AGENDA

1. (1:30) Introduction of New GFEC Member Joseph Dennis

2. (1:30) Automatic consent approval of minutes from March 8, 2019

Information Item
3. (1:35) Promoting Student Research Grants Competition (Lisa Martin)

Approvals
4. (1:40) Request to approve the new Master of Science in Design + Innovation effective Summer 2020 (Lennon Rodgers, Jake Blanchard)

5. (1:45) Request to approve a change of academic home for the Capstone Certificate in Power Conversion and Control from Engineering Professional Development to the College of Engineering effective Fall 2019

6. (1:50) Request to approve a change of academic home for the Capstone Certificate in Foundations of Professional Development from Engineering Professional Development to the College of Engineering effective Fall 2019

7. (1:55) Request to approve a change of academic home for the Doctoral Minor in Folklore from the Department of Comparative Literature and Folklore Studies to the Department of German, Nordic, and Slavic within the College of Letters and Science effective Fall 2019

Program Reviews and Updates
8. (2:00) MS/PhD/Doctoral Minor in Civil and Environmental Engineering Program Review Update (Parmesh Ramanathan)

9. (2:05) Ten-Year Program Review of the MS/PhD/Doctoral Minor in Pharmaceutical Sciences (Gail Robertson)

10. (2:30) Ten-Year Program Review of the MS/PhD in Social and Administrative Sciences in Pharmacy (John Pfotenhauer)

11. (2:55) Ten-Year Program Review of the MA/MS/PhD/Doctoral Minor in Anthropology (Earlise Ward)

Upcoming Meetings
May 10
University of Wisconsin-Madison
Graduate Faculty Executive Committee Meeting
1:30 pm – 3:30 pm, Room 52 Bascom Hall
March 8, 2019

MINUTES


Members Absent: John Pfotenhauer, Tracy Schroepfer, Bret Shaw

Guests: Mike Graham, James Keck, Rob Lemanski, Christine Sorkness, Enno Siemsen, Andrea Poehling, Elaine Klein, Nicole Wiessinger, Jordon Tong

Staff: Judy Bauman, Amy Bergholz, Eileen Callahan, Elena Hsu, Amy Kuether, LaRuth McAfee, A.J. Meinig, Emily Reynolds, Christopher Yue

Dean William Karpus called the meeting to order.

1. The minutes of February 8, 2019 were approved as a matter of automatic consent.

Approvals:

2. Dean Karpus introduced James Keck, Rob Lemanske and Christine Sorkness from the School of Medicine and Public Health, who presented a Notice of Intent to establish a Master of Science in Clinical and Health Informatics in the School of Medicine and Public Health. The 131 program is a multidisciplinary approach to improve decision making efforts in healthcare industry. The DCS has researched demand for the course and has determined there is a high demand. GFEC discussion included the demand for the program, oversight of program and faculty load.

   Motion: Moved and seconded to approve the Notice of Intent to proceed with the planning and development of a new Master of Science in Clinical and Health Informatics in the School of Medicine and Public Health. The motion was passed unanimously.

3. Dean Karpus introduced Enno Siemsen from the School of Business, who presented a Notice of Intent to establish a Master of Science in Business Analytics in the School of Business. It is responsive to growing needs for the program that many Universities are already offering. Enno responded to questions regarding overlap with other programs and prerequisites for admission.

   Motion: Moved and seconded to approve the Notice of Intent to proceed with the planning and development of a new Master of Science in Business Analytics in the School of Business. The motion was passed unanimously.

Program Reviews:

4. GFEC member Lara Collier presented the Institutional 10-year Program Review of Biotechnology Master of Science. Professor Collier noted strengths of the program include a 95% completion rate, strong relationships with local/regional companies, engaged staff and faculty, a strong trainee pool, a sense of community among students, and the amount of hands-on experiences provided.

   Professor Collier discussed review committee recommendations, including monitoring enrollment numbers; consistency in curriculum; providing access to faculty for mentoring; providing alumni profiles
Motion: Moved and seconded to accept the Institutional 10-Year Review of the Biotechnology Master of Science. The motion was passed unanimously.

5. Former GFEC member Mike Graham presented the Institutional 10-year Program Review of Freshwater and Marine Science MS/PhD. Professor Graham noted strengths of the program include flexibility, the ability to recruit students from a multitude of backgrounds, student satisfaction with experience and preparedness for careers.

Professor Graham discussed review committee recommendations, including developing clear guidelines and timelines for proceeding through the program; the creation of a handbook; development of core integrative courses for students interested in academia; addressing RA rate structure; and establishing a longer term for the program director. The GFEC expressed some concern regarding diversity initiatives and the relatively small size of the program.

Motion: Moved and seconded to accept the Institutional 10-Year Review of the Freshwater and Marine Science MS/PhD. The motion was passed unanimously.

Post-Review Program Responses

6. Associate Dean Ramanathan presented a post-review response to the Statistics Program Review. The response did not address requested diversity initiatives. The GFEC would like a specific response regarding diversity initiatives.

7. Associate Dean Ramanathan presented a post-review response to the Public Affairs/International Public Affairs Program Review, which the Committee found acceptable.

8. Associate Dean Ramanathan presented a post-review response to the Latin American, Caribbean and Iberian Studies Program Review, which the Committee found acceptable.

9. Associate Dean Ramanathan presented a post-review response to the Classical and Ancient Near Eastern Studies Program Review, the committee would like specific information regarding the program’s attrition rates. Specifically, whether either Classics and/or Hebrew Bible attrition contributed to the lower than expected PhD degree completion.

10. Associate Dean Ramanathan presented a post-review response to the Life Sciences Communication Program Review, which the Committee found acceptable.

11. Associate Dean Ramanathan presented a post-review response to the German, Nordic and Slavic Languages and Literature Program Review, which the Committee found acceptable.

Adjournment:

Meeting adjourned by Dean William Karpus
New Program Proposal

Date Submitted: 03/15/19 1:43 pm

Viewing: Design + Innovation

Last edit: 03/25/19 9:17 am
Changes proposed by: mkwasny

Name of the school or college academic planner who you consulted with on this proposal.

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Jake Blanchard - EGR</td>
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</table>

In Workflow

1. ENGINEERG Dept. Approver
2. EGR College Admin Reviewer
3. EGR College Approver
4. APIR Admin
5. GFEC Approver
6. UAPC Approver
7. APIR Admin
8. Registrar

Approval Path

1. 03/18/19 9:45 am
   James P Blanchard (jpblanch):
   Approved for ENGINEERG Dept. Approver
2. 03/22/19 4:07 pm
   Sara K Hagen (skhagen):
   Approved for EGR College Admin Reviewer
3. 03/22/19 4:35 pm
   Sara K Hagen (skhagen):
   Approved for EGR College Approver
4. 03/27/19 2:19 pm
   Nicole Wiessinger (wiessinger):
   Approved for APIR Admin
Proposal Abstract/Summary:

Design thinking is an iterative process in which we seek to understand the user of the design, challenge assumptions, and redefine problems in an attempt to identify alternative strategies and solutions that might not be instantly apparent with our initial level of understanding. Many organizations have seen the success of employing Design Thinking techniques when facing some of their biggest challenges, and career opportunities for cross-disciplinary students with skills in design thinking and other forms of creative design have dramatically increased over students with traditionally focused degrees.

The Masters of Science in Design + Innovation will prepare students to solve “wicked problems” by providing them with a robust set of design thinking strategies and tools from multiple perspectives (social science, business, engineering, art, user experience, social impact, etc.) as well as the opportunities to practice these techniques with hands-on, real-world projects.

In this Master’s program, students will:
- Be exposed to the lessons and perspectives of design thinking from five (5) of UW-Madison’s Schools and Colleges: Engineering, Human Ecology, Business, Information School, and Art
- Work within interdisciplinary teams to complete real-world projects in conjunction with industry partners
- Explore their own unique career path within the fields of Product Design, UI/UX design, Communication Design, and Design Strategy

This program is 30 credits, offered in-person as a full-time, one-year accelerated program, with three semesters of coursework beginning in the summer (planned May, 2020) and finishing the following spring.

Basic Information

Type of Program: Degree/Major

Upload the Approved Notice of Intent and UW System Approval Memo.

NOI_MSDesignPlusInnovation for UW System.pdf
A2P 19Feb MSN Design Plus Innovation MS.pdf

Upload completed draft of the full Board of Regents Authorization Proposal for this program.

BOR-New-Program-Authorization-MS-Design+Innovation--DRAFT_03-13-2019.docx
Who is the audience?
Graduate or professional

Home Department: College of Engineering (ENGINEERG)

School/College: College of Engineering

The program will be governed by the home department/academic unit as specified. Will an additional coordinating or oversight committee be established for the program?

Yes

Describe procedures under which the coordinating/oversight committee will operate, including how the committee chair is appointed, to whom the chair reports, how participating faculty and staff are identified, provisions for transitions in the committee, and processes for interaction with the home department.

The Master of Science in Design Plus (+) Innovation is a collaborative effort among five schools/colleges at the University of Wisconsin-Madison. Due to the inter-divisional and multidisciplinary nature of the program, the governance structure has been designed to seek balanced representation and influences from across campus and industry, as detailed below:

The program will be led by two Co-Directors:
The Academic Co-Director will oversee the academic operations of the program, including admissions, student experience, review of students’ progress, and review of the program. The Academic Co-Director will be hired/nominated by majority vote of the Steering Committee, subject to the approval of the Executive Associate Dean or equivalent of the appropriate participating school or college, for periods of up to three years at a time, renewable. While this position will report to the Executive Associate Dean or equivalent of one of the four remaining schools or colleges outside of the College of Engineering, the inter-divisional nature of the program requires an individual who can balance the needs of all five schools/colleges without deep ties to any school/college in particular. To this end, this individual may be more likely to come from outside the university (i.e. from industry). Michelle Kwasny, previously from IDEO, has served in this role to date and will serve as the initial Academic Co-Director.

The Program Co-Director will oversee the administrative operations of the program, including the budget, admissions process, and marketing. The Administrative Co-Director will be nominated by the Executive Associate Dean of the College of Engineering, subject to approval of the Steering Committee, for periods of up to three years at a time, renewable. This position will report to the Executive Associate Dean of the College of Engineering. Lee DeBaillie has led the administrative development of the proposed program and will serve as the initial Program Co-Director.

The Co-Directors will be supported by a Graduate Coordinator who will serve as students’ first resource for admissions, course selection, degree pathways, and time to completion. We plan
Resource for admissions, course selection, degree pathways, and time to completion. We plan to hire a Graduate Coordinator at half-time to begin in the Fall of 2020, with plans to increase the position to full-time in the following year to support growing student enrollment.

The program will be overseen by a Steering Committee made up of seven (7) representatives total: the two Co-Directors of the program and one faculty or staff representative from each of the five participating schools/colleges, as appointed by the dean of that school/college. The Steering Committee will be charged with ongoing oversight of and strategic planning for the program, including but not limited to program curriculum, admissions decisions, budget and financial decisions, etc. The Steering Committee will work with the existing Education and Curriculum Committee in the College of Engineering in the development of new courses and improvements to existing courses that are part of the Program Curriculum.

The Steering Committee will be advised by an Advisory Committee on how to keep the program high quality, up to date, and relevant within the marketplace and the academic community. The Advisory Committee will be made up of no more than ten (10) representatives spanning complementary areas of expertise, including but not limited to other departments/schools at UW-Madison, other UW schools, industry leaders, alumni, employers, and other external thought leaders. This group will be nominated and approved by the Steering Committee for periods of up to three years at a time, renewable. This group will convene at least once per year, in-person or remotely, to provide input on the direction of and plan for the program.

Is this in the Graduate School? Yes

Award: Master of Science

SIS Code:

SIS Description:

Transcript Title: Design + Innovation

Named Options:

Will this be offered as an additional major as well? No

Is this a non-admitting master's degree? No

Roles by Responsibility: List one person for each role in the drop down list. Use the green + to create additional boxes.

<table>
<thead>
<tr>
<th>Role Type</th>
<th>Name (Last, First)</th>
<th>Email</th>
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<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Chair</td>
<td>Blanchard, James P</td>
<td><a href="mailto:jpblanch@wisc.edu">jpblanch@wisc.edu</a></td>
<td>608/265-2001</td>
<td></td>
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### Program Details

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<tbody>
<tr>
<td>Faculty Director</td>
<td>Radwin, Robert G</td>
<td><a href="mailto:rradwin@wisc.edu">rradwin@wisc.edu</a></td>
<td>608/263-6596</td>
<td>Duane H. and Dorothy M. Bluemke, Professor, Industrial and Systems Engineering</td>
</tr>
<tr>
<td>Primary Contact</td>
<td>Kwasny, Michelle</td>
<td><a href="mailto:mkwasny@wisc.edu">mkwasny@wisc.edu</a></td>
<td>608/263-2383</td>
<td>Academic Co-Director, MS Design + Innovation</td>
</tr>
<tr>
<td>Primary Dean's Office Contact</td>
<td>Debaillie, Lee</td>
<td><a href="mailto:debaillie@wisc.edu">debaillie@wisc.edu</a></td>
<td>608/262-2329</td>
<td>Program Co-Director, MS Design + Innovation</td>
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List the departments that have a vested interest in this proposal.

<table>
<thead>
<tr>
<th>Departments</th>
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<tr>
<td>College of Engineering (ENGINEERG)</td>
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<tr>
<td>School of Human Ecology (HUM ECOL)</td>
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<td>School of Business (BUSINESS)</td>
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<td>Information School (I SCHOOL)</td>
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<tr>
<td>Art (ART)</td>
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<tr>
<td>College of Letters &amp; Science (L&amp;S)</td>
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</table>

Are all program reviews in the home academic unit up to date? | Yes
Are all assessment plans in the home academic unit up to date? | Yes
Are all assessment reports in the home academic unit up to date? | Yes

Mode of Delivery:
- Face-to-Face (majority face-to-face courses)
- Will this program be part of a consortial or collaborative arrangement with another college or university? | No
- Will instruction take place at a location geographically separate from UW-Madison? | No
Will this program have outside accreditation? Yes

Guide Accreditation tab

Accreditation

National Association of Schools of Art and Design

Accreditation status: Planned 2025-2026

Will graduates of this program seek licensure or certification after graduation? No

First term of student enrollment: Summer 2020 (1206)

When will the application for the first term of enrollment open? Summer 2019 (1196)

Which terms will you allow new students to enroll? What are the application deadlines for each term selected?

<table>
<thead>
<tr>
<th>Start Term</th>
<th>Application Deadline MM/DD</th>
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<tr>
<td>Summer</td>
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Year of three year check-in to GFEC (3 years after first student enrollment): 2023

Year of first program review (5 years after first student enrollment): 2025

If this proposal is approved, describe the implementation plan and timeline.

With the aim of admitting our first cohort of students in May 2020, we will immediately begin marketing for the degree in consultation with the Division of Continuing Studies, as soon as permitted by Academic Planning. We will work to hire our support staff, including our graduate coordinator, and form our advisory committee. While our planning committee, comprised of members from each of the five schools and colleges participating in the degree, has been meeting on an ongoing basis since Summer 2018, we will confirm and appoint our formal Steering Committee. In Fall of 2019, we will begin planning our student welcome and orientation so we are ready to go for Summer 2020. Come early 2020, we imagine the focus of our efforts will be to ensure that a high-quality, cross-disciplinary group of students gets admitted/enrolled in the program. We will prepare training materials for faculty and staff to advise new MS students and train them in Spring 2020. Lastly, while much legwork has been put in already to ensure all those participating in programming or curriculum are well informed, given the cross-university nature of this program, we will continue to keep everyone involved informed of the latest program details and milestones.
Rationale and Justifications

Why is the program being proposed? What is its purpose?

Design and innovation are more important than ever in our workforce, as evidenced by the growing number of jobs that pair a master’s degree with design thinking skills. Problem solving happens at the intersection of disciplines, and to be prepared for the modern job market candidates will need these interdisciplinary problem-solving skills.

Given the demand for master’s training in design and the need for interdisciplinary skills, the University of Wisconsin-Madison will leverage the design and innovation efforts across the campus by bringing together the Design Thinking Initiative in the School of Human Ecology (SoHE), the engineering innovation, prototyping and manufacturing expertise in the College of Engineering (CoE), the corporate and entrepreneurial activities in the Wisconsin School of Business (WSB), the user experience and data analytics capabilities in the Information School (iSchool), and the graphic design and interactive media experience in the Art Department within the School of Education (SoE), in order to offer a new interdisciplinary Master of Science in Design + Innovation. This program uses design thinking as a core methodology that prioritizes non-linear, collaborative process for systemic transformation of services, products and processes. Throughout the program, students will work in interdisciplinary teams to solve complex problems that are desirable from a human point of view, while being technologically feasible and economically viable. Students will leave the program equipped with design thinking strategies and tools that elevate their ability to create meaningful solutions and enhance their professional practices in their chosen field, whether that is engineering, business, human-centered design, software development, business ownership, and beyond. Such a range of outcomes requires training in multiple sectors, which UW-Madison and the partnering campus units are uniquely prepared to offer.
What is its relation to the institution’s mission? (Consider the mission broadly as a major research university with missions in teaching, research, service, and the Wisconsin Idea.) How does it contribute to the mission of the sponsoring unit(s)?

The proposed revenue generating program fits well within State of Wisconsin calls to develop an innovation and tech savvy workforce, as well as the important educational goal of getting students to be career-ready through completing a well-rounded degree program.

The Master of Science in Design + Innovation is directly aligned with campus strategic plans to develop additional revenue-generating professional master’s degrees. It will also support the summer enrollment goal, given that each cohort starts their core coursework in the Summer.

The University of Wisconsin-Madison further states that one of its goals is building innovative professional master-level degrees and other lifelong learning experiences in its Strategic Plan. We foresee extending the Wisconsin Idea, as our curriculum emphasizes applied learning and includes live consulting projects with businesses in Wisconsin and beyond; this directly enable participants to have meaningful lifelong learning experiences.

The MS Design + Innovation also embodies the spirit of collaboration, with five (5) schools and colleges coming together to offer and support the degree. The program will leverage the design and innovation efforts across the campus by bringing together the Design Thinking Initiative in the School of Human Ecology (SoHE), the engineering innovation, prototyping and manufacturing expertise in the College of Engineering (CoE), the corporate and entrepreneurial activities in the Wisconsin School of Business (WSB), the user experience and data analytics capabilities in the Information School (iSchool), and the digital design efforts and “wicked problem” solving efforts in the Art Department within the School of Education. Specifically, this program has coordinated with the MS Information in the iSchool within letters and science and will share coursework in the area of User Experience Design / Interaction design. This cooperative relationship allows students to choose courses in general information and data management as part of their electives for the degree.
Do current students need or want the program? Provide evidence.

Design thinking courses to be used in the MS-Design + Innovation program have been piloted with undergraduates to great success, enrolling 21 students in the summer, 39 students spanning Engineering and Human Ecology as part of a Freshman Interest Group offering, and 35 students as a stand-alone course within the School of Human Ecology. Many students who have experienced design thinking in these courses indicate they are interested in pursuing a more formal graduate experience that would go beyond a single course.

The degree planning committee has also been contacted by several prospective students and are now on stand-by waiting for the proposed program to move forward. In addition, many current UW-Madison undergraduate students have been in touch with the planning committee to learn more about the degree and timeline. We do not have data on whether these particular students would be willing to pay for the program, the cost for our program ($49,597) is comparable in price, if not less expensive, than other comparable programs even in our region (i.e. MIT’s Integrated Design and Marketing program is $77,000, Northwestern’s MS in Engineering Design Innovation is $69,652 and their MS in Product Design and Development Management (mpd2) is $63,264, and the University of Michigan’s MS in Design Science is $48,686).

In addition, prospective industry partners (e.g. American Family, Cuna Mutual, TASC, Kohler, etc.) are excited about the new degree offer, and have already proposed ways of engaging with students; these include hosting site visits, sponsoring employee fellowships through the program, providing content for the Capstone course, and everything in between. Because we know that students desire real-world challenges and interactions with employers, we believe industry participation will encourage students desire for the program.

What is the market, workforce, and industry need for this program? Provide evidence.

According to the World Economic Forum, creativity, critical thinking, and complex problem solving will be the top three skills needed in the workforce in 2020. The Harvard Business Review recently described how employers are actively seeking graduates with design skills. For example, IBM Design is on track to hire 1,000 designers and G.E. Healthcare (a Wisconsin company) and Samsung have made design thinking part of their strategic mission. Nationally, between May 2017 to May 2018, over 26,000 jobs were posted for jobs that require a master’s degree and skills in design thinking, product design, creative design or interaction design. Locally, employment opportunities in interdisciplinary design range from the state’s many product manufacturers, such as S.C. Johnson and Harley-Davidson, to product development companies like Design-Concepts, IDEO, i3 Product Development, Frog and Continuum. In a February 2018 online survey conducted by Forrester, strategic decision makers in IT, executive management and operations in 60 US-based organizations showed that broad adoption of design thinking is on the rise, with 78% of all respondents identified that design thinking’s
adoption has increased over the past two years.

Looking beyond Wisconsin, multiple employers are expressing interest in these trends and opportunities. Because of this, many major universities have an interdisciplinary design program, including Stanford, MIT, University of Michigan, University of Illinois, Northwestern, University of Minnesota, Virginia Tech and the University of Washington.

Search for terms related to design and innovation are also strong. In a naming study conducted by DCS in June, 2018, revealed that the word “design” has a high average search volume, with over 90,000 monthly searches in the U.S. alone, and a high click-through rate among international, national, and regional audiences. Using Google’s forecasting tools for design master’s degree search terms, the anticipated number of times ads would be seen is 2.09 million over 2 months based on current user analytics worldwide, with over 500,000 in the US, and 38,000 in the Midwest. Lastly, the program’s competitors are seeing average monthly searches on their sites in high volume: University of Illinois – Design Center: 40,500 average monthly searches, University of Minnesota, College of Design: 33,100 average monthly searches, and Berkeley’s Design Innovation program: 49,500 average monthly searches.

Nationally and in Wisconsin, design-related occupations show up in the top tier of job openings for design skills; listed specialties include Product Designers, User Experience (UX) Designers, Human Factors Engineers, Product Managers, Software Developers, and Mechanical Engineers. Within our state, 52% of UX design jobs in Wisconsin specifically requested design skills in 2018, as did 28% of Manufacturing Engineering positions. Other common positions include Design Strategists and Human Factors Engineers. This range of career outcomes requires training from multiple sectors, which UW-Madison is uniquely prepared to offer.

Targeted career paths for graduates include:
- Coders and Engineers: Designers who can code or engineer possess a powerful set of tools. These designers have the skills to conceive new ideas and the ability to launch new apps and products quickly into market.
- Entrepreneurs: People with a background in design who are interested in pursuing entrepreneurial careers.
- Researchers: Designers who are able to combine traditional methods with real-time data to reveal user behavior.
- Strategists: Designers who look at the business model, channel strategy, marketing, supply chain, etc. for truly disruptive innovation.
- Social Innovators: Designers who strive to create maximum positive impact on the planet by collaborating with entrepreneurs and NGOs to bring new innovations to those most in need.
How does the program represent emerging knowledge, or new directions in professions and disciplines?

This program is at the forefront of emerging knowledge and new directions in the design professions and disciplines. More and more organizations are recognizing the benefit of human-centered design skills within their organization, as well as the need to hire students with an interdisciplinary approach and background. This program allows students to bring their depth of expertise and cross-pollinate their ideas with others, adding breadth to their resume.

The program also emphasizes several emerging and very valuable skill sets:
- Product Design
- User Interface Design / User Experience Design
- Communication and Visual Design
- Design Strategy

In what ways will the program prepare students through diverse elements in the curriculum for an integrated and multicultural society (may include diversity issues in the curriculum or other approaches)?

The MS-Design + Innovation teaches students the practice of human-centered design and innovation. One core tenet of this practice is, “empathizing with and embracing diverse viewpoints, testing new ideas with others, and observing and learning from unfamiliar contexts.” As the first step of the design thinking process, Empathize, students learn to seek out perspectives of those they are designing for, but also teaches them deep observation skills to uncover latent needs and unsaid desires. Beyond the process and practice of design thinking is the goal of a radically innovative solution. “You cannot have groundbreaking innovation... without diversity and a collective experience of inclusion within your team or organization.” There is a growing body of evidence that supports this, showing diversity and inclusion is a key to more revenue growth, better problem-solving, and greater creativity. The plan for advancing inclusive excellence within the MS-Design + Innovation program at UW-Madison is as follows:

Equity in student recruitment, retention, and completion. Working in concert with DCS, the degree will be marketed via career fairs and conferences broadly, but also focus on events that draw together underrepresented student populations, such as the National Society of Black Engineers, SACNAS, Women in Engineering, Society of Hispanic Professional Engineers, American Indian Science and Engineering Society, Association for Women in Computing, Chinese Institute of Engineers USA, Society of Mexican American Engineers and Scientists. The program will showcase diverse imagery in its marketing materials, as well as the diversity of the program steering committee and participating instructors at relevant recruiting events for the program.

The expected applicant pool will present a wide variety of interest areas and backgrounds spanning the areas of the five participating units and beyond, both right out of undergraduate studies to working professionals. The admissions committee will use each student’s current
area of interest/study, as well as their desired specialization area and future career path, to balance the student cohort with a diversity of skillsets and mindsets.

The first step in getting advising or support as a student will be within the College of Engineering. College of Engineering support services staff attend professional development training on diversity and inclusion each year to support a wide variety of student needs and goals. However, the needs of our diverse student cohort will be wide, and we will need specialists from each unit to support in the advising and student support services along the way. Students will be assigned a graduate advisor from one of the five participating schools and colleges based on their background and intended specialization, and can rely on the program’s steering committee and their instructors, both spanning all five participating schools and colleges, for more tailored support with academic or career goals. The program also has plans to hire a full-time career services support staff member by year two of implementation.

Diversity in student learning. Once in the program, all students, regardless of background, are required to take four core courses that each teach different perspectives, theories, and practices of design and innovation. The required Capstone course will give students the opportunity to work on diverse project teams on real-world problems, guided by instructors across all five participating units. Co-curricular activities will also offer students a modern diversity of opinion from a wide diversity of practitioners outside of classroom instruction.

Equity in hiring of faculty and staff. With no immediate plans to hire, we will rely on the diversity and inclusion training and hiring efforts within each of the five participating units, as well as campus-wide Faculty Diversity Initiatives offered by the Office of the Provost that assist departments to recruit and retain a demographically representative faculty. Our future career services support staff, and any additional hiring for the program, will be done so through the lens of diversity and inclusion, beginning with advertising the opening widely and where it would garner interest from a diverse applicant pool.

Connection to institutional strategic initiatives. There is recognition from the planning committee that one barrier to this program may be program expense. Therefore, by the third year of the program a portion of net revenues (targeted at 8%, or the equivalent of four full scholarships) will be used to support scholarships for students from under-resourced populations to support our recruiting goals around diversity.
What gap in the program array is it intended to fill?

The program will provide new career paths for students. For example, students who have spent their undergraduate studies narrowly focused on one area (e.g. systems engineering) will find that the breadth of the program opens them up to a wider array of career pathways (e.g. product design or user experience design), or to careers with companies that have a broader outlook. Students who are a few years out from their undergraduate studies in focused areas will find that adding an interdisciplinary credential in Design + Innovation will allow them to change careers and focus in on an innovation-related role or position. Students who had been focused on creative studies (e.g. designers, artists, etc.) will find that exposure to a diversity of student backgrounds (e.g. engineers, business students, etc.) will help them market their skills within the larger employment marketplace; they will be valuable not only because of their primary specialty, but also because of their ability to create concrete marketable outcomes.

The proposed MS Design + Innovation program pulls together the unique approaches to innovation that currently exist within each of the five schools and colleges participating, in order to teach these approaches to students in a hands-on, interdisciplinary way. Students will take coursework from all five schools and colleges, and faculty involved will collaborate to teach the project-based Capstone course, leading to the cross-pollination of ideas and hopefully new collaborations.

Faculty and Staff Resources

List the core program faculty and staff with title and departmental affiliation(s) who are primarily involved and will participate in the delivery and oversight.

<table>
<thead>
<tr>
<th>Name (Last, First)</th>
<th>Department</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blanchard, James P</td>
<td>College of Engineering (ENGINEERG)</td>
<td>Executive Associate Dean, Thomas and Suzanne Werner Professor, Engineering Physics</td>
</tr>
<tr>
<td>Radwin, Robert G</td>
<td>Industrial and Systems Engr (IND SY EGR)</td>
<td>Duane H. and Dorothy M. Bluemke Professor</td>
</tr>
<tr>
<td>Rodgers, Lennon P</td>
<td>College of Engineering (ENGINEERG)</td>
<td>Director of Grainger Engineering Design Innovation Lab</td>
</tr>
<tr>
<td>Williamson, Karl Joseph</td>
<td>College of Engineering (ENGINEERG)</td>
<td>Shop Manager</td>
</tr>
<tr>
<td>Debaillie, Lee</td>
<td>College of Engineering (ENGINEERG)</td>
<td>Program Director</td>
</tr>
</tbody>
</table>
What resources are available to support faculty, staff, labs, equipment, etc.?

In addition to current resources in all five schools/colleges—classrooms, libraries, computer labs, etc.—the MS in Design + Innovation will take advantage of a number of spaces that encourage collaboration. UW-Madison’s Wendt Commons is currently under renovation to become flexible studio space for pursuing semester long design projects. Students and staff will also have access to the prototyping equipment available within the College of Engineering’s Makerspace and TEAM-Lab, and the Innovation Lab at the School of Human Ecology.

Program advisor(s) with title and departmental affiliation(s).
Describe how student services and advising will be supported.

The program co-directors and the faculty/staff members of the steering committee will be the primary responsible members of the advising team for the Masters of Science in Design + Innovation. This team will lead curriculum development and academic guidance - course planning. This team will also be responsible for the student professional development and partner on employer relations.

The Division of Continuing Studies Integrated Marketing & Communications team (IMC), the College of Engineering Graduate Student Services Office, and the MS Design + Innovation steering committee will work in concert on recruitment and admissions procedures. Once a student is admitted, the College of Engineering Program Office will work closely to support the MS Design + Innovation students. This team will lead admissions operations, as well as academic guidance, including policies and procedures, and also student services in general, including career and leadership development, employer relations, data reporting and rankings management.

Additional support for students electing to study coursework that aligns with one of the four schools/colleges outside of Engineering will be provided by career services within each school/college. The MS Design + Innovation program seeks to hire a Career Services Support staff member starting in Summer 2020 to help students navigate the intersections of their disciplines and their future career goals.

Programmatic services, including connections to web and Guide information and the Registrar’s Office, will be the responsibility of the College of Engineering Graduate Student Services office, in alignment with the work they currently perform related to existing CoE revenue programs. Communication with the CoE Dean’s Office will be the responsibility of the MS Design + Innovation Co-Directors.

Professional development opportunities will be primarily provided through MS Design + Innovation cohort co-curricular events, as well as a cross-section of the events offered in the supporting five schools/colleges.

Confirm that the program advisor(s) or coordinator(s) have been consulted and reviewed this proposal.

Select the Graduate Research Scholars Community for this program.

Graduate Engineering Research Scholars

Resources, Budget, and Finance
Is this a revenue program? Yes

What is the tuition structure for this program?
Market-based tuition - separate proposal to be submitted

Select a tuition increment:
$1,600/credit

What is the rationale for selecting this tuition increment?

The Division of Continuing Studies performed a competitive pricing study comparing tuition at eight similar degree programs across five peer institutions. The proposed program, at $1,600/credit plus segregated fees, supports the estimated program expenses and costs less than six of the eight peer programs.

Upload the proposal for market based tuition:

D+I Market-based Tuition Proposal v3.docx
Provide a summary business plan.

Internal studies have shown a strong market demand for design and innovation skills. Many of these skills do not lie within a single academic discipline. The interdisciplinary Design + Innovation Master of Science degree (“program”) is being proposed to meet this demand.

The program will integrate the design and innovation efforts of the School of Human Ecology, the Wisconsin School of Business, the College of Engineering, the Information School and the Art Department in the School of Education. The program will maintain this partnership of complementary disciplines and utilize a fixed $-per-credit compensation model for instruction. The program will maintain continuous engagement with industry to monitor evolving trends and ensure the relevance of graduate skills.

At least eight interdisciplinary design and innovation MS programs exist at other peer institutions. The Design + Innovation program offers a competitive tuition price, an intensive program-long capstone experience and greater integration of disciplines compared to competing peer programs.

The Division of Continuing Studies will provide marketing and recruiting services for the program. Key student profiles will include product developers, coders and engineers, entrepreneurs, business strategists and social innovators. After the start-up phase, an estimated 50 students will enroll annually. A final capacity of 100 students per year is possible when fully leveraging program revenue to provide additional instructors, teaching assistants and support staff.

The program be financially self-supporting through tuition revenue by academic year three. Tuition revenue will support course instruction, new course development, capstone course materials, program scholarships, marketing, program development, an academic director, a program director, a graduate coordinator, and career services and administrative staff.

The College of Engineering will administer the program side-by-side with other graduate revenue programs. Program oversight will be provided by a steering committee representing the partnering schools and colleges. A program director and an academic director will provide day-to-day decision-making and serve on the steering committee. An industry advisory board will provide advice and insight into market needs and trends.

Program aspirations include a steady stream of curious, intelligent and passionate students; dynamic and creative instruction combining direct experience and theory; a student experience of both structure and creativity, direct industry relevance and a solid and continuous financial foundation.
Provide an overview of plans for funding the program including but not limited to program administration, instructional/curricular delivery, technology needs and program assessment.

The program will be self-funded through tuition revenue within three years of implementation. Enrollment will begin with 15 students and increase to 50 three years after launch. The program will request non-standard market-based tuition based on a competitive analysis of similar programs at peer institutions.

Tuition revenue will be gathered centrally at the College of Engineering where it will be redistributed to the program partners and used directly for program administrative support.

With respect to instruction, Memorandums of Agreement (MOA) are in place with all program partners to assess instructional activity at $600/credit hour per student. The terms of these MOA’s are re-assessed every 1-3 years. Therefore, all program partners are compensated by the program for instruction based on total credit hours of each course.

With respect to excess program revenue, the steering committee will direct allocation among the program partners, and/or invest back into the program, and/or hold in a contingency fund for future needs. Potential partner uses for the revenue include faculty salaries, TA support, equipment purchases and laboratory upkeep.

Program administration will be housed in the College of Engineering. Tuition revenue will directly support relevant staff including the program director, the academic director, graduate student services coordinator, career services staff and administrative support. Other direct expenses are capstone laboratory costs, new course development, marketing and recruitment.

The Division of Continuing Studies will support program assessment through targeted student surveys at key times in the program. The surveys will identify program deficiencies, which feed planning session decision-making on program improvement.
What is the marketing plan?

Marketing efforts will be led by the Division of Continuing Studies Integrated Marketing & Communications (IMC) team in collaboration with program directors. IMC will develop a comprehensive learner-centric marketing strategy to build awareness of the program and generate leads.

Specific digital marketing efforts employed will likely include paid search (Google AdWords), paid social (Instagram, Snapchat) and digital display web banners. Email marketing will also be utilized by targeting specific undergrad majors and alumni as well as targeted paid lists such as GRE. Dedicated landing page(s) will be built using lead conversion best practices.

In the marketing planning phase (April – July 2019), the IMC marketing team will develop and implement a marketing plan, identify target audiences and key messages, develop landing page content, and build a marketing campaign with supporting creative materials. With a targeted campaign launch of July 2019, the marketing campaign will run for six months prior to the February 2020 application deadline. The IMC marketing team will continue to monitor performance and optimize the campaign for improved results.
Describe resource and fiscal considerations - A. Provide an overview of plans for funding the program including program administration, instructional/curricular delivery, academic and career advising, technology needs, marketing (if relevant), financial aid and scholarships (if relevant), capacity for student learning outcomes assessment and program review.

The program will be self-funded through tuition revenue within three years of implementation. Enrollment is targeted to begin with 15 students and increase to 50 students three years after launch. The program will request non-standard market-based tuition based on a competitive analysis of similar programs at peer institutions.

Tuition revenue will be gathered centrally at the College of Engineering where it will be redistributed to the program partners and used directly for program administrative support.

With respect to instruction, Memorandums of Agreement (MOA) are in place with all program partners to assess instructional activity at $600/credit hour per student. The terms of these MOA's are re-assessed every 1-3 years. Therefore, all program partners are compensated by the program for instruction based on course credit hours times the number of students in each course.

