AGENDA

INTRODUCTION

1:30 Automatic consent approval of the minutes from January 12, 2018  GFEC20180209.01
1:30 Introduction of new GFEC members (William Karpus)

APPROVALS

1:35 Request to discontinue the Doctoral Minor in Biometry effective Spring 2018 (Cecile Ane)  GFEC20180209.02
1:40 Request to approve a new Doctoral Minor in Interdisciplinary Theatre Studies effective Fall 2018 (Mary Trotter)  GFEC20180209.03

PROGRAM REVIEWS AND UPDATES

1:50 Ten-Year Review of Water Resources Management M.S./Doctoral Minor (Sue Babcock)  GFEC20180209.04
2:15 Ten-Year Review of Botany M.S./Ph.D./Doctoral Minor (Sue Babcock)  GFEC20180209.05
2:40 Ten-Year Review of Mathematics M.A./Ph.D./Doctoral Minor (Parmesh Ramanathan)  GFEC20180209.06

DISCUSSION

3:05 Annual Assessment and Feedback on Progress Towards Degree (Parmesh Ramanathan)  GFEC20180209.07

2017-2018 MEETING SCHEDULE
March 9, April 13, May 11, June 8
1:30 p.m. – 3:30 p.m. in 52 Bascom Hall
University of Wisconsin-Madison
Graduate Faculty Executive Committee
1:30 pm – 3:30 pm, Room 52 Bascom Hall
January 12, 2018

M I N U T E S


Members Absent: Lara Collier, Alex Dressler, Steffen Lempp, Christopher Livanos, Christa Olson, Parmesh Ramanathan, Monica Turner, Earlise Ward

Guests: Barbara Duerst, Greg Downey, Elaine Klein, Jocelyn Milner, Lisa Naughton, Andrea Poehling, Lauren Ritters, Fernando Tejedo-Herrera

Staff: Judy Bauman, Katie Block, Eileen Callahan, Meghan Chua, Marty Gustafson, Kelly Haslam, Michelle Holland, LaRuth McAfee, Emily Reynolds

Dean William Karpus called the meeting to order. Since the committee did not have quorum at the start, Dean Karpus proposed moving forward with the presentations and delaying voting. The committee agreed.

Dean Karpus announced Associate Professor Alex Dressler as a new member of the GFEC.

Approvals:

1. Dean Karpus introduced Policy and Planning Analyst Andrea Poehling from the SMPH Dean’s Office and Faculty Associate Barbara Duerst from the Department of Population Health Sciences, who presented a request to suspend admissions to the Capstone Certificate in Leadership for Population Health Improvement effective Fall 2018 and a request to discontinue it effective Fall 2019. The certificate has consistent low enrollment and can no longer be supported by the department, which has already informally stopped admitting students. There are three students currently in the certificate and they have been notified they must finish by Fall 2019 to receive the certificate; they are on track to finish their coursework by then.

2. Dean Karpus introduced Professor Lauren Ritters from the Department of Integrative Biology, who presented a request to discontinue the Zoology M.A. effective Fall 2018. The M.A. has no enrollments or awards; all students pursuing master’s level-work in Zoology are in the M.S.

3. Dean Karpus introduced Professor and Chair Lisa Naughton from the Department of Geography, who introduced a request to suspend admissions to the Capstone Certificate in Geographic Information Systems effective Fall 2018 as well as a request to discontinue it effective Spring 2020. This is a follow-up from the November 2017 GFEC approval to create a new named option and two new capstones in geographic information systems-related areas. Students currently in this capstone certificate will need
to complete the certificate by Fall 2019 or be moved to either one of the new capstone certificates or the new named option.

4. Dean Karpus introduced Professor Kristin Eschenfelder, who introduced a request to approve a new Capstone Certificate in Data Analytics for Decision Making from the Information School effective Spring 2019. The staff supporting this certificate is already in place. The certificate is coordinated with current offerings from the Department of Statistics to ensure there is no competition for students. The certificate has participation from the Department of Communication Arts and Wisconsin School of Business. Associate Dean Martin pointed out that currently the proposal language allows students to use credits taken at other institutions toward the certificate, but this is not allowed by UW-Madison policy. The implementation form for the certificate will be amended to reflect this.

Program Reviews and Updates:

5. Former GFEC Member Fernando Tejedo-Herrera introduced the Institutional (10-Year) Review of the M.A./Ph.D./Specialist Certificate/Doctoral Minor in Educational Leadership and Policy Analysis (ELPA). Tejedo-Herrera noted strengths of the program, including high national rankings, good representation of underrepresented minority students, strong mentoring for students, support for professional development, high rates of career placement of graduate students into relevant fields and a thorough up-to-date student handbook. Tejedo-Herrera also discussed review committee recommendations, including discussing the future of the Specialist Certificate, which is a low-award degree; developing an annual department-wide evaluation of students in line with institutional assessment efforts; exposing graduate students to possible resources available in the Graduate School including the Individual Development Plan (IDP); developing the degree specializations into formal named options; and enhancing interaction between full-time and professional students. The GFEC commends the program on its strengths and recommends it engage in efforts to address the review committee’s concerns. Dean Karpus announced to the committee that as two additional members had arrived, the meeting now had quorum and voting on approvals could be conducted. Recently arrived members were apprised of summaries of the presentations on approvals.

Motion: Moved and seconded to accept the Institutional (10-Year) Review of the M.A./Ph.D./Specialist Certificate/Doctoral Minor in Educational Leadership and Policy Analysis. The motion was passed unanimously.

7. GFEC Member Nicole Perna introduced the Institutional (10-Year) Review of the M.S./Ph.D./Doctoral Minor in Molecular and Environmental Toxicology. Perna noted the strengths of the program include a dedicated director and coordinator highly valued by students, strong support for diversity recruiting, demanding curriculum that is clear and appreciated by students, diverse post-degree career opportunities, excellent alumni relations networking and professional development opportunities and strong junior faculty recruitment and productivity. Perna noted review committee recommendations, including updating the graduate handbook, strategizing a backup plan in the event of a T32 grant non-renewal, addressing concerns about degree completion and time to degree, formalizing trainer recruitment processes, addressing uneven TA/preceptor workloads and the student-reported curriculum gap in risk assessment. Some issues that the committee brought up that the program has since addressed are developing a leadership transition plan and lightening the coordinator workload. The
committee recommended the continuation of the doctoral minor. Associate Dean Martin has followed up with the program regarding their students teaching without receiving course credit or having T.A. appointments and will continue to work with the program on this issue. The GFEC commends the program on its strengths and recommends it engage in efforts to address the review committee’s concerns.

Motion: Moved and seconded to accept the Institutional (10-Year) Review of the M.S./Ph.D./Doctoral Minor in Molecular and Environmental Toxicology. The motion was passed unanimously.

8. GFEC Member Caroline Alexander introduced the Institutional (10-Year) Review of the M.S./Ph.D./Doctoral Minor in Medical Physics. Alexander noted the strengths of the program include a strong reputation for scholarly activities and innovation, exceptional career placement, good representation of students in department decision-making, and active efforts to recruit and matriculate underrepresented minority and women students. Alexander noted enrollment levels are consistent with plans, program resources and career outcomes; that students have clear and simple access to information, especially the choice of CAMPEP (Commission on Accreditation of Medical Physics Education Programs) accreditation; and that the CAMPEP review includes continuous assessment metrics. Alexander discussed the review committee recommendations, which included balancing evolving coursework to accommodate specializations with fundamentals, protecting time for clinical faculty to teach and developing financial strategies to overcome flat-line funding from federal and local sources. The review committee also noted that the Doctoral Minor is awarded 1-3 times a year and is supported at the request of other programs. The review committee recommended continuation of the doctoral minor. The GFEC commends the program on its strengths and recommends it engage in efforts to address the review committee’s suggestions.

Motion: Moved and seconded to accept the Institutional (10-Year) Review of the M.S./Ph.D./Doctoral Minor in Medical Physics. The motion was passed unanimously.

The minutes of December 1, 2017, were approved as a matter of automatic consent.

Motion: Moved and seconded to suspend admissions to the Capstone Certificate in Leadership for Population Health Improvement effective Fall 2018. The motion was passed with two abstentions.

Motion: Moved and seconded to discontinue the Capstone Certificate in Leadership for Population Health Improvement effective Fall 2019. The motion was passed with two abstentions.

Motion: Moved and seconded to discontinue the Zoology M.A. effective Fall 2018. The motion was passed with two abstentions.

Motion: Moved and seconded to suspend admissions to the Capstone Certificate in Geographic Information Systems effective Fall 2018. The motion was passed with two abstentions.

Motion: Moved and seconded to discontinue the Capstone Certificate in Geographic Information Systems effective Spring 2020. The motion was passed with two abstentions.
Motion: Moved and seconded to approve the creation of the Capstone Certificate in Data Analytics for Decision Making effective Spring 2019. The motion was passed with three abstentions.

Adjournment:
Motion: Moved and seconded to adjourn. The motion passed unanimously.
Date: January 17, 2018

To: Sarah Mangelsdorf, Provost
    William Karpus, Dean of the Graduate School

From: Sarah Pfatteicher, Associate Dean for Academic Affairs, CALS

Subject: Request to Discontinue Doctoral Minor in Biometry

On January 16th, the CALS Academic Planning Council met and unanimously approved the attached request to discontinue the doctoral minor in Biometry (0 enrolled students) effective for the earliest possible date.

Please feel free to contact me if you have any questions.

Cc: Nikki Bollig, Assistant Dean, CALS
    Marty Gustafson, Assistant Dean, Graduate School
    Sarah Kuba, Academic Planner, APIR
    Jocelyn Milner, Associate Provost and Director, APIR
    Emily Reynolds, Academic Planning Specialist, Graduate School
    John Schuppel, Graduate Coordinator, Statistics
    Dick Straub, Senior Associate Dean, CALS
    Kathryn VandenBosch, Dean, CALS
    Brian Yandell, Director, Biometry Program
As Director of the Biometry Program, after consultation with Biometry Faculty, we request the Graduate School discontinue the doctoral minor in Biometry.

The Biometry Program has 3 faculty, and all agreed in discussions during Fall 2017, and in email this past week, to discontinue the Biometry doctoral minor. Staff in Statistics (who assist with administration of the Biometry Program), confirm that there are no students currently in this minor. In fact, the Graduate School could only find record of one person who has ever had this minor.

Because there are no students currently enrolled in or being recruited for the doctoral minor, we request that the doctoral minor be discontinued at the first available opportunity.

Thank you for your consideration. If you require any additional information, please do not hesitate to contact John Schuppel.
19 January 2018

TO: William Karpus, Dean, Graduate School

FROM: John Karl Scholz, Dean

RE: Proposal to Create Doctoral Minor, Interdisciplinary Theatre Studies

CC: Russ Castronovo, Chair, Department of English
Marty Gustafson, Assistant Dean, Graduate School
John Hitchcock, Chair, Theatre & Drama, Education
Elaine Klein, Associate Dean for Academic Planning, L&S
Sarah Kuba, Academic Planner, Academic Planning and Institutional Research
Jocelyn Milner, Vice Provost and Director, Academic Planning and Institutional Research
Emily Reynolds, Academic Planning Specialist, Graduate School
Mary Trotter, Director, Interdisciplinary Theatre Studies
Nancy Westphal-Johnson, Associate Dean for Academic Administration
Susan Zaeske, Associate Dean for the Arts and Humanities, L&S

On January 16, 2018, the L&S Academic Planning Council considered the attached request to create a new doctoral minor, in Interdisciplinary Theatre Studies (ITS). The ITS program, which is housed in the Department of English, is overseen by an interdepartmental program committee that is composed of faculty who are well-equipped to guide students through this program of study, in courses that are regularly offered in the Departments of English (L&S) and in Theatre & Drama (Education).

