these rising enrollments.

Below we present an overview of the issues discussed by the three task forces and their preliminary recommendations. Although the three task forces met and discussed issues independently, there was considerable overlap in both discussions and recommendations, and for the purposes of this document, we have endeavored to present a consensus view, recognizing that there were diverse and divergent opinions on many issues. In the latter case, we will try to point out major areas of divergence, in an effort to stimulate further input on these topics from the university community.

Task force discussions addressed the following general questions:

- Will growth benefit the campus and should we proceed with some version of the 2020 initiative?
- If the number of students enrolled at UC Davis is increased, what should be the mix of California and national/international students?
- Do plans proposed meet the goal of securing the financial foundation of the campus?
- If growth occurs, what are the major issues involving recruiting, admissions and enrollment management that must be addressed?
- What specific issues will arise from a substantial increase in the number of international students and how should these be addressed?
- How can the campus improve the success of all of our students and increase the quality of their experience against a backdrop of rising enrollment and falling state support?
- What investments must be made in capital projects to maintain excellence as enrollment increases?
- How will faculty hiring be aligned with academic needs to maintain excellence as enrollment increases?

In the following sections, task force discussion of these questions is summarized and recommendations presented.

***Will growth benefit the campus and should we proceed with some version of the 2020 initiative?***

After grappling with this question for six months, the task forces reached an answer that can best be summarized as “yes, but there are a number of issues that require further analysis and need to be addressed.” It was generally agreed that growth brings with it many opportunities, including development of new and exciting areas of research, growth in graduate education, regional economic benefits, and increased access for students to the benefits of a UC Davis education. However, the task forces were also very cognizant and deeply concerned about the complexities inherent in growth of the magnitude proposed, particularly at a time when the academic enterprise and infrastructural foundation of the campus is already under great stress from substantial budget cuts due to increasing costs and declining state support. The ability of the campus to make the substantial investments needed to ensure a strong foundation for growth was an issue of concern, and the task forces felt that as the campus contemplates growth, it should do so with its highest priority being to maintain and enhance the overall quality of the university. The task forces strongly believe that successive years of budget reductions have already begun to erode the formerly solid foundations of that quality, and that attempting to grow from such an unstable foundation would be inadvisable. Thus, the 2020 initiative should proceed only if key foundational areas discussed below can be strengthened before growth commences. With regard to financial benefits, it was agreed that there were indeed versions of the 2020 model that could lead to the eventual generation of net revenues that would contribute significantly to the financial security of the university (in the range of 35-50 million dollars per year added to a current base of \$700 million in tuition and unrestricted state support). However, tough decisions in conflict with some of the traditional principles of the campus with respect to the Master Plan or involving significant changes to past practices would have to be made in order to successfully implement the 2020 models. It was clear that all financially viable growth scenarios considered could indeed internationalize the campus to a greater or lesser extent, and there was general consensus that this would be a good thing for our students, but that it would also create new challenges.

***If the number of students enrolled at UC Davis is increased, what should be the mix of California and national/international students?***

The task force spent substantial time discussing the implications of the 2020 models in relation to the California Master Plan for Higher Education. The Master Plan<sup>1</sup>, which has stood as the framework for the resourcing of state-supported higher education for decades, provided that all California residents in the top one-eighth of the statewide high school graduating class who applied on time be offered a place somewhere in the University of California system. State law affirms the State's commitment to fund all eligible California residents: "The University of California and the California State University are expected to plan that adequate spaces are available to accommodate all California resident students who are eligible and likely to apply to attend an appropriate place within the system. The State of California likewise reaffirms its historic commitment to ensure that resources are provided to make this expansion possible, and shall commit resources to ensure that [eligible] students ... are accommodated in a place within the system."

Historically, the State and the University have agreed upon a level of enrollment of California students—a number of FTE students—that is defined as "state-supported." The cost to deliver a UC education for these students has been covered through a combination of a defined level of state support per student and student contributions in tuition and/or fees. Over time the former has declined while the latter have grown. Moreover, as enrollment growth continued while state contributions leveled off, tuition and fees have not increased sufficiently to either maintain historic levels of *per capita* support for California students or address significant increases in the University's fixed costs of instruction (recent increases in retirement and health benefits costs for faculty and staff are an example). The result has been an increasing gap between revenues afforded by California students and the campus's cost of instruction, which has led to growing budget deficits and resulted in undesirable trends such as increasing class size and challenges in course availability.

Increasing the size of the university through the enrollment of additional California students would thus exacerbate our already difficult budgetary circumstances and potentially reduce the quality of the educational experience enjoyed by all students. However, there is one strategy that may be of benefit in addressing the challenges that face the university: increasing the enrollment of students from beyond the borders of California.

National and international students (i.e. students who are not California residents) pay supplemental tuition that substantially exceeds the cost of providing a place for them at the university. Thus, enrollment of these students, even though they are not "state" funded, generates net revenue that can offset the gap between revenues and expenses attributable to reduced state support for California students. The task forces discussed at length the ramifications of this difference with respect to the goal of honoring the principles put forward in the Master Plan. An alternative model brought up in task force

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<sup>1</sup> <http://www.ucop.edu/acadinit/mastplan/mp.htm>

discussions that would potentially serve the same purpose as admitting a higher percentage of national and international students and still preserve access for additional California students was the so-called “high tuition – high aid” model, in which nominal tuition would be set at equivalent (high) levels for all students (California, national and international), with substantial increases in financial aid covering the increased costs for students requiring assistance. In this model, all students with the ability to pay higher tuition (not just national and international students) who had the ability to pay higher tuition rates would do so. This approach would require dramatic changes in current UC-wide policies with respect to tuition, and was not further considered.

As the state falls further and further behind in its ability to subsidize places for all California students who qualify for admission, offering places to national or international students gives rise to a paradox that demands attention and careful deliberation. By enrolling these national and international students, it becomes possible to subsidize access for additional Californians, maintain the quality of a UC education for all, and actually improve the quality of the student experience by creating a truly international learning community at UC Davis. But there is a price to be paid—every place offered to a national or international student is one less that, if funding were available, might potentially be offered to a Californian. Finding the proper balance between these conflicting goals of excellence and access is a major decision facing the university, and was at the heart of many of the 2020 task force discussions.

The task forces considered several possible models for growth, each representing a different balance point between the benefits of growth and access for California residents. The original “straw model” presented when the 2020 initiative was first introduced to the campus (designated below as Model 1, or M1) included a balanced growth of approximately 2000 California students and 3000 national and international students. While this model achieved two worthy goals, internationalizing the campus, and significantly increasing access to the university for California students, a comprehensive financial analysis (described below) revealed that it could not generate sufficient revenue to support the specified level of enrollment while maintaining the excellence of the university. Indeed, it appeared to yield a university that would be larger but no more financially secure. Having failed to achieve one of the basic goals of the 2020 initiative, this model was eliminated from further consideration. The task forces then moved on to discuss a continuum of models with varying proportions of California and national/international students, as discussed in more detail in the next section. As one might predict, the fewer California students and more national and international students enrolled, the greater the revenue that would be generated. The task forces thus recognize that the campus will have to face a difficult choice between conflicting priorities, ultimately balancing the benefits of financial sustainability against limitations on growing access to the university for Californians in the absence of additional state funding.

The five models also differ with respect to the degree to which they would expand the proportion of students from outside of California, ranging from 13 to 21% national and international students at steady state. While high in comparison to past enrollment practices at UC Davis, these levels are similar to current enrollment targets at sister UC campuses including UC Berkeley, UCLA and UC San Diego, and

significantly lower than levels (ranging from 30% to above 50%) seen at some other major public institutions such as the University of Wisconsin Madison, the University of Michigan Ann Arbor and the University of Colorado Boulder.

With respect to the issues discussed in this section, the task force recommends the following:

- The campus should proceed with planning for growth, but should not proceed with implementation until a strategy is defined that supports a high quality educational experience for all students and maintains excellence in the research and service missions of the university.
- Significant enrollment increases should not occur without first addressing existing academic resource deficiencies and creating a strong foundation for growth. In this respect, the highest priorities to be addressed include reversing impediments to timely student progress by increasing course availability and developing more comprehensive and coordinated student advising services, reversing recent trends in faculty-student ratios, and general improvements in campus infrastructure.
- Growth in enrollment should only proceed if a model can be developed that results in increased financial stability of the university.
- The campus aspires to maintain its historic and strong commitment to access for Californians; however, increased enrollment of California resident students should be limited unless accompanied by commensurate increases in funding from the state; enrollment of national and international students should be increased in the short term.
- Enrollment of national and international students must conform to the doctrine of “compares favorably” as put forward by the UC Systemwide Academic Senate Board of Admissions and Relations with Schools (BOARS)<sup>2</sup>; i.e. that the admitted national and international students will compare favorably to admitted California residents at each campus.
- Hiring of faculty and staff and construction of new facilities should occur in advance of or simultaneous with growth in the number of students, so that the academic experience does not suffer, and realistic estimates of the cost of these investments should be included in the final revenue models for growth to ensure adequate support.
- Additional temporary teaching resources (e.g., funding for lecturers or other temporary teaching staff) should be provided while hiring of permanent ladder rank faculty is underway, in order to maintain preferred student faculty ratios.
- The 2020 Initiative should contain three distinct phases: 1) a foundation rebuilding and detailed planning phase during which existing deficiencies are addressed to prepare a strong foundation for growth; 2) a growth phase during which resources are made available to support increased enrollment; and 3) a sustainability phase in which the campus transitions into a new equilibrium level of enrollment.