With respect to excess program revenue, the steering committee will direct allocation among the program partners, and/or invest back into the program, and/or hold in a contingency fund for future needs. Potential partner uses for the revenue include faculty salaries, TA support, scholarships, equipment purchases and laboratory upkeep.

Program administration will be housed in the College of Engineering. Tuition revenue will directly support relevant staff including the program director, the academic director, a graduate student services coordinator, a career advisor and administrative support. Other direct expenses are capstone laboratory costs, new course development, student scholarships, and marketing and recruitment. The graduate coordinator will provided significant first-contact student advising services.

Student learning outcomes assessment will link directly to activities in the capstone courses. This data will be gathered and documented as part of program administration activities.

The Division of Continuing Studies will support program assessment through targeted student surveys delivered at key times in the program cycle. The surveys will identify program deficiencies, which are then addressed in planning sessions for program improvement. The surveys will also identify what is working well, so that these aspects are recognized and preserved and not inadvertently removed.
Describe resource and fiscal considerations - B. Are the faculty, instructional staff and key personnel existing or new faculty and staff? If they already serve existing programs, how are they able to add this workload? If new faculty and staff will be added, how will they be funded?

For program start-up (1-2) years, most faculty and staff are existing. Much of the early curriculum will make use of existing courses across all the program partners. Several new program courses were planned for development, with instructor time already available. Adding students to these existing courses is manageable as there are many courses over many schools and colleges, and enrollment is low in the early years. Instructional compensation ($600/credit) will assist with creating any new sections that may be required. Some administrative staff will be unloading work from other areas or are seeing decreased activity in existing work loads. Michelle Kwasny, Academic Director and recent hire, will take on much of the program development, capstone course development, and initial capstone course delivery, with some assistance from all program faculty.

For early program years (3-4), academic capacity will be added through increased instructional appointments and the hiring of teaching assistants. A career services staff member will be hired directly as part of administrative staff growth. All of these actions are funded through tuition revenue.

For longer-term program operation (5+ years) with sustained high enrollment (50+ students/year), the hiring of additional dedicated instructional staff and dedicated support staff will be undertaken. Exact needs will be determined based on student demand for academic topics or program services. Program tuition revenue will be used to fund the hires either through increased instructional revenue or as a direct program personnel expense.

Describe resource and fiscal considerations - C. What impacts will the program have on staffing needs beyond the immediate program? How are those needs being met?

The program is designed to have very little impact on staffing needs outside of program activities. Over time, up to an additional 100 students will attend the university, adding a small load to centralized services.

Describe resource and fiscal considerations - D. For graduate programs, describe plans for funding students including but not limited to funding sources and how funding decisions will be made.

Students in this program will be primarily self-funded. While students are not allowed tuition remission, program plans include scholarships supported by tuition revenue to meet recruitment goals. The program steering committee will determine qualifications and administer the awards.

UW System Administration and the Board of Regents require submission of budget information in a specific format. These forms will be completed in collaboration with APIR after school/college approval and before submission to UWSA for Board consideration. These forms are uploaded here by APIR.
Does the program or change require substantial new resources other than those just described? Describe the needs. Confirm that the dean is committed to providing the resources.

No.

Are new Library resources needed to support this program?

No

Describe plans for funding students including but not limited to funding sources and how funding decisions are made.

The students in this program will be primarily self-funded. While students will not be allowed traditional assistantships with tuition remission, program plans include the equivalent of four full-time annual scholarships supported by tuition revenue. The program steering committee will determine scholarship qualifications and conduct selection of awards.

Curriculum and Requirements

Guide Admissions/How to Get In tab

Approved Shared Content from /shared/graduate-school-admissions/

Graduate School Admissions

Graduate admissions is a two-step process between academic degree programs and the Graduate School. Applicants must meet requirements of both the program(s) and the Graduate School. Once you have researched the graduate program(s) you are interested in, apply online.

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Deadline</td>
<td>This program does not admit in the fall.</td>
</tr>
<tr>
<td>Spring Deadline</td>
<td>This program does not admit in the spring.</td>
</tr>
<tr>
<td>Summer Deadline</td>
<td>February 1*</td>
</tr>
<tr>
<td>GRE (Graduate Record)</td>
<td>Not required.</td>
</tr>
<tr>
<td>Examinations</td>
<td></td>
</tr>
<tr>
<td>English Proficiency Test</td>
<td>Every applicant whose native language is not English or whose undergraduate instruction was not in English must provide an English proficiency test score and meet the Graduate School minimum requirements</td>
</tr>
</tbody>
</table>
and meet the Graduate School minimum requirements (https://grad.wisc.edu/apply/requirements/#english-proficiency).

Other Test(s) (e.g., GMAT, MCAT): n/a

Letters of Recommendation: 2

**Required**

*Rolling admission will begin after October 1, with a final application deadline of February 1. Applications will be accepted until a cohort of up to 25 students per specialization have committed to attend or the final application deadline of February 1 has been reached (whichever happens first).*

**Application Process**

Applications are accepted for the summer term only. Applications will open approximately one calendar year prior to the start of the term. Rolling admission will begin after October 1, with a final application deadline of February 1. Applications will be accepted until a cohort of up to 25 students per specialization have committed to attend or the final application deadline of February 1 has been reached (whichever happens first).

**Minimum Eligibility Requirements (GPA, test scores, etc.)**

ALL applicants must meet the general Graduate School Requirements for Admission.

**GPA:** A minimum 3.0/4.0 GPA on the last 60 undergraduate credits is required.

**Degree:** A bachelor degree (or equivalent), in any relevant subject area, is required before the start of the program. The degree is not required to be complete at the time of application.

**English Proficiency Scores (TOEFL/IELTS)** – required for those whose native language is not English, or whose undergraduate instruction was not in English. See Graduate School Requirements for Admission for more information and exemption policies.

**Required Application Materials**

All application materials must be submitted online through the Graduate School’s application portal. Do NOT send any paper copies of documents by mail (email or paper mail) unless specifically requested to do so by the Graduate Admissions Team. Applications must be complete to be reviewed by the Graduate Admissions Team.

Online application: https://grad.wisc.edu/apply/

Resume or Curriculum Vitae (CV)

Statement of Purpose:

Statement length: Maximum of one page.

Statement MUST respond to the following question: “Why are you interested in the Master of Science in Design + Innovation program?”

Unofficial transcripts: All applicants must upload a copy of their transcript from their undergraduate institution and other previous higher education institutions, including other graduate studies. An official transcript is not part of the online application process unless specifically requested in writing by the Admissions Team.

Two (2) letters of recommendation: Enter the recommender email contact information into the online application. Recommenders will receive an email with instructions for the survey and recommendation letter upload process. We do not accept recommendation letters via email, paper format, or online portfolios.

English Proficiency Scores (TOEFL/IELTS) – required for those whose native language is not English, or whose undergraduate instruction was not in English. See Graduate School Requirements for Admission for more information and exemption policies. Scores are accepted if they are within two years of the start of the admissions term for which applicants are applying. TOEFL scores should be electronically sent directly from Educational Testing Service (ETS) to institution code 1846 (no department code is needed). IELTS scores should be electronically sent
directly from IELTS to **UW-Madison, Graduate Studies**.

**Application Fee**

Describe plans for recruiting students to this program.

Working in concert with the Division of Continuing Studies, we plan to:
- Travel to college and career fairs across the United States (Host institution invites many colleges to host informational booths)
- Create pop-up events and lunch and learns at targeted universities and businesses (UW-Madison is only visiting institution, often a more intimate event with a presentation)
- Host a series of events on UW-Madison campus targeting UW-Madison undergraduate students (examples might include: tips for your application, difference between masters and PhD, panel of students or admissions committee)
- Work with MS Design + Innovation program staff to host booths at targeted conferences and career fairs to reach working professionals
- Call all leads within 24 hours of RFI form submission including video conferencing as requested
- One to one email and texting with prospective students to answer questions and connect to program staff as appropriate
- Develop automated campaigns to move prospective from interested to started the application and started the application to completed the application
- Develop automated yield campaigns and strategies to get accepted students to enroll
- Coordinate many of the above marketing activities in conjunction with partner departments (e.g., partners take program brochures to conferences they attend and vice versa)
What is the recruiting and admissions strategy for underrepresented students?

In addition to general outreach and recruitment efforts listed above, we plan to participate in events that draw together underrepresented student populations, such as National Society of Black Engineers, SACNAS, Women in Engineering, Society of Hispanic Professional Engineers, American Indian Science and Engineering Society, Association for Women in Computing, Chinese Institute of Engineers USA, Society of Mexican American Engineers and Scientists (NOTE: these are examples, not exhaustive list). The program will showcase diverse imagery in its marketing materials, as well as the diversity of the program steering committee and participating instructors at relevant recruiting events for the program.

The expected applicant pool will present a wide variety of interest areas and backgrounds spanning the areas of the five participating units and beyond, both right out of undergraduate studies to working professionals. The admissions committee will use each student’s current area of interest/study, as well as their desired specialization area and future career path, to balance the student cohort with a diversity of skillsets and mindsets.

While recruiting underrepresented students to a professional masters program has proven difficult, we hope that our plans to offer scholarships starting in year 2-3 will give those who may not have had the opportunity to pay full tuition for the program a chance to come.

Projected Annual Enrollment:

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>15</td>
</tr>
<tr>
<td>Year 2</td>
<td>25</td>
</tr>
<tr>
<td>Year 3</td>
<td>50</td>
</tr>
<tr>
<td>Year 4</td>
<td>75</td>
</tr>
<tr>
<td>Year 5</td>
<td>100</td>
</tr>
</tbody>
</table>

Maximum enrollment that can be supported with existing instructional and student services resources:

100
Describe plans for supporting enrollments that are much higher or much lower than the anticipated enrollment.

In the event of low enrollment, efforts to expand administrative resources will be curtailed and instructional expenses will decrease, as they are linked to student enrollment through the $/credit instructional compensation. Marketing, recruitment and enrollment data will be evaluated to assess shortcomings and identify overlooked opportunities. Marketing and recruiting techniques will be re-evaluated and re-engaged in the marketplace to increase enrollment in the next cycle.

Higher-than-expected enrollment is less likely, as student enrollment numbers can be controlled through the admissions process. However, if this were to occur, expanding instructional resources will be a first priority. New course sections will be created for required courses and any high-demand elective courses. High enrollment will produce high tuition revenue, and this would be applied to increasing existing instructor appointments, and/or hiring additional teaching assistants, and/or tapping private sector instructional expertise, and/or one-time faculty overload requests. Staff capacity can be rapidly increased through use of student hourly workers, overload requests and overtime depending on employee labor classification. If the high enrollment levels continue, additional instructional and administrative staff will need to be hired.

Those who are not familiar with using the html editor fields may upload a document with information about the curriculum for use by those who will format and edit the content that will appear in the Guide.

Guide Requirements tab

Approved Shared Content from /shared/graduate-minimum-degree-requirements-and-satisfactory-progress/

Minimum Graduate School Requirements

Review the Graduate School minimum academic progress and degree requirements, in addition to the program requirements listed below.

Major requirements

<table>
<thead>
<tr>
<th>mode of instruction</th>
<th>Face to Face</th>
<th>Evening/Weekend</th>
<th>Online</th>
<th>Hybrid</th>
<th>Accelerated</th>
</tr>
</thead>
</table>
Approved Shared Content from /shared/graduate-school-mode-instruction-definitions/

Evening/Weekend: These programs are offered in an evening and/or weekend format to accommodate working schedules. Enjoy the advantages of on-campus courses and personal connections, while keeping your day job. For more information about the meeting schedule of a specific program, contact the program.

Online: These programs are offered primarily online. Many available online programs can be completed almost entirely online with all online programs offering at least 50 percent or more of the program work online. Some online programs have an on-campus component that is often designed to accommodate working schedules. Take advantage of the convenience of online learning while participating in a rich, interactive learning environment. For more information about the online nature of a specific program, contact the program.

Hybrid: These programs have innovative curricula that combine on-campus and online formats. Most hybrid programs are completed on-campus with a partial or completely online semester. For more information about the hybrid schedule of a specific program, contact the program.

Accelerated: These on-campus programs are offered in an accelerated format that allows you to complete your program in a condensed time-frame. Enjoy the advantages of on-campus courses with minimal disruption to your career. For more information about the accelerated nature of a specific program, contact the program.

Curricular Requirements

<table>
<thead>
<tr>
<th>Requirements</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Credit Requirement</td>
<td>30 credits</td>
</tr>
<tr>
<td>Minimum Residence Credit Requirement</td>
<td>16 credits</td>
</tr>
<tr>
<td>Minimum Graduate Coursework Requirement</td>
<td>At least half of degree coursework (15 out of 30 total credits) must be in graduate-level coursework; courses with the Graduate Level Coursework attribute are identified and searchable in the university's Course Guide (<a href="http://my.wisc.edu/CourseGuideRedirect/BrowseByTitle">http://my.wisc.edu/CourseGuideRedirect/BrowseByTitle</a>).</td>
</tr>
<tr>
<td>Overall Graduate GPA Requirement</td>
<td>3.00 GPA required</td>
</tr>
<tr>
<td>Other Grade Requirements</td>
<td>Students must earn a C or above in all coursework.</td>
</tr>
<tr>
<td>Assessments and Examinations</td>
<td>Students may not have any more than two incompletes on their record at any one time.</td>
</tr>
<tr>
<td>Language Requirements</td>
<td>No language requirements.</td>
</tr>
</tbody>
</table>

https://next-guide.wisc.edu/programadmin/
# required courses

## Course List

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Courses - required of all students (18 credits)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DS 641</td>
<td>Design Thinking for Transformation</td>
<td>3</td>
</tr>
<tr>
<td>INTEREGR 477</td>
<td>Course INTEREGR 477 Not Found</td>
<td>3</td>
</tr>
<tr>
<td>OTM 760</td>
<td>Managing by Design</td>
<td>3</td>
</tr>
<tr>
<td>INTER-HE 940</td>
<td>Collaborative Capstone I</td>
<td>3</td>
</tr>
<tr>
<td>INTEREGR 941</td>
<td>Collaborative Capstone II</td>
<td>3</td>
</tr>
<tr>
<td>One of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L I S 707</td>
<td>Data Visualization and Communication for Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>DS 541</td>
<td>Visual Thinking for Problem Solving</td>
<td></td>
</tr>
<tr>
<td>Specializations 1</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Students select one specialization in addition to the Core Courses. Students may select courses across the specialization lists with approval of their faculty advisor. 12 credits minimum required.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Product Design

- ISY E/PSYCH 349: Introduction to Human Factors
- ISY E/PSYCH 549: Human Factors Engineering
- M E/E C E 439: Introduction to Robotics
- M E 449: Redesign and Prototype Fabrication
- M E 549: Product Design
- ISY E/COMP SCI/DS 518: Wearable Technology
- ISY E 552: Human Factors Engineering Design and Evaluation
- M H R 734: Venture Creation
- M H R 741: Technology Entrepreneurship
- MARKETING 737: Creating Breakthrough New Products
- ART 346: Basic Graphic Design
- ART 409: Digital Fabrication Studio
- ART 428: Digital Imaging Studio
- ART 429: 3D Digital Studio I
- DS 527: Global Artisans
- CNSR SCI 657: Consumer Behavior

## UI/UX Design

- L I S/COMP SCI 611: User Experience Design 1
- L I S/COMP SCI 612: User Experience Design 2
- L I S/COMP SCI 613: User Experience Design 3
- L I S 646: Introduction to Info Architecture and Interaction Design for the Web
- L I S 661: Information Ethics and Policy
- DS/COMP SCI 579: Virtual Reality
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISYE/PSYCH 349</td>
<td>Introduction to Human Factors</td>
<td></td>
</tr>
<tr>
<td>ISYE/COMP SCI/DS 518</td>
<td>Wearable Technology</td>
<td></td>
</tr>
<tr>
<td>ISYE/PSYCH 549</td>
<td>Human Factors Engineering</td>
<td></td>
</tr>
<tr>
<td>MHR 734</td>
<td>Venture Creation</td>
<td></td>
</tr>
<tr>
<td>MHR 741</td>
<td>Technology Entrepreneurship</td>
<td></td>
</tr>
<tr>
<td>ART 346</td>
<td>Basic Graphic Design</td>
<td></td>
</tr>
<tr>
<td>ART 428</td>
<td>Digital Imaging Studio</td>
<td></td>
</tr>
<tr>
<td>ART 438</td>
<td>History of Graphic Design and Typography</td>
<td></td>
</tr>
<tr>
<td>ART 528</td>
<td>Digital Interactive Studio</td>
<td></td>
</tr>
<tr>
<td>ART 529</td>
<td>3D Digital Studio II</td>
<td></td>
</tr>
<tr>
<td><strong>Communication Design</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ART 318</td>
<td>Introduction to Video, Performance &amp; Installation Art</td>
<td></td>
</tr>
<tr>
<td>ART 346</td>
<td>Basic Graphic Design</td>
<td></td>
</tr>
<tr>
<td>ART 409</td>
<td>Digital Fabrication Studio</td>
<td></td>
</tr>
<tr>
<td>ART 428</td>
<td>Digital Imaging Studio</td>
<td></td>
</tr>
<tr>
<td>ART 429</td>
<td>3D Digital Studio I</td>
<td></td>
</tr>
<tr>
<td>ART 438</td>
<td>History of Graphic Design and Typography</td>
<td></td>
</tr>
<tr>
<td>ART 528</td>
<td>Digital Interactive Studio</td>
<td></td>
</tr>
<tr>
<td>ART 529</td>
<td>3D Digital Studio II</td>
<td></td>
</tr>
<tr>
<td>DS/COMP SCI 579</td>
<td>Virtual Reality</td>
<td></td>
</tr>
<tr>
<td>DS/LAND ARC 639</td>
<td>Culture and Built Environment</td>
<td></td>
</tr>
<tr>
<td>DS 541</td>
<td>Visual Thinking for Problem Solving 2</td>
<td>2</td>
</tr>
<tr>
<td>LIS 707</td>
<td>Data Visualization and Communication for Decision Making 3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Design Strategy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSCS 335</td>
<td>Communicating with Key Audiences</td>
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<tr>
<td>CNSR SCI 555</td>
<td>Consumer Strategy &amp; Evaluation</td>
<td></td>
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<tr>
<td>CNSR SCI 561</td>
<td>Retail Channel Strategy &amp; Omni-Channel Retailing</td>
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<tr>
<td>CNSR SCI 562</td>
<td>The Global Consumer</td>
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<td>CNSR SCI 567</td>
<td>Product Development Strategies in Retailing</td>
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<td>CNSR SCI 657</td>
<td>Consumer Behavior</td>
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<td>HDFS 872</td>
<td>Bridging the Gap Between Research and Action</td>
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<tr>
<td>DS 527</td>
<td>Global Artisans</td>
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<tr>
<td>DS/LAND ARC 639</td>
<td>Culture and Built Environment</td>
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<td>MEE 549</td>
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<td>MHR 715</td>
<td>Strategic Management of Innovation</td>
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<td>Business Strategy</td>
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<td>MHR 734</td>
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<td>MHR 741</td>
<td>Technology Entrepreneurship</td>
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<td>MARKETING 737</td>
<td>Creating Breakthrough New Products</td>
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<tr>
<td>ART 318</td>
<td>Introduction to Video, Performance &amp; Installation Art</td>
<td></td>
</tr>
</tbody>
</table>
These tracks are internal to the program and represent different pathways a student can follow to earn this degree. Track names do not appear in the Graduate School admissions application, and they will not appear on the transcript.

1. **DS 541** may be counted as credit in the specialization area only if it was not taken as a Core Requirement. Students may NOT double count **DS 541** for the Core Requirement and the Specialization.

2. **LIS 707** may be counted as credit in the specialization area only if it was not taken as a Core Requirement. Students may NOT double count **LIS 707** for the Core Requirement and the Specialization.

Total credits required:

30

Guide Graduate Policies tab

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
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<td>Total Credits</td>
<td>30</td>
</tr>
</tbody>
</table>
requirement if they are in courses numbered 700 or above. Coursework earned five or more years prior to admission is not allowed to satisfy requirements.

**PROBATION**

The Graduate School regularly reviews the record of any student who earned grades of BC, C, D, F, or Incomplete in a graduate course (300 or above), or grade of U in research credits. This review could result in academic probation with a hold on future enrollment or in being suspended from the Graduate School.

- **Good standing** (progressing according to standards; any funding guarantee remains in place).
- **Probation** (not progressing according to standards but permitted to enroll; loss of funding guarantee; specific plan with dates and deadlines in place in regard to removal of probationary status).
- ** Unsatisfactory progress** (not progressing according to standards; not permitted to enroll, dismissal, leave of absence or change of advisor or program).

A semester GPA below 3.0 will result in the student being placed on academic probation. If a semester GPA of 3.0 is not attained during the subsequent semester of full time enrollment (or 12 credits of enrollment if enrolled part-time), this will be deemed unsatisfactory progress and the student may be dismissed from the program or allowed to continue for one additional semester based on advisor appeal to the Graduate School.

**ADVISOR**

All students will be assigned a faculty advisor who assists them in planning a course sequence that meets degrees requirements and who will discuss career objectives with the students.

**CREDITS PER TERM ALLOWED**

15 credits

**TIME CONSTRAINTS**

Master’s degree students who have been absent for five or more consecutive years lose all credits that they have earned before their absence. Individual programs may count the coursework students completed prior to their absence for meeting program requirements; that coursework may not count toward Graduate School credit requirements.

**OTHER**

Students enrolled in this program are not permitted to accept teaching assistantships, project assistantships, research assistantships or other appointments that would result in a tuition waiver. Students in this program cannot enroll in other graduate programs nor take courses outside the prescribed curriculum.

Discuss expected progress to degree and time to degree. For undergraduate programs discuss considerations for supporting students to complete the degree in four academic years.

The Master of Science in Design + Innovation is a 12-month accelerated program. Students may request to extend the program electives to with advisor approval.
# Program Learning Outcomes and Assessment

List the program learning outcomes.

<table>
<thead>
<tr>
<th>Outcomes – enter one learning outcome per box. Use the green + to create additional boxes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Demonstrate creative, independent problem solving skills and entrepreneurial thinking.</td>
</tr>
<tr>
<td>2 Apply design tools and strategies on interdisciplinary teams and projects.</td>
</tr>
<tr>
<td>3 Communicate effectively both visually and orally.</td>
</tr>
<tr>
<td>4 Implement an iterative design thinking process.</td>
</tr>
<tr>
<td>5 Demonstrate a hands-on, iterative process that includes making, creating and designing.</td>
</tr>
<tr>
<td>6 Gain depth in a field of study that can be applied in a social, global and design context.</td>
</tr>
<tr>
<td>7 Apply principles of ethical and professional conduct in a field experience.</td>
</tr>
</tbody>
</table>
Summarize the assessment plan.

Direct evidence is provided primarily by student work product and process in the Capstone courses, and is supported by post-degree student outcomes, including attainment of career objectives. The M.S. Design + Innovation Capstone courses (INTER-HE 940: Collaborative Capstone I and INTER EGR 941: Collaborative Capstone II) will be the primary source for direct assessment of student learning outcomes. Instructors for the course will come from the five participating schools and colleges and will serve as guides for student teams throughout the course, and each of them will be prepared with guidelines and rubrics for assessing students across all seven learning outcomes throughout the year. In addition, each semester’s Capstone will conclude with final presentations that will showcase student work and be judged by a panel of evaluators drawn from our Capstone instructors, sponsoring industry partners, the MS Design + Innovation steering committee, other instructors for the program, our program Advisory Board, and other relevant partners in Madison and beyond.

The Division of Continuing Studies (DCS) distributes pre and post-program degree surveys on behalf of all non-pooled, 131 programs to support program level indirect assessment requirements. These surveys meet the university indirect assessment requirements as they 1) identify which learning outcomes were assessed, 2) outline what data was collected and how, and 3) summarize key findings and recommendations. DCS compiles the survey information into various reports that programs can use for longitudinal review.

Student evaluations of teachers and classes are an important additional source of program assessment data, which can inform program and course design, instructional strategies, and program improvement.

During the implementation phase, the program will also carefully monitor student access to courses to ensure growth of course capacity to fully meet student demand, and student engagement and success to inform program, course and instructional design.

Approved Assessment Plan:  

MS Design + Innovation Assessment Plan.docx

Related Programs
Provide information in related programs offered by other UW System institutions and explain the extent to which the proposed program is distinct and how it overlaps or duplicates those programs.

Although there are a number of design-related programs at the undergraduate level in the UW System, there are few graduate-level design degrees. Those that exist serve students interested in earning a credential specific to a discipline (architecture, art, engineering) without the broader intersection of disciplines that this collaborative program will serve.

UW-Milwaukee offers a number of current design specializations (not degrees) starting with a Master’s (MArch) in Architecture with a concentration in Ecological Design within its accredited Architectural program. This MArch is focused on the built environment and “provides students with the tools to design buildings to be carbon neutral as well a resource-conserving and environmentally non-polluting.” Milwaukee’s Urban Planning graduate program also offers a Master’s in Urban Planning with a concentration area in Physical Planning and Urban Design. Finally, UW-Milwaukee’s Master of Arts (MA) in Art has a specialization in Design Entrepreneurship and Innovation. This program is not currently accepting applications however.

Another program with an art-based framework is the hybrid 60-credit MFA in Design offered from UW-Stout’s School of Art and Design. Although cross-disciplinary with graphic, industrial, entertainment, media and interior design elements, this Master of Fine Arts program does not include courses from Business and Engineering, and offers a different credential from an M.S.

The University of Wisconsin-Platteville does have an area of emphasis in Engineering Design within its online Master of Science in Engineering degree. This program provides “the fundamental areas of engineering and...skills to increase efficiencies and design optimal solutions in a variety of engineering and industrial settings” and does not provide the same intersection of business and human-centered approaches as the proposed program for students from multiple disciplinary backgrounds.

Within the University of Wisconsin-Madison, the School of Human Ecology also offers an M.S. and MFA in Human Ecology with named options in Design Studies. These programs are both research and thesis-based. M.S. students select an area of specialization in design history, material culture studies, environment design, or textile science. Students in the MFA typically focus on either Textile and Fashion Design or Interior Architecture with a substantial studio work component. As a partner in this degree, SoHE has assisted in developing a new design degree to support students with a wider interest in design. In fact, through this partnership with the College of Engineering, SoHE can meet one of the strategic goals in its SoHE21 Vision to strengthen their graduate programs by expanding depth and breadth of graduate course work. The MS in Design + Innovation also responds to the College of Engineering’s strategic plan to encourage collaborative, multidisciplinary teaching, recruit students from a variety of backgrounds, and create a challenging, modern, relevant and inclusive curriculum.

Commitments
Courses in the curriculum are numbered 300 or higher.

Yes

The program faculty/staff will ensure the program website, Advance Your Career materials if applicable, and other presentations are consistent with the Guide information for this program.

Yes

Credential will not be awarded retroactively to students who completed all of the requirements before the credential was approved.

Yes

Supporting Information

List name and department of those who are in support of this proposal.

If those supporting the proposal provided a letter or email of support upload here. A letter is NOT required. Upload any other explanatory information about support from other UW-Madison units.

- Education D+I MOU and Letter.pdf
- NOI_iSchool_SupportLetter1.pdf
- NOI_SoHE Support Lettershim 9-24-18.pdf
- WSB support for Masters in Design_Innovation 9-28-18.pdf

Additional Information:

Approvals

Department Approval - This proposal has been approved by the faculty at the department/academic unit level. The program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) to meet the responsibilities associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and program review, and otherwise attend to all responsibilities related to offering this program.

Enter any notes about approval here:

Pending approval by CoE APC.

Entered by: James Blanchard
School/College Approval - This proposal has been approved at the school/college level and it is submitted with the Dean’s support. The Dean and program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) to meet the responsibilities associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and program review, and otherwise attend to all responsibilities related to offering this program.

Enter any notes about approval here:

Approved by CoE APC on March 22, 2019

Entered by and date: Sara Hagen
Date entered: 03/22/2019

GFEC Approval - This proposal has been approved by the Graduate Faculty Executive Committee and the Dean of the Graduate School.

Enter any notes about the approval here:

Entered by:
Date entered:

UAPC Approval - This proposal has been approved by the University Academic Planning Council and the Provost.

Enter any notes about approval here:

Entered by:
Date entered:

For Administrative Use

Admin Notes:

Guide URL:

Effective date:

Career:

SIS Program Code:
SIS Short
Description:
Other plan codes associated with this program:
Diploma Text:
Diploma Text 2:
Degree:
Field of Study:
Program Length:
National Student Clearing House Classification:
Plan Group:
Educational Level:
Award Category:
Enrollment Category:
CIP Code:
STEMOPT:
UWSTEM:
HEALTH:
Educational Innovation Program:
Distance Education Program:
Non Traditional Program:
Special Plan Type:
Added to UW System Crosswalk:
Reviewer
Comments

Maureen A N Bischof (mabischof) (03/22/19 5:06 pm): Program learning outcomes and assessment plan reviewed and accepted.
UNIVERSITY OF WISCONSIN-MADISON  
COST AND REVENUE PROJECTIONS NARRATIVE  
MASTER OF SCIENCE DESIGN + INNOVATION  

Introduction

The proposed MS-Design + Innovation program is a 12-month master’s program (summer, fall, spring term enrollment) comprised of 30 credits. It is a joint interdisciplinary venture among five schools and colleges at UW-Madison. The curriculum is face-to-face and emphasizes human-centered team-based design interaction in a series of capstone, core and elective courses.

The College of Engineering will serve as the program’s administrative home and will manage the program budget and tuition revenue. Engineering program administrative costs will be paid directly by tuition revenue. Instruction compensation will be distributed to all program partners based on an instructional agreement. A steering committee composed of the partnering schools and colleges will oversee the program and will oversee the reinvestment plan of the investment margin.

Section I – Enrollment

All enrollments are considered new students and each is a full-time equivalent because the curriculum is designed as a one-year full-time program. The curriculum is 12-months in duration, so there are no continuing students. Retention is estimated at 95%, similar to other accelerated master’s programs recently implemented at the College of Engineering. The interdisciplinary aspect of the program allows for recruitment from a variety of academic and employment backgrounds. First-year enrollment is projected at 15 students and enrollment is projected to increase to 100 students at program year five.

Section II – Credit Hours

The program requires a total of 30 credits - 18 from core courses and 12 from a list of approved electives. All program courses are existing courses except for five new courses that have been approved and developed or in the development stage. The curriculum requires that each student enroll in 6 credits in the summer, 12 credits in the fall and 12 credits in the spring. The number of new student credit hours generated annually is a product of headcount by 30 required credits.

Section III – Faculty and Staff Appointments

The MS-Design + Innovation program will rely on existing faculty and will also add faculty and instructional staff as needed as the program grows. The distributed nature of the curriculum over five schools and colleges will allow for student enrollments to also be distributed, making use of existing capacity and allowing for instructional capacity to be added where needed. As student interest and the discipline evolves, there will be flexibility to focus instructional resources.

Faculty and instructional FTE allocations are based on an assumption of an instructional load per instructional FTE of 480 student credit hours annually, calculated as: three sections of 20 students in three credit classes in fall and spring and two sections of 20 students in a three
credit class in summer. The number of instructional FTE is the ratio of the total student credit hours divided by the student credit hours per instructional FTE.

Instructional support will also include teaching assistants, which will be budgeted at 0.7 FTE in year 1 of the program and grow to 7.0 FTE by year 5.

Staff support will be as follows:
- An academic program director, who will allocate 50% of time to the academic director role. The remaining time is accounted for as an instructor.
- A program director, who will contribute 25% time to the program. The reminder of this person’s time is allocated to similar duties in other College of Engineering master’s programs.
- Graduate coordinator appointed at 50% time in year 1, 75% time in year 2, and 100% thereafter.
- Industry liaison (career services support) appointed at 50% in year 1, 75% in year 2 and 100% thereafter.
- Administrative support staff, appointed at 50% in year 1, and 75% thereafter.

Salaries are projected to increase at a rate of 2% annually.

Section IV – Program Revenues

Program revenue will be generated from tuition. The program is proposing a market-based per credit tuition of $1,600/credit. Segregated fees will be charged but are not counted as program revenue. Program revenue is calculated by multiplying new student headcount enrollment by 30 credits/year by $1,600/credit.

Section V – Program Expenses

In addition to faculty/instructional staff and other staff support, program expenses include a 10% campus assessment on gross revenue, new course development and course renewal/maintenance, laboratory support costs, program events, industry liaison expenses, marketing, and an 8% set aside for scholarships. Criteria for scholarship award is in development and will likely include financial need, applicant diversity and/or Wisconsin residency.

Section VI – Net Revenue

By year 5 the program is projected to generate more than $1M in net revenue. This net revenue is a pool of funds for reinvestment by the five partnering schools/colleges. The reinvestment pool will be directed to additional scholarships for students, a program contingency fund, refurbishment and expansion of the design lab spaces and design lab equipment, and to fund faculty salaries and research assistants.
### Cost and Revenue Projections For MS Design plus Innovation

<table>
<thead>
<tr>
<th>Items</th>
<th>2020-21</th>
<th>2021-22</th>
<th>2022-23</th>
<th>2023-24</th>
<th>2024-25</th>
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<tr>
<td>Enrollment (New Student) FTE</td>
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<td>Enrollment (Continuing Student) FTE</td>
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### Total New Credit Hours
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<th>2022-23</th>
<th>2023-24</th>
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<td>I</td>
<td>450</td>
<td>750</td>
<td>1500</td>
<td>2250</td>
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### FTE of Faculty/Instructional Staff
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<tr>
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<th>Year 1</th>
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<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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<tbody>
<tr>
<td>FTE of Faculty/Instructional Staff</td>
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<td>FTE of Program Director</td>
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<td>FTE of Industry Liaison/Career Services</td>
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### Revenues

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<th>Year 3</th>
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<th>Year 5</th>
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<td>Total New Revenue</td>
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### Expenses

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<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
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<tbody>
<tr>
<td>Salaries plus Fringes</td>
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<tr>
<td>Faculty/Instructional Staff</td>
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<td>Other Expenses</td>
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<td>Laboratory Support Costs</td>
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<td>New Course Development and Maintenance</td>
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<td>Campus allocation (10% of tuition revenue)</td>
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<td>$120,000</td>
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<td>Total Expenses</td>
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### Net Revenue
<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Revenue</td>
<td>$207</td>
<td>$247</td>
<td>$257,055</td>
<td>$650,620</td>
<td>$1,050,955</td>
</tr>
</tbody>
</table>

Submit budget narrative in MS Word Format

**Provost's Signature:**

**Date:**
Assessment Plan

MASTERS OF SCIENCE IN DESIGN + INNOVATION

IDENTIFYING INFORMATION

School / College: College of Engineering
Graduate Degree Program Name: Design + Innovation
Graduate Degree Level: M.S.
Faculty Director Contact/Title: Michelle Kwasny, Academic Director of MS in Design + Innovation
Primary Contact Information: mkwasny@wisc.edu

STUDENT LEARNING OUTCOMES

In this program, students will:

1) Demonstrate creative, independent problem solving skills and entrepreneurial thinking.
2) Apply design tools and strategies on interdisciplinary teams and projects.
3) Communicate effectively both visually and orally.
4) Implement an iterative design thinking process.
5) Demonstrate a hands-on, iterative process that includes making, creating and designing.
6) Gain depth in a field of study that can be applied in a social, global and design context.
7) Apply principles of ethical and professional conduct in a field experience.
PLAN FOR ASSESSING EACH STUDENT OUTCOME

For each of the degree major/program student learning outcomes, indicate how the program plans to assess whether or not students are meeting the expectation, as well as when each learning outcome will be assessed. Keep in mind that each academic degree program is expected to engage in at least one assessment activity per year and assessment activities, in total, must include one direct assessment method. While programs do not need to assess each learning outcome every year, all learning outcomes must be assessed within a period of three years.

