

Flagship 2030 Final Report

University of Colorado at Boulder

Graduate Education Task Force

September 2008

Introduction:

Graduate Education Membership: John Stevenson, English and the Graduate School, (Chair); Joe Rosse, Leeds School and the Vice Chancellor for Research Office (Co-chair); Daniel Barth, Psychology; Larry Bell, Office of International Education; David Ferris, Comparative Literature and Humanities; Ken Foote, Geography; Leslie Irvine, Sociology; Charles Judd, Psychology; David King, United Government of Graduate Students; Carl Koval, Chemistry and Biochemistry; Merlyn Holmes, Graduate School; Peggy McKinney, English; and Marguerite Moritz, Journalism and Mass Communication. Staff support: Lisa Hutton, Office of the Vice Chancellor for Research/Dean of the Graduate School.

Core and Flagship Initiatives: The Graduate Education Task Force was assigned two core initiatives: Enhancing Graduate Education and Ensuring Access; it was also assigned three Flagship 2030 initiatives: Transcending Boundaries, the Global Crossroads, and Alternative Degree Tracks.

Work Plan: Between receiving our charge in mid-February and completing our discussions in August, the Task Force met ten times as a whole committee. Before beginning our work, the group read a number of relevant documents: the CU-Boulder Strategic Enrollment Plan Report (1997), the Task Force on Graduate Tuition and Enrollment Management Strategy Report (2004), and the Global Task Force Report (2007); we also reviewed the Responsive PhD Report prepared by the Woodrow Wilson Foundation (2005). The Chair had regular communication with the Chairs of the Research and Enrollment Task Forces, and also met with the Enrollment Task Force's subcommittee on Graduate Enrollment. The Graduate Education Task Force was able to review a near-final draft of the section of the Enrollment Task Force's report that deals with graduate student enrollment.

Part One:

The Executive Summary of the Flagship 2030 Strategic Plan makes the following statement about Core Initiative 3, "Enhancing Graduate Education": "Increase the graduate student population from the current 15 percent of total enrollment to 20 percent." Any dictionary reminds us that there are two meanings of "enhance"--to increase in size and to improve in quality, and the Graduate Education Task Force has considered both kinds of enhancement in its deliberations.

The Task Force has also been animated throughout by the firm conviction that no strategic plan for the future of the University of Colorado at Boulder can be viable without graduate education squarely at its center. We are, by statute but more importantly by the long-standing commitments that have shaped this institution's identity, a "comprehensive graduate research university." It is indisputable that this campus can boast many very fine graduate programs, and an array of distinguished graduate alumni; the research achievements of our faculty are substantial, and all would agree that graduate students have made an indispensable contribution to that success. But our successes in graduate education over the years have been shadowed by questions about what might have been—how many good students almost came here but did not because of better offers? How many faculty have left because of the opportunity to work with more or more gifted

graduate students elsewhere? How many additional highly ranked graduate programs might we have, given the superlative quality of our faculty and the attractions of our location? The Graduate Education Task Force firmly believes that the time has arrived, with Flagship 2030, to transform those *might have beens* into *will bes*, if we can muster the will and the resources to accomplish what needs to be done.

The Graduate Education Task Force has taken as its central questions matters of graduate student support and graduate program quality. Those larger questions, of course, broke down into a number of others, especially when we brought in the questions of access, interdisciplinarity, and internationalization that were also part of our charge. These more detailed questions included:

1. **What's right** about the situation now?
2. **Is growth in the overall graduate population** in the campus's best interests? Are there systemic forces that have limited graduate enrollment growth here?
3. **What would be the capacity for growth** with the faculty growth now planned? What about new schools or colleges? How might new interdisciplinary programs be best organized and administered?
4. **How do we best encourage** the development of new programs and the proper evolution of existing programs?
5. **What is the balance** between masters and doctoral education? What will the faculty support? How do certificate programs, dual degree programs, joint degree programs fit into the mix?
6. **What is the role of the Graduate School** in enhancing graduate education? What functions and resources should be centralized so as to provide maximum benefit to the programs? What kinds of student resources beyond financial support should we provide?
7. **How do we attract** more of the students we really want?
8. **How do we make internationalization work** for graduate education? How do we both bring in more of the best students from around the world, and also allow domestic students the opportunity to work and learn in a truly global environment?