The APC was pleased to approve this request. We wish the program all success in offering it.
January 3, 2018

TO: John Karl Scholz, Dean, College of Letters and Science
CC: Sue Zaeske, Associate Dean, College of Letters and Science
    Elaine M. Klein, Assistant Dean, College of Letters and Science
FR: Russ Castronovo, Chair, English Department
    Mary Trotter, Director, Interdisciplinary Theatre Studies
RE: Proposal for a new PhD Minor in Interdisciplinary Theatre Studies

Please find attached a proposal for a new PhD Minor in Interdisciplinary Theatre Studies. This proposal has been approved by ITS’s administrative home department, English. We believe that this minor will serve students interested in theatre, drama, and performance located in major departments and programs across the university.

Sincerely,

[Signature]

Russ Castronovo
Chair, English Department
Tom Paine Professor of English
Dorothy Draheim Professor of American Studies

[Signature]

Mary Trotter
Chair, Interdisciplinary Theatre Studies Program
Associate Professor, English and Interdisciplinary Theatre Studies

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Interdisciplinary Theatre Studies Program
University of Wisconsin – Madison, 7195 Helen C. White Hall, 600 N. Park Street, Madison, Wisconsin 53706
INSTRUCTIONS FOR PROPOSING A NEW DOCTORAL MINOR

A doctoral minor is a 9-12 credit program designed to meet the breadth requirement of a doctoral degree at UW-Madison. The Doctoral Minor referred to within this document is “Option A” within the Graduate School Academic Policies and Procedures Minors policy. “Option B” minors (“distributed minors”) do not need to go through this process. Refer to the AP&P Minors policy for grounding in policy requirements for Doctoral Minors before proceeding.

PLANNING THE DOCTORAL MINOR

- Planning starts with idea development among the program faculty and staff.
- Begin to fill out the Doctoral Minor Proposal Form.
- When your ideas are starting to take shape, consult with your school/college dean’s office. If you aren’t sure who to talk to in your school/college dean’s office or if you have questions and want to discuss your plans, contact the Academic Planning Specialist in the Office of Academic Planning and Assessment in the Graduate School.
- When you have a full draft of a completed Doctoral Minor Proposal Form, and ideally before school/college approval, send the proposal to the Graduate School Assistant Dean for Academic Planning and Assessment and the Graduate School Academic Planning Specialist for a check-in and proposal review. This will help make sure that the doctoral minor meets all components of the Graduate School guidelines and will identify any implementation questions.

APPROVAL STEPS FOR DOCTORAL MINORS

1. The program faculty who are sponsoring the doctoral minor (most often the faculty or executive committee in a department) formally approve the doctoral minor.
2. The school/college that houses the doctoral minor considers the minor for approval, usually at the school/college Academic Planning Council.
3. After school/college approval, the dean forwards the proposal to the dean of the Graduate School with a copy to the Graduate School Assistant Dean for Academic Planning and Assessment and the Graduate School Academic Planning Specialist.
4. The Graduate Faculty Executive Committee considers the doctoral minor for approval.

QUESTIONS: Emily Reynolds, Academic Planning Specialist, Graduate School
(emily.reynolds@wisc.edu)
Marty Gustafson, Assistant Dean for Academic Planning and Assessment, Graduate School
(marty.gustafson@wisc.edu)
Doctoral minors are intended for all doctoral students who are not meeting the breadth requirement in some other way (programs must petition for this exception to be granted; the policy and procedures can be found here). This form is to be used in concert with the Graduate School Academic Policies and Procedures Minors policy. Complete the form and save as a Microsoft Word document.

1. **Doctoral Minor name and academic home**
   1.1. Doctoral Minor name: **Interdisciplinary Theatre Studies/G970**
   1.2. Home Department/Academic Unit (Name/UDDS): **English (Interdisciplinary Theatre Studies) / A4824**
      
      The home department/academic unit is responsible for the academic oversight, delivery, and administration of the doctoral minor.
   1.3. Home School/College: Letters and Science, College of
   1.4. Additional Department(s)/Academic unit(s) information, if relevant:
      
      The English Department is the administrative home of the Interdisciplinary Theatre Studies Program, Teaching and courses relevant to the minor will be performed by ITS faculty members.
   1.5. Faculty director of the Doctoral Minor (name, title, email): **Mary Trotter, Director, Interdisciplinary Theatre Studies Program, Associate Professor of Interdisciplinary Theatre Studies and English, mary.trotter@wisc.edu**
   1.6. Primary Doctoral Minor contact (name, title, email): **Mary Trotter, Associate Professor, Interdisciplinary Theatre Studies and English, mary.trotter@wisc.edu**
   1.7. Primary school/college dean’s office contact (name, title, email): **Elaine M. Klein, Associate Dean for Academic Planning**
   1.8. Date form completed: Click here to enter a date.

2. **Approval, Implementation, and Review**
   2.1. School/College Approval Date: Click here to enter a date.
   2.2. GFEC Approval Date: Click here to enter a date.
   2.3. Expected first term of student enrollment (can be as soon as next semester): **Fall 2018**
   2.4. Year of minor’s home graduate program or department (if applicable) next program review: **2021-2022**
   2.5. Are all academic programs in the home academic unit up to date for program review? **Yes**
      
      ▪ If no, please provide an explanation:

3. **Purpose, rationale, justification**
   Describe the purpose, rationale, and justification for the Doctoral Minor:
   3.1. What is the purpose of the Doctoral Minor? How does it contribute to the mission of the sponsoring unit(s)?
The Doctoral Minor in Interdisciplinary Theatre Studies offers doctoral students in other UW departments and programs the opportunity to gain advanced knowledge of theatre and performance history, theory and criticism as a complement to their core field of study. It will be of particular interest to students studying dramatic literature in English or foreign language departments; fine arts and communication arts students engaged in performance research, history, pedagogy or practice; and students in folklore, gender and women’s studies or other programs engaged in research about performativity, ritual or the performance of everyday life. The ITS minor’s goals reflect those of our MA and PhD programs; specifically:

- Thorough familiarity with the theory, history, and practice of drama and theatre as collaborative cultural forms
- Historical understanding of the diverse global locations of theatre and the intercultural contact among theatre traditions
- Intensive training in the methods and materials of theatre research and writing
- Understanding of theatre-as-practice, and of the reciprocal relations between research and practice, through participation in the production process

With the discontinuation of the Theatre and Drama PhD minor in fall of 2017, new UW graduate students are currently unable to complete a minor in theatre or performance studies beyond one they may piece together on their own as a distributed minor. By instigating the ITS minor, students interested in this area of study will be mentored by the ITS Program Director, who will help them find ITS courses complementary to their primary research. This minor will boost PhD students’ research across the university, while also signaling to potential employers a student’s expertise in the fields of theatre and performance studies.

3.2. What is the evidence that there is a societal and student demand for the Doctoral Minor program?

For many years, graduate students from diverse departments and programs across UW-Madison have sought a minor in theatre, drama and performance, and the interest in such a minor remains strong on campus. In the last semester, the ITS program received inquiries from PhD students in Music, African Languages and Literature, English and Curriculum and Instruction about the minor. Likewise, ITS’s affiliate faculty in other departments—especially the foreign language departments—are eager to see the ITS minor reestablished for their own students. Indeed, the number of theatre and performance research faculty in other departments (many of whom are ITS affiliate faculty) reflects how important theatre this minor can be to the research and career goals of students in diverse Departments across campus. The ITS Minor will not only deepen students’ doctoral research, but also signal to these students’ future employers their expertise in this important field that is relevant to so many academic programs and departments.

4. Curriculum

4.1. Provide a summary of requirements for the Doctoral Minor.

Ph.D. students in other departments or programs may choose to complete a Minor in Interdisciplinary Theatre Studies (ITS). Students interested in this minor need to meet with the ITS Program Director, who will advise them of and approve courses appropriate to their specific interests. Students must complete 12 credits (4 courses) in the program at the 300 level or higher. At least three of the courses must be at the 500 level or higher. A maximum of 3 credits (1 course) of independent study are allowed.
In courses with different assignments for graduate students than undergraduate students, applicants for the Minor must complete the graduate student assignments in the course. Students must earn a grade point average of at least 3.0 in all Minor courses. Under unusual circumstances it may be possible for theatre or performance studies courses completed at another institution within the prior five years to count toward the minor in ITS. Such transfer credits must be approved by the ITS Program Director based on the syllabus, transcript, and final paper from the course.

Program requirements should provide content that leads to the completion of the Doctoral Minor learning goal(s).

4.2. Provide a list of courses students can take toward the minor.

<table>
<thead>
<tr>
<th>Primary Department</th>
<th>Cross-Listing Departments</th>
<th>#</th>
<th>Course Name</th>
<th>Credits</th>
<th>Approval Status; Frequency Taught (e.g. Yes; 1x/year)</th>
<th>Letter from Primary Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
<td>850</td>
<td>Proseminar in Theatre Research</td>
<td>3</td>
<td>Yes; 1x/year</td>
<td>Yes</td>
</tr>
<tr>
<td>English</td>
<td></td>
<td>859</td>
<td>Seminar in Interdisciplinary Theatre Studies</td>
<td>3</td>
<td>Yes; 2x/year</td>
<td>Yes</td>
</tr>
<tr>
<td>English</td>
<td>Theatre and Drama</td>
<td>731</td>
<td>Advanced Theatre History, 500 BC to 1700</td>
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<td>Yes; about every 2 years</td>
<td>Yes</td>
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<td>English</td>
<td>Theatre and Drama</td>
<td>732</td>
<td>Advanced Theatre History, 1700 to Present</td>
<td>3</td>
<td>Yes; about every 2 years</td>
<td>Yes</td>
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<td>English</td>
<td>Theatre and Drama</td>
<td>578</td>
<td>Modern American Drama and Theatre</td>
<td>3</td>
<td>Yes; about every 2 years</td>
<td>Yes</td>
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<tr>
<td>English</td>
<td>Theatre and Drama</td>
<td>577</td>
<td>Postcolonial Theatre: Drama, Theory and Performance of the Global South</td>
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<td>Yes; about every 2 years</td>
<td>Yes</td>
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<td>English</td>
<td>Theatre and Drama</td>
<td>576</td>
<td>Survey: Theories of Drama</td>
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<td>Yes; about every 3 years</td>
<td>Yes</td>
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<td>Theatre and Drama</td>
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<td>British Drama 1914-Present</td>
<td>3</td>
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<td>Yes</td>
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<td>Theatre and Drama</td>
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<td>522</td>
<td>Experimental Drama: The Theatre of Europe 1850-Present</td>
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<td>See note 1 below</td>
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<tr>
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<td>619</td>
<td>Special Topics in Theatre and Drama</td>
<td>3</td>
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<td>See note 1 below</td>
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<td>Theatre and Drama</td>
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<td>Theatre in Education</td>
<td>3</td>
<td>Yes; about every 2 years</td>
<td>See note 1 below</td>
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<td>Curriculum &amp; Instruction</td>
<td>562</td>
<td>Drama in Education: Advanced Studies</td>
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<td>Yes; about every 2 years</td>
<td>See note 1 below</td>
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<td>Theatre and Drama</td>
<td>Gender and Women’s Studies</td>
<td>415</td>
<td>Introduction to Contemporary Feminist Theatre and Criticism</td>
<td>3</td>
<td>Yes; about every 2 years</td>
<td>See note 1 below</td>
</tr>
</tbody>
</table>

(Add as many lines as needed)
NOTES REGARDING COURSE LIST:

1. In 2015 the Theatre and Drama PhD and MA Programs transferred from the Department of Theatre and Drama to an independent program housed administratively in English renamed Interdisciplinary Theatre Studies. The Theatre and Drama courses on this list are taught by current ITS faculty/staff housed in Departments outside Theatre and Drama. The ITS Program is currently transferring the listed Theatre and Drama courses to new course numbers designated for ITS courses by our administrative home in English (English 650-659, 850-859). At the same time, we are petitioning for ITS to receive its own subject listing. Should we receive our own subject listing, all of the above courses will be transferred to that subject listing.

