

## Report and Recommendations of the Task Force on Graduate Education May 2016

At the request of the president and provost, we<sup>1</sup> convened to consider our aspirations for graduate education at Lehigh and to recommend organizational structures that would best support those aspirations.

Considering our hopes and needs for graduate education, we identified guiding values, the cultural characteristics necessary to cultivate those values in our graduate programs and the university as a whole, and the material conditions that would enable that culture to flourish.<sup>2</sup> Here, we present our recommendations for building necessary organizational structures and practices.<sup>3</sup> In each of five thematic areas, we provide a statement of need and desired outcomes of organizational changes and actions.

### **I. Provide a strong voice and visibility for graduate education.**

Graduate education requires a clear voice, visibility, and identity, both within the university and in our presentation to the world. As we work to revise Lehigh's mission statement and solidify our vision for the future, we must recognize that graduate education is woven into the fabric of university life, from the character and quality of the undergraduate experience to the character and productivity of faculty research.

To reach our full potential as a student-centered research university, graduate students and graduate education must play more prominent roles in campus life. We view this need in relation to the needs of undergraduate education and recognize expanding areas of overlap between the two: an increased emphasis on developing capacity for independent inquiry in undergraduates, together with an increased need for career and personal development of graduate students, suggest the potential for flourishing connections. There should be expanding opportunities for graduate-undergraduate engagement in both traditional research venues and new inquiry-based programs like Mountaintop.

As we work to enhance the visibility of graduate education on campus, we must also be conscious of our reputation in the wider academic community. The reputation of our graduate programs, and of the university more generally, depends upon the visibility of both graduate programs and graduate students. We should expand efforts to support conferences and symposia held on campus, especially where these contribute to the visibility of graduate programs, and to enable graduate student presence at national and international conferences when they have earned opportunities to present and to influence discourse in their fields.

As we work to enhance visibility for research (for example, through the work of University Communications and the Lehigh Research Review), there should be companion efforts to provide new visibility for graduate programs, including the roles of graduate students and graduate education in driving research in many fields. The recommendations we make in the

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<sup>1</sup> See Appendix 1 for task force members.

<sup>2</sup> See Appendix 2 for this statement of values, culture, and enabling conditions. See Appendix 3 for a description of our process.

<sup>3</sup> In some cases, we include specific ideas that arose in the process of defining these five key areas for action. These should not be viewed as exhaustive: we identified many ideas that would merit being put into practice, and more should arise through the process of acting on the major imperatives listed here.

ensuing sections will contribute further to providing graduate education with due prominence on campus.

## **II. Develop a necessary set of supportive structures and services for students, faculty, and alumni.**

Key aspects of graduate student need—professional and career development, support for dealing with personal and life circumstances, and intellectual and social life outside the department or research group—are insufficiently, inconsistently, and inefficiently served by existing staffing and structures. The rich suite of services available to Lehigh undergraduates, and the substantial professional resources upon which those services are built, present an opportunity. We do not see a need for wholesale duplication. We embrace the notion of applying the considerable pools of knowledge and talent resident in existing units toward fulfilling graduate education needs. Yet services need to reach graduate students where they are and in accord with their specific needs. In the absence of identified points of access and staff with identified responsibilities, we risk maintaining a status quo in which graduate student needs have secondary priority or remain entirely unserved.

We recommend development of a home for graduate education on campus covering both physical (point of contact and congregation) and conceptual (a coherent frame for identifying and meeting graduate student needs) elements through which students may access a proper set of services, particularly those related to professional development and graduate student life. Building upon the existing Office of Graduate Student Life, which has made substantial progress in providing integrative, holistic support for graduate education, we recommend raising the capacity and priority for serving graduate student needs in multiple existing units, including the Office of Career and Professional Development, the Alumni Association and Residential Services, in addition to capabilities resident in Student Affairs.

