

**Prioritizing and Strengthening Graduate Education
at UC Davis**

**A report by the Joint Administration / Academic Senate
Special Task Force on Graduate Education
May 18, 2012**

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VISION

The Graduate Education Task Force envisions UC Davis as one of the top five public research universities in the country, achieving its vision of excellence¹. Graduate education is recognized as an integral and vital part of the university's mission, is given high priority and is central to the processes of strategic planning and resource allocation.

The task force envisions graduate education at the heart of this university. Graduate students contribute to the superior education of our undergraduates and collaborate with faculty to produce cutting edge research, propelling UC Davis into the top tier of research institutions. There is a **synergistic effect** when outstanding faculty attracts talented graduate students and when having the most capable students attracts the best faculty. Likewise, the ability of graduate students to thrive and succeed in their programs is a necessary component of excellent graduate education.

This university has internationally recognized faculty in a range of fields, a reputation as a leader in interdisciplinary education and research, and a strategically beneficial geographical location. Given these qualities, UC Davis is well positioned to recruit, educate, mentor, and graduate highly accomplished scholars who advance both their chosen fields and the interests of society. Graduate students educated at UC Davis today will become the next generation of scholars, becoming leaders in academia and the public and private sectors. Investing in graduate education will ensure that UC Davis graduates are well prepared to take on these leadership roles and to solve complex problems through interdisciplinary engagement, addressing issues of importance to the sciences, humanities, arts, and to society.

Implementation of the Vision

In order to achieve this vision of the task force, UC Davis must **strengthen** graduate education and make it a **priority**. Graduate education should be **integral** to UC Davis' strategic planning, resource allocation, and faculty development. The current restructuring of the UC Davis budget model provides an opportunity to recognize, through allocation of resources, the contribution of graduate education to the vision of the university. Implementing this vision requires strong leadership commitment to both graduate education and the excellence of UC Davis. At the core of this report is the self-evident statement that **excellence of a research university without excellence of graduate education is not possible**.

Enactment of the vision hinges on the following critical elements and actions, elaborated further in subsequent sections of this report:

¹UC Davis. (2011). *A Vision of Excellence*. Retrieved May 1, 2012 from <http://vision.ucdavis.edu/>

- 1. Commit to graduate education as a strategic priority, integrated into UC Davis's overall planning and resource allocation.** Value graduate education because it builds strength within a discipline and also capitalizes on the rich array of research collaborations at UC Davis, expanding the application of core knowledge to innovative partnerships. Ensure that responsibility for graduate education is shared among faculty and the Graduate Council, the Office of Graduate Studies, the Office of Research, and all colleges and schools. Invest and strengthen infrastructure that supports graduate education. The funding model for graduate education should be transparent and flexible enough to facilitate effective execution of the charge and should support both graduate groups and department-based graduate programs. Increase accountability by using appropriate metrics to track success. Broaden fund-raising and advocacy for graduate education to build support for this endeavor.
- 2. Enhance the environment for graduate student success as integral to UC Davis excellence.** Graduate students' ability to achieve their highest potential is dependent on access to financial support, to opportunities for both scholastic mentorship and professional advisement on their career choices, and to social and professional networking in a vibrant graduate student and campus community. Graduate students both contribute to and benefit from the quality of graduate education at UC Davis. In order to recruit and graduate students among the best in the country, we must bolster commitments of campus resources, provide superior academic and professional opportunities, and cultivate a satisfying graduate student experience. A commitment to excellence in graduate education also includes efforts to increase diversity, expand student voice in program and policy decisions as part of university governance, and promote global experiences for graduate students.
- 3. Engage and recognize faculty participation in graduate education in a manner that energizes faculty and advances their academic accomplishments.** Faculty involvement in graduate education builds visibility and capacity of the faculty and yields opportunities for leadership and innovative collaborations. Faculty effort in graduate education must be recognized and incentivized by the university. Faculty engaged in graduate education need to embrace the principle of mentorship as both a privilege and responsibility. They must be prepared and willing to mentor *and* advise graduate students to become critical thinkers and informed citizens; to contribute creative solutions to important societal problems; to undertake leadership roles in their chosen disciplines; and to actively participate and contribute to interdisciplinary collaborations.
- 4. Value societal relevance of graduate education at UC Davis.** As a leading Land Grant institution, UC Davis is positioned to enrich graduate education through the application of

research and teaching to inform solutions to pressing social problems. Use innovative models of research and engaged public scholarship to encourage graduate students in all disciplines to explore the implications for their research and training for improving the lives of people across the state and around the world.

Fulfillment of these goals will require an acceptance of our responsibilities as a top university to graduate education. We must be willing to commit the necessary resources and effort to strategically prioritize graduate education in the overall mission of the university.

CHARGE OF THE TASK FORCE

The Joint Administration / Academic Senate Special Task Force on Graduate Education at UC Davis was appointed by the Provost and Executive Vice Chancellor, in partnership with the Chair and Executive Committee of the Academic Senate in May 2011 to take stock of the various ways our institution supports graduate education and how this might be further improved (see Appendix A for charge). The task force was charged to engage in a visioning process aimed to articulate what we want graduate education at UC Davis to be or become as we approach 2020. It aimed to answer the questions “why” and “what” much more than the question “how.” It was not charged with a standard review of either the existing Graduate Studies unit or our many graduate and professional degree programs, nor was it charged with creating a budget model. The task force included faculty, staff, and students from departments, colleges and schools across the campus (see Appendix B for membership). This report is intended to provide an overview of the issues that warrant attention as further strategic planning occurs (such as the 2020 Initiative², the graduate education budget model, our next comprehensive campaign, annual academic planning) with suggestions for potential avenues for implementation.

GROUP PROCESS FOR TASK FORCE

In gathering information about graduate education at the university, the task force cast a wide net, aiming to be as inclusive as possible of all constituents of the university while becoming knowledgeable about trends in graduate education beyond UC Davis as well. To inform the process, the task force hosted meetings to gather perspectives from expert consultants, campus leadership, faculty, students, and staff; as well as task force meetings with invited guests. The task force reviewed previous UC Davis commissioned reports on graduate

² UC Davis. (2011). *The 2020 Initiative: A Path to Academic Excellence & Economic Opportunity*. Retrieved May 1, 2012 from http://chancellor.ucdavis.edu/initiatives/2020_Initiative/index.html

education and gathered pertinent data at both the campus and UC system-wide levels. The task force held regular meetings from Fall 2011 through Spring 2012 and also worked via email and on a dedicated SmartSite.

To begin the process, several expert consultants who have been involved in transformations in graduate education at other universities visited campus. The visits brought external and national perspectives on graduate education and stimulated discussion among a variety of stakeholders at UC Davis about crucial topics. The expert consultants, invited by the Provost and the Chair of the Academic Senate, included:

Joel Michaelsen, PhD, Professor, Department of Geography, Chair Academic Senate 2006 – 2008; 2008 – 2010, University of California, Santa Barbara

Steve Matson, PhD, Dean, The Graduate School; Professor, Department of Biology, University of North Carolina, Chapel Hill

Frances Leslie, PhD, Dean, Graduate Division; Professor of Pharmacology, School of Medicine, University of California, Irvine

Carol Lynch, PhD, Senior Scholar in Residence and Co-Director, Professional Science Master's Initiatives, Council of Graduate Schools

In addition to meeting as a group with the expert consultants, the task force hosted a series of roundtable discussions with various other groups invested in graduate education at UC Davis. The expert consultants acted, effectively, as sounding boards for the audiences who attended these events and stimulated engaged discussions.

To assess the core components of excellence from the perspective of graduate students, the task force listened to graduate students. The two graduate student representatives on the task force organized a listening session in conjunction with meetings with our expert consultants, where at least 17 [marked as attended, more offered input] graduate students provided focused comments to several questions.

There were also sessions with the Council of Deans, Graduate Group and Program Chairs, as well as a public forum that was publicized through campus media outlets and targeted email alerts. In total, more than 150 individuals participated directly in the dialogues with the expert consultants. At the conclusion of their visit, the expert consultants summarized their observations in reports to the task force (see Appendix C).

Additionally, the task force received information from graduate faculty and staff, reviewed system wide and UC specific data, studied previous UC Davis reports on graduate education and engaged in numerous conversations formally at task force meetings and informally with colleagues and students.

After seeking external input, the task force met with a series of informants who shared perspectives and experiences, including:

- Graduate Studies Dean Jeffrey Gibeling, who outlined his perspective on the major issues facing graduate education at UC Davis;
- Provost Ralph Hexter and Kelly Ratliff, Associate Vice Chancellor, Budget and Institutional Analysis, who spoke on the general approach to the new budget model and possible financial impacts for graduate education;
- Graduate Council Chair Andre Knoesen, who provided perspective on behalf of the graduate council;
- Members of the Self Supporting Degree Programs task force, including Chair Harold Levine and members Jana Katz Bell and Sarah Mangum, who reviewed the group's initial findings on professional masters programs and discussed commonalities in the work of both task forces.

To assure full opportunity for input about graduate education, the task force set up a public e-mail address where individuals could post comments to the task force, and the task force publicized the address widely – both at the public forum, in campus media materials and in emails to various groups at two different cycles in the task force's work. E-mail input was submitted from graduate students, faculty, chairs and associate deans.

In addition to seeking input from these sources, the task force engaged in its own deliberations. The driving question for those conversations was “**what is excellence in graduate education?**” This question generated multiple meanings from different perspectives. Thus further brainstorming addressed excellence in graduate education from the perspective of (1) the university; (2) faculty; (3) students, and (4) the wider community. After the initial scan of ideas, the task force engaged in a SWOT (strengths /weaknesses /opportunities / risks) analysis to begin to isolate key emerging themes from the discussions, followed by refinement of prominent themes and generation of recommendations. Diverse perspectives were voiced and the task force engaged in thoughtful discussion to achieve consensus on recommendations.

Because the task force was charged with envisioning the future of graduate education rather than identifying the tactics to achieve it, this report includes broad recommendations and illustrative possibilities for enactment. Full implementation will require thoughtful deliberations and decisions by the appropriate bodies. Appendices D and E include summaries of brainstorming around specific recommendations, for graduate education metrics and graduate students respectively, to be used as a basis for further consideration.

UC Davis is characterized by a diverse graduate education portfolio. **It is highly unlikely that a single solution will benefit all graduate groups or programs in all disciplines.** At the same time, there are several overarching issues that are addressed in this report, worthy of collective

deliberation. Committed faculty, staff and administrators working in collaboration with graduate students could engage in critical discussions to develop creative solutions that meet both overall needs and the needs of specific programs and groups.

BACKGROUND REVIEW

This task force joins others who have worked to consider the strength, direction and/or vision of graduate education at UC Davis. The task force reviewed several previous reports by committees of the Academic Council, specifically *Enhancing Graduate Education at UC Davis* (2006)³, *The Report on Graduate Education at UC Davis* (2008)⁴, *Report of the Task Force on the Future of UC Davis* (2010)⁵ and the *Proposal to Reconstitute the Office of Graduate Studies as The Graduate School at UC Davis* (2011)⁶. Some focused more on the structural details of graduate education delivery and others sought to enhance the role of graduate scholarship at UC Davis. Under Provost Hexter's and Academic Senate Chair Robert L. Powell's charge, the task force was asked to develop the "what" of a vision for graduate education rather than "how." With that in mind, previous efforts informed our recommendations. Several themes and specific recommendations from previous documents emerged as central in the current deliberations. The following components of previous reports resonate most with the proposed recommendations and are briefly reviewed.

Previous reports called for attention to the need for a clearer platform for strategic planning and metric-based resource allocations. Underlying concerns that have been repeatedly considered are: 1) the complexity of the graduate department and graduate group structure and 2) the lack of a strategic planning mandate for graduate education by either Office of Graduate Studies or other appropriate bodies.

³Academic Planning and Development – A Committee of the Graduate Council at UC Davis. (2006). *Enhancing Graduate Education at UC Davis*. Retrieved May 1, 2012 from <http://www.gradstudies.ucdavis.edu/gradcouncil/APDReport.pdf>

⁴Academic Planning and Development – A Committee of the Graduate Council at UC Davis. (2008). *The Report on Graduate Education at UC Davis*. Retrieved May 1, 2012 from <http://www.gradstudies.ucdavis.edu/gradcouncil/APD%20Report%20Grad%20Education%202008.pdf>

⁵University of California, Academic Senate, Davis Division. (November 2010). *Report of the Task Force on the Future of UC Davis*. Retrieved May 1, 2012 from http://academicsenate.ucdavis.edu/documents/FUTURES_Task_Force_Recommendations_110310_EC.pdf

⁶UC Davis Office of Graduate Studies (January 2011). *Proposal to Reconstitute the Office of Graduate Studies as The Graduate School at UC Davis*. Retrieved May 1, 2012 from <http://academicsenate.ucdavis.edu/rfc/view.cfm?or&id=37>

The 2006 Academic Planning & Development report acknowledges that in terms of graduate education, there is a potential benefit in recognizing programmatically connected clusters as a way to preserve the uniqueness of graduate group offerings and provide adequate, yet appropriately directed support to faculty and students. Data were gathered on the clustering of graduate programs based on the faculty involved. Perhaps this method needs updating but the sentiment aligns with recommendations from the Task Force on the Future at UC Davis to:

1. Review current practices for funding graduate groups. The Task Force maintained that there needs to be on-going discussions as to how to improve upon our current model to give firmer footing for the resource base of graduate groups.
2. Provide incentives for graduate groups to form larger graduate group “umbrellas” or “clusters” wherever useful, independent of current lead dean affiliations.