<table>
<thead>
<tr>
<th>Assessment Planning (How)</th>
<th>1. Demonstrate creative, independent problem solving skills and entrepreneurial thinking.</th>
<th>2. Apply design tools and strategies on interdisciplinary teams and projects.</th>
<th>3. Communicate effectively both visually and orally.</th>
<th>4. Implement an iterative design thinking process.</th>
<th>5. Demonstrate a hands-on, iterative process that includes making, creating and designing.</th>
<th>6. Gain depth in a field of study that can be applied in a social, global and design context.</th>
<th>7. Apply principles of ethical and professional conduct in a field experience.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method for assessing learning (at least one direct method required)</td>
<td>Indirect: Pre-Degree survey will assess familiarity and prior experience with this learning outcome, and Post-Degree assessment will assess students’ self-reported level of preparation on each learning outcome. Indirect surveys will also review student expectations, learning goals, and their overall satisfaction of their learning within the program.</td>
<td>Direct: Rigorous evaluations of the Capstone projects at the end of the Fall and Spring semesters, as well as formative assessments from project team guides throughout the course will help assess students across all seven learning objectives. The projects are evaluated as individualized feedback as well as to the team. Team roles are clearly defined within each project. Design steps are also evaluated with rubrics to clearly articulate and guide each project step in a guided learning methodology. This will ensure that all learners have clear guidelines across project team guides and see what areas Given the different topics for each Capstone course, the Fall and Spring semesters will vary slightly in evaluation criteria and rubric (see how objectives map to these Capstones below).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timetable for assessment activity (at least one activity each)</td>
<td>Due to the accelerated 12-month nature of this MS program, many of the learning outcomes will be assessed two times per year within the Capstone course – at the end of Fall semester and Spring</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
year; all outcomes reviewed in a 3-year cycle) semester respectively. Students will complete the indirect assessments (pre-degree and post-degree survey) when they begin and end the program (i.e. in June and the following May).

Who is responsible for assessment?
The MS Design + Innovation Co-Directors, Lee Debaille and Michelle Kwasny, will coordinate the implementation of the assessment plan annually. They will work with the Division of Continuing Studies to conduct the pre- and post-survey indirect assessments, as well as work with faculty and staff advisors to complete all direct assessments. Assessment data will be forwarded to the steering committee for evaluation and further dissemination.

What is the plan for review of the assessment information?
Annually, at the September meeting of the steering committee, assessment results (compiled by Lee Debaille and Michelle Kwasny) will be reviewed. The steering committee will produce an initial summary to be presented at the “All Faculty” department meeting held early in the Fall (usually scheduled in October) of each academic year.

What is the plan for production of an annual summary report?
After reviewing the assessment summary and comments from the “All Faculty” department meeting, the degree program’s executive committee will decide which (if any) items are actionable and provide a report of those plans, along with the initial assessment summary, to the Provost office by October 1st.

How will recommendations be implemented?
Any actionable items will be discussed during steering committee meetings held in the late Fall semester. Proposals will be developed and go through the appropriate governance steps at that time. If approved, any curricular/programmatic/co-curricular changes will be implemented the following Summer semester or thereafter. The department will monitor all new implementations annually, with a more comprehensive report being compiled during the appropriate student learning outcome assessment year (within the 3-year timeline).
## GRADUATE DEGREE PROGRAM CURRICULUM MAPPING WORKSHEET (WHERE)

<table>
<thead>
<tr>
<th>Curriculum Map (Where)</th>
<th>MS Design + Innovation Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Degree Program Required Courses or Experiences</strong></td>
<td>1. Demonstrate creative, independent problem solving skills and entrepreneurial thinking.</td>
</tr>
<tr>
<td>DS 641: Design Thinking for Transformation</td>
<td>X</td>
</tr>
<tr>
<td>INTER ENG 477: Tools for Prototyping and Manufacturing</td>
<td>X</td>
</tr>
<tr>
<td>DS 541 - Visual Thinking for Problem Solving</td>
<td>X</td>
</tr>
<tr>
<td>LIS 707 - Data Visualization and Communication for Decision-Making</td>
<td></td>
</tr>
<tr>
<td>OTM 760 - Managing By Design</td>
<td>X</td>
</tr>
<tr>
<td>INTER HE 940 - Collaborative Capstone I</td>
<td>X</td>
</tr>
<tr>
<td>INTER ENG 941 - Collaborative Capstone II</td>
<td>X</td>
</tr>
</tbody>
</table>

*Add additional rows as needed to capture all requirements. Minimally, all of the courses/experiences required to complete the major degree program should be listed. Optionally, elective courses may be included in addition to the required courses.*
October 10, 2019

James Blanchard, PhD
Professor and Executive Associate Dean
College of Engineering
University of Wisconsin-Madison

Dear Dean Blanchard,

As a partner with the College of Engineering in the creation of a new multi-disciplinary Master of Science degree in Design + Innovation, the School of Education offers our continued support for the Notice of Intent (NOI) and leadership in our participating disciplines to plan this innovative program.

The School of Education has reviewed the NOI and are pleased with its collaborative direction. We are eager to contribute to a program that is intentionally designed to transform students coming from a variety of backgrounds, into design thinkers, strategists and leaders on the intersection between design desirability, feasibility, and viability. The School of Education has courses related to Graphic Design, Digital Design, Collaborative Problem Solving, and Organizational Theory that could be terrific electives for the proposed Design + Innovation program. We look forward to working with you to identify specific courses that would meet the goals of the program.

John Hitchcock, Associate Dean for the Arts, will work with your team to help with the program planning, course development, and will serve as a liaison to the School of Education departments to provide executive committee leadership and teaching associated with the new Design + Innovation program. The School of Education has also signed a memorandum of understanding with the College of Engineering for this partnership. We look forward to offering this exciting new program with you in the future.

Sincerely,

Diana Hess, PhD
Dean
Karen A. Falk Distinguished Chair of Education
MEMORANDUM OF UNDERSTANDING

Between

UW-Madison School of Education

And

UW-Madison College of Engineering

The purpose of this Memorandum of Understanding is to specify the revenue-sharing arrangement between the School of Education (Education) and the College of Engineering (Engineering) for the Design + Innovation Master's Degree Program, which will be structured as a 131 Program Revenue degree. This agreement will be effective for the 2020 Summer Session and the 2020-21 Academic Year.

Engineering will serve as the home department for the Design + Innovation Program ("the Program"). As such, all tuition paid by students in the Program will be credited to Engineering, regardless of which school or college bears the cost of instruction. In the event that Education bears the cost of instruction for any courses in the Program, Engineering will transfer revenue for those courses to Education as follows:

- At the end of each fiscal year, Engineering will obtain enrollment information from the Student Information System (SIS) and revenue data from WISDM (or WISER) for Program courses for which Education bore the cost of instruction.
- Education will be provided an opportunity to review the data prior to agreement of the final revenue transfer amount.
- The revenue transfer amount will be equal to $600 per credit for the Program courses for which Education bore the cost of instruction.
- If the revenue transfer amount is not sufficient to cover the cost of instruction paid by Education, the loss shall be absorbed by Education.
- The revenue transfer for Academic Year 2020-21 shall include enrollments from the 2020 summer session.
- The revenue transfer will be made by August 31\textsuperscript{st} following the end of the fiscal year.

The undersigned have read and agree with the terms of this Memorandum of Understanding.

By

[Signature]

Diana Hess, Dean

UW-Madison School of Education

Date

October 10, 2018

By

[Signature]

James P. Blanchard, Executive Associate Dean

UW-Madison College of Engineering

Date

________________________
September 24, 2018

James Blanchard, PhD
Professor and Executive Associate Dean
College of Engineering
University of Wisconsin-Madison

Dear Dean Blanchard,

As a partner with the College of Engineering in the creation of a new multi-disciplinary Masters of Science degree in Design + Innovation, the School of Human Ecology (SoHE) and the Department of Design Studies (DS) offer our strong support for the Notice of Intent and leadership in our participating disciplines to plan this innovative program.

The SoHE and the DS Department have reviewed the NOI and are pleased with its collaborative direction. SoHE’s vision is to become a leader in Transformative Design, integrating design thinking into our culture and curriculum. We are eager to contribute to a program that is intentionally designed to transform students from a variety of backgrounds into design thinkers, strategists and leaders on the intersection between design desirability, feasibility, and viability. These skills are actively sought by employers of our graduates. The program will also benefit SoHE’s goals toward Transformative Design Thinking Initiative.

I fully support the efforts of my faculty colleagues to participate in the program planning, course development, executive committee leadership and teaching associated with the new Design + Innovation program. I have also signed a Memorandum of Understanding with the College of Engineering for this partnership. We look forward to offering this exciting new program with you in the future.

Sincerely,

Soyeon Shim
Dean
September 27, 2018

James Blanchard, PhD
Professor and Executive Associate Dean
College of Engineering
University of Wisconsin-Madison

Dear Dean Blanchard,

The faculty of the Information School (iSchool) is pleased to support the Notice of Intent (NOI) for a new multi-disciplinary Masters of Science degree in Design + Innovation. The Executive Committee of iSchool has reviewed and approved our role as expressed in the NOI. We are happy to contribute to a program that is intentionally designed to transform students from a variety of backgrounds into design thinkers, strategists and leaders on the intersection between design desirability, feasibility, and viability. We look forward to offering this new program with you in the future.

Sincerely,

Kyung-Sun Kim
Professor and Interim Director
MEMORANDUM

Date: September 28, 2018

To: James Blanchard, Professor and Executive Associate Dean, College of Engineering

From: Barry Gerhart, Interim Albert O. Nicholas Dean, Wisconsin School of Business

Re: Support for intent to create Masters of Science degree in Design + Innovation

As a partner with the College of Engineering in the creation of a new multi-disciplinary Masters of Science degree in Design + Innovation, the Wisconsin School of Business (WSB) offers our continued support for the Notice of Intent (NOI) and leadership in our participating disciplines to plan this innovative program.

The WSB APC has reviewed the NOI and are pleased with its collaborative direction. We are eager to contribute to a program that is intentionally designed to transform students from a variety of backgrounds into design thinkers, strategists and leaders on the intersection between design desirability, feasibility, and viability. These skills are actively sought by employers of our graduates. The program will also benefit our school’s mission.

I fully support the efforts of my faculty colleagues to participate in the program planning, course development, executive committee leadership and teaching associated with the new Design + Innovation program. The WSB has also signed a Memorandum of Understanding with the College of Engineering for this partnership. We look forward to offering this exciting new program with you in the future.

Copies:
Marty Gustafson, Assistant Dean, Educational Innovation Program Development, DCS
Michelle Kwasny, School of Human Ecology
Lee DeBaillie, Director of Accelerated Master’s Engineering Programs, COE
Enno Siemsen, Associate Dean of Masters Programs, WSB
Ella Mae Matsumura, Senior Associate Dean of Academic Programs, WSB
MEMORANDUM

Date: April 5, 2019

To: James Blanchard, Professor and Executive Associate Dean, College of Engineering

From: Barry Gerhart, Interim Albert O. Nicholas Dean, Wisconsin School of Business

Re: Support for Masters of Science degree in Design + Innovation proposal

As a partner with the College of Engineering in the creation of the new multi-disciplinary Masters of Science degree in Design + Innovation that comes under our Memorandum of Understanding signed last summer, the Wisconsin School of Business (WSB) continues to offer our support of this innovative program.

We believe the program is intentionally designed to transform students from a variety of backgrounds into design thinkers, strategists, and leaders able to deftly balance concerns at the intersection of design desirability, feasibility, and viability. These skills are actively sought by employers of our graduates and the students we serve across the university.

While the WSB is working through its regular governance processes that will yield more specific commitments, select courses at the WSB addressing aspects of innovation and entrepreneurship are appropriate for students in the program.

We look forward to the approval and launch of this exciting new degree.

Copies:

Marty Gustafson, Assistant Dean, Educational Innovation Program Development, DCS
Michelle Kwasny, School of Human Ecology
Lee DeBaillie, Director of Accelerated Master’s Engineering Programs, COE
Enno Siemsen, Associate Dean of Masters Programs, WSB
Ella Mae Matsumura, Senior Associate Dean of Academic Programs, WSB
John Surdyk, Director, INSITE

Office of the Dean
Wisconsin School of Business  4300 Grainger Hall  975 University Avenue  Madison, WI 53706
P: 608-265-4937  Fax: 608-265-3121  E: dean@wsb.wisc.edu
April 3, 2019

James Blanchard, PhD
Professor and Executive Associate Dean
College of Engineering
University of Wisconsin-Madison

Dear Dean Blanchard,

The faculty of the School of Human Ecology (SoHE) and the Department of Design Studies (DS) offer our strong support for the program proposal for a new multi-disciplinary Masters of Science degree in Design + Innovation. The Executive Committee of SoHE has reviewed and approved our role as expressed in the NOI and DS faculty participated in the program design committee.

SoHE’s vision is to become a leader in Transformative Design, integrating design thinking into our culture and curriculum. We are eager to contribute to a program that is intentionally designed to transform students from a variety of backgrounds into design thinkers, strategists and leaders on the intersection between design desirability, feasibility, and viability. These skills are actively sought by employers of our graduates. The program will also benefit SoHE’s goals toward Transformative Design Thinking Initiative.

We look forward to offering this exciting new program with you in the future.

Sincerely,

Soyeon Shim
Dean
April 3, 2019

James Blanchard, PhD
Professor and Executive Associate Dean
College of Engineering
University of Wisconsin-Madison

Dear Dean Blanchard,

The faculty of the Information School (iSchool) is pleased to support the proposal for new multi-disciplinary Masters of Science degree in Design + Innovation. The Executive Committee of iSchool reviewed and approved our role as expressed in the NOI, and iSchool faculty participated in the program development committee. We are happy to contribute to a program that is intentionally designed to transform students from a variety of backgrounds into design thinkers, strategists and leaders on the intersection between design desirability, feasibility, and viability. We look forward to offering this new program with you in the future.

Sincerely,

Kyung-Sun Kim
Professor and Interim Director
April 4, 2019

James Blanchard, PhD
Professor and Executive Associate Dean
College of Engineering
University of Wisconsin-Madison

Dear James Blanchard,

The faculty of the School of Education and the Department of Art offer our strong support for the program proposal for a new multi-disciplinary Masters of Science degree in Design + Innovation.

Faculty Members from the School of Education Art Department have participated in the program design committee and approve our role as expressed in the NOI. We believe the Art Department courses in Graphic and Interactive Design and Digital Fabrication will be an asset for anyone in the program, and we are committed to making our courses available for MS-D+I students. The courses contributed by the Department of Art stand to diversify our student population and bring new perspectives and knowledge backgrounds into the department.

We are eager to contribute to a program that is intentionally designed to transform students from a variety of backgrounds into design thinkers, strategists and leaders on the intersection between design desirability, feasibility, and viability. These skills are actively sought by employers and we are eager to extend our abilities to provide these skills through interdisciplinary curriculum.

We look forward to offering this exciting new program with you in the future.

Sincerely,

John Hitchcock, Associate Dean for the Arts and Professor of Art
608-772-7955 • jhitchcock@wisc.edu
Date Submitted: 02/22/19 9:12 am

Viewing: **UNCS393 : Capstone Certificate in Power Conversion and Control**

Last approved: 10/26/18 12:10 pm
Last edit: 02/26/19 11:36 am

Changes proposed by: skhagen

Catalog Pages Using this Program

- Power Conversion and Control, Capstone Certificate

Name of the school or college academic planner who you consulted with on this proposal.

In Workflow

1. ENGINEERG Dept. Approver
2. EGR College Admin Reviewer
3. EGR College Approver
4. AIPR Admin
5. GFEC Approver
6. UAPC Approver
7. AIPR Admin
8. Registrar

Approval Path

1. 02/14/19 9:37 am
   Michelle Young (meyoung): Rollback to Initiator
2. 02/26/19 11:21 am
   James P Blanchard (jpblanch): Approved for ENGINEERG Dept. Approver
3. 02/26/19 11:29 am
   Sara K Hagen (skhagen): Approved for EGR College Admin Reviewer
4. 02/26/19 11:36 am
   Sara K Hagen (skhagen): Approved for EGR College Approver
5. 03/18/19 1:59 pm
   Nicole Wiessinger
Proposal Abstract/Summary:

Tighten up admission requirements by
1) Removing text stating that exceptions to admission requirements are considered on an individual basis.
2) Adding prerequisite topics.
Change academic home of certificate to College of Engineering (dept).

If approved, what term should the proposed change be effective?
   Fall 2019 (1202)

Select yes if this proposal is only to add, remove, or rearrange curricular requirements, and will change less than 50% of the curriculum.
   No

Basic Information

Program State: Active
Type of Program: Capstone Certificate (Special only)
Who is the audience? Special
Home Department: College of Engineering (ENGINEERG) EGR-P-D
School/College: College of Engineering
The program will be governed by the home department/academic unit as specified. Will an additional coordinating or oversight committee be established for the program?

No

Is this in the Graduate School? Yes

SIS Code: UNCS393

SIS Description: Power Conversion & Control CAP

Transcript Title: Capstone Certificate in Power Conversion and Control

Roles by Responsibility: List one person for each role in the drop down list. Use the green + to create additional boxes.

<table>
<thead>
<tr>
<th>Role Type</th>
<th>Name (Last, First)</th>
<th>Email</th>
<th>Phone</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty Director</td>
<td>Tinjum, James M</td>
<td><a href="mailto:jmtinjum@wisc.edu">jmtinjum@wisc.edu</a></td>
<td>608/262-0785</td>
<td></td>
</tr>
</tbody>
</table>

List the departments that have a vested interest in this proposal.

<table>
<thead>
<tr>
<th>Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical and Computer Engr (ELEC C EGR)</td>
</tr>
</tbody>
</table>

Are all program reviews in the home academic unit up to date? Yes

Are all assessment plans in the home academic unit up to date? Yes

Are all assessment reports in the home academic unit up to date? Yes

Mode of Delivery:
Distance Education (100% online)

Provide information on how any lab courses required for the degree will be handled.

Will this program be part of a consortial or collaborative arrangement with another college or university? No

Will instruction take place at a location geographically separate from UW-Madison? No

Will this program have outside accreditation? No

Will graduates of this program seek licensure or certification after graduation? No
Year of three year check-in to GFEC (3 years after first student enrollment):

Year of first program review (5 years after first student enrollment):

If this proposal is approved, describe the implementation plan and timeline.

We will update the program's admission website and communications with these changes as soon as approval is granted.

Rationale and Justifications

What is the rationale for this change?

The program has seen increased interest from applicants without an electrical engineering degree. The admissions committee wants to tighten up the admission requirements for applicants without EE backgrounds, in order to be very clear which topics applicants should have mastered before they apply.

The department Engineering Professional Development is becoming an office, so they can no longer be the home for certificates. migration cleanup

What evidence do you have that these changes will have the desired impact?

Students without solid EE backgrounds struggle with this highly technical and advanced EE curriculum.

The certificate needs an academic home.

Faculty and Staff Resources

Confirm that the program advisor(s) or coordinator(s) have been consulted and reviewed this proposal.

Resources, Budget, and Finance

Is this a revenue program? Yes

What is the tuition structure for this program?

Online/Distance per-credit tuition

Select a tuition increment:
$1,600/credit

What is the rationale for selecting this tuition increment?

Will segregated fees be charged?  
Yes

If segregated fees will not be charged, please explain.

Provide an overview of plans for funding the program including but not limited to program administration, instructional/curricular delivery, technology needs and program assessment.

Given considerations associated with the proposed change, describe the academic unit's fiscal capacity to support the instructional and curricular requirements, academic and career advising, student support services, technology needs, and relevant assessment of student learning and program review requirements. Is there sufficient capacity in the curricular and academic support services to meet the additional workload? For research graduate programs, include information on how the program will be administered and how student funding will be handled. For undergraduate programs, include information on academic advising, career advising, student support services.

Does the program or change require substantial new resources other than those just described? Describe the needs. Confirm that the dean is committed to providing the resources.

Will you be seeking federal financial aid eligibility for this Capstone program?  
Yes

*Capstone program students are eligible for federal financial aid (usually loans) if the participate in Gainful Employment (GE) requirements, that is, the prepare students for employment in a recognized occupation. For information about gainful employment requirements see:*  https://studentaid.ed.gov/sa/about/data-center/school/ge

Identify the SOC codes most closely associated with the occupational preparation the Capstone provides.

What program-specific financial aid, if any, is available for this program?
Gainful Employment requirements come with the need to track employment of graduates and provide additional reports – does the program have the capacity to complete these requirements?

### Curriculum and Requirements

If you are proposing a change to the curriculum, what percentage of the curriculum is changing?  
No change

Guide Admissions/How to Get In tab

### Applicant requirements

**Applicant requirements** Exceptions to standard admission requirements are considered by the admissions committee on an individual basis. A B.S. degree from a program accredited by the Accreditation Board for Engineering and Technology (ABET) or the equivalent.* A B.S. in electrical engineering is recommended. Students who do not have a B.S.E.E. need to have completed fundamental coursework in electrical engineering including circuit theory, fourier analysis, AC circuit analysis using complex impedances, transfer function analysis and evaluation including Bode plots, transformer equivalent circuits, piecewise continuous analysis of nonlinear circuits, and magnetic theory.

need to have completed fundamental coursework in electrical engineering: A minimum undergraduate grade-point average (GPA) of 3.00 on the equivalent of the last 60 semester hours (approximately two years of work) or a master’s degree with a minimum cumulative GPA of 3.00. Applicants from an international institution must have a strong academic performance comparable to a 3.00 for an undergraduate or master’s degree. All GPAs are based on a 4.00 scale.

Applicants whose native language is not English must provide scores from the Test of English as a Foreign Language (TOEFL). The minimum acceptable score on the TOEFL is 580 on the written version, 243 on the computer version, or 92 on the Internet version.

*Equivalency to an ABET-accredited program: Applicants who do not have bachelor’s degree from an ABET accredited program may also qualify for admission to the program. Such applicants must have a B.S. in science, technology, or a related field with sufficient coursework and professional experience to demonstrate proficiency in engineering practice.

Registration as a professional engineer by examination, if achieved, should be documented to support your application. ADMISSION

Applications are accepted for admission for all three terms (fall, spring, and summer), but admission deadlines must be met. The admissions process has been designed to conduct a holistic review of likely success in the program. Decisions are based on academic and professional background. See the program's website for current
dates and information regarding selection of students.

Note: Adult Career and Special Student Services (ACSSS) is the admitting office for all University Special students. However, the department offering the Capstone Certificate program makes the final admission decision upon review of all applicant materials.

Application steps

1. Email the chair of the admissions committee stating your intent to apply to the Power Conversion and Control capstone certificate program. Indicate if you intend to apply to a degree program upon successful completion of the capstone certificate. Attach a current resume or CV to the Intent to Apply email. Current chair: daryl.harrison@wisc.edu

   Your resume/CV should include at least:
   Educational history (including GPA, awards and honors received).
   Professional work experience (including specific details on your engineering experience, technical training, and responsibilities).
   Listing of professional association memberships, advanced training (such as a PE license) and other noteworthy, engineering-related details.

2. Submit an online application for admission as a University Special student, selecting UNCS Capstone Certificate and the program: Power Conversion and Control. This application is received and processed by ACSSS with final decision held for approval from the specific capstone certificate coordinator.

3. Following steps outlined by the program, request transcripts of all previous college work and two letters of recommendations are sent to the department as follows:

   Engineering Professional Development
   Attention: Daryl Harrison
   432 North Lake Street, Room 701
   Madison, WI  53706
   For pdf’s, use the following email address: daryl.harrison@wisc.edu
   For the two (2) letters of recommendation, use the Download Recommendation Form. The recommenders should send the statement directly to the admissions committee chair. At least one letter should be from your current or previous direct supervisor. Academic references are acceptable for applicants who have been out of school less than five years.

4. Complete a phone interview.
   The admissions committee chair will schedule a phone interview with candidates after all application materials are received. Once completed, the application will be presented to the Admissions Committee for evaluation at the next scheduled meeting.

5. Notification of admissions decision.
   The committee will make one of the following decisions:
   Recommend admission.
   Request additional information before evaluating further.
   Decline further consideration of your application.

ENROLLMENT
https://next-guide.wisc.edu/programadmin/
After a decision has been made, the admissions committee chair contacts applicants by email to inform of the decision.

Admitted students receive a formal letter of admission to UW–Madison from Adult Career and Special Student Services along with general enrollment information. Additional detail is provided on the ACSSS enrollment page.

Are international students permitted to enroll in this program? Yes  No

Those who are not familiar with using the html editor fields may upload a document with information about the curriculum for use by those who will format and edit the content that will appear in the Guide.

Guide Requirements tab

The curriculum is 9 credits (see course list below). Students must complete all courses with a minimum GPA of 2.00 in each class in order to continue to the next class.

Students without prior coursework in energy conversion will be required to take E C E 355 Electromechanical Energy Conversion. The Admissions Committee will make this decision for each admitted student at the time of admission.

Course List

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prerequisite Course</td>
<td></td>
</tr>
<tr>
<td>E C E 355</td>
<td>Electromechanical Energy Conversion</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Required Courses</td>
<td></td>
</tr>
<tr>
<td>E C E 411</td>
<td>Introduction to Electric Drive Systems</td>
<td>3</td>
</tr>
<tr>
<td>E C E 412</td>
<td>Power Electronic Circuits</td>
<td>3</td>
</tr>
<tr>
<td>M E 446</td>
<td>Automatic Controls</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Total Credits</td>
<td>9</td>
</tr>
</tbody>
</table>

Total credits required:

Semesters to completion:

Guide Graduate Policies tab
Describe part-time format (<8 credits fall and spring semesters < 4 credits summer term) here.

Describe full-time, time-compressed, intensive format here.

Describe other format here.

Program Learning Outcomes and Assessment

List the program learning outcomes.

<table>
<thead>
<tr>
<th>Outcomes – enter one learning outcome per box. Use the green + to create additional boxes.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analyze how torque and speed are controlled in the major classes of electric machines.</td>
</tr>
<tr>
<td>2. Evaluate how power electronics is used to perform electrical power conversion from one form into another.</td>
</tr>
<tr>
<td>3. Complete preliminary designs of automatic controlled systems using power electronics circuits.</td>
</tr>
</tbody>
</table>

Summarize the assessment plan.

Approved Assessment Plan:

Commitments

All required courses are approved through the school/college level.

Yes

Courses are offered on a regular basis to allow timely completion.

Yes

Courses have enrollment capacity.
Courses in the curriculum are numbered 300 or higher.

Courses in which a student elects the pass/fail option will not count toward completion of requirements.

Special topics courses are only used if all topics count for the certificate.

All requirements must be met; exceptions that amount to waiving requirements are not permitted.

Course substitutions to the curriculum should be kept to a minimum; if substitutions are being made on a regular basis, the curriculum should be re-examined. When course substitutions are made, the substituted course should be formally added to the curriculum through governance for inclusion in the curriculum the following academic year.

Substitutions are not permitted for any course unless the substitution would be provided for every student with the same substitution request.

All of the Capstone certificate credits must be earned “in residence” (which includes on campus and distance-delivered courses) at UW-Madison while enrolled in the Capstone certificate program. Because a Capstone certificate is comprised of just a few courses, it is not appropriate for students who already have completed the same or similar coursework at UW-Madison or another institution.

Students must earn a minimum grade of C on all attempted Capstone certificate coursework.

The program faculty/staff will ensure the program is encoded into DARS and will work with the Registrar’s Office DARS liaison to keep approved revisions to the curriculum current.
All students will be declared into the appropriate plan code in SIS via either an admission process or e-declaration. If the student does not have the plan code on their student record in SIS the student is not considered to be in the program.

Yes

The program faculty/staff will ensure the program website, Advance Your Career materials if applicable, and other presentations are consistent with the Guide information for this program.

Yes

Degree-seeking students may not be concurrently enrolled in a Capstone certificate program.

Yes

Students enrolled in Capstone certificate programs are NOT eligible for teaching assistant (TA), research assistant (RA), project assistant (PA) nor graduate fellowship support. Programs must disclose this program policy to Capstone certificate students in the recommendation of admission letter, program website, program handbook, and program orientation.

Yes

To be eligible for admission to a Capstone program, a student must hold an earned bachelor’s degree or equivalent credential from an accredited college or university.

Yes

Supporting Information

List name and department of those who are in support of this proposal.

If those supporting the proposal provided a letter or email of support upload here. A letter is NOT required. Upload any other explanatory information about support from other UW-Madison units.

Additional Information:

Approvals
Department Approval - This proposal has been approved by the faculty at the department/academic unit level. The program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) to meet the responsibilities associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and program review, and otherwise attend to all responsibilities related to offering this program.

Enter any notes about approval here:

**DEPD Faculty approved the transition of DEPD as an academic department on 12/20/2018.**
**College of Engineering Leadership Council approved on 1/23/2019.**

Entered by:  
Sara Hagen  
Date entered:  
02/26/2019

School/College Approval - This proposal has been approved at the school/college level and it is submitted with the Dean’s support. The Dean and program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) to meet the responsibilities associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and program review, and otherwise attend to all responsibilities related to offering this program.

Enter any notes about approval here:

**APC approved the transition of DEPD to an office on 2/20/2019**

Entered by and date:  
Sara Hagen  
Date entered:  
02/26/2019

GFEC Approval - This proposal has been approved by the Graduate Faculty Executive Committee and the Dean of the Graduate School.

Enter any notes about the approval here:

Entered by:  
Date entered:

UAPC Approval - This proposal has been approved by the University Academic Planning Council and the Provost.

Enter any notes about approval here:

Entered by:  
Date entered:
For Administrative Use

Admin Notes:

Guide URL:

Effective date:

Career: Special Student

SIS Program Code: UNCS

SIS Short Description: Pwr Conv

Other plan codes associated with this program:

Degree: CRT

Field of Study: Physical Science

Program Length: 1

National Student Clearing House Classification:

Plan Group: 393

Award Category: Capstone

Enrollment Category: 800


UWSTEM: Yes

HEALTH:

Educational Innovation Program:

Distance Education Program: Plan is
<table>
<thead>
<tr>
<th>Non Traditional Program:</th>
<th>Plan is</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Plan Type:</td>
<td>The entire plan is a Non-pooled plan</td>
</tr>
<tr>
<td>CDR certificate category:</td>
<td>Postbaccalaureate certificate</td>
</tr>
</tbody>
</table>

**Reviewer Comments**

Michelle Young (meyoung) (02/14/19 9:37 am): Rollback: Additional edits are needed. Email sent to Sara Hagen.
Date Submitted: 02/22/19 9:10 am

Viewing: UNCS396 : Capstone Certificate in Foundations of Professional Development

Last approved: 10/26/18 12:13 pm
Last edit: 03/18/19 2:04 pm
Changes proposed by: skhagen

Catalog Pages Using this Program

Foundations of Professional Development, Capstone Certificate

Approval Path
1. 02/26/19 11:21 am
   James P Blanchard (jpblanch):
   Approved for ENGINEERG Dept. Approver
2. 02/26/19 11:30 am
   Sara K Hagen (skhagen):
   Approved for EGR College Admin Reviewer
3. 02/26/19 11:37 am
   Sara K Hagen (skhagen):
   Approved for EGR College Approver
4. 03/18/19 2:08 pm
   Nicole Wiessinger (wiessinger):
   Approved for APIR Admin

Name of the school or college academic planner who you consulted with on this proposal.

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jake Blanchard - EGR</td>
</tr>
</tbody>
</table>
Proposal Abstract/Summary:

Change of academic/administrative home for certificate from Engineering Professional Development to College of Engineering

If approved, what term should the proposed change be effective?

   Fall 2019 (1202)

Select yes if this proposal is only to add, remove, or rearrange curricular requirements, and will change less than 50% of the curriculum.

   No

---

**Basic Information**

Program State:    Active

Type of Program:    Capstone Certificate (Special only)

Who is the audience?    Special

Home Department:    [College of Engineering (ENGINEERG) EGR-P]

School/College:    College of Engineering

The program will be governed by the home department/academic unit as specified. Will an additional coordinating or oversight committee be established for the program?

   No

Is this in the Graduate School?    Yes

SIS Code:    UNCS396
SIS Description: Fndtns of Prof Develop CAP

Transcript Title: Capstone Certificate in Foundations of Professional Development

Roles by Responsibility: List one person for each role in the drop down list. Use the green + to create additional boxes.

List the departments that have a vested interest in this proposal.

Are all program reviews in the home academic unit up to date? Yes
Are all assessment plans in the home academic unit up to date? Yes
Are all assessment reports in the home academic unit up to date? Yes

Mode of Delivery:
Distance Education (100% online)

Provide information on how any lab courses required for the degree will be handled.

Will this program be part of a consortial or collaborative arrangement with another college or university? No
Will instruction take place at a location geographically separate from UW-Madison? No
Will this program have outside accreditation? No
Will graduates of this program seek licensure or certification after graduation? No

Year of three year check-in to GFEC (3 years after first student enrollment):

Year of first program review (5 years after first student enrollment):

If this proposal is approved, describe the implementation plan and timeline.

Rationale and Justifications
What is the rationale for this change?

The department Engineering Professional Development is dissolving, which means this certificate needs a new academic home in the College. migration cleanup

What evidence do you have that these changes will have the desired impact?

This is a required administrative change.

**Faculty and Staff Resources**

Confirm that the program advisor(s) or coordinator(s) have been consulted and reviewed this proposal.

**Resources, Budget, and Finance**

Is this a revenue program? Yes

What is the tuition structure for this program? Online/Distance per-credit tuition

Select a tuition increment: $1,300/credit

What is the rationale for selecting this tuition increment?

Will segregated fees be charged? Yes

If segregated fees will not be charged, please explain.

Provide an overview of plans for funding the program including but not limited to program administration, instructional/curricular delivery, technology needs and program assessment.
Given considerations associated with the proposed change, describe the academic unit's fiscal capacity to support the instructional and curricular requirements, academic and career advising, student support services, technology needs, and relevant assessment of student learning and program review requirements. Is there sufficient capacity in the curricular and academic support services to meet the additional workload? For research graduate programs, include information on how the program will be administered and how student funding will be handled. For undergraduate programs, include information on academic advising, career advising, student support services.

Does the program or change require substantial new resources other than those just described? Describe the needs. Confirm that the dean is committed to providing the resources.

Will you be seeking federal financial aid eligibility for this Capstone program?  Yes

Capstone program students are eligible for federal financial aid (usually loans) if the participate in Gainful Employment (GE) requirements, that is, the prepare students for employment in a recognized occupation. For information about gainful employment requirements see: https://studentaid.ed.gov/sa/about/data-center/school/ge

Identify the SOC codes most closely associated with the occupational preparation the Capstone provides.

What program-specific financial aid, if any, is available for this program?

What is time period that this program is designed to be completed in by the typical student?

Gainful Employment requirements come with the need to track employment of graduates and provide additional reports – does the program have the capacity to complete these requirements?

---

**Curriculum and Requirements**

If you are proposing a change to the curriculum, what percentage of the curriculum is changing?  No change

Guide Admissions/How to Get In tab
ADMISSION

Applicants must possess a baccalaureate degree. Applications are accepted on a rolling schedule. Students may begin the program at the start of any term (fall, spring, or summer). Adult Career and Special Student Services (ACSSS) is the admitting office for all University Special students, including capstone certificate students. However, the department offering the capstone certificate program makes the final admission decision upon review of all applicant materials.

Admission requirements for the Capstone Certificate Foundations of Professional Development program are:

Hold bachelor’s degree or equivalent credential from an accredited college or university.

A minimum undergraduate grade-point average (GPA) of 3.00 on the equivalent of the last 60 semester hours (approximately two years of work) or a master’s degree with a minimum cumulative GPA of 3.00. Applicants from an international institution must have a strong academic performance comparable to a 3.00 for an undergraduate or master’s degree.

Applicants whose native language is not English must provide scores from the Test of English as a Foreign Language (TOEFL). The minimum acceptable score on the TOEFL is 580 on the written version, 243 on the computer version, or 92 on the Internet version.

Exceptions to standard admission requirements are considered by the admissions committee on an individual basis.

Application steps

1. Communicate Intent to Apply to the program: Send an email to the chair of the admissions committee, shainah.greene@wisc.edu, and state an intent to apply to the certificate. Attach an unofficial transcript that shows cumulative GPA and bachelor’s degree received.

2. Submit an online application for admission as a University Special student, selecting UNCS Capstone Certificate and the program: Foundations of Professional Development. This application is received and processed by ACSSS with final decision held for approval from the specific capstone certificate coordinator.

3. Arrange to have transcripts of all previous educational institutions and a letter of recommendation sent directly to the chair of the admissions committee for the capstone certificate program: Attn: Shainah Greene, 432 North Lake Street, Room 701, Madison, WI 53706.

   Note: Transcripts should be sent directly by the educational institution to the program.