We would benefit as well from stronger central support for graduate admissions. While some aspects of graduate recruiting are always handled locally—considering both the nature of self-contained and specially accredited professional programs and the very individualized nature of recruiting for research relationships with faculty—a central office could effect improvements to application and admissions processes, to data collection, and to program review. Coordination in these areas would enable collective strategies for enhancing diversity, support program quality, and be essential to successful pursuit of training grants.

There are opportunities for an integrated point of access to more fully serve individual members of the faculty as well. Nationally and at Lehigh, mentoring of graduate students is a topic of intensive discussion. This role has become more complex with changes in students' career options, in grant funding streams that support students financially, in graduate students' potential roles on campus, and in the form and pedagogical function of the dissertation. An identified center for graduate education could serve more broadly as a touch point for faculty, staff, students, and alumni involved in graduate education.

### **III. Encourage and credit the full scope of faculty involvement and investment in graduate education.**

In most research-based graduate programs, guiding and orchestrating the student's development as an effective independent investigator is the most critically important and central role of the faculty. In some areas, mentors are credited for playing this central role, yet it is recorded as service, which faculty perceive garners limited (or only ad hoc or informal) credit, without full accounting of the investment of time and pedagogical expertise. Full credit needs to be given for these critical educational efforts.

We recommend full recognition of aspects of graduate education that occur outside the classroom, including dissertation committee membership, mentoring, and professional development. This will require review of the new PAR system and of relevant sections of R&P, to ensure that work with graduate students receives appropriate recognition across the university. For example, while some units have systems that provide for course release based on directed dissertations, this is unevenly addressed across departments and colleges. Furthermore, this is only one means of acknowledging the full scope of faculty contributions, and extraordinary contributions and productivity must be recognized as well. Means of rewarding extraordinary contributions—such as support for graduate assistants and summer support, as well as the allocation of faculty time in the merit system—have yet to be explored.

The need to encourage and credit contributions to graduate education extends to members of the faculty who currently have limited avenues for contributing, or who contribute (mainly as members of dissertation committees) without being credited. We take this up more fully in the following section.

### **IV. Enable and encourage graduate students and graduate programs to draw on faculty talent across departmental and college boundaries.**

Whether in degree programs that are disciplinary or draw from multiple disciplines, graduate students should be able to benefit from all of the faculty, and all of the faculty should be able to benefit from working with graduate students. Our present structure prevents a substantial fraction of the faculty from contributing to graduate education and discourages graduate students from benefiting from what the whole of the faculty can provide. Even simple access to courses outside their colleges can be difficult for graduate students. This stands in contrast with undergraduate education, where students readily draw from faculty offerings across the university.

Faculty research and areas of excellence are increasingly interdisciplinary or are organized around areas of societal need and endeavor, defying containment within any traditional disciplinary box. Intellectual exchange and collective inquiry that would be beneficial to both students and faculty may require relationships among faculty and students whose background, foundational knowledge, and/or specializations are in different areas. Recognizing that graduate students serve as cohesive forces in interdisciplinary research, training program offerings from federal agencies emphasize interdisciplinarity and relationships with major research themes (as well as, per our recommendations in theme 2, professional development). Yet our administrative and financial structures encourage research-based graduate programs to be departmental and almost entirely within colleges.

Currently, only one doctoral program (Bioengineering) and one research-based master's program (American Studies) involve faculty from multiple departments.

Beyond formation and operation of interdisciplinary programs, we noted that research programs (labs, centers, thematic clusters, etc.) should be able to host students from different graduate programs. As examples, computer science may be a critical element of a humanities research project, and social and earth sciences are important to the active interests of civil engineers. Faculty should look to each other's graduate programs, as well as to each other, for these critical roles.

Both organizational and financial disincentives to formation of interdepartmental and intercollege graduate programs, and to faculty contribution to students and programs outside their departments, should be overcome. Organizationally, it is imperative that we break the tacit assumption that graduate programs emerge from and are run exclusively by, and wholly within, departments. Faculty with compelling interest in interdisciplinary graduate programs require clarity regarding how to proceed, organizational support, and examples to guide them.