The 2008 Academic Planning & Development report takes up several issues related to the internal structures of new graduate program development and funding. Our committee sees the importance of realistic planning and suggests that the recommendations from the 2008 report, particularly related to graduate group administration and support, be revisited with attention to:

1. Encouraging program clusters and umbrella structures.
2. Improving information flow from graduate programs to Graduate Studies.
3. Creating transparent metrics and a data repository.
4. Strengthening internal program reviews.

In January 2011, the Office of Graduate Studies made a proposal to establish a Graduate School that would focus on academic activities that enhance the excellence of graduate education and postdoctoral training at UC Davis. While this task force is not making recommendations for major structural change, the academic emphasis of that proposal is reflected in the recommendations of this task force. The 2011 proposal included the following major organizational themes:

- Enhancing Program Success through Student Success
- Engaging Faculty in Reflection on and Creativity in Graduate Education and Postdoctoral Training
- Disseminating Innovative Practices in Graduate Education
- Enhancing Diversity and Fostering a Sense of Community
- Promoting Excellence through Increased Student Support

In the last weeks of deliberation, the Council of Graduate Schools and the Educational Testing Service released a report, *Pathways Through Graduate School and Into Careers*⁷. This report highlighted many of the issues identified by this task force, particularly the multiple career paths made possible by graduate education and the importance of understanding demand for programs during strategic planning. Specific recommendations of this document would be useful for further campus discussion.

UC DAVIS GRADUATE ENROLLMENT

In addition to reviewing previous reports, the task force identified background data that would be useful for deliberation. The Office of Budget and Planning, in collaboration with the Office of Graduate Studies compiled relevant data from a variety of sources. Detailed information and its analyses are included in Appendix F. Highlights are summarized below.

UC Davis offers 95 graduate programs, including 38 department-based graduate programs, 49 graduate-groups, and 8 professional degree and self-supporting programs. Enrollment at UC Davis in graduate education has grown over 35% from 2000 to 2011, with 6,533 graduate students registered in Fall 2011 (51.1% PhD, 15.3% academic masters, 1.9% academic self-supporting, 16.6% professional degree, and 15.2% health sciences). These numbers do not include the 898 medical interns or residents who do not pay graduate tuition. International students constituted about 15% of the total graduate student body in 2011.

The total number of applicants in 2010 was 9,487, with 29% of these applicants offered admission to graduate school, and 44% of these choosing to enroll. Costs (tuition and fees) of graduate education have increased by about 58% since 2007 to \$15,271 annually for California residents. Costs of professional graduate education range from \$19,273 to \$46,485. Support for graduate education varies widely across disciplines and programs. In 2009, across colleges and schools, the average loan amount for graduate students taking loans ranged from \$9,088 to \$33,605 annually. There is great variability across schools and colleges in the percent of students requiring loans, ranging from 15.3% in Engineering to 42.3% in HArCS during 2009. During the same time period, professional graduate student loan participation ranged from 46.8% in the Graduate School of Management to 92.7% in Medicine. While some professional graduate students will readily achieve enough income in the future to offset loans, others who seek public service positions or who practice in underserved communities can face daunting

⁷ Council of Graduate Schools and the Education Testing Board. (2012). *Pathways Through Graduate School and Into Careers*. Retrieved May 1, 2012 from <http://pathwaysreport.org>

financial challenges. Financial aid and employment opportunities are also summarized in Appendix F.

Diversity of the graduate student body has improved over the past decade, but does not yet reflect the demographics of the state of California. In 2011, our graduate student community included the following students: 2.2% African American, 24.3% Asian-Pacific Islander, 8.6% Chicano-Latino, 1.0% Native American, 50.1% White, and 13.8% other/unknown. Since 2000, diversity has increased at UC Davis, from 1.6% African American, 13.6% Asian-Pacific Islander, 5.4% Chicano-Latino, 0.7% Native American, 54.1% White, and 24.4% other/unknown. Underrepresented minorities (by federal definition, including African Americans, Chicano-Latino, and Native American groups) compose about 11.9% of the graduate student population. This figure is comparable to UC Berkeley (11.6%). Total enrollment by gender is almost equal, with 50.4% women and 49.6% men. However, women are underrepresented in Engineering (26.1%), Mathematics and Physical Sciences (36.5%) and the Graduate School of Management (30.4%).

The time to degree varies significantly across graduate programs. Using three year averages (2008-2011), for PhD degrees, the average is 6.01 years, with a range of 3.44 to 8.17 years. For Master's degrees, the average is 2.61 years, with a range of 1.29 to 5.98 years.

CRITICAL ISSUES/RECOMMENDATIONS

The following sections elaborate the major issues and recommendations for this report, including committing to graduate education as a strategic priority, improving the graduate student experience, engaging and rewarding faculty, and valuing the contributions of graduate education to society.

I. COMMIT TO GRADUATE EDUCATION AS A STRATEGIC PRIORITY

The vision for graduate education is core to the mission of UC Davis as a comprehensive research university, dedicated to the generation, advancement, dissemination and application of knowledge to advance the human condition throughout our communities and around the world⁸. Graduate education advances the vision of UC Davis to be known for its diverse, educational opportunities; its innovative, interdisciplinary and collaborative research endeavors; and its distinction in leading enterprises that support social responsibility and

⁸ UC Davis Office of the University Registrar (n.d.) *UC Davis Mission statement; Philosophy of Purpose*. Retrieved May 1, 2012 from <http://registrar.ucdavis.edu/UCDWebCatalog/mission.html>

sustainable global efforts. And yet, graduate education as a whole is not an explicit part of overall strategic planning at UC Davis, and the campus does not currently perform a simultaneous comprehensive review of the quality and effectiveness of all graduate programs. While the Office of Graduate Studies provides central support for admissions, core funding, and student affairs, and the Graduate Council oversees academic planning including program quality, the collective knowledge and wisdom about graduate programs is not applied to the annual academic and budget planning process undertaken in colleges and schools. **We recommend that graduate education be more explicitly considered in all aspects of strategic planning to ensure appropriate infrastructure, including funding, is in place.**

Concurrent efforts are underway that require integration with the recommendations of this report. They include 1) implementation of a new incentive-based budget and the development of methodologies to address resource allocation for graduate education; 2) deliberation by task forces addressing the 2020 Initiative including recommendations on enrollment (California, national and international students), programs, and facilities; and 3) review of the role of professional master's programs and self-supporting programs as both applied academic offerings and potential revenue sources to support PhD programs.⁹

Several structures support graduate education, including annual budget and planning, the graduate group structure, fund raising and advocacy. These structures must be strengthened to actualize the vision for graduate education.

IMPROVE STRATEGIC PLANNING AND BUDGET PROCESS

Strategic planning processes must integrate graduate education explicitly into priority-setting at the college/school and campus levels. Current deliberative bodies exist, including administrative and Academic Senate groups as well as the graduate program/groups themselves, but it is not clear whether the framework in which they are currently operating enables them to cooperate effectively and base decisions on current information about the quality and effectiveness of graduate education across the campus. Such cooperation and access to information is essential to address potential challenges and opportunities, develop plans in a timely fashion, and set appropriate strategic priorities. Additionally, new institutional stakeholders in graduate education are emerging, as exemplified by the Research Investments in Science and Engineering (RISE) and Interdisciplinary Frontiers in the Humanities and Arts (IFHA) programs launched in 2012 and managed by the Office for Research. Such programs have the potential to singlehandedly establish new graduate groups and research units by providing them with medium-term funding. While these are important investments that will

⁹ Office of the Provost and Executive Vice Chancellor, UC Davis. (n.d.) *Initiatives*. Retrieved May 1, 2012 from <http://provost.ucdavis.edu/initiatives-and-activities/initiatives/index.html>

enable UC Davis to quickly move into new areas of research and graduate education and training, their longer-term impact should be addressed and integrated in a coherent plan, in concert with the other bodies engaged with various aspects of graduate education at Davis.

A related, more general question concerns the best model for planning, administering, and staffing graduate education. This is not limited to whether centralized structures are preferable to distributed ones or vice versa, but whether, rather than pursuing a one-fits-all strategy, different models may be needed to best address the varied dimensions and needs of graduate education. It may or may not be the case that bodies in charge of monitoring the quality of existing graduate programs would be necessarily best equipped to evaluate actual program quality or make recommendations on future trends in graduate education. Administering and monitoring are different sorts of tasks from evaluating and planning. One may find good reasons for either aggregating or separating them, but those reasons should be identified and openly discussed. Similarly, there is fragmentation between providing resources through the annual budget to existing programs/groups and introducing new programs. It may be that the task of mapping future areas of graduate and undergraduate education and research could be better served by a centralized body including representatives of all campus stakeholders that looks at the overall picture of the present state and future directions of all aspects of the university. Conversely, many of the administrative aspects of graduate education may be more efficiently distributed toward departments and groups that have fine-grained knowledge of the specific professional requirements of their fields and the pedagogical needs of their students.

We believe there is a need for extensive, regularly updated information about the state and performance of all graduate programs/groups. Ideally, this information should be updated as part of each budget and planning cycle to provide a reliable basis for planning and budgeting decisions. In order to promote transparency, the committee feels strongly that this information must be accessible to the campus community in an easy, timely fashion so that it can be reviewed, used, challenged, and amended by all interested parties. The campus community should also have extensive and intensive input in determining and updating the metrics to be employed in this ongoing evaluation process, since the types of metrics most appropriate will vary by field, program and discipline.

While it is not the purview of this committee to make specific proposals on these matters, we recommend that strategic planning regarding graduate education abide by the following principles:

Recognition of graduate education. Graduate education should be an essential element of all planning processes. College/school plans should address graduate education conducted through departments and through graduate groups. At the campus-wide level, graduate

education should be included as an explicit priority in resource allocation, and student support across colleges and schools.

Integration of academic planning and assessments. Academic planning conducted by Graduate Council on behalf of the Academic Senate, including assessments of program/group quality, should be integrated into the strategic planning process.

Attention to optimal program/group size. Academic planning not just for new but also established programs/groups should attend to the optimal size of incoming classes, taking into account the opportunities for graduates' employment after graduation. Programs/groups should be transparent about the career paths for which they train students, as well as their record of placement of graduates in these positions.

Shared governance. Shared governance enables coordination of academic planning and resource allocation and facilitates transparency. The faculty is responsible for the curriculum. Respecting shared governance for graduate education requires that Academic Senate committees focused on graduate education should be consulted at the college/school and campus levels, and their input should be incorporated into strategic planning. Implementation procedures should recognize the role of shared governance, including compliance with the processes detailed in the Compendium. Graduate students should have an active role in informing policies that affect their success and well-being.

Accountability. Strategic planning and resource allocation processes must hold all levels accountable for their performance in advancing graduate education and the quality of graduate education. Planning documents should report prior goals, measures of performance, and actual performance.

Transparency. All strategic planning and resource allocation processes should be transparent and communicated to stakeholders.

ENHANCE STRUCTURAL AND FINANCIAL SUPPORT FOR GRADUATE GROUPS

As other research universities come to recognize the importance of interdisciplinary education and research, UC Davis is in a privileged position because the university has already established a strong reputation and structures for interdisciplinary collaboration through the flexible graduate group model and research centers that span departments, colleges and schools. The university must stabilize the innovative interdisciplinary structure that is UC Davis' trademark. Graduate groups must be better supported and their performance more carefully monitored if they are to remain the exemplars in research and education that they are. In addition to supporting its innovative interdisciplinary structures, the university must also continue to build

its strengths in traditional disciplinary areas, which are important in and of themselves as well as being a foundation for students engaged in interdisciplinary studies.

INCREASE ACCOUNTABILITY FOR GRADUATE EDUCATION BY USING APPROPRIATE METRICS AT PROGRAM AND UNIVERSITY LEVELS TO TRACK SUCCESS

With a renewed focus on the value and quality of graduate education, the importance of assessing the status of graduate education on our campus as a whole, as well as the status of individual graduate programs/groups seems obvious. Additionally with the new incentive-based budget model being implemented on our campus, the task force recommends developing formal assessments of graduate education at the campus and college/school levels and enhancing existing assessments of program quality to promote use of data to drive improvements in programs.

Assessing the status of graduate education at UC Davis as a whole obviously is a challenging task and requires new ideas. However, the ability of a research university to assess, for instance, whether as a whole the quality of its graduate education is on an upward or a downward trajectory is crucial. Such global assessments will support the evaluation of certain novel incentives (or disincentives) that will be implemented on our campus; they will be crucial tools for strategic planning; and they might also become valuable tools for advocating the importance of graduate education in our outreach and fundraising initiatives. In the opinion of the task force, not implementing such a high-level assessment will make steering our campus along an upward trajectory much more difficult. The assessment process should involve all major constituents: administration, faculty, staff and graduate students.

In these times of an incentive-based budget model, annual resource allocations to graduate programs/groups should be informed by some quantitative data. However, the fact that information contained in such quantitative data about graduate programs/ groups has certain limits and that evaluating this information is time consuming have to be taken into account when implementing such a process. It is also important to point out that the annual production and dissemination of quantitative evidence about the life of our graduate programs/groups should not be seen to conflict with the multi-annual reviews of graduate programs performed by the Graduate Council but to serve as an additional evidentiary tool available to them.