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<sup>2</sup> [http://www.universityofcalifornia.edu/senate/reports/RMA\\_MGYreBOARSresolutiononevalofresidents\\_non-residents\\_FINAL.pdf](http://www.universityofcalifornia.edu/senate/reports/RMA_MGYreBOARSresolutiononevalofresidents_non-residents_FINAL.pdf)

***Do plans proposed meet the goal of securing the financial foundation of the campus?***

One of the most critical issues facing the task forces was evaluation of the degree to which the specific growth scenarios proposed in the 2020 process would meet the goal of improving the financial stability of the university. Although increasing access to California students was seen as a laudable and worthy goal, the idea of growth at any cost was not supported. In other words, if at the end of the process enrollment was higher but the campus was in a similar or worse financial situation, the task force felt that the negative impacts on the university would outweigh the advantages of internationalization and other benefits of growth such as increased access.

To aid the task forces in considering the financial impacts of growth, the office of Budget and Institutional Analysis (BIA) in the Office of Administration and Resource Management developed a series of models capturing, to the extent possible, the costs and revenues associated with enrollment of California, national and international students under different growth scenarios. The five models presented are only a subset of those one could possibly consider, but provide a framework for considering the financial impacts of balancing access for California students with growth in national and international students.

Calculation of revenues is fairly straightforward, with the principal variables including (1) the absolute number of additional California students paying resident tuition (less one-third return to aid under current policy), and of national and international students paying additional supplemental tuition (not subject to return to aid), and (2) the actual level of resident tuition, which was assumed for purposes of the model to increase at a rate of 2-3% per year (the actual tuition rate is subject to regental policy and future levels therefore depend on action by the UC Regents). Based on recent history, no assumptions were made that there would be any increase in state funding for enrollment growth.

Calculation of costs associated with growth is much more complex, since it must consider a wide variety of direct costs and investments required to accommodate the needs of a growing university. Although some costs are independent of the disciplinary area in which growth occurs (e.g. increased load on the registrar's office), other costs are dramatically different by discipline (e.g. salaries and startup packages for new faculty hires). Cost models for growth must therefore be based on assumptions about the disciplinary distribution of growth. The baseline analysis assumes that growth within disciplines will occur in the same proportions currently extant on campus, so that discipline-dependent costs can be modeled. For example, if discipline "A" represents 10% of enrollment and discipline "B" represents 5%, the analysis assumes that 10% and 5% of growth will occur within disciplines "A" and "B", respectively. However, this assumption is not a foregone conclusion of the 2020 initiative; indeed, a major topic of discussion was whether to maintain the *status quo* or rather to strategically allocate growth in specific disciplines in proportions different from current allocations.

The development of a model for costs associated with growth began with a detailed consideration of the cost of academic activities. By determining the average course-taking behavior of students in different

disciplines (e.g. how many student credit hours does an average Engineering student take from the Division of Social Sciences in earning their degree), it is possible to calculate, assuming proportional growth in undergraduate student numbers in each college, the number of faculty who would have to be hired in all colleges to deliver the courses needed in the different disciplinary areas while maintaining current student-faculty ratios. By determining the past instruction-related costs for these faculty as well as associated areas of academic support (including salaries for ladder faculty, lecturers, TAs and staff, as well as office support costs), it is possible to estimate the cost per undergraduate student credit hour for each of the disciplinary areas offered. By combining this estimate with the relative proportion of student credit hours students in the different disciplines take (on average) from each college in completing their degrees, it is possible to estimate the academic costs per undergraduate by discipline. Assuming that the current relative proportion of students in different disciplines is unchanged in the future, it is thus possible to estimate the average academic costs per additional student enrolled at UC Davis (the current estimate is \$7,940 weighted average per student). In addition to these academic costs, additional costs include \$977 (for generic institutional support, budgeted at only 66% of the current cost per student for future students to account for economies of scale and new efficiencies) and \$1,412 (for libraries, financial aid administration, the registrar, the admissions office and campus wide programs of instruction), for a total sum of \$10,329 per student for academic costs.

In addition to academic costs, there are other costs that must be included in any model of sustainable growth. These include faculty start-up costs at hiring, future fixed cost increases for salaries and benefits, additional costs for outreach and recruitment activities to attract a high quality pool of national and international students, additional costs that are specific to providing academic support for a greatly increased number of international students (e.g. student advising, ESL courses, international student support services, etc.) and increased costs for expanding instructional activity in areas in which there are already difficulties meeting course demand. Finally, there will be substantial costs associated with capital construction to accommodate growth in the number of students and faculty, both with respect to instructional classrooms as well as research facilities. These costs are challenging to estimate accurately, and are in some cases contingent on decisions yet to be made. For example, how will instruction be delivered in the future? Will there be greater use of online instruction? Will classrooms be used at non-traditional times like weekends? Another major impact on capital costs will be the disciplinary areas into which new research faculty are hired. Is there existing capacity for new faculty in that discipline, or will the next hire require construction of a new building? How many faculty will be hired in high cost disciplines requiring expensive research lab space, as opposed to office space? For the purposes of this report, estimates for capital expenditures are based on average costs of recent construction on campus, current ratios of teaching and research space relative to student numbers, and the assumption that growth will maintain current proportions among the disciplines on campus.

Current estimates indicate that maintaining the faculty-student ratio would require approximately 300 new FTE to support 5000 additional undergraduate students. Based on current campus practices for FTE utilization, which differ between colleges, this would include hiring of approximately 220 research faculty, with remaining funds used for hiring lecturers or for supporting other academic activities. In

additional to faculty, we estimate approximately 400 to 600 non-faculty hires would be needed to maintain current levels of staffing for academic and other support services (not including additional staff supporting externally funded research programs).

The committee notes that the addition of research faculty would likely also result in substantial growth in the number of graduate students. However, for the purposes of these models, neither the revenues associated with graduate tuition nor specific costs related to graduate instruction have been included, since the revenues generated approximately balance the costs incurred under current circumstances. The task force also noted that graduate education at UC Davis was the topic of a very comprehensive recent report from the Joint Administration/Academic Senate Special Task Force on Graduate Education at UC Davis<sup>3</sup>. The issues that might arise as a consequence of increased graduate student enrollment due to the 2020 process must be considered in the light of the recommendations of this report.

The development of a comprehensive budget model for the 2020 Initiative is contingent on assuming the outcome of a number of important choices that the campus must make over the coming years. Two areas for discussion and decision that have the largest impacts on revenues and expenditures at UC Davis are (1) the balance between enrollment of California and national/international students and (2) the balance at UC Davis between academic disciplines that have inherently higher and lower costs (where costs include everything from faculty startup costs to laboratory space requirements for research and teaching).

The task force discussed at great length various options for the balance between California and national/international students, including various strategies employed elsewhere in the UC system (see Table 1 below). At one extreme lies a model (designated "M3") in which there is no overall growth in student number, but rather replacement of California students as they graduate with national or international students who pay supplemental tuition. This model is most often framed in terms of "rolling back" enrollment of California students to the number of students for whom the state is providing support through previous funding formulas (i.e. eliminating "over-enrollment"). In the case of UC Davis, returning to the state-funded level of enrollment would lead to a reduction of approximately 2000 California students, which was why this number was used for models M3 and M5. Obviously, this approach has a very positive impact on net revenue, since tuition income is significantly increased without many of the costs (or opportunities) inherent in growth, such as faculty hiring and capital construction. However, it is an the approach that has the greatest negative impact on access for California students, and with some exceptions task force members were not supportive of this option as an initial strategy.

At the other end of the spectrum from the model described in the preceding paragraph was the hypothetical model proposed at the initial presentation of the 2020 initiative in late 2011 (M1). This model included a growth of about 5000 students, comprised of about 2000 additional California students and 3000 additional national/international students beyond current enrollment. This plan had

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<sup>3</sup> <http://provost.ucdavis.edu/initiatives-and-activities/initiatives/initiative-ja-as-ge.html>

the advantage of substantially increasing access for California students, while still generating additional revenue through the enrollment of a substantial number of students who would pay supplemental tuition. However, after careful analysis of the balance between costs and revenues inherent in this model, using the formulas discussed above, it was determined that the end result would be a campus that was larger in size but still facing roughly the same financial challenges we face today; i.e. revenues exceeded costs by an amount (~\$6 million annually) insufficient to make a significant difference in the financial stability of the university. Although some of the benefits of the 2020 initiative would have been achieved (e.g. a significant improvement in internationalization), the failure to help significantly in addressing the serious budget issues facing the campus led to the rejection of this model by the task force.

Between these two extremes, one can calculate the budgetary ramifications of any number of models involving various ratios of California and national/international students, and various approaches with respect to the absolute number of California students (compare Models M2, M4 and M5). With all other variables held constant, task force discussion revolved around the balance between meeting competing aspirations: providing access to California students, and the financial and other benefits of increasing the representation on campus of students from the rest of the world.

**TABLE 1: Summary of 2020 Undergraduate Enrollment Models**

Model	Possible Scenarios		Current California Resident Undergraduate Enrollment	Current National & International Undergraduate Enrollment	Future California Resident Undergraduates	Future National & International Undergraduates	National & International Enrollment as a % of Total Undergraduate Enrollment at steady state	Estimated Annual Net Revenue at Steady State (millions)
	New National & International Undergraduate Students	New California Resident Undergraduate Students						
M1	3,000	2,000	23,000	1,200	25,000	4,200	14%	\$6
M2	4,500	500	23,000	1,200	23,500	5,700	19%	\$38
M3	2,000	-2000	23,000	1,200	21,000	3,200	13%	\$40
M4	5,000	0	23,000	1,200	23,000	6,200	21%	\$48
M5	3,000	-2000	23,000	1,200	21,000	4,200	17%	\$50

Each of the models proposed presents contrasting benefits and challenges (pros and cons are summarized in Table 2). In models M2 and M4, access for California students is either preserved at current levels or increased modestly, with substantial growth in the number of national and international students. In models M3 and M5, the campus returns to state-funded levels of enrollment with the consequent reductions in access for California residents, but total enrollment growth is more modest (0-2000 students), reducing the need for expensive investments to accommodate growth while still providing significant increases in international enrollment.

