

APPENDIX 2

CALS Education Workgroup—Full Report

■ Introduction

On January 29th, 2013, Dean Kathryn VandenBosch initiated a workgroup on education as part of the CALS strategic planning process. The general charge of the workgroup is to craft “recommendations concerning teaching, training, and learning.” Specifically the workgroup was asked to identify specific tasks to be undertaken in the coming year “related to strategic positioning for our educational mission.”

The workgroup took as a starting point the mission statements of the college and the Office of Academic Affairs.

CALS Mission

To advance and share knowledge, discover solutions and promote opportunities in food and agriculture, bioenergy, health, the environment and human well-being.

CALS Office of Academic Affairs Mission

To provide each student with excellent learning opportunities that promotes personal and professional development.

The following is a summary of our considerations and recommended tasks, including suggestions for task force structure.

■ Educating a Diversity of Learners

A large part of CALS’ educational mission focuses on undergraduate students. In the conversations that the strategic planning committee’s stakeholder engagement subgroup had with undergraduates, a number of related areas emerged that students see as particular strengths of our college. First and foremost, students single out what we characterized earlier as the unique blend of research-based, hands-on teaching. This is made possible by smaller class sizes and ongoing contact with faculty, both in the classroom and as part of one-on-one research experiences. Students also appreciate the flexible curriculum and the opportunity to supplement on-campus learning with global experiences through internships and other international programs.

CALS’ prominence also relies to a significant degree on the contributions of a world-class graduate student body to our research enterprise and on the large number of highly ranked graduate programs in the college.

Our graduate programs also have significant primary and secondary impacts on our state and beyond. Primary impacts include the critical role that graduate students make to the research and—to a lesser degree—teaching mission of our college. As a result, the majority of extramural grants in CALS devote significant resources to supporting our graduate education infrastruc-

ture through research and project assistantships. These primary impacts are complemented by the important secondary impacts that our graduate students have in various arenas once they leave CALS. As faculty and educators at peer schools, such as Cornell, Colorado State or Michigan State, they train the next generation of students in the life sciences and various agricultural fields by applying their research-based knowledge for effective tech transfer and innovative products and processes.

In addition to our degree-granting educational structures, CALS has a variety of short courses, workshops, and other formal and informal educational programs with a broad scope of different topics and curricula. These include activities considered part of the college’s “instructional” functions as well as those connected to the college’s connection to UW-Extension. One of many examples is the venerable Farm and Industry Short Course (FISC) program, which for 128 years has offered a 16-week residential curriculum focused on providing applied skills in agriculture. In addition to FISC, CALS offers dozens of other short courses and workshops (often just hours or days long) for a wide array of practitioners such as food processors, agricultural producers, consultants and other information/service providers. The full range of short course and Extension learning opportunities exemplifies how our college has institutionalized the Wisconsin Idea in an educational setting. These programs translate the vibrant research culture on campus into applied skills for the Wisconsin workforce. It is critical that these educational offerings and their instructors be able to adapt quickly to current real-world problems and student/customer demand.

Through both our formal educational offerings and our more informal outreach efforts, CALS departments and centers offer a variety of continuing education opportunities that teach the science behind everyday activities to a diverse learner population. These “courses” are an important part of CALS as they demystify science by bridging research from the laboratory with applications in industry, thereby strengthening the bonds between the university and the community at large while also positively impacting the state’s economy. Despite the ability to quickly access information through the Internet, this form of knowledge-sharing continues to be an effective and efficient method to reach a variety of learners and has steadily increased over time.

What makes CALS CALS is not that we do these activities, but that we integrate them into a coherent set of practices that blurs the separation between teaching, research and service and crosses the boundaries between disciplines. At times, the breadth of our mission causes tension—should the focus of our faculty be on teaching residential or community learners? Should we aim to serve degree-seeking students or the citizens of the state? Should our limited faculty lines be directed toward areas of greatest student interest or greatest industry demand? The answer in each case is that we must balance what appear at times to be compet-

ing interests, for it is in the very combinations of the following areas that our strength lies. Indeed, tension implies that we are tied together, and this interconnectedness is key to our identity and our success.