One proposal that has been positively discussed by the task force is to conduct an annual, anonymous graduate student survey. This survey could include questions on the academic as well as the student experience aspects of a successful graduate education. The positive effects of such a (simple) survey are that:

1. Graduate programs/groups are provided performance indicators of certain important aspects of their program;
2. Such performance indicators can be used to implement adjustments, if necessary, and they can also be used to support a request for an incentive-based budget allocation;
3. These performance indicators have the potential to inform a more global, campus-wide assessment of graduate education (see above);
4. Graduate students are more visibly and continuously involved.

In what follows we provide some more concrete details as a basis for initiating further discussion, and consideration by graduate groups/programs and Graduate Council. Appendix D describes a potential template that could be adjusted to the features of specific fields and disciplines. Some of the parameters may not apply to all fields, while others may need to be added. Because of the importance of the decisions that may be affected by any of these metrics that are collected and reported, we strongly believe that programs/groups should be directly involved, and largely control, the determination of their specific version of the metrics that will be adopted to assess their progress. During her visit to UC Davis, external consultant Frances Leslie shared her experience about a pilot method she used at UC Irvine to solicit appropriate metrics directly from a trial selection of programs. The initiative included financial incentives that encouraged programs to participate in an initial effort to gather information for making strategic decisions. At UC Davis, any such data collected by these means should be made available to all programs/groups, which may use it to inform the development of their policies and strategies, and to learn from the experience of other programs/groups.

Implementing the use of any metrics in resource allocation has three prerequisites. First, the measurement of success for each metric and program must be defined clearly. Second, the use of the metrics collectively and/or individually in resource allocation should be defined clearly and administered in a transparent way. Finally, multiple years of data should be collected before they are used for resource allocation. We believe that the interpretation of such data and the fine-tuning of the parameters would take time, and will become more reliable as the data set grows over the years, making patterns more visible. The availability of these data to all programs would enable broad participation by campus stakeholders in the process.

We present an expanded version of the “Graduate Program Evaluation Metrics” already approved by Graduate Council in Appendix D, primarily to gather finer grained evidence about the graduate students’ professional success during their enrollment in our programs and in the first five years after graduation. Based largely on data collected by the Office of Graduate Studies on an annual basis, the first part of the metrics draws a picture of our programs based on institutional data: student and faculty productivity; grants and awards, time to completion,

student/faculty ratios, etc.¹⁰ We also identify indicators that may capture effort, not only success, as well as some of the graduate students' intellectual, scientific, and social contributions that are not captured by more traditional indicators.

The evidence for the second part of the metrics comes not from the institution but from the students themselves. We feel that their experience is not adequately represented by the data that programs produce as they administer themselves, and therefore should be collected annually through an anonymous quantitative questionnaire about the quality and structure of training, mentorship, advising, resources for professional and intellectual growth, and quality of graduate life in general. It is important to note that this procedure then also provides a means for more active participation of graduate students in their education.

DEVELOP COMPREHENSIVE, STRATEGIC FUNDRAISING PLANS

Funding for graduate education was raised as an issue in almost every conversation held by the Graduate Education Task Force, both externally and internally. Concurrent efforts are underway to restructure the budget model for graduate education and to evaluate and potentially expand professional and self-supporting masters programs, providing additional revenue sources for graduate education. As state support shrinks and tuition and fees increase, current models of funding for graduate education are no longer viable. These issues are exacerbated further with the higher costs of supporting international students, a force that runs counter to the vision for enriching UC Davis with a more diverse and international student body. Finally, development of a graduate student center (which we recommend below) requires funding.

Reallocation of current funds alone is inadequate and new sources of funds will be necessary to actualize the vision for graduate education at UC Davis. As highlighted by our external consultants, nationally, there is growing recognition of the importance of fundraising for graduate education specifically, reflected by the inclusion of fundraising workshops at the annual meeting of the Council of Graduate Schools. Some universities within the UC System incorporate explicit, measureable goals for graduate studies as part of their larger campaigns. UC Berkeley's capital campaign includes a goal of \$340,000,000 for graduate fellowships, 11.4% of the overall \$3 billion campaign goal. Similarly, at UCLA, the \$500 Million Bruin Scholars Initiative seeks to raise \$300 million in graduate student support. In the current UC Davis Comprehensive Campaign, graduate education is not identified as a specific goal. Yet, to date, of the total campaign fundraising at approximately \$776 million, \$104 million is designated for

¹⁰Graduate Council, UC Davis. (May 20, 2009). *Graduate Program Evaluation Metrics*. Retrieved on May 1, 2012.

<http://gradstudies.ucdavis.edu/gradcouncil/Program%20Evaluation%20Metrics%20approved%205-2009.pdf>

student support, with \$81.7 million already donated to support graduate education, indicating a significant interest in graduate education among donors. UC Davis fundraising efforts would be more successful if they capitalized explicitly on this interest.

Because the costs of graduate education are prohibitive for both the university and for students, scholarships and fellowships are essential. Further funding will be needed for implementing improvements of the graduate student experience, such as developing the graduate student center desired by graduate students, which would build community and provide a gathering place for scholarly and social exchange (to be discussed further below). We therefore recommend that UC Davis examine the feasibility of adopting specific, measurable goals in the next comprehensive campaign for graduate support in the form of 1) a graduate fellowship endowment and 2) capital donations for a graduate student center. During the planning for the campaign, we recommend that graduate education and funding for a graduate center be tested with potential donors so that a specific goal can be established.

In addition to individual donors, we recommend that UC Davis engage potential employers to gain input to enhance graduate education and to cultivate their interest in providing financial support to graduate students. As indicated in the recent *Pathways through Graduate School and Into Careers*¹¹ report, mutually beneficial partnerships could result in graduate student scholarships, faculty endowments, collaborative research, and internships.

Actualization of this goal will require both central and unit-level coordination and effort. At the campus level, campaign messages should reflect the value of graduate education for UC Davis and for society and the ways that financial support enables actualization of that value. The general case for graduate education should form a key theme for fundraising and should be incorporated into the overarching development strategy. Graduate programs/groups can contribute specific strategies to identify, cultivate and solicit donors appropriate to support their particular areas of expertise, and can execute fundraising efforts in the context of their colleges and schools. In addition to a specific goal for endowment, we recommend explicit strategies that link support for graduate students to other fund-raising opportunities, such as faculty endowments and research investments.

ASSESS CURRENT ADVOCACY EFFORTS AND DEVELOP NEW PLANS WHERE NEEDED

The value of education in general and of graduate education in California in particular is a matter of public debate with significant consequences for the public funding and support for UC Davis. Rather than assuming that this value is self-evident, it is incumbent upon UC Davis to

¹¹ Council of Graduate Schools and the Education Testing Board. (2012). *Pathways Through Graduate School and Into Careers*. Retrieved May 1, 2012 from <http://pathwaysreport.org>

make the case for continued and increased public and private funding of graduate education. External consultant Steve Matson advised UC Davis to increase advocacy to “tell the story” of how graduate education is of vital importance to the people of the state.

We recommend several strategies to advance advocacy. We recommend the formation of a graduate education advocacy committee, with representatives of faculty, students, staff, and administrators from across the colleges/ schools with an interest strategic communications to work with campus communications and government affairs to assess current efforts and develop new plans where needed. We also recommend specific steps to improve advocacy efforts for graduate education. First, we need to understand broader public perceptions of graduate education and identify the key decision-makers and thought leaders with influence over direct funding. This would include legislators and public agency leaders at the state and federal levels as well as important business and civic leaders. Discussions with these key stakeholders should gather their perspectives on graduate education and its value, their thoughts on its most important challenges and opportunities, and the prospects for increasing public and private support. Second, based on an understanding of these perspectives, we need to develop core messages to be used in communicating the ways graduate education is worthy of public and private investment. Third, we must develop strategies to infuse these messages into the policy arena as well as the media and other influential settings. Fourth, we must continually assess the effectiveness of these messages and refine them based on this feedback.

The following are some potential messages based on the findings of the Task Force and related materials.¹²

Graduate Education is Vital to California’s Future

- In the coming years, graduate studies will play an increasingly vital role in building the brain trust California needs to maintain a leading economy.
- Our graduate students will go on to become the professors who will inspire the next generation of Californians to think critically, to question, to explore, to discover and to lead.
- Problems important to society require advanced solutions integrating contributions of many disciplines – A major strength of UC Davis is its research collaborations that address food, water, energy, health, technology, the arts, and society.
- Over the next 10 to 15 years, California’s public and private universities will need to hire an estimated 25,000 new faculty. UC Davis graduate programs will be an important

¹² University of California Office of the President. (2012). *Office of Research and Graduate Studies*. Retrieved on May 1, 2012 from <http://www.ucop.edu/research/> ; Feeling, N. (2012, March 14). Students Take Their Research to the Capitol. *UC Newsroom*. Retrieved May 1, 2012, from <http://www.universityofcalifornia.edu/news/article/27323>

source of this talent.

- A robust graduate research program is critical to creating the brainpower the 21st century economy requires. By 2018, the number of jobs in the United States that require a graduate degree is expected to grow by 2.5 million. UC Davis's leadership in graduate education ensures California will be well-poised to meet this demand, producing a workforce that will keep our economy innovating, attracting industry and investment from around the world.
- UC Davis's successful recruitment and training of undergraduate students for this workforce is inextricably connected to the strengths of its graduate education. Strong graduate programs/groups attract high caliber faculty, who, in turn, deliver excellent instruction to both graduate and undergraduate students.

Graduate education at UC Davis offers unique value

- UC Davis's Land Grant heritage emphasizes producing knowledge for the benefit of the people of the state.
- UC Davis's innovative graduate groups promote interdisciplinary teaching and research, resulting in new approaches to complex problems.

UC Davis graduate students contribute in important ways to undergraduate education through service as teaching assistants, mentors, and role models.

II. ENHANCE ENVIRONMENT FOR GRADUATE STUDENT SUCCESS AS INTEGRAL TO UC DAVIS EXCELLENCE

Graduate students play a multi-faceted role in the university's pursuit of excellence in graduate education. While they obviously benefit from strong faculty, staff, programs and facilities, they are also integral to making all education excellent at UC Davis. We recruit highly motivated students of both skill and aptitude into our graduate programs/groups, aiming for them to accomplish their scholarly, professional and personal goals. Our students represent a range of experience, talents, interests and expectations. They come to UC Davis to become a part of a vibrant learning environment, engage in innovative research and excel as scholars. As these goals are central to the mission of graduate education, ensuring that students have every chance to prosper in these areas should be a high priority. As the products of our graduate programs/groups, graduate students are the foremost indicators of the quality of graduate education at UC Davis. Their scholarly achievements and success during and after earning their degrees are a direct result of the opportunities and resources available to them during graduate school. In this context, the university must address ways to enhance the environment for graduate student success ensuring that students are able to benefit fully from the knowledge and opportunities made available to them in our programs/groups.

In preparation of this report, with leadership from our two graduate student members, we listened to the thoughts and concerns of our graduate students via a focused graduate student roundtable and open forums featuring visiting expert panels. Capturing three main themes heard from graduate students themselves, the Graduate Education Task Force recommends that the administrative and faculty leadership of the university undertake efforts to ensure appropriate levels of financial support, foster a vibrant graduate student community, and promote superior mentorship and professional development. The Task Force also supports efforts to increase diversity within the graduate student body, continue support of current and expanded avenues for including graduate student representation in university governance, and promote graduate students' global experience. In addition to the broader recommendations below, in Appendix E we have provided a more complete list of suggestions for enhancing graduate education shared with us by those we listened to and spoke with throughout this process.

ADDRESS GRADUATE STUDENT FUNDING AND OTHER FINANCIAL ASPECTS

The level of support for graduate students over the course of their studies is a critical factor in attracting and retaining the best, brightest graduate students. Sustained funding, low bureaucratic hurdles in processing student funding, and ease of access to information about funding opportunities all promote excellence in graduate education by ensuring that students can focus primarily on their scholarship. University fees, tuition, and cost of living continue to rise. Between 2005 and 2010, resident academic graduate student tuition increased 70%, but during the same time period available financial support (i.e. state, federal or private fellowships, loans, university aid) increased by only 29%. Competition for limited resources is growing and is highly variable across graduate programs/groups. Detailed information about student financial support is available in Appendix F.

As part of administrative and strategic planning, the university must address how best to ensure adequate resources to attract and sustain top quality graduate students and their research activities. Some graduate students spend an inordinate amount of time searching for and securing funds. Some level of this activity is certainly good for future career experience; however excess time spent in this area distracts students from their studies and leads to unwarranted stress and frustration. Even small administrative changes in this area could lead to large improvements in graduate student productivity and quality of life.

Increase fellowship support: In order to promote successful graduate student research, students need to be sufficiently funded at levels competitive with UC Davis's peer and competitor institutions. In 2009 – 2010 UC Davis was the lowest among the UC system for total grant and fellowship support at 19% versus a system-wide average of 32% (see Appendix F).

Fellowship support at critical junctures in PhD students' careers is especially important for students whose funding comes primarily through employment (teaching or GSRs) unrelated to their research. These students' longer time-to-degree is often a function of not having sufficient time to devote to completing coursework in a timely fashion, conducting their research, and writing strong dissertations. We would thus support the expansion of recent fellowship initiatives, such as the Provost Fellowships for doctoral students in the Humanities and Social Sciences.