**Table 2: Pros, cons and risks of alternative 2020 models**

<b>Model</b>	<b>Pros</b>	<b>Cons</b>	<b>Risks</b>
M1	Greatest increase in access for California students; significant internationalization of campus	Cost due to enrollment of additional California students not subsidized by state support or supplemental tuition.	Fails to significantly increase financial stability of the university.
M2	Modestly increases access for California students; second highest internationalization of campus	High targets for national and international students will challenge undergraduate admissions office; strain on services for international students; highest costs for growth	May not be possible to achieve large enrollment targets for national and international students under “compares favorably” doctrine; financial model will require continued success in recruitment and retention; construction and hiring costs for high growth may be underestimated.
M3	No growth minimizes need for large investments in construction and faculty recruitment.	Major decrease in access for California students	Lack of support due to significantly decreased access for California students
M4	No decrease in access for California students; second highest level of revenue generated at steady state	No increase in access for California students; high targets for national and international students will challenge undergraduate admissions office; strain on services for international students; highest costs for growth	May not be possible to achieve large enrollment targets for national and international students under “compares favorably” doctrine; financial model will require continued success in recruitment and retention; construction and hiring costs for high growth may be underestimated.
M5	Highest level of revenue generated at steady state; lower costs than some other plans for construction and hiring due to minimal net growth	Major decrease in access for California students	Lack of support due to significantly decreased access for California students

The task force members, while agreeing that Model M1 failed to achieve the desired goal of improving the financial stability of the university, varied in their preferences for Models M2-M5. The task forces faced a difficult choice between competing benefits: continuing to provide maximal access to the residents of California, and fulfilling our commitment to providing an excellent educational experience to all of our students through securing the financial future of the university and providing the benefits of a more internationalized campus environment.

Each of the models makes different predictions regarding net steady state revenue at the end of the period of growth in 2020, after all costs of implementation have been accounted for and all the additional students are enrolled, ranging from \$38 million to \$50 million per year. These amounts should be considered very rough approximations, given the large number of assumptions and estimates that are inherent in modeling of this type, but they do give an approximation of the relative magnitude of revenue generated as well as the relative impacts of different approaches. The task forces recognize that there will be strong views regarding which (if any) model should be implemented, and anticipates hearing the thoughts of the broader campus community on these issues.

It is critical to note that these estimates are based on continuation of past campus practices, and on the assumption that there will be no changes in the future. For example, it makes the assumption that there will be no substantial changes in the relative proportions of different academic disciplines over time. Any deviation from this assumption could have substantial impacts on the net revenue, given that specific disciplines are inherently more or less expensive. Given an approximately two-fold difference in cost per student for academic activities between the highest and lowest cost academic disciplines, it is clear that choices the campus makes about amount of growth or changes in the relative proportion of new students pursuing specific disciplines could have a significant effect on the net financial impact of increased enrollment.

For the purposes of this report, the task force has assumed that there will be no changes in disciplinary balance; i.e. that the ratio of growth students in different disciplines will be proportionate to the current balance among our students. However, maintenance of this balance should not be considered to be completely independent of changes in the national origin of our students. It is anticipated that certain adjustments may be required if the 2020 process results in a substantial influx of international students, whose interests may not be distributed among disciplinary areas in the same proportions as those of California and national students. Data from other universities indicates that international students tend to be over-represented in disciplines including business and engineering, which may have ramifications for overall admissions in the years ahead.

Disciplinary balance will be an ongoing topic of discussion, and may be impacted by many other variables including budget circumstances, faculty and student interests and the development of new areas of societal interest and need. One important issue raised by the task force was the need for increased attention to student outcomes with respect to job placement and other metrics of student success, particularly in light of the current campus objective of being more student-centered in our thinking; this might also lead to some shifts in disciplinary balance among the students.

The task force does not underestimate the complexity of developing a model that accurately predicts the budgetary impacts of a growth scenario of this magnitude over the better part of a decade. Given the rate of change in the university's revenue streams and costs over the past decade due to circumstances largely beyond our control, and the difficulty of precisely predicting the magnitude of many large investments such as the cost for capital construction needed to support faculty research and classroom teaching, it is clear that any growth model will need to be both flexible and subject to annual reevaluation and adjustment if necessary. The ultimate enrollment targets are estimates, and will have to conform to both fiscal realities as well as the success of our recruiting efforts.

Due to the complexity of the process and the many variables involved, there is no simple algorithm that can determine with great precision the outcome of any particular model for 2020. However, the analyses developed by the Office of Budget and Institutional Analysis are the best estimates currently available for predicting costs and revenues associated with increases in enrollment. The task forces spent many hours considering these issues, and the members of the task force, as well as staff from

Budget and Institutional Analysis, will be a valuable resource in assisting the campus community and senate leadership in understanding the 2020 initiative and the choices that must be made.

Ultimately, budget planning must not be the driving force in defining the goals and aspirations of the campus; rather, the campus should develop a strategic vision based on its aspirations, and then let that vision guide whatever actions may be needed to realize our goals. Likewise, the relative financial advantages of the various growth models must not be allowed to drive any compromises in relative admissions standards for California and national/international students; the task forces agree that there must be strict comparability between these two groups of students in admission to UC Davis.

With respect to the issues discussed in this section, the task force recommends the following:

- Enrollment models must be developed that generate sufficient resources to remedy extant academic and physical infrastructural problems resulting from recent and future budget cuts, while also supporting the investments needed to provide an outstanding experience for the increased number of students enrolled in the future.
- The task force recommends that any model put forward should focus first on increasing revenue rather than cutting costs. If proposals to decrease costs are made, they should be very specific and take into consideration the considerable cuts already made across the campus due to recent budget reductions.
- A detailed analysis should be completed of several of the major investments proposed in this document (e.g. the substantially increased recruitment efforts required to generate a deeper pool of national/international applicants), so that the revenues generated by different models can be compared accurately to the real costs of the recommendations made.

***If growth occurs, what are the major issues involving recruiting, admissions and enrollment management that must be addressed?***

Even before the announcement of the 2020 initiative, the campus had considered plans to modestly increase the number of national and international students as part of the 2010-2011 and 2011-2012 budget strategy. This effort began in earnest with the arrival of the new Director of Admissions, who has already begun strengthening recruitment efforts to identify and attract outstanding applicants from California, the rest of the nation and the world. The recruitment efforts in California are directed primarily towards increasing both the excellence and diversity of our entering student cohorts, rather than increasing the size of these groups. For national and international students, these initial efforts and the growth proposed in the 2020 initiative are focused on both excellence and growth. The rising prominence of UC Davis and its programs are of great benefit to our recruiting efforts, but the campus must make substantial investments to ensure that we can attract a sufficient pool of high quality applicants from diverse regions of the world. This will entail effort on many fronts, from investments in campus outreach overseas to the development of programs that will be of special interest to international students in the face of rising competition from other universities for outstanding students.

Examples that leverage the research strengths of UC Davis might include “majors of the future” such as those relevant to global issues like sustainability, food, energy and health. Members of a panel of current UC Davis students, presenting to one of the task forces, also expressed a strong interest in the development of a traditional business major at UC Davis, which they felt would be of substantial interest to many of their peers as well as to national and international students (a view strongly shared by the Director of Admissions).

Although it is understood that much more aggressive recruitment efforts will be needed, the task force expressed concerns about the use of independent recruiting agents overseas, including how to ensure the ethical behavior of these agents and how to ensure the quality of the students recruited in this manner. The campus has explored the use of alternative models, including such approaches as the establishment of overseas offices representing UC Davis, the development of relationships with accredited recruiting agents and the establishment of partnerships with specialized agencies like the INTO program<sup>4</sup> that represent multiple universities with large scale overseas recruitment capabilities.

To address recruitment issues, the task force recommends:

- Significant additional investments should be made in the recruitment activities of the Office of Admissions and the colleges in order to increase the pool of national and international applicants sufficiently to permit increased enrollment while maintaining comparability with California applicants in the admissions process.
- The faculty should be encouraged to accelerate the development of academic programs that would increase the ability of UC Davis to compete for top international and national applicants, and the administration should ensure that the investments and resources necessary to support these programs are available.

The task forces spent considerable time reviewing the admissions process at UC Davis, in order to develop a realistic understanding of the efforts that would be required to substantially increase enrollment of national and international students. Director of Admissions Walter Robinson and his staff presented a detailed overview of the holistic admissions review process used for the first time this past year. A detailed description was presented of how applications from international students were comparatively evaluated, given that there are certain metrics not readily available for these students (e.g. performance in some A-G courses).

One of the most critical issues raised, and the basis for much discussion and one of the task force’s guiding principles, was the concept of “compares favorably”, in which BOARS stipulates that the admitted national and international students will compare favorably to admitted California residents at each campus, within the context of holistic review. The task force was unanimous in its opinion that this principle should be firmly upheld, and that applications from national and international candidates

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<sup>4</sup> <http://www.into-corporate.com/>

should be treated fairly but without special preference. Substantial efforts and investments will be required to develop a national and international pool of applicants much larger and deeper (in quality) than the current pool, in order to make possible significantly increased enrollment of national and international students while adhering to the “compares favorably” principle.

A second issue is the impact of selectively increasing national and international enrollment on the enrollment of underrepresented, disadvantaged and first generation students. Concern was expressed that a targeted increase in recruitment of national/international students might diminish the number of students admitted from these groups, and that additional targeted recruitment efforts would be needed to ensure a strong pool of applicants.

A third issue discussed was how to deal with the varying capacities of specific colleges to accommodate substantially increased numbers of admits, given that the admission of international students in numbers not before seen at UC Davis might impact the distribution of students between the colleges. In the first instance, international students may have different patterns of preference for specific majors than domestic students. The task force reviewed data about the origin and admission trends of international students in general and current international students at UC Davis. About half of existing undergraduate international students come from Asia, with China being the single largest country of origin. Economics and managerial economics are the majors with the largest current enrollment of international students at UC Davis. National data indicates that business, engineering, math/computer science, and life/physical sciences & social sciences are the most popular majors for international students.