We decided that we would not categorize our recommendations by a time frame, but would instead order them by our sense of their priority, with the most urgent needs first.

Note on percentage growth goal:

The Task Force would like to state at the outset that it fully endorses the trenchant analysis and recommendations on graduate enrollment offered by the Enrollment Task Force. To avoid redundancy, we will elaborate on our endorsement only briefly.

The goal of a 20% graduate student population on the Boulder campus is laudable: it would better reflect our character as a research institution and in fact strengthen our capacity to do good research and creative work; it would align us with our peers, most (but not all) of whom have a higher graduate student population than we do. A larger graduate student presence would help improve the academic tone and commitment of the overall student body. That said, the current 15% population has been the reality here for the better part of two decades (and perhaps longer--older methods of calculating this number are not consistent with methods used today), and that stability has persisted despite some focused attempts to increase it. Many of the recommendations of the Task Forces of 1997 and 2004, both of whose charges included this issue, were implemented, and while those reports produced some very valuable changes, including new degree programs and a much better tuition structure for students on appointment, they have not had any substantial impact on the overall percentage of graduate students on campus.

The Enrollment Task Force ably documents and discusses many of the structural and attitudinal obstacles to graduate population growth at Boulder, and we see no need to repeat those points. What does bear repeating are points made in the Enrollment report about the other side of the enhancement question, how to improve the quality of graduate education at Boulder, because the surest way to ensure the interest and ultimate enrollment here of the best students is to offer the finest programs we can, and to offer them across the disciplines, as befits our identity as a comprehensive research institution. And of course strong programs are only half of the formula for success—the best students look for quality education, but they also require a level of support commensurate with both their needs and the kinds of offers our competitors provide

Graduate Education Recommendations:

TOP PRIORITY: IMPROVE GRADUATE STUDENT SUPPORT

Every discussion with faculty here about how to improve graduate education elicits the same point: we do not support our graduate students in the way that we should. For those on appointment, stipends are too low, and for those whose appointments include teaching, teaching loads are too burdensome. The cost of living in Boulder is high compared to many of our peers. Our graduate students add debt, they take on extra work, and in many cases, their time to degree is extended unreasonably; some never finish their degrees for financial reasons that have nothing to do with their ability to do their work.

Many programs use their fellowship funds (some of which are allocated by the Graduate School, some of which originate from endowments controlled in the departments, schools, and colleges) to improve the offers they can make, but this is an inevitably ad hoc process, cobbling together some teaching or research work with a modicum of fellowship dollars in hopes that it will create an effective offer. Moreover, most fellowship dollars are allocated as enticements in recruiting; that strategy makes sense in the current climate, but it usually means that few funds are available for support later in a student's career—such as would provide time to finish a dissertation. Moreover, non-resident students who are wholly supported on fellowships or training grants are not eligible for the benefit of the tuition remission reform policy instituted in 2006 (by which non-resident students on appointment are charged at the employee rate, currently equal to the resident rate). As a result, the tuition costs to the grant or endowment can be substantial, thereby reducing the overall number of students who can be supported in this manner.

Specific steps:

1. For the next five years, increase the standard stipend rate for graduate student appointments at double the percentage size of the faculty raise pool; so, if the latter is 5%, stipends would increase 10%. (Additional cost in 2013= c. \$11M/yr)
2. The Graduate School's Fellowship Program currently has about \$2.5M in continuing money. That sum should be increased at double the standard factor increase until it reaches \$5M (with standard factor increases after that).
3. Develop methods for allocating support more strategically; such strategies might include:
 - a. Multi-year increases in fellowship support to programs which can demonstrate improvements in program quality.
 - b. Create a fellowship fund earmarked for students writing dissertations.
4. Make permanent the current tuition structure for out-of-state and international graduate students on appointment. Bring students on full fellowship (either locally endowed or national/international) under this tuition structure.

5. Bring in more high-quality international students through a yearly set-aside (\$200K) for tuition matches for Fulbright Fellowship students.
6. The Graduate School's TA support budget currently has about \$700K for required matches for grant applications; this sum should be increased to \$2M over three years to keep up with what has been rapidly rising faculty demand for these funds.