   The letter of recommendation should be from an employer or colleague. Use the Download Recommendation Form, which should be sent by email directly by your recommender to the chair of the admissions committee, shainah.greene@wisc.edu.

4. After all of application materials have been received, the admissions committee chair contacts applicants for a phone interview. After the interview, the complete application will be presented to the Admissions Committee for evaluation at its next scheduled meeting.

Final admissions decision

Admission decisions are made in the order completed applications are received. The committee will make one of the following decisions:

Recommend admission

Defer consideration until the regular consideration review meeting.

Decline further consideration of your application.

After a decision is made, the admissions committee chair will contact applicants by email to inform them of the
decision and to schedule a time to discuss the decision and any next steps. The ACSSS is also notified of the final admission decision and completes the formal process for UW–Madison admissions.

**ENROLLMENT**

Admitted students receive a formal letter of admission to UW–Madison from Adult Career and Special Student Services along with general enrollment information.

The Foundations in Professional Development program will send an email to admitted students with specific information pertaining to enrollment in courses and completion of the capstone program.

Additional detail is provided on the [ACSSS enrollment page](https://next-guide.wisc.edu/programadmin/).

Are international students permitted to enroll in this program? No

Those who are not familiar with using the html editor fields may upload a document with information about the curriculum for use by those who will format and edit the content that will appear in the Guide.

Guide Requirements tab

Must have a minimum GPA of 2.00

Certificate requires 9 credits

<table>
<thead>
<tr>
<th>Course List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
</tr>
<tr>
<td>Personal Development</td>
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<tr>
<td>E P D 700</td>
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<td>E P D 701</td>
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<tr>
<td>Team Development</td>
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<tr>
<td>E P D/GEN BUS/M H R 783</td>
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<tr>
<td>E P D 706</td>
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<td>or E P D/GEN BUS/OTM 784</td>
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<td>E P D 712</td>
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<tr>
<td>or E P D 713</td>
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<tr>
<td>Additional Core Courses</td>
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<tr>
<td>Select three courses from this list that have NOT already been taken:</td>
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<tr>
<td>E P D 701</td>
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<td>E P D 702</td>
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<td>E P D/L I S 703</td>
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</table>
Program Learning Outcomes and Assessment

List the program learning outcomes.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Strategically manage complex information and projects in a digital environment.</td>
</tr>
<tr>
<td>2</td>
<td>Select and successfully apply effective communication strategies in the workplace.</td>
</tr>
<tr>
<td>3</td>
<td>Employ proven methods to effectively and ethically work across disciplinary and organizational boundaries.</td>
</tr>
</tbody>
</table>
Outcomes – enter one learning outcome per box. Use the green + to create additional boxes.

| 4 | Recognize and analyze trends within your discipline and workplace. |

Summarize the assessment plan.

Approved Assessment Plan:

**Commitments**

All required courses are approved through the school/college level.

**Yes**

Courses are offered on a regular basis to allow timely completion.

**Yes**

Courses have enrollment capacity.

**Yes**

Courses in the curriculum are numbered 300 or higher.

**Yes**

Courses in which a student elects the pass/fail option will not count toward completion of requirements.

**Yes**

Special topics courses are only used if all topics count for the certificate.

**Yes**

All requirements must be met; exceptions that amount to waiving requirements are not permitted.

**Yes**

Course substitutions to the curriculum should be kept to a minimum; if substitutions are being made on a regular basis, the curriculum should be re-examined. When course substitutions are made, the substituted course should be formally added to the curriculum through governance for inclusion in the curriculum the following academic year.
Yes

Substitutions are not permitted for any course unless the substitution would be provided for every student with the same substitution request.

Yes

All of the Capstone certificate credits must be earned “in residence” (which includes on campus and distance-delivered courses) at UW-Madison while enrolled in the Capstone certificate program. Because a Capstone certificate is comprised of just a few courses, it is not appropriate for students who already have completed the same or similar coursework at UW-Madison or another institution.

Yes

Students must earn a minimum grade of C on all attempted Capstone certificate coursework.

Yes

The program faculty/staff will ensure the program is encoded into DARS and will work with the Registrar’s Office DARS liaison to keep approved revisions to the curriculum current.

Yes

All students will be declared into the appropriate plan code in SIS via either an admission process or e-declaration. If the student does not have the plan code on their student record in SIS the student is not considered to be in the program.

Yes

The program faculty/staff will ensure the program website, Advance Your Career materials if applicable, and other presentations are consistent with the Guide information for this program.

Yes

Degree-seeking students may not be concurrently enrolled in a Capstone certificate program.

Yes

Students enrolled in Capstone certificate programs are NOT eligible for teaching assistant (TA), research assistant (RA), project assistant (PA) nor graduate fellowship support. Programs must disclose this program policy to Capstone certificate students in the recommendation of admission letter, program website, program handbook, and program orientation.
To be eligible for admission to a Capstone program, a student must hold an earned bachelor’s degree or equivalent credential from an accredited college or university.

Yes

Supporting Information

List name and department of those who are in support of this proposal.

If those supporting the proposal provided a letter or email of support upload here. A letter is NOT required. Upload any other explanatory information about support from other UW-Madison units.

Additional Information:

Approvals

Department Approval - This proposal has been approved by the faculty at the department/academic unit level. The program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) to meet the responsibilities associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and program review, and otherwise attend to all responsibilities related to offering this program.

Enter any notes about approval here:

DEPD Faculty approved the transition of DEPD as an academic department on 12/20/2018.

Entered by: Sara Hagen
Date entered: 02/26/2019

School/College Approval - This proposal has been approved at the school/college level and it is submitted with the Dean’s support. The Dean and program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) to meet the responsibilities associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and program review, and otherwise attend to all responsibilities related to offering this program.

Enter any notes about approval here:

APC approved the transition of DEPD to an office on 2/20/2019

Entered by and date: Sara Hagen
Date entered: 02/26/2019
GFEC Approval - This proposal has been approved by the Graduate Faculty Executive Committee and the Dean of the Graduate School.

Enter any notes about the approval here:

Entered by:
  Date entered:

UAPC Approval - This proposal has been approved by the University Academic Planning Council and the Provost.

Enter any notes about approval here:

Entered by:
  Date entered:

For Administrative Use

Admin Notes:

Guide URL:

Effective date:

Career: Special Student

SIS Program Code: UNCS

SIS Short Description: Prof Dev

Other plan codes associated with this program:

Degree: CRT

Field of Study: Physical Science

Program Length: 1

National Student Clearing House Post Baccalaureate certificate
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<td>UWSTEM:</td>
<td>Yes</td>
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<tr>
<td>HEALTH:</td>
<td></td>
</tr>
</tbody>
</table>

| Educational Innovation Program: | Plan is |
| Distance Education Program:    | Plan is |
| Non Traditional Program:       | Plan is |

| Special Plan Type: | The entire plan is a Non-pooled plan |
| CDR certificate category: | Postbaccalaureate certificate |

Reviewer Comments

**Nicole Wiessinger (wiessinger) (03/18/19 2:04 pm):** Edited effective date from Spring 2020 to Fall 2019 per conversation with Sara Hagen 3/18/2019.
12 March, 2019

TO: Sarah Mangelsdorf, Provost

FROM: John Karl Scholz, Dean

RE: Change in Academic/Administrative Home

Subject Listing: FOLKLORE 380
Undergraduate Certificate: Folklore, CERT 424
Graduate Minor: Folklore, GMIN 423

CC: Cal Bergman, Associate Dean for Student Academic Affairs, L&S
Janet Gilmore, Professor of Landscape Architecture and Lead Faculty, Folklore Studies
Anne Gunther, Associate Dean for Budget and Planning, L&S
Elaine Klein, Associate Dean for Academic Planning, L&S
Ernesto Livorni, Chair, Comparative Literature and Folklore Studies
Shirin Malekpour, Associate Dean for Teaching and Learning Administration, L&S
Jocelyn Milner, Vice Provost and Director, Academic Planning and Institutional Research
James Montgomery, Associate Dean for Fiscal Initiatives, L&S
Jennifer Noyes, Associate Dean for Operations and Staff
Emily Reynolds, Graduate School
Nicole Wiessinger, Academic Planner, Academic Planning and Institutional Research
Susan Zaeske, Associate Dean for the Arts and Humanities, L&S

On March 5, 2019, the L&S Academic Planning Council considered the attached request formally to change the academic and administrative home for the subject listing, undergraduate certificate program, and graduate minor in Folklore, from the Department of Comparative Literature (CLFS, UDDS A4819) to the Department of German, Nordic, Slavic (GNS, UDDS A4870).

This change arises from staffing changes in CLFS, which have reduced that department’s capacity to attend to the time-sensitive tasks associated with scheduling courses and administering these programs. GNS has graciously agreed to provide curricular services for FOLKLORE, and though CLFS has granted GNS staff access to the FOLKLORE listing in the Student Information System, colleagues in Academic Planning & Institutional Research and in...
the Registrar’s Office advise that transferring the subject listing to a new home will better ensure that course scheduling proceeds smoothly in future.

We also seek permission to transfer the two academic programs governed entirely by the Folklore Program committee from CLFS to GNS, to be administered according to the attached program bylaws. This transition, like the one discussed above, ensures that the academic programs are located in the unit where curricular decisions related to them will be made and implemented as courses are scheduled. (On a related note, we are not seeking permission to move a program intended for University Special Students, because that program will be discontinued.)

These requests have been approved by the Folklore Program Working Group, by the Chair of CLFS, and by the Department of German, Nordic, Slavic, and on March 5, 2019, the L&S Academic Planning Council approved a motion to take all of the actions enumerated above.
Procedures and Policies of the Folklore Program
Submitted to L&S 2-11-2019

These governance policies and procedures are formulated with the understanding that the Folklore Program will be subsumed as a program unit under GNS, and subject to the governance structure of that department.

1. Folklore Program Committee (indirectly equivalent to a stand-alone Department’s Department Committee)
   a. Membership
      i. FPC Members are self-nominated or invited, and consist of current UW-Madison faculty and academic staff who work with folklore curriculum, research, and community engagement.
      ii. Interested faculty and staff members must submit a short statement of interest and CV demonstrating a record of teaching, research, scholarship, and/or community engagement in Folklore or related disciplines.
      iii. FPC members may participate in regularly-scheduled (monthly) meetings.
         1. A Graduate Student Representative may be invited to participate in these meetings.
      iv. Tenured members of the Folklore Program Committee will convene during meeting sessions to provide advisory votes based on FPC meeting discussions to the Folklore Program Leader to communicate to the GNS Chair regarding curriculum management and Folklore Program budgetary matters.
   b. Charge/duties
      1. Curriculum and Advising
         1. Faculty members of the Folklore Program Committee (“faculty” includes both faculty and instructional academic staff) will coordinate efforts with GNS staff to assemble classroom requests from FP instructors and to assure timetable accuracy.
         2. Faculty members in the program are eligible to be active FP Faculty Advisors.
         3. Members of the Folklore Program Committee are eligible to serve on a curricular assessment subcommittee, designated by the Chair of GNS, to assess and report student learning and student attainment of degree learning objectives that will help shape required program submissions.
         4. Events and Communication: The Folklore Program Committee recommends to the GNS Chair an individual or subcommittee to

---

1 In the case of the Folklore Program being assumed as a program within a full-fledged Department, the Folklore Program Committee operates within its sub-departmental domain, with governance members from the greater departmental entity serving on the FPC.
develop, update, and maintain a Folklore Program website, in coordination with GNS staff.

i. Budgetary Recommendations
   1. Tenured faculty on the Folklore Program Committee will assist the Folklore Program Leader in making budgetary recommendations to the GNS chair.

2. Folklore Program Leader
   A. Selection
      i. The Folklore Program Leader shall be a Faculty member who is teaching or has actively taught folklore courses within the last three years, or who is actively serving on Folklore degree committees or has been in the past three years.
      ii. The Chair of the Department of German, Nordic and Slavic shall appoint the program leader upon recommendation by the FPC.*
      iii. The Folklore Program Leader shall serve a one-year term beginning with the Academic Year, and will be eligible to serve additional consecutive terms.

   B. Charge/duties
      i. The Folklore Program Leader will maintain a list of active folklore instructors, advisors, and mentors and will work with GNS to coordinate curricular, degree program, and other advising needs for folklore students.
      ii. The Folklore Program Leader is responsible for setting the agenda of the FP meetings, leading the monthly meetings, and providing overall leadership for the Folklore Program.
      iii. The Folklore Program Leader will make recommendations about the expenditure of Folklore Program funds to the GNS Chair.

* Per email from Manon van de Water to Susan Zaeske and Elaine Klein (2/1/2019), GNS has the rule that one cannot both be chair of GNS and the lead faculty member for a subgroup.
Date Submitted: 03/07/19 3:23 pm

Viewing: **GMIN423 : Folklore**

Last approved: 09/25/18 8:40 pm

Last edit: 03/12/19 2:52 pm

Changes proposed by: jgilmore

Catalog Pages Using this Program

- **Folklore, Doctoral Minor**

Name of the school or college academic planner who you consulted with on this proposal.

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elaine M Klein - L&amp;S</td>
</tr>
</tbody>
</table>

In Workflow

1. **GNS Dept. Approver**
2. **L&S College Admin Reviewer**
3. **L&S College Approver**
4. **APIR Admin**
5. **GFEC Approver**
6. **UAPC Approver**
7. **APIR Admin**
8. **Registrar**

Approval Path

1. 03/12/19 12:33 pm
   Nicole J Senter (nsenter): Approved for GNS Dept. Approver
2. 03/12/19 12:38 pm
   Elaine M Klein (emklein): Approved for L&S College Admin Reviewer
3. 03/12/19 2:52 pm
   Elaine M Klein (emklein): Approved for L&S College Approver
4. 03/18/19 1:25 pm
   Nicole Wiessinger (wiessinger): Approved for APIR Admin

History
Proposal Abstract/Summary:

Due to the loss of administrative support staff in the Department of Comparative Literature and Folklore Studies (which is currently planning restructuring), L&S proposes to transfer the FOLKLORE subject listing, undergraduate certificate, and graduate minor from the Department of Comparative Literature and Folklore Studies to the German, Nordic, Slavic Department, where resources are available to maintain the schedule of courses and provide oversight and support for the faculty committee that will administer the curriculum, including submission of a proposal by 10/1/2019 to reopen the program.

If approved, what term should the proposed change be effective?

- Fall 2019 (1202)

Select yes if this proposal is only to add, remove, or rearrange curricular requirements, and will change less than 50% of the curriculum.

- No

---

**Basic Information**

- **Program State:** Suspend Admissions
- **Type of Program:** Minor (PhD and BSE only)
- **Who is the audience:** Graduate or professional
- **Home Department:** German, Nordic, and Slavic (GNS) CCLFS
- **School/College:** College of Letters and Science

The program will be governed by the home department/academic unit as specified. Will an additional coordinating or oversight committee be established for the program?

- No

- **Is this in the Graduate School?** Yes
- **SIS Code:** GMIN423
- **SIS Description:** Folklore MIN
- **Transcript Title:** Folklore
Suspension and Discontinuation

What is the date by which you will submit a plan to resolve the suspended status, if approved?  
10/1/2019

What is the last term that a student could declare this program?  
Summer 2018

What is the timeline and advance communication plan?

Explain the precipitating circumstances or rationale for the proposal.

What is the potential impact on enrolled students?

What is the potential impact on faculty and staff?

Explain and provide evidence of efforts made to confer with and to notify faculty and staff.

Explain and provide evidence of efforts made to confer with and to notify current students.

Explain and provide evidence of efforts made to confer with and to notify alumni and other stakeholders.

Teach-out plan - How will program quality be maintained during the suspended period or the teach-out period for discontinued programs?

Teach-out plan: A) For currently enrolled students, how will required courses, curricular elements, advising and other student services be provided?
Teach-out plan: B) For prospective students in the admissions pipeline, how are any commitments being met or needs to notify them that their program of interest will not be available?

Teach-out plan: C) For stopped out students, what provisions are made for their re-entry? What program(s) will they be re-entered into?

Teach-out plan: D) Provide any other information relevant to teach-out planning.

Roles by Responsibility: List one person for each role in the drop down list. Use the green + to create additional boxes.

<table>
<thead>
<tr>
<th>Role Type</th>
<th>Name (Last, First)</th>
<th>Email</th>
<th>Phone</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department Chair</td>
<td>Livorni, Ernesto</td>
<td><a href="mailto:elivorni@wisc.edu">elivorni@wisc.edu</a></td>
<td>608/262-4068</td>
<td></td>
</tr>
<tr>
<td>Department Chair</td>
<td>Van De Water, Manon</td>
<td><a href="mailto:mvandewa@wisc.edu">mvandewa@wisc.edu</a></td>
<td>608/262-1844</td>
<td></td>
</tr>
<tr>
<td>Primary Dean's Office Contact</td>
<td>Klein, Elaine M</td>
<td><a href="mailto:emklein@wisc.edu">emklein@wisc.edu</a></td>
<td>608/265-8484</td>
<td></td>
</tr>
<tr>
<td>Primary Dean's Office Contact</td>
<td>Reynolds, Emily M</td>
<td><a href="mailto:emreynolds2@wisc.ed">emreynolds2@wisc.ed</a></td>
<td>608/890-3419</td>
<td>Graduate Guide Coordinator</td>
</tr>
</tbody>
</table>

List the departments that have a vested interest in this proposal.

<table>
<thead>
<tr>
<th>Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comp Lit &amp; Folklore Studies (CLFS)</td>
</tr>
<tr>
<td>German, Nordic, and Slavic (GNS)</td>
</tr>
</tbody>
</table>

Are all program reviews in the home academic unit up to date? Yes
Are all assessment plans in the home academic unit up to date? Yes
Are all assessment reports in the home academic unit up to date? Yes
Will this program be part of a consortial or collaborative arrangement with another college or university? No
Will instruction take place at a location geographically separate from UW-Madison? No

Faculty and Staff Resources

Curriculum and Requirements

If you are proposing a change to the curriculum, what percentage of the curriculum is changing? No change

Guide Admissions/How to Get In tab

Those who are not familiar with using the html editor fields may upload a document with information about the curriculum for use by those who will format and edit the content that will appear in the Guide.

Guide Requirements tab

Students interested in a doctoral minor in folklore may either select an Option A Folklore minor or develop an Option B distributed minor with coursework in folklore and at least one other program. Students choosing an Option A minor select an advisor from the CLFS faculty, in consultation with the chair of the department. Students are expected to achieve a B or better in four folklore courses at the 300 level or above. Students must take either FOLKLORE/L I S 490 or FOLKLORE 510. Three additional courses may be selected from other courses at the 300 level or above.

Total credits required:

Guide Graduate Policies tab

Program Learning Outcomes and Assessment

List the program learning outcomes.
Summarize the assessment plan.

Approved Assessment Plan:

**Commitments**

Courses in the curriculum are numbered 300 or higher.

Yes

The program faculty/staff will ensure the program website, Advance Your Career materials if applicable, and other presentations are consistent with the Guide information for this program.

Yes

**Approvals**

*Department Approval* - This proposal has been approved by the faculty at the department/academic unit level. The program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) to meet the responsibilities associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and program review, and otherwise attend to all responsibilities related to offering this program.

Enter any notes about approval here:

per email discussion with Folklore Studies program lead (Janet Gilmore) and CLFS

Department Chair: approved by the Folklore Program Working Group on 3/7/2019 and by CLFS on 3/7/2019

Entered by: Elaine Klein, on behalf of the department and program
Date entered: 3/12/2019

*School/College Approval* - This proposal has been approved at the school/college level and it is submitted with the Dean’s support. The Dean and program faculty confirm that the unit has the capacity and resources (financial, physical, instructional, and administrative) to meet the responsibilities associated with offering the program, including offering the necessary courses, advising students, maintaining accurate information about the program in the Guide and elsewhere, conducting student learning assessment and program review, and otherwise attend to all responsibilities related to offering this program.

Enter any notes about approval here:
Approved by the L&S APC on 3/5/2019.

Entered by and date: Elaine klein, on behalf of Dean Scholz and the L&S APC 3/12/2019

GFEC Approval - This proposal has been approved by the Graduate Faculty Executive Committee and the Dean of the Graduate School.

Enter any notes about the approval here:

Entered by: Date entered:

UAPC Approval - This proposal has been approved by the University Academic Planning Council and the Provost.

Enter any notes about approval here:

Entered by: Date entered:

For Administrative Use

Admin Notes:

Guide URL:

Effective date:

Career: Graduate

SIS Program Code:

SIS Short Description:

Folklore

Other plan codes associated with this program:

Field of Study: Social Science

Plan Group:
CIP Code: 05.0209 - Folklore Studies.

Reviewer

Comments


Ernesto Livorni (elivorni) (03/08/19 8:50 am): As Chair of the Dept of CLFS, I approve the changes
March 1, 2019

William J. Karpus, Ph.D.
Dean of the Graduate School
Professor of Pathology and Laboratory Medicine
University of Wisconsin-Madison

Sent Electronically

Dear Professor Karpus,

As the Associate Chair for Graduate Studies in the Department of Civil and Environmental Engineering (CEE), I am glad to respond to your letter dated November 15, 2018 to Professor David Noyce, Chair of the CEE department, regarding the discussion of the ten-year review of the CEE graduate program that took place at the Graduate Faculty Executive Committee (GFEC) meeting on November 9, 2018.

We are very pleased that the GFEC has identified several strengths of our graduate program and greatly appreciate the comments provided regarding areas that require improvement. Our response to these comments is provided below. Please note that actions have already been implemented or efforts are underway to address some of the challenges identified.

Qualifying Exams: The GFEC recommends clarifying requirements, expectations and procedures for qualifying exams. Once clarified, the information needs to be updated in the handbook and communicated effectively with students.

It is important for the GFEC to understand that the Department of Civil and Environmental Engineering consists of multiple groups or disciplines and three graduate degree programs. Scholarship and expectations vary significantly between Construction Engineering and Management, Geological Engineering, Environmental Engineering, Structural Engineering, Transportation Engineering, Constructed Materials, Water Resource Engineering, and Environmental Chemistry. Having said this, the CEE department, under the leadership of Prof. Hussain Bahia, is working on establishing a set of clear expectations and timelines regarding the qualifying examinations across all disciplines. To the extent possible, changes will be made to achieve uniformity in the qualifying exam requirements. The department will create a yearly workshop for students who plan to take the qualifying exam in order to better inform them of the exam requirements, format, selection of topics, timeline, and expectations. This information will also be transmitted in written form via the CEE Graduate Handbook.
Diversity: The GFEC notes the recent increase in diversity among faculty but is concerned about diversity of students in the programs. The GFEC recommends that the program develop a plan to increase diversity of faculty and students is advised. LaRuth McAfee, Graduate School Assistant Dean for Diversity, Inclusion and Funding, is available for consultation in developing such a plan. The GFEC also proposes a review of completion rates for underrepresented students.

Increasing diversity in the CEE department’s student population is one of the priorities of the department leadership. Today, 38% (65 of 168) of CEE graduate students are female and over 7% of CEE graduate students are from historically underrepresented groups, both the highest in department history. Nevertheless, we know we can do more. Besides the actions listed below, the CEE department will explore further opportunities with Dr. Lisa Martin (Associate Dean of the Graduate School) and Dr. LaRuth McAfee (Assistant Dean for Diversity, Inclusion and Funding in the Graduate School) to further enhance diversity in the graduate student population.

CEE has intensified its recruiting efforts with the goal of attracting and retaining an increased number of diversity candidates. Highly-ranked under-represented minority and female applicants to the doctoral program are all invited (and funded) to visit UW-Madison. In addition to a fellowship, these applicants are offered a $5k “signing bonus” to further encourage them to enroll in the CEE doctoral program. As a result of these policies, diversity in the doctoral program has been enhanced in the past few years.

Other measures the CEE department is taking to enhance diversity in the graduate program include recruitment of under-represented minority undergraduate students to conduct summer research with CEE faculty members. These summer programs are expected to increase the chances of recruiting these students into the graduate program one or two years later. The CEE department is also using the McNair scholars directory to identify and target prospective high-quality under-represented minority graduate students. It should be mentioned that the CEE department is also one of the most active in the College in recruiting and advising Graduate Engineering Research Scholars (GERS). To date, five GERS students will start their graduate studies in CEE in Fall 2019.

The CEE department is also implementing additional measures to monitor the progress of doctoral students towards their degree in order to continue improving the completion rate in the doctoral program. It should be mentioned that the College of Engineering is in the process of establishing new procedures for evaluating progress of doctoral students towards their degree. Once finalized, the CEE department will implement the new procedures recommended by the College of Engineering.
Consistency of Assessment: The GFEC recommends establishing consistency among the assessments across the program.

The CEE department leadership agrees. Efforts completed in relation to addressing the qualifying examination, independent study requirements for M.S. students, and diversity topics will naturally blend towards establishing a broader and more uniform departmental assessment. The CEE department will also implement in the near future additional assessment tools targeted to the accelerated M.S. degree program consistent across all disciplines.

Uniformity of teaching assistant assignments and workloads: The GFEC suggests a department-wide review of TA assignments and workloads to establish equity throughout the department.

The CEE department’s TA policy (attached to this document) does attempt to ensure equity across the department. The allotment of TAs and graders is based on a formula that includes enrollment and type of course. The policy also includes language explaining how these roles should be utilized in the department to ensure that TAs and graders are doing the appropriate type of work. The CEE department, however, is aware that there is more to be done in this regard.

It is important to note that at least part of any inequity that may exist in TA assignments and workload expectations in CEE is not a direct result of department or faculty expectations. It is CEE’s observation that, like with appointments at any level, some will view expectations as a "salary" appointment and do what it takes to get the job done. Others, on the other hand, will view expectations as an "hourly" appointment and stop all activities at the end of the last hour with no concern for completion. Variance in equity is often driven by a student's desire to exceed expectations in lieu of punching a time clock. Besides having a department policy regarding TAs, the CEE department uses a deliberate “truth in advertising” approach to clearly articulate the hourly expectations that are assigned with each TA appointment percentage. Faculty supervising the TA are similarly instructed and aware of the policy.

Strategic use of fellowship funds: The GFEC encourages the program to develop a strategic plan for the use of fellowships in their overall student funding landscape, as past fellowship allocations from the Graduate School have not been spent on an annual basis as intended.

The CEE graduate program made this a priority during the 2018-2019 academic year. Changes implemented resulted in great success in the recruitment of doctoral students this academic year. Two 1-year fellowships and one summer fellowship were given to three new
doctoral students who started either in the Summer or Fall of 2018, one of them being a female under-represented minority student. In addition, three 9-month fellowships were awarded to three doctoral students who started in the Spring 2019 semester. With these fellowships, nearly all of the funds that had accumulated in the past will be spent by the end of Summer 2019. Overall, 15 funding offers were made during the 2018-2019 academic year to prospective doctoral students and 9 of these offers were accepted.

**Recruiting strategies and admissions process:** The GFEC recommends reviewing this process and would like the department to share their process for admitting students with the committee.

The recruiting and admission process followed in the CEE department is basically the same discussed in the *Self Study Report for 10-Year Program Review* submitted by the CEE department at the end of 2017 (copied below).

"Recruitment – The CEE department advertises its various graduate programs primarily through the departmental website (https://www.engr.wisc.edu/department/civil-environmental-engineering/), as well as through the undergraduate program. Each faculty member also advertises his or her program through individual or laboratory websites, through presentations at technical meetings, and through involvement in professional organizations. Another avenue used to advertise the CEE graduate programs is by sending targeted information about the CEE program to identified potential students (typically through their advisors), and by inviting leading faculty from top universities to visit UW-Madison in order to increase awareness within the academic community of recent research, personnel and infrastructure changes in our department. Although the department Chair and Associate Chair for Graduate Studies lead the graduate recruitment efforts, most faculty members actively participate in recruitment of Ph.D. students, as well as of M.S. students interested in gaining research experience during their graduate studies. Faculty members also participate in local recruiting opportunities through GERS, OPPS, SURE, REU and other similar college programs.

CEE faculty play a major role in the recruiting process by directly contacting strong applicants to discuss research and funding opportunities, as well as the details of the research programs of greatest interest to the prospective students. Faculty members interested in recruiting particular students are typically provided funds to invite these students to campus. Visits are organized to ensure that the appropriate faculty and staff are available during the student visit and to meet the needs and schedule of the student. Site visits are structured to include meetings with the appropriate faculty, a tour of the college and relevant research/teaching
laboratories, a tour of campus, unsupervised meetings with existing graduate students, and anything else that may be of interest to the student. Top applicants, besides being offered funding through a research or teaching assistantship (typically for one or two years only), are often offered a “sign-on” bonus as an additional incentive to choose UW-Madison for their graduate studies. The lack of ability to make multi-year funding offers (e.g., 4- or 5-year guaranteed funding offers), however, has placed the CEE program at a disadvantage compared to most of its peers when recruiting top graduate applicants. The CEE department, in the latest round of the Graduate School Student Competition, thus focused its funding request on making several multi-year fellowship offers. The funds that the Graduate School may be able to provide, however, are not sufficient to compete on a plain level field with other top schools.

As part of our efforts to recruit students from under-represented minority groups, we have participated in the past in campus visits to universities with greater undergraduate populations of minority students. We have also searched for qualified students at conferences and professional meetings. We intend to increase our presence in conferences aimed at students from under-represented groups, such as the Society of Hispanic Professional Engineers (SHPE) Conference. We are also working to establish a more formal relationship with universities (University of Puerto Rico-Mayaguez for example) to help us attract new students. These efforts are sometimes leveraged by the experience at UW-Madison of current or previous under-represented minority students.

Admissions – Master degree applications are typically reviewed by one faculty member in the student’s proposed area of study. Ph.D. applications are also reviewed by all faculty members actively recruiting doctoral students at the time. All available numeric and intangible variables for evaluation are taken into consideration. Some of these variables include:

- Undergraduate institution;
- Letters of recommendation;
- Compatibility between previous coursework and proposed area of study;
- GPA;
- GRE scores;
- Accomplishments to date (e.g., publications, research experience, involvement in student organizations, leadership skills)
- TOEFL scores (when applicable);

Significant weight is placed on the quality of the institution of the student’s most recent degree and letters of recommendation from known and respected faculty colleagues from these institutions. Students who appear worthy of acceptance are
typically contacted first by a faculty member in the corresponding technical area, and often invited to a campus visit, as described above. These communications/visits allow further evaluation of the applicants by exploring their communication skills and ability to articulate their interests and goals. These are also opportunities for the applicants to learn more about the program, including research and funding opportunities for graduate students.

The advisor/advisee match typically happens during the recruitment process. In the vast majority of cases, active recruitment of doctoral students is done on an individual basis by an interested faculty member in coordination with the CEE Graduate Chair. Some of the matching is conducted based on the Statement of Purpose of the student, submitted as part of the application, if the applicant lists a particular faculty member with whom he or she is interested in working. There are a few cases in which once the student has been enrolled in the program, he or she decides to work with a different professor after one or two semesters. Only in a few cases of doctoral students who come with their own funding (e.g., self funding or external fellowship) a temporary advisor is assigned upon arrival until an advisor/advisee match occurs, typically during the first two semesters.

Two changes, however, have been implemented since that report was submitted, as follows.

1. All applicants admitted into the doctoral program are offered either five years or three years of funding, depending on whether the applicant’s highest degree is a B.S. or an M.S. degree, respectively. This change was likely the main factor that led to the significant increase in the ratio between students who accepted funding offers and the total number of offers made (9/15).

2. Closer monitoring of the time when the CEE department notifies the Graduate School of the decision whether to admit or not a graduate student has been implemented. This applies particularly to M.S. applicants, as all applicants to the doctoral program who will be admitted are contacted soon after the application window closes by interested faculty members.

Please note that changes to the actions discussed above will likely occur as they are further developed and implemented, and also as a result of discussions with other members of the CEE department and key personnel in the Graduate School.

If you have any questions regarding the content of this letter or require any additional information, please do not hesitate to contact either me at gustavo.parra@wisc.edu or Professor David Noyce at danoyce@wisc.edu.
Sincerely,

Gustavo J. Parra-Montesinos
C.K. Wang Professor of Civil and Environmental Engineering (CEE)
Associate Chair for Graduate Studies, CEE Department
1. This policy applies to academic year appointments. Summer appointments are established with the summer course proposal process.

2. The assignment of TA or grader duties to a course should be consistent with official UW-Madison title descriptions, which are as follows:
   a. **Teaching Assistant – Standard**: This title is appropriate for graduate students enrolled in a UW System institution who have been assigned teaching responsibilities in an instructional department under the supervision of an academic staff or faculty member.
   b. **Project Assistant – Grader/Reader**: These titles designate graduate students enrolled in a UW System institution who are employed to assist with grading at the UW-Madison. These positions are paid a fixed hourly rate.

3. TA and grader appointments may not be used to provide support for:
   a. Research activities,
   b. Administrative activities,
   c. Instructional activities for courses not covered by this policy.

   This part of the policy is intended to address feedback received in a May 2017 survey of TAs, which included: “For CEE XXX, TAs did all grading of homework and exams. Sometimes there was a grader assigned for the class, and occasionally that grader was one of the CEE XXX TAs, however, this person did not in fact do more grading than the other TAs. Sometimes a grader was assigned who did no actual grading for the class and the position was used to supplement lack of funding in other areas.”

4. Faculty supervisors are expected to ensure that TA workload is consistent with appointment level.
   a. Survey of TAs in May 2017 showed:
      i. TAs that supported classes having 50-minute and 75-minute discussion or lab sections worked an average of 6.3 ± 2.4 hours per section per week.
      ii. TAs that supported classes having 115-minute discussion or lab sections worked an average of 9.8 ± 2.7 hours per section per week.
   b. CEE support for TAs is set at 6.7 hours per section per week.

5. The eligibility of CEE and GLE courses to receive funds for TA and grader support is as follows:
   a. Each CEE and GLE course with lab sections is eligible for a TA with a 1/6 appointment for each lab section, plus a grader
      i. \((\text{Number of grader hours per semester}) = (0.50)\times(\text{course credits})\times(\text{enrollment}) = (0.50)\times(\text{SCH})\)
      ii. Any course with fewer than 120 SCH (e.g., a 3-credit class with 40 students, a 4-credit class with 30 students) will not receive grader support
      iii. For a given course, average enrollment of 18 to 24 students per lab section is expected.
iv. Any lab-based course with fewer than 24 students will not receive TA support
v. Any lab section with fewer than 12 students will not receive TA support.
vi. Courses considered to have lab sections for the purpose of this policy are listed in Section 8 of this policy.
b. Each CEE and GLE course with discussion sections is eligible for a TA with a 1/6 appointment for each discussion section, plus a grader
   i. (Number of grader hours per semester) = (0.50)*(course credits)*(enrollment) = (0.50)*(SCH)
   ii. Any course with fewer than 120 SCH (e.g., a 3-credit class with 40 students, a 4-credit class with 30 students) will not receive grader support
   iii. For a given course, average enrollment of 30 to 40 students per discussion section is expected.
   iv. Any discussion-based course with fewer than 40 students will not receive TA support
   v. Any discussion section with fewer than 20 students will not receive TA support.
c. Each CEE and GLE course without lab or discussion sections are eligible for grader hours as follows:
   i. (Number of grader hours per semester) = (0.65)*(course credits)*(enrollment) = (0.65)*(SCH)
   ii. Any course with fewer than 120 SCH (e.g., a 3-credit class with 40 students, a 4-credit class with 30 students) will not receive grader support
d. GLE courses offered by an instructor with a primary appointment in the Department of Geoscience are also eligible for the TA and/or grader support listed in Items 4a through 4c, with the following conditions:
   i. Allocation of CEE funds for TA and grader support is contingent on the course:
      1. Being required by the BSGLE degree program, and
      2. Meeting the minimum enrollment expectations noted in Sections 4a through 4c above
   ii. CEE support for these courses is at the discretion of the CEE Chair, and will consider:
      1. Percentage of CEE/GLE enrollment to total enrollment in the course
      2. Percentage of CEE/GLE enrollment to total enrollment in GLE courses offered by other instructors with primary appointments in the Department of Geoscience.
      3. Percentage of Geoscience enrollment to total enrollment in GLE courses offered by instructors with primary appointments in the CEE department
      4. Consultation with the Department of Geoscience chair
e. CEE or GLE courses offered by an instructor with a primary appointment outside of CEE are also eligible for TA and/or grader support with consideration given to items similar to those noted in Section 4d.