2. ITS is made up of a transdisciplinary faculty with tenure homes across the university. When a faculty member in ITS teaches a course relevant to the program, the Director (under advisement of the ITS steering committee) will designate said course as eligible for inclusion in a student’s PhD minor, and advertise the fact to all students in the minor.

4.3. Total credits required: **12 credits**

   Doctoral Minors are a minimum of 9 credits. A maximum of 3 credits of independent study (e.g., 699, 799, 899, 999) are allowed. Research and thesis cannot be used to satisfy the minor (e.g., 790, 890, 990).

Checklist for Verification of Curricular Policy Requirements*

You will have an opportunity to provide explanation and rationale for any Curricular Policy Requirements that have not been affirmed in the text box that follows the checklist, below.

- Courses for the Doctoral Minor are numbered 300 or higher.
- Courses are offered on a regular basis (as identified in course chart in section 4.2).
- Courses have enrollment capacity for students in the Doctoral Minor.
- Courses in the proposed Doctoral Minor have been approved.
- Students must earn a minimum 3.00 GPA on required doctoral minor coursework. Completed courses listed within the doctoral minor curriculum, whether or not they meet a specific requirement, are included in the calculation of the GPA.
- Courses in which a student elects the pass/fail option will not meet Doctoral Minor requirements.
- Coursework may not be double counted for major requirements.
- No more than 5 credits of coursework completed more than 5 years prior to admission to the doctoral program may be used; coursework taken 10 years ago or more may not be used.
- All Doctoral Minor requirements must be met; waiving requirements is not permitted.
- Substitutions are not permitted for any course unless the substitution would be provided for every student with the same substitution request.
- Units must maintain Doctoral Minor requirements so that they are up-to-date; all curriculum changes must be approved through the appropriate school/college academic planning council (APC) or curriculum committee. The school/college APC or curriculum committee will notify the Graduate School about approved curricular changes to the Doctoral Minor. Typically, any changes in requirements will be effective no sooner than the fall semester after approval.

*Provide explanation and rationale for any Curricular Policy Requirements that have not been affirmed.

5. **Student Services & Advising**

5.1. List the name(s) of Doctoral Minor Advisor(s) with title and departmental affiliation(s).

   Mary Trotter, Director, Interdisciplinary Theatre Studies, Associate Professor, English and Interdisciplinary Theatre Studies

5.2. ☒ Confirm that program coordinator(s) have been consulted and reviewed this proposal.
6. Recruiting, Admission, & Enrollment
6.1. Describe plans for recruiting students to complete the Doctoral Minor:

The ITS Program will inform our affiliate faculty and the Directors of Graduate Studies of pertinent UW-Madison departments about our program and its value to students with an interest and need for theatre and performance research in support of their studies within their major.

6.2. List any admission criteria for the Doctoral Minor beyond admission to a graduate or professional program and permission from the student’s home degree/major: Not applicable

6.3. Maximum enrollment that can be supported with existing instructional and student services resources: Based upon the number of courses we teach each year, we estimate that the program can enroll up to 20 students in the minor with current instructional and student services resources.

6.4. Describe plans for supporting enrollments that are much higher than the anticipated enrollment. While we anticipate eight to ten minors in the foreseeable future—well below the number we could support—if our numbers increased beyond 20, we would increase enrollment in non-seminar courses. Lower anticipated numbers would not affect our curriculum.

7. Learning Outcomes
7.1. ☑ Attach learning outcome(s) when submitting this proposal.

8. Governance & Faculty
8.1. The Doctoral Minor is governed by:

☑ Existing department and school/college governance committees
☐ New Doctoral Minor governance committees*

*If the Doctoral Minor is governed by a new committee, define and outline governance structures and procedures for the doctoral minor program.

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

- Aparna Dharwadker, Professor, English and Interdisciplinary Theatre Studies
- Christine Garlough, Associate Professor, Gender and Women’s Studies, Member, ITS Steering Committee
- Paola Hernandez, Associate Professor, Spanish and Portuguese and Interdisciplinary Theatre Studies; Member, ITS Steering Committee
- Michael Peterson, Associate Professor, Art and Interdisciplinary Theatre Studies, Member, ITS Steering Committee
- Jennifer Plants, Faculty Associate, English and Interdisciplinary Theatre Studies
- Mary Trotter, Associate Professor, English and Interdisciplinary Theatre Studies, Director, ITS
- Manon van de Water, Professor, GNS and Interdisciplinary Theatre Studies
- Michael Vanden Heuvel, Professor, CANES and Interdisciplinary Theatre Studies

9. Doctoral Minor Completion
9.1. ☑ The faculty program director will sign the doctoral warrant certifying that a student has completed all of the requirements for the Doctoral Minor.
Checklist for Verification of Ongoing Commitment*
You will have an opportunity to provide explanation and rationale for any Ongoing Commitments that have not been affirmed in the text box that follows the checklist.
☑ If the program requires new instructional resources, space, advising, additions to the Library collections, or other support, a supporting letter is attached to demonstrate that the appropriate unit can provide the resources.
☑ The Doctoral Minor faculty are responsible for seeking appropriate governance approval for significantly altering the Doctoral Minor's curriculum, suspending admissions or discontinuing the Doctoral Minor. Any changes in requirements will be effective no sooner than the fall semester after approval.
☑ The Doctoral Minor will be included in the program's institutional program review.
☑ The program faculty/staff will ensure the program website and Guide (graduate catalog) materials are current and consistent across all locations where information is provided.

Required attachments
☑ Attach learning outcome(s) when submitting this proposal.
☑ Supporting letters/memos
  Provide letters or memos from other academic units that will have overlapping interest. This will include departments/schools/colleges that provide courses for the Doctoral Minor or have program names that are similar.
Learning Outcomes for the Proposed ITS PhD Minor

These learning outcomes for the proposed ITS PhD Minor will be shared with all students pursuing the minor. The ITS Program will regularly assess student success meeting these outcomes.

- Demonstrate understanding of the theory, history, and practice of drama and theatre as collaborative cultural forms across historical periods.
- Master the methods and materials of theatre and performance research and writing in order to produce original scholarly projects
May 15, 2017,

To Whom It May Concern:

I write in support of the establishment of a doctoral minor in Interdisciplinary Theatre Studies. As this will serve as replacement for the now-closing doctoral minor in Theatre and Drama, it is a necessary mechanism for enabling Ph.D. students to benefit from having a secondary concentration in theater and performance studies. I urge you to approve the application to establish the ITS minor.

Sincerely,

Quitman E. Phillips
Chair of Art History
May 30, 2017

Professor Mary Trotter
Director, Interdisciplinary Theatre Studies Program
University of Wisconsin, Madison

Dear Professor Trotter,

On behalf of the graduate program in Classical and Ancient Near Eastern Studies, I am writing to support the establishment of a Doctoral Minor in Interdisciplinary Theatre Studies. We believe that this minor could be of interest to students in CANES, especially those completing the Classics option, who regularly take courses in ancient drama. Adding the minor in ITS would give them the opportunity to expand their knowledge of theatre beyond what we are able to teach in our program, which focuses mainly on the texts and very little on performance or other subjects.

Moreover, two faculty members from the CANES graduate program also teach in ITS. Professor Michael Vanden Heuvel is a member of the core faculty, while Professor Laura McClure is a member of the affiliated faculty. By connecting the courses that they currently teach to a doctoral minor in ITS, they would be able to reach a broader range of students.

In sum, we enthusiastically support the creation of this doctoral minor.

Sincerely,

Jeffrey Benek
Professor and Chair

Department of Classical and Ancient Near Eastern Studies
University of Wisconsin-Madison 910 Van Hise Hall 1220 Linden Drive Madison, Wisconsin 53706
608.262.2041 608.262.8570 (fax) canes@wisc.edu canes.wisc.edu
May 25, 2017

To whom it may concern,

I am pleased to convey the Department of Communication Arts’ support for establishing a Doctoral Minor in Interdisciplinary Theatre Studies, to replace the recently discontinued Doctoral Minor in Theatre and Drama. We see no issues with the creation of this new Doctoral Minor in response to the recent restructuring of the Department of Theatre and Drama.

Sincerely,

Michael A. Xenos
Communication Arts Partners Professor and Department Chair
Department of Communication Arts
May 17, 2017

To: Mary Trotter, Theater Studies
From: Russ Castronovo, Chair, English
Re: Interdisciplinary Theater Studies MA and PhD Programs

As part of its ongoing partnership with Theater Studies, the English Department supports the establishment of a Doctoral Minor in ITS.

This degree will replace the Doctoral Minor in Theatre and Drama, which is being closed now that the PhD program in Theatre and Drama has relocated to the Interdisciplinary Theatre Studies Program. This adjustment to the Doctoral Minor will allow ITS faculty to continue to serve the many arts and humanities PhD students on campus who wish to pursue a minor focus in theatre and performance studies.
Prof. Mary Trotter  
Program Director  
Interdisciplinary Theatre Studies  

16 August 2017  

Dear Mary,  

On behalf of the Mead Witter School of Music, I write in support of your proposal for a new doctoral minor in Interdisciplinary Theatre Studies to replace the previous minor in Theatre & Drama that is now closed. My understanding is that your minor will consist of 12-credits taken from an array of ITS offerings and will be advised by the program director.  

The School of Music continues to require the minor for our Ph.D. and D.M.A. programs and believe that an ITS minor would be of great interest to our students. Your proposed minor does not replicate not does it compete with any of our minors, but rather provides complimentary opportunities.  

On behalf of the entire School, I wish you all success with the ITS program and, in particular, in establishing this new minor.  

With all good wishes,  

Susan C. Cook  
Pamela O. Hamel/Music Board of Advisors Chair  
Mead Witter School of Music
October 6, 2017

Mary Trotter
Associate Professor, English and Interdisciplinary Theatre Studies
Director, Interdisciplinary Theatre Studies Program
University of Wisconsin-Madison
7195G Helen C. White Hall
600 North Park Street
Madison, WI 53706

Dear Mary Trotter,

The Theatre and Drama Department supports the Interdisciplinary Theatre Studies Program’s request to create a PhD minor in Interdisciplinary Theatre Studies. This degree is not in conflict with Theatre and Drama offerings, and will encourage graduate students to take courses in theatre and performance, including possibly Theatre and Drama courses, as part of their requirements to degree.