Other support enhancements:

Salary, fellowship, and tuition support are the key elements in this plan; however, other kinds of support are also important and require immediate attention. Moreover, these enhancements will have a significantly improve our ability to attract the best international students.

1. The remarkably successful and nationally-recognized Graduate Teacher Program is the most important professional development entity for graduate students on campus; it should be fully funded immediately.
2. Over three years, increase the campus contribution to the cost of graduate students' health insurance (now 70%) by 10%/year, until it reaches 100%.
Cost = ~\$1M/year.
3. Improve graduate student housing options by construction of attractive and reasonably-priced facilities near campus.

Recruiting support:

A systematic plan for improving graduate student quality and quantity requires a continuing budget dedicated to attracting the best talent. The Provost generously allocated funds for this purpose in AY 07-08. A permanent budget of \$500K should be established immediately, growing to \$1M over five years, with funds divided between programs and, for those issues where centralized activity is appropriate (especially the recruiting of international students), the Graduate School.

NEXT PRIORITY: CREATE STRUCTURES TO ENABLE PROGRAM INNOVATION AND DEVELOPMENT

Whatever the size of the graduate population in the years ahead, the Boulder campus must have structures in place that encourage and support the development of new programs and new degrees, even new schools and colleges (e.g., Information Sciences, Environment, Geosciences) to match the evolving disciplinary and interdisciplinary landscape. The goal must be to have the resources, as well as the institutional flexibility, necessary to respond effectively as the need for new degrees and initiatives arises.

1. Create a funding mechanism, housed in the Graduate School, to encourage the development of innovative (e.g., interdisciplinary) master's and doctoral degree programs. The burgeoning national movement for more Professional Master's programs suggests that such a fund could support the development of PMAs as well. The PMA model has already enjoyed considerable success in specific areas (such as Engineering), and while it is not a model that would work across campus, it is certainly a trend that should be encouraged where it is appropriate, in such areas as computational science, remote sensing, energy, sustainability, and so on. The mechanism should include seed grant money (\$250K to start) to aid program development and should work out methods of tuition-sharing; that additional revenue for departments would both encourage innovation and provide additional support for graduate education in the programs so rewarded.
2. Explore new ways to involve the interdisciplinary Institutes and federal labs in graduate education, especially the possibility of housing new degrees in the Institutes.

3. Work with the campus central administration and with the CU system to create a more transparent and efficient new degree approval system.
4. Strengthen connections between the Graduate School and the Office of International Education so as enable the kinds of international alliances and agreements that will truly globalize graduate education here. The goal is the creation of a network of partnerships—dual degrees, exchanges, collaborations, short and long-term residencies, etc.—that would be grounded in research and intellectual exchange and would provide an essential framework for the Boulder campus’s emergence as a global crossroads. Boulder’s participation this year in the American Council of Education’s Internationalization Laboratory provides a perfect opportunity to take immediate action.

We have decided not to weigh in on the question of what our mix of degrees—BAMAs, PMAs, joint degrees, dual degrees, distance degrees, traditional masters and doctorates, and so forth—might look like in 2030. Rather, we think the essential task is to provide the solid financial foundation and flexible organizational structures that will make possible the evolution and transformations that lie inevitably ahead.

NEXT PRIORITY: CLARIFY THE ROLE OF THE GRADUATE SCHOOL

Unlike undergraduate education, with its centralized Admissions and much shared curriculum, graduate education is significantly decentralized. The Graduate School awards graduate degrees, and sets a number of standards for admission, adequate progress, and completion, but other substantive matters—program admission, financial support, curriculum, and evaluation—are determined by the individual programs. This reality raises a structural question: what is the proper function of the Graduate School as an administrative entity in graduate education? Put another way, which aspects of graduate education are best coordinated centrally, and which are best left to the programs?