■ Content, Delivery and Capacity

As we consider our educational mission, we begin with three key elements: Content (what do we teach and why?); Delivery (when, where, and how do we teach?); and Capacity (to whom and how much do we teach?).

Content. Intellectual adaptability and flexibility are critical skills for any graduating UW student, especially in a world where new scientific breakthroughs and the emergence of new scientific fields (genomics, nanotechnology, bioenergy, etc.) constantly change our understanding of the world and can quickly make existing knowledge obsolete. As scientific disciplines and techniques emerge, we must ensure that our educational mission extends beyond disciplinary training and envision academic structures that move toward a problem-oriented approach. We see three learning goals as particularly pertinent in this context: to educate creative problem solvers, to contribute to workforce development, and to prepare scientifically literate and culturally competent citizens. In short, as we develop the content of our curricula, we must model for our students the value of lifelong learning and growth suggested by the UP&S motto: “Come grow with us.”

Delivery. Just as we urge innovation in the content of our teaching, we must consider innovations in the delivery of that content. New modes have the potential to increase our capacity with existing audiences and to extend our reach to new audiences. As the college engages in these explorations, we urge an approach that prioritizes quality and the creative use of our finite resources. These new modes of delivery should ideally be developed in the context of other campus-wide or system-wide initiatives, such as UW-Madison Educational Innovation or UW-System Flexible Option degrees. Partnering with Extension or other units on campus would allow CALS to share resources to develop new modes of instruction or content delivery and to develop teaching modules that could simultaneously serve different audiences in Extension, short courses and other distance learning settings. We urge the college to think creatively about its role in outreach to public audiences beyond Extension. In short, we must leverage the college’s leadership and expertise in all modes of communication to a large external audience, with a targeted goal of increasing citizen literacy to become informed consumers. In keeping with the proposed new CALS tagline “Growing the Future,” our educational efforts should be as forward-thinking as our research.

Capacity. As important as content and delivery are to our educational mission and future, our workgroup contends that capacity is the area with the most leverage over the other two, since in order to increase capacity (the number and type of students we teach), one essentially has to think about both content and delivery. If we continue to teach the same material and to teach in the same way, it is difficult to increase capacity without also increasing resources (which seems unlikely in the current climate). We have chosen to begin with capacity as our entry point not to the exclusion of all else, but as a vantage point from which we can explore conversations in other areas.

In addition, of the three, capacity is the area that is most pressing on our attention. Undergraduate and graduate enrollment in CALS has increased from roughly 3,000 students in the fall of 1998 to roughly 4,000 in the fall of 2012. As student enrollment has increased, the total number of faculty in the college decreased from 360 in 1980 to fewer than 275 today. This growth affects our capacity elsewhere. For instance, can we continue our graduate or community efforts at the same level while accommodating such expansion at the undergraduate level? While the increase in enrollment clearly shows demand for CALS programs, it also creates pressures and poses its own challenges; one of the key messages of UW’s Educational Innovation (EI) initiative has been that new revenues are likely to come from reaching out to new audiences. In order to explore EI opportunities, CALS will need to identify areas where growth is both feasible and beneficial, at the same time that we strive to serve the already growing populations coming into the college.

[Note: See related charts on numbers of faculty and students in Appendix 1.]

The workgroup on education thus recommends that a key strategy for CALS in the coming years be to direct our instructional resources toward activities and policies that will increase our overall instructional capacity while maintaining instructional quality. This could include separate strategies for capacity-building within majors and for the college overall. Exploring opportunities to share the expertise of the college with non-traditional students via non-traditional teaching methods may allow for continuing capacity growth and also bring in additional revenue. Specifically, we urge the college leadership to contemplate scenarios that decouple growth or instructional capacity within departmental majors, on the one hand, and growth in credit hours provided by the college, on the other hand. It is conceivable, for instance, that CALS would cap enrollment for some of its majors in order to be able to continue to provide high-quality education, even within shrinking 101 budget environments. This is not incompatible, however, with the idea of departments—regardless of size—providing large service courses in content areas relevant to students across the college and the university. In fact, capacity building in the area of service courses (a) allows the

college to strategically invest in structures that will be rewarded by emerging campus-wide budget metrics, and (b) is much more adaptable to highly dynamic budgetary or staffing realities than more formalized structural growth in disciplinary majors. Look for ways to work across boundaries to join similar class content courses while potentially conserving instructional effort—this will have a positive effect on the student population by showcasing the breath of the entire university and hence provide a more robust experience.