With respect to admissions, the task force recommends that:

- The principle of “compares favorably” should be strictly upheld in all admission activities.
- Continued emphasis should be placed on recruitment and admission of students from underrepresented and disadvantaged backgrounds, and careful attention should be given to monitoring the impacts of the 2020 process on the number of these students enrolled at UC Davis.
- The ongoing impacts of the 2020 process on relative admission targets for different schools and colleges should be carefully monitored and efforts made to ensure appropriate distribution of students between different units.

Maintaining optimal enrollment levels in each college and school of the university is a complex process. Student numbers reflect not only the admission of new freshman and transfer students, but also differences in the fraction of admitted students who matriculate (the “take rate”) as well as student behavior after matriculation; e.g. retention in the major/college and at the university.

Predicting the quantitative relationship between application, admission and enrollment numbers is an imprecise science. The algorithms that predict steady-state enrollment given specific student numbers

admitted are based on information from prior years, and the ability to predict enrollment accurately is dependent on stability in student behavior with respect to the acceptance rate as well as post-matriculation behavior. Although several years of data are averaged to minimize the impact of transient changes, the enrollment models are nonetheless sensitive to factors such as changing student demographics. For example, current historical data reflects past cohorts with a relatively small proportion of international students, and it is likely that this group may differ in patterns of behavior relative to domestic students with respect to factors such as acceptance rates, disciplinary (major) preferences, and retention and time to completion at UC Davis. Sometimes changes can occur without an obvious explanation; e.g. for the entering class of Fall 2012, the proportion of admitted students who accepted offers to attend UC Davis rose significantly but unexpectedly in certain disciplines such as engineering. This uncertainty makes the process of aligning college demand and capacity with student supply problematic in some cases, and the move to substantially increase international admissions may make this even harder. It also complicates predictions regarding the magnitude of investments needed to accommodate growth, since the cost of offering some disciplines significantly exceeds the cost of others.

Enrollment management is dependent on complex and interacting forces, and it will be essential to constantly monitor the impact of specific policy changes on student behavior. Changes in the demography of the entering student class; changes in advising, support services, and courses available to matriculated students; and changes in the enrollment capacity of each school and college must be continuously evaluated to maintain the appropriate balance. Factors impacting highly recruited international students, with whom the campus has relatively limited experience, must be an area of particular focus.

It is unclear whether the aggregate behavior of international students after admission will parallel that of domestic students, whose behavior is complex and involves substantial movement between majors and colleges. Since current enrollment practices have evolved in a population of primarily domestic students, this will be an issue that will need careful attention moving forward in order to avoid unanticipated shifts in student distribution between colleges.

A number of enrollment growth scenarios have been considered by the task force, with varying proportions of California, national and international students. Achieving the final targets proposed for 2020 will require an integrated approach to recruitment, admission and enrollment management, and success will likely require an iterative approach as the process proceeds and as new data on student behavior is gathered from each entering cohort.

It has been noted that the number of international and national students admitted to and enrolled at UC Davis has already begun increasing over the past two years. This does not represent a premature initiation of the 2020 process, but rather an intentional increase in enrollment focused on generating \$10M in revenue to offset a specific budget cut in 2010-2011. Implementation of the 2020 process is

contingent on the outcome of campus discussions and additional consultation with the Academic Senate that will occur during Fall 2012.

To address enrollment issues, the task force recommends that:

- A comprehensive effort should be made to understand the patterns of student choices after matriculation so as to better predict which colleges and departments will be most impacted by increases in the number of students (particularly international) admitted. This will require continual updates as the number of international students increases, and should lead to more precision in predicting where growth will occur.
- Enrollment scenarios reflecting different options for growth should be created and used to help predict relative impact of different models, recognizing that decisions about the balance between growth in different schools and colleges have not yet been made.
- There should be an ongoing effort to monitor the enrollment preferences and academic outcomes of each new cohort of undergraduate students as the 2020 process proceeds to optimize the quality of the information supporting future decisions about admissions.
- Plans should be developed for the space and facilities needs for programs anticipated to grow disproportionately as a result of increased international student enrollment.
- The model for any growth initiative proposed should address the quality of the student experience in all important aspects, and every effort should be made to avoid further increases in student fees and tuition.
- The 2020 leadership should redouble its efforts to reach out to student constituencies in the fall to explain and seek student input on the issues surrounding the 2020 initiative.

***What specific issues will arise from a substantial increase in the number of international students and how should these be addressed?***

The task forces embrace the goal of internationalization of the UC Davis campus. Although the campus has grown in the past at rates approaching those anticipated in the 2020 initiative, the proposed growth in enrollment of international students is unprecedented. To ensure that these students enjoy academic success and a positive experience during their time at UC Davis, it will be essential that the campus undertake a significant planning effort and make significant investments to support those needs unique to international students on campus. In some cases, national students may likewise require specific assistance; however, the committee was particularly concerned about issues facing international students.

The primary office for addressing the specific needs of international students, SISS (Services for International Students and Scholars), must be expanded to meet the needs of the growing cohort of students they will serve. SISS should work closely with the Office of Admissions and the Advising services

on campus to ensure a smooth handoff of international students between admission, arrival on campus, registration and enrollment and initiation of coursework in a major.

Likewise, the campus programs providing supplementary instruction in speaking, reading and writing the English language (often referred to as ESL courses) must be coordinated and expanded to address what will likely be a substantial increase in services required; this is an example of an area that is already under stress even before the onset of the 2020 process due to the number of domestic students in need of these courses, as well as relatively small recent increases in international enrollment. Skepticism was expressed about the extent to which TOEFL (test of English as a foreign language) scores accurately reflect international students' ability to be successful in a university environment, particularly in the area of oral language skills, raising concerns that needs for ESL courses may be more substantial than one might anticipate. Anecdotal evidence from the relatively small number of current international students suggests that despite strong academic credentials, language skills are often a challenge for international student success.

The campus has recently evaluated proposals for supporting increased ESL instruction, and has begun work with a consortium including University Extension, the Department of Linguistics and other partners to develop an expanded ESL program. In addition to expanding this program, other issues arise. For example, who should pay for ESL instruction? Should this be an optional, supplementary part of a UC Davis education, subject to additional fees, or should it be part of the standard curriculum covered by regular tuition? Is there a possibility of using information technology-driven approaches to enhancing ESL instruction, or are traditional approaches superior? What is clear is that appropriate linguistic and cultural skills will be essential to the ability of many international students to succeed and thrive at UC Davis, and that the values of internationalizing the campus will only be realized if all students are able to fully participate in the academic and social culture of the university. Concern was expressed that admission of students with insufficient language skills would lead to serious problems in academic performance, and it is critical that admissions and the ESL program work together to ensure that all students are sufficiently supported. It is critical that the ESL program ensure that students are prepared for the rigors of upper division courses; it is currently the impression of some on campus that certain students are still unprepared even after taking ESL courses offered at Davis or elsewhere.

Cultural integration is as important as academic preparation in ensuring a positive experience for international students – we need to be proactive in developing activities that help students interact with each other and feel welcome on campus and in the community. Planning is underway for development of a new international student center at the edge of campus to provide academic and other support to these students, and to develop a venue that can be used to increase the opportunities for interaction between domestic and international students, staff and faculty. This works both ways: in addition to easing the entry of international students into life in Davis, it is also essential that we open channels of communication that ensure that a rapid increase in the numbers of international students does not lead to “culture shock” for the campus and community. Some concern was expressed about the likelihood that a significant proportion of international students will be from higher socioeconomic backgrounds,

and that this might lead to a sense that they were being “favored” by the campus in some way. It will be important to ensure that all students feel valued as members of the campus community, and that there will be an appreciation of the important role played by national and international students in creating a sustainable, interesting and diverse campus community.

Finally, the task force brought up the issue of increasing the economic diversity of admitted international students. Tuition discounting can be used to provide assistance for economically challenged international students; however, this approach creates additional costs, and financial aid for international students will have to be provided judiciously. There is certainly also an opportunity for philanthropy in this respect.

To address these issues, the task force recommends that:

- Sufficient resources must be committed to ensure full support for activities critical to international students (e.g. the services provided by the SISS).
- Appropriate resources must be provided to ensure access to ESL courses sufficient to support academic success throughout the student experience for all students. The campus and ESL program should explore funding alternatives and best practices at comparison institutions with large international enrollments.
- Specific models for pre-matriculation programs for incoming international students should be explored, (e.g. extended summer advising and orientation programs) to deal with academic, language and cultural issues and to ensure that students are prepared to excel as they begin the academic year.
- The Office of Development and the Office of the Vice Provost of University Outreach and International Programs should collaborate to aggressively pursue philanthropic giving for both need-based and merit-based scholarship funding for all students.
- Consideration should be given to the recommendations presented in Part II of the June 2012 report of the Provost’s International Advisory Committee<sup>5</sup> with regard to support of international undergraduate students at UC Davis.

***How can the campus improve the success of all of our students and increase the quality of their experience against a backdrop of rising enrollment and falling state support?***

The task force was deeply concerned about the quality of the student experience at UC Davis, particularly with respect to issues that impact academic success. One of the first experiences that sets the stage for academic success is summer orientation, and recent growth in student numbers combined with budget cuts have already stressed the orientation system with respect to facilities, financial support

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<sup>5</sup> <http://provost.ucdavis.edu/initiatives-and-activities/initiatives/init-adv-committee.html>

and staffing. Additional enrollment, and particularly increases in the number of international students, will require additional funding for this self-supporting auxiliary program.