6. This policy shall be reviewed and, if needed, updated at a frequency no less than once every three years.

7. At the time of writing this policy, costs for the above student help were as follows:
   a. Teaching Assistant – Standard: $2,704.73 for a 1/6-time, 4.5-month appointment (100 hours at $27.05/hour)
   b. Project Assistant – Grader/Reader: $17.36/hour
   c. Fringe benefits are not counted within the TA/Grader allocation received from the College of Engineering, but these costs are real and come from differential tuition
   d. Tuition costs are not counted within the TA/Grader allocation received from the College of Engineering. The university waives tuition for TAs, but it is unclear how this is set up in university accounting.

8. At the time of writing this policy, CEE annually budgeted about $300,000 for TA and grader salaries from the college
   a. CEE also receives the proportionate amount of fringe benefit funding in addition to the $300,000 for salaries
      i. 23.5% for TAs
      ii. 3.3% for graders
   b. Salary and fringe benefit funding comes from COE differential tuition
   c. At the time of writing this policy, CEE used about $290,000 of the budgeted $300,000
9. At the time of writing this policy, the following courses were considered to have laboratory sections:

- CEE 291 – Problem Solving Using Computer Tools
- CEE 310 – Fluid Mechanics
- CEE 311 – Hydroscience (a course change proposal should be submitted to the university, so that these sections are listed in the catalog and timetable as lab sections rather than discussion sections)
- CEE 322 – Environmental Engineering Processes
- CEE 330 – Soil Mechanics
- CEE 370 – Transportation Engineering
- CEE 377 – An Introduction to Geographic Information Systems
- CEE 392 – Building Information Modeling
- CEE 395 – Materials for Constructed Facilities
- CEE 410 – Hydraulic Engineering
- CEE 503 – Water Analysis – Intermediate
- CEE 574 – Traffic Control
- CEE 575 – Advanced Highway Materials and Construction
- CEE 695 – Design and Construction of Bituminous Mixtures
- CEE 730 – Engineering Properties of Soils
- CEE 732 – Unsaturated Soil Geoengineering
- CEE 795 – Characterization of Asphalt Binders
- CEE 821 – Environmental Engineering: Biological Treatment Processes
- CEE 822 – Environmental Engineering: Physical/Chemical Treatment Processes
- GLE 360 – Principles of Mineralogy
- GLE 370 – Elementary Petrology
- GLE 431 – Sedimentary and Stratigraphy Lab
- GLE 455 – Structural Geology
- GLE 474 – Rock Mechanics
- GLE 595 – Field Methods: Applied Geophysics
- GLE 627 – Hydrogeology
15 November 2018

David Noyce, Ph.D.
Professor and Chair
Department of Civil & Environmental Engineering
College of Engineering
University of Wisconsin–Madison

Dear Professor Noyce,

When the College of Engineering assembled a review committee to conduct the ten-year program review of the Civil and Environmental Engineering MS/PhD/Doctoral Minor, Professor John Pfotenhauer was asked to serve as the Graduate Faculty Executive Committee (GFEC) representative. Professor Pfotenhauer led a discussion of the review at the GFEC meeting on November 9, 2018. In this letter, I summarize the committee’s discussion.

The GFEC learned of the strengths of this program, which include industry relationships, diverse faculty, an excellent program chair, collegial faculty relationships and healthy relationships between faculty and students.

In addition to these many strengths, the GFEC discussed some of the challenges facing the program:

- **Qualifying Exams:** The GFEC recommends clarifying requirements, expectations and procedures for qualifying exams. Once clarified, the information needs to be updated in the handbook and communicated effectively with students.

- **Diversity:** The GFEC notes the recent increase in diversity among faculty but is concerned about diversity of students in the programs. The GFEC recommends that the program develop a plan to increase diversity of faculty and students is advised. LaRuth McAfee, Graduate School Assistant Dean for Diversity, Inclusion and Funding, is available for consultation in developing such a plan. The GFEC also proposes a review of completion rates for underrepresented students.

- **Consistency of Assessment:** The GFEC recommends establishing consistency among the assessments across the program.

- **Uniformity of teaching assistant assignments and workloads:** The GFEC suggests a department-wide review of TA assignments and workloads to establish equity throughout the department.

Office of the Dean
217 Bascom Hall 500 Lincoln Drive Madison, WI 53706-1380 grad.wisc.edu
Email: GraduateSchoolDean@grad.wisc.edu; Phone: (608) 263-1353; Fax: (608) 265-9505
• **Strategic use of fellowship funds:** The GFEC encourages the program to develop a strategic plan for the use of fellowships in their overall student funding landscape, as past fellowship allocations from the Graduate School have not been spent on an annual basis as intended.

• **Recruiting strategies and admissions process:** The GFEC recommends reviewing this process and would like the department to share their process for admitting students with the committee.

The GFEC recommends the department engage in efforts to address the recommendations of the review committee and provide a written response including a plan for increasing diversity of students by **March 1, 2019**, which will be discussed at a subsequent GFEC meeting. Thank you for your commitment to graduate education.

Sincerely,

William J. Karpus  
Dean of the Graduate School  
Professor of Pathology and Laboratory Medicine

Cc: Ian Robertson, College of Engineering  
James P. Blanchard, College of Engineering  
Laura Albert, College of Engineering  
Gustavo Parra-Montesinos, Department of Civil & Environmental Engineering  
Cheryl Loschko, Department of Civil and Environmental Engineering  
Jocelyn Milner, Office of the Provost  
Nicole Wiessinger, Office of the Provost  
Parmesh Ramanathan, Graduate School  
Joshua Morrill, Graduate School  
LaRuth McAfee, Graduate School  
Emily Reynolds, Graduate School
MEMORANDUM

DATE: March 6, 2019
TO: Sarah Mangelsdorf, Provost and Vice Chancellor for Academic Affairs
FROM: Steven M. Swanson, Dean and Professor
RE: Final Summary of Review for:
   - Master’s – Pharmaceutical Sciences
   - PhD – Pharmaceutical Sciences

The Master’s and Doctoral – Pharmaceutical Sciences program review was completed by a review committee chaired by: Dale E. Bjorling, Associate Dean for Research & Graduate Training, UW School of Veterinary Medicine with members: Elaine T. Alarid, Professor of Oncology, Professor, McCardle Laboratory for Cancer Research; James L. Keck, Associate Dean for Basic Sciences, UW SMPH and Gail Robertson, Professor, Department of Neuroscience, SMPH and GFEC Representative. The review committee was charged with assessing the strengths and weaknesses of the program and recommendations for future directions. The School APC discussed and approved the review committee report on March 1, 2019. Based on my review of their report and the APC response, I am providing the following executive summary of the program review:

Overview

Overall, the Committee found that the program is functioning well and delivering high-quality graduate training that supports the mission of the School of Pharmacy and the University of Wisconsin-Madison. Strengths of the program include that the multidisciplinary nature of the program and program retreats that focus on improvements. The administration was considered to be supportive, responsive to students needs and engaged with alumni. Recruitment efforts are seen as robust and effective. Students are active in national societies and have opportunities to engage with industry representatives. Areas for improvement include a succession plan for current program leadership, increased involvement of students in program governance, improved web presence for the program, and consistencies within the program of aspects such as preliminary exam format. Other areas for improvement include diversifying applicants’ countries of origin and increasing the number of students recruited to the program. Finally, student career advising could be strengthened.

Recommendations

The Program leadership is committed to addressing the concerns raised by the Review Committee. Improvements include establishing a Pharmaceutical Sciences Graduate Program Committee that could improve both the robustness and transparency of program governance. New and improved marketing strategies by our new Office of Marketing and Communications at the School of Pharmacy can help develop recruitment materials to increase awareness of the program and broaden the type and origin of candidates. Greater emphasis will be placed on student experience and advising. Specific community building events are currently being rolled
out as improved communication and clarity of policies in the student handbook. Greater attention will be placed on the development of Individual Development Programs, mentor training and transparency/communication.

Attachments
Self-Study
Review Committee Report
Program Response

Copies
Ron Burnette, Chair, Pharmaceutical Sciences Division
Chuck Lauhon, Assistant Dean of Graduate Studies
Melgardt M. de Villiers, Associate Dean for Academic Affairs
Kim Rantanen-Day, School of Pharmacy Dean's Office
Dale E. Bjorling, Chair, Program Review Committee
Jocelyn Milner, APIR
Sarah Kuba, APIR
Bill Karpus, Graduate School
Parmesh Ramanathan, Graduate School
MEMORANDUM

TO: Steven Swanson, PhD (Dean), School of Pharmacy, University of Wisconsin Madison.
Charles T Lauhon, PhD, Vice Chair Pharmaceutical Sciences Division, Assistant Dean for Graduate Studies; Ken Niemeyer, Graduate Programs Coordinator (Senior Student Services Coordinator)

FROM: Melgardt de Villiers, PhD (Chair Academic Planning Council), Associate Dean Academic Affairs, School of Pharmacy, University of Wisconsin Madison

RE: 10 Year Program Review Graduate Programs Pharmaceutical Sciences

Date 3/1/2019

The Academic Planning Council of the School of Pharmacy at the University of Wisconsin Madison met on 3/1/2019 and unanimously approved the report and recommendations of the program review for the Graduate Programs in Pharmaceutical Sciences.

Sincerely

[Signature]
Self-Study for MS and PhD – Pharmaceutical Sciences

Date submitted: August, 2018

Primary Contact: Charles T. Lauhon

Department(s)/Academic Unit(s): Pharmaceutical Sciences Division

School(s)/College(s): Pharmacy

A. Response to Previous Program Review Recommendations

The Pharmaceutical Sciences PhD Program was last reviewed in 2009 by a committee consisting of faculty from Pharmacy Schools at peer institutions whose expertise were representative of the breadth of Pharmacy graduate programs as a whole, and were not necessarily focused on a science based PhD program per se. That External Review Committee (ERC) provided five main areas of improvement for our program and these are addressed below. We have also included our own strengths and weaknesses identified from the 2009 self study for additional reference. The entire ERC report is provided as Appendix item A1.

Strengths and Weaknesses Identified by the Program During the Last Self-Study (2009):

Strengths
• Research achievement, measured by faculty funding levels and productivity has been excellent, leading to increased program visibility.
• A new building resulted in significantly Improved research resources, including analytical and animal facilities.
• Since the consolidation, there has been growing collaboration within the Division.
• There has been a recent improvement in infrastructure that has increased participation of graduate students in Division activities, curriculum assessment and governance.
• Organization and resources for recruiting prospective graduate students has notably increased.

Challenges
• Recruiting a diverse set of top-quality graduate students that matches the broad research interests of Division faculty remains a challenge.
• The program has had difficulty recruiting underrepresented minority students.
• The current funding environment and insufficient fellowship support makes recruiting and supporting graduate students unpredictable.
• Transition into the new curriculum requires improved communication among program administration, students and faculty for ensuring proper student guidance.
• Communication to best balance the needs of the overall Division with the diverse requirements of each of its cores is an ongoing challenge.
Report from the 2009 Program Review and Program Response

The Pharmaceutical Sciences Division in the School of Pharmacy was created in 1996 by merging basic science curricular areas, each previously offering their own Ph.D. degree program. The new structure consists of three core areas: drug discovery, drug action, and drug delivery. Theoretically, the amalgamation was to have created a critical mass of faculty with interdisciplinary interests in pharmaceutical sciences. In effect, the consolidation seems to have merely removed the names of the traditional basic science areas from the degree track without resulting in the desired integration. This was viewed as one of the factors that would be detrimental to efforts by the Division to obtain a graduate training grant. The identity as a Pharmaceutical Sciences program is in jeopardy unless the Division can find ways to bring the faculty closer together through strategic recruiting and the development of additional programs designed to enhance the communal culture. The ERC believes that the future success of the Division will depend upon its ability to find ways of becoming more fully merged.

The ultimate success of the Pharmaceutical Sciences Division will depend largely upon the accomplishment of its stated mission of integrating the core areas as a means of increasing collaborative interaction and enhancing graduate student development. Attainment of this goal can result only when the Division has 1) strong leadership from a chair empowered with suitable resources and authority, and 2) faculty members who embrace the idea of providing graduate students with training in the broad field of pharmaceutical sciences while emphasizing their areas of specialization. The ERC believes that the Division can facilitate realization within the next five years of its plan by quickly developing a comprehensive strategy for creating a culture of cooperation and commitment. Central to this effort will be the development of a blueprint for faculty recruitment and retention focusing on insuring that all faculty members embrace their roles as educators and scholars in the pharmaceutical sciences arena. Willingness to teach in the professional and graduate programs as well as to mentor graduate students in the Pharmaceutical Sciences Division should be included as components of the assessment for promotion and tenure and of the annual faculty evaluation process.

Critique #1: The majority of students interviewed by the ERC identified themselves as being associated with a specific faculty mentor rather than with a Pharmaceutical Sciences graduate program.

Response: We have increased cohesion and common experiences among students in the program during the last 10 years. These efforts include:

(1) A highly popular and interactive required course in research ethics (726-800);

(2) An increase in membership and activity of our student AAPS chapter, to which most of our students belong and are active. Activities range from pure social events to sponsoring seminars, attending and hosting conferences and professional development visits from PhD alumni.
(3) Our students are involved in student-run Midwest regional annual research meetings, such as the Pharmaceutics Graduate Student Research Meeting - (PGSRM). Our students hosted in 2011 and will do so again in 2019. Graduate students from Pharmaceutical Sciences Programs from major research universities in the Midwest attend. The Dean also provides support for our students to attend the annual Am. Assoc. Pharmaceutical Scientists (AAPS) national meeting. These experiences reinforce a shared student experience as future scholars in Pharmaceutical Sciences, not just in the more narrow field of their research lab.

(4) We have brought back student-run research/career exploration retreats that involve graduate alumni for professional development and networking (see Program Appendix, item K1)

Critique #2: The students also expressed the opinion that more required course work taught by Division faculty would be desirable. Additionally, students felt that they should present a seminar every year as a means of developing their professional communication skills.

Response: After consulting students in a 'town hall' type meeting, the seminar structure was redesigned, such that each core of the program has its own designated seminar course (718-931; 718-932). These courses feature a mix of student and outside speakers. Students present once per year with written feedback from the students and faculty. In addition, there are several annual program-wide colloquia featuring more eminent outside speakers. (see Appendix item B2 for recent seminar list and course syllabi). As a formal course, student attendance is required, while faculty attendance is expected.

More recent meetings with students about increased course work has resulted in mixed responses. Some students appreciate the flexibility of a small number of course requirements, while others would like to see more didactic content that is of broader use for their career goals. We are currently weighing options to strike the right balance in formal offerings including how best to provide content that is more applicable to their potential careers in industry. The latter includes knowledge about industry protocols (GMP, GLP) and drug development paradigms and techniques, including regulatory and clinical trial fundamentals. The School has an outside 'Board of Visitors' alumni/stakeholder group that provides feedback to program leadership about such training needs.

Critique #3: The Division has condensed and refined its process for recruitment of students to the program. This has helped in the identification and admission of high quality students. Nevertheless, since many students elected to enter the program in order to work with a specific faculty member, changes in recruiting need to be made to ensure that students matriculate because of a desire for a career in pharmaceutical sciences.

Response: We have found over the last ten years that, in fact, many of our students join the program with wide open expectations for their training. The interdisciplinary nature of the program may attract such students. For many of our incoming students we have difficulty temporarily identifying which core of our Division they wish to align themselves (in order to pick one of the required core seminar courses). Moreover, many faculty lament that students
they 'recruited' to our program end up working for a faculty member in an entirely different core or research field after their rotations. We believe this is a healthy sign that our entering students do indeed identify with an overall interest in Pharmaceutical Sciences; it is now more incumbent on our faculty to meet the student expectations for broad training in the field in addition to the specific training of their thesis research. In addition, we have had only 2-3 direct admit students in the last ten years and > 95% of our students in that time have completed the standard three laboratory rotations prior to finding a permanent lab.

Critique #4: Several of the students are supported by a Teaching Assistantship (TA) during their entire time in the graduate program. This practice often delays completion of the dissertation research and extends the duration of time to completion of the degree. The ERC recommends that TA support be used more strategically as an aid to student recruitment and as part of a bridge funding mechanism for faculty seeking grant renewal. Shorter student resident times may also result from diminishing reliance on TA support.

Response: In recent years, the average number of dissertators who are supported by TAs in a given semester has dropped to around 2-3 students (10-15%). The overwhelming majority of students are not supported by a TA during years 3-5. This decrease has correlated with the increased success of our domestic students in securing outside funding in the form of fellowship and training grant support. As part of our orientation, we stress the benefits of applying for fellowships early and often and have hired academic staff who assist with fellowship submission. Our PhD time to degree of 5.16 years is near the University average.

Critique #5: Students meet with their thesis committees once a year. Moreover, students tended to feel intimidated by their major professors. The ERC believes that more frequent meetings of the thesis committee prior to the time that the student passes the preliminary examination and starts full-time on a dissertation research project would benefit development of a multidisciplinary pharmaceutical sciences culture within the Division. Additionally, this may alleviate the student belief that their fate is controlled by a single faculty member.

Response: The successful implementation of annual thesis committee meetings took considerable time and effort by program leadership and is the result of the disciplinary breadth of our program, which spans the physical and biological sciences. We feel it is unrealistic to expect more frequent meetings. The introduction of the Individual Development Plan, the movement to broaden the training of PhDs on this campus, and efforts by program leadership to connect students with alumni have all hopefully helped to reduce the feeling of students that they are beholden solely to their PI for career advice and placement. Exit surveys of our PhD graduates show that half of our students reported having a significant faculty mentor who was not their advisor (Appendix item F2, p.8)
B. Overview of the Program

Program History and Administrative Structure

Briefly, the Pharmaceutical Sciences Division emerged in 1996 as an amalgamation of 5 smaller PhD programs in areas ranging from Medicinal Chemistry to Pharmaceutics (see consolidation in Figure 1 below). This is a unique structure for graduate programs in Schools of Pharmacy, in that most have separate departments with budgetary autonomy. Pharmaceutical Sciences is one of three Divisions in the School, none of which have specific resource allocations. Thus, in the eyes of the University, the Dean is also the Chair of the "Department of Pharmacy" as well as the Chair of the School's executive committee. As noted by the 2009 program review committee, some challenges for the Pharmaceutical Sciences program relate to this unique structure, in that the program needs to balance the strengths of greater resources and research opportunities for students in the broad Division, with the tendency of individual faculty and students to focus on their particular areas of interest. This impacts a range of activities from recruiting and research resource allocation, to teaching and learning priorities.

![Diagram](image)

**Figure 1.** Consolidation of graduate programs in 1996 (formally approved 1998) to give the current Pharmaceutical Sciences Division in the School of Pharmacy.

In terms of administration, the School of Pharmacy currently has a separate Associate Dean for Research and an Assistant Dean for Graduate Studies. In addition to the Pharmaceutical Sciences program, the School has MS and PhD programs in Social and Administrative Sciences in Pharmacy as well as a combined MS/two-year residency program in Pharmacy Administration. The latter program is housed at UW Hospital. The Asst Dean formally administers these three quite different graduate programs with the assistance of the Graduate Program Coordinator, who assists in disseminates information from the Graduate School and Asst Dean to the individual programs, as well as providing students information about policies, deadlines, and opportunities to assist their smooth progression through the program. This current administrative organization is depicted in Appendix item B1.

The Pharmaceutical Sciences Division is divided into three administrative 'Cores' - Drug Discovery, Drug Action and Drug Delivery. The Division is led by the Chair, along with two appointed Vice-Chairs, such that each core is represented in administrative decision-making. Functionally, the Cores have provided a structure for assigning teaching and committee service.
within the Division. They also facilitate information flow to and from the Chair to faculty in each Core concerning issues that impact the teaching, research and service missions of the Division. Students are loosely affiliated to the core structure via their faculty advisor as well as which seminar course they attend. Otherwise they are not bound to the core structure in terms of recruiting or joining a research group.

Currently, the Graduate Program is administrated by one of the Vice Chairs (who is also currently the Asst Dean for Graduate Studies). Internal policy concerning the graduate program can be initiated by the Dean, Asst Dean, or Division Chair, or suggested by faculty, staff or students. Graduate School policy is communicated initially to the Dean and/or the Asst Dean for Graduate Studies who then disseminates this information to the Chair and Vice Chairs and to faculty and students. The Chair and Vice Chairs make up a three member de facto Graduate Program Committee by considering the wide variety of requests and policy decisions that are encountered during administration of the program. Program policy changes and program assessment discussions of particular potential impact are brought regularly to the Division faculty for discussion and approval. Student input is gathered through annual meetings by the Program Director with each class in early summer and previously through town hall type meetings. Additional lines of communication are provided by the student AAPS chapter, a professional organization which has leadership positions. That group of student leaders are often consulted by the Program Director and the Chairs for input on a variety of policy issues and opportunities affecting students in the program. Administrative support for the Program Director consists solely of the Graduate Program Coordinator (GPC), who provides support for all activities in which the program is involved. This includes all recruiting and marketing activities, admissions, committees, student administrative support, student advising, student alumni relations and career services support. The School has in place positions specifically for program assessment (an Asst Dean and a Director of Assessment) and has recently hired an Assoc. Dean in Marketing and Communications, the latter of which will assist program leadership in these areas.

**Mission of the Pharmaceutical Sciences Division:**
The mission of the Division of Pharmaceutical Sciences is "To discover, to teach, and to apply knowledge in the three fields of Drug Discovery, Drug Action, and Drug Delivery. This mission is accomplished through the education of undergraduate, graduate, and professional students, by conducting innovative research, and by providing service to the professional, scientific, and public communities."

This mission is in line with the School of Pharmacy's mission statement to educate, train, and provide life-long learning opportunities for students, pharmacists and scientists, while creating, disseminating and applying new knowledge based on research in the biomedical, pharmaceutical, social and clinical sciences to enhance the quality of life through improved health.'

**Program Degree Requirements**
The course requirements for the PhD and the MS degree are equivalent, as students are expected to finish course requirements and become dissertators by the end of their second
year. We do not recruit students who seek a terminal MS degree; this degree is awarded to students who leave the program before completing the PhD, if they have met the course requirements and defend an MS thesis. Other instances where the MS is awarded include students who are working for program faculty and are enrolled in a different PhD program but would like to complete an MS in Pharmaceutical Sciences along the way to their PhD. The course requirements (see Table below) include one required one semester course in introductory principles (718-780) that spans the research areas of the three cores and is framed around research topics that are involved in the drug approval pipeline. The course is taught in three modules based on the cores and is taught by a variety of faculty each year. The three cores currently approach the material in different ways, which can be a challenge for students, who have given the course mixed reviews throughout its tenure. We are constantly looking for ways to improve the course, although in many ways the discussion surrounding the course reflects all of the different cultures inherent in a broad interdisciplinary group of faculty.

In addition to this main 780 introductory course, each core is responsible for identifying a course of its own that includes the basic principles of its research area. The Discovery Core offers a course that encompasses organic synthesis, medicinal chemistry and research areas at the interface of chemistry and biology (718-786). The Drug Action Core requires students take the cell signaling course (630), which is crosslisted in Biochemistry and offered by Pharmacology faculty in the Medical School. The Drug Delivery Core requires students to take Pharmacokinetics (718-768), which is a highly valuable course for those students planning a career in the pharmaceutical industry. Because of the breadth of these three areas, students are required to take two of the three courses to satisfy the degree requirements.

Additional requirements include the Responsible Conduct of Research (i.e., ethics) course (726-800), which is a popular course due to its compelling content and highly interactive teaching methodology. The course is taught by an interdisciplinary team of faculty in the School and is helpful for creating a positive work climate, because it brings the students together to talk about different viewpoints on issues that we all face as part of our daily professional activities. The course was recently expanded from one to two credits due to the popularity of the weekly discussions. The course also includes students from the Clinical and Translational Sciences MS and PhD programs and may be expanded to include more graduates programs which would increase the range of perspectives further.

The final course requirement is the seminar course, which as mentioned above was introduced as a result of poor faculty involvement in our previously structured Division-wide seminar series and specific student input on how to fix the seminars. In these courses, each core has its own weekly seminar featuring either two students or an outside speaker presenting. When the students present, they are giving written and/or oral feedback by faculty and students. This prepares our students to give professional level research talks for when they attend conferences or give job talks. Students are required to attend throughout their time in the program and the course is graded. Faculty attendance is expected.

The remaining course requirements are 3 credits of coursework that can be satisfied by courses from an extensive list offered either in our program or by other departments on campus. Approved lists of elective courses are provided on the program website. Faculty in the program provide a number of elective courses. The Division has relative strength in analytical chemistry and natural product chemistry, thus there is a course in mass spectrometry
techniques and applications, as well as an NMR structure and natural product biosynthesis course. The Delivery core provides a number of elective courses that provide content that is unique to campus in the areas of polymeric drug delivery, molecular solids, and noncovalent molecular interactions. Most elective courses are offered in alternate years to bolster enrollment numbers and while understandable, this can complicate student planning when they are expected to complete course requirements in two years. Proposals to make more of these courses required for the PhD have received mixed review, again due to the breadth of the research areas in our Division. Many students are encouraged/required by their PIs to take coursework in other departments due to its direct application to their thesis research. Thus, the addition of more program based coursework is seen as superfluous to those faculty whose research areas are further removed from the core principles of pharmaceutical science. Alternatively, many students and faculty stress the importance of pharmaceutical science coursework to bolster fundamental training in the field for which the degree is based. Employers may expect such training when making hiring decisions. This brief synopsis describes the essence of the parameters of most faculty discussions of the curriculum.

PhD-Pharmaceutical Sciences
Minimum credits: 51

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<tr>
<th>CODE</th>
<th>TITLE</th>
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<tbody>
<tr>
<td>PHM SCI 780</td>
<td>Principles of Pharmaceutical Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Select at least two of the following core courses:</td>
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<tr>
<td>PHM SCI 768</td>
<td>Pharmacokinetics</td>
<td></td>
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<tr>
<td>PHM SCI 786</td>
<td>Natural Product Synthesis, Biosynthesis and Drug Discovery</td>
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<tr>
<td>BIOCHEM/PHMCOL-M/ZOOLOGY 630</td>
<td>Cellular Signal Transduction Mechanisms</td>
<td></td>
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<tr>
<td>Research ethics/responsible conduct of research course</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Three additional credits from the Drug Action, Drug Delivery, or Drug Discovery elective lists are required (courses meeting this requirement are listed in the Pharmaceutical Sciences Graduate Handbook)</td>
<td>3</td>
<td></td>
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<tr>
<td>Complete a Research course (PHM SCI 718-PHM SCI 990)</td>
<td>1-12</td>
<td></td>
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<tr>
<td>PHM SCI 931</td>
<td>Pharmaceutical Sciences Seminar (required every fall term)</td>
<td>1</td>
</tr>
<tr>
<td>PHM SCI 932</td>
<td>Pharmaceutical Sciences Seminar (required every spring during enrollment as a graduate student in the program)</td>
<td>1</td>
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**Program Learning Goals.** The learning goals for the PhD degree are deliberately broad to reflect the inherent breadth of the curriculum and research areas. Our overall goal is produce independent critical thinkers who can communicate the importance of their work and rigorously justify their methodology and results to address knowledge gaps in their field and make significant research contributions. The learning goals stated here are broadly worded but can each be assessed by specific metrics that we already have in place to ensure rigorous training.

- **PhD (and MS) Pharmaceutical Sciences Program Learning Goals**
  1. Demonstrate critical knowledge and in-depth understanding of principles in Pharmaceutical Sciences as well as the student's specific area of expertise.
  2. Identify important research questions, formulate testable hypotheses, and design experiments to test those hypotheses.
  3. Conduct original research that contributes to the student's field of study.
  4. Communicate scientific knowledge and research results effectively to a range of audiences.
  5. Demonstrates breadth within their learning experiences.
  6. Advances contributions of the field of study to society.
  7. Apply ethical principles in conducting scientific research.

**Preliminary Examination.** The program expects students to finish coursework and take their preliminary examination by the end of the summer of their second year. There is no qualifying exam; therefore, outside of courses, the preliminary exam is the major hurdle to the student's advancement to dissertator status. The prelim in Pharmaceutical Sciences consists of two parts: (i) a 3-page written synopsis of the student's research progress to date and (ii) an independently prepared research proposal similar to an NIH predoctoral fellowship proposal. These documents serve as content for a presentation to the thesis committee, during which the committee examines the student's ability to answer questions and defend the proposal. The proposal can either be based on the students thesis research or be in an area that is independent of the students thesis research. This decision is at the discretion of the PI and reflects differences in culture between the more physical and biological sciences. The results of the preliminary exam are either a pass, a pass with written revisions required, or a fail. If the student fails, they can be given a chance to retake the prelim at a later date. Alternatively, a fail can result in a student being asked to leave the program, with the option of earning an MS degree by preparing a short thesis and defending that document, given satisfactory course performance and a suitable number of credits earned. Currently, preliminary exam pass rates in the program exceed 90%.
**Annual Review Meetings.** Our students are required to assemble a thesis committee in the spring of their first year and meet with their committees by the end of their first summer. The makeup of the committee includes their advisor, two additional Division or affiliate faculty and one faculty member from a different academic unit. Non graduate faculty are also permitted as stated in Graduate School Thesis committee guidelines. In the student's second year they will take their preliminary exam with this committee, and once they become a dissertator, they will meet annually with their committee until they defend their PhD thesis. These meetings are mandatory and written feedback is required for submission to the GPC. The Program Director reads these reports to obtain documentation that each student is making satisfactory progress toward their degree.

In cases where progress is unsatisfactory, the Program Director will discuss the issues with both the advisor and student to attempt to rectify the situation. For the rare cases which result in the termination of the student-advisor relationship, the Program Director will offer to mediate transition for the student. Outcomes in such a situation are discussed further in section E on student advising.

The program views the role of the thesis committee as providing technical support for the student's research efforts and assessment of the student's ability to successfully complete the program. However, just as important is the committee's role in providing additional mentoring; thus, it can be an additional source of support and ideas for the student's professional development as well as a potential buffer in the student-advisor relationship. The recent development of the use of Individual Development Plans and the broadening of training of PhD students require more active involvement of the thesis committee and annual meetings provide an important forum to discuss the strengths and weaknesses of the student in relation to their career goals. However, it is up to the student to take optimal advantage of the committee as a resource and we encourage students to do so at the first student orientation as well as throughout their time in the program.

**Program Timeline.** The figure below taken from our recruiting presentation shows the overall average program timeline in terms of the sequencing of rotations, coursework, preliminary examination, annual committee meetings and thesis defense. As will be discussed in Section G, the time to degree for the PhD is close to the campus average and reflects the range of student research areas in our program that span the physical and biological sciences.
C. Program Assessment and Evaluation

The Program’s Assessment Plan is found in Appendix item C1 and the latest assessment report is found in Appendix item C2. As this was the first year of formal annual program assessment, the program chose to formally assess one learning outcome. Learning outcome #7 - Apply ethical principles in conducting scientific research, was analyzed in terms of discussion of the tools in place and whether they are appropriate to properly assess this learning goal. The most important assessment of this goal is our didactic course in research ethics (726-800), which is taken by most students in the program. The course is extremely popular among the students and taught by a faculty member who has extensive experience in teaching the material. A mixture of students in the PharmSci and Clinical Translational Sciences programs currently take the course and evaluations of the course, instructor and TA are very positive. Most faculty agree that this course is an important part of our graduate program, although course quality will be highly dependent on faculty who are willing to engage with students to stress the importance of the material. For example, we have had issues in the past with academic integrity involving plagiarism, which we dealt with directly and severely. In addition to student orientation, this course is an ideal platform for dealing with such issues through case-based discussion. All of our students met the assessment criteria for this learning outcome when the course was last offered in fall 2016.

An additional assessment tool for this learning goal is the quality of the research done in terms of responsible conduct. This can be partly assessed by looking at the quality of research via the thesis documents produced by our students. Recently, we noticed another instance of academic misconduct in the writing of a PhD thesis, as well as in coursework.
Preventing such instances requires constant vigilance, and we have instituted a policy in which students provide a copy of their thesis to the program director in addition to the thesis committee before the dissertation defense.

The results of these assessments for learning goal #7 were discussed and approved at the first faculty meeting in the fall of 2017. This approach will be taken going forward as applied to all learning goals in future years, in agreement with guidelines provided by the Graduate School and Provost's office.

In general, aspects of the graduate program are discussed throughout the year in regular faculty meetings. Recruiting has been by far the most popular topic of discussion in these meetings, as we constantly strive to improve the quality and diversity of our incoming students. Other topics arise on an as needed basis, and include refreshers on how students are funded, changes in program requirements, and compliance with annual review meetings and other popular policies. In general, faculty are engaged about the program, and the discussion is animated by the fact that the Division is extremely broad, spanning disciplines (and cultures) as disparate as synthetic organic chemistry, physical chemistry, cancer biology, and bioengineering. Consensus building can be blood sport in our Division, and the danger is to end up with a policy that displeases everyone, but the overall trend is to provide both increased feedback to the students and frequent scrutiny and responsiveness of our program to meet the changing needs of the students for successful career outcomes.

Closing the Assessment Loop - Future Challenges in Training PharmSci PhDs

We are constantly reflecting on the experience of our students in our program and striving to improve it. Exit surveys by the Graduate School (see Appendix item F2) indicate that 80% of our graduates would recommend our program, while the most cited criticism is the need for more advising on career opportunities. (This is also the most popular critique of graduate students in all programs at UW) The School is fortunate to have a Board of Visitors, (https://pharmacy.wisc.edu/about/office-of-dean/board-of-visitors/) which is an external advisory group made up of alumni/stakeholders who have had successful careers in the pharmaceutical industry or in pharmacy practice. Many members are alumni of our PhD program. The groups convenes at the School every 6 months to receive updates on the 'State of the School' and to provide feedback to faculty and students. Part of that feedback involves discussion of what our graduate programs can do to better equip the students for future success. The topics are wide ranging, but often focus on skills such as project management, risk assessment, leadership and communication skills, etc., that fit into the growing trend of 'broadening' PhD training to provide graduates with skills for increased flexibility in the workforce. As our recent student-run professional development retreat showed, our graduates are involved in a wide variety of occupations after they receive their PhD training, and the Board of Visitors often emphasize the evolution in training that is necessary to keep up with these trends to properly equip our students for future success.

Current discussions in our Division on this movement to broaden PhD training focus on the (in)ability of faculty in our program to provide such content as well as finding the proper balance of a graduate student's time between research, coursework, and professional development activities. It is possible we can tap into our extensive alumni network to
provide extended content in the form of workshops, seminars or short courses, the latter of which is currently provided by our Division of Pharmacy Professional Development (DPPD) in the School. This group has recently agreed to offer their industrial short courses on topics such as ADME training, pharmaceutical analysis, regulatory, early formulation techniques and other topics at a reduced cost to our graduate students. Many of these topics lie outside the range of expertise of our faculty, due to the mismatch between federally funded research priorities and techniques that are seen as fundamental to pharmaceutical scientists. Another possible solution is to incorporate more of this material in our introductory 780 course in order to expose all of our students to more industrial drug development content. The content would likely be provided in part by PhD alumni in industry. Keeping the cost and time required to a reasonable level is likely a key factor to get buy-in from both faculty as well as students.
D. Recruiting, Admissions, and Enrollment

Note: The major source of data for this section can be accessed interactively for all programs as well as Division wide and campus wide student populations. See the Graduate Workbook at:

https://dataviz.wisc.edu/views/GraduateSchoolExplorer/HomePage?%3Aembed=y&%3Adisplay_count=no&%3AshowAppBanner=false&%3AshowShareOptions=true&%3AshowVizHome=no

Enrollment. As shown in the graph below, total current enrollment (58 students) in the Pharmaceutical Sciences PhD program is at an all time high, and approximately 20% above the running average (48) of enrolled students for the past ten years. This number will be 60 in the fall of 2018 because we accepted an entering class of 14 for fall of 2018 while we graduated 12 students.