Sincerely,

[Signature]

John Hitchcock, Associate Dean for the Arts, Chair of Theatre and Drama and Professor of Art
University of Wisconsin Madison
608-772-7955 • jhitchcock@education.wisc.edu
May 17, 2017

To:    Sarah Mangelsdorf, Provost and Vice Chancellor for Academic Affairs  
        William Karpus, Vice Chancellor for Research and Graduate Education

From:  Paul Robbins, Director, Nelson Institute for Environmental Studies

Re:     Final Summary of Review for: MS degree in Water Resources Management

The review committee was charged with assessing the strengths and weaknesses of the MS degree in Water Resources Management, and making recommendations for future directions. The Nelson Institute APC discussed and unanimously approved the review committee report. Based on my review of their report and the APC response, I am providing the following response to the program review:

Overview

We are pleased to see that, overall, the committee concluded that the program has served its students and the university extremely well (the program is now more than 50-years old). It has a loyal alumni base, and has benefited, over the years, from the involvement of dedicated faculty who believe in its mission. The reviewers have a long list of strengths of the program including that the program has had a “ground-breaking, science-based approach.” They cite as strengths the cohort structure and the joint summer project that have been hallmarks of the program from its inception. They note that the program has been successful in launching graduates to fill satisfying and important professional roles. In short, they credit WRM as fulfilling all the essential elements of a successful graduate program. The program is nationally competitive and, in a sense, one of a kind.

As a tribute to the rigor of the report, the review committee also identified a number of program weaknesses. Some of these arise from the cohort-team project structure, which as noted, is also seen as a strength. Because students are not working in a traditional research mode, in which a faculty advisor has a direct interest in their specific individual research, there have been challenges in finding faculty to participate on student committees. This may also be the reason that some students reported difficulties in getting timely and specific advising. The program is dependent on “good will” participation by faculty.

So too, student resources were identified as an area of weakness. Although many students are able to find employment as TAs or PAs, the group project itself does not provide assistantships.
Students may therefore be burdened with paying some, or all, costs of the program. This problem is one aspect of the perception by the review committee that the program is underfunded.

The view from the Director’s Office is that this might be viewed as a problem, but a reorientation of our perspective might also be in order. As a professional program, which launches student careers, student education might better be viewed as an investment on the part of those participating in the program. Even so, this office is simultaneously continuing to seek external funding to support WRM students (e.g. donor-funded fellowships and scholarships – see below).

A further serious issue has been raised about the degree to which the WRM program is integrated with other faculty initiatives and programs associated with water resources on this campus or in the region. For example, it is noted that the program has not connected to Sea Grant activities on the Madison campus or the Global Water Center in Milwaukee. We acknowledge that improvement is needed, but point out that the chair - Professor Thompson - is working diligently on precisely these connections. We fully expect that we will work together to foster these networks; this office will provide full support for the WRM chair in meeting campus priorities.

We finally note that the committee calls out a lack of long-term strategic planning. From the Director’s Office, we believe that this is the paramount challenge for the program, but well within its capacity. Specifically, connecting WRM to this Division’s strategic priorities (e.g. Urban Ecology and Environmental Justice; outreach to Native Nations, etc.) is essential as the program moves forward.

We note that this office has continued to work with WRM leadership for the development of resources and several actions have been taken at the director’s level to increase support for the program. For example, the terms of a Wisconsin Distinguished Graduate fellowship have been rewritten to allow support of WRM activities. In the next few years this fellowship will be dedicated to an ongoing WRM project at Green Lake. To capitalize on the heightened alumni interest around our 50th anniversary, a WRM support fund was created. This fund is providing discretionary resources for the chair of the program. In 2015 UW Nelson Institute Professorship in Water Resources was established. The holder of the professorship, the chair of the program, receives an annual allocation.

Despite these positive steps, or rather, because of them, we believe that there is a need for a strategic evaluation. Other issues identified in the report as in need of attention will provide us with guidance as we develop the agenda for strategic planning and adjust our priorities to assure the continuing success of the program.

**Recommendations**

The recommendations in the report can be summarized as asking for attention to 1) student
issues – diversity, funding, and advising, and the appropriate number of student for a viable program; 2) faculty issues – recruitment of new faculty to replace those retiring, improving faculty advising of students, and assuring support for faculty engaged in the summer workshop; 3) general program issues – to consider forming an outside advisory board, to reach out to engage with other research programs, government agencies, and private sector businesses; and, as discussed above, to develop a strategic plan for the next 5-10 years; and 4) to connect and integrate the strategy to be developed for WRM with that of the Nelson Institute as a whole. We concur with these recommendations.

Follow Up

The Nelson Director will call for the WRM program committee to develop a proposal for the timing and format for a strategic planning effort. Such an effort will be logistically supported by the Director’s Office and staff. Our charge will be for this planning to address the recommendations of this thorough, constructive, and useful report.

Best wishes,

Paul Robbins
Director

CC: Prof. Anita Thompson Chair, WRM
CC: Prof. Paul Zedler, Associate Director for Research and Education, Nelson Institute
CC: Dr. Ken Bradbury Chair, program review committee
CC: Jocelyn Milner, APIR
CC: Sarah Kuba, APIR
CC: Marty Gustafson, Graduate School
Ten-Year Review of the Water Resources Management Program at the University of Wisconsin-Madison

Prepared for The Nelson Institute for Environmental Studies, University of Wisconsin-Madison

April 23, 2017.

Review Committee: Dr. Kenneth Bradbury, Chair, Dr. James LaGro, Jr., Dr. Jennifer Hauxwell, Dr. Susan Babcock (Graduate Faculty Executive Committee (GFEC) representative]

Introduction

This is a report on a ten-year review of the Water Resources Management Program at the University of Wisconsin-Madison. This review was requested by Paul F. Robbins, Director, and Paul Zedler, Associate Director, of the Nelson Institute, which administratively houses the Water Resources Management Program. As stated in the charge to the review committee (appended to this report), this review focuses “…on evaluating the quality and function of the academic programs. To the extent that departmental matters (e.g., strategic planning, climate, facilities) affect academic programs, the committee should offer comment; however, the focus of your report should be on the academic programs, and the student experience.”

The Water Resources Management (WRM) program is one of three graduate degree-granting programs administered by the Nelson Institute. The other two programs are Environmental Conservation (EC) and Environment and Resources (E&R). The WRM program leads to a master of science (M.S.) degree in water resources management. Graduates typically seek employment as professionals in government, business, industry, education and the nonprofit sector. WRM students do not conduct individual research projects. Instead, they participate in a summer group practicum, or workshop, with a water resources management focus. This summer practicum is a unique feature of the program, and sets it apart from many other graduate school experiences.

The WRM program operates on a very small budget. The program’s Chair, currently Dr. Anita Thompson, receives one month of salary for chairing the program. The advisor for the workshop, who may or may not be the same person as the chair, also receives one month of summer salary. Funding for the summer practicum is usually provided by outside clients for whom the practicum is undertaken, but on occasion has been supported by other funds, such as Professorships. Other UW faculty affiliated with the program serve on a largely volunteer basis. The Nelson Institute staff provides much of the day-to-day program administration. Students in the program are about half self-supported and take courses in a variety of departments affiliated with the program.

The review was conducted between January 1 and March 31, 2017. After an initial meeting and interview with Director Thompson the committee developed a series of interview questions and scheduled interviews with the individuals and groups listed below. The committee also designed an
online survey and sent this to current WRM students. Following the interviews and survey the committee discussed the results and developed the following consensus report.

Sources of information
The review committee collected and assessed a variety of information in preparing this report. Key sources of information include:

- The Self-Study Report prepared by the WRM program, dated September, 2016
- An on-line survey of current WRM students
- Direct interviews with individuals or groups as follows:
  - WRM Chair (Dr. Anita Thompson)
  - Nelson Institute Director (Dr. Paul Robbins)
  - Nelson Institute Staff (Jim Miller)
  - UW Faculty members who have recently participated in the WRM program:
    - Dr. Kenneth Potter
    - Dr. Jean Bahr
    - Dr. Ken Genskow
    - Dr. Emily Stanley
    - Dr. Stephen Ventura
  - Current graduate students in the WRM program
    - Three second-year students
  - Alumni of the program
    - Three recent program alumni
  - Potential employers of program graduates
    - Three business or government leaders who have employed or might employ WRM graduates

Summary notes and responses for each of these data sources are included as appendices to this report along with the current checklist for successful graduate degree programs and a list of some competing programs at other institutions.

Summary of program strengths and challenges
Through its interviews and material review the committee concludes that the Water Resources Management (WRM) program has been very successful over the past decade, as measured by student and alumni satisfaction with the program and the broad success of program graduates in finding employment in water resources fields. The program has an overwhelmingly positive reputation, is widely respected, and has a strong, loyal, and geographically widespread alumni base. Employers find that WRM graduates are excellent employees, and many graduates have become leaders in their fields. Many interviewees commented that the program embodies the Wisconsin Idea by combining university research and knowledge with management and administrative skills.

The fundamental strength of the program is the dedication and passion that the Chair, faculty, and students bring to it. Much of this passion is focused on the summer WRM workshop practicum which was cited numerous times as offering a unique and even transformative student experience in which students are forced to work together, often outside their individual comfort zones, to achieve the group
goals. Students, faculty, and alumni are committed to the program and proud to have been a part of it. An observation heard more than once can be summarized in the statement “…this program runs on love…”; such a statement reflects the passion and loyalty of the participants but also reflects the realities that the program is underfunded and depends on goodwill and volunteerism for its continued success. This lack of long-term resources is a program weakness and a potential area of concern. Another concern is that the program appears to be operating without a long-term strategy and with only modest integration with other water-management related programming in the Nelson Institute, the larger University of Wisconsin system, or nationally. This lack of long-term plans or strategies may be leading to missed opportunities and chances to make the program even better.

Program strengths

- High-quality students, with a breadth of experiences
- Groundbreaking, science-based approach
- Small size. Faculty and students feel that the current program is about the right size (10-15 students per year/cohort). But this small size may also present challenges for program sustainability.
- Produces practitioners with a relatively broad perspective on water resource management issues (e.g., about half of WRM students earn a second degree, such as CEE, Public Affairs, URPL)
- Loved by students and faculty
- The cohort system, in which student groups participate together over a two year period; group cohesion (e.g., strengthened by the off-campus orientation/field trip)
- The current moderate size of the cohorts (10-15 students) lets individual students take personal ownership in the workshop project while also working on an interdisciplinary team
- The summer workshop, often cited as a unique group experience that takes students out of their comfort zone, often widened students’ career horizons, and embodies the Wisconsin Idea
- The mixture of science and policy
- The dedication and passion of recent program Chairs and associated faculty and staff
- A loyal and widespread alumni network
- A record of successful employment and career growth for program alumni
- Satisfied employers of program graduates

Program weaknesses

- Limited funding for both faculty and students.
- Dependence on goodwill and dedication of faculty for supervision and direction
- Danger of the workshop being “captured” by the research interests or discipline of particular Directors or faculty advisors
- Uneven and inconsistent application process for practicum projects and sponsors. Essentially a word of mouth process
- Some potential employers find graduates underprepared in technical skills
- Group practicum can make it difficult for students applying for jobs to articulate areas in which they provided leadership
- Uneven and sometimes inadequate student advising (e.g., brochure, curricula maps) and/or orientation
- Lack of a long-term strategic plan
• Lack of coordination with the strategic goals of the Nelson Institute
• Curriculum is vulnerable to the lack of regularly-offered social science courses (e.g., Water Institutions & Policies)
• Stronger linkages could be made with Public Health
• Limited coordination with other UW-Madison water programs
• Little ethnic or cultural diversity among students in the program
• Limited international water expertise on Madison campus, and lack of an international water policy course

Challenges facing the program

The committee identified several issues that it regards as challenges to the WRM program over the next decade.

