20 October 2017

TO: Sarah Mangelsdorf, Provost
FROM: John Karl Scholz, Dean
RE: Department of Geography, Request to Create Two New Capstone Certificates: “GIS Fundamentals” and “Advanced GIS”

CC: Greg Downey, Associate Dean for Social Science, L&S
Katy Duren, Associate Dean, DCS
Marty Gustafson, Assistant Dean, Graduate School
Elaine Klein, Assistant Dean for Academic Planning, L&S
Sarah Kuba, Academic Planner, Academic Planning and Institutional Research
Lisa Martin, Associate Dean, Graduate School
Jocelyn Milner, Vice Provost and Director, Academic Planning and Institutional Research
James Montgomery, Associate Dean for Fiscal Initiatives, L&S
Lisa Naughton, Professor and Chair, Geography
Parmesh Ramanathan, Associate Dean, Graduate School
Nancy Westphal-Johnson, Associate Dean for Academic Administration

On October 17 2017, the L&S Academic Planning Council considered the attached request to create two new capstone certificate programs to be offered in the Department of Geography, the GIS Fundamentals Capstone Certificate, and the Advanced GIS Capstone Certificate.

These programs are founded upon the existing Capstone Certificate in Cartography/GIS, which will be superseded by these programs. Like the existing certificate, these programs are intended to be non-pooled tuition (revenue generating) programs that will be supported by the revenue they generate; however, these certificates require fewer credits to complete, and “stack” in a way that provides more flexible entry and exit points for students interested in this increasingly popular professional field. In the proposal, our colleagues note declining enrollments in the existing 22-credit program; they also report concerns that the existing program is an ineffective pathway into master’s level study. This program redesign is intended to address the needs of students who may wish either to acquire basic conceptual and methodological underpinnings of GIS (“GIS Fundamentals”) or to extend their knowledge and skills in this area, and apply those skills in a wide variety of disciplines (“Advanced GIS”). Some students may want only one of these certificates; some may choose to complete both.
The Department of Geography has long had experience administering non-pooled tuition programs, and has staff and structures in place to administer these programs. The department has worked with the Division of Continuing Studies to develop these programs and market them.

The L&S Curriculum Committee reviewed this request and recommended its support to the L&S Academic Planning Council. When the L&S APC considered it, members voted unanimously to support this request. We are enthusiastic about these programs, and look forward to their success.
INSTRUCTIONS FOR PROPOSING CAPSTONE CERTIFICATES and USE OF PROPOSAL FORM

A Capstone certificate program is a designated set of for-credit courses focused upon a specific topic or theme that give students the opportunity to pursue a subject of interest in a formalized way that is documented on the transcript. Capstone certificates are designed to offer a focused educational experience in a format that is friendly to working professionals. The curriculum may represent a more practice-oriented subset of an existing graduate discipline or field of study.

PLANNING THE CAPSTONE CERTIFICATE

- Planning starts with idea development among the program faculty and staff.
- Begin to fill out the Capstone Certificate Proposal Form.
- When your ideas are starting to take shape, consult with your school/college dean’s office. Non-pooled Capstone certificates should also contact the school/college budget officer. 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 Jocelyn Milner, Director of Academic Planning and Institutional Research.
- When you have a full draft of a completed Capstone Certificate Proposal Form, and ideally before school/college approval, send the proposal to Jocelyn Milner and Graduate School Assistant Dean Marty Gustafson for a check-in and proposal review. This will help make sure that the certificate meets all components of the UAPC guidelines and will identify any implementation questions.

APPROVAL STEPS FOR CAPSTONE CERTIFICATES

1. The program faculty who are sponsoring the Capstone certificate program (most often the faculty or executive committee in a department) formally approve the certificate proposal.
2. The school/college that houses the certificate considers the certificate for approval, usually at the school/college Academic Planning Council.
3. After school/college approval, the dean forwards the proposal to the provost and the dean of the Graduate School with a copy to the director of Academic Planning and Institutional Research and the Graduate School Assistant Dean for Academic Planning and Assessment.
4. The Graduate Faculty Executive Committee considers the certificate for approval.
5. The provost will seek a recommendation for approval from the University Academic Planning Council.