![Pharmaceutical Sciences Enrollment Trend](image)

The reason for the increase in enrollment is a particularly successful recruiting year for the class that entered in the fall of 2017 as the result of changes in our recruiting approach. We made changes in the way we admitted students which resulted in more overall offers in an effort to increase the number of domestic student acceptances, both from majority and minority groups. This effort resulted in 17 students in the entering class that year, nearly double the average. The School was able to support all students without difficulty this year (largely due to a buildup of donor funds and increased fundraising success). We were also able to place the students into laboratories with only some minor strain. In addition to the size, the demographic mix of this class was close to what we would consider ideal. Of the 17 students, 12 were domestic, 5 international, 9 female, 8 male, and 4 URM students. The answer to the question of whether the program can support class sizes this large on a regular basis is likely no, however, so we tried to moderate our number of offers this spring for the class entering in fall of 2018. That resulted in a somewhat smaller entering class of 14, with demographics that are not as optimal in terms of URM and domestic recruiting. We are always refining the process. There are obviously many variables in recruiting from year to year, so we are not sure exactly what the reasons are for specific successes or failures. The admissions committee and faculty as
a whole are constantly discussing ways to make the process more successful, not just in terms of numbers but in quality and fit of our entering students.

**Recruiting Methods.** Our typical recruiting method has been to bring in a large cohort of about 20-25 domestic students and interview them during a single recruiting weekend in mid-February to show them the range of research in our program and the university as a whole. These students are selected by the admissions committee, made up of about eight faculty, who are a mixture of both junior and senior level from our Division. Letters of invite are sent out to students asking them to interview during the specific weekend in February (for program see Appendix item D1). On the Thursday evening of this itinerary, the visiting students are invited for an informal reception and dinner with current students at the Madison downtown hotel where they are staying. On Friday of the visit, students are treated to an overview of the program from the Program Director, then have a number of (typically) one-on-one faculty visits, lunch, student tours, student panel discussions, an inspiring talk from one of our alumni, an afternoon poster session with awards and refreshments, and finally dinner and informal time with faculty and current students. On Saturday, current students from the student recruiting committee show the visiting recruits the campus and the city of Madison. We survey written input from all of the faculty and students about each visiting student and the admissions committee meets one week after the visit to decide on offers and to rank students for the type of offer. We have limited fellowship dollars, so we currently offer our top recruits full year fellowships, while the rest of the students are offered one semester of fellowships and one semester of TA support. As mentioned, donor-sponsored fellowship dollars are increasing, and we hope these funds will help us better land our top recruits, although it’s not clear that there is a strong correlation between the type of offer and matriculation. The Dean has supported two straight years of stipend increases (from $24,000 to $26,000) which also improves our offers (as well as student climate). We also use a combination of both campus and donor funds to provide 'signing bonuses'/transitional funds, to help students with financial issues during their transition to graduate school. Stipend levels for campus and national peer programs can be found in Appendix items J1-J3.

One of the many challenges of recruiting graduate students to our program is that the breadth of research in our Division spans many of the scientific disciplines found at an entire large research university. With this breadth of research comes a similar breadth in the culture of student recruiting. For example, chemistry programs give out offers to students directly without interviews, then invite the students to visit, while biological programs typically interview applicants before extending offers. We are often competing not only with other Pharmaceutical Sciences programs in the U.S., but also the ‘pure’ science departments, such as Chemistry, Biochemistry, Neuroscience, Chemical and Biomedical Engineering, Microbiology, etc. This puts us at a disadvantage, especially because many students are not familiar with Pharmaceutical Sciences as an advanced degree program and have never taken a course in medicinal chemistry, pharmacology or pharmaceutics. Thus, we tend to attract a certain proportion of students who are adding our program to a basket of these other pure discipline programs.

Because of this competition, and a particularly dismal recruiting year in 2015-16 (7 total students, 2 domestic), we decided in 2016-17 to try giving offers without interviews to our top
15 domestic students based on the usual range of metrics the committee uses to decide on admission. These include GPA, research experience, personal statement, letters of recommendation, and GRE scores. This allowed us to nearly double the number of domestic student offers from 17 in 2016 to 33 in 2017, which resulted in an increase in domestic students enrolling from 3 (18%) to 12 (36%). While we are careful not to overanalyze one good year, this approach certainly allows us to increase offers to domestic students. Additionally, we usually struggle to capture any of our top 10 recruited students in a given year. In 2017, we gave full year fellowship offers to our top 15 students without interviews and 4 of those students accepted our offers which was much better. However, this year (2018) only 1 of 12 such students offered admission, while 50% of the remaining domestic student offers were accepted. We are eager to see how the quality of these two classes compares with previous cohorts in terms of time to degree, productivity and placement. Hopefully we are still identifying students who are a good match to our program. We are constantly assessing our recruiting practices and will make adjustments as best we can. The negatives of this new approach are that we have two recruiting cohorts - those with offers up front and those who are required to interview. Some faculty are uncomfortable with this approach and certainly we cannot have the two groups of students visits at the same time. This requires us to offer different visiting dates for those students with offers. Since they are often most in demand during recruiting season, it has been resource intensive to find dates and set up visits for what becomes multiple smaller groups of students. It’s also not clear if this practice is affecting climate in the program. In the future, we may have to expand to two interview weekends to properly support our increase in domestic offers, something we have been hesitant to do in the past.

**Recruiting Data and Trends.** The table below provided by the Graduate School shows the recruiting data (admissions, acceptances, enrollment) for our PhD program from 2007-2017.
Application and Enrollment Data for All PharmSci PhD Applicants By Year 2007-2017

This data shows that our overall number of applications in recent years are the highest we've seen and are remaining at that level, unlike for grad programs overall which have dipped recently. As mentioned we've recently significantly increased our number of offers. The percentage of students who accept our offers has not changed significantly (about 40% acceptance overall), which is a similar rate to campus programs overall but less than biological programs which average ca. 50%. So the net effect of our giving some offers without interviews appears to mostly be a simple result of allowing us to give out an increased number of offers by not having to schedule interview visits up front for all students before our offer decisions are made.

International Student Recruiting. Unlike most programs at UW, we have a high percentage of international students - typically 55-60%, compared to graduate programs on campus overall (~15%). We have a number of faculty who received their undergraduate education in China and who are knowledgeable about the top universities in China. Thus, they are able to accurately analyze applications from Chinese students and identify the top students. They are also familiar with faculty at these institutions who are writing letters for the applicants. Most of the successful Chinese applicants to our program have a first author publication in a Western journal and many have a M.S. degree. India is another source of students for whom we have faculty expertise in recruiting. We cannot afford to invite these students to visit, so for the past 4-5 years we have been Skype-interviewing international students. Typically an admissions subcommittee of 3-4 faculty will interview approximately 20 students and we will make an average of 6-12 offers of which 4-7 will be accepted. Those international students who decline our offers often end up at top universities. Recently, students who declined our offers have are attending Scripps (La Jolla), Northwestern, UPenn, Michigan, and North Carolina. As the graph below illustrates, we typically accept 10% or less of our international applicants and get over 50% of our offers accepted, although this number is not as high as in recent years. Our competition is getting tougher and the students we interview usually have multiple offers from highly regarded graduate programs in the U.S. In terms of performance, our international students are top notch, often finishing their degree in a shorter amount of time than our domestic students with a high number of first author papers and they find excellent jobs either in pharmaceutical industry here in the U.S. or postdoctoral positions, or academic positions in China. The downside of having a large proportion of international students is that they are ineligible for most predoctoral fellowships and thus must be supported by research grants or by TAs. We try to make sure the communication skills of our international TAs are suitable by using the campus SPEAK test mechanism for assessment. We assign students who do not perform satisfactorily to ESL courses on campus.
URM Recruiting and Retention. The Program has made significant progress in the recruiting of students from underrepresented groups. The figure below shows data from the Graduate School for the last ten years. In particular, last year was relatively strong - we had a good number of applicants and also found many of these students to be a good fit for our program. We were fortunately able to attract these students as 4 of the 6 offers were accepted. Three of the four are currently on either fellowship or training grant support. We have benefitted from collaborations with multiple groups on campus, including Dr. Theresa Duello, SciMed GRS leadership, the BOPS collaborative recruiting program, and other graduate programs such as MCP and CMB who are committed to recruiting a diverse student population. The sharing of best practices and student information for those interested in our program has been an invaluable resource for contacting students who already have expressed an interest in us.

Retention efforts need to be in place for all students but particularly for students from minority groups who may feel less comfortable in their work environment. We currently monitor all of our students in terms of progress in coursework and rotations. In addition, the School recently conducted a fairly comprehensive climate survey of all students, in which responses from the School's graduate students has been separately identified and analyzed. Discussion of this data is included in Section F of this self-study. The PhD completion rate for our URM students during 2007-2015 is similar but slightly lower (80% either completed or still enrolled) compared to all students in our program (86%), although the numbers of URM students are small so the comparison can be skewed by one or two outliers. We continue to add content to our orientation and meetings of the Program Director with the students to stress the importance of an inclusive work environment. These efforts are matched by the School overall and are fully supported by the Dean.
E. Advising and Student Support

Advising for Entering Students

When students arrive in the fall of their first year, the program assigns a temporary faculty advisor to guide each student through the program in the first semester or until they choose a thesis advisor. Temporary advisors are chosen based on enthusiasm of faculty members to serve in this role and in some cases specific students are matched if requested by the faculty although we do not attempt to match advisors based on research interests because that is the role of the research rotations. Graduate student peer mentors are also assigned: they can answer questions on housing, transportation, student activities and other topics in which faculty are not as knowledgeable. The GPC and Program Director are additional resources of program information and general advising during this time.

During orientation, the students receive comprehensive information on the appropriate timeline for success in the program, as well as the general skills and habits that make for a successful graduate student. Questions such as work hours, specific breakdown of activities, etc. are obviously varied depending on the culture of each laboratory; however, some general advice common to success in graduate school can be disseminated early and often. These include time management skills, setting goals, taking responsibility for one's progress, seeking advice and additional mentors, attending seminars, reading the literature, and contributing to a positive work environment. Such good habits are initially relayed at orientation and then reinforced in annual meetings of each class with the Program Director. These annual meetings with the Program Director were initiated in the spring of 2017.
Advising Resources for Continuing Students

Once a student has joined a research group, generally by the end of the fall semester in the first year, the thesis advisor should play a major role in advising, in addition to senior graduate students in the research lab. In addition, the program coordinator is always available for consultation. Our GPC, Ken Niemeyer, recently won the 2017-18 staff award for support of international students from the UW ISS; moreover in our most recent PhD student survey, nearly 95% of the students found advising in the program to be 'good to excellent' vs 87% of graduate students at UW overall (p. 3 of graduate exit surveys listed in Appendix item F2).

Thus, we are fortunate to have such excellent advising support for our students. A great deal of “virtual” career resources are maintained online by the GPC via “BOX” technology and alumni are increasing taking a role in connecting with current students (e.g. LinkedIn). There is a healthy peer-to-peer advising culture in the AAPS organization focused on professional development, socialization, and careers. Further, our student handbook (http://www.pharmacy.wisc.edu/graduate-handbook-pharmaceutical-sciences/) is also a source of information and is a constantly updated 'living' document. The handbook includes information on program requirements, deadlines, fillable forms, as well as contact information for who to see in case of disputes or incident reporting.

Monitoring of student progress is also a forum for advising, in this case by the student's thesis committee. Program leadership has tried to instill a culture of broadening the advisory role of students to include the entire thesis committee instead of having students beholden solely to their thesis advisor. In practice, this is more complicated, but annual review meetings between the students and their thesis committees are mandatory and while compliance took time, it is currently > 95%. These annual reviews include forms that provide written feedback for the student and are reviewed by the Program Director to look for disconnects between student and advisor expectations.

While many students maintain Individual Development Plans, the program does not currently have a mechanism to require these plans, although the students are strongly encouraged to prepare one. They have been added to the Student Handbook and the benefits are discussed in annual meetings of each class with the Program Director. A line item has also been added to the Annual Review form to encourage students not only to prepare a plan but also discuss aspects of their strengths and weaknesses with their committees during their annual meeting.

Student - Advisor Issues

Like most graduate programs, there are instances when students find that their relationship with their thesis advisor is less than optimal for their continued progress toward their PhD. Such breakdowns in the advisor-advisee relationship can occur for multiple reasons. The program tries to educate the students about choosing mentors and research labs in terms of compatibility, and also lists steps to resolve disputes when the relationship breaks down. These steps include approaching the Program Director or GPC, as well as the Division Chair. These resources of course may not be seen as objective by students. Thus, additional resources are listed as preferable options, such as the campus Ombuds office or the Dean of Students office in cases of harassment or bias. The Program Director has been involved in arbitration of disputes between students and advisors with a range in outcomes and thus has experience
advising students on their options per Graduate School policies on the nature of the student advisor relationship.

Because the student advisor relationship can be terminated by either party, a general (unwritten) policy is in place to support students who find themselves without an advisor through no fault of their own, and who wish to continue in the program. The reasons for this situation vary considerably, and on average about one student per class at some point in their career will switch advisors. Most cases involve the moving of faculty to a different institution. Many times students will remain in Madison and wish to work for a different advisor and remain in the program. Our policy is to provide stipend support for the student while the transition takes place. The typical timeframe for such support is one semester and the student is advised to actively seek a new advisor as quickly as reasonably possible. The Program Director assumes the role of temporary advisor during this period. If the student wishes to join a lab within the program there are no stipulations; however, if the student wishes to join a lab outside the Pharmaceutical Sciences Division Faculty (and Affiliate Faculty), then the new advisor must be able to provide stipend support for the duration of the students time in the lab until they obtain their degree. Cases in which the student is leaving a laboratory voluntarily due to issues that are not related to a faculty move are very rare, and the policy of School support in such instances needs to be more closely examined. In such cases, students likely realize this and set up arrangements with another laboratory in advance. Clearly, such arrangements are detrimental to the goals of the program and are discouraged.
F. Program Community and Climate

Efforts to Enhance Climate Among Students and Faculty in Program. The program spends significant resources towards the recruitment of a diverse group of graduate students. The Program Director is currently in his tenth year in the position and has made considerable progress learning about strategies to recruit students from all backgrounds to study at Wisconsin. Much of this learning was through collaboration with campus partners and attending conferences targeted to undergraduates from underrepresented groups. Examples are the national research meetings (e.g., ABRCMS, ChOPS and SACNAS), as well as summer research/recruiting programs initiated at UW (BOPS, SROP). The Program Director has served on the Faculty Advisory Board for the SciMed Graduate Research Scholars community for 8 years. This program provides fellowship and tuition support and professional development activities and community to an ever increasing cohort of underrepresented minority graduate students on campus. In addition, both the Program Director and GPC have attended numerous lectures and workshops concerning best practices in recruiting, retaining and providing a positive climate for a diverse student population.

Success in recruiting a diverse student population must be followed up by significant efforts at student retention by creating and maintaining a positive workplace climate. As shown in the insert below, our recent climate survey results are positive overall (see Appendix item F1 for full survey), in that an overwhelming majority of our students feel that the program treats students with respect and creates a welcoming work environment. However, such data can often obscure unsatisfactory responses from a minority group. Thus, while a majority group will respond that everything is fine and there are no serious issues, members of minority

One third of graduate students in the School of Pharmacy have experienced or witnessed discrimination in the School.
populations may see things much differently, yet their responses will be minimized in the overall assessment. In our survey, for example, nearly one third of the graduate students responding have personally witnessed discrimination and a similar number feel wary of speaking out about the behavior of students or faculty/staff due to concerns about subsequent treatment. This indicates that more work should be done to create a positive climate and also to instill in all students that they are able to voice concerns without fear of recrimination, and moreover, that we will take their concerns seriously.

We are committed to doing everything we can to foster a positive work environment. This idea of positive climate and acceptance is introduced to the students during orientation and reinforced during annual meetings with the Program Director. (It should be noted that the climate survey was taken in 2016 and the annual class meetings with the Program Director began in 2017). The initial goal of improving climate is raising awareness that most, if not all of us, have unconscious biases that are the result of inexperience interacting with groups or individuals with whom we are unaccustomed to interacting. Acceptance of this simple fact can lead to a greater level of sensitivity when interacting with others and hopefully create a more positive climate, in which differences can be shared without judgement and ignorance can be treated with open discussion and education equally without judgement. It is often difficult to get groups to discuss diversity and bias openly. The Program Director has attempted this in annual meetings with students but frankly with little success. Eyes widen and mouths close. Future efforts will be to leave that to the professionals and employ campus workshops on unconscious bias and effective communication and conflict resolution that are more involved than the 20 minute overview we currently offer during student orientation. It’s not clear that these efforts will result in a magically welcoming environment, and it’s also not clear we have more issues in this area than the average graduate program but more effort in this area could be helpful.

School Climate. One issue that is not part of the mission of the graduate program per se, is the recruiting of a diverse faculty and staff. In general, this has been a more difficult and underappreciated problem for our School, and has been mentioned by students in past surveys and town hall type meetings. In the PharmSci Division, of the 25 regular faculty and 8 affiliate faculty, none are members of unrepresented groups. Of the approximately 100 members of academic and non-academic staff in the School overall, only three could be identified as such, although gender and international diversity is improving in some areas. The current numbers certainly do not help our domestic targeted student recruiting because a simple scan of the faculty and staff by a visiting perspective student would indicate that diversity is not a priority in our School. There are obvious challenges due to local demographics of the state and pipeline issues in faculty hiring but more effort in diverse hiring practices are likely warranted and could also help in successful recruiting of a more diverse student body.

From an overall School climate perspective, the Dean is committed to both educational efforts to promote a positive work environment as well as supporting more social activities that bring students, faculty and staff together. Graduate students in particular are appreciative of such efforts and most if not all faculty welcome opportunities to interact with students in informal settings. There are a number of such opportunities currently. These include weekly seminars, annual recruiting events, Division and student led research retreats, the annual
student awards ceremony and other events that are purely social. Many of the program faculty are regular attendees at such events and collegiality is a noted reason many students give for why they joined our program. Our task is simply to make sure these events are inclusive and respectful and a positive experience for everyone.

G. Degree Completion and Time to Degree

Degree Completion. The table below tabulates the current data from the Graduate School Data Workbook for degree completion rates for students in our program relative to campus at large (2007-2015 cohorts). In every student category measured, we have significantly better completion rates relative to UW students overall. A significant driver is the strong completion rates for our international student population of over 90%, although every category is over 80%. This data is a strong testament to our student advising as well as the commitment of our faculty as trainers of graduate students. Specific reasons students give who have left our program are nearly always personal, and include illness, relationships, etc. or if a faulty member leaves for another institution. In the latter cases, students usually stay in Madison and find another advisor in our program. Thus, we think the degree completion data reflects that students are pleased with the training and are receiving sufficient mentoring to complete the degree requirements. This is also supported by the PhD exit survey results from the graduate school that over 80% of our students say the program is very good or excellent (98% if you include 'good') and would recommend our program to other students (Appendix item F2)

<table>
<thead>
<tr>
<th>Cohort</th>
<th>%Graduated with PhD/Still Enrolled</th>
<th>%Left program with M.S.</th>
<th>%Left program without degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>PharmSci Students All</td>
<td>88.3</td>
<td>7.4</td>
<td>4.3</td>
</tr>
<tr>
<td>All UW Students</td>
<td>74</td>
<td>15.2</td>
<td>10.8</td>
</tr>
<tr>
<td>PharmSci URM</td>
<td>80</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>All UW URM</td>
<td>68.5</td>
<td>15.3</td>
<td>16.2</td>
</tr>
<tr>
<td>PharmSci Internat.</td>
<td>90.9</td>
<td>5.5</td>
<td>3.6</td>
</tr>
<tr>
<td>All UW Internat.</td>
<td>77</td>
<td>14.2</td>
<td>8.8</td>
</tr>
<tr>
<td>PharmSci Domestic Non-URM</td>
<td>85.3</td>
<td>11.8</td>
<td>2.9</td>
</tr>
<tr>
<td>All UW Domestic Non-URM</td>
<td>73.2</td>
<td>15.7</td>
<td>11.1</td>
</tr>
<tr>
<td>PharmSci Female</td>
<td>85</td>
<td>10</td>
<td>5</td>
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</table>
Time to Degree. The table and graphs below show time to degree data for our PhD cohorts graduating in the period 2009-2017. We are highly interested in this data and have compiled our own detailed data that includes the graduation time for each of our students (see Appendix item G1 for full data on 67 recent graduates). The mean time to degree in our analysis is 5.16 years for PhD completion. This number is in line with the campus average as well as the AAU national peer average. Since we harbor the full range of disciplines, including physical sciences, where times to degree are typically shorter, to biological sciences where they are longer, we should be comparable to graduate student STEM populations overall. This seems to be the case. Time to degree from one of our recent cohorts shown below (2015-17) shows an increased number of about 5.5 years, but we’re not sure that this is cause for concern. Our entering class of five students in 2010 was an outlier and had an average time to degree of 5.9 years. All other classes in the last ten years have finished in an average of 5.2 years or less.

Time to degree for targeted domestic (URM) students is omitted for unknown reasons in the Graduate School table below from 2017. We had three URM students graduate with their PhD from 2015-17 with times to degree of 3.75, 4.33 and 5.25 (mean = 4.4). Thus, our recent targeted minority graduates have been stellar in terms of this metric. Certainly, between the low number of required courses in our program, the timing of the prelim requirement, and the increased funding resources, it would be difficult to find additional measures at the program level to further shorten our students’ time to degree.

<table>
<thead>
<tr>
<th>Median Time to Degree for Degree Recipients + ++</th>
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<tbody>
<tr>
<td>2009-11</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Domestic Non-Targeted</td>
</tr>
<tr>
<td>Domestic Targeted Minorities</td>
</tr>
<tr>
<td>International</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Male</td>
</tr>
</tbody>
</table>
Time to Degree Data from GradSchool Workbook for All PharmSci Students 2008-2017

Time to Degree Data from GradSchool Workbook for URM PharmSci Students 2008-2017

Graduate School Time to Degree: 2008-2017
Time to Degree Data from GradSchool Workbook for International PharmSci Students 2008-2017
H. Career Services and Post-Graduation Outcomes

Placement Data. The program has trained 74 PhD graduates in the last decade (those earning degrees Aug 2009-Aug 2018, inclusive). The program has tracked initial post-PhD positions for these alumni (see Appendix item H2), and various scientist titles in industry are the most common placement, accounting for 34 graduates (~46%). This includes first employers from the pharmaceutical or biotechnology industries (18 graduates; ~24%) such as Abbott, AbbVie, Amgen, Arrowhead Pharmaceuticals, Boehringer Ingelheim, Covidien, Genencor, Genentech, Gilead Sciences, Merck (6 graduates), Mylan, Pfizer, and Upsher-Smith Laboratories. Positions in “other” varied industries (involving mainly scientific titles, as well as toxicity roles, scientific marketing/business and regulatory) capture another 10 graduates (~14%), including biomaterials, chemical, consumer products, cosmetic, and healthcare firms (including 3M, Baxter Healthcare, Dow Chemical, Fontarome Chemical, HEC Group; Kimberly Clark Corporation, L’Oreal, Mendel Biological Solutions, SK Chemical, and ThermoFisher Scientific). Six (6) graduates (~8%) found first post-PhD employment in contract research/manufacturing companies, including Pharmaceutical Product Development (PPD) (5 graduates) and Patheon. 

Postdoctoral positions in academia account for initial post-PhD placement for 30 of the 74 graduates (~41%). Postdoctoral employers include Baylor, Duke, ETH Zurich, Harvard (2), Northeastern, Princeton, Scripps, Stanford, Texas-Austin, UCLA (2), UCSF (2), and the University of Washington. Five alumni have been employed by other departments at UW-
Madison, while four have continued in their Pharmaceutical Sciences advisor’s lab for a time, post-PhD, as a postdoc. Two (~3%) have secured postdoctoral work at **academic institutions outside of the United States.** Another four graduates (~5%) have secured **postdoctoral titles in industry** (Bioo Scientific; Invivo Sciences LLC; Merck) or **in government** (NIH-NINDS).

**Three graduates (~4%) have secured faculty positions** directly after their PhD experiences, at China Pharmaceutical University (PRC), Dalian University of Technology (PRC), and the St. Louis College of Pharmacy. **Among the remaining seven (7) graduates, we can describe diverse first-employers (and titles),** including Arbor Scientia (Medical Writer); UW-Madison’s Department of Chemistry (Research Data Scientist), the Wisconsin Alumni Research Foundation (Development Consultant). We have a graduate who gained a clinical chemistry fellowship at the University of Washington. One graduate is currently enrolled in the MD program at the University of Pennsylvania and one earned a law degree at the University of Houston following PhD completion. One May 2018 graduate is currently interviewing, seeking her first post-PhD position.

**Reflection of Outcomes on Program Goals.** Our mission is to train future scholars scientists and leaders in Pharmaceutical Sciences. Our placement data is supportive of a strong track record training future leaders in industry. This success provides a strong cohort of alumni working in leadership positions who can be advocates for the future success of our program. Current professional titles of Pharmaceutical Sciences PhD alumni, 2000-18, are presented in Appendix item H3. The bulk of alumni hold scientific titles of some type in industry and several have advanced to the “director” level at their employers. There is ample evidence of alumni venturing out of the strict research-and-development stereotype of scientific PhD graduates, though that R&D flavor is strongly represented. Examples include alumni working in corporate strategy, data science, engineering, labeling, quality control, regulatory affairs and writing roles. Not as many of our students end up as faculty in R1 institutions but many have secured teaching roles at universities. We feel the list provides a rich picture of the diversity of the career outcomes of our graduates.

**Career services.** From looking at campus PhD exit survey data, this is one area that graduate students most find lacking in their programs. In Pharmaceutical Sciences, the emphasis on application of core content to industry occurs early in the required curriculum. The first-semester core course, **PharmSci 780, Principles of Pharmaceutical Sciences,** introduces students to the language and organizational flow of the drug development process and includes lectures from those working in the field, including the Director of the School’s Zeeh Pharmaceutical Experiment (“Formulations”) Station and visiting scientists from the pharmaceutical industry. While only first-year students are formally enrolled in 780, these guest speakers are publicized and open to the entire graduate student population in the spirit of continually exposing our students to developments in the field. In the fall of 2018, the industrial bent to guest speakers will be complemented by an alumni speaker working as a FDA scientist. The latter speaker has intentionally been invited to bring information to graduate students who are interested in scientific roles in the federal government.

**Visiting seminar speakers,** which visit weekly during the academic year, consistently meet with students in small settings, such as lunch, where various topics of conversation can be
pursued, including that of the speaker’s career path and career recommendations. These speakers are typically from academia, but occasionally are from industry or other work environments. **Some seminar speaker selections are student-driven:** the student chapter of the American Association of Pharmaceutical Sciences (AAPS) invites an annual seminar speaker (who presents at a division-wide colloquia), and the Drug Action Core encourages graduate students enrolled in its seminar section to select a speaker annually, specific to that core.

**Alumni visiting the university.** PhD alumni on the School’s Board of Visitors or scientists who will be recognized for university honorary citations are often approached to hold “career roundtables” for graduate students coinciding with the days they are in Madison for these meetings/events. We folded distinguished alumni as featured speakers into our two most recent “Research Days” (a.k.a. February Graduate Recruiting weekend). The itinerary on these days have typically allowed the visiting alum/alumna to explore career topics and advice with current graduate students

The UW-Madison Chapter of the American Association of Pharmaceutical Sciences (AAPS) is thriving. Their activities are open to all UW Pharmaceutical Sciences students, though only some students formally join AAPS. The student chapter organizes two professional development “workshops” each academic year, one in the fall and one in the spring semester. These are focused on some aspect of professional development. Separately, AAPS organizes several career “roundtables” each academic year, to provide a Q&A venue for professionals of interest. **The Graduate Studies Office will be working to supplement the AAPS workshop and roundtable schedule in 2018/19,** organizing and funding professional development activities complementary and in addition to the AAPS schedule—we anticipate this mode of operation will be typical moving forward

While the School of Pharmacy does not have a formal Career Services Office, the SoP Graduate Coordinator does host employers for information sessions and interviews on occasion. Recent corporate recruiters connecting with the program in such a way include Pfizer, Celgene, and Merck. The program works with these recruiters to publicize their events and job opportunities to other graduate students on campus that are of interest to the company.

**Career Resources on Campus.** Pharmaceutical Sciences graduate students may utilize the resources of the UW’s College of Engineering Career Services Office (https://ecs.wisc.edu/), including professional staff that will review resumes and cover letters, and discuss job search strategies and topics like negotiation. Similarly, we have a close relationship with the Department of Chemistry’s Career Services Office, which is generously includes our students when it hosts employers or posts job opportunities. The recent change of the entire campus to the “Handshake” software for dealing with prospective student employers, job postings, campus employer-hosted events, etc. should improve this aspect of the student experience campus-wide.

In addition, we diligently direct students to various campus resources in professional development activities for career preparation. These include publicizing offerings from the Graduate School’s Office of Professional Development, the Discover PD tool that includes information of Individual Development Plan preparation and reporting, as well as the Delta Program for Teaching and the 'Future Faculty' series program for students who are interesting in academic careers. Many students in our program have participated in the Morgridge
Center's Entrepreneurial Bootcamp (https://bus.wisc.edu/degrees-programs/non-business-majors/morgridge-entrepreneurial-bootcamp), which is a one-week technology entrepreneurial workshop for STEM graduate students.

**Overall impression from recent graduates.** A table of survey data from the 2012-2017 graduates below show in addition to a favorable view of advising, our students are more happy with our ability to help them find employment compared to graduate students at UW overall. Nearly 90% of our students report receiving career advice from our program during their time here.

<table>
<thead>
<tr>
<th>Question</th>
<th>Excellent</th>
<th>Very Good</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>Response</th>
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<tr>
<td>Quality of academic advising and guidance</td>
<td>50.0%</td>
<td>25.0%</td>
<td>19.4%</td>
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<td>-</td>
<td>36</td>
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<tr>
<td>Assistance in finding employment</td>
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<td>16.7%</td>
<td>11.1%</td>
<td>5.6%</td>
<td>36</td>
</tr>
</tbody>
</table>

**Pharmaceutical Sciences:**

<table>
<thead>
<tr>
<th>Question</th>
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<th>Very Good</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of academic advising and guidance</td>
<td>41.5%</td>
<td>27.4%</td>
<td>17.7%</td>
<td>9.1%</td>
<td>4.3%</td>
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<tr>
<td>Assistance in finding employment</td>
<td>25.0%</td>
<td>24.3%</td>
<td>23.3%</td>
<td>17.0%</td>
<td>10.5%</td>
<td>3931</td>
</tr>
</tbody>
</table>

**I. Overall Analysis of the Self-Study and the State of the Program:**

**Program Strengths**

- The advising resources for the program are outstanding. The experience and capability of the program coordinator (GPC) is an outstanding attribute that enables students to receive timely and thorough information about program expectations as well as facilitate resources required for success in the program and securing employment after graduation.
- The graduation completion rates are excellent for all student subpopulations and time to degree is overall in line with peers (although there may be some recent lengthening that should be monitored)
- There has been a considerable increase in resources invested in recruiting to bring students in as well as professional development resources (travel awards, short courses etc.) to support them while they are here.
- There has been a significant increased commitment and success in recruiting students from underrepresented groups into the program.
- Connections with alumni of the program have been strengthened and are providing needed feedback to program leaders and students with mentoring opportunities and greater awareness of that they are part of extended community
- Strengthening of research cores, particularly the Medicinal Chemistry Center and its affiliation with the Carbone Cancer Center, the Analytical Instrumentation Center and
the Zeeh Pharmaceutical Station provide students with greater access to cutting edge technology to solve research problems at the boundaries of scientific disciplines

Areas for Improvement

• The required courses in the curriculum should be reevaluated to make sure the learning outcome of these courses in aggregate match the skills required of the students for the best career options
• The identity of the program should be further discussed by faculty in anticipation of increased branding and marketing efforts by the newly hired Assoc. Dean for Marketing and Communications
• Recent efforts to improve climate among the students, faculty and staff should be increased to promote an environment of mutual respect and freedom of expression. The Program Director should identify and implement trainings/discussion sessions on climate that are to be a required part of progression through the graduate program. A newly constructed Climate Committee will include representatives from the graduate programs and will report to the Assoc. Dean for Faculty Affairs as well as the Dean.
• Professional development opportunities in the program and on campus should be explicitly provided for students
• Improve resources for supporting the research and professional development of international students in the program
• Recent changes in recruiting practices will require diligent monitoring for effects on student placement, advising, mentoring as well as program climate

J. Funding

Overall Funding Promise to Students. The program in its offer letters to accepted students commits to funding all students for the entirety of their PhD study, provided they are in good academic standing. The mechanisms for funding during the first academic year include a combination of donor sponsored fellowships and TA support and the amount of each is specifically provided in the letters. The thesis advisors are responsible for student support beginning in the summer of the first year until the student files their PhD thesis and leaves the program. All students are paid the same recommended student stipend, which is currently $26,000 per year. At present, we have full compliance from the faculty on this recommendation. Stipend levels are generally set by the Dean and the Program Director and subsequently communicated to the faculty. Faculty retain the right to call for a discussion on stipend levels if deemed necessary. After a number of years of stagnant stipends, the program has been able to find the resources to raise the stipend during each of the last two years. These increases combined with increased donor funds for fellowships has allowed the program to provide more competitive offers with more fellowships and fewer TAs to our student recruits.

We also actively seek out training grant support from a variety of training grants who are open to our students. Our incoming students have been received awards from both the Biotechnology Training Grant and Chemical-Biology Interface Training Grant in recent years. We also apply annually for fellowships for our minority student recruits from the SciMed
Graduate Research Scholars program on campus and in recent years we've been able to offer 1-3 of these fellowships each year to our accepted URM students. Similar to campus training grants, the SciMed GRS fellowships involve a second calendar year of funding later in one’s graduate training.

**Typical Funding Breakdown and Recent Trends.** Our students are funded by a mixture of RA, TA, and PA appointments as well as external fellowship support. The table and figures below shows data from the Graduate School showing exact numbers and percentages of each funding mechanism from the last ten years. We tabulated the data ourselves for the last two years, but data to Fall 2017 is included in the graphs from the Graduate Workbook Data. The overall percentages of each funding mechanism have been broadly consistent over the last ten years. We currently have approximately 20 TA slots available in the fall and 17 in the spring. The exact numbers vary depending on demand as students from outside our program can be hired during periods of lower demand, or some lecture courses can split a single TA due to low workload. We have two stable project assistant (PA) lines in which students work in either the mass spectrometry or NMR laboratories to assist with running samples and instrument upkeep, as well as a pharmaceutical formulation laboratory (the Zeeh Pharmaceutical Station) that hires students as PAs occasionally. As mentioned, we are fortunate to have a member of our staff whose role in part is to assist students in identifying and preparing predoctoral fellowship applications. This has been instrumental in increasing the quality of our external fellowship support in the period since the last review. For example, we now regularly have multiple NSF predoctoral fellows (three currently), which is the most we've ever had. There are additional smaller fellowships that may not show up in the data, including American Foundation for Pharmaceutical Education (AFPE) that provides partial support for students in a given semester.
### Headcount of Students with an Appointment of 33% or Higher*

<table>
<thead>
<tr>
<th></th>
<th>Fall, 2006</th>
<th>Fall, 2007</th>
<th>Fall, 2008</th>
<th>Fall, 2009</th>
<th>Fall, 2010</th>
<th>Fall, 2011</th>
<th>Fall, 2012</th>
<th>Fall, 2013</th>
<th>Fall, 2014</th>
<th>Fall, 2015</th>
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<tr>
<td>Fellows</td>
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<td>13</td>
<td>8</td>
<td>16</td>
<td>10</td>
<td>8</td>
<td>10</td>
<td>13</td>
<td>18</td>
<td>12</td>
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<tr>
<td>Trainees</td>
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<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
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<td>14</td>
<td>12</td>
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<td>3</td>
<td>2</td>
<td>2</td>
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<td>49</td>
<td>46</td>
<td>44</td>
<td>46</td>
<td>51</td>
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</table>

### Percentage of Students with an Appointment of 33% or Higher*

<table>
<thead>
<tr>
<th></th>
<th>Fall, 2006</th>
<th>Fall, 2007</th>
<th>Fall, 2008</th>
<th>Fall, 2009</th>
<th>Fall, 2010</th>
<th>Fall, 2011</th>
<th>Fall, 2012</th>
<th>Fall, 2013</th>
<th>Fall, 2014</th>
<th>Fall, 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellows</td>
<td>27%</td>
<td>28%</td>
<td>17%</td>
<td>33%</td>
<td>20%</td>
<td>17%</td>
<td>23%</td>
<td>26%</td>
<td>35%</td>
<td>24%</td>
</tr>
<tr>
<td>Trainees</td>
<td>4%</td>
<td>4%</td>
<td>7%</td>
<td>4%</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Research Assistants</td>
<td>42%</td>
<td>36%</td>
<td>46%</td>
<td>23%</td>
<td>27%</td>
<td>35%</td>
<td>41%</td>
<td>41%</td>
<td>27%</td>
<td>39%</td>
</tr>
<tr>
<td>Teaching Assistants**</td>
<td>21%</td>
<td>30%</td>
<td>24%</td>
<td>33%</td>
<td>41%</td>
<td>30%</td>
<td>27%</td>
<td>22%</td>
<td>33%</td>
<td>29%</td>
</tr>
<tr>
<td>Project Assistants</td>
<td>2%</td>
<td>2%</td>
<td>4%</td>
<td>7%</td>
<td>5%</td>
<td>4%</td>
<td>2%</td>
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<td>6%</td>
<td>2%</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
<td>9%</td>
<td>2%</td>
<td>2%</td>
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<td></td>
</tr>
</tbody>
</table>

Percent of Full-Time Doctoral Students with First 4 Years Funded Through the University**: 98%

Percent of Full-Time Masters Students with First 2 Years Funded Through the University**: 100%

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**Funding Mechanisms for Pharmaceutical Sciences graduate students 2006-2015 (above) and 2016-18 (below).**

<table>
<thead>
<tr>
<th></th>
<th>Fall, 2016</th>
<th>Spring, 2017</th>
<th>Fall, 2017</th>
<th>Spring, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellows</td>
<td>8 (5)*</td>
<td>8 (5)</td>
<td>13 (4)</td>
<td>16 (4)</td>
</tr>
<tr>
<td>Trainees</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>RAs</td>
<td>15</td>
<td>17</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>TAs</td>
<td>18</td>
<td>15</td>
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<td>PAs</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>44</td>
<td>58</td>
<td>58</td>
</tr>
</tbody>
</table>

* = Externally funded fellowships (NSF, APFE, etc.)
Trends for the last two years have seen an increase in fellowships due to a very large recruiting class (17 students) in 2017, which was an unexpected but welcome surprise. Fortunately (and surprisingly to the Program Director...), we were able to meet the fiscal
demand of this large entering class due to the generosity of our alumni donors who have significantly increased their philanthropy in recent years. That combined with two smaller classes in 2015 and 2016 led to a buildup in funds to support the large first year class. Our most recent recruiting class for fall of 2018 is 14 students, which is again larger than the running average of about 11. There is some concern about pressures on TA support going forward but otherwise the demographics of more younger research active faculty in our program has provided ample demand to support the recent increase in student matriculation into our program. As mentioned earlier, the increase in our overall number of students going forward will have to be closely monitored as to funding mechanism as well as our ability to provide the same resources and placement assistance to ensure the same quality outcomes for our students.