Financial support for students
Currently, the program provides little or no financial support for its students. Students are often either self-supported or obtain RA, PA, or TA support in other departments, often while pursuing double/dual majors. The committee wonders if this arrangement is sustainable, and whether it is causing the best and brightest students to go elsewhere.

Financial support for faculty
The WRM program has been fortunate in recent years in having exceptional faculty members step up to direct the program and assist with the summer workshop. The financial rewards for doing this work are small – generally a month of summer salary – while the work load – running the summer workshop and advising 20 or more students – can be large. In addition, accepting the Chair position likely interrupts the research career of the faculty member. We note that the WRM Chair position now (as of this year) has a Professorship (Nelson Institute Professor of Water Resources) tied to it and with that come some discretionary funds for the Chair.

Equipment or dedicated program space
Students mentioned that much of the equipment for the field practicum must be borrowed, often from the practicum Director’s laboratory or from other cooperative faculty or institutions. Obviously, equipment needs vary from year to year but building up an inventory of common water-resources field equipment might help facilitate the practicum. In addition, except for a small room in the basement of Science Hall, there is no “common space” for WRM students to gather, work together, or store equipment.

Selection process for Practicum projects
Currently, the selection process for practicum workshop projects is unclear and uneven. There is little or no solicitation for projects; instead the opportunities depend largely on faculty members’ own contacts and interests. Faculty expressed a reluctance to advertise the workshop opportunity more broadly because it would likely mean rejecting proposals, with potential negative impacts on outside relationships. The danger with this process is that some worthy projects (and potential funding
opportunities) can be missed. The committee suggests that the Request for Applications process for practicum could be improved to make more communities aware of the opportunity while continuing to respect the interests of those directing the program. Low-stakes requests for applications (short preproposals) might be an easy way to increase exposure.

**Ongoing and appropriate faculty support and expertise**

Many of the faculty who over the last decade have directed the WRM program are now at or near retirement. It is unclear who the next cadre of faculty will be who will step up to move the program forward. In addition, the committee identified a potential gap in faculty expertise as a lack of anyone with expertise in international water policy. Finally, a professional practice course (how to write proposals, resumes, budgets, make presentations, etc.) might be a good addition to the program.

**Student advising**

One of the most common criticisms of the program given by students and alumni was a lack of clarity in student advising. The program Chair is the default advisor for all the students in the program, possibly creating an unreasonable advising workload. The program requires all students to form a 3-person advisory committee, and program staff emphasize to students the importance of this committee both to assisting with curriculum selection and to developing networking skills and mentorship opportunities. The program expects student to be proactive in forming these committees. Nevertheless, students reported difficulty and uncertainty in finding other advisors, often because they didn’t know who or how to ask. The role of, and even need for, an advisory committee in a WRM student’s program seems to be unclear to some (not all) students, and some students treat the advising as perfunctory or simply a check-off before graduation. Frequently the advisory committees do not even form or meet until the student’s program is nearly complete, and such advising can be ineffective.

**Opportunities for engaging other professionals**

Wisconsin, and the Madison area in particular, are rich in professionals working in water-resources fields. The committee suggests that student training could be strengthened by developing more intentional interactions with practicing professionals. This might initially take the form of guest lectures or panel discussions with outside professionals about career opportunities or water-management issues of the day and might eventually lead to internships or funding opportunities.

**Integration with other programming in the Nelson Institute or wider water resources community**

Although the WRM program is housed in the Nelson Institute, it appears to have only minimal links to other Nelson Institute programs and activities. For example, the two strategic priorities established by Nelson Institute Director Robbins are Urban Needs and Native Nations, but the WRM program has not been formally linked to either of these. Nor does it have many links to other important programs such as Sea Grant or Water at UW, though we note that Chair Anita Thompson currently serves on the Water at UW Steering Committee in an effort to better link these programs. There are obvious potential links with the new Master’s program in Environmental Conservation at Nelson. Improving such linkages could lead to synergy for all Nelson programs.

On the broader scale, the WRM program currently seems disconnected from important water-resources institutions or industries outside of the university. For example, the Water Council and related Global Water Center in Milwaukee is “...a globally connected epicenter for freshwater research, innovation,
education and business development” that might be a natural partner for the WRM program to expand its portfolio of opportunities for training and funding. In Madison, the Clean Lakes Alliance has developed a strong, and well-funded institution focused on the Madison lakes and involving local business leaders and industries; such an organization might present opportunities for WRM.

Lack of a strategic plan
Many of the criticisms or questions the committee heard related to the WRM program seem to relate to the absence of strategic thinking or planning for the program. This is not to say that the program has not been, or is not being, successful – it has been and it is. But, looking forward, the committee developed numerous questions, such as:

- Is the program the right size? Is its current size sustainable?
- How can the program achieve financial stability?
- Is there a pool of UW-Madison faculty members ready to step up to guide the program as currently engaged faculty retire?
- Is the program exposing students to not only contemporary but emerging urban, suburban, and rural water resource management issues, and not only in the Upper Midwest but in other parts of the U.S. and even internationally? Many of the challenges in protecting the integrity of natural hydrogeologic and ecological systems pertain to “human dimensions” issues (e.g., land use patterns, resource extraction technologies, and water infrastructure systems, driven by public policies and human behaviors). A broad range of resource management challenges pertain to water extraction, delivery, and use by people (e.g., aquifer depletion from over-pumping, rural groundwater contamination from agriculture and onsite wastewater systems; lead pipes in urban water delivery systems; combined sewer overflows in metro areas).
- Are there different models (other than the practicum) for students to get equivalent technical/management experience? What are they?
- How can the program move from the current “volunteer” model to a “service” model for funding and faculty involvement?
- The workshop/practicum format has remained almost unchanged for many years. Is this still the appropriate format for the WRM experience? What is the current standard of practice for such workshops? How could it be improved (e.g., switching the writing requirement from 1-2 credit mandatory fall semester after practicum to finalize written report; workshop on data visualization)?
- What programs at other Universities (or even at UW-Madison) does WRM compete with? How does the WRM program (e.g., curriculum, student advising & handbook, funding, governance) compare to programs offered elsewhere (e.g., Oregon State U., U. Michigan, U. Minnesota, U.C.-Davis, U. Nevada-Reno, U. Arizona, U. Vermont, U. New Mexico)? Are there “best practices” that could inform future changes to the WRM program?
- Could the program be marketed more effectively? Currently there is little or no marketing.
- How could the strong and loyal alumni group be utilized more effectively? E.g., alumni advisory council; periodic panels with working WRM professionals.
- Are there opportunities for funding that are going untapped, such as partnerships with industry, foundations, or agencies?
Recommendations

Overall, the committee believes the WRM program is functioning well, producing successful practitioners, satisfying employers, and maintaining its reputation as a unique program. Going forward, however, the committee recommends that to be sustainable and to aspire to excellence the program must take a hard look at itself in the context of changing water resource management challenges at regional, national, and international scales. The program also needs to attend to issues related to funding, competition from other programs, and student advising. Specifically, we recommend the following:

1. The WRM program should develop a comprehensive strategic plan for the next 5-10 years, with attention to the following items:
   a. How WRM compares to competing interdisciplinary water resources programs at other universities. What will continue to make WRM unique and competitive? (see Appendix 12).
   b. Student diversity
   c. Funding and funding models
   d. Faculty support. Where will the next generation of faculty come from?
   e. How WRM might be better integrated with the larger mission of the Nelson Institute and other water programs on the UW-Madison campus?
   f. Is the program the right size? Is the number of graduates produced aligned with the demand for employees with the expertise gained in WRM program?
   g. How can the summer workshop, a unique aspect of the program, best prepare students to address changing water management challenges?

2. The program should evaluate the ways that student advising takes place, and the needs and timing for appropriate student advising. Program policies and procedures should be summarized in the up-to-date program handbook that is required by the graduate school.

3. The program should consider establishing an outside board of visitors, possibly composed of alumni and employers, to annually review the program and provide guidance.

4. The program should explore opportunities for better connections with the industry and business sectors both inside and outside of Wisconsin.

5. The program should review the Check list for Successful Graduate Degree Programs, provided to them with the review request materials and included as Appendix 11, and assure that all information on it is current and easily found on the program website

Appendices

Appendices to this report summarize the information collected by the review committee.

Appendices:

1. Letter of Charge to the Review Committee
2. Notes from the initial committee meeting (1/4/17) including comments from Director Anita Thompson
3. Questions prepared for faculty, students, alumni, and employers
4. Summary of interview with Nelson Institute Director Robbins
5. Summary of interview with Jim Miller, Senior Student Services Coordinator
6. Summary of group interview with WRM Faculty members
7. Summary of group interview with current WRM students
8. Summary of Qualtrics survey responses from current students
9. Summary of group interview with WRM employers
10. Summary of group interview with WRM alumni
11. Successful Graduate Degree Program Checklist
12. Information and links from competing similar programs at other institutions
This visualization was created by the Graduate School. Questions should be directed to Peter Kinsley, peter.kinsley@wisc.edu.
This visualization was created by the Graduate School. Questions should be directed to Peter Kinsley, peter.kinsley@wisc.edu.
54.2% for 1+ to 2 years,
36.7% for 2+ to 3 years,
3.3% for One year or less,
5.8% for 3+ to 4 years.
22 December 2017

TO:      Ken Cameron, Professor and Chair, Botany
FROM:   John Karl Scholz, Dean
RE:       Completion of the Review of Botany Graduate Programs:
          o Master of Science – Botany
          o Doctor of Philosophy Botany

CC:     Marty Gustafson, Assistant Dean, Graduate School
        Elaine Klein, Associate Dean for Academic Planning, L&S
        Sarah Kuba, Academic Planner, Academic Planning and Institutional Research
        Jocelyn Milner, Vice Provost and Director, Academic Planning and Analysis
        Eric Wilcots, Associate Dean for the Natural and Mathematical Sciences, L&S

On October 3, 2017, the L&S Academic Planning Council considered the review of graduate
level academic programs overseen by the Department of Botany. Associate Dean Eric
Wilcots led discussion of the department’s self-study, the review committee report, and of the
corrections and comments offered about the committee report.

Before I summarize the council’s discussion, I should note that the council asked me to
convey its commendation for thoughtfulness and candor evident in the self-study, and their
appreciation that the department was able to identify strengths and challenges appropriately,
and to use this process as a mechanism for improvement. This is, we think, the most important
aspect of the program review process, and we appreciate your work in this regard.

The council noted that though small, this program steadily enrolls the an appropriate number
of high quality students to ensure good levels for mentoring; furthermore, Botany is notable
among the sciences for attracting high quality under-represented students. Members’ greatest
concern was identified by the review committee, regarding the appearance of inconsistencies
in the graduate experience for students, and the degree to which shared or similar
requirements may or may not be communicated explicitly and consistently to all of your
students. The APC observed that consistency in communication with graduate students is vital
to students’ perceptions of equity and fairness: students not only should know what the
requirements are, but that the requirements across groups of students completing similar
degrees reflect some degree of parity. The council shared the review committee’s concern
about the considerable variation in the graduate student experience, and (perhaps related)
reports of students’ “uncertainty” about what is expected of them. We agree that this is an
area for improvement; since these issues are well within the department’s control, the council encourages you to consider the review committee’s advice. You may also wish to confer with the Graduate School about best practices.