Increase summer funding opportunities: For students who are only employed during the academic year, summers present a real financial challenge. Many students take out loans or work in jobs unrelated to their career aspirations in order to make ends meet. In 2009, across colleges and schools, the average loan for graduate students ranged from \$9,088 to \$33,605 annually. Among academic graduate students, 42.3% of graduate students in HARCS, as an example, took out loans in 2009. For students unable to secure employment soon after graduation, these loans are an onerous burden. More opportunities for summer support would help students maintain momentum in their research and writing during the summers and to shorten their time to degree.

Improve access to information. In order to promote successful graduate student research, students need to have information about funding options, including clear (potentially uniform) explanations of funding packages offered at admissions. Other potential improvements include establishing a single point of access for student financial support (whether physical and/or virtual) that consolidates information from Graduate Studies, Student Accounting, Services for International Students and Scholars, and Financial Aid, and assistance in finding job opportunities, such as teaching and research assistantships. We would advocate for an improved central web registry.

Invest in grant writing skills. The need to secure funds does not end in graduate school. Our graduate programs should encourage graduate students to write grants, and, in conjunction, should facilitate student learning of skills in grant source research and grant writing. Faculty should be incentivized to include students in their grant securing activities, when applicable. Graduate programs/ groups (i.e. Ecology and Anthropology) with existing programs for training students in grant writing could serve as models for best and preferred practices across campus.

Increase fundraising for graduate student support. While already in place in the current comprehensive campaign, development and fundraising efforts to increase graduate student financial support should be an ongoing priority.

IMPROVE MENTORSHIP AND PROFESSIONAL ADVISING

Graduate students are professors and professionals in training and the graduate school experience is modeled on the apprentice or intern tradition. Excellence in this tradition is achieved through mentorship: the master transfers knowledge and skills to the student, who then develops new knowledge and skills through work on independent and joint projects. It is also achieved through the master's effective and informed career advising so that the student is well supported in his or her pursuit of career objectives. Comprising both mentorship and advising, this theme identified by graduate students dovetails with upcoming recommendations in the faculty engagement section of this report.

Facing a new reality. More so than in the past, our graduate students will enter careers outside of academia. This is a fact highlighted by the report by the Commission on the Future of Graduate Education, entitled "The Path Forward: the Future of Graduate Education in the United States."¹³ Given this shift, university services and faculty need the knowledge and means to prepare graduate students aspiring to a variety of potential career paths. It is imperative that there are systems in place to provide graduate students with the skills and knowledge needed to excel in environments both within and outside of academia. Attention should be given to identify and match the desired skills in the various disciplines against the growing number of potential career paths and to identify examples of successful efforts (i.e. best practices) both within and beyond the university relating to the professional development of graduate students. The task force recommends beginning efforts in this area by reviewing the report by the "Commission on Pathways through Graduate Education and into Careers"¹⁴ and by developing a concrete plan to facilitate ideas for adoption at UC Davis.

Promote shared responsibility. Strengthening professional development requires shared responsibility and engagement at the program, graduate group, division, school, college and campus wide levels. It is necessary that the university respond and support graduate student success by improving communication between programs, Graduate Studies, centers such as the Center for Excellence in Teaching and Learning and the Internship and Career Center, and graduate students so that information on multiple career paths can be better distributed and accessed, and so that professional development activities can be better developed and aligned with the needs of the students. Faculty and administrative partnership and involvement in student-initiated and student-centered activities such as the Interdisciplinary Graduate and

¹³ Council of Graduate Schools and the Education Testing Board. (2010). *The Path Forward: the Future of Graduate Education in the United States*. Retrieved May 1, 2012 from <http://www.fgereport.org>

¹⁴ Council of Graduate Schools and the Education Testing Board. (2012). *Pathways Through Graduate School and Into Careers*. Retrieved May 1, 2012 from <http://pathwaysreport.org>

Professional Research Symposium and Week of Welcome should be encouraged, supported, acknowledged, incentivized and evaluated.

Support graduate program coordinators. Often bureaucratic and administrative processes interrupt graduate student attention to scholarly/research activities. As such, graduate students rely heavily on Graduate Program Coordinators for help and support. From admission and orientation to administering and facilitating student funding and filing for graduation, Graduate Program Coordinators assume a vital role and provide critical assistance and service to graduate students, faculty and other staff. There appears to be wide variation in the job functions, supervision, expectations and training of these staff, however, resulting in an equally wide variation in the classification, and perhaps under-classification, of these positions across programs/groups. In addition to acknowledging and recognizing their important contributions, coordinators across all graduate programs should be supported and empowered to develop and possess the consistent knowledge, skills and experience necessary to effectively support graduate student success and address the complex intricacies of graduate administration.

FOSTER GRADUATE STUDENT COMMUNITY

A positive and strong sense of campus community is central to the quality of graduate student life and supports excellence in scholarship. According to the UC Davis Graduate Student Association, representatives request that the officers engage in efforts to build community more than any other item.¹⁵ Our campus is large and graduate students are often physically, scholastically and/or socially isolated within their respective buildings, laboratories and facilities. Excellent scholarship grows out of dynamic physical and social environments, ecosystems where students from many different backgrounds and with many different interests find themselves in conversation over coffee, sharing intellectual insights about a speaker outside of their discipline, or engaging in joint and/or interdisciplinary projects. The university should foster graduate community, with particular sensitivity to the unique experience of graduate students – the related pressures, challenges and joys.

Explore the development of a graduate student center. Such a facility strategically situated in an accessible and centralized location on campus and combined with appropriate scholarly and social programming would foster a stronger sense of graduate community and improve the UC Davis graduate student experience. Additionally, consolidating relevant graduate student services can ease the burden students currently face trying to find several offices just to get an appropriate signature or vital piece of information. Such a center could also make accessible

¹⁵ Graduate Student Association. (November 3, 2010 and December 1, 2010). *Graduate Student Association Assembly Meeting Agenda Meetings*. Retrieved May 1, 2012 from http://gsa.ucdavis.edu/GSA_Agendas_and_Minutes/2010-11

relevant technology and services, such as teleconferencing or a video classroom as central resources that are vital to world-class education in the 21st century. It could also increase access to services and programs for those graduate and professional students whose programs are not located on or near campus.

Support improved communication among graduate students. Whether enhanced by a physical facility or not, communication between and among graduate students and graduate student services could be improved through a variety of means (e.g. publicize central graduate student support services and staff resources; facilitate disciplinary and interdisciplinary forums for sharing scholarship; formalize graduate student social events; encourage professional development activities; establish more formal and ongoing contact with key graduate studies staff and administrators; coordinate advocacy and communication about matters affecting graduate students).

Assess the need for graduate student housing and child care resources. A suitable living situation for graduate students and (in many cases) their families, is crucial to students' academic and social success. Especially in light of growth objectives for our campus, relevant campus constituencies should carefully assess the current use and need for campus housing for graduate students and graduate student families, attending as well to child care resources.

INCREASE GRADUATE STUDENT DIVERSITY

Diversity of the student body has been widely discussed as an important measure of excellence in graduate education. Enhancing diversity in graduate education should be made explicit by encouraging California-resident, domestic and international graduate students alike to apply to the university all the while communicating the positive relationship between diversity and academic excellence. Attracting and retaining diverse students is challenging and our university's current initiatives reinforce this essential task. UC Davis should be doing more to draw and retain California residents with diverse backgrounds. In particular, many California residents receive their undergraduate degrees from the UC and California State University systems. Developing further initiatives to seek out the most promising of these students and to prepare them to attend graduate programs at UC Davis will bolster our status as an excellent university.

Be deliberate about diversity goals and utilize existing planning. Diversity is essential to a top research university and encourages contributions from students from a variety of cultures, with various backgrounds and life experiences that enrich the entire institution's pursuit of new and important knowledge. UC Davis' current diversity plan reinforces our commitment and should be made more central to overall strategic planning, as well as distributed widely to ensure active adoption by all graduate programs.

There must be shared responsibility at all levels in taking the necessary steps to expand graduate student diversity through strategic and intentional outreach, recruitment and retention efforts. Examples of such steps include, but are not limited to: increasing international recruitment for graduate students; considering using other criteria in making admission decisions including non-cognitive indicators; developing strong partnerships with institutions that attract diverse populations of students including California State Universities; Hispanic-Serving Universities, Tribal Colleges and Universities; and Historically Black Colleges and Universities; and continuing our commitment to pipeline programs for members of under-represented minority groups pursuing graduate education.

Additionally, a concerted effort must be made to attract and retain a diverse graduate student body and university community with input from the widest and most inclusive range of constituencies. Existing programs and resources that promote increased diversity in graduate education at UC Davis include: the Student Recruitment and Retention Center, the Graduate Ally Coalition and Alliance for Graduate Education and the Professoriate.

ASSURE GRADUATE STUDENT VOICE IN POLICY DECISIONS

There are currently several graduate student positions on campus that exist to give graduate students an opportunity to contribute to campus priorities and decision-making. These positions include, but are not limited to, Graduate Student Association (GSA) officers, the Chancellor's Graduate and Professional Student Advisory Board (CGPSA), and the Graduate Student Assistant to the Dean and Chancellor (GSADC). There are also graduate student positions at the various student centers -- such as the Student Recruitment and Retention Center (SRRC), Women's Resources and Research Center (WRRRC), Cross Cultural Center (CCC), Lesbian, Gay, Bisexual, Transgender Resource Center, (LGBTRC) -- that, in practice, are often called upon by the administration to inform future policies. In addition, many campus committees have membership space for graduate student participants, including the Executive Committees of several graduate groups. The level of potential involvement and the value placed at UC Davis of including graduate students in governance is a particular strength of our campus. What has been built up over time; however, must be maintained and appreciation of student voice must be consistently demonstrated. This strength may also be extended at the graduate program/group level by engaging graduate students in ongoing improvement and planning efforts.

Broaden communication about service positions. Since service is a fundamental component to professional careers in academia, graduate student involvement in service committees is beneficial training. Often these positions are filled by members of the independent Graduate Student General Assembly, which serves as the primary recruiter for involvement. Sometimes

advisory committee slots remain unfilled, however. Coordinated advertisement and promotion in partnership with Graduate Studies could improve the involvement of graduate students in a range of decisions that affect their welfare and that of the campus as a whole.

Develop leadership skills. Graduate students often lead initiatives that support the graduate student experience, such as interdisciplinary seminars or campus-wide projects. Therefore, information should be made more available on how to organize seminars, workshops, student groups, and lecture series; how to secure university facilities and resources; and how to connect with other efforts. Additionally, workshops and/or programs to develop graduate student leadership skills should be considered as well as expanding funding and access to the few campus programs that currently support this mission, such as the Professors for the Future program and the Graduate Ally Coalition.

Solicit student feedback regularly. In line with recommendations of the previous section, (Increase Accountability for Graduate Education by Using Appropriate Metrics at Program and University Levels to Track Success), including students in on-going evaluation and assessment of the quality of graduate education and the graduate student experience at the program/group and broader campus level (e.g., through an annual student survey) is vital to students' continued success at UC Davis.

PROVIDE GLOBAL EXPERIENCES AND SUPPORT INTERNATIONAL STUDENTS

Educating the next generation of leaders and scholars requires preparing them to contribute to a global society. Our graduate students need deep exposure to peoples, cultures, and ideas from around the world. UC Davis must continue to recruit the best international students while recognizing that a global university is a function not only of how far students travel to get there but of the kinds of opportunities available within the organization as a whole. With this in mind, we look forward to reading the recommendations of the International Advisory Committee, which has been taking this sort of holistic approach to issues of internationalization.

Recruit and attend to special needs of international students. Currently, it is not cost-effective for graduate programs/groups to recruit many international students because (due to Non-resident Supplemental Tuition), international students cost significantly more than out-of-state students, who are eligible to become residents in their second year of study. As a result, graduate programs/groups often cannot admit some of their top applicants. It is important that we find ways to level the field of competition for international graduate students who apply to UC Davis. It is also important that we level the playing field for our international students in cultural, linguistic, and social ways, attending to their particular needs as graduate students.

Increase support for international conference and research travel: When students travel abroad, their work is circulated among and they develop relationships with international colleagues. The payoffs of such travel are both intellectual and professional (universities abroad are often very interested in hiring students who receive their doctorates at American institutions). In addition to more support for student travel to international conferences, we would advocate for more support for student dissertation research abroad. Many of our current graduate students choose projects with a local focus, even restricting themselves to California, simply because they know they will not have the funds to pursue projects with a more extensive national, let alone an international, reach. By supporting student research abroad, we can develop more globally oriented graduate students and provide them further post-graduation job opportunities. Support for international travel by graduate students must recognize the variety of activities and destinations that student research can involve. Currently there are funding incentives for graduate students to travel to “third world” countries to do research with practical applications but fewer opportunities for students who need to pursue their research in, for instance, major European cities, and/or whose work does not have immediate application.

Develop exchange programs with universities abroad: These might involve GSR or TA employment, where UC Davis hosts a student from a country at the same time that one of our students is hosted in that other country. This can be done at the department or the school level. Such exchange programs—because they are exchanges—are less expensive and can yield positive outcomes with a small investment of resources.