**Teaching Assistant Assignment.** TA assignments are handled solely by the Program Director. There is some flexibility with the number of TAs such that in cases of increased demand, small overloads can be accommodated without the need for allotment quotas, algorithmic assignment policies, etc. In extreme cases, TA requests can be denied, at the discretion of the Program Director, usually with input from the Division Chair and Vice Chairs. Priority is given to junior faculty and for emergency bridge funding situations, as well as for faculty who have not requested TA support in the recent past. Typically, the program discourages students being assigned to TA after they are dissertators, although this is necessary in times of funding gaps or to fill TA slots that would otherwise be vacant. Because the workload is not particularly onerous for some of the courses, TA positions are often the most reasonable recourse to support senior students for whom there are no other funding options. We typically have 2-3 senior students per semester who are assigned TAs for the reasons above. The positive aspect of having senior students TA is that they are often experienced and more helpful to both students and faculty in terms of course support. TA support is based on request and not allotted a priori to faculty. For this reason, the support is not spread equally but tends to aggregate to faculty who train a larger proportion of our students. There is some inequity in the TA allocation that is also due to professional culture, in that faculty in the physical sciences are more accustomed to utilizing TA support than those in biologically oriented laboratories who utilize RA support from research grants and train fewer graduate students. There are many variables, but the intent is to use the TA mechanism strategically to balance course support, support for junior faculty who wish to build a group based primarily on graduate students, and to provide bridge support to faculty in need.

**Funding Summary.** As seen in the graphs, we are fortunate to be able to provide support to all of our students throughout their time in the program. The TA lines of support are critical in allowing faculty to stretch their grant dollars and as bridge funding. With increasing success in development for endowed support funds, we may be able to provide fellowship support to senior students as both merit awards and to alleviate funding gaps.
K. Professional Development and Breadth

Professional Development Culture. As a more applied science program, professional development has always been part of the culture of the Pharmaceutical Sciences Graduate Program. It is present from orientation programming and messages from the Assistant Dean for Graduate Studies and in the culture of the dynamic and broadly represented AAPS student group, which is heavily involved in professional development activities. There are ubiquitous postings and announcements of professional development activities throughout the research tower and the School’s Graduate Program Coordinator has been encouraged in his role to emphasize such opportunities to graduate students. The School's Events Coordinator complements this with a weekly email of her own targeted to the graduate student population but more school-specific.

The SoP Graduate Studies Office maintains a “virtual career library” for students. For new students just joining the program, resources involving mentoring (https://uwmadison.box.com/s/p4glq5lj8wrzw7t8lk54dmmqtsqidrux) and professional development (https://uwmadison.box.com/s/3qben39ki5qcyctjxb5tmkh2uvppg6g) are provided over the summer, as part of the “onboarding” process. Continuing students have consistent access to another BOX folder more focused on assorted career topics—see https://uwmadison.box.com/s/9nq704d7etmmrg7rmvqpy6oqg64716f. The SoP Graduate Studies Office maintains a “virtual career library” of sorts for students. For new students just joining the program, resources involving mentoring (https://uwmadison.box.com/s/p4glq5lj8wrzw7t8lk54dmmqtsqidrux) and professional development (https://uwmadison.box.com/s/3qben39ki5qcyctjxb5tmkh2uvppg6g) are provided over the summer, as part of the “onboarding” process. Continuing students have consistent access to another BOX folder more focused on assorted career topics—see https://uwmadison.box.com/s/9nq704d7etmmrg7rmvqpy6oqg64716f.

Resources and Opportunities. The Program offers an increasing array of Professional Development activities and opportunities to develop their skills. For example, The Dean’s Office sponsored a Pharmaceutical Sciences Graduate Student Retreat (May 2018). It was organized by graduate students for graduate students, and its agenda supported by Midwest-based PharmSci PhD alumni who populated its career panels (focusing on industry, academic, and nontraditional careers). Such large scale, all-day professional development and career exploratory-oriented graduate retreats are planned for the summers of even years (’20, ’22, …). The School also supports students to attend the annual Am. Assoc. Pharmaceutical Scientists (AAPS) Meeting which allows students to present research and network with other scientists in PharmSci related fields in both industry and academics.

The UW Pharmaceutical Sciences Graduate student body is hosting the 51st Pharmaceutics Graduate Student Research Meeting (PGSRM) in Madison in June 2019; it last hosted this event in 2011. While “Pharmaceutics” in name, this student-organized conference, involving multiple graduate programs from schools and colleges of pharmacy in the Midwest, has grown to include other pharma-disciplines. The multiple day conference provides graduate students a wealth of organizational challenges outside of the laboratory; a true team of graduate students executes the event, while supported by various School offices and employees. This includes opportunities to recruit leaders in industry to participate at the event.
The School’s Division of Pharmacy Professional Development (DPPD) (https://ce.pharmacy.wisc.edu/) regularly offers opportunities for PharmSci graduate students to attend its industry-oriented conferences at reduced prices, or even for free, if contributing via a presentation or poster. The July/August/September 2018 “Land O'Lakes” conferences held at the UW Fluno Center focusing on, respectively, bioanalytical science, pharmaceutical analysis, and drug metabolism/pharmacokinetics are all examples of such. These conferences are mainly attended by scientists from industry, allowing amazing networking opportunities for students interested in engaging in such.

The School has been successful in development work to be able to support six to seven annual graduate student travel awards, which allow students to attend and present at a wide array of national meetings. Such conferences allow for professional networking, a deepening and broadening of one’s research background, and the development of communications skills. According to the program’s PhD exit survey, our students regularly present at meetings away from campus - the mean number of such presentations is around 5-6 and over 40% of our students present greater than ten times on campus. This shows that we prepare our students for future success in giving presentations about their work and developing their communication skills.

Individual Development Plans (IDPs). Currently the program is not requiring students to use IDPs beyond the federal requirement, however, the Program Director talks with the students during orientation and annually after that to recommend their adoption and use during annual review meetings. PharmSci graduate students on NIH grants are using IDPs via the infrastructure that the UW-Madison has created to support such. Over 80% of our 2012-2017 graduating cohort report they received information about using IDPs.

Program Breadth. Our program is inherently broad, requiring the students to be proficient in a number of cores areas that span the entire discipline of pharmaceutical sciences. Just after our last program review, we were one of the first graduate programs on campus to successfully petition the Graduate School to discontinue a minor requirement for our PhD students. Most students at the time were utilizing minor option A to pick a focus area. The result of this decision was to streamline the coursework for the students while retaining its breadth. The focused coursework that was originally part of a minor was then satisfied (although reduced in credits) by individual faculty advising their students to take coursework in areas that supplemented their research. For example, students in the discovery core who are chemistry oriented will often take two graduate courses in the chemistry department. This results in ca. six credits of focus in that area, rather than the previous 9 required for a minor in chemistry. An overview of academic transcripts of our current students indicates that most take at least six credits of coursework that is independent of the minimal requirements for the degree. Historically, before the consolidation in 1996, our PhD programs had extensive course requirements with both breadth and depth. Whether the current array of didactic requirements is a sufficient foundation for a strong career in Pharmaceutical Sciences is open to question and will elicit animated discussion among faculty and other stakeholders. In some ways, we have shifted the responsibility for didactic training in Pharmaceutical Sciences to the individual PIs.
December 17, 2018

To: Steven M. Swanson, PhD
    Dean, School of Pharmacy

From: D.E. Bjorling

Re: Review of the Pharmaceutical Sciences Master's and PhD Degree Programs

The review committee, comprised of Professors Elaine T. Alarid, James L. Keck, Gail A. Robertson, and myself, have completed the review of the Pharmaceutical Sciences Master’s and PhD Degree Programs as you requested. A copy of this review is attached. Please let me know if you have any questions regarding the review.
Overall

The Pharmaceutical Sciences PhD program appears to be functioning effectively. Faculty and students expressed satisfaction with the program. Students have been successful in acquiring highly-competitive fellowships (e.g., NSF) to support their training. Faculty and students expressed great confidence in, and satisfaction with, the program administration. Students indicated that the program generally meets their needs but would be strengthened by providing additional career counseling. A challenge for the program is alignment of expectations and activities among the three focus areas of the program. Students indicated that this concern is at least partially addressed by attendance of seminars presented by students mentored by faculty across the program. However, this is an area that requires further discussion by trainers. Additional issues that the review committee identified as priorities included more formal engagement of faculty and students in oversight of the program and development of a succession plan for the current Program Director should he decide at some time in the future to step down. Overall, the program is functioning well and delivering high-quality graduate training that supports the mission of the School of Pharmacy and the University of Wisconsin-Madison. The following materials provide more detail on the committee’s observations regarding areas of strength and areas that should be considered for improvement.

Administration

Strengths

1. Faculty and students consistently praised both the Director (Dr. Lauhon) and the Program Coordinator (Ken Niemeyer) for their efforts on behalf of the program. Dr. Lauhon is viewed as highly consultative with faculty and very dedicated to the success of the program. The work of Mr. Niemeyer in support of the program is very much appreciated, particularly by students.
2. Although not solely the responsibility of program administration, it was noted that changes were made in response to the previous program review that had substantially improved the program and benefited students.
3. Student and alumni tracking appear strong.
4. The Dean of School of Pharmacy supports the graduate program.

Areas for Improvement

1. A succession plan for program leadership needs to be created. This could include identification of an Assistant/Associate Director who could subsequently move into the role of director.
2. Currently, faculty trainers function as a committee of the whole for discussion of program issues and admissions. Establishment of a dedicated advisory or oversight committee for the Pharmaceutical Sciences PhD program would
facilitate identification of future leaders of the program, engagement of student representatives, and more equitably distribute administrative responsibilities. It may be desirable to grant this committee decision making authority. There was the impression that compromises were at times made to accommodate faculty and to reach consensus that were not invariably in the best interests of the program – a committee may reduce such instances in the future.

3. Students do not feel ownership in the program and would like more engagement in decision making. Student participation in program governance would greatly help in this area.

Recruitment and Students

Strengths

1. Quality of students is in general excellent. This is substantiated, in part, by receipt of outside fellowships to support training.
2. Core curriculum and seminar series help to build cohesion among students.
3. Students are appreciative of activities that provide information on career options, particularly round table discussions with program alumni and individuals from industry.
4. Student activities are particularly focused on, and organized by, the student chapter of the American Association of Pharmaceutical Sciences (AAPS). The AAPS appears central to students in the program.
5. Organized recruitment that includes a research day was well received by faculty, current students and prospective students.

Areas for Improvement

1. Recruitment is a challenge. Many potential students are unaware of the existence of the program until they begin searching the Graduate School website. Students also find the program while researching the graduate program in Chemistry.
2. The unique perspective of program and the diversity of available research opportunities are not effectively communicated to prospective students. This is a marketing problem. Website improvements with a responsive IT team could significantly enhance student recruitment.
3. Students accepted into the program are advised to wait until August to select rotations. However, by this time, they find that faculty have already committed to other rotators. The program is strongly encouraged to preclude faculty from accepting rotating students until a common date to allow all students fair and equal access to desired rotations.
4. Although perceived as occurring rarely, students occasionally “fall through the cracks” and fail to receive effective mentoring and guidance.
5. Career counseling is provided, but some students expressed a desire for more activities and direction in this area.
6. Students should be more actively engaged in discussion and operation of the program.
7. Students expressed a desire for more social activities. This may be an issue for the AAPS chapter to take up, but there should be faculty support.
8. Although a high percentage of students participate in AAPS activities, not all are members. If sufficient flexible funds are available, consideration could be given to paying membership dues for all students.
9. Faculty feel student supply falls short of their demands. It is not uncommon for all faculty at UW to serve as trainers in multiple programs. However, faculty indicated a desire for an increase in the number of students available to them through this program.
10. Limited eligibility (i.e., many programs restricted to US citizens) restricts opportunities for international students to distinguish themselves with fellowships, etc. The program has a high percentage of international students, and lack of these opportunities contributes to a class difference and negatively affects climate. Paucity of opportunities for honors for international students could be addressed through school-centered awards (e.g., outstanding thesis, most dedicated outreach volunteer, service award for most involved AAPS chapter leader, etc.).
11. Extend the existing peer mentoring program to include involvement of willing senior students with assigned incoming students. Mentors could drive activities such as getting together outside of campus activities at least twice per semester. Topics for discussion could be broad, including: how to navigate the program; adjusting to graduate school/campus/USA; hobbies; self-care (e.g., exercise, diet, etc.) and the integration of personal with work life.
12. All applications from international students should receive equal review and consideration. It appears that applications from some countries of origin may be prioritized above others.

Program

Strengths

1. The multidisciplinary nature of the program is a significant strength. Three distinct tracks – Drug Action, Drug Discovery and Drug Development – occupy a unique niche in UW-Madison’s graduate training enterprise, and train students for diverse careers in industry and academia.
2. Students appreciate retreats that focus on the program.

Areas for Improvement

1. The website should be revised and updated to provide easier access to information (handbook, mission, timeline, events). Similarly, the student handbook should be more readily accessible on program website.
2. While the multidisciplinary nature of the program is recognized as a strength, it also raises challenges regarding maintaining a cohesive, consistent program.
This may be less an area that requires improvement and more an issue that requires continued attention to ensure that the program remains cohesive and effective for all students and trainers. However, faculty continue to identify with old programmatic designations rather than those developed under a cohesive program.

3. The lack of a common prelim mechanism negatively affects climate due to student perceptions of unfairness. While students appreciate the interdisciplinary nature of the program, current differences in expectations in the formats of preliminary exams creates a culture in which students view different focus groups as more or less rigorous. Establishing a more uniform prelim among the cores that reflects a consensus vision for future training, rather than cultural traditions that differ between cores, could address this.

4. A standardized pathway to degree, including a time-line that describes expectations for each year of graduate school, with set requirements that do not differ between programs should be agreed upon.

5. TAships fail to provide teacher training. This is a missed opportunity.

6. The program handbook should be revised to make expectations for students (prospective and current) more transparent (i.e., example timeline with course curriculum and expectations for each year).

7. IDPs should be required of all students.

8. Related to an item listed under Recruitment and Students above, the students expressed interest in strengthening the mentoring program, particularly more frequent meetings with mentors. The program might want to consider a policy regarding who is responsible for scheduling mentoring meetings (mentor or trainee) and a suggested frequency of meeting. This is not to be confused with meetings of the trainee’s graduate committee.

9. Keeping a single events calendar rather than several different calendars and developing a program newsletter for announcements would improve communication and decrease the number of individual emails to students.

Submitted December 17, 2018

Review Committee:

Elaine T. Alarid, PhD
Professor, Department of Oncology

Dale E. Bjorling, DVM, MS, Committee Chair
Associate Dean for Research and Graduate Training, School of Veterinary Medicine

James L. Keck, PhD
Associate Dean for Basic Sciences, School of Medicine and Public Health

Gail A. Robertson, PhD
Professor, Department of Neurosciences
To: Steven M. Swanson, Dean, School of Pharmacy  
Cc: Melgardt de Villiers, Assoc. Dean for Academic Affairs, School of Pharmacy  
From: Charles T. Lauhon, Asst. Dean for Graduate Education, School of Pharmacy  
Re: Pharmaceutical Sciences Graduate Program Review – Program Response to Review Committee Report  

January 29, 2019

Dear Dean Swanson,

This document serves as the program response to the report by the review committee as a result of our Ten-Year Graduate Program Review. We are pleased that the committee found many aspects of the program to be in line with characteristics of a highly effective graduate program. With any program, there is always room for improvement and the committee has made some excellent observations about areas in which we can do better. Below is a summary of our current thoughts on how we can address their concerns. I want to thank the committee for their service and their thoughtful work in helping us to assess and improve our program.

1) Administrative concerns:  
We agree with the review committee that the program could benefit from a specific PharmSci Graduate Committee that includes faculty who could be part of a succession plan for the program director, as well as students to increase their involvement in governance. Such a group would represent a wider constituency within the program. Items brought to the faculty by such a committee would be more strongly vetted than in the current administrative structure and would lead to greater transparency in the governance process.

2) Recruitment and Students:  
a) Recruiting. The committee has identified the single biggest challenge to a program like ours – branding and marketing. Pharmacy-related graduate programs such as ours have a difficult time communicating the unique value that we bring to graduate education relative to a ‘pure’ discipline. This value includes highly interdisciplinary training, as well as an increased exposure to translational and industry related research. Fortunately, the School of Pharmacy has recently reinvigorated its communications and marketing efforts with the appointment of a new Associate Dean and staff. Thus, we will initiate a new marketing strategy for identifying and increasing the number of qualified PhD applicants who would be a stronger fit for our program. This will hopefully make our recruiting more efficient and increase the number of potentially interested students we can reach. Success in this area will be measured by increases in matriculation of our top ranked students as well as our ability to satisfy faculty demand for students, as mentioned in the committee report.
b) Student Experience.

- **Climate**: Many of the social and governance issues that are lacking for students may be addressed by the new Graduate Committee. The Dean has been a leader in the area of building of community within the School with increased social activities involving faculty, students and staff. We have increased our PhD alumni involvement in the School in recent years in the form of research retreats and professional development activities which we will continue going forward.

- **International Students**: Although our international students compete very well for travel, teaching and service awards within the School, we will consider increases in the number of student awards using new funding ideas from the Dean. This may compensate for the intrinsically low number of national awards available for international students studying in the U.S.

- **Retention**: In terms of mentoring, we have increased our efforts at having more frequent ‘check-ins’ with each class of students, and introduced peer student mentors, but we can think about more effective methods to prevent students who struggle from getting discouraged. Senior student mentoring may indeed help in this regard as well as more explicit expectations in our handbook and courses.

3) **Program**. Much of the concern from the committee is a result of the extreme scientific and cultural breadth of our program. Since we are a single Division and not separate departments, this is both an attribute and an ongoing challenge. While we believe we have made progress in this area (especially in recruiting), there remain evolutionary remnants (such as the prelim format) that reflect the cultural differences. In response to the current concerns, we will consider the following:

- **Handbook**: We will reevaluate the student handbook for increased clarity on expectations, especially in the area of rotations, mentoring, guidelines for success, preliminary exam format, teaching workshops, and examples of successful graduate program timelines. Such issues will be discussed in the new graduate committee before changes are brought to the Division if required.

- **IDPs**: We will consider making student Individual Development Programs (IDPs) a requirement in the program (currently they are only encouraged).

- **Mentor Training**: We plan to implement mentor training for our faculty – such training is now more accessible on campus and will give faculty examples of best practices that can improve communication between mentors and students.

- **Communication**: We will consolidate information sources (e.g. events calendar, career services) for our students wherever possible.

Once again, we thank the committee for their thoughtful input and hope these initiatives will both address their concerns and improve what we believe is a strong program.

Respectfully Submitted,

[Signature]

Charles T. Lauhon, PhD
Director of Pharmaceutical Sciences Graduate Program
DATE: February 14, 2019
TO: Sarah Mangelsdorf, Provost and Vice Chancellor for Academic Affairs
FROM: Steven M. Swanson, Dean and Professor
RE: Final Summary of Review for:
   • Master’s – Social and Administrative Pharmacy
   • PhD – Social and Administrative Pharmacy

The Masters and Doctoral – Social and Administrative Pharmacy program review was completed by a review committee chaired by Jamie C. Barner, PhD, Professor and Head, Division of Health Outcomes, University of Texas at Austin with members Linsey Steege, PhD, Assistant Professor, School of Nursing; John Mullahy, PhD, Professor, Department of Population Health Sciences, SMPH; and John M. Pfotenhauer, PhD, Professor, Department of Mechanical Engineering and GFEC representative. The review committee was charged with assessing the strengths and weaknesses of the program and providing recommendations for future directions. The School APC discussed and approved the review committee report on January 23, 2019 (see attached memo from the chair). Based on my review of their report and the APC response, I am providing the following executive summary of the program review.

Overview

The Review Committee made nine specific recommendations:

1. Convert seminar/course series to organized courses
2. Finalize student handbook
3. Create minimally acceptable progress
4. Require Individual Development Plans for students
5. Increase reviews to biennial for students as appropriate
6. Evaluate PVL for grad program coordinator
7. Develop seminar series focused on career development
8. Reexamine program assessment to develop meaningful learning objectives
9. Set goals for student recruitment (minority, UW pharmacy students)

Recommendations

Each of the recommendations listed above will be addressed by the Program. Details about the approaches to address each issue are detailed in the attached Program Response.

Attachments

Review Committee Report
Program Response
SoP APC approval memo
Copies

Melgardt M. de Villiers, PhD, Vice Dean and Associate Dean for Academic Affairs
David A. Mott, Chair, SAS Graduate Program
Jamie C. Barner, PhD, Chair, program review committee
Jocelyn Milner, APIR
Sarah Kuba, APIR
Bill Karpus, Graduate School
Parmesh Ramanathan, Graduate School
Review Committee Report for Masters and PhD – Social and Administrative Sciences in Pharmacy
School of Pharmacy, University of Wisconsin-Madison

Visit: September 21, 2018
Report Submitted: November 14, 2018

Site Visit Team
Jamie Barner, Chair of the Program Review Committee
Professor and Head, Division of Health Outcomes
The University of Texas at Austin

Linsey Steege
Assistant Professor, School of Nursing
University of Wisconsin-Madison

John Mullahy
Professor, Department of Population Health Sciences, School of Medicine and Public Health
University of Wisconsin-Madison

John M. Pfotenhauer
Professor, Department of Mechanical Engineering, College of Engineering
University of Wisconsin-Madison

Special acknowledgement to Beth Janetski for your invaluable input and meticulous notes.
SUMMARY OF THE ACTIVITIES OF THE REVIEW COMMITTEE AND MATERIALS REVIEWED
The committee received and reviewed the following documents: Committee Charge; 2018 Self Study (July 2018) and Appendices (see below). Dr. Pfotenhauer provided the committee with additional data from the Graduate School regarding Admission and Graduation (see Appendix 1 at the end of this document). The accuracy and comprehensiveness of the materials and self-study was appropriate.

A. SAS Graduate Program Self Study Report 2009
B. Report of the External Review Committee 2009
C. Response and Plan from SAS Graduate Program 2009
D. Online Guide to the SAS Graduate Program
E. SAS Graduate Program Assessment Plan submitted to the SOP Academic Planning Council
F. SAS PhD Assessment Report to the Graduate School 2018
G. SAS MS Assessment Report to the Graduate School 2018
H. SAS Graduate Student Annual Review Document
I. Graduate Programs Climate Survey
J. Graduate Student Orientation Schedule
K. SAS Exit Survey Summary
L. SAS Graduate Student Awards

The committee met with the following groups: junior faculty (Drs. Abraham, Ford, Look, Shiyanbola); senior faculty (Drs. Chewning, Chui, Mott); graduate program coordinator (Ken Niemeyer) and junior and senior graduate students.

EVALUATION OF STRENGTHS
The school is a well-respected program and the team was impressed with the superb quality of the faculty and graduate students as evidenced by extramural funding, high-quality publications, visibility at scientific conferences and honors/awards. The team was also very impressed with the leadership and trajectory for growth of the Sonderegger Center. The junior faculty, one of which has an engineering background, bring diverse perspectives, a spirit of collaboration and renewed energy to the program. Their achievements in research and scholarship are also notable. The division’s name change was a very positive and strategic decision that should increase visibility to non-pharmacy related constituents. The thoughtful selection of topics for the seminar cores has the propensity to strengthen the graduate program, as well as increase its visibility outside of the school. Graduate student TA and RA support is consistent and strong and the students expressed appreciation for freedom within the program to explore different topics.
EVALUATION OF WEAKNESSES OF THE PROGRAM AND STRATEGIES

Time to graduation
Approximately 32% of the students take more than 6 years to graduate (see Appendix 1: Graduate School Time to Degree 2008-2017). Variability in time to graduation seems to be impacted by a multitude of factors including: nature of the project (primary vs. secondary data collection); advisor’s mentoring style (structured vs. unstructured); and perception of guaranteed funding (e.g. TA or RA) throughout the program. In some cases, extensions to graduation may have been impacted by part-time status and the timing of course offerings to complete requirements for preliminary examinations. Faculty should examine structural problems with consistency related to student progression and expectations for degree completion. Specific strategies are addressed below under Coursework and Policies and Procedures.

Coursework
Currently, only 6 credit hours are taught in the division. Faculty may want to consider what other “core competencies” could be taught by division faculty. One opportunity is to convert the Core Seminar series to organized courses. The majority of the courses are taken outside of the division and the graduate students expressed some difficulty in identifying which courses to take and when they were offered. Faculty could help facilitate this process by offering a compendium of available courses by topic area and when they are taught. Faculty may also want to consider having students provide a formal evaluation of these ‘outside’ courses so that other students can use the information in making future course selections.

Specific Strategies:
Internal courses
• Convert seminar series courses to organized courses
  o Change to course status could increase non-pharmacy enrollment
• Cross list and advertise courses with other academic units (e.g., Nursing, Population Health, Engineering)
  o This will provide more visibility of the division and potentially the Center
• Review “Core Topics” annually to determine if revisions are needed
• Consider requiring all students to attend, including dissertators
  o Dissertators can provide unique perspectives because of their experiences
  o Dissertators could assume an instructor role for selected content, which could be enhance their teaching portfolios
  o Dissertators remain abreast of core issues
  o Since this is one of the few courses where all students are together, it could also promote more cohesion among students as well as foster an “identity” as a SAS graduate student vs. a mentor-related identity

Outside courses
• Include an organized (e.g., area, when taught) list of outside courses in the SAS Handbook
• Create an evaluation form for outside courses and have students evaluate them
**Policies and Procedures**

Discussion with faculty and graduate students overwhelmingly revealed a need to have more structure in SAS policies and procedures. Students commented that they “didn’t know where to find information.” When asked about various aspects related to the program, one prevalent response was “it depends on the advisor.” While the committee recognizes and endorses the purview of advisors, it seems to, at times, produce wide variations in program outcomes. Faculty are strongly encouraged to engage in consensus building regarding “adequate progress” and requirements for passing preliminary exams, proposal and final defenses. Two specific issues mentioned regarding preliminary examinations were how the timing depended heavily on advisors' assessment of readiness, and whether or not the student had an opportunity to provide “oral clarification” of their written responses.

**Specific Strategies:**

**SAS Handbook**
- The committee recommends that the graduate student handbook be revised so that it includes the following features:
  - A definition and timeline of minimally acceptable progress including separate milestones for the MS and PhD degrees (coursework, preliminary examinations, final defense)
    - Consider both timeframe and quality and arrive at a consensus that minimizes wide variations in each
    - Solicit examples of handbooks from peer institutions
    - Review the graduate school’s template
    - Consider including a process for students to change advisors.
    - The process should encourage faculty to maintain an openness to such change and acceptance of students’ decision
  - A grievance process
- Make the handbook available online
- Review and update annually
- Ensure student review
  - Require a signature that the student has read and understands the information
  - Consider a fun “quiz” with prizes in seminar each fall to assess student understanding of key components of and/or changes to the handbook

**Individual Development Plan**
- Require students to conduct an annual individual development plan
  - Feedback was overwhelmingly positive from graduate students who were currently engaged in the process
  - Process may help decrease time to graduation because of goal setting and continual monitoring

**Graduate Student Annual Reviews**
- Continue annual reviews
- Consider increasing the frequency to biennial so that issues can be addressed earlier
  - The second annual review can be discussed among the faculty and only with the student if an issue arises
Graduate Program Coordinator

The Graduate Program Coordinator would be an asset to faculty in helping with administrative duties, as well as serving as another main “touch point” for students regarding policies and procedures. However, it appears that additional resources may be needed specifically to support the SAS division. The Graduate Coordinator indicated approximately 15% of time was devoted to SAS issues and the SAS Division Administrative personnel has assumed responsibilities related to prospective students (e.g. recruitment, scheduling, acceptance letters).

- Evaluate roles and responsibilities of the Graduate Program Coordinator and the SAS Administrative personnel
- Consider allocating additional time (FTE level to be determined by faculty and Dean) for a Graduate Program Coordinator to support the SAS division.
  - Coordinator could help with developing, reviewing and updating handbook
  - Coordinator could help address other student issues (international student issues, requirements, deadline reminders, etc.)

Graduate Student Engagement

Within SAS

While students overwhelming agree that there is an “open door” policy and that they feel comfortable communicating with their peers, faculty and some students perceive the students to be “mentor-centric”. Students seem to have opportunities with summer RAs to work with other faculty members, but it is typically limited to the summer timeframe. Several strategies could be employed to help students not only be identified by their mentor, but also as a graduate student in the SAS program.

Specific Strategies:

- Encourage students to work with other faculty members and students on research projects
- Faculty members could work more collaboratively on projects and employ a diverse group of students to participate
- Encourage membership in student organizations (ISPOR, ISPE, AMCP) to foster collegiality among students

Within School

Students indicated minimal interaction with graduate pharmacy students outside of SAS. Having once or twice a year contact with other graduate students from different disciplines benefits students regardless of career choices. Students who have a global understanding of various disciplines will be more competitive in the current highly collaborative biomedical environment.

Specific Strategies:

- School could consider creating a Pharmacy Graduate Student Association. The group could host joint seminars/poster presentations and socials on an annual/biennial basis. Dues could be used to support student travel to professional meeting(s).
• Consider a seminar series focused on career development with diverse speakers from academe and industry. Students could be paired from different divisions to work on case studies.
• Consider other areas that span across disciplines (ethics, communication) where students can engage and work collaboratively.

Outside of School
Students overwhelming voiced a desire to have more interaction with alumni and some expressed a desire to participate in internships. Engagement outside of the School typically leads to enhanced, more relevant and well-rounded instruction and research, as well as expanded career opportunities for students.
Specific Strategies:
• School should consider engaging alumni (academe and industry) to present in seminar or other courses. If funding is an issue, this can be accomplished via electronic means (e.g., WebEx, Skype)
• Faculty may want to utilize alumni to serve on student thesis and dissertation committees
• School may want to develop an External Advisory Board of diverse industry and academic partners, as well as key constituents (e.g., patients, practitioners)
• Faculty should consider reaching out to alumni in industry regarding graduate student internship opportunities

Program Assessment
Program assessment outcomes need to be expanded beyond just ethics training.
Specific Strategies:
• SAS should leverage the internal (School) program assessment faculty and Assessment Office to develop meaningful, measureable and specific learning objectives and outcomes for the SAS program.

Student Recruitment
Recruitment has been mentioned as a priority in the last 2 reviews; however, the faculty acknowledges little progress. Faculty have identified underrepresented minorities and domestic students as focus areas. Faculty should set actionable, measurable and attainable short (1 year) and long (5 year) term goals.
Specific Strategies:
Underrepresented minorities:
• Engage predominantly underrepresented minority groups (e.g. organizations such as SNPhA and historically black colleges and universities (HBCUs))
• Leverage African female faculty members in recruitment efforts
US-trained PharmD students:

- Hold post-graduate roundtable discussions with UW pharmacy students to share information about and opportunities in SAS MS and PhD programs. Utilize graduate students who serve as TAs to recruit selected students.
- Work with PharmD students on research and/or Honors projects. Consider including graduate students as part of the research team.
- Engage PharmD students who have poster presentations at national meetings
Appendix 1

Admission and Graduation Graphs from the Graduate School (PhD and MS combined)

(https://grad.wisc.edu/ second block, “Our Academic Programs: Explore the Data”)

Graduate School Time to Degree: 2008-2017

Completion Rates: 2007-2015 Entrance Cohorts
January 21, 2019

TO: Mel DeVilliers, Vice Dean of the School of Pharmacy

FROM: Michelle Chui, Director of SAS Graduate Program

Re: Response to the SAS Graduate Program Review

On November 14, 2018, I received the final report from the SAS Graduate Program External Review Committee. I immediately forwarded the report to program faculty for their review. On January 10, 2019, the program faculty met for two hours to discuss the report and to begin to develop a plan to respond to key recommendations. Below, I have summarized the recommendations and a brief description of ways in which we are going to approach each recommendation.