Regarding the use of assessment information to reflect on overall program, members were pleased to see the department is indeed collecting assessment data at the graduate level, in the form of an alumni survey. That said, the council agreed with the review committee’s concerns that these data have not yet been subjected to analysis and discussion. The APC encourages you to summarize and analyze these data, and to use it as the foundation for a thoughtful discussion about the program. This work will not only help to direct efforts for future improvement, but it conveys to your alumni that not only are their opinions solicited, but their voices are heard and views are considered.

The L&S Academic Planning Council approved a motion to accept this review as complete, and by copy of this memorandum we are sharing news of that completion with colleagues who also have an interest in program review. These materials will be considered also by the Graduate Faculty Executive Committee (which may offer additional advice), and will be submitted for final review to the Provost’s Office.

I join the council in wishing you continued success with this excellent program.
On November 28, 2016 Dean J. Karl Scholz, dean of the College of Letters and Science, charged this review committee with evaluating the graduate programs in the Department of Botany. This document summarizes the review committee’s processes, findings, and recommendations.

The starting point for this review is the Department of Botany Self-Study submitted in October 2015. Additional data and documents were graciously provided by the department when requested by the review committee. In addition, various summary documents and data were provided by the Graduate School, and these too informed the review.

In the Spring of 2017, the review committee met with several individuals and groups: David Baum, chair of the department; Carmela Diosana, department student services coordinator; first year graduate students; senior graduate students; and the department graduate committee. In addition, the committee was given a tour was given by Simon Gilroy of the facilities and space in Birge Hall used by Botany.

Below we focus on highlighting notable strengths of the department and program, and then comment on potential areas for improvement with suggestions for future action. The routine elements of the review including assessment matters appear in Appendix A. We note that the primary focus is on the graduate programs (MS and PhD) and on how departmental structures and processes affect Botany graduate students. We emphasize that our intent is to offer suggestions and comments to improve what we view as a strong program and a central L&S department.

**Strengths**

The Department of Botany has numerous strengths (see, e.g. p. 40 of the self-study). It is a productive, well-funded, and highly ranked department. The program synthesizes traditional aspects of Botany with newer more specialized disciplines including field and laboratory studies within tracks consisting of: general botany; ecology; evolution; and molecular, cellular and developmental biology.

The department represents a high concentration of botany faculty, more than in many integrated biology departments in other universities, and several botany faculty conduct collaborative research with faculty across the campus. For example, some botany faculty are active in campus-wide ecology programs, others are involved in programs involving evolution, microbiology, etc. (Self-study, pp. 4-7.)
It is notable that the department has a nearly equal gender balance of faculty, and a diverse group of graduate students. Indeed, the percentage of targeted domestic students is substantially higher than biological science averages for the campus overall, and that percentage has grown faster over the past 10 years compared to the campus biology community as a whole.

The department is housed in Birge Hall, which it shares with Zoology. Although the building is old, several of the facilities are of high quality and in some cases reflect modern or state of the art facilities. These include a high quality research greenhouse, relatively new growth chambers, an herbarium, and excellent imaging and microscopy facilities. Laboratories are fairly spacious (but many need remodeling), and graduate student offices also appear to be spacious (although some lack air conditioning).

The department describes detailed procedures that promote depth, breadth, and steady progress toward curricular, research and thesis progress, including details about tracks, the minor requirement (for the PhD), checklists assessing progress through the degree, and annual meetings of students and their advisory committees. The positive effect of these processes may be seen in completion data: Average time to the PhD degree is below AAU peers by almost a year and the 10 year completion rate for the PhD is substantially higher. In addition, the department describes the training of teachers as a goal of the program, and in fact many of the graduates do end up in academic positions (largely at undergraduate colleges).

Finally, the overall climate seems quite good. For the most part the people we talked to were happy and there seems to be a strong sense of esprit de corps among the graduate students. This is supported in part by weekly Friday afternoon gatherings, and by the major involvement of graduate students in recruiting. Indeed, the recruiting weekend was spoken of quite highly, especially by new graduate students. Those activities create a strongly favorable impression of the department among recruits.

**Areas for Improvement**

The committee was struck by the considerable variation that arises in the graduate student experience including: differences in funding source (some students rarely serve as TAs, while others do so for most of their career) and levels (0.34 vs. 0.5 FTE, 9 vs. 12 month appointments); the resulting differences in length of time to degree; expectations for the qualifying/prelim exam, including differences in format, generality; advisor guidance and committee involvement; suspected differences in the quality of the thesis and degree as a whole; and the lack of a core body of knowledge, even within a given track.

It is the practice of the department that students meet with the graduate committee at the beginning of their studies. They are expected to meet with their advisory committee by the end of the first year of studies. We found nonetheless that first-year students expressed uncertainty regarding what was expected of them, how to progress in their research, or how their graduate career would likely progress. Several examples were cited of mismatches between student expectations, developed during recruiting, and the first year experience (delays in starting research, interaction with the thesis advisor, lack of clarity in how track requirements can be satisfied, uncertainty in locating the Department’s handbook for graduate students and rules). In
addition, advising methods and expectations vary considerably, and we received indications that some committee members were reluctant to meet.

The program offers considerable flexibility in course work through the various tracks; this is a strong advantage for research degree students. However, an apparent unintended consequence is substantial heterogeneity in expectations, guidance, and support. It is not clear whether this diversity is an inevitable result of the desirable flexibility.

Some of the above concerns are reflected in the Graduate School exit surveys. For most categories in the surveys, the average ratings given by Botany graduates are lower than for the biological sciences in general across the entire spectrum of topics queried about the graduate student experience. Although surveys of this form can exhibit biases, there are sufficient indicators to suggest that the graduate student climate could be improved.

Although the graduate student population is of high quality (e.g. average undergraduate GPA is about 3.5), the students tend to be from smaller liberal arts colleges, and we wonder why the department does not recruit more students from peer departments. As a highly ranked department in an R1 university, this is somewhat striking. Likewise, we note that few of the graduate students are placed as faculty in R1 universities. This demographic is consistent with one of the department's strategic goals: graduating educators. However, it may also have an impact on graduate student recruiting, research, and placement.

The department has a process and collects data to track its progress (self-study p. 12) but lacks the resources to collate and evaluate this information. Perhaps the Graduate School data are adequate for program quality assessment purposes, but the department may gain considerable benefit from reviewing the data that it collects. This also raises the question whether there are adequate staff to address the needs of the graduate program.

Advice to the Program, College, Dean and UW.

The department does provide graduate students with information about its program online and in a printed graduate student handbook, and in particular about matters such as funding, placement, etc. (See the FAQ and Interviewing Tips at http://www.botany.wisc.edu/gradfaq.htm.) However, it is clear that not all students are receiving the information in a manner that is useful to them. We advise counseling all students during recruiting and again in their first semester regarding what to expect in terms of faculty advising, RA vs. TA support, summer support, etc. The general lack of parity of experience within and among the tracks should be made clear to recruits, specifically the differences in how students are funded among the tracks. We believe that the graduate student experience would be improved if they met earlier with their advisory committee, i.e. before the end of the first term rather than by the end of the first year (an extension can be requested by students who select their adviser late or have lab rotations their first term). Moreover, the department needs to clarify among faculty what the expectations are regarding graduate committee membership, activities, and responsibilities. A process should be developed to ensure that committee meetings with students are in fact taking place each year (and that the committee meetings are achieving their intended purposes).
More broadly, the department should clarify the degree to which heterogeneity in the program is desirable rather than having heterogeneity be the default. Several instances of mixed messages suggest that the department would benefit from a department-wide discussion of things like curricular implementation, what constitutes a thesis and defense, how are students funded, what are the strategic goals of the department, space needs and use. These conversations can be difficult, and the Office of Quality Improvement might provide guidance and support in facilitating them.

In general we support the excellent recommendations by the Botany Graduate Committee (Nov. 18, 2016) regarding measures to: (1) develop professional skills, (2) construct graduate Independent Development Plans 2) standardize the Qualifying/Preliminary Exam. Additionally, it might fall on that committee to ensure that students are aware of department guidelines and requirements.

Although there are many plant biologists on campus, it is not clear how well Botany is connected to that community. We acknowledge some connections described in the self-study (pp. 5, 6). However, the potential exists for Botany to play a major leading role in the larger campus community, and we advocate exploring that potential.

In the current funding and political climate, the reality is that the department must aggressively seek funds from sources outside the usual channels. We therefore urge the department to establish a board of visitors (BOV). There are many successful examples within L&S. Such a group can assist in a number of ways. BOV’s are often active in fund raising, working with the department and the UW Foundation to raise support for important needs including: student RAs and fieldwork support, awards, and infrastructure (including bricks & mortar). A BOV could also aid in counseling students, advocating for the department, and providing independent opinions. The department publishes an excellent alumni newsletter twice a year, which might contain news from the BOV. Both the Newsletter and the BOV aid in communicating Department strengths and needs to alumni, thus encouraging small, medium and the occasional (sometimes unforeseen) big donor. The department might also consider making annual Distinguished Alumni Awards with the recipient speaking at the annual banquet. Tracking and compiling studies of accomplishments by faculty, students and alumni would likely benefit not only fundraising activities, but also graduate student recruiting.

Although there seems to be good camaraderie among the graduate students, we suggest that the department enhance that by providing support for a graduate Botany Club if the graduate students are interested in that sort of structure. Such a club could assist the Department to run, or aid in, existing functions including the graduate recruiting weekend, Friday Afternoon Club, department picnics and banquet, the September field trip, Trivia Night, and other additional activities and programs. If well-deployed, this can also help to increase communication among students and with faculty.

We encourage the department to expand its contacts with peer research institutions to encourage applicants from a broader range of undergraduate programs. This could be done, for example, through the selection of seminar speakers.
More broadly, it is widely held that NRC rankings of departments are difficult to interpret or unreliable. We suggest that the department instead define for itself a group of peers and/or aspirational peers and investigate processes and performance on relevant metrics to develop best practices for the graduate program. Even if some practices are not developed, it is constructive to know what the competition is doing, and to selectively choose how you wish to compete. Further, we recommend that the department develop and actively maintain a strategic plan that includes future hiring. Although budget limitations cannot be denied, a current plan can provide the backdrop for overall decision making, as well as the ability to seize opportunities as they arise.

Finally, to address an unasked question, but one that is very much present: we do not recommend merging Botany and Zoology. We see good arguments to maintain a Department of Botany that is independent and that offers a strong program, and do not see academic reasons for merging the two departments. However, because staffing resources appear to be limiting, we encourage both departments to examine ways in which they could combine support services to streamline administrative processes (particularly within Birge Hall operations), and thereby garner additional support for the graduate program.

We hope that the above suggestions are helpful. We emphasize again that our intent is to offer suggestions and comments to improve what we view as a strong program and a central L&S department, and we stand ready to provide support for that in whatever way is suitable.
Appendix A

1. Academic program information

This review focused on the graduate programs in the Department of Botany, which encompasses the MS in Botany and the PhD in Botany.

a. Requirements for each program were provided to the committee.

b. Requirements for each program appear to be in order.

c. Each program is described clearly and consistently in the range of materials provided to students (websites, handbooks, etc.)

The self-study, pp. 42 to 52, outlines requirements. Requirements seem to be in order. However, there appears to be considerable variation across tracks, advisors, and graduate committees regarding expectations, and there is variation in student awareness of expectations. The department website has details on degree requirements for the MS and PhD and paper copies of the handbook are also available. (See specifics in the body of the report regarding student understanding of their program requirements and heterogeneity in requirements.)