III. ENGAGE AND RECOGNIZE FACULTY PARTICIPATION

Through its discussions, interviews, invited guests, reviews of past reports, and interactions with faculty and students, it is clear that there is a high level of commitment to graduate education among faculty, who represent a wide diversity of interests and possess unique and internationally recognized strengths. As evidenced in a 2010 Report by the UC Davis Division of the Academic Senate¹⁶, our faculty actively participate in graduate education. This role is “critical to the scholarship of university faculty who must be recognized for the contributions that they make to the campus.” In this context, the university must address ways and means to facilitate such participation so as to maximize faculty scholarly pursuit and enhance the graduate education enterprise at UC Davis. The Graduate Education Task Force recommends

¹⁶ University of California, Academic Senate, Davis Division. (November 2010). *Report of the Task Force on the Future of UC Davis*. Retrieved May 1, 2012 from http://academic senate.ucdavis.edu/documents/FUTURES_Task_Force_Recommendations_110310_EC.pdf

that the administrative and faculty leadership of the university undertake efforts to enhance the engagement of faculty in graduate education; to provide development opportunities for faculty so that they may better fulfill their responsibility as advisors and mentors to graduate students; and to offer incentives to faculty that recognize and value their contribution to the mission of graduate education.

ENGAGE FACULTY IN GRADUATE EDUCATION

UC Davis faculty members are committed to graduate education. However, mentoring and advising graduate students and teaching graduate classes requires a large investment of faculty time and effort, and faculty must balance these activities with undergraduate teaching, research, and service within and outside the university. In addition, there are many formal and informal activities associated with developing and maintaining a successful graduate program/group that are often not fully recognized.

Redesign curricula content and delivery. Especially in the graduate groups, administrative inefficiencies often exist due to duplication of effort between groups and minimal allocated financial support. For example, in some broad disciplinary areas, multiple separate admissions committees engage in graduate student selection for areas that some faculty may consider having very similar criteria of excellence and competence. Continuing this practice may be more costly to the faculty involved than undertaking an effort to streamline admission and basic education in those areas. For instance, a letter from three Graduate Group Chairs, N. Baumgarth, DVM, PhD, Immunology; P. Lein, PhD, Pharmacology & Toxicology; D. Borjesson, DVM, PhD, Comparative Pathology (personal communication, January 30, 2012), suggested the creation of a large “UC Davis Biological and Biomedical Sciences” umbrella to enable faculty to maximize their efforts in support of graduate education and teaching by working together on a first-year combined and streamlined graduate program, increasing their competitiveness for extramural training grant support, and becoming a cohesive voice for their faculty stakeholder community in higher, campus level strategic planning. The taskforce presents this as an example, not a specific endorsement; it is the prerogative and responsibility of the faculty in the Biological and Biomedical Sciences to assess the educational value of such a proposal.

Thought and consideration should be given to the establishment of such academic umbrellas by the faculty involved in naturally-related groups. There is the potential for voluntary faculty action that will not only facilitate the education process itself but also entice broader and more enthusiastic faculty engagement in graduate education across campus. However, resource allocation should not be used as a means of coercing reorganization of delivery of the graduate curriculum.

Consider administrative efficiencies. One possible means of increasing faculty's ability to engage in core activities is to explore redesigning administration of graduate education in order to mitigate the overall burden of program delivery and administration on the faculty.

Due to its complexity, graduate education is not included in the new budget model scheduled to go into effect July, 2012. As budget models for graduate education are explored, possibilities for administrative efficiency should be explored as well. Dean of Graduate Studies Jeffery Gibeling introduced one such proposal in early 2011¹⁷. Many of the faculty and staff concerns regarding this proposal were related to its single "clustered" model of graduate program administration. Some graduate groups have chosen already to pool resources; their experiences may serve as a measure of the effectiveness of voluntary administrative "clustering" efforts.

However, it is unlikely that a one-size-fits-all approach will support continued and increased excellence in graduate education. Mandating clustering may have many negative effects, including demoralizing faculty, graduate students, and staff by undermining a sense of community and, reducing staff's ability to develop expertise in the specific programs/groups they manage. From an administrative perspective clustering graduate program staff may exacerbate workload difficulties rather than aid in workload management. For example, graduate programs undertake admissions at the same time. Thus, all graduate program administrators face this periodic (and predictable) increase in workload at the same time. Administrative efficiencies may be better obtained by clustering graduate and undergraduate program administration activities. Still, the complexity and efficiency of administering graduate student support will need to be addressed since this is an area unique to graduate students (i.e. different than undergraduate student financial aid).

Recognize faculty service effort in support of graduate education. Graduate education is very time-intensive. There are many activities beyond the classroom and mentoring and advising that require faculty effort in order to develop and maintain excellence in graduate education. Faculty members devote a great deal of time to admitting graduate students and recruiting them to come to campus. They devote a great deal of time to academic advising other than chairing dissertation and thesis committees, and to managing graduate curricula. One source of faculty burnout is the time spent on such activities on top of other regular duties. Even when faculty members do not chair a graduate program/group, or chair a dissertation or thesis committee, the time commitment can be considerable. Greater recognition of the time-consuming nature of these activities when assessing the service component of a faculty member's merit case, and recognition of their importance to the university could aid in

¹⁷ UC Davis Office of Graduate Studies (January 2011). *Proposal to Reconstitute the Office of Graduate Studies as The Graduate School at UC Davis*. Retrieved May 1, 2012 from <http://academicsenate.ucdavis.edu/rfc/view.cfm?or&id=37>

mitigating burnout. It could also enhance awareness of the essential role of graduate education for the university's mission.

PROMOTE FACULTY DEVELOPMENT

UC Davis' pursuit of excellence in fulfilling its mission as one of the major land-grant universities in the nation is reflected in the diversity of its faculty from a broad variety of backgrounds, education, and training. In order to achieve excellence while at UC Davis, faculty work constantly to achieve success in their scholarly activities. To facilitate this effort, faculty must be afforded opportunities to enhance their skills as mentors, teachers and researchers. For example, mentorship and advising, including preparing students for multiple career paths, is considered a critical element of excellence in graduate education. Another aspect of faculty development that affects excellence in graduate education is success in securing research funding. However, little guidance is available to faculty members who wish to develop and improve their skills in these areas. Therefore, our committee strongly encourages the university to expand resources for research and researcher support and provide development opportunities for its faculty so as to ensure the success of our graduate education mission.

Development of mentoring competencies. A 2011 international survey conducted by Nature magazine¹⁸ revealed that graduate students dissatisfaction with guidance received from faculty mentors ranged from 37%-57% depending on the number of years of time spent as a graduate student. Our discussion with faculty and students alike reflected the sentiment of this survey, and indicated a desire and need for faculty to continue to strive for excellence as effective graduate student mentors. The range in mentoring skills is a reflection of the various backgrounds of faculty members, especially how they themselves were mentored. But the art of mentoring is important in all fields, and not limited or restricted to one field more than another. Therefore, formal and continuous training of faculty, in particular at the beginning of their career, in the fundamentals of mentorship is essential. Effective mentoring skills vary by field, so senior members of graduate programs/groups must be encouraged to engage with their junior colleagues regarding their development as mentors.

Mentorship should be viewed from a holistic perspective and include advice on the substance of the student's academic program and on issues related to professional and career development. Addressing such issues is particularly important to guide graduate students toward the completion of their degree and their launching of a career. The best mentors often continue to provide guidance and support throughout a student's career, even decades after the student has graduated. The task force recognizes current efforts by the Office of Graduate

¹⁸ Russo, G. (2011). Aspirations and Anxieties, Nature's international student survey reveals changing career preferences — and a need for inspiring mentors. *Nature*, 475:533-535

Studies as well as by some graduate programs/groups to provide workshops on mentoring and on advising students about a range of career paths. Efforts to improve mentoring must be broadened to become an important part of the UC Davis campus culture. For example, consideration should be given to canvassing our students on their perception of the qualities of mentorship that would be most beneficial to them, and to continuing to seek feedback from students on a regular basis. Also, there may be value to creating a system with the intent of defining and then analyzing indicators that objectively measures faculty mentorship. Such a system could serve as a catalyst for strengthening areas of greatest need in mentoring competencies, and also allow faculty to individually gauge their development as mentors.

Training to advise students on a range of career paths. While also a part of mentorship, the task force feels compelled to highlight this particular aspect for special emphasis. The ultimate outcome of a graduate education is no longer limited to a professorship at an academic institution. Today, graduate students have opportunities not only in academia but in public and private industry (e.g., the pharmaceutical industry and non-governmental organizations), local and national government (i.e. government research agencies and K-12 education), and elsewhere. Faculty cannot limit their professional guidance of graduate students to “cloning” themselves. However, during the town hall meetings, students expressed discomfort in accessing general career planning guidance through the Internship and Career Center when their career goals seemed to contradict the expectations of their faculty advisor. Active referral from faculty may ease this discomfort. Advisers can minimize stress for their students by helping them to map out possible career aspirations. To do so, faculty themselves need to be informed about the range of career options, including (if applicable) the non-academic landscape and help their student navigate a path which will help them to meet their personal as well as scholarly goals. In support of this opinion, Joel Michaelsen, one of our expert consultants, noted that since many faculty have little experience outside of academia, there is some need for “re-training” in the broader range of career paths open to and compelling for graduate students. Concomitantly, it is up to faculty in each graduate program/group to define what constitutes a successful outcome of the program/group and to communicate this information to students at the time of recruitment/admission. If programs/groups choose a narrower set of career options for their students, then they need to adjust their program size so that their graduates can secure employment in the fields for which they have been trained.

Facilitate efforts to seek research funding. Research costs, including salaries, supplies, equipment, and other costs, continue to rise and place significant strains on the ability of faculty to maintain an active research program. Further, the flattening of budgets for a number of research agencies (e.g., National Institutes of Health, National Endowment for the Humanities, National Science Foundation) reduces the likelihood that even the most meritorious grant applications will be funded at all, or even at reduced levels. Therefore, it is

imperative that the university continues to invest in its research enterprise, including the development of faculty competitiveness for external funding. This can be accomplished by providing support for new and innovative research programs (e.g., Research and Investigation in Science and Engineering, “RISE”, issued by the Office of Research; the Mellon Research Initiatives in the Humanities), and for mid-career faculty with promising ideas in new research areas.

In some fields, where the primary means of funding research is through competitive extramural grant competitions or other non-university sources, faculty should receive support in developing their skills in order to enhance their competitiveness in obtaining outside grants. However, in many areas, such as the Humanities and Fine Arts, relatively little extramural research funding is available. The university’s investment in its research enterprise must recognize the value of excellent research and graduate education in these areas as well. Faculty in these areas should be provided with resources to pursue their research so they may effectively mentor graduate students. For faculty in fields where relatively little funding is available for their own research, one possible technique for supporting faculty research is the practice of automatically “topping off” the stipends offered by funding agencies: the university makes up the difference between the salary offered by a competitive extramural grant and the faculty’s regular annual salary. Faculty should not have to take a pay cut in order to devote time to the research that a competitive fellowship is designed to support. A policy of this sort would encourage faculty to apply for grants that bring resources and prestige to the university and its graduate programs. Fund-raising efforts could target establishment of such an endowed fund.

Align efforts between research and graduate education. The Graduate Education Task Force recognizes the important and essential linkage between research success and graduate education and training. Scholarly activity includes both teaching and research, and there is a natural relationship and interdependency between them. Faculty who conduct research activities that contribute new knowledge and advance their field of study are perfectly suited to mentor and advise graduate students in developing and/or applying these research advances so that they may, ultimately, reveal new insights and open new avenues for research and discovery. In kind, graduate students who are sufficiently supported and appropriately mentored are better prepared to substantively engage and contribute to research programs that contribute new knowledge and advance a field of study. Yet, despite this clear, fundamental and necessary interaction between research and education, there is still much that UC Davis can and should be doing to align its efforts in these areas. For example, many of the large granting opportunities to establish centers of research excellence have a large graduate education and training component. Applications for training grants are most often successful when they demonstrate an environment of research excellence that seamlessly supports graduate students. Therefore, announcements for research opportunities that include

graduate training should be coordinated between the Office of Graduate Studies and the Office of Research. The task force strongly urges greater dialogue between both offices to ensure we capitalize on ways to strengthen both our research and graduate education efforts.

PROVIDE FACULTY INCENTIVES

Providing faculty members with incentives to engage in core graduate education activities will promote excellence in graduate education. Current structures for research funding and graduate teaching provide faculty members with perverse incentives. Increasing tuition and fees and the requirement that non-resident tuition must be paid from the funding source supporting graduate student researchers are making it more cost-effective for faculty members to employ post-doctoral scholars instead of graduate students. Additionally graduate teaching is not treated uniformly across campus units. In some cases faculty members must teach graduate courses on an overload basis.

Costs of graduate students verses post-doctoral scholars. The rising costs for graduate student tuition, fees, and stipends coupled with the increasing limitations placed by extramural funding agencies on fee remission and training support is placing a significant strain on the ability of faculty to employ graduate students. Often, the first year of funding provided by the faculty mentor does not result in very much measurable research productivity. Graduate students' need to balance subsequent course work, studying for qualifying exam, training in techniques, etc, with part-time research employment, especially in light of the rising costs, makes graduate students a burden too great for some faculty. Instead, faculty often prefer to hire more experienced, albeit more costly, post-doctoral scholars who, by their nature, generate more "bang for the buck" when compared to a graduate student. After all, post-doctoral scholars are full-time employees who do not face the competing demands and tuition/fee costs that graduate student researchers do. This trend is worrisome, and must be addressed by the university so as to incentivize more faculty to engage in training graduate students for the next generation. The university's 25% "buy-down" of tuition and fees, including non-resident tuition, of graduate students funded from extramural sources is an illustration of a policy that mitigates the disincentive to employ graduate students. UC Davis policies resulting in disparate tuition and fees between resident and non-resident graduate students should be revisited in the context of our overall mission.