<table>
<thead>
<tr>
<th>ERC Recommendations</th>
<th>Action Plan</th>
</tr>
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</table>
| Convert seminar/course series to organized courses in order to make core competencies explicit and to allow cross-listing) | We have already begun to discuss the conversion of our seminar/course series into organized courses. We currently have two 3-credit courses:  
- 711 – Quantitative Methods  
- 715 – Theory  
We propose the following four 2-credit stand-alone courses (that will be convert from our current 911 seminar):  
- Dissemination and Implementation (offered Spring 2019-2020)  
- Grant Writing (offered Spring 2018-2019)  
- Community and Stakeholder Engagement (offered Fall 2019-2020)  
- Mixed Methods (offered Fall 2018-2019)  
We are also developing a no-credit colloquium that will require attendance from all faculty and graduate students (including dissertators), which will be used to alumni speakers, career development, student presentations, and other topics. |
| Work on finalizing handbook (including list of outside courses w/ eval form), process for students to be co-advised, grievance process) | We are slowly working on our handbook. This has been a difficult task for us, because we do not want to contradict the graduate school which has several policies and procedures in development. However, we are making some headway on some of the ERC recommendations.  
Co-advising model: We will adopt a co-advising model in which students have the option to select a primary and secondary advisor. We are also working on a streamline way for students to evaluate outside courses, and to provide an updated list to students so that they can more easily select courses each semester. |
<p>| Create minimally acceptable progress (including milestones for MS/PhD and PhD) | Last year, we created a table that provides guidelines for typical milestones for the MS/PhD and PhD programs. Students will be asked to self-evaluate their progress at their annual review. Students that are not making the recommended progress will be reviewed again by the entire graduate faculty biennially (instead of annually) |
| Require IDP | We currently have an annual graduate student review at the end of the Spring semester. Starting this Spring 2019, we have agreed to ask all graduate students (whether they have NIH funding or not) to fill out an IDP to inform their annual review. |</p>
<table>
<thead>
<tr>
<th><strong>Increase reviews to biennial for students as appropriate</strong></th>
<th>In addition to implementing a biennial review for students who are not making typical progress, we will track the potential barriers for students having difficulty making progress.</th>
</tr>
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<tbody>
<tr>
<td><strong>Evaluate PVL for grad program coordinator</strong></td>
<td>We are planning to conduct a full inventory of how our graduate program coordinator assists us, as well as the other graduate programs that he supports. We are also doing an inventory of how our SAS administrative assistant assists us, as it pertains to the graduate program. This will help us think about how our graduate program coordinator could assist us more efficiently and effectively.</td>
</tr>
<tr>
<td><strong>Develop seminar series focused on career development</strong></td>
<td>We have begun to develop the seminar series. One alum is scheduled for next month, and the second one will probably be scheduled for May of this year. Our plan is to invite 2-3 alumni to provide a short research talk, followed by Q&amp;A about career development each academic year. We have funding to reimburse travel expenses for alumni that can drive to visit us, and can provide a small honorarium as well. We would also like to engage the AIHP Board, the SoP Board of Visitors, the Citation of Merit awardees as well as we expand the seminar series. Lastly, we are brainstorming the value of a graduate student retreat which might include an alumni panel for career counseling, industry and non-traditional roles, career development skills such as jobs, writing, interviewing, elevator speech.</td>
</tr>
<tr>
<td><strong>Reexamine program assessment to develop meaningful learning objectives</strong></td>
<td>We will use our summer retreat time to think through our school program assessment objectives.</td>
</tr>
<tr>
<td><strong>Set goals for student recruitment (minority, UW pharmacy students)</strong></td>
<td>We recently received a $25,000 award to assist us with graduate student recruitment and retention. We would like to explore multi-media to market our program (check with Alyson Kim), and to determine if visits to pharmacy schools with high minority populations and no graduate programs would be effective. To improve student recruitment within the UW pharmacy school, we would like to expand the “Research Path of Distinction” so pharmacy students can receive recognition for research electives, explore summer funding for PharmD students, and to develop a YouTube video of students who have had research experiences with us.</td>
</tr>
<tr>
<td><strong>Non-ERC Recommendations</strong></td>
<td>Our graduate school application is confusing. In order to reduce confusion, we will initiate a request from the graduate school to remove the masters degree from the application website. We will keep the masters degree “on the books” so that we may still confer masters degrees to students. We would also like to explore a change to our designation to a STEM designation, so that our degree accurately reflects the quantitative nature of the program, and so our international students may have additional time to find domestic employment.</td>
</tr>
</tbody>
</table>

If there are any questions or concerns, please let me know.

Cc: Charles Lauhon PhD, Assistant Dean for Graduate Studies  
Ken Niemeyer, Graduate Programs Coordinator  
Beth Janetski, PhD, Director of Assessment  
Dave Mott PhD, Chair of the SAS Division  
Steve Swanson PhD, Dean of SoP
MEMORANDUM

DATE: 1/30/2019

TO: Steven Swanson, PhD (Dean), School of Pharmacy, University of Wisconsin Madison.

FROM: Melgardt de Villiers, PhD (Chair Academic Planning Council), Associate Dean Academic Affairs, School of Pharmacy, University of Wisconsin Madison

RE: 10 Year Program Review Graduate Programs Social and Administrative Sciences

The Academic Planning Council of the School of Pharmacy at the University of Wisconsin Madison met on 1/23/2019 and unanimously approved the report and recommendations of the program review for the Graduate Programs in Social and Administrative Sciences.

Sincerely

[Signature]
15 June 2018

TO: Sissel Schroeder, Professor and Chair, Anthropology
FROM: John Karl Scholz, Dean
RE: Completion of Academic Program Review:
  - Anthropology, B.A., B.S., M.A., M.S., Ph.D.
  - Certificate in Archaeology (undergraduate)

CC: Cal Bergman, Associate Dean for Student Academic Affairs, L&S
    Greg Downey, Associate Dean for Social Science, L&S
    Elaine Klein, Associate Dean for Academic Planning, L&S
    Sarah Kuba, Academic Planner, Academic Planning and Institutional Research
    Lisa Martin, Associate Dean, Graduate School
    Jocelyn Milner, Vice Provost and Director, Academic Planning and Institutional Research
    James Montgomery, Associate Dean for Fiscal Initiatives, L&S
    Jennifer Noyes, Associate Dean for Operations and Staff
    Parmesh Ramanathan, Associate Dean, Graduate School

On May 1, 2018, the L&S Academic Planning Council considered materials submitted with respect to the review of academic programs enumerated above. In the course of the council’s deliberations, members were provided with a self-study submitted by the Department of Anthropology, a report submitted prepared by a committee of faculty who used that self-study as the foundation for its discussions with faculty, staff and students, and the Department’s comments on the report. Discussion was led by Associate Dean Greg Downey, who began with an overview of the department, noting that it is unusual in the breadth of study covered by biological and cultural anthropology and archeology and conveys this breadth in valuable ways to its undergraduate majors, in important service courses, and to graduate students. Council members agreed with the review committee’s assessment of the quality and depth of the self-study prepared for this review, which will likely prove useful in years to come as the department continues to plan for the future.
The self-study documents the decline in enrollments in the undergraduate major, which mirrors—
but which is not so precipitous as—the national trend. Undergraduate time to degree is longer
than average in the college, and the number of exceptions granted to students who complete the
major is relatively high. Certificate awards have also declined considerably over the past four
years. These observations, when coupled with insights obtained from a 2015 exit survey and
analysis of students’ post graduation plans, make it clear that the department has gathered the
raw materials for having a robust discussion about curricular revision, though specific planning
is unclear at this time. Council members supported this approach, but also strongly
recommended that, in addition to the analysis of descriptive data available about the program, the
department should incorporate a better understanding of program wide learning outcomes via
direct assessment of student learning. This, too, may help reduce time-to-degree and guide
decision-making about program requirements.

The review committee report agreed with and strongly endorsed the self-study’s conclusion
about the need to improve the advising model in the department, and that this may also improve
student persistence in the major and certificate program. Associate Dean Bergman reported that
L&S Academic Advising Services and Anthropology have developed a plan to provide more
support for advising in Anthropology for a time, with the goal of evaluating the impact of
improved advising and determining the path forward.

The Anthropology graduate program is relatively small, and members noted that both the self-
study and committee report cited graduate student funding as one of the department’s primary
challenges. The review committee suggested a variety of improvements that might be made with
respect to sharing information with graduate students. APC members noted that, in the context
of a static budget, stipend changes could be achieved by re-balancing the size of the graduate
program. This approach would likely involve investing greater effort in securing students who
are most likely to complete the program, and mentoring students to successful completion.

The L&S APC approved a motion to consider the L&S portion of this program review complete.
The council requested that Anthropology submit a follow-up report by February 1, 2019,
concerning PhD completion, exploring reasons for the relatively low completion rates, and
proposing solutions (such as adjusting the size of the graduate program to allocate more
resources to fewer students, which may affect student completion). In view of the possibility
that the Graduate Faculty Executive Committee may require the Department to provide
additional information or impose a different deadline for your report, the APC will defer its
request, and review the materials provided in response to the GFEC request.
Dear Elaine and Greg,

Thank you for sharing the Program Review Committee's final report with me. Attached, please find a copy of the report with comments, clarifications, and corrections.

We really appreciate the work of the Review Committee and are most grateful for their constructive suggestions and positive perspective on the department. We learned a lot from putting together our self study and appreciate that the committee gave a lot of attention to the details in the study.

Please let me know if there is anything else that I can do in support of this process.

Best wishes,
Sissel

---

Dear Elaine,

Thank you so much for sharing the Program Review Committee's final report with me. I will share the report with my colleagues and respond with corrections of fact. I very much hope to be able to do that by April 24!

Best wishes,
Sissel

---

Dear Sissel,

Greg and I have received the report of the committee convened to review the programs in the Anthropology Department, and per our usual L&S process, are sharing that report with you with a request that you and your colleagues review it to correct any errors of fact (vs. interpretation) prior to APC discussion. Please feel free to annotate the document or to quote from it to correct the information – the council is pretty comfortable with either approach.
Our APC agendas are getting crowded – assuming that we receive your response by April 24, and that something really urgent doesn’t come up, it could be discussed May 1 or 15.

Thanks,
Elaine

Elaine M. Klein
Associate Dean for Academic Planning, L&S
elaine.klein@wisc.edu | 608-265-8484

Please note that there are two “Elaine Kleins” on campus; are you sending your messages to the right one?
Anthropology Department Review

1. The committee composition and the charge:

The committee was convened on December 8, 2017 by Dean John Karl Scholz. Its members are: Ian Baird (Associate Professor, Geography), Ivan Ermakoff (Professor, Sociology), Earlise Ward (Associate Professor, School of Nursing), Zhongdang Pan (Professor, Communication Arts). Pan was appointed to chair the committee.

In his letter that convened the Review Committee, Dean Scholz instructed us to (1) examine materials prepared by the faculty and (2) interview people who work with the program and its students in order to (3) “validate the self-study, evaluate program quality, and offer useful advice about where the programs need attention or improvement.” We were instructed, in particular, to pay attention to student learning assessments and improvement.

2. The procedure and activities:

The Committee members held an initial meeting with the Department Chair, Professor Sissel Schroeder on Monday, January 8th. The meeting included a wide-ranging discussion that lasted for nearly two hours. It was a valuable opportunity for the Committee members to get an initial impression of the department. As a result of the meeting, a procedure was set up for the Committee to conduct its review activities:

1) We each read the Self-Study document carefully and generated a list of questions or issues for clarification or exploration. Pan pooled these together and sent to Sissel as among the topics to be discussed in upcoming meetings.

2) Sissel helped us to set up four meetings:
   • 1:45 pm – 3 pm on Friday, Feb 9, a meeting with Sissel (Department Chair), Claire Wendland (Associate Chair and Faculty Undergraduate Advisor), and Travis Pickering (Director of Graduate Program).
   • 2:30 – 4 pm, Tuesday, Feb. 13, a meeting with graduate students. Twelve graduate students, representing all three sections of the department, attended the meeting.
   • 1:45 – 3 pm, Friday, Feb. 16, a meeting with undergraduate students. The turnout was low. Only two students attended the meeting, one junior and one senior.
   • 1:30 – 3 pm, Thursday, Feb. 22, the first meeting with the faculty. Seven faculty members attended at least a significant portion of the meeting.
   • 1:45 – 3:30 pm, Friday, the second meeting with the faculty. Six faculty members attended the meeting.

3) In her email messages to faculty, graduate students, and undergraduate majors to set up the meetings, Sissel identified all committee members, included Pan’s email address, and stated explicitly that the Committee welcomed them to contact the Committee directly, if they wished to discuss issues in settings outside of the scheduled meetings. Nobody took us up with regard to this invitation.

4) Pan compiled the notes from the organized meetings and shared them among the Committee members as a way to pool the “data” together. The committee then met on 3 – 4 pm on Thursday, March 1st, to discuss what we gained from these conversations and notes.

5) We then requested more materials from Sissel, including the 2006 Self-Study document, the evaluation of the 2006 Self-Study document, the enrollment and TA figures for

Commented [MOU1]: Of the twelve students who attended this meeting, 1 was a biological anthropology student and 11 were cultural anthropology students (one of whom started the program as an archaeology student). None of the archaeology graduate students were able to attend the meeting. We think this is an important clarification to make because it highlights a bias in representation that disproportionately emphasizes graduate student perceptions in one section of the department.

Commented [MOU2]: This meeting was held on February 23; all six faculty were in attendance for the entire meeting.
Anthropology 104 and 105, and teaching valuation numbers of Anthropology 102 and 321. We also developed an outline of this report.

6) In preparation of completing our report, we held a final meeting with Sissel at 3 pm on Wednesday, March 6 to clarify some issues from our internal discussion. We (Ivan was absent due to traveling) also met with College of Letters and Science, Associate Dean Greg Downey and Elaine Klein to discuss various facets of our planned recommendations on March 15.

Throughout our review process, Sissel has been extremely responsive, open, cordial, and efficient. All faculty members, undergraduate students and graduate students who we talked were open and responsive to our questions. Pooling the information and ideas from these discussions, and the data that we received, Pan put together the initial draft. All committee members have been fully involved in discussing and rewriting the report. What is presented here reflects the consensus of the Committee.

3. Assessments: Strengths and Weaknesses

(1) Reading the Self-Study in context

Our review started with reading the Self-Study. We found the document to generally be thorough, comprehensive, and clear with regard to the strengths and challenges of the department’s programs. On every aspect of the undergraduate and graduate program, the Self-Study renders assessments based on carefully presented data. The program overview of the Self-Study also outlines the discipline that the department embodies and the significance and contributions of the department in liberal arts education on UW-Madison campus.

Based on our discussions with faculty and students, we do feel that the Self-Study could have documented more substantively the far-reaching contributions that the department makes to the missions of the university, via (1) its faculty research in various locations of the world and our own state (aligned with the Wisconsin Idea), (2) its course offerings that provide students across campus with unique opportunities to be exposed to more holistic and comparative understandings of human diversity and to broaden their international and ethnic studies horizon, (3) in relation to international studies, an important strength of this university, and (4) outreach with the faculty with regard to fieldwork that involves indigenous peoples in the state, and elsewhere. We also feel that the Self-Study could have offered a more fully developed narrative on the philosophy and the scaffold of the department’s governance. For example, it was a pleasant surprise for us to find that the department has a graduate representative attending its open portion of faculty meetings. It was also a surprise to find that the administrative layer of the department is very thin, suggesting to us that it is highly efficient and at the same time has its resources stretched to the upmost limit.

Reading the Self-Study together with the 2006 Self-Study was an experience of continuity. The 2006 Self-Study stated clearly that “the Department of Anthropology is a well-governed program with sound academic values”. This statement can be readily adopted to summarize what we have learned from our reading of the new Self-Study and our meetings with faculty and students. The Department of Anthropology has its distinct tradition of having three foci, archaeology, biological anthropology, and cultural anthropology; it makes vital contributions to the missions of the College and the University in faculty research, undergraduate and graduate education /instruction and training.
The 2006 Self-Study depicted the overall backdrop against which to read the 2017 Self-Study, which highlights shrinking resources and downsizing. The 2017 Self-Study reflects the consequences of this overall trend. Placed in this context, we find that the faculty and staff have been doing a very admirable job in keeping the programs at high levels of vitality and productivity with shoe-string resources. Of course, the department got strong support from the College of Letters and Science (L&S) to stay healthy and strong. After the departure of five faculty members in 2012, the faculty size is now back to 19, with hires aided by the cluster initiatives and support from the Mellon and Luce Foundations. But it is still below the 2006 level by four people. The department has a very limited base budget for TAs, 21 in the fall and 19 in the spring, at no more than 40% level, making it unable to meet the enrollment demands on some of its undergraduate courses. For example, as one faculty said in a meeting with us, “You give me one TA, I’ll give you 80 students!”

Another indication of how the department struggles under severe resource shortage is that it is one of the few major academic departments in the College of L&S that does not have an undergraduate advisor on its staff. Instead, the department has to designate a faculty to take on that role at the expense of one course release. As a way to share the burden, this role rotates among the three sections. But then anybody new to this role needs to invest a significant amount of time to familiarize him/herself on the ins and outs of course selection, requirements, and procedures related to completing a major. As one undergraduate student pointed out, they have to “rely on self-advising (a characterization verified by the Self-Study and our meetings with the faculty), and it is frustrating.” Another student said, they “feel sorry for the faculty undergraduate advisor who has a long line of anxious students waiting to see her.” With a faculty in this role as a part of his/her job, it is also impossible for the department to maintain continuity in advising its majors, attracting students to its majors or the Archaeology Certificate program, all of which negatively impact maintaining and nurturing alumni relations and development efforts.

It is important to note, the department has no leeway to hire a person to meet this critical advising need because it is, under the present budget model, more than $180K in debt. Shifting its already small TA budget to hiring a staff person would mean not only further limiting the enrollment of some popular classes, hurting the department’s role in student learning on campus, but also undermining the graduate program in that it will further reduce the intake of graduate students. This will mean severely limiting the department’s ability to offer graduate seminars and creating difficulties for core research areas of the department to reach a critical mass necessary for their viability.

Below, we’ll integrate the information from the Self-Study and our meetings to discuss the undergraduate and graduate programs separately.

(2) The undergraduate program

Undergraduate major in the department is well managed, despite the severe limitations of not having an undergraduate advisor on the department’s staff.

First, the courses are all well lined up in the sequence of introductory courses, intermediate and advanced electives, and a capstone, and they are offered regularly. We did not hear of any students whose timely graduation was hampered by not being able to complete a required course on time. The course line-up and requirements for the major clearly reflect the learning outcomes specified and the department has put in place assessment methods and schedules in relation to such outcomes.
Second, the courses are also very well taught. A clear indication is that there are three recipients of the Chancellor’s Distinguished Teaching Award. Two introductory courses, Anthro 104, Cultural Anthropology and Human Diversity, and Anthro 105, Principles of Biological Anthropology, serve a larger number of students from across the campus. The department has recognized a strong student demand for these courses but the enrollment of each is limited by the TA budget. Sissel told us that the department is expecting a possible infusion of $19,800 as part of the College’s response to the anticipated expansion of student population on campus and has decided to allocate that to create a TA position for Anthro 105.

Third, despite the national trend of declining undergraduate degrees awarded in basic liberal arts departments, the anthropology major remains strong with around 100 undergraduate majors. In addition, 38% of the majors also complete at least another major. A growing number double-major in anthropology and biology or zoology, making for a strong pre-health professional track. The department also houses the Archaeology Certificate program, which averages 12 awards each year. In addition, the department runs two Summer Field School programs, enrolling 7-8 students in Wisconsin and 8-9 summer in South Africa.

Fourth, the anthropology majors tend to take slightly longer than the campus average to complete their degrees. But a significant portion of them also take on a second major, participate in the Archaeology Certificate program, or decide to major in anthropology later than those who choose other majors. It may also be related to inadequate undergraduate advising as a result of not having an undergraduate advisor on staff.

Fifth, it is no less significant but often neglected that when placed in the national context, the anthropology majors, and possibly, many anthropology courses that attract non-majors, are an important part of channeling women and first-generation students to STEM, as these courses contribute to preparing students to develop their interest in medical sciences, biology, zoology, environment, and climate sciences.

A significant feature of the undergraduate program in anthropology is the multi-faceted services it provides to the undergraduate curricula in Letters and Science and the campus as whole. Four of the courses meet the university’s breadth requirement in ethnic studies, including Anthropology 104, which has an average enrollment of nearly 800 per semester. Many of the anthropology courses are an integral component of the curricula of international studies and women and gender studies. In addition, the department has set aside discussion sections for Anthropology 104 and 105 for students taking FIGs.

The Self-Study (p. 10) summarizes some statistics from the department’s senior exit survey and discusses how the department has stipulated the learning outcomes and procedures of assessments and how it has also conducted such assessments in accordance to the established schedule (pp. 9-10, with more details in Appendices B & C). Both give out solid indications that the department has invested carefully and strategically in strengthening the undergraduate program with severely limited resources.

A clear weak spot of the undergraduate program is inadequate undergraduate advising. This is explicitly recognized in the Self-Study (p. 13) and articulated prominently by both the faculty and students in their meetings with us. Having a dedicated undergraduate advisor on staff to introduce undergraduate students to the anthropology major, advise students to move through the program, provide career development activities for students to learn job
opportunities and career prospect, and engage the alums continuously, has been identified as the department’s Number One pressing need.

Having such a person on staff is also critically important to realize the great affordances in the anthropology curriculum. The department offers many opportunities for students to develop hands-on skills and professional experiences through, for example, Summer Field Schools and Lab Work. How to address logistic and financial concerns related to such activities could be substantially aided by having an undergraduate advisor who has experience and knowledge in these areas. Without such advice, building summer Field School and study abroad components into one’s undergraduate program is likely to be a daunting task for an undergraduate student. In other words, a more effective advising system implemented by an undergraduate advisor would turn such worthy opportunities present in the curriculum into actual student learning and enrichment experiences.

(3) The graduate program

The graduate training takes place in three sections, archaeology, biological anthropology, and cultural anthropology. There is also an intersectional option. The graduate program is essentially a PhD program with MA/MS as an intermediate step. It is relatively small with 67 students currently, 19 in archaeology, 10 in biological anthropology, 37 in cultural anthropology and 1 who intersect with more than one section. The Self-Study provides a very clear description with data from existing surveys (Appendix E, p. 47) and a graduate student listening session (Appendix G, pp. 52-53). The department’s webpage also provides a very clear description of the requirements for PhDs (https://www.anthropology.wisc.edu/graduate-study/table-of-phd-requirements/) and Master’s (https://www.anthropology.wisc.edu/graduate-study/table-of-masters-requirements/). Clear stipulations of learning outcomes and the corresponding assessment regime are provided in the Self-Study (Appendix F, pp. 48-51).

The department has put in place an advising and professional development system for its graduate program. It includes the following elements: (1) Each student has a second faculty as his/her co-advisor; (2) a student organization called AnthroCircle organizes colloquia and social events; (3) the department fosters a non-prejudicial culture for students who decide to change their academic advisor; (4) the department organizes regular colloquia, brown bags, and/or lab meetings (in archaeology and biological anthropology). The system also includes a transparent procedure for TA assignment, which includes having a spreadsheet that lists the courses and TA positions tied to each, an annual survey of graduate students on their teaching experiences and interests that serves as their application for a TA assignment, and formal and informal TA evaluations by supervising faculty. In addition, the department also encourages students to seek extramural funding and conduct their independent research. As part of this culture, the faculty, through various informal and formal venues, provides guidance to graduate students on how to seek extramural research support. These include offering workshops on proposal writing, providing URLs of the likely funding agencies in course syllabi, meeting with graduate students to discuss how to obtain funding, etc. The Self-Study provides some statistics showing that a substantial portion of graduate students have succeeded in obtaining extramural funding in various forms (Table 9, p. 21).

The graduate program is also facing serious challenges. The Self-Study documents some of these challenges. Through our conversations with the faculty and grad students, we gained a better appreciation of them and became aware of some other challenges that are not fully documented in the Self-Study.

Commented [MOU5]: We think it important to clarify that graduate courses on research methods specifically focused on writing dissertation proposals to submit to funding agencies are offered by each section (Anthro 906 in biological anthropology, Anthro 909 in cultural anthropology, and Anthro 942 [Topic: Research Methods] in archaeology)
First, the 10-year PhD completion rate is low (28%). While the Self-Study makes a convincing case that this number needs to be interpreted with a nuanced understanding of the historical legacy (p. 22), the data available via the Graduate School’s webpage (https://grad.wisc.edu/) shows that the department’s 10-year PhD completion rate at 37.5%, substantially lower than the AAU Peer rate of 57.8% in the same discipline.

Second, while the size of the graduate applicant pool is healthy (average 82 in the past 10 years for an average of 10 in-takes), the acceptance rate is low at 34.4% in the last 10 years (p. 19). The faculty made a strong case that the number should be interpreted with some nuances. The implications of going deeper into the applicant pool in admission and having such a low acceptance rate need to be considered in conjunction with the admission and advising practices. The department takes a more “holistic admission” approach by considering an applicant’s background, interest, and experiences, as they are reflected in the application files as a whole. Great emphasis is placed on a student’s personal statement and interaction with the faculty. By doing so, the graduate program is able to identify those exceptional students whose strengths are not reflected in test scores and to open the program to the outstanding students from severely disadvantaged background (e.g., first-generation college or graduate students, or international students from the “Global South”). Indeed, this observation is documented with statistics in Table 5 (p. 20). The challenge that such a graduate student population poses is that intensive faculty advising and mentoring and a strong sense of community among graduate students are particularly needed compared with some other program. This is a point brought up in our meetings with graduate students and faculty. Graduate students pointed out that many of those who exited without a degree did so because of a lack of funding. Faculty pointed out in addition to that, there were also personal reasons for leaving the program. Some were probably less prepared when entering the program.

Third, graduate student funding is the most severe stress point on the graduate program. As shown in the Self-Study, in the fall of 2015, two-thirds of graduate students received funding. The primary forms are teaching assistantships and outside fellowships. The 4-year guaranteed funding appears healthy at 62%. These numbers, however, tell an incomplete story. First off, the TAships are at the 40% rate, making them less attractive compared with those in some other L&S departments that are at 50%. Secondly, averaged over the past 10 years, only 45% of the graduate students received funding, with 36.6% in the form of TAships. The numbers are significantly lower than the university average of 62-73% (p. 20). Thirdly, anthropology PhDs take 6-12 years to complete (p. 22) and all need to conduct extensive fieldwork toward their dissertation. This means that all of them need to find funding from other sources for at least a significant portion of their graduate program. In sum, funding for graduate students appears to be more severely limited in anthropology than in many of the other programs in L&S; it is also likely more acutely experienced among anthropology graduate students than those in many other programs. This was clearly expressed by graduate students who met with us and also confirmed by one faculty who pointed out that the lack of funding “is a top stressor” for anthropology graduate students.

Fourth, as the Appendix G of the Self-Study shows, there are serious challenges in graduate advising, communication, community building, and pedagogical training. In our meetings with graduate students and faculty, we detected an alarming perceptual disparity between students and faculty. We feel that the best way to capture such a disparity is to show our summary from the meetings in a table, with the comments by graduate students and
responses from the faculty (we brought up students’ comments in our meetings with the faculty) displayed side by side (Appendix A).

4. Analysis and recommendations

Based on our review, we find the Department of Anthropology is strong in faculty research, and has well-constituted undergraduate and graduate programs. It makes critical contributions to the College and its mission and it is an indispensable and valuable player in shaping student learning experiences on campus. At the same time, the department is also facing serious challenges in areas of staffing, graduate student funding, shortage of TA office spaces and other general community spaces for grad students to use, and the challenges related to trying to preserve the present faculty or to grow it in the near future. Some of the perceptual disparities between graduate students and the faculty that we observed could be addressed via better communication. But in a significant way, the root of the problems is in the resource deprivation.

We recommend that the department consider the following measures aimed to address the perceptual disparities and identify venues for new resources:

First, staffing. We recommend the department address the pressing undergraduate advising needs by designing a 50-100% staff position of undergraduate advisor and hire a person to fill it as soon as possible. The department needs to develop a well-conceived description of the position. In addition to undergraduate advising for the department’s majors and those who are potentially interested in majoring anthropology, the person should be given the specific responsibilities of developing and implementing an exit survey of the undergraduate majors, maintaining an alumni database, and developing a newsletter or its equivalent for regular alumni relationship maintenance and development. The person should also be given the specific responsibility of helping students’ career development by organizing career fair activities.

Second, communication. We recommend the department develop a series of measures to improve its communication with and among graduate students. These could include:

1) Developing a faculty-led credit-carrying pro-seminar that serves as a go-to venue for professional development (on issues ranging from MA or PhD student course requirements to grant proposal writing) and community building (graduate students get to know the people, works and approaches in sections other than their own). It could incorporate some section-specific brown bags or colloquia.

2) Holding an information-sharing session with graduate students in each semester where the Chair, Section Chair, and Director of Graduate Studies share information on issues related to the graduate program, including how to get reimbursement for organizing colloquia and how TA assignments have been or will be made. We believe that greater, more systematic, and transparent communication will also help alleviate the anxiety and frustration about funding that surfaced in our meeting with graduate students. This point is of particular importance in the case of the first-year students insofar as their initial experience is likely to durably color their perception of the program. Students will benefit from learning early on their teaching responsibilities and the degree of autonomy and self-determination expected from them. It is also important that the graduate student representative at faculty meeting fully understand that her/his responsibility is to report to her/his fellow students.

Commented [MOU6]: We clarified earlier in the document that each section within the department offers courses that focus on grant proposal writing.
3) Developing a regularly updated Graduate Student Handbook that is available on the department’s website. Its contents and changes get discussed in pro-seminar sessions, the new student orientation, and the information-sharing sessions.

4) Organizing and publicizing every year a preparation session laying out expectations and assessment criteria for the qualifying exams.

5) Designating the Director of Graduate Studies as the faculty liaison for AnthroCircle (Undergraduate advisor could serve as a staff advisor and logistic support), which is encouraged to organize social and professional development activities. It appears that AnthroCircle needs more faculty focus and involvement of the undergraduate advisor, so that it serves its purpose.

6) Including in the end-of-semester check-in form an item that requires the faculty and the student to indicate that they have discussed or have scheduled to discuss the student’s activities as reflected in the form.

7) Developing an annual Professional Activity Report (PAR) template for graduate students to track and report their activities each year. There should be more transparency to let students know that TA assignments and nominations for fellowships or awards will make use of the information provided in PARs.

8) Making the physical space of the Department more user friendly by (a) adding signs on office doors allowing students to identify administrative responsibilities (b) devising a community space where students can meet.

9) Devising an exit survey for graduate students, to be complete after their oral defense or other departing occasions. It should collect information on their appraisals of the program, their experiences, and their next stop.

Third, resource planning. We recommend that the department continue its efforts to identify opportunities where additional resources could be brought in to the department. These include cluster hire initiatives, hiring and teaching assistantship opportunities that may be available in various Title VI centers, teaching and research development opportunities on campus, and graduate student support that is allocated via Graduate School. We also recommend that the department explore ways to upgrade the Archaeology Certificate program to bring more students to the department and ways in which it can utilize the archaeological research collections in public events and/or exhibits that could have development opportunities, namely, generating interests of potential donors and alums.

We are acutely aware that we conducted this review in the larger context where higher education in the United States and the world is in the midst of a major transformation. While many innovations are being developed with new technologies, new models of forging alliances with stakeholders, and new pedagogical approaches that encourage participatory and network-based learning, an unmistakable trend is the spread of a neo-liberal mode of thinking about higher education, which is characterized by, arguably, an over-emphasis on essentialized students’ demands, job market statistics, and efficiency statistics measurable to serve the administrative systems (e.g., number of course credits per faculty) but not necessarily sufficient to capture classroom dynamics (e.g., student experiences in exchanging ideas, encountering different perspectives, engaging in critical thinking and exploring imaginations). This trend is not friendly to departments of basic liberal arts disciplines. Anthropology is one such department. This is a national trend; it is also clearly observable at UW-Madison. The comparative reading of the Anthropology Department’s 2006 Self-Study and the 2017 one clearly shows negative impacts of this trend on the department’s capacity to improve its programs: It has suffered a net resource loss, and the shrinkage of resources noted in 2006 has continued since then.
The department has taken measures to address the resource shortage in the new era with faculty hires through the Mellon and Luce Foundations and it is in the process of preparing a cluster hire proposal with the medical school and biomedical center to fill its critical need of hiring a faculty in the area of archeological chemistry. But one thing is also plainly clear to us: Not all L&S units are equally capable of devising revenue-generating innovations. Such variations may arise in part from differences among disciplines. If, for example, a significant portion of communication discipline can be creatively linked to revenue-generating innovations (e.g., online courses with a broad appeal) due to its ready interface with daily practices (e.g., developing interpersonal relationships) or industries (e.g., designing digital media), this is not a readily transportable model for the basic liberal arts departments such as anthropology or philosophy. Further, mechanisms to incentivize revenue-generating innovations by L&S units may also work better for larger units with the ability to re-configure their resources to devise and implement such innovations. The anthropology department does not seem to be in that position either. The impossible situation related to the undergraduate advisor is a case in point. While the Chair, the Faculty Undergraduate Advisor, and the faculty in general all recognize that without such a person on staff, “it’s hurting our students,” they simply do not see how to identify a movable piece in their available resources to hire such a person. In our view, allocating faculty resources of one course reduction to meet that need is both inadequate and wasteful.

Stated bluntly, it is our view that the department needs some help from the College and the Graduate School. We recommend that with the strong support from the College and Graduate School, the department develop a resource planning model that will strengthen its services to the undergraduate students on campus and the majors and do so in the way that will also help address the resource shortage challenge that its graduate program is facing. More specifically, this model needs to enable the department to:

1. Hire an undergraduate advisor;
2. Expand the department’s base budget for teaching assistantships so that (1) two TAs per semester are added to Anthropology 105 and (2) the Department is able to make TA appointments on a 50% basis without having to reduce the number of TAships offered to reach this goal.

It is our hope that in the long run, with the targeted allocation of new resources, coupled with the department’s initiatives, the department can reverse the source shrinking trajectory and start to stabilize and even grow back to its previous size of 24-member faculty.
### Appendix A. A Summary of Meetings with Graduate Students and the Faculty

<table>
<thead>
<tr>
<th>Issues Raised</th>
<th>Responses from the Faculty</th>
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<tr>
<td>□ TA funding is limited.</td>
<td>□ 5-year guaranteed funding is not a suitable model for us because we need our graduate students to develop their independence as scholars, which includes getting extramural funding to support their field work. This is important for them to develop their career.</td>
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<tr>
<td></td>
<td>□ Limited funding – both in the length of graduate and amount – makes us less competitive in attracting top applicants. We have to go deeper into the applicant pool, attract more non-traditional students and students who need more help and would otherwise not get an opportunity to go to graduate school.</td>
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<tr>
<td>□ Expected to get outside funding but do not have enough professional development activities on how to identify potential sources of funding and write proposals.</td>
<td>□ The department at large and three sections separately, especially the archaeology and bio-anthropology, have weekly brown-bags or colloquia where such issues are discussed.</td>
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<td></td>
<td>□ In some courses (e.g., Anthropology 901, Methods in Cultural Anthropology), the course syllabi list potential funding sources and online links.</td>
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<td></td>
<td>□ Faculty are available to advise students on such issues.</td>
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<td>□ TA assignments not known until very late and the process is not transparent enough.</td>
<td>□ The timing of TA assignments is not always under our control. It depends on when the Graduate School approves our TA budget and the enrollment figures. “We just don’t get information to plan ahead as we’d like.”</td>
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<td></td>
<td>□ Every semester, a survey was sent to all grad students. They are told that it also serves as an application. Ranking among the grad students is based on the information from the survey. Other things being equal, we give someone who has not had the opportunity higher preference.</td>
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<td>□ The faculty were indignant when hearing this complain. One said immediately, “Lack of transparency is not the term we’ll use.”</td>
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Commented [MOU9]: The course number is Anthro 909

Commented [MOU10]: The College of Letters & Science approves this budget. The process of making TA recommendations in the department is slow in part because of the need to review graduate student progress, especially performance on the qualifying exam, before assigning TAs. We have be trying to move this process forward over the past two years and will continue in this effort.
<table>
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<tr>
<th>Faculty advising varies greatly among individuals. Do not know who the Director of Graduate Studies is. The check-in form for each semester is only a formality. Assessment of the qualifying exams does not have substantive feedback and the result (&quot;MA pass&quot; or &quot;PhD pass&quot;) is not notified the students promptly.</th>
<th>The department has put in place a structure to advise graduate students. Each student has an advisor and a co-advisor. There is an institutional code that students are free to switch advisors. Advisors need to submit a check-in form on each advisee every semester to report their progress. It is substantive in that it is based on meetings with students.</th>
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<tr>
<td>The check-in form for each semester is only a formality. Assessment of the qualifying exams does not have substantive feedback and the result (&quot;MA pass&quot; or &quot;PhD pass&quot;) is not notified the students promptly.</td>
<td>Assessment of qualifying exams is done properly. For those of us who are physically present, we'll give students substantive feedback and notification on their passage within 24 hours after the committee meets.</td>
</tr>
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<td>Tremendous progress has been made since the previous 10-year review.</td>
<td>This content duplicates the previous two boxes.</td>
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Commented [MOU11]: We found this comment a little unclear and offer this clarification: the smaller size of the faculty and graduate student cohorts in the archaeology and biological sections may facilitate regular discussions about advising in comparison to the much larger cultural anthropology section. |

Commented [MOU12]: This content duplicates the previous two boxes.
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<th>within 24 hours after the committee meets.</th>
<th>Tremendous progress has been made since the previous 10-year review.</th>
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<tbody>
<tr>
<td>Maybe in archaeology and bio-anthropology, we each have a smaller group. We do not have enough discussion on how to advise graduate students.</td>
<td>Not enough training in pedagogy; graduate students’ teaching not observed and substantively evaluated.</td>
</tr>
<tr>
<td>This (a lack of faculty evaluation of teaching) is not true. We evaluate students teaching regularly and give them feedback. There are formal and informal evaluations. Faculty’s evaluations of graduate TAs go into their file.</td>
<td>Grad students-organized workshops to discuss gender and sexuality in teaching.</td>
</tr>
<tr>
<td>Indeed, they don’t have enough pedagogical training in the department.</td>
<td></td>
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