2. Each program has student learning outcomes that relate to program requirements.

Yes. See pp. 10-15 of the self study.

3. Each program engages in efforts to assess student learning with respect to these outcomes.

Yes. See again pp. 10-15.

4. The faculty uses assessment data to improve the program.

Yes, see e.g. p. 15. Additional assessment data (pp. 11, 12) will also be collected and used in future assessments.

5. The academic program plays a substantive and meaningful role in the department, in clear relation to the departmental mission and purpose.

Yes, without doubt. It is the only graduate program in the department, and is a central part of the departmental mission and purpose.

6. The overall department context supports each program. For example: faculty research; departmental service; administration and operations; climate; alumni engagement and/or opportunities for development contribute to student learning in the program.

Yes. See comments in the body of the report below for more specifics.
7. Each academic program contributes to institutional and disciplinary goals, such as:
   a. College strategic directions
      \texttt{http://www.greatu.wisc.edu/resourceroom/documents/l&s_sp_june09.pdf}
   b. University strategic directions \texttt{http://www.chancellor.wisc.edu/strategicplan/}
   c. Contributions to The Wisconsin Experience and Essential Learning at UW-Madison
      \texttt{http://www.learning.wisc.edu/}
   d. Issues important to the review of a graduate program
      \texttt{https://kb.wisc.edu/GSAdminKB/page.php?id=31653}
   e. Contributions to the discipline

Yes. Botany is a major and central player in L&S, the university, and the discipline.

8. With respect to the general topics above, specific questions asked, or additional matters
that may arise in the course of evaluation, review committee reports should:
   a. Candidly evaluate program strengths.
   b. Candidly evaluate program weaknesses.
   c. Offer advice to the program, college, dean and university
Graduate School Completion Rates by Summer 2017

- Completed: 69.2%
- Did not complete plan: 19.2%
- Left with a Master's: 11.5%

This visualization was created by the Graduate School. Questions should be directed to Peter Kinsley, peter.kinsley@wisc.edu.
10 January 2018

TO: Tonghai Yang, Professor and Chair, Mathematics
FROM: John Karl Scholz, Dean
RE: Completion of Academic Program Review for B.A., B.S., M.A., and Ph.D. in Mathematics; M.S.- Mathematics, Option in Foundations in Advanced Studies; Certificate in Mathematics (Undergraduate)

CC: Marty Gustafson, Assistant Dean, Graduate School
    Elaine Klein, Associate Dean for Academic Planning, L&S
    Sarah Kuba, Academic Planner, Academic Planning and Institutional Research
    Jocelyn Milner, Vice Provost and Director, Academic Planning and Analysis
    Eric Wilcots, Associate Dean for the Natural and Mathematical Sciences, L&S

On November 21, 2017, the L&S Academic Planning Council considered the review of the several academic programs overseen by the Department of Mathematics. Associate Dean Eric Wilcots led discussion of the department’s self-study, the review committee report, and of the corrections and comments offered about the committee report.

The self-study was informative and thorough, providing sufficient detail and insight into the programs offered and the many students the department serves. The brief review committee report did not elaborate on any areas of concern noted in the self study; however, we are well aware of the department’s commitment to managing enrollment pressures and to serve students along a wide range of abilities and interests, and in particular, to reach out to under-represented minority students at the undergraduate level. Council members – particularly those from departments whose students are deeply engaged in quantitative work – found this discussion to be quite useful.

Council members were particularly interested in the large impact this department has on our undergraduate students, as well as the efforts you and your colleagues make to ensure that impact is positive and useful to them. The APC noted the good work the department has done to improve undergraduate teaching, including clearly assigning learning outcomes to courses, developing a process for assessing student learning with respect to these outcomes, and participating in the campus REACH initiative to transform high-enrollment courses by
creating more active and inclusive learning environments. Council members were impressed by how seriously math is responding to the challenges of undergraduate teaching, and reiterated what we already know: the work you do is essential to the continued success of many UW-Madison students.

Dean Wilcots also discussed the Mathematics graduate program with the council, observing that it is strong, retention and completion rates are good, and students are well-placed on completion. We concur with your assessment that responses to the Graduate School exit survey are positive, suggesting that the department is stewarding the graduate program well. We trust that the department will continue to monitor these survey responses and attend to areas where there may be room for improvement. We would be remiss if we did not commend the department on its noteworthy success in achieving a remarkable level of gender diversity among faculty and staff, greatly exceeding the average in the Physical Sciences Division. We commend the department’s aspiration to extend this success by continuing to work on efforts to reach out to students who are under-represented in the discipline in your focused effort to increase racial diversity in the graduate program.

Council members also discussed the department’s participation in two non-pooled tuition programs, a Visiting International Scholars Program (VISP) that provides a focused study abroad experience for international students, and the MS-Mathematics “Graduate Foundations” that serves as a “first-level” graduate experience for international students, into which qualified VISP students can transition. These programs have brought new resources into the department, which the department is using to hire more faculty; that is, “reinvesting” your revenue to make the program stronger. This approach appears to be working well, and could easily serve as a model for other departments considering similar programs.

The Council and I are aware that the most substantial new challenge for Mathematics will be meeting the needs of new students with enrollment expansion, since so many students (whether they are L&S students or not) are required to take Math courses at various levels. As you know, the College is already working with you to plan for expansion, and I expect that with continued dialogue, engagement, planning – and with revenue deriving from increased enrollments - we will be able to accommodate those needs.

The review committee also shared several observations related to advising, which suggest that Math might benefit from revisiting its current advising model. The committee recommended identifying a “point of contact” for advising. Almost all other large L&S departments use such a model; in your case, a professional advisor might not only provide advising, but also help coordinate faculty advising and facilitate communication about other student experiences that enhance the courses they take. This type of consistent contact is important when faculty advisors are used, since student access to advising is affected when faculty responsibilities and honors take these advisors away from campus. Access is also limited when students can only see their advisors for “drop-in hours” rather than by appointment. Another suggestion was that Math advisors should use the Advisor Notes System, to support communication about student advising contacts, since this gap has an effect on the work of advisors in other units. Concerning staffing levels, the department should evaluate carefully the caution offered by the committee when it noted that the current Associate Director of Undergraduate Studies is “pulled in many
directions”: is a 9-month appointment sufficient to allow for engagement in efforts during the Summer to manage SOAR Consultants, summer course access or to consult with other colleagues on campus, etc? We trust that some revenues arriving with enrollment expansion will be allocated appropriately to support these aspects of the department’s service to students.

The L&S Academic Planning Council approved a motion to accept this review as complete, and by copy of this memorandum we are sharing news of that completion with our colleagues who also have an interest in program review. These materials will be considered also by the Graduate Faculty Executive Committee (which may offer additional advice), and will be submitted for final review to the Provost’s Office.

Finally, in reflecting on the rather succinct review committee report, council members wondered whether the department has considered engaging in planning or consultation that might help members address some of the issues it faces. Although this review is complete, APC members suggest that – if the department thinks it would be useful to do so – you confer with your associate dean about pursuing additional insights in this way.
May 8, 2017

To: Eric Wilcots, Associate Dean for the Natural and Mathematical Sciences
    Elaine M. Klein, Associate Dean for Academic Planning
    College of Letters and Science

Dear Deans Klein and Wilcots,

Attached below please find the report of the committee charged with evaluating programs offered in the Department of Mathematics.

Sincerely yours,

A. Baha Balantekin
Eugene P. Wigner Professor
Department of Physics
University of Wisconsin, Madison
Executive Summary:

In compliance with UW-Madison requirements, a ten-year review of the Mathematics Academic Programs was initiated in the 2016-2017 Academic Year. The Mathematics Department produced a self-study report in January 2017. In February 2017 a committee consisting of Baha Balantekin (Physics), Judith Burstyn (Chemistry), Bruce Hansen (Economics), Parmesh Ramanathan (Engineering - GFEC Representative), Mark Rzchowski (Physics), and Ellen Zweibel (Astronomy) was formed by Associate Dean Eric Wilcots.

The committee interviewed the Chair of the Mathematics Department (Prof. Gloria Mari-Beffa), and a sample of faculty, undergraduate and graduate students, and academic staff. The present report is based on the material gathered in the interviews and the self-study report prepared by the Department.

Mathematics Department is a well-regarded department in national rankings. It is also a very young department as compared to its peers. They were able to hire many excellent young faculty members who received multiple awards. The Department, however, has significantly shrunk in recent years. At the time of the last ten-year review it had 55 faculty members, they are now down to 45. This shrinkage causes significant difficulties in covering their courses. This department is small as compared to its peer institutions and its further shrinkage should be prevented. In addition to teaching the mathematics majors, Mathematics Department provides a very important service to the rest of the campus through the service courses they teach extending all the way to the graduate courses. Mathematics is fundamental to a wide variety of disciplines and the health of the Mathematics Department is consequently very important to the rest of the University.

Mathematics Department has significant resource problems shared by many other L&S departments. If the enrollment keeps going up and the resources remain the same, the Department and the College needs to think of creative, innovative solutions.

Undergraduate Program:

In addition to several mathematics major options, the Department participates in the AMEP major and teaches a large number of non-majors in service courses.
Mathematics major programs are successful. They are competitive, with a variety of interesting courses covering not only the basic subjects, but also modern mathematics. Class sizes are capped.

A very popular choice for students seems to be the Option 2 major, which is a real growth area. Most students who choose this option also have a second declared major. The largest fraction (30%) of the option 2 majors who declared a second major chose economics. Clearly it is very beneficial for the economics students to acquire a strong background in mathematics justifying College’s investment in both departments. We suggest that the Mathematics Department to follow the future employment trajectory of those who chose option 2 majors. Although the number of students who chose applied mathematics majors went up the number of applied mathematicians in the Department did not significantly increase. Undergrad students who do research typically choose applied mathematics, mostly in number theory, which is easier to start.

In addition they have a certificate program, which is primarily designed for engineering students who can take a few more classes beyond what is required to become certified.

Mathematics Department also participates in the AMEP major. This major, which emphasizes physics and engineering in addition to mathematics, is rather distinct from the applied mathematics major. It should continue to be offered in parallel to the applied mathematics major.

The Mathematics Department participates in the REACH program for some of their courses. The courses attached to the REACH program have course coordinator support. We note that other big courses could benefit from the course coordinators. If the REACH program disappears there is a problem for not only for Mathematics, but also for other departments in the College (Physics and Chemistry).

Undergrad students we met mentioned that there is no uniformity in grading between different sections of the same class. There should be more consistency in this regard. The impression of the Committee was that lower level undergraduate courses could be better coordinated, again reflecting lack of sources.

Some of the mid-level classes have grown significantly. Providing TA positions for higher-level courses would not only benefit the undergraduates enrolled in those courses, but would also enable graduate students to be TA’s in courses other than lower-level math courses.

Graduate Program:

Master of Arts Program: They have a revenue-generating master’s program conferring a master of arts degree in mathematics. This program is in cooperation with Shanghai’s Jiao Tong University and a few other Chinese universities. As such this program is targeted to a very narrow group of students, but this is inherent to all the exchange programs. Under this two-year program seniors from those universities come to Madison as exchange students. In their second year in Madison they become master’s students. The program has been matriculating about 25 students per year, which is comparable to the number of students
matriculating into the Math PhD program. Over its short span of existence (3 years), graduation rate from this program and eventual acceptance rate of its graduates into Ph.D. programs is 100%. The placement of graduates from this program relies heavily on the time, effort, and commitment of one faculty member, Professor Shi Jin. This program is revenue generating, but short-staffed. It seems to be build upon personal connections of one of the mathematics faculty members. The program brings in very good students to Madison, but it is very hard to sustain in the long-term and it is not easy to replicate in other departments. University should recognize risks in allowing the Mathematics Department to be financially dependent on this revenue generating master’s program as its future is not certain.