■ Recommended Workgroups For 2013-14

In order to achieve our collegiate educational mission, the workgroup on education has identified three target areas of study that we recommend be considered in depth by three working groups during the coming academic year:

1. Educational Capacity Metrics
2. Use of 101-Funded Graduate Assistantships
3. Short Course Offerings and Infrastructure

The first group will look at how we measure instructional “capacity” across the college; we cannot increase our capacity if we do not have a clear set of current measures and a realistic set of future goals. The second group will look in-depth at a key practice that affects our instructional capacity, namely the use of 101-funded research assistantships and whether some of them should be converted to teaching assistantships. The third group will focus on short courses (including but not limited to the Farm and Industry Short Course) to explore this area of potential growth in capacity (and resources) for the college. Each of these three groups is described in more detail in the draft charge documents below.

In addition, we recognize three further efforts that originated prior to the strategic planning process and that will continue in the coming year.

1. Educational Innovation Director
2. Biology Major Work Group
3. Farm & Industry Short Course Task Force Report

The workgroup on education recommends continuing the role of CALS Director of Educational Innovation (currently held by Prof. Brad Barham, AAE) in order to ensure ongoing engagement with campus conversations on how to balance pursuing opportunities for the generation of new revenue with maintaining an emphasis on our core strengths and mission. The workgroup also strongly supports the continued work of the cross-college Biology Major Work Group (chaired by Associate Deans Sarah Pfatteicher in CALS and Eric Wilcots in L&S) to ensure a smooth transition plan for the Biology Major and to support incorporation of the major into long-term planning for CALS and L&S. The FISC Task Force met in 2009-10 and submitted its findings to the college at the conclusion of that year, and the Office of Academic Affairs (in which FISC is housed) continues its work on implementing the recommendations of

that committee’s report. The search for a new FISC director, who will continue the review and development process with FISC, began in early April and is scheduled to conclude by mid-summer.

■ Recommendations for Establishing a Workgroup on Educational Capacity Metrics

Our rapidly growing enrollments require us to reconsider our teaching loads. Given our split 101-2/101-4/104 faculty appointments, our diverse audiences, and our frequent cross-college course offerings, establishing a baseline or target capacity is challenging. But as campus explores moving toward responsibility-centered management, with budgets driven by instructional contributions, we would be wise to consider what metrics accurately reflect our contributions to the teaching mission of the university. CALS has a reputation on campus for low teaching loads relative to our sister colleges. We need to take this external perception seriously.

The recommended task for this workgroup is to review existing and available data and to select a set of metrics that is both appropriate for the college’s diverse mission and that captures the values and principles of the college. Academic Planning and Institutional Research compiled an overview of some available metrics in a document prepared for the Dean’s Council. It is available at: <http://apir.wisc.edu/instruction/DeansCouncil-Packet.4.13.2011.pdf>. Note that inclusion on this list does not necessarily indicate a recommendation that these documents represent the most appropriate metrics for our purposes.

Workgroup membership should include faculty and instructional staff who can represent the breadth of our departments (basic and applied; social, biological, and physical sciences; large and small) and students who can represent the breadth of our learners. The group should also include individuals who can assemble and evaluate our teaching data from multiple perspectives. We recommend close engagement with the staff in the CALS Office of Academic Affairs, the UW-Madison Office of Academic Planning and Institutional Research, and members of the University Assessment Council.

Some key questions for this group to consider include:

- What external policies and regulations limit or shape our instructional capacity? For example, what rules associated with Hatch funding affect our instructional appointments?
- Should the college seek to increase capacity across the board (by some set number or by some percentage), or to bring the tails closer to the middle of the curve (by increasing in some areas while capping or slowing growth in other areas)?
- What metrics enable us to account for quality as well as quantity in our capacity?
- How do we measure our teaching contributions to non-credit instruction (through short courses, outreach, and Extension efforts)?