Our needs go beyond mere advocacy. We therefore conclude that there is a need for leadership and focused organizational support for graduate education that is empowered with the necessary resources, administrative support structures, clarity of charge, and authority to cross the boundaries that have historically siloed graduate education at Lehigh.

This recommendation supports, in part, action on the recommendations we make above: we can imagine an office of graduate education, led by a powerful advocate, that provides voice and visibility, serves as a hub for providing support services, and initiates changes that enable fuller faculty participation in graduate education. It is essential that there be sufficient authority to enable the significant changes we recommend in this section including, we expect, the ability to authorize the creation of graduate programs.

**V. Deploy the key resources of time and money in a manner that fully supports our success and the success of our students.**

Graduate program needs for course-based work can often be most effectively and efficiently provided when scheduling in blocks of less than the standard 15-week semester. Block scheduling and similar approaches enable material to be covered in modules taken according to the needs of individual students and programs and provide new efficiencies in use of faculty time. We therefore recommend a system to enable departure from the 15-week semester as the standard unit of class time and faculty commitment.

We further recommend a university review of the tuition revenue stream model with the goal of supporting student access, faculty collaboration, and directing resources to support quality, sustainability, and synergy between graduate programs and research strengths. In contrast with our centralized model for undergraduate tuition, our current graduate tuition model involves a substantial portion of graduate tuition (80% on the margin) returning to the colleges according to student course registrations. This model has the advantage of encouraging the colleges to offer graduate level courses that are well subscribed and enabling

the colleges to operate revenue-generating professional programs.<sup>4</sup> However, it presents barriers to student access, to collaboration and resource sharing, and to organization of interdisciplinary graduate programs. Students are discouraged from taking courses outside their units, even when they would benefit. Construction of graduate programs that cross departmental and college boundaries is difficult, especially when course needs will vary across the student cohort. While a full review of this tuition model was outside the scope of our work this semester, we expect a review to be a necessary part of implementation of our recommendations.

We view our work this semester as one step in what should be an ongoing process of action and continued inquiry. Some of what we recommend is available for immediate action. In other areas, we have defined goals and identified approaches and there is additional design work to be done. In all areas we note that as a community of researchers we should be eager to act thoughtfully, assess outcomes, and refine. Our recommendations are, in that light, a starting point for the flourishing of graduate education at Lehigh. In our experience as a group, this work was, and can continue to be, a creative endeavor. We look forward to continued conversations as the president and provost review our recommendations and as we consider next steps.

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<sup>4</sup> It is important that we not disrupt programs that already provide high quality graduate education, provide graduate students with a full suite of needed services and are operationally self-sufficient. Colleges should be able to maintain ownership of self-contained programs, especially professional degree programs, as long as those programs meet university standards and align with Lehigh's vision for graduate education. At the same time, those programs may benefit from access to faculty talents from across the university.

## **Appendix 1: Task Force Membership**

Task force members were selected by the vice president and associate provost for research and graduate study in close consultation with the provost and after consultation with the deans of the colleges. Members were drawn from academic programs across the university, with most—though not all—being faculty in current graduate programs. Members included one current graduate program director, one current department chair, and seven current or recent members of the Graduate and Research Committee.

Jenna Lay, English, Chair

Arindam Banerjee, Mechanical Engineering and Mechanics

Grace Caskie, Education and Human Services

Shin-Yi Chou, Economics

Volkmar Dierolf, Physics

James Gilchrist, Chemical and Biomolecular Engineering

Sabrina Jedlicka, Materials Science and Engineering

Naomi Rothman, Management

Thomas Hammond, Education and Human Services

Kathleen Hutnik, Associate Dean and Director, Graduate Student Life

Ziad Munson, Sociology and Anthropology

Alan Snyder, Vice President and Associate Provost for Research & Graduate Studies (*ex officio*)

## Appendix 2: Values, Culture, and Enabling Conditions<sup>5</sup>

We **value** and see as necessary that graduate programs

- are intellectually sustainable, enrich the lives of faculty and students, and contribute to society.
- are financially sustainable and supported based on their value to students, research programs, and stakeholders.
- become a fundamental part of Lehigh's identity and reputation.
- have a balanced and integrated relationship with undergraduate education.