To some degree, the answer to the last question is self-evident and is reflected in the division of labor that presently obtains. But the present structure may not be adequate for the future. If this campus is to achieve the goals it should pursue for graduate education, we will need a strong Graduate School, one able, in appropriate areas, to act more efficiently, more objectively, and with more expertise than individual programs can provide. So, it should continue its essential role in the oversight of graduate faculty appointments, student petitions, progress towards degree, financial support, probation, degree completion, grievances, and much more. But in the years ahead, the Graduate School can play a vital role in enhancing graduate education by taking on more of those tasks that can be most efficiently or expertly coordinated centrally, many of which we have already touched on: recruiting (including the best ways to use the highly-successful new admissions process Apply Yourself to enhance recruitment); in encouraging and helping in the development of new degree and certificate programs; in working with OIE on internationalization; on providing expert advice in a central place for best practices in all matters relating to graduate education, such as mentoring or the responsible conduct of research; in providing a crossroads and inculcating a social framework for interdisciplinary work; by establishing new initiatives in professional development (such as non-academic careers); by working on public outreach about the value of graduate education, and much more (see Appendix A for some examples at peers).

We have not fully discussed nor will we address here one persistent question about the Graduate School, and that is whether or not it should remain part of the Office of the Vice Chancellor for Research. There are arguments on both sides, though there is an overwhelming trend among our

peers to separate these offices (see Appendix B). We think it best to recommend to the Provost that he appoint a Task Force on the Future of the Graduate School, with a charge to make a recommendation about this structural issue by the end of AY 08-09. Whether independent or linked to the VCR, however, the Graduate School must have the staff and the resources to lead the way in ensuring the vision we have tried to outline here.

Part Two:

The Graduate Education Task Force received the request to address the intersections between our recommendations and the re-accreditation process that the campus must undergo in 2009-10 quite late in our discussions, and we did not have time to address that matter in any detail.

Acknowledging that, we would make the following points:

1) *Describe how your recommendations help advance UCB's mission as a comprehensive graduate research institution with selective admission standards.*

Our recommendations are intended to enhance the quality of graduate education on the Boulder campus and so speak directly to this question. More graduate student financial support, the ability to recruit better graduate students, the development of new degree programs—all these recommendations, if implemented, would certainly advance the UCB mission, making us more comprehensive, more graduate-education oriented, and better able to conduct research.

2) *Discuss how your recommendations affect the allocation of campus resources (personnel, financial, facilities, etc.) in order to allow us to fulfill our mission, improve the quality of education, and respond to future challenges and opportunities.* The recommendations that we have made are expensive and will require either significant new resources or a major reallocation of resources that now exist. Our recommendations call for significant new financial support for graduate students, and rely on the kind of faculty growth and facilities development that are being directly discussed (and in many cases, have been previously promised) elsewhere. But, given that we have not fully achieved our potential as a comprehensive **graduate** research institution, we believe that such a commitment is essential, both to fulfill that potential and to position ourselves as a model flagship university in the future.

3) *Describe how your recommendations improve student learning and effective teaching.*

New degree programs will offer new learning opportunities for our students and new teaching and research avenues for our faculty. Better financial support for graduate students will allow them to focus better on their academic work, improving their learning and speeding the completion of their degrees.

4) *Describe how your recommendations help foster the acquisition, discovery and application of knowledge and promote a life of learning for faculty, staff and students.*

The research and education missions of this campus rely on the presence of gifted graduate students: they are essential to the teaching of undergraduates, to the research success of our faculty, and to the discovery of the kind of new knowledge that it is our most important goal. We believe that we will not be able to continue to acquire, discover, and apply knowledge in the future unless we are able to address the needs of graduate education on this campus in the ways that we have advocated here.

5) *Discuss how your recommendations impact the university's internal and external constituencies and serve their needs and expectations.* Graduate education is crucial if our

excellent faculty are to fulfill their research and teaching responsibilities: faculty need highly talented graduate students for the success of their research projects and to maintain their position at the forefront of their disciplines. Those graduate students, in turn, will go on to take their place as the intellectual leadership class of tomorrow, which our external constituencies look to us to provide as one of our essential roles.

Conclusion:

A great comprehensive graduate research university, a true flagship, cannot exist apart from strong graduate programs populated with talented students preparing themselves to become the intellectual leaders of the next generation. The University of Colorado at Boulder must take steps to ensure that our flagship identity and our institutional excellence, which is to say, our most precious assets, will not only endure but thrive, and such a future cannot be guaranteed without immediate and long-term attention to graduate education. These efforts must include a commitment to improve graduate student support of all kinds, to devise mechanisms whereby innovative educational programs can seamlessly emerge, and the creation of the kind of institutional support that will allow these goals to be realized.