- What metrics include and recognize our full array of instructional personnel (faculty, instructional staff, teaching assistants, undergraduate assistants, peer mentors, other?)
- What metrics will allow for college-wide comparisons, and yet will also recognize the different content and culture of different disciplines (e.g., labs, field study, writing-intensive courses, etc.)?
- What metrics will encourage an increase in overall capacity while also supporting the sort of low enrollment/high impact classes (independent study, internships, e.g.) that characterize the best of experiential learning that is so important to CALS?
- How much of our effort should be aimed at expanding our numbers and resources vs. capping our numbers to stay within our existing resources vs. expanding our numbers by creatively rethinking our use of current resources?

■ Recommendations for Establishing a Workgroup on the Use of 101-Funded Graduate Assistantships in CALS

In 2009, the Academic Affairs Visioning Task Force recommended a study of the advisability of converting some department-held research assistant positions to teaching assistant positions. Changes in leadership, staffing shortages and the addition of 8 FTEs of teaching assistantships via the Madison Initiative for Undergraduates put this study on a back burner, but we believe the time has come to revisit the issues.

The recommended task for this workgroup is to review the current distribution and use of 101-funded graduate assistantships in the college and to recommend a plan for the future use of these assistantships that is appropriate for the college's diverse mission and that captures the values and principles of the college.

Workgroup membership should include faculty and staff who can represent the breadth of our departments (basic and applied; social, biological, and physical sciences; large and small) and students who can represent the breadth of our learners. The group should also include individuals who can assemble and evaluate our personnel allocations from multiple perspectives. We recommend close engagement with the staff in the CALS Office of Academic Affairs, the UW-Madison Office of Academic Planning and Institutional Research, and individuals with campus financial expertise.

Some key questions for this group to consider include:

- What is the total number of FTEs of state-funded RA and TA positions across the college and how are they distributed?
- Why was funding preferentially directed toward RAs in the past?
- How much TA-like work is done under other titles, such as practica?
- How much could our teaching capacity increase if we directed more of our current resources to teaching assistants?
- What guidelines should shape our allocation of TAs and our workload expectations for them?

■ Recommendations for Establishing a Workgroup on Short Course Offerings and Infrastructure in CALS

Some short course offerings (Farm and Industry Short Course, School for Beginning Dairy and Livestock Farmers, Master Cheesemakers, etc.) are well-established and recognizable, and many such efforts generate revenue for the units that run them. But the full extent of our efforts to provide focused training related to specific career goals is unclear, as is our potential future capacity. In addition, many of these programs are run independently, that is, there is little coordination of short courses across the college. Are there infrastructure needs (distance education capabilities, registration and enrollment systems, billing procedures, etc.) that could support multiple programs?

The recommended task for this workgroup is to review the current array of short course offerings in the college and to recommend future subject offerings and/or infrastructure support that would encourage both efficient use of current resources and generation of future revenue. The recommendations should be appropriate for the college's diverse mission and should align with the values and principles of the college.

Workgroup membership should include faculty and staff who can represent the breadth of our departments (basic and applied; social, biological, and physical sciences; large and small) and students who can represent the breadth of our learners. The group should also include individuals who can evaluate our short course potential from multiple perspectives. We recommend close engagement with the staff in the CALS Office of Academic Affairs, UW Extension, the Division of Continuing Studies, and the CALS Director of Educational Innovation.

Some key questions for this working group to consider include:

- Is it possible (or advisable) to catalog the majority of the "short course" offerings in the college?
- Would current or future efforts benefit from some shared infrastructure (such as in program development, financial management, registration coordination, marketing, etc.)?
- What can we learn from colleagues across campus or around the country who engage in short course offerings?
- What, if any, connection should there be between short courses and our degree programs? (Credit transfers, for example?)
- Not all of our academic departments are engaged equally in offering short courses. Is there benefit to be gained from encouraging broader participation in such courses? Are there ways in which our basic science departments, for example, might offer short courses appropriate to their missions and expertise?