These values will be supported by a **culture** that

- fosters intellectual vibrancy and community, creating an environment for innovative and creative research.
- brings to bear the strengths of, and synergies among, the whole of the faculty and of the variety of graduate programs.
- takes a student-centered approach, viewing students as precious assets whose developing capacities and individual aspirations for productive lives after Lehigh are essential.
- attracts diverse and capable students and faculty, supporting their full success.
- offers a culture of respect and direct and honest communication

This culture can best be developed by assuring the following **enabling conditions**

- Use our small size to be nimble.
- Enable faculty to contribute to graduate programs regardless of departmental affiliation.
- Give credit for the full scope of faculty investment in graduate programs, including mentoring, and allow faculty to focus their efforts where they can contribute the most.
- Assure that resources support our potential and demonstrated successes.
- Enable more public-facing and innovative forms of graduate study.
- Enable synergies of graduate programs with prominent research programs that are increasingly interdisciplinary.
- Develop a necessary set of supportive structures and services for students, faculty, and alumni.

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<sup>5</sup> As noted in the main body of our report and as further described in Appendix 3, these descriptions of values, supporting culture, and enabling material conditions were among our intermediate work products.

### **Appendix 3: Process**

Because we found our work this semester both satisfying and fruitful, we wish to share an overview of our process. Task force members expressed their hopes that we might see some version of it adopted in other settings, as it offers a model for organizational work as a process of collaborative, creative inquiry. The process enabled us to benefit from the diverse perspectives, experiences, and observations of task force members, incorporating these into our work with a remarkable absence of contention and neither paralyzed by, nor attempting to deny, the complexity of some of the problems we encountered.

We took an approach derived from design thinking methodology, seeking to put proper focus on the purpose of graduate education, help people de-anchor from present daily experience, and elicit optimism and imagination. Our charge—to consider our aspirations for graduate education at Lehigh and to make recommendations of organizational structures that would best support those aspirations—served as a starting point from which we undertook three cycles of expansive generation of ideas followed by focused, analytical thinking.

We began with the words “consider our aspirations” as a call to future-oriented thinking. All members of the group began, as preparation for our first session, by considering both current frustrations and possible futures for graduate education, expressing these as statements of goals or intent in the form “How might we. . .”, i.e., as statements of design intent. Group analysis of the 70+ statements we generated yielded the descriptions of values, supporting culture and enabling conditions that appear in Appendix 2.

Our second cycle of expansion and analysis began with traditional brainstorming on means of making these enabling conditions our reality. Drawing from the resultant catalog of about 150 individual ideas, we developed a compact list of enabling actions. Honing and categorization of these yielded the five major recommendations we make in our report. We undertook a final, more abbreviated cycle of brainstorming and processing to flesh out some of the material presented in recommendations four and five.

Important aspects of the process include the following:

- Involvement of faculty from a variety of fields and at a variety of career stages provided necessary diversity of experience and perspective.
- The initial stages gave every member a voice. Our approach to analysis of the materials was crafted to develop empathy among group members, many of whom did not know each other in advance.
- We maintained clear separation between expansive phases and analysis or winnowing phases. The group quickly became adept at switching modes.
- By treating materials generated in expansive phases as data to be analyzed, we emphasized shared discovery over proffering and negotiating among opinions.

It was essential to have dedicated sessions during which group members could fully immerse themselves in the process, while also recognizing the many demands on faculty time. We accomplished our live group work with one organizational meeting, three half day sessions, and one two-hour final meeting over the course of the semester. Careful facilitation and consolidation of materials between sessions enabled us to fully capitalize on our time together. We structured our meetings with influences from both a design perspective and a pedagogical framework grounded in collaborative learning models.