Of particular concern is orientation for international students, who arrive in general just before classes start and who may have the most significant challenges in becoming oriented to campus life. It was noted that there will be a special session this year for international student orientation, and residence hall advisers are receiving special training for working with international students. Additional training in cultural competency will be provided to residence hall staff; it was noted that this might also be useful for departmental and college advisers. It is critical that these efforts be greatly expanded and accelerated if large numbers of international students are to begin arriving in upcoming years.

A major academic issue discussed by the task force was the importance of advising to student success and the quality of the student experience at UC Davis. From the day students arrive on campus, advising has a critical impact on academic planning, academic performance, progress through the degree to completion and success in identifying and preparing for postgraduate activities. Advising is delivered by dean's offices, departmental offices, individual faculty, student peer counselors and various offices administered by Student Affairs (e.g. professional school advising), as well as online resources.

It is difficult to overemphasize the importance of timely and effective advising on the quality of the student experience, academic success and time to completion, and it is a high priority of the task force to ensure that 2020-driven growth in the student population has no negative impact on the quality and quantity of advising services available. Indeed, the task force expressed a concern that recent budget cuts, coupled with recent increases in enrollment, may have already led to situation in which advising resources are in need of significant investment to prepare for any additional enrollment growth; exploring this may require a specific work group or task force. There are already unsustainable loads on some campus advising staff; this should be addressed before more students are admitted. While there is no fixed student-advisor ratio that is defined as optimal in all contexts, it should nonetheless be the case that all students across campus should have equal access to advising services, independent of the nature or size of their major.

The students on the task forces and on student panels presenting to the task forces expressed significant dissatisfaction with the current suite of academic web-based services dealing with issues such as course registration, financial aid accounting, wait list management, and other related issues. It was felt that the web services were poorly integrated and overly complex and that one had the sense of being shuttled between different systems that should be seamless but were instead distinct and unconnected.

Of particular concern to the task force was the impact on advising services of targeted increases in the enrollment of international students. A panel of campus advising staff members noted that advising of international students was in many cases more time consuming (up to 50% more) than that of domestic students, due to cultural and linguistic differences. Furthermore, it was felt likely that international

students might have increased needs for certain types of advising due to the inherent stress of being so far away from home for an extended period of time. There was therefore concern that 2020 growth-related augmentation of advising staff based on current student/advisor ratios might seriously underestimate the load conferred by the needs of a new, largely international cohort of students.

In addition to supporting the general advising needs of these students, it was felt that the extant offices like Services for International Students and Scholars (SISS), specifically tasked to support international students, would need to be significantly augmented to ensure their ability to provide necessary services. Wes Young, the Director of SISS, noted that international students initially seeking technical advice on specific topics like visa and immigration issues frequently asked his office for academic advising support. He noted that it will be important to coordinate the advising needs of these students between his office and other campus advising staff. The task force noted that Part II of the June report of the Provost's International Advisory Committee emphasized in detail many of the points mentioned here and above with respect to the importance of investments needed to support an increased cohort of international students at UC Davis.

To address these issues, the task force recommends that:

- Sufficient investments should be made to ensure a high quality orientation experience for all incoming students, which may require campus augmentation of this previously self-funded program.
- A comprehensive review should be completed of current advising resources to ensure the highest quality of counseling and support services for our existing students and to identify any investments needed to prepare a solid foundation for growth.
- Increased investments in advising services should reflect the special needs of international students with respect to certain advising services required, and should also reflect the differentially increased workload that will fall on the advising staff due to the special challenges inherent in provided academic advising to international students.
- Expanded access to advising and more proactive advising should be a priority across the campus, and investments should be made to support student success through increased staffing, better use of IT solutions (e.g. automated notification to advisers from the Office of the Registrar regarding students showing serious declines in academic performance), and better intra-campus communication in support of advising between the colleges, departments and other advising entities under the auspices of Student Affairs such as residential and professional school advising.

***What investments must be made in capital projects to maintain excellence as enrollment increases?***

**Research space.** The campus has many buildings that because of age need major renovations in order to effectively serve teaching and research needs. Prior to the most recent economic downturn, the State of California provided roughly one-third of the total campus capital budget, and more than three-

quarters of capital funding for core instructional and research facilities. The last year that the campus received a capital funding appropriation from the state was 2007/2008 (for the Veterinary Medicine 3B building). As with funding for the operating budget, the ability of the state to fund capital construction remains at best uncertain.

The campus has access to debt funding for capital projects, whether new facilities or renovations, as long as the campus is willing to set aside operating funds annually for repayment of debt. Current interest rates and typical borrowing structures require approximately \$1 million annually for 30 years to repay every \$14 million in current year capital costs. It is important to remember that debt funding committed for capital construction or renovation presents an opportunity cost to the operating budget in future years. The 2020 financial model currently includes generalized estimates of future additional capital costs based on increases in the quantity of classroom, academic office and research space in direct proportion to the growth in student number relative to current levels.

In addition, many successive years of inadequate and unpredictable funding for facilities maintenance has created a large backlog of deferred maintenance. The annual cost of operating and maintaining space on campus ranges from about \$6 per square foot for simple office space up to more than \$12 per square foot for complex and technical laboratory space. Actual funding levels are substantially below these levels. The 2020 financial model includes these current estimates for assumed new facilities, but does not include any additional funding to address existing deferred maintenance.

Finally, it is unclear how effectively space is being utilized across the campus. As with budget resources, the Provost ultimately assigns space to Schools, Divisions, and Colleges. However, the central campus does not routinely assess or audit space utilization except when new space requests are made. In most cases, space-related costs including construction, maintenance and utilities are borne by the central campus, and thus campus departments are not particularly incentivized, at least from a financial perspective, to use space efficiently. Thus, it is possible, though not at all clear, that the campus may be able to incrementally absorb some additional enrollment growth within existing space, if incentives can be put in place to encourage more efficient space utilization.

**Teaching space.** As enrollment has grown, classroom space resources have become increasingly impacted. This is particularly true for the very high enrollment courses with a laboratory component (e.g. the Chemistry 2 and Biological Sciences 2 course series), where the necessity of aligning lecture and laboratory schedules, combined with the current demand on the few very large classrooms, has led to a situation in which it is very difficult or no longer possible to meet student enrollment demand. Classroom utilization statistics suggest that among standard general-assignment classrooms, small rooms (16-25 seats) and large rooms (301+) are operating above their optimal capacity. For teaching laboratories, mid-sized facilities (16-25, and 26-40 seats) are also operating near or above capacity. In comparison to other universities, UC Davis has notably fewer small classrooms, but has comparable numbers of larger classrooms on a *per capita* basis; however, detailed information was not available for comparison universities regarding how their space was utilized with respect to class size and teaching

schedules. The largest lecture halls on campus are in almost continuous use Monday through Friday from 8:00 AM to 9:00 PM. Mid-sized lecture halls (between 100 and 300 seats) have some additional availability during off-peak times (peak time is between 8:00 AM and 3:00 PM), particularly on Fridays. Student panels noted in their presentations to the task forces that there was a perception that many of their courses are over-crowded, and that access to certain large enrollment courses was a serious problem for them.

A number of strategies can be pursued to accommodate the need for additional classroom space associated with future enrollment growth (and to deal with current needs). Three general approaches were discussed by the task forces: increased efficiency in the scheduling and use of current space, reductions in classroom demand through strategies moving some instruction outside of the classroom, and construction of new classroom facilities.

Current classroom utilization statistics reveal substantial unused capacity during times that are not popular with faculty or students; e.g. late afternoon and evenings (particularly on Fridays), although departments are required to schedule at least 25% of undergraduate courses they offer in off-peak times. There is likewise little instructional utilization of classrooms on weekends. However, there was little enthusiasm for increasing class offerings at non-standard times, although the task forces recognize the budgetary advantages that might come from avoiding new classroom construction by scheduling courses in such unpopular time slots. Concern was expressed about evening classes conflicting with student involvement in extracurricular organizations and activities and with faculty members trying to juggle work-life balance. Some additional capacity might be gained by discouraging “non-standard” class schedules, such as Monday-Wednesday courses, which tend to create unused time slots on Fridays. It was also suggested that the registrar should consider prioritizing the assignment of large classrooms to courses that are required for student progress in their majors to minimize impacts on time to degree.

A second strategy discussed was the idea of moving some class meeting times out of the classroom through use of online instructional methods. Particular attention was given to hybrid course models, in which students spent some fraction of the course in the classroom, but other portions engaged in online learning experiences. For example, one approach offers a portion of the course material online and then offers hands-on application and case studies in the classroom, thus focusing instructor efforts on aspects of the course that go beyond delivery of information. In some instructional models, this approach would reduce the amount of classroom space required relative to traditional courses, since the classroom would only be required for a fraction of the course time. Of course, in cases where the online component is supplementary to, rather than in place of, the “in class” components of the course, this reduction is lost.

Although the task force recognizes that effective use of internet-based learning activities may in some cases enhance the educational experience for students, and appreciates the need to consider ways to more cost-effectively maintain the quality of the student experience at UC Davis, there was a sense that this approach would not obviate the need for additional classroom construction, for two reasons. First,

there was a sense that many faculty still had reservations about moving towards increased use of online pedagogy, and that it would take significant time and resources to develop enough courses of this type to have a significant impact on classroom utilization. Second, both students and faculty expressed serious concerns about the impact of online learning on opportunities for student-faculty and student-student interactions; several students noted that direct interactions with the faculty were one of the primary reasons they attended a premier institution like UC Davis. It was noted that changes in curriculum and pedagogy need to originate with the faculty and cannot and should not be imposed in a top-down manner. In recognition of the strong viewpoints on these issues, the task force encourages the campus to proceed cautiously and thoughtfully with respect to attempting to incentivize faculty or student behaviors that might represent dramatic departures from long-standing campus norms and practices.