Recognize faculty participation in graduate courses. Although counting graduate courses in faculty workloads should be a relatively straightforward exercise, apparently it is not consistently performed campus wide. External consultant Steve Matson noted the problem of equitably recognizing faculty time for teaching graduate courses. This is particularly challenging for graduate groups which do not hire directly and have limited to no voice ensuring that

departmental faculty hires consider the need for teaching of appropriate courses as part of the graduate group. Regardless of whether a graduate course is taught for a group or a departmentally based program, another challenge is that the amount of faculty time per student credit hour (SCH) is much greater for graduate courses than for undergraduate courses yet, the SCH/student full-time equivalent (FTE) for graduate student is 20% lower. Current measurements of faculty workload that rely on SCH or student full-time equivalents (FTE) do not represent the time spent. Therefore, it is important that extant academic policies be clarified and articulated at departmental levels, and/or revised (e.g., UCD APM210 to accompany UC APM 210) to ensure that all faculty teaching effort is treated equitably. Specifically, graduate courses should not be routinely taught on an overload basis but should be recognized as part of a faculty member's normal teaching load. The greater faculty time per graduate SCH must be recognized as well, and reflected in resource allocation rules for academic units. Failing to recognize the time dedicated to teaching results in faculty members having less time to devote to research, service, and mentoring. This imbalance undermines the overall excellence of the university as well as its graduate programs/groups.

Reward faculty efforts to support graduate education. It is essential that we change the campus culture to recognize the contributions graduate education makes to the university's mission. Changing culture can be facilitated by pairing the adoption of a shared vision with small, concrete steps that reward faculty efforts to support graduate education without requiring changes in policies or increases in resources. While the task force does not propose a specific set of items, during the course of its meetings and its internal discussions a number of concrete actions emerged. Here are a few examples that relate to the concepts discussed earlier in this section.

- Count faculty instruction of graduate group courses, particularly core courses, as part of a faculty member's normal teaching assignment. This will encourage departments to invest in the success of graduate groups. Particularly if the funding were allocated to the graduate groups themselves, it could encourage close and healthy relationships between graduate groups and departments by providing them with an incentive to undertake academic planning jointly.
- Clarify and perhaps revise procedures for faculty "credit" for team-taught courses. For intellectual and practical reasons, graduate courses are team taught more frequently than undergraduate courses. Although team-taught courses can be immensely beneficial to graduate students and to faculty, sometimes faculty are discouraged from team teaching such courses because they don't "get credit" for doing so. There is no clear, commonly recognized reason why this would be the case. One possibility is that departments and graduate groups are not completing records correctly so that instructor teaching activity reports do not reflect actual teaching efforts. Another is that

faculty members are not educated regarding how to report guest lectures and partial course responsibilities in a way that gains them credit. These two possibilities can be addressed with simple clarifications/education efforts. A third is that the “credit” in question is not the credit that accrues to the individual but the financial resources that accrue to the unit offering the course. Whether or not this is a disincentive depends on the budgeting model at the campus and college level. For all three possibilities, there should be sufficient transparency for faculty members, department chairs, and graduate group chairs to be able to understand the benefits and costs to team teaching.

- Examine incentives for enhancing capacity for supporting graduate students as GSRs. Specifically, consider reducing the revenue stream tax on research dollars used to support graduate students. Under the current version of the funding streams model, all revenues are taxed at the same rate. Funds used to fund GSRs support the university’s research and teaching missions. Rebating part of the tax would recognize the role that faculty who obtain grants play in both. Under the current system there is no recognition of the cost to faculty members of mentoring graduate students. Additionally, consider expanding the budget for the Senate Small Grants in Aid of Research program, perhaps earmarking additional funds to be used for the hiring of graduate student researchers. The current Small Grants program prioritizes funding to assistant professors and, as a result, more senior faculty – who may be especially well qualified to mentor GSRs – cannot afford to hire them.
- Provide supports for faculty who spearhead and/or administer efforts to obtain large training grants that employ graduate students. Such efforts take an enormous amount of effort and providing some relief (e.g. in the form of course buyout) might help to involve more faculty members in the process.

IV. VALUE SOCIETAL RELEVANCE OF GRADUATE EDUCATION AT UC DAVIS

Leading public universities such as UC Davis have historically contributed to the social good in four broad ways. First and foremost, this has been achieved through their education function, as public universities have served as a critical pathway to opportunity for poor and otherwise disadvantaged populations unable to access private higher education institutions, and helped educate a broad and critical citizenry that is important for preserving a dynamic democracy. Second, public universities have been important sites of social critique and contributors to movements for social change. This function has been achieved through university research on structures of inequality that have contributed to a changed understanding of our society and because universities have served as an important site for social movement formation. Third,

public universities have served as generators of new knowledge, technological innovations and economic development. Finally, public universities have been large public employers.

As a public Land Grant institution, UC Davis has a historical commitment to producing knowledge for the benefit of the people of the state.¹⁹ UC Davis is unique in its dynamic location at a crossroads where global flows of people, ideas, good, and economic value converge, in close proximity to the state capitol, and as a campus linking both urban and rural regions of the state. UC Davis is ideally positioned to provide its world-class research as a resource to inform public policy at state, national and international scales. Innovative practices of engaged scholarship, translational research, and university-community partnerships represent important approaches to manifest this vital Land Grant mission.²⁰

The UC Davis Vision of Excellence calls out the challenge to “expand our Land Grant mission, so that our pursuit of knowledge and our engagement with partners will serve the state and nation, and address the emerging challenges of an interdependent global society.” Likewise, these values are recognized in rankings such as the *Washington Monthly* which places UC Davis as 6th in the US based on our contribution to the “public good” in three broad categories: “Social Mobility (recruiting and graduating low-income students), Research (producing cutting-edge scholarship and PhDs), and Service (encouraging students to give something back to their country).”

Building on these strengths, UC Davis can provide powerful learning and professional development opportunities for graduate students. Examples of strategies to achieve these goals could include the following.

¹⁹The Kellogg Commission on the Future of State and Land-Grant Universities. (2001, January). *Returning to Our Roots: Executive Summaries*. Retrieved May 1, 2012 from <http://www.aplu.org/page.aspx?pid=305> ; The Kellogg Commission on the Future of State and Land-Grant Universities. (1999, February). *Returning to our Roots: The Engaged Institution*. Retrieved May 1, 2012 from <http://www.aplu.org/page.aspx?pid=305> . The Kellogg Commission on the Future of State and Land-Grant Universities emphasized the importance of community engagement, outlining seven characteristics of an engaged institution – responsiveness, respect for partners, academic neutrality, accessibility, integration, coordination, and resource partnerships. Moreover, the reports noted that lack of stable funding for engagement was a critical problem.

²⁰For some of the earliest calls for publicly engaged scholarship, see, Boyer, E. L. (1990). *Scholarship Reconsidered: Priorities of the Professoriate*. San Francisco, Calif.: Jossey-Bass; Glassick, C. E., Huber, M. T., Maeroff, G. I. (1997). *Scholarship Assessed: Evaluation of the Professorate*. San Francisco, Calif.: Jossey-Bass

CAPITALIZE ON GEOGRAPHIC IDENTITY

First, at the level of the university's identity as a whole, it may be beneficial to embrace the unique geographic positioning of the campus. Geographical location is a key resource that Davis can mobilize to achieve excellence across the disciplines. Since its inception, UC Davis has been able to maximize the benefits deriving from its place in the central valley, developing a remarkably close and advantageous connection to the agricultural industry that has traditionally framed the identity of our campus and built capacity for relevant research globally. The excellence of the graduate programs in agriculture-related life sciences is a testament to that. But if the campus' location has not changed since 1905, transportation and mobility has -- by orders of magnitude. It is now time to acknowledge that Davis is not only the premier UC campus in the Central Valley, but also the northern-most university of the San Francisco Bay Area, literally located where the Valley meets the Bay.

More importantly, the most successful US universities have thrived in extremely successful geographies of innovation that bring together academia, industry, and culture in the Bay Area, Boston, and in the Durham, NC area.²¹ All these ecologies involve more than one university -- Harvard-MIT-Tufts, Stanford-Berkeley-UCSF, Duke-UNC -- each with specific strengths. Not only is Davis well placed to contribute to the Bay Area's ecology of innovation and to become its northern node -- Davis is as close to Berkeley as Berkeley is to Stanford -- but it can do so without in any way weakening the connection to the Valley that has proven so central to its success.

UC Davis should be able to have it both ways: reinforce its status as the premier research and graduate training center for agriculture-related techno sciences while also boosting the attractiveness and excellence of its full range of graduate programs in the sciences, social sciences, humanities and the arts by taking full advantage of the intellectual, industrial, and cultural resources found in the Bay Area. These connections can be developed in a variety of ways: 1) Internships, summer schools, and conferences at Bay Area industries and universities can introduce our science, health, and engineering students into biotech, IT, and pharma research networks, as much as our campus' location connects our agriculture and environmental science students to California's agricultural research and business communities; 2) Pedagogical complementarities could be identified to establish opportunities for teaching and training collaborations between Davis and Bay Area universities (Harvard and MIT have recently synchronized their academic schedules to allow students to cross-register with virtually no hindrance, and teaching collaborations are increasing between Duke and UNC as well); 3) In

²¹ C.f.: Grimaldi, R., Kenney, M., Siegel, D.S., Wright, M. (2011). 30 years after Bayh-Dole: Reassessing academic entrepreneurship. *Research Policy*, 40, (8) 1045-1057; Adams, S.B. (2003). Regionalism in Stanford's Contribution to the Rise of Silicon Valley. *Enterprise & Society*, 4 (3): 521-543.

addition to having access to museums and cultural programs in Sacramento, our graduate programs in the arts and humanities are one hour away from top-notch museums, galleries, art schools, and a large cosmopolitan artistic community with which they can and should interact and collaborate (New York's academic excellence in the arts and humanities is directly tied to extra-academic resources, such as the city's many vibrant artistic and cultural institutions and communities).

The opportunities offered by Bay Area networks and resources would attract the best graduate students who are interested in a top education but also in accessing the best professional networks of innovation. Conversely, Davis should recognize that our graduate students are our ambassadors. The networks and collaborations they will establish, with our help, within the Bay Area ecology of innovation and culture will demonstrate UC Davis' excellence while opening up further partnerships venues for other elements of the campus community -- not unlike MIT's reliance on its foreign students to develop global research collaborations.

By acknowledging and further establishing itself as a member of the Bay Area ecology of innovation rather than adopting a more limiting self-representation as a specialized Valley-oriented campus, Davis should appear as a desirable partner for the kind of collaborations that Google, BP, and Intel have already developed with Stanford University and UC Berkeley, or those that Pfizer has established with UC San Francisco. These collaborations hinge on the quality and quantity of the research resources of these specific institutions, but also on a clear acknowledgment of the vast amount of talent residing, circulating, and flocking to the Bay Area.

USE ENGAGEMENT AS OPPORTUNITY FOR GRADUATE EDUCATION TRAINING

The practices of engaged scholarship can provide powerful learning experiences for graduate students that can both enrich their academic training and prepare them for a range of careers, both within and beyond the academy. Supporting and sustaining such functions in the university will require making this an institutional priority. Developing specialized graduate training programs such as the internationally renowned Atmospheric Aerosols and Health program, organized through the UC Toxic Substances Research and Training Program (with funding from the UC Office of President) drew on an interdisciplinary team of faculty from the social sciences, natural sciences from both UC Davis and UC Merced for a two-year sequence of workshops, guest lectures with professionals in the air quality arena, collaborative projects, and individual research projects that integrated the science and policy of air quality. While the program has since been closed due to funding, it remains a positive example of how the interdisciplinary, collaborative, and policy-relevant research can offer unique learning experiences. Similar training programs could be developed on a range of themes cutting across the sciences, social sciences, humanities, and the arts. Even more ambitious programs, such as University of

Oregon's Sustainable Cities Initiative that orients multiple courses around a collaborative effort to improve sustainability in a given city each year offer a campus-wide model to consider.²² Developing a faculty-graduate student mentorship program that would pair graduate students with a faculty mentor with expertise in engaged scholarship related to the student's area of study are another, lower resource, possibility.

RECOGNIZE AND REWARD ENGAGED SCHOLARSHIP

Formal awards are an important element of articulating and reproducing the organizational culture of any institution. The Academic Senate currently recognizes engaged scholarship by faculty through its Distinguished Public Service Award. A Graduate Student Award for Engaged Scholarship to bestow special recognition on students who apply their research to make significant contributions to the public good would help signal and celebrate this value in the University. The award could be offered by the Chancellor and a representative of the relevant community partner. This would be complementary to the current Chancellor's Achievement Awards for Diversity and Community that focuses internally on campus climate by extending this to university-community partnerships. Award recipients could also have a public version of their research published through a university imprint and/or posted on the university website.

Recognition of excellence in engaged scholarship can also be enhanced through supporting the participation of graduate students in specialized conferences on this theme, such as those of *Imagining America*.²³

PROMOTE PUBLIC POLICY APPLICATIONS OF GRADUATE EDUCATION

As the UC campus in closest proximity to the state Capital, UC Davis has unparalleled access to

²²The University of Oregon. (n.d.) *Sustainable Cities Initiative*. Retrieved May 1, 2012 from <http://sci.uoregon.edu/programs/> The Sustainable Cities Initiative is a cross-disciplinary effort that integrates research, education, service, and public outreach around issues of sustainable city design. SCI works at a variety of scales, from regions to individual buildings actively seeking, through multiple perspectives and disciplines, solutions to sustainable city design problems.