APPENDIX A: Examples of activities coordinated or pursued centrally by Graduate Schools at peer institutions

Innovation

- CIRGE, the Center for Innovation and Research in Graduate Education was founded at the University of Washington in 2001
<http://depts.washington.edu/cirgeweb/c/>

Interdisciplinary Initiatives

- Minnesota / Grad School Office of Interdisciplinary Initiatives
<http://www.grad.umn.edu/oii/index.html>

Recruitment

- **Univ of Texas at Austin / The Graduate Recruitment and Outreach Program** is dedicated to the recruitment and retention of the best and brightest graduate students, including those from underrepresented groups, to The University of Texas at Austin (UT Austin). We invite applications from students whose breadth of academic experience and fitness for the specific field of study suggest the potential for scholarly achievement. Learn more about our [recruitment and retention](#) efforts.

Importance of Grad Ed - for Community / State

- Graduate Education Week: This state-wide event celebrates the societal achievements and contributions of graduate education in Missouri.
<http://gradschool.missouri.edu/about-us/initiatives/graduate-education-week/>

Services for Graduate Students

- Berkeley / Graduate Academic Services
The Academic Services Unit offers programs and workshops to develop the skills necessary to complete your graduate degree. Workshop topics include academic publishing, academic writing, dissertation writing, editing, and grant writing.
<http://www.grad.berkeley.edu/graddiv/contact.shtml>
- Minnesota / Mentoring Resources
<http://www.grad.umn.edu/dgs/mentoring/index.html>
 - * General Web Resources
 - * University of Minnesota Resources
 - * Resources developed by other Universities

Preparing Grad Students for the Future / Revisiting PhD Education

- Virginia Tech / Preparing students for intl. world
<http://www.insidehighered.com/news/2008/06/25/virginiatech>
- Penn State / Graduate Exhibition The Graduate Exhibition celebrates research in all its aspects as an essential and exciting part of graduate education at Penn State. Established in 1986, the Graduate Exhibition places special emphasis on communicating research and creative endeavor to a **general audience** and offers an unusual opportunity for professional development by challenging graduate students to present their work in clear, comprehensible terms to people outside their fields. <http://www.gradsch.psu.edu/exhibition/>

Enhancing Grad Student Life / Community Building

- MIT / Community Building <http://web.mit.edu/odge/community/index.html>
- MIT / Graduate Community Fellows: a cadre of graduate students who function under the direction of the Office of the Dean for Graduate Education on projects and assignments that enhance the life of graduate students in unique ways. Fellows report to a senior staff member in the Office of the Dean for Graduate Education and are assigned to projects in particular areas. In this pilot year, these areas are: (<http://web.mit.edu/odge/community/gcfellows.html>)
 - Diversity initiatives (with Assistant Dean Christopher Jones) [Details](#)
 - Graduate Student Life Grants (with Director of Communications Barrie Gleason) [Details](#)
 - Programs for women (with Associate Dean Blanche Staton) [Details](#)
 - Programs for international students (with Associate Dean Danielle Guichard-Ashbrook) [Details](#)
- MIT / The Graduate Student Life Grants program is a request-for-proposal process inviting graduate students to submit creative, [community building](#) ideas for possible funding. This is a unique opportunity to enhance graduate student life at the Institute with experiences outside the classroom and lab.
<http://web.mit.edu/odge/community/grants.html>
- Wisconsin - Madison / **Graduate Student Collaborative: Connecting Grad Students to One Another, the University, and the Community** The Graduate Student Collaborative is dedicated to enhancing the involvement, personal development, and quality of life of Wisconsin graduate students by acting as a resource, a voice, and a link within the Graduate School. GSC is engaged in outreach, professional development, and social programs.
<http://info.gradsch.wisc.edu/education/gsc/aboutgsc.html>
- Harvard / Graduate Student Center
http://www.gsas.harvard.edu/current_students/dudley_house_the_graduate_student_center.php