Although the opinion was expressed by some that the future of instruction is not likely to involve large lecture hall formats, many others strongly believe that an urgent need for additional large lecture format classroom space exists already, and that extending the hours of use of existing classrooms, changes in pedagogy and increasing online instruction, if they happen, will not happen fast enough to address existing deficiencies or to deal with the initial growth in student numbers associated with the 2020 process. Greatest attention was focused on the need for an additional large classroom (>500 seats), although other needs were noted. It was also suggested that in trying to better anticipate and explore the pedagogies of the future, the campus should strongly consider pilot construction projects to explore more flexible classroom designs optimized for active learning, such as those recently constructed at the University of Minnesota.<sup>6</sup>

In addition to classroom needs related to formal courses, there was additional discussion of need for more academic learning space. It was suggested that the campus consider repurposing some existing spaces to create more flexible interaction and learning spaces, e.g. student use of the library as a study space appears to be driven as much by the availability of electrical outlets to charge laptops as the fact that it is a good study space. Another example of a creative use of space is the “octagon” in the Activities and Recreation Center lobby, which through use of portable walls has transformed a space that was largely unused into a popular informal student gathering and study space.

A final important need mentioned was for additional space for student summer orientation programs, which have reached capacity at current levels of enrollment. Orientation is critical for the support of entering students, and this issue must be addressed before the size of the incoming class increases significantly.

To address space-related issues, the task force recommends:

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<sup>6</sup> The recently constructed Science Teaching and Student Services building at the University of Minnesota: [http://www1.umn.edu/news/news-releases/2010/UR\\_CONTENT\\_248261.html](http://www1.umn.edu/news/news-releases/2010/UR_CONTENT_248261.html)

- The campus should explore ways to incentivize more efficient utilization of existing space. The task force does not make specific recommendations, however possible strategies for further study include:
  - Increase teaching during off-peak hours.
  - Discourage use of classroom spaces in non-standard time slots (e.g. MW classes)
  - Incorporate the cost of space into the new campus budget model.
  - Establish common space standards and metrics that acknowledge discipline-specific academic, research and administrative needs.
- Analysis should be carried out to ensure that a lack of facilities does not limit student access to courses needed for timely progress to graduation.
- The campus should set as a top priority the elimination of waiting lists for impacted courses that are required for student progress towards their degrees, and should commit sufficient revenues from growth to ensure that this problem does not recur.
- Invest in classroom upgrades where needed to bring classrooms up to a common standard of quality, including classroom technology. Where appropriate, such upgrades should create more flexible spaces with the ability to accommodate various pedagogical and learning styles.
- The Registrar should revisit the policy of classroom assignments starting anew each quarter. Ongoing priority should be offered to large lecture courses (greater than 300 students) with laboratory & discussion sections, and courses designated by the Vice Provost of Undergraduate Education as being critical to reducing time to degree.
- Options should be explored to increase utilization of classroom facilities. Examples may include creating incentives for faculty to explore new pedagogical approaches or expanding use of online learning, or creating financial incentives for via the campus budget model for courses offered during non-peak times. While exploring such incentives, the primary focus should be on the quality of the student experience and on supporting approaches have worked in the past.
- Pilot projects should be established to construct classroom space designed for use of active learning approaches so that interested faculty could experiment with new forms of pedagogy.
- A project advisory committee (PAC) should be charged to program and plan additional classroom space, including at least one 500 seat lecture hall, prior to any significant increase in 2020-related student enrollment. The PAC should also evaluate the need for additional classroom and laboratory facilities. In conducting this planning, the PAC should consider re-purposing existing space as one strategy to provide additional classroom space.
- The 2020 financial model should acknowledge the need to increase funding for deferred maintenance, including remaining seismic and ADA issues with existing buildings.
- The space needs of summer orientation should be defined and addressed to support this key program supporting academic success.

**Student Housing.** The tradition at UC Davis has long been that freshman live on-campus in the resident halls, then move to mostly off-campus housing in the city of Davis. Indeed, the UC Davis Student Housing program guarantees residence hall housing for all 1<sup>st</sup> year students and approximately 91% of

first year students take this offer. Studies show improved academic success for students living in a residence hall program.

Recently, the demand for housing guarantees for second year students has increased significantly – perhaps as much by parents as students themselves – and is now also part of the student housing offerings. Only about 5% of second year students take this offer and return to live in the residence halls.

Guaranteed housing for incoming transfer students is provided using a master lease of apartments in Davis which are leased back to transfers. Approximately 25% of transfer students take this offer. UC Student Housing is distinct from three privately managed housing projects on campus: Primero Grove, Russell Park, and West Village.

UC Davis Student Housing is in the process of implementing an ambitious plan to renovate and/or replace most of its existing housing stock. Within the Student Housing Master Plan, the campus has flexibility in implementing future housing projects to meet demand from projected levels of undergraduate growth, with Orchard and Solano park redevelopment, West Village, Tercero Phase 4, and Castilian redevelopment all providing options for varying amounts and types of housing. A privately owned group housing property on Oxford Circle may be a future strategic acquisition if further housing needs are identified.

Housing needs at the Sacramento campus have from time to time been considered, but are not an active part of Student Housing's planning.

With respect to student housing, the task force recommends:

- The campus should conduct additional analysis and research to ascertain the most important housing attributes and amenities for students, especially international students. Evaluate the need for additional centralized group living (e.g., fraternity & sorority) housing on campus.
- A range of housing types, including a range of price points, should be provided to accommodate the varied needs of students.
- Residential integration of national and international students with California residents should be encouraged while acknowledging and accommodating particular housing needs and desires of various student sub-populations.

**Student Services Facilities.** UC Davis offers a tremendous variety of student services and facilities, including student unions, community centers, recreation facilities, and club meeting spaces. Student services facilities are places vital to the student experience of the campus community and, thus, a long-term emotional connection to the campus. In general, students appear to be mostly satisfied with the type and variety of campus life programs.

That said, students on the task forces and in student panels that presented to the task forces did note some frustration with insufficient food facilities on campus, long lines at the bookstore at the beginning of each quarter, and long wait times at the Student Services offices in Dutton Hall. These bottlenecks appear to be primarily related to peak usage times (e.g., the Coffee House right at noon and the bookstore during the first week of classes); nonetheless, these are areas of concern and strategies should be considered to try to mitigate these frustrations.

Students are also interested in creating more informal lounge and study spaces. Access to electrical outlets for charging laptops and other electronic devices is often seen as a crucial element of student study space.

Student services facilities are almost exclusively funded with student fees approved by student referenda. An increase in enrollment would proportionally increase student fee revenue, which could be used to address the incremental demand on existing facilities created by growth. Alternatively, some students suggested that growth might provide an opportunity to lower fees as the number of students increases; that is, to leave existing service facilities unchanged (and presumably more crowded), and thus reduce fees by spreading the current cost among more students.

It may be time to consider alternative funding strategies for new or expanded student services facilities. In an era of steeply increasing tuition rates, students may be decreasingly supportive of new or increased fees.

The task force recommends:

- The campus should discourage new student fees to fund facilities, and consideration should be given to reducing per-student fees if future enrollment growth generates net new student services revenue without creating a need for additional capital projects.
- The office of Development and Alumni Relations should work to increase philanthropic giving to support new and expanded student services facilities.

***How will faculty hiring be aligned with academic needs to maintain excellence as enrollment increases?***

Faculty FTE (full-time equivalent) refers to the authority and accompanying budgetary resources necessary to hire new tenure-track ladder rank faculty. The task force spent considerable time researching and discussing issues surrounding FTE allocation among the several Schools, Divisions, and Colleges. In particular, the Provost sought input from the task force on how he might think about distributing future FTE in the event that the campus undergoes significant growth.

Past rounds of FTE allocation (or de-allocation in the case of recent budget reductions) have been based on various combinations of workload factors, new initiatives or opportunities, and a reserve for the

Provost's strategic decisions. Workload factors have at various times included student credit hours, number of majors; research expenditures; and the number of graduate students mentored and PhDs awarded, as well as other metrics. In addition, past FTE allocations have sometimes been distributed differentially among colleges to adjust for historic imbalances.

In identifying needs to hire new faculty, departments generally start by determining areas of research need consistent with departmental and School/Division/College academic plans, then align new faculty with teaching needs. At a major research university like UC Davis, such emphasis on research is typical and appropriate. The task force notes that in contrast, recent reductions in faculty positions necessitated by budget reductions have been effected largely opportunistically based on retirements or resignations, and thus in some cases have created gaps in important disciplinary areas that are not consistent with units' academic plans. As the campus contemplates future allocation of FTE, lack of FTE in critical areas should be considered as one criterion.

The task force explored a number of metrics and indicators the Provost might factor into determining how best to allocate future FTE. While acknowledging that FTE allocation should always emphasize research, the task force also believes that stressing the importance of high-quality undergraduate teaching should be more explicitly featured in future FTE calls. For example, insofar as general education requirements are unevenly distributed across colleges, some element of FTE allocation could account for such discrepancies. However, it was also noted that student-faculty ratios (SFR) as a workload measure may be skewed by the differing amount of service teaching provided by some colleges compared to others. Also, research-active faculty and those who provide more graduate instruction and mentoring have less time available for undergraduate instruction; thus SFR is an incomplete measure of workload, and therefore shouldn't be unduly weighted as a factor in FTE allocations. In addition, graduate teaching will also need to be taken into account.

The task force debated increasing the use of lecturers with security of employment (SOE) as part of an overall faculty investment strategy. This strategy might be a particularly good response to improve access to high demand gateway courses by employing faculty whose workload is more heavily focused on teaching. In addition, addition of SOEs with higher teaching loads may also increase success in recruiting research faculty by enabling departments to differentially allocate teaching loads among SOEs and research-active faculty. Moreover, many research grants these days include deliverables relating to outreach, communication and education; SOEs with expertise in teaching may in fact help strengthen research proposals by adding pedagogical expertise to proposed research teams.