FOR INFORMATION AND FORMS: http://apir.wisc.edu/certificates.htm

At this URL you will find links to the following information:
- Detailed instructions and the Capstone Certificate Proposal Form
- Capstone Certificate Guidelines, which is the policy framework for the proposal form (adopted April 2013)
- Certificate Knowledge Base - The KB houses certificate forms and frequently asked questions.

QUESTIONS: Sarah Kuba, Academic Planner, APIR (sarah.kuba@wisc.edu)
Jocelyn Milner, Director, Academic Planning and Institutional Research (jocelyn.milner@wisc.edu)
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Jocelyn Milner, Director, Academic Planning and Institutional Research (jocelyn.milner@wisc.edu)
Capstone certificates are available to University Special (non-degree seeking) students who hold a bachelor’s degree or equivalent credential from an accredited college or university and are designed to offer a focused professionally oriented educational experience. This form is to be used in concert with the Capstone certificate guidelines. Complete the form and save as a Microsoft Word document.

1. Capstone certificate name and academic home

1.1. Capstone certificate name: GIS Fundamentals Capstone Certificate

1.2. Home Department/Academic Unit (Name/UDDS): Geography/A482942
   The home department/academic unit is responsible for the academic oversight, delivery, and administration of the certificate.

1.3. Home School/College: Letters and Science, College of

1.4. Additional Department(s)/Academic unit(s) information, if relevant:
   N/A

1.5. Faculty director of the Capstone certificate program (name, title email):

   The GISPP Oversight Committee consists of four rotating members: the Departmental Chair/GISPP Oversight Committee Chair, the Curriculum Committee Chair, the Financial Committee Chair, and a faculty representative from the Cart/GIS subgroup selected by the Departmental Chair. The GISPP Director and Manager are ex officio, non-voting members.
   - GISPP Oversight Committee:
     - Lisa Naughton, Geography Department Chair/ GISPP Oversight Committee Chair
     - Jack Williams, Finance Committee Chair
     - Joe Mason, Curriculum Committee Chair
     - Qunying Huang, GIS Faculty Representative
   - GISPP Staff
     - Ian Muehlenhaus, GISPP Director
     - Brittney Markle, GISPP Manager

1.6. Primary Capstone certificate program contact (name, title, email): Ian Muehlenhaus, GISPP Director, muehlenhaus@wisc.edu, and Brittney Markle, GISPP Manager, bmarkle@wisc.edu

1.7. Primary school/college dean’s office contact (name, title, email): Greg Downey, Associate Dean for Social Sciences, greg.downey@wisc.edu

1.8. Date form completed: 9/11/2017
2. **Approval, Implementation, and Review**

2.1. School/College Approval Date: **October 17, 2017**

2.2. GFEC Approval Date:

2.3. UAPC Approval Date:

2.4. Expected first term of student enrollment (usually 2-3 terms after UAPC approval; typically the following Fall term): Fall 2018

2.5. Year of three year check-in to GFEC (3 years after first student enrollment): 2021

2.6. Year of first program review (5 years after first student enrollment): 2023

2.7. Are all academic programs in the home academic unit are up to date for program review? Yes ▪ If no, please provide an explanation:
   Type an explanation here. (1000 word limit)

### Information to be completed by RO and APIR:

- Plan Code (assigned by the Registrar’s Office):
- CIP Code (assigned by Academic Planning and Institutional Research):
- Primary Divisional Disciplinary Assignment (assigned by APIR for analysis purposes only):

3. **Purpose, rationale, justification**

Describe the purpose, rationale, and justification for the Capstone certificate:

3.1. What is the purpose of the Capstone certificate program? How does it contribute to the mission of the sponsoring unit(s)?