²³ *Imagining America Conference*. (April 20, 2012). Conference theme retrieved May 1, 2012 from <http://imaginingamerica.org/syracuseengagedgrads/annual-conference/> *Imagining America's* 2012 graduate student conference is framed as follows. "Recognizing that public scholarship takes many forms and engages a variety of different communities and disciplines, we invite proposals that animate intellectual, community-based, and/or arts projects within and across all disciplines that consider the collaborative knowledge-making process with, by, and for publics. What forms does public scholarship take in your discipline? What kinds of connections across disciplines and with diverse communities are available? How do collaborative projects with the community inform your discipline? What types of methods cultivate cross-disciplinary and cross-community engaged scholarship?"

the political heart of the state and an opportunity to serve as a “go-to” source of cutting edge research to inform the wide range of state public policy. While UC Davis has made some important investments in capitalizing on this asset, including the recent incorporation of the UC Sacramento Center, there remains additional potential for graduate education to make best use of this opportunity. Developing a graduate level public-policy program (the UC Sacramento Center currently serves primarily undergraduates) would offer to our graduate students from across the disciplines advanced training in public policy analysis and the application of their research to informing public policy. A similar program could be developed through the UC DC program in the nation’s capital. Shorter-term policy internships and workshops, policy mentors, and other programs can help promote UC Davis graduate education as a valuable resource for the public good.

V. CONCLUSION

This report has outlined a series of recommendations to increase visibility of graduate education in the strategic and budget planning processes of the university, to strengthen the environment for student success, to engage and reward faculty, and to increase the social relevance of our work. These recommendations range from general principles to specific suggestions for improvement. The task force was charged with envisioning what graduate education should be at UC Davis. Moving forward from this report, the task force hopes that these themes will be employed in a larger conversation about practical implementation. Similarly, this report addresses graduate education as a whole and the recommendations raised should be addressed as such. To focus on one section of the report without considering how all of the critical recommendations are interrelated would impede a successful outcome. It is the hope of the task force members that these ideas will be taken in the spirit with which they were generated, as a collective effort to discuss, debate, and act to assure that our efforts in graduate education result in the outcomes that our campus values and desires.

APPENDIX A: CHARGE FOR THE TASK FORCE

Charge letter for the Joint Administrative Academic Senate Special Task Force on Graduate Education at UC Davis follows.



RALPH J. HEXTER
Provost and Executive Vice Chancellor

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May 12, 2011

Professor Mario Biagioli, Science and Technology Studies
Professor Gina Bloom, Department of English
Mr. Ethan Evans, Doctoral Candidate/Sociology
Professor Rachael Goodhue, Department of Agricultural and Resource Economics
Professor M (Lev) Kavvas, Department of Civil and Environmental Engineering
Associate Dean Kent Lloyd, School of Veterinary Medicine
Ms. Cassandra Paul, Doctoral Candidate/Physics
Professor Wolfgang Polonik, Department of Statistics
Assistant Dean Richard Shintaku, Graduate Studies
Professor Andrew Sih, Department of Environmental Science and Policy
Professor Alan Taylor, Department of History
Dean Heather Young, School of Nursing (chair)

RE: The Joint Administration /Academic Senate Special Task Force on Graduate Education at UC Davis

Dear Colleagues:

We are writing to invite your participation on a joint Senate-Administration Task Force to provide advice and recommendations to the Provost and Executive Vice Chancellor and to the Chair of the Academic Senate regarding various ways our institution supports graduate education in all its forms, and the strategic process that aims to articulate what we want graduate education at UC Davis to be or become as we approach 2020. The task is ambitious and the primary focus should be on the vision itself, rather than the path to reaching it.

We have attached a detailed description that describes the Task Force and the role of the Task Force in this broad visioning effort. We look forward to discussing the process and our goals at the first meeting of the Task Force.

The Budget and Institutional Analysis Office will provide staff support for the committee and make detailed background information and analysis available to members prior to the initial meeting. Staff will contact you shortly to schedule the committee's first meeting. You need not respond to this letter unless you are unable to serve.

The Joint Administration/Academic Senate Task Force on Graduate Education at UC Davis
May 12, 2011
Page 2

We very much appreciate your participation in this important task force, which will support the design of the future of our graduate education.

Sincerely,



Ralph J. Hexter
Provost and Executive Vice Chancellor



Robert L. Powell
Academic Senate Chair

Attachment

c: Chancellor Katehi
Analyst Sarah Mangum

APPENDIX B: TASK FORCE MEMBERS

CHARGING AUTHORITIES

Ralph J. Hexter, Provost and Executive Vice Chancellor

Robert L. Powell, Academic Senate Chair (through June, 2011)

Linda Bisson, Academic Senate Chair (July, 2011 - Present)

TASK FORCE

Heather M. Young, Associate Vice Chancellor, Dean and Professor, Nursing (Chair)

Mario Biagioli, Distinguished Professor, Law and Science and Technology Studies

Gina Bloom, Associate Professor, English

Ethan Evans, Doctoral Candidate, Sociology

Rachael Goodhue, Professor, Agricultural and Resource Economics

M (Lev) Kavas, Professor Civil and Environmental Engineering

Kent Lloyd, Associate Dean, Professor Veterinary Medicine

Jonathan London, Assistant Professor, Human & Community Development

Cassandra Paul, Doctoral Candidate, Physics

Wolfgang Polonik, Professor, Statistics

Richard Shintaku, Assistant Dean, Graduate Studies

Alan Taylor, Professor, Department of History

APPENDIX C: EXPERT CONSULTANT REPORTS

UC-Davis Graduate Studies Task Force Comments from external consultant committee Visit on October 27-28, 2011

Steve Matson, Dean of The Graduate School, University of North Carolina at Chapel Hill

Frances Leslie, Dean, Graduate Division, University of California at Irvine

Joel Michaelsen, Professor of Geography, University of California at Santa Barbara

The graduate education task force invited three outside visitors with expertise in graduate education to visit the UC-Davis campus and speak with several groups about the future of graduate education both at UC-Davis and nationally. We met twice with the task force – once over dinner when we arrived and then again at the end of our visit. The task force is fully engaged in the process, is widely representative of the university and seems genuinely willing to think creatively about graduate education at Davis. Dean Heather Young is an excellent leader of this group and was present at several of our meetings throughout the day. The dinner represented an opportunity to talk broadly and although we were broken into two groups, there appeared to be lively conversation focused on graduate education at both tables. The last meeting with the task force centered on providing some overarching thoughts regarding graduate education at Davis and each visitor shared some of their thinking that may help the task force complete its mission.

In addition, the visiting team met with the Dean of Graduate Studies, the chair of the Graduate Council, several academic deans, a group of departmental and graduate group chairs, and a group of students. We also participated in an open forum with faculty and students. We finished the day with a dinner hosted by the Provost and the Chair of the Faculty Senate. In each case there was active discussion and interest in graduate education.

During the final session with the task force each visitor spent 5-7 minutes providing general comments on what they had learned during the day and their sense of what is important in graduate education for the future.

Professor Michaelsen suggested that a significant trend in graduate studies involves movement toward more interdisciplinary and multidisciplinary programs, and that UC-Davis' graduate group model seems to have already moved effectively in this direction. Furthermore, the model should be able to adapt relatively quickly to future trends. On the other hand, it does present challenges to resource planning that need to be carefully addressed. He also suggested that, in this era of shrinking resources for UC, it might be worthwhile to think about how multi-campus graduate groups might be developed. Of course, the issues the UC-Davis is struggling with would become much more challenging for programs spanning several campuses. Finally,

Professor Michaelsen noted that graduate programs will need to prepare students for a broader range of career paths beyond the traditional research/academic realm. This will not only require new programs for students, but also some re-training of faculty, many of whom have little experience outside of academia.

Dean Leslie highlighted the value of the interdisciplinary graduate groups and their unique place within the UC system. Whereas other campuses, such as UC-Irvine, struggle to break down barriers between individual disciplines, UC-Davis has a long tradition of fostering interdisciplinary research and education through the graduate group structure. These groups are clearly facing challenges in the current environment, however. The decentralized structure of these groups makes it more difficult for them to secure adequate resources in these difficult budgetary times. Furthermore, although the groups foster collaboration at the faculty level, they may result in greater isolation of the graduate students. Dean Leslie viewed these issues as resolvable, however, and urged that the visioning initiative find ways to protect their interdisciplinary structure at a time when collaborative research that spans boundaries is increasingly essential.

Dean Matson suggested the committee find a way to discuss the funding of graduate education separate from other issues impacting graduate education. There is little doubt that graduate education at Davis is underfunded; both the faculty and the students made this abundantly clear. And finding adequate financial support for graduate education is something the task force must address. However, if the funding issue is allowed to cloud all other conversations then other aspects of graduate education will never be fully addressed.

On a national level, the incorporation of extensive professional development opportunities for graduate students in graduate training is an important role for a graduate school. Dean Gibeling has done a marvelous job and the offerings are extensive. This takes the pressure off academic units to provide training in areas where they are not familiar with the needs and have no basis for providing the appropriate training. This is now viewed as a central role of a graduate school and has taken on an added urgency with the decline in available tenure-track positions at research universities. Interestingly, students at Davis seem unaware of these offerings as evidenced when we met with the students. This may be due to lack of advertising, to lack of interest (this does not seem the case) or to a sense that faculty don't want the students to engage in these activities. In any event, these offerings should be widely publicized and extensively utilized by the students. If the faculty are resistant to students receiving this training this must be addressed by the graduate dean and provost.

Matson noted that no one we met with seemed to place much value on fundraising for graduate education. Matson repeatedly raised this issue but without much response. Perhaps this is not important. However, the last CGS national meeting devoted a plenary session to

fundraising and each annual CGS meeting has a workshop focused on fundraising. Matson also talked about advocacy for graduate education within the institution, outside the institution and with the legislature. This appeared to resonate with some groups. This has become a more important part of the role of the graduate school for public institutions that rely on public support.

Student concerns:

Students are very concerned about funding, community and mentorship. They spoke very clearly about these issues and the external group shared several thoughts. Creating community among graduate students is an issue at all of our institutions. UC-Irvine may have made the most progress here with on campus housing for graduate students and a Division of Student Affairs that is more directed toward graduate students and more collaborative with their Graduate Division than is the case at most institutions. UCSB has also built housing for graduate students that has been helpful in recruiting students and in building community among new students. Nonetheless, there is no simple solution to this problem and it is worth the task force taking time to discuss the issue thoroughly. Dean Gibeling's view of a graduate student center is a viable option that has been used successfully elsewhere. The students noted that a new student center was being opened but that no space in it was to be designated for graduate student use. This has left the graduate students feeling marginalized. The students' concern about mentorship and their suggestions should also be taken quite seriously. This is an issue that can be addressed, although it may be somewhat more challenging in graduate groups than in departmental programs. There will always be poor mentors but a strong effort to make good mentorship important and valued will go a long way. As noted above, the funding issue is a concern of all parties.

Faculty concerns:

The faculty seem to be primarily focused on funding for graduate education and the issue of counting teaching of graduate courses in a way that recognizes faculty time and allows graduate groups to function as they have for the past two decades. This is related to the FTE issue where graduate groups do not have FTEs and do not have any real voice in determining where FTEs will go while needing to ensure teaching of appropriate courses as part of the graduate group. The issue of counting graduate courses in faculty workloads should be straightforward, so possibly policies on this need to be clarified and articulated at departmental levels.

Dean Gibeling's proposal:

We do want to share some comments on Jeff's plans for Graduate Studies. In our view his goal of creating a graduate school to focus on more academic issues is right on target. This will allow

a broader view of the mission of the Graduate School on campus which will be needed as graduate schools across the country work to collect data on completion rates, time to degree and various other parameters of graduate education that are now under the microscope. In addition, this provides him with greater opportunity to advocate both internally and externally for graduate education and to raise private monies to support graduate students. The two deans are not in favor of moving the transactional aspects of graduate education out of the graduate school. We believe these activities need centralized oversight to ensure high quality and that accreditation standards are being met in all disciplines, and for graduate education in general. Graduate education is receiving increasing scrutiny by national accreditation boards.

Conclusion:

In general, the Office of Graduate Studies has been very successful at UC-Davis. The graduate groups function well in their ability to provide cross disciplinary training to graduate students without the complication of being a jack of all trades and master of none. The professional development program is well conceived and should be serving students and faculty alike. This will help job placements for graduate students as tenure-track faculty appointments become more difficult to secure. Funding for graduate education is a significant concern for the faculty, the students and the administration. There is no simple solution to this problem in light of decreasing state and federal support for students. All possibilities need to be pursued vigorously, including fundraising, which is one of the few sources that has the potential to offset declining governmental support.

**UC-Davis Graduate Studies Task Force
Comments from external visit committee
Visit on November 1, 2011**

Carol Lynch, Senior Scholar in Residence and Director, Professional Master's Programs, Council of Graduate Schools

Over the course of my visit, these are my overarching impressions:

Council of Deans and VCs

Asked to enumerate the top issues facing graduate education nationally, I listed (in no particular order of relative importance):

- Collecting accurate data on completion, time to degree and student placement.
- Tying funding more to metrics and outcomes.
- Recruiting and retaining more diverse students, including supporting pathways into graduate education.
- More emphasis on fundraising for graduate programs and students (especially crucial in light of severe budget cuts).
- Professional development for graduate students, such as Preparing Future Faculty, Preparing Future Professionals, and Research Integrity (and increased professionalism of graduate education in general).
- Expanded international experiences for students, including dual and joint degree options.
- Bringing on the faculty as critical partners in all these areas.