On the other hand, concern was expressed about the possibility that increasing use of SOE lecturers may diminish the value of being taught by research-active faculty because research informs teaching. Some expressed concern about creating a "second tier" of faculty not engaged in research. Finally, some concern was expressed about the potential for SOE lecturers to displace graduate student opportunities for teaching. Certainly, it is not foreseen that the number of such (P)SOE appointments would ever be large. Ultimately, it was agreed that the value of SOEs varied by discipline (with particular benefits in

disciplines with very high research startup costs) and that decisions to employ SOEs should be left to departments.

The task force also discussed the extent to which student demand for courses and majors should drive FTE allocation. While a seemingly straight-forward notion, in fact there are multiple layers of complexity associated with this issue, including the fundamental nature of a research university, the extent to which student demand aligns with research directions and societal needs, and the inherent difficulty of creating new courses and majors in a very decentralized decision making organization. In particular, Academic Senate policy links majors to particular departments for accountability, even though participation in teaching courses (particularly in interdisciplinary areas) often transcends departmental boundaries.

Graduate groups provide examples of where cross-departmental and cross-college teaching and research combine in ways that might be models for new interdisciplinary majors. It was noted that such initiatives need to originate with faculty involvement and commitment to be truly sustainable. It was also noted that while creating new majors is possible if challenging; once established, it is very difficult to discontinue these programs if student demand fades.

One idea is to explore options for individualized majors that students could define with faculty advice and oversight. If the campus desires to respond to student demand in a substantive way, it should create venues in which students can more clearly articulate their interests. A structure for individualized majors could lay the groundwork for this. In this regard, majors of the future can be in part driven by faculty research interests in addition to student articulation of new fields of interest. In addition, properly advertised, the idea of individualized majors undertaken under faculty direction could also be a draw for some highly motivated students.

Ultimately, the task force agrees that as tuition costs increase, the imperative to sharpen the focus on the quality of the undergraduate experience will be paramount. One way to emphasize this point is to make undergraduate teaching a more important element of FTE allocation than it has been in the past.

The task force therefore recommends:

- That FTE calls at UC Davis should always emphasize research and graduate education; however, they should also recognize the importance and quality of undergraduate teaching, perhaps to a greater degree than in the past. Examples of ways in which this might be measured include determining the impact of the FTE proposals submitted on:
  - The quality and efficacy of instruction as measured by faculty-student ratios.
  - The absolute values and positive trends in enrollment-based metrics such as student credit hours, number of majors, degrees awarded and time to completion.
  - Innovation in teaching and teaching effectiveness without prescribing particular modalities.

- Impacted majors.
- That the campus consider increased use of lecturers with security of employment (SOE) titles where it makes sense both pedagogically and financially.
- That the campus create incentives for cross-departmental and cross-college majors that respond to student demand, research trajectories and societal needs.
- That the administration work with the Academic Senate to find ways to facilitate the development of interdisciplinary courses and majors.

## CONCLUSION

In their analysis of the 2020 initiative, the task forces expressed certain fundamental principles that most members agreed should be followed no matter what plan is adopted. These principles include the following:

- (1) That the campus should adhere closely to the Academic Senate (BOARS) doctrine of “compares favorably,” i.e. that the admitted national and international students will compare favorably to admitted California residents at each campus.
- (2) That the campus should ensure that the quality of the student experience will be enhanced by the growth in student enrollment and that necessary investment in staff, faculty and facilities should be made in a timely fashion to ensure this outcome.
- (3) That growth in enrollment should only proceed if a model can be developed that results in increased financial stability of the university while adhering to principles 1 and 2.

Even as the campus looks ahead, it is important to remember that this initiative is not intended to provide a detailed blueprint for every year stretching out to 2020 and beyond. Rather, it describes a recommended overall direction for the campus, with general principles and goals. Even if the campus starts down an agreed-upon pathway, each individual decision will be made according to established protocols and progress will be assessed annually, so that each successive year’s program can be adjusted to reflect then prevailing realities, in order to realistically achieve the aims of the plan.

The task force members look forward to a vigorous and productive discussion of this initiative over the coming months with the relevant committees of the Academic Senate and with all members of the campus community, including the faculty, staff, students, regional stakeholders and friends of the university. The collective wisdom of the community will be essential to ensure that UC Davis continues to achieve ever greater excellence while fulfilling its mission of educating tomorrow’s leaders.

Comments and feedback on this report are welcome and can be submitted to the Provost at the following email address: [future@ucdavis.edu](mailto:future@ucdavis.edu).

**Appendix 1: 2020 Academic Resources Task Force Meeting Summary**

Meeting	Date	Topics discussed
1	1/13/12	<ul style="list-style-type: none"> <li>• Review of 2020 Work Plan</li> <li>• Role of Academic Resources task force</li> <li>• Academic Resources 101                             <ul style="list-style-type: none"> <li>○ Overview of current FTE allocation</li> <li>○ Overview of past allocation practices</li> </ul> </li> </ul>
2	1/31/12	<ul style="list-style-type: none"> <li>• Continued discussion of FTE allocation                             <ul style="list-style-type: none"> <li>○ Review of past FTE allocation process</li> <li>○ Discussion of allocation processes</li> </ul> </li> </ul>
3	2/10/12	<ul style="list-style-type: none"> <li>• Follow up data requests from January 31<sup>st</sup> meeting</li> <li>• Cost of Academic Activities Model</li> </ul>
4	2/28/12	<ul style="list-style-type: none"> <li>• Follow up data requests from February 10<sup>th</sup> meeting                             <ul style="list-style-type: none"> <li>○ Data on national and international student origin and majors</li> </ul> </li> <li>• 2020 Financial Modeling</li> </ul>
5	3/16/12	<ul style="list-style-type: none"> <li>• National and International student recruitment</li> </ul>
6	4/11/12	<ul style="list-style-type: none"> <li>• General discussion of 2020</li> </ul>
7	4/25/12	<ul style="list-style-type: none"> <li>• Update On Enrollment Management and Facilities Task Force Discussions</li> <li>• Questions/issues to be addressed in task force report</li> <li>• Provost Dashboard demonstration</li> </ul>
8	5/9/12	<ul style="list-style-type: none"> <li>• General feedback from questions distributed at April 25<sup>th</sup> meeting</li> <li>• Focused discussion: How should the Provost frame a call for FTE proposals?</li> <li>• Focused discussion: What might the campus consider vis-à-vis SOE (security of employment) faculty positions?</li> </ul>
9	5/21/12	<ul style="list-style-type: none"> <li>• Discussion of Academic Resources Task Force report                             <ul style="list-style-type: none"> <li>○ Review and discussion of reports issues matrix</li> </ul> </li> </ul>
10	5/30/12	<ul style="list-style-type: none"> <li>• Discussion of Academic Resources Task Force report                             <ul style="list-style-type: none"> <li>○ Review and discussion of issues matrix and recommendations</li> </ul> </li> </ul>
11	6/13/12	<ul style="list-style-type: none"> <li>• Discussion of Academic Resources Task Force report                             <ul style="list-style-type: none"> <li>○ Review and discussion of revised issues matrix and recommendations</li> </ul> </li> </ul>

**Appendix 2: 2020 Enrollment Management Task Force Meeting Summary**

Meeting	Date	Topics discussed
1	1/10/12	<ul style="list-style-type: none"> <li>• Overview of 2020 Work Plan</li> <li>• Role of enrollment management task force</li> <li>• Preliminary discussion of issues and data requirements</li> <li>• Suggestions for other topics of interest to task force members</li> <li>• Resources available</li> <li>• Resources requested</li> </ul>
2	1/24/12	<ul style="list-style-type: none"> <li>• Presentation by Walter Robinson, Director of Undergraduate Admissions</li> <li>• Task force discussion of recruitment and enrollment</li> </ul>
3	2/7/12	<ul style="list-style-type: none"> <li>• Presentation on enrollment modeling by Helen Paik, Institutional Analysis (BIA) <ul style="list-style-type: none"> <li>○ Discussion and Q&amp;A regarding enrollment modeling</li> <li>○ Retrospective models in a changing environment</li> <li>○ The “S-shaped” curve</li> <li>○ Complexities of post-matriculation student behavior</li> </ul> </li> <li>• Disciplinary differences</li> <li>• International student behavior</li> <li>• Discussion of enrollment policies <ul style="list-style-type: none"> <li>○ Balance between academic disciplines</li> <li>○ Balance between resident, national and international students</li> <li>○ Impact on Academic Resources discussion</li> <li>○ Impact on Facilities discussion</li> </ul> </li> </ul>
4	2/21/12	<ul style="list-style-type: none"> <li>• Cost of Academic Activities Model (Lucy Bunch, Anissa Nachman; Budget &amp; Institutional Analysis)</li> </ul>
5	3/6/12	<ul style="list-style-type: none"> <li>• Further discussion of 2020 budget model</li> </ul>
6	3/20/12	<ul style="list-style-type: none"> <li>• Completion of individual comments on current status of 2020 (carried over from last meeting)</li> <li>• Open discussion of issues involving student academic success that may arise due to growth in student number associated with the 2020 initiative <ul style="list-style-type: none"> <li>○ Impacts on time to completion <ul style="list-style-type: none"> <li>▪ Course availability <ul style="list-style-type: none"> <li>- “Hotspots”</li> <li>- General education courses</li> <li>- Writing intensive courses</li> <li>- Lab courses</li> </ul> </li> <li>▪ Classroom facilities <ul style="list-style-type: none"> <li>- Large lecture halls</li> <li>- New approaches to pedagogy (e.g. hybrid online)</li> <li>- Summer school</li> </ul> </li> <li>▪ Impacts on student advising <ul style="list-style-type: none"> <li>- Student/advisor ratio</li> <li>- Role of faculty advising</li> </ul> </li> <li>▪ Specific issues related to increased number of national/international</li> </ul> </li> </ul> </li> </ul>