   Describe the purpose of the Capstone certificate here. (1000 word limit)

The current Geographic Information Systems (GIS) Capstone Certificate is a longstanding program with the University of Wisconsin-Madison in the Department of Geography that has maintained successful enrollment and completion since its inception in 1999. However, in recent years enrollments have largely stagnated, likely due to increased competition and the high amount of credits in our capstone. Crucially for this proposal, we see two groups of existing capstone students that are not being well served by the current Capstone. In the first group, we have many students who purposefully delay Capstone completion to keep taking all the GIS classes offered by the department (e.g., well over 30 credits). For this audience, the current Capstone curriculum does not offer enough courses to meet their needs. In the second group, some students fail to graduate due to the large credit load (22 credits, which were grandfathered in) relative to typical certificate programs at UW-Madison (15 credits max.) and the psychological hurdle of a large capstone project.

We therefore propose to offer two, stackable (i.e., students can progress through the capstone programs into the online master’s), 12 credit, 100% online capstone certificate options: 1) a GIS Fundamentals Capstone Certificate (*described here*) and 2) an Advanced GIS Capstone Certificate (*see separate proposal*). The GIS Fundamentals Capstone Certificate is intended to produce individuals, both inside and outside of Wisconsin, skilled in the basic conceptual and methodological
underpinnings of GIS technology and able to make informed use of current GIS applications in real-world problem solving. GIS Fundamentals Capstone Certificate students will acquire basic technological skills needed in applying GIS towards a wide variety of disciplines while gaining experience with common commercial and open-source GIS software. The course package will provide foundational competency in mapping science and spatial analysis; consisting of 3 core courses. These core courses include two introductory courses covering fundamentals in cartography and GIS and a third more intensive programming course.

Establishing a stackable set of online capstone certificates will contribute to the mission of the Department of Geography in two ways. First, we will significantly increase enrollment of our capstone certificate programs by allowing working professionals to take this program without leaving their jobs or home, particularly for international audiences. Second, the redesigned capstones will act as feeders into our successful and already growing Online Professional Master’s in GIS Development. Students in both online capstone certificate programs will be able to transfer several courses into the Online Professional Master’s Program if they decide to move forward with their GIS training.

The program will be run on a non-pooled program model (i.e., as a 131 fund) and is expected to be fully self-supporting. Funds generated by the program beyond program costs will be used to strengthen the Geography Department’s teaching, research, and student service missions. We intend to make this program available fall 2018, if approved.

3.2. What is the evidence that there is a student demand for the Capstone certificate program?

Provide evidence of student demand for the Capstone certificate program

Although many geography programs in the nation and around the world are moving to provide training in GIS, the Cartography/GIS programs in Geography at UW-Madison have distinct advantages in this competition. The Cart/GIS program at UW-Madison Department of Geography is world-renowned and has a long tradition of excellence in the field. Our Geography Department is ranked 1st or 6th in the U.S., according to R-rank and S-rank criteria, respectively (NRC 2011). Our excellence in GIS is recognized beyond the U.S.; for example, we host an annual workshop for top students from Beijing Normal University. We also have demonstrated experience in running a successful revenue-based professional program. Our current capstone certificate in GIS, developed based on the innovative idea of Chancellor Ward in 1999, has been running very successfully for over 10 years with an annual revenue of about $250,000. Through running the capstone program, we also have gained a good sense of the growing need for training in areas beyond what the current capstone certificate program offers. We also offer an online master’s in Cartography and GIS, which has exceeded our original enrollment expectations.

Another downfall to our current capstone program lies in its delivery. This is an in-house program intended to serve students on-campus. We are seeing increasing demand for online GIS education daily through numerous inquiries from outside the University as well as from undergraduate and graduate students across the disciplines. Our proposed capstone certificates in GIS Fundamentals and Advanced GIS are designed to fill this void and expand the UW brand in GIS beyond Madison, Wisconsin.