The committee did not meet any students from this program. The committee, however, had an hour-long meeting with Professor Shi Jin who coordinates the program. The committee also discussed this program with several Math faculty members. They are satisfied with the quality of the students in the program.

In addition to the students recruited from four or five Chinese institutions, a handful of domestic students have enrolled in the program. Therefore, the diversity of the students in the program is very limited.

PhD Program: The program receives about 400 applications each year. An admissions committee evaluates all the applicants and admits 80-100 each year. The program uses teaching assistantships (TAs) to offer four-year guaranteed support to the admitted students. The program succeeds in matriculating about 25 students each year. About 43% of the students in the program are domestic; 21% of the domestic students are either minority or targeted minority. The Male to Female ratio in the program is about 80-20. The statistics in the self-study show that the gender diversity is better among the international students as compared to their domestic students. The program is aware and concerned of these differences in the gender diversity between domestic and international students. Chair of the Admissions Committee mentioned that he is constantly thinking about ways to recruit more domestic female students.

The program also has some gender bias in its PhD qualifying exams. As noted in the self-study, 20 out of the 28 students who did not pass the qualifying exams in the recent past are women. The graduate students speculated that this bias was due to the reluctance of female students to ask for extension on the time limit to complete the qualifying exam.

The graduate students seem to be satisfied with the program in terms of access to information concerning requirements and processes. The Graduate Student Coordinator is an excellent source of information for the students. The program also has a website with the relevant information.

The graduate students have four-year guaranteed support, mainly through TA positions. The program makes effort to continue supporting students after the guarantee expires. Most of the graduate students end up serving as TAs in the introductory mathematics courses through their study. Although this will require more resources, the committee feels that the program should strive to give the students an opportunity to teach some of the mid-level courses to enrich their teaching experience.
The graduate students are optimistic about their placements after completing the PhD. The statistics in the self-study document shows that a large fraction of the students choose a postdoctoral position in good institutions after completing their PhD.

The committee did not review the research activity of the Mathematics Department. Such a review was not in the committee’s charge and it is best done by outside experts. However, research impacts the graduate education as it is an essential part of it. It seems that Mathematics Department does not have a strategic long-range plan. The chair conveyed that the faculty members do not feel that such a plan is necessary. A strategic plan could be helpful for graduate recruitment, for example, in aligning the department with emerging or "hot" areas.

It should be pointed out that, like several other departments in the College, the fact that they cannot pay their TA’s enough puts them at a non-competitive position in admissions.
This visualization was created by the UW-Madison Graduate School Office of Academic Planning and Assessment. Questions should be directed to Peter Kinsley, peter.kinsley@wisc.edu.
This visualization was created by the UW-Madison Graduate School Office of Academic Planning and Assessment. Questions should be directed to Peter Kinsley, peter.kinsley@wisc.edu.
Select Degree Level
○ Doctorate
○ Master's

Select Entrance Cohort Group
2007-2009 Cohort

Select Student Category
(All)

Disciplinary Division
All

School/College
All

Academic Plan
Mathematics PHD

Completed Plan: 67.4%
Did not complete plan: 5.8%
Left with a Masters: 26.7%

This visualization was created by the UW-Madison Graduate School Office of Academic Planning and Assessment. Questions should be directed to Peter Kinsley, peter.kinsley@wisc.edu.
Policy Proposal for Annual Assessment and Feedback (AAF) of Graduate Students on Progress Towards Degree

Premise. Every doctoral student should get an annual feedback of his/her progress towards degree beginning in the third year.

Graduate School presently does not have a policy to assure that every doctoral student is assessed annually and given a written feedback on his/her academic progress. Many of our peer institutions such as Duke University, University of Arizona, University of California-Berkeley, Columbia University, and University of Florida have such policies. Despite, the lack of such a policy at UW-Madison, many of our graduate programs conduct such a formal assessment, at least bi-annually, if not annually. This is reflected in the results of the pertinent question in our doctoral exit survey. On average, 47% of our Ph.D. graduates (Fall 2012 to Summer 2017) indicate that they received an annual assessment. However, as shown in Figure 1, there is considerable variation among the schools and colleges on this aspect. The goal of the proposed Annual Assessment Feedback (AAF) policy is to provide all doctoral students with an annual written assessment of their academic progress towards degree completion.

Why Annual Assessment and Feedback (AAF)?

- Provides each student a clarity of expectations
  - Clarity of expectations is a basic right
- Establishes clear goals which in turn, keep students motivated
  - Reduces attrition
  - Reduces time to degree
- Helps alleviate problem situations
  - Early identification and intervention in problem situations
- A means to check whether a student is in good academic standing
  - For compliance with certain fellowship conditions
- A means for graduate students to discuss professional goals with program faculty
  - By including aspects beyond research, students are better prepared for “life” after graduation
- Aggregate information of students’ activities can inform program decisions

![Figure 1: Percentage of PhD graduates in the doctoral exit surveys (2012-2017) who indicated that they receive formal annual assessment, divided based on respondents' school or college.](image-url)
Studies such as the Graduate Education Initiative ([10-year Mellon Foundation project) [Ehrenberg, Zuckerman, Groen, Brucker, 2006] and Council of Graduate Schools 2010 report on Ph.D. Completion and Attrition have demonstrated some of these benefits. University of Wisconsin, Madison data that integrates information from the Doctoral Exit Surveys and Time of Degree information also shows slight decrease in the time to degree for students who say that they received annual feedback in their exit surveys, after controlling for program and other fixed effects. Such findings suggest that annual assessment and feedback are beneficial to a student’s navigation of his/her graduate education.

Guiding Principles for the proposed Annual Assessment and Feedback (AAF) policy?

- AAF must work for all programs on campus (small and large). It should not add undue burden on the programs.
- Programs should have flexibility in implementing the policy.
- The assessment and feedback must include input from a program faculty member other than student’s advisor(s).
- Professional and career development training should also be part of this annual review so that the students are better prepared for a career of their choice.

Figure 2: Reduction in time to degree among students who indicate they received annual assessment in the doctoral exit surveys (2012-2017) after controlling for program and other fixed effects. The number of students included in this plot is 3943 and error bars represent 95% confidence intervals.
1. Effective Fall 2019, all graduate students past their second year of study must submit an annual progress report and receive a written feedback assessing their progress towards completing the degree. The format and nature of the report will be decided by the program and included in the graduate program handbook.

2. The written feedback to the student must include input from at least two graduate faculty members chosen by the program, at least one whom is not an advisor or co-advisor of the student. The written review should include feedback on the educational and research accomplishments, the milestones the student must complete, and an estimated timeline for completing the remaining activities (e.g., the timeline to become a dissertator or the timeline to defend the thesis).

3. The written feedback must also explicitly state whether the student is “Making Satisfactory Progress Towards Degree” or “Not Making Satisfactory Progress Towards Degree”. For students who are not making satisfactory progress towards degree, the written feedback must include steps the student should take to make satisfactory progress and a timeline for doing so. Failure to make satisfactory progress may result in the student being placed on academic probation and/or even dismissed from the program for failure to make sufficient progress towards degree. Programs will develop policies for handling such situations, including an adequate appeal process for the student.

4. In addition, to the curricular and research milestones, the annual progress report submitted by the student should preferably include the professional and career development activities in which he/she participated. Use of Individual Development Plans (IDPs) may be encouraged. Similarly, the written review should preferably provide guidance on the professional and career development training for the student.

5. The Graduate School will develop a process to record and track the annual feedback provided to each student. Early in the Fall semester, the Graduate School will check whether each student met the program’s AAF requirements in the immediate preceding year. An enrollment hold may be placed on student who did not submit an annual progress report.

6. Each program must archive all the annual progress reports submitted by a student and corresponding feedback given to the student.
UW-Madison Graduate School AAF Implementation Strategies

There are two components to AAF implementation: (i) software to track completion of AAF, and (ii) software to record and archive assessment & feedback.

**Software to track completion of AAF.** Graduate School will work with campus to add a field to Student Information System (SIS) to record and archive each year’s final assessment, i.e., “Making Satisfactory Progress Towards Degree” or “Not Making Satisfactory Progress Towards Degree”. Graduate School Tracking System (GSTS) (when fully developed and deployed) will have capabilities to view and track this new SIS field.

**Software/tool to facilitate AAF.** There are many options for software this category.

- **Option 1:** Graduate School provides a set of sample forms containing assessment and feedback questions. Programs may create their own forms or adapt one of these sample forms. The program maintains an archive of the signed and completed forms for each student in the program.

- **Option 2:** Graduate School provides a software that only has the following five capabilities: (i) student information, advisor information, program information, etc. are populated automatically from University records, (ii) student can upload a file documenting his/her activities, (iii) program/advisor can upload a file documenting the written feedback given to the student, (iv) program indicates whether the student is making or not making satisfactory progress towards degree, (v) an archive of previous years’ documents and recommendations are available to the student, advisor, and the program through a portal. **All programs must use this software for all their students.** If SIS is enhanced to allow uploading and archiving documents, we may be able to extend GSTS to implement this option.

- **Option 3:** Graduate School provides software that is similar to the current campus software called Performance Management and Development Program (PMDP). As in option 2, student information, advisor information, program information, etc. are populated automatically from University records. In addition, there are web forms that allow students to add activities and goals, and supplemental information in the form of a PDF file. Advisors have the capability to assess and provide feedback on the activities and goals entered by the student. Advisor/program may also attach a PDF file for additional feedback. The software also has a web form where the program/advisor indicates whether the student is making or not making satisfactory progress towards degree. As in option 2, an archive of previous years’ assessment and feedback is available to the student, advisor, and the program through a portal. **All programs must use this software for all their students, although they may simplify its use by relying only on uploading files and submitting recommendation.**

**First year of implementation.** If the AAF policy becomes effective in Fall 2019, students and program will have until August 2020 to meet the AAF requirements. Early in the Fall 2020 semester, the Graduate School will check whether each student met the program’s AAF requirements in the preceding 2019-20 year. An enrollment hold for Spring 2021 may be placed on student who did not submit an annual progress report.
UW-Madison Graduate School AAF Examples

Examples of possible program policies that will meet Graduate School’s AAF requirements.

1. Annual thesis committee reviews commonly used in many programs on campus will meet
the Graduate School’s AAF requirements if it includes the necessary written feedback.
2. Although Graduate School recommends a face-to-face discussion between the student
and the faculty members involved in the review, it is not required. If the student’s
research advisor was part of the formal assessment, then he/she may be able to
communicate the feedback as part of the regular interactions with the student.
3. The assessment committee need not be tailored to each student. A single committee that
assesses the annual progress of all doctoral students in the program will also be adequate.
4. Example of the assessment form from University of California-Berkeley and Duke
University’s Department of Chemistry’s annual assessment process are included to
illustrate possible approaches.

In summary, for most students, a new process is not needed. They already receive good feedback
from their advisors and/or other mentors on a regular basis. However, with over 5000 doctoral
students on campus, there are several adverse situations each year that could be alleviated by
this policy. The goal is to alleviate these situations, be constructive for all students, and not be
burdensome on the programs.