Meeting	Date	Topics discussed
		<ul style="list-style-type: none"> <li>students               <ul style="list-style-type: none"> <li>- ESL courses</li> <li>- SISS support for international students</li> <li>▪ Student access to other services                   <ul style="list-style-type: none"> <li>- Financial aid office</li> <li>- Student academic success center (SASC)</li> </ul> </li> <li>▪ Other issues</li> </ul> </li> </ul>
7	4/3/12	<ul style="list-style-type: none"> <li>• Presentation by Wes Young; Director of Services for International Students &amp; Scholars</li> <li>• Discussion of issues associated with a significant increase in the number of international undergraduate students enrolled at UC Davis</li> </ul>
8	4/17/12	<ul style="list-style-type: none"> <li>• Discussion with Dr. Julia Menard-Warwick; Director of UC Davis ESL Program</li> </ul>
9	5/1/12	<ul style="list-style-type: none"> <li>• Student Panel (organized by ASUCD Vice President Yena Bae)               <ul style="list-style-type: none"> <li>○ Attachment: questions submitted by task force members</li> </ul> </li> </ul>
10	5/15/12	<ul style="list-style-type: none"> <li>• Panel of campus advisers (organized by task force members Catrina Wagner and Theresa Costa):               <ul style="list-style-type: none"> <li>○ Nicole Bibel, Letters &amp; Science Dean's office Peer Adviser &amp; former Orientation Student Coordinator/Orientation Leader</li> <li>○ Kelly Cole, Student Housing First-Year Experience and Residence Hall Advising Team Coordinator</li> <li>○ Beth Floyd, Letters &amp; Science Dean's office Staff Adviser and former Engineering Department Staff Adviser</li> <li>○ Reina Gonzalez, Department Civil and Environmental Engineering Staff Adviser and former Orientation Program Assistant</li> <li>○ Anna Roach, Agricultural &amp; Environmental Dean's office Peer Adviser</li> <li>○ Maria Saldana-Seibert, Molecular and Cellular Biology Staff Adviser</li> <li>○ Linda Scott, Pre-Health Advising Staff Adviser                   <ul style="list-style-type: none"> <li>▪ Attachment: questions submitted by task force members</li> </ul> </li> </ul> </li> <li>• Discussion of recent admission and budget information</li> <li>• Discussion of task force report</li> </ul>
11	5/29/12	<ul style="list-style-type: none"> <li>• Discussion of Enrollment Management Task Force Report               <ul style="list-style-type: none"> <li>○ Review and discussion of report issues matrix</li> </ul> </li> </ul>
12	6/12/12	<ul style="list-style-type: none"> <li>• Discussion of Enrollment Management Task Force Report               <ul style="list-style-type: none"> <li>○ Review and discussion of revised issues matrix and recommendations</li> </ul> </li> </ul>

**Appendix 3: 2020 Facilities Planning Task Force Meeting Summary**

Meeting	Date	Topics discussed
1	1/11/12	<ul style="list-style-type: none"> <li>• Overview of 2020 Work Plan</li> <li>• Role of Facilities Planning Task Force</li> <li>• Capital planning overview</li> </ul>
2	1/25/12	<ul style="list-style-type: none"> <li>• Student Housing</li> </ul>
3	2/8/12	<ul style="list-style-type: none"> <li>• Instructional facilities – information and overview               <ul style="list-style-type: none"> <li>○ Classroom inventory and utilization</li> <li>○ Overview of classroom scheduling process</li> <li>○ Challenges to optimal classroom utilization</li> <li>○ Case-study: “hot-spot” analysis</li> </ul> </li> </ul>
4	2/22/12	<ul style="list-style-type: none"> <li>• Instructional facilities – information and overview (continue from February 28<sup>th</sup> meeting)</li> <li>• Cost of Academic Activities Model</li> </ul>
5	3/7/12	<ul style="list-style-type: none"> <li>• Further discussion of 2020 Financial Modeling</li> </ul>
6	3/21/12	<ul style="list-style-type: none"> <li>• Instructional facilities “hot spots”</li> <li>• UC Davis Extension presentation on online instruction</li> </ul>
7	4/4/12	<ul style="list-style-type: none"> <li>• General discussion of 2020</li> <li>• Classroom facilities discussion</li> </ul>
8	4/18/12	<ul style="list-style-type: none"> <li>• Follow up information requested during April 4<sup>th</sup> meeting               <ul style="list-style-type: none"> <li>○ Origin and majors of existing international students</li> <li>○ “Cold-spots”</li> <li>○ Budgetary impact of new classroom facilities</li> </ul> </li> <li>• Preliminary discussion of Facilities Task Force Report</li> </ul>
9	5/2/12	<ul style="list-style-type: none"> <li>• Student Services Facilities</li> <li>• Preliminary discussion of Facilities Task Force Report</li> </ul>
10	5/21/12	<ul style="list-style-type: none"> <li>• Discussion of Facilities Task Force Report               <ul style="list-style-type: none"> <li>○ Review and discussion of reports issues matrix</li> </ul> </li> </ul>
11	5/30/12	<ul style="list-style-type: none"> <li>• Discussion of Facilities Task Force Report               <ul style="list-style-type: none"> <li>○ Review and discussion of revised issues matrix and recommendations</li> </ul> </li> </ul>
12	6/13/12	<ul style="list-style-type: none"> <li>• Discussion of Facilities Task Force Report</li> </ul>

**Appendix 4: 2020 Task Force Membership**

Academic Resources Task Force Members:

Kyriacos Athanasiou, Distinguished Professor and Chair, Biomedical Engineering  
Alan Buckpitt, Professor, Veterinary Medicine  
Rosemary Capps, Director, Center for Excellence in Teaching and Learning  
Catherine Chin, Associate Professor, Religious Studies  
Joseph DiTomaso, Cooperative Extension Specialist, Plant Sciences  
Paul Fitzgerald, Chair and Professor, Cell Biology and Human Anatomy, School of Medicine  
Adrian Glass-Moore, Chief of Staff, ASUCD, Undergraduate Student, East Asian Studies  
Charles Hess, Dean/Professor Emeritus, Agricultural and Environmental Sciences/Plant Sciences  
Tom Joo, Professor, School of Law  
Susan Kauzlarich, Professor, Chemistry  
Subhash Mahajan, Distinguished Professor, Chemical Engineering/Material Science  
Rosemary Martin-Ocampo, Unit Business Officer, University Development  
Nicole Moore, Graduate Student Association, Native American Studies/Education  
Katherine Olmstead, Professor, History  
Ted Powers, Professor, Molecular and Cellular Biology  
Dave Rizzo, Professor, Plant Pathology  
David Simpson, Professor, English  
Annemarie Stone, ASUCD Representative, undergraduate student, English

*Ralph Hexter, Committee Chair, Executive Vice Chancellor and Provost*

*Kelly Ratliff, Committee Staff, Associate Vice Chancellor, Budget & Institutional Analysis, Administrative and Resource Management*

*Mimi Rose, Executive Assistant to the 2020 Initiative*

Enrollment Management Task Force Members:

Ralph Aldredge, Professor, Mechanical and Aerospace Engineering, Academic Senate Representative  
Yena Bae, Vice-President, ASUCD, undergraduate student, International Relations/Political Science  
Theresa Costa, Academic Advisor, Department of Plant Sciences  
Paul Griffin, Professor, Graduate School of Management  
Susan Keen, Associate Dean and Senior Lecturer SOE, Evolution and Ecology  
Alex McCalla, Professor Emeritus, Representative to the Faculty Emeriti Association  
Colin Milburn, Associate Professor, English  
Cutcha Risling Baldy, Graduate Student, Native American Studies  
Susan Rivera, Professor, Psychology/Center for Mind and Brain, Academic Senate Representative  
Neil Schore, Professor, Chemistry  
Eric Schroeder, Director of Summer Abroad and Education Abroad  
Diane Ullman, Associate Dean and Professor, Entomology  
Jean VanderGheynst, Associate Dean and Professor, College of Engineering

Catrina Wagner, Associate Director, Office of Student Development  
Deborah Ward, Associate Clinical Professor, Betty Irene Moore School of Nursing, UC Davis

*Kenneth Burtis, Committee Chair, Offices of the Chancellor and Provost*  
*Bob Loessberg-Zahl, Committee Staff, Budget & Institutional Analysis, Administrative and Resource Management*  
*Mimi Rose, Executive Assistant to the 2020 Initiative*

Facilities Planning Task Force Members:

Andreas Albrecht, Professor, Physics  
Trish Berger, Professor, Animal Sciences  
Sabrina Dias, Chief of Staff, ASUCD, undergraduate student, Biological Sciences  
Tom Famula, Professor, Animal Sciences  
Bob Halferty, Representative to the Emeriti and Retirees' Associations  
Samantha Harris, Assistant Professor, Neurobiology, Physiology and Behavior  
Bruce Hartsough, Professor, College of Engineering  
Joel Hass, Professor, Mathematics  
Stuart Hill, Lecturer, SOE, Political Science  
Tim McNeil, Director/Associate Professor, Design Program  
Peter Narby, Graduate Student, Geology  
Zack O'Donnell, Service Manager, Communication Resources  
Pablo Ortiz, Professor, Music  
Carolyn Penny, Director of International Law Program, University Extension  
Rebecca Sterling, President, ASUCD  
Emma Strong, Graduate Student, Civil and Environmental Engineering  
Adam Thongsavat, President, ASUCD  
Peter Yellowlees, Professor, Psychiatry

*Karl Mohr, Committee Chair, Office of the Provost*  
*Christine McUumber, Committee Staff, Budget and Institutional Analysis, Administrative and Resource Management*  
*Mimi Rose, Executive Assistant to the 2020 Initiative*