Fundraising:

- Berkeley / Graduate Development Office
<http://www.grad.berkeley.edu/graddiv/contact.shtml#13>
The Development Office in the Graduate Division coordinates fundraising initiatives for graduate student support at UC Berkeley. The office works with private individuals, foundations, and corporations to ensure that the University can attract top graduate applicants each year and maintain its excellence in research and teaching.
- MIT / The Ike Colbert Fund for Graduate Community is a bold idea that solidifies the commitment of the Office of the Dean for Graduate Education to enhancing the quality of graduate student life. This permanent fund is an outgrowth of an innovative request-for-proposal process—the Graduate Student Life Grants— that has tapped into a wellspring of creative ideas for enriching the graduate experience. Gifts to the Fund will be used to support student life and learning initiatives in a variety of ways by:
 - * generating and supporting more initiatives
 - * supporting student groups with unique needs
 - * sustaining programs that stand the test of time<http://web.mit.edu/odge/fund/index.html>

Serving Our Graduates / Alumni

- Harvard /
http://www.gsas.harvard.edu/alumni/graduate_school_alumni_association.php

APPENDIX B:**Public AAU Institutions: Research and Graduate School Structures**SEPARATE, VC or VP Research & Dean of the Grad School (28 TOTAL)

Indiana University – SEPARATE (Dean of Grad Studies, VP Research)
 Iowa State – SEPARATE– (VP Research & Econ Development, Assoc Provost for Academic Programs/Dean Graduate College)
 Michigan State – SEPARATE (VP Research & Grad Studies, Dean of Grad School)
 Ohio State – SEPARATE (Senior VP for Research, Vice Provost/Dean of Grad School)
 Purdue – SEPARATE – (VP Research, Dean of Grad School)
 Rutgers- SEPARATE – (VP for Research and Grad Ed, VC Research)
 SUNY-Stony Brook – SEPARATE (VP Research, Dean Grad School)
 Texas A&M – SEPARATE – (VP Research, Dean of Grad Studies)
 SUNY-Buffalo – SEPARATE (VP Research, V-Provost Grad Ed/Dean Grad School)
 UC-Davis – SEPARATE (VC Research, Dean Grad School)
 UC-Berkeley – SEPARATE (VC Research, Dean Grad School)
 UC-Irvine – SEPARATE (VC Research, Dean Grad School)
 UCLA – SEPARATE (VC Research, Dean Grad School)
 UCSD – SEPARATE (VC Research, Dean Grad School)
 UC-Santa Barbara – SEPARATE (VC Research, Dean Grad School)
 U. Arizona – SEPARATE – (VP Research & Grad Studies, Dean Grad School)
 U. Florida – SEPARATE (VC Research, Dean Grad School)
 U. Illinois-Urbana/Champaign – SEPARATE (VC Research, Dean Grad School)
 U. Iowa – SEPARATE (VC Research, Dean Grad School)
 U. Maryland-College Park – SEPARATE (VP Research, Dean Grad School)
 U. Michigan – SEPARATE (VP Research, Dean Grad School)
 U. Minnesota-Twin Cities – SEPARATE (VP Research, Dean Grad School)
 U. Missouri – SEPARATE (VC Research, Dean Grad School)
 U. Nebraska – SEPARATE (VC Research & Econ Development, Dean Grad School)
 U. NC-Chapel Hill – SEPARATE (VC Research & Econ Development, Dean Grad School)
 U. Pittsburgh – SEPARATE (Director, Office of Research, Dean Grad School)
 U. Texas-Austin – SEPARATE (VP Research, Dean Grad School)
 U. Washington – SEPARATE (VP Research, Dean Grad School)

JOINT VC or VP Research/Dean Grad School (6 TOTAL)

Pennsylvania State – SAME – (SVP Research/Dean of Grad School)
 CU-Boulder – SAME (VC Research & Dean Grad School)
 U. Kansas – SAME (V-Provost for Research & Grad School)
 U. Oregon – SAME – (VC Research & Grad Studies/Dean Grad School)
 U. Virginia – SAME – (VP Research & Grad Studies [no dean grad school])
 U. Wisconsin-Madison – SAME (VC Research/Dean Grad School)