I was surprised (and pleased) at the interest shown (with almost no antagonism) to the development of quality professional programs and with more attention in general to providing students at all levels with appropriate professional (as well as academic) skills to lead to satisfying careers. Although there was interest, there was also concern from the Management and Law deans about how to incorporate students from other programs into their courses.

Graduate Education Task Force

I was impressed with the thoughtfulness of this group and the willingness to engage hard questions. Topics discussed in this meeting included:

- How to tie funding to appropriate metrics.
- Are PhDs, especially the dissertation, a waste of time for students who end up in careers that don't require a PhD? (This led into a brief discussion of advancing alternative types of professional education.) My feeling in thinking about this is that we should perhaps

work on ways for students to move more easily into and out of degrees if/when their career goals change.

- What are the strengths and weaknesses at UCD? (I would add here that SWOT analysis is always helpful for this sort of task force.)

Strength: graduate groups. (There was some discussion of why this model had not been widely adopted nationally if it was so admired. My impression is that UCD was fortunate in the historical relationships which led to the groups, as they are difficult to form, especially without strong funding incentives – the NSF IGERT program would be an example of such an incentive.)

Weakness: relatively weak graduate “office” vs. a stronger graduate “school.”

Question: is there any danger that a stronger central unit would increase administration, add to bureaucracy and create insensitivity to departmental differences? (This appeared to be a minor view, but always worth guarding against. In my conversations and review of the UCD documents I saw no indication that this was likely to occur, in fact would conclude the reverse, with more faculty participation in graduate academic support and planning.)

In Summary

I was very impressed with the apparent engagement of much of the campus faculty (and administrators) in the conversation about the future of graduate education at UCD. I believe the right questions are being asked, although even more attention could be paid to the impacts of the new budget on graduate education and the office of the Graduate Dean. I was impressed with the leadership in these discussions from the Chancellor, Provost and Graduate Dean. If I can be of any further help, please don't hesitate to contact me.

APPENDIX D: PRELIMINARY SUGGESTIONS FOR GRADUATE EDUCATION METRICS

This appendix includes some of the Graduate Education Task Force's thoughts regarding metrics for evaluating the performance of graduate groups and programs. We offer it only as material for future discussions, not as a recommendation. We want to preface these suggestions with a few clarifications:

1. The Task Force believes that appropriate metrics should be considered in discussions about resources allocation to graduate programs and groups, and not only as part of academic quality reviews of graduate programs like those currently performed by Graduate Council on behalf of the Academic Senate. However, these academic quality reviews should be considered in the resource allocation process. Any annual metrics should not be considered a replacement for substantive review.
2. We believe that, consequently, these metrics should be applied and tracked annually, not every few years as with the academic quality program review schedule. For this to be feasible, the tracking procedure needs to be simple so as to avoid undue workload to faculty and staff.
3. At this time we offer no suggestions as to how to use the various performance indicators of one specific program to produce summary statistics encapsulating the overall quality of that program. That issue may be better tackled after a few years of evidence gathering. However, the aggregation of such program-specific summaries might allow us to compute an overall campus graduate education quality indicator.
4. The development and implementation of metrics should be a transparent campus-wide effort with extensive and direct participation of all stakeholders. It should not be the result of a top-down policy. The definition of success for each metric and its role in resource allocation should be clear and transparent.

Our proposal involves two different data-gathering procedures. Taken together, Parts 1 and 2 could provide us with an annually updated snapshot of the state of all our graduate programs.

Part 1

This part offers some thoughts about possible extensions of the "Graduate Program Evaluation Metrics" (developed by Graduate Dean Gibeling and Graduate Council, and approved by Graduate Council on May 20, 2009 – please see citation on page 14.). Because these draft metrics already cover many key issues that are easily quantifiable, the Graduate Education Task Force focused on additional questions to produce finer grained evidence, in particular about graduate students' professional progress and success during their enrollment in our programs

and in the first five years after graduation. Most, though not all, of this evidence can be gathered by information routinely available to the Office of Graduate Studies. The additional data gathering – especially that related to the students’ post-graduation progress – will be somewhat time consuming, but this might be crucial for gauging the quality of our students’ training and the likelihood of their future success.

As for student characteristics of a program, the gathered evidence might be more informative if the following is included:

- Attrition rates by year (how many students left the program during the first year, second year, etc.), with sensitivity to the difference between intended and unintended attrition.
- Distinguishing between internal and external student fellowships.
- Gathering information about the research productivity of graduate students from admission to five years post graduation might be broken down into several elements, such as:
 - Co-authored and single-authored peer-reviewed publications (divided by articles, book chapters, reviews, short notes, conference abstracts, etc). Texts accepted for publication but not yet published should be counted.
 - Number of submissions to journals, independent of outcome.
 - Number of grant applications as PI, independent of outcome. List amounts.
 - Publications citations.
 - Grants (research, travel, campus activities, etc – give amount).
 - Patents (as either inventor or co-inventor).
 - Talks and conferences (divided by local, national, international)
 - Participation in international activities (exchange programs, summer schools, international conferences).
 - Outreach programs participation (e.g., internships in governmental agencies, NGOs, museums, or other extra-university entities, socially conscious activities (e.g., prison teaching, etc), volunteering in degree-related activities, etc).
 - Awards and other forms of recognition.

Faculty characteristics could be enhanced by including, for instance,

- Number of faculty in program divided between those having FTEs, zero-FTE appointments, or MOUs;
- Percentage of faculty with more than one other affiliation with a department or program/group;
- Information on faculty diversity;

- Faculty awards (prizes, fellowships, visiting professorships, etc) and media presence (interviews, etc).

Part 2

The second part of this appendix discusses a possible graduate student questionnaire that might be taken anonymously at the end of each academic year. The Task Force thought of it as a complement to the data collection addressed in Part 1. It would provide evidence of the students' own assessment of their programs, the quality of training and mentorship, and their overall experience as graduate students. We have avoided questions requiring qualitative answers, so that the results of the questionnaire can be integrated with the numerical evidence produced by Part 1). The expectation of the Task Force is that this data is mainly processes/evaluated by the graduate programs and graduate groups themselves. It can be used to inform enhancements of the program, and in times of a short budget, this data might perhaps also for making a case for the program. Another positive effect seems to be that this would make it obvious that graduate students are taken seriously, as they are continuously and actively involved in the evaluation of their program.

Once again, this is to be understood as a basis for a serious discussion by the relevant campus stakeholders rather than as a recommendation of the Task Force. Some of the parameters listed here may not apply to all fields. Conversely, we may have overlooked indicators that are instead important to some disciplines. We believe the responsibility for these adaptations rests primarily with the departments, programs, graduate groups, and of course the students themselves.

The survey might be taken anonymously at the end of each academic year (perhaps via a simple web-based survey) with questions to be answered on the following scale:

5	4	3	2	1	0
Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree	N/A

1. I feel that after completion of my graduate program I will possess the skills and the expertise necessary to advance the career I am interested in.
2. I feel well informed about possible careers in my field (both academic and non-academic).
3. (For those students considering a non-academic career): I feel that my advisor and/or dissertation committee are supportive of my career choices, even though they may not be theirs.

4. The overall atmosphere in my program is positive and is supportive of my career goals.
5. I was provided adequate professional training, such as how to present my work at a conference, how to write a publishable article, how to handle myself during an interview, etc.
6. The course offerings are adequate to allow me to progress through the program at a normal pace.
7. My program provides adequate advising on the coursework to take.
8. My program provides adequate information on and preparation for the exams I have to take as part of my degree requirements.
9. I am satisfied with relevant resources made available by my program (e.g. IT support, copy machines, printer etc.)
10. I was given adequate information regarding the process of choosing an adviser, or changing one.
11. I was given clear and adequate information about funding provided by the program and funding I was responsible to secure.
12. I meet my thesis advisor regularly.
13. I feel my advisor is invested in my research and is doing his/her best to enable me to pursue it.
14. I meet **all** members (individually or collectively) of my dissertation committee regularly.
15. I feel that all members of my dissertation committee (minus my main advisor) take their role seriously and give me useful research and professional advice.
16. I feel that the expectations set by my advisor for progress are clear.
17. I feel that the expectations set by my advisor for progress are reasonable.

18. There are enough occasions during which I can interact with my fellow graduate students, both intellectually and socially.
19. There are enough social occasions during which I can interact with faculty who are not my advisor or dissertation committee members.
20. I feel that I have adequate information about upcoming seminars, conferences, job opportunities, summer schools, exchange programs, and funding opportunities.

APPENDIX E: GRADUATE STUDENT FEEDBACK

Specific Suggestions from Students to Enhance Environment for Graduate Student Success

FOSTERING GRADUATE STUDENT COMMUNITY:

Explore the development of a graduate student center and specifically explore the prospect of including relevant graduate student services as part of this building/center to align services with the graduate student community.

Support improved communication between and among graduate students by promoting and supporting the development of more formalized graduate student events.

Assess the need for graduate student housing that should include the needs of graduate student families (including child care resources).

IMPROVE MENTORSHIP AND PROFESSIONAL DEVELOPMENT:

Improve communication between programs, Graduate Studies/CETL/ICC/Centers and graduate students, to allow students to acquire the information and support they need to explore alternative career paths.

Increase faculty and administrative involvement in student-initiated activities such as the Interdisciplinary Graduate and Professional Research Symposium and Week of Welcome.

Acknowledge the role and importance of Graduate Program Coordinators and support them in developing the knowledge, skills and experiences necessary to effectively support students across all graduate programs.

Provide resources and incentives for faculty involvement in programs intended to improve mentorship skills such as the Mentoring at Critical Transitions program in Graduate Studies.

Identify and develop opportunities externally and/or internationally in order to expose graduate students to a greater variety of possible professional venues.

Develop programs to enhance the professional development of students in exploring diverse career paths.

Identify and match the desired skills in the various disciplines against the growing number of potential career paths both in and outside academia.

Research and identify examples of successful efforts (i.e. best practices) both within and beyond the university relative to the professional development of graduate students.

ADDRESS GRADUATE STUDENT FUNDING AND OTHER FINANCIAL ASPECTS:

Increase fellowship support in order to promote successful graduate student research.

Clarify student funding in admission decisions and in written/oral communication to applicants.

Increase development and fundraising efforts for graduate programs and graduate students.

More funding opportunities should be provided for graduate students; programs should emphasize the importance of hiring graduate student researchers.

Create a permanent advocate for graduate student financial issues modeled after the short-term trial position currently in place at Graduate Studies.

Develop discipline specific grant writing workshops for students. Ecology has a very successful grant writing workshop program with high success rates and Anthropology requires a grant writing class of first year graduate students. Both can be used as models.

Re-envision the online accounting system from the perspective of the student. Help students understand which part of their bill they are responsible for, and which part their employer is responsible for depending on their appointment type.

Centralize a physical and/or virtual location for graduate students to access financial support information. This would include Graduate Studies, Student Accounting, SISS, & Financial Aid.

Emphasize use of a central web location for programs to post TA-ships and GSRs. Graduate Studies has allocated space for this but it is underutilized.

Explore expanding summer education programs and other summer funding opportunities.

ASSURE GRADUATE STUDENT VOICE IN POLICY DECISIONS:

Broaden communications that would increase involvement of the general graduate student body.

Provide workshops and/or programs to develop graduate student leadership skills.

Consider expanding funding and access to the few campus programs that currently support this mission such as the Professors for the Future program, and the Graduate Ally Coalition.

Continue to involve graduate students to participate in university governance opportunities and advertise these opportunities more widely

INCREASE GRADUATE STUDENT DIVERSITY:

Be more intentional and explicit about diversity goals relative to graduate education and graduate students.

Take the necessary steps to expand graduate student diversity through strategic and intentional outreach, recruitment and retention efforts. Examples include but are not limited to increasing international competition for graduate students; develop strong partnerships with institutions that attract diverse populations of students including California State Universities; Hispanic-Serving Universities; Tribal Colleges and Universities; and Historically Black Colleges and Universities; and continuing our commitment to pipeline programs (e.g. UC LEADS, McNair Scholars) for members of under-represented minority groups pursuing graduate education.

Develop and implement strategies, programs and resources to both attract and retain a diverse graduate student body with input from the widest and inclusive range of constituencies (students, faculty, staff and community). Examples of programs and resources include: the Student Recruitment and Retention Center, the Graduate Ally Coalition and AGEP.

Ensure that support services are delivered with sensitivity to language and cultural differences.

Consider using other criteria in making admission decisions including non-cognitive indicators and other holistic graduate admission measures.

PROVIDE GLOBAL EXPERIENCES AND SUPPORT INTERNATIONAL STUDENTS:

Recruit and attend to the many special needs of international graduate students.

Increase support for international study, conference participation and research travel.

Develop exchange programs with universities abroad and relevant international funding sources.

APPENDIX F: BUDGET AND INSTITUTIONAL ANALYSIS OFFICE DATA

Reports include:

Graduate Enrollment Working Paper, fall 2011

Overview of Graduate Student Aid

Academic Graduate Studies Time to Degree

Graduate Student Ethnicity at all UC Campuses, 2010