3.3 What is the evidence that there is a market demand for graduates of the Capstone certificate program?

Provide evidence of market demand for the Capstone certificate program

Proposals for new Capstone certificates must provide a demonstrated need for such a program: this provision must be defined in terms of external markets (i.e. external demand for the skills associated
with such a certificate) and must describe how the Capstone certificate program will attract new student enrollments.

Increasingly we are seeing the impact GIS has on our everyday lives as it rapidly becomes a major expanding sector in the global economy. It is not only a vital component of Geography, but has increasing importance to other academic and practitioner fields ranging from engineering to natural sciences to social sciences. The United States Department of Labor identifies GIS and Geospatial Technology broadly as a key area of growth. It is indicated that there currently are approximately 424,000 Americans working in geospatial occupations and that an additional 148,700 jobs in geospatial occupations are expected to be created in the next ten years, a growth rate of approximately 35% (see US Department of Labor website). In addition, the initial wave of professionals in GIS who started their careers in the mid-1980s will be nearing retirement age, meaning the level of demand for GIS professionals should remain high for decades to come. The 2013 NRC report, Future U.S. Workforce for Geospatial Intelligence, assesses the supply of expertise in 10 geospatial intelligence fields and identifies cartography/GIS as the core area of expertise needed. It indicates that due to competition from private companies it is already difficult to find qualified experts in GIS techniques. This shortfall is expected to continue for at least 20 years.

Over the last few decades, the tools for analysis, visualization, processing, and archiving of spatial information have become increasingly complex, prompting a large demand for individuals with formal training in Geographic Information Science. Taken together, these data support a significant need for the training our proposed scalable certificate programs will deliver. The rapid growth of similar (but not interchangeable) professional GIS training programs in competing universities like Penn State provides further evidence of the high demand for this type of skills training.

4. Curriculum

4.1. Delivery modality:

☐ Face-to-face
☒ Distance

_Distance-delivered programs are those certificate or degree programs in which 50% or more of the required courses may be taken as distance-delivered courses._

4.2. Provide a complete list of requirements.
- Geog 370: Introduction to Cartography (core course)
- Geog 377: Introduction to GIS (core course)
- Geog 378: Geocomputing (core course)

_Program requirements should provide content that leads to the completion of Capstone certificate learning goals. See section 8 Assessment._

4.3. Chart student progression through the curriculum.

<table>
<thead>
<tr>
<th>Semester students will take the course</th>
<th>Department</th>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Instructor</th>
<th>Semester &amp; year last taught</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st, 2nd, or 3rd semester</td>
<td>Geography</td>
<td>370</td>
<td>Introduction to Cartography</td>
<td>4</td>
<td>Faculty Associate</td>
<td>Summer 2017</td>
</tr>
</tbody>
</table>
4.4. Total credits required: 12

Capstone certificate programs are usually 9 to 12 credits and may not be more than 15 credits.

4.5. Semesters to completion: 1-3

4.6. Describe the student progression (one-course per semester for several semesters, all courses taken in one intensive semester, other:

☒ Part-time (< 8 credits fall and spring semesters, < 4 credits summer term)
Students can choose to take 1 course per semester for 3 consecutive semesters.

☒ Full-time, time-compressed, intensive
Students can choose to take all three courses in one intensive semester.

☒ Other
Students can choose to take three courses over two semesters with one light semester (1 course) and one heavy semester (2 courses).

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 check list, below.

☒ Courses for the Capstone certificate are numbered 300 or higher.
☒ Courses are offered on a regular basis (as identified in student progression chart in section 4).
☒ Courses have enrollment capacity for students in the Capstone certificate program.
☒ Courses in the proposed Capstone certificate have been approved.
☒ All of the Capstone certificate credits must be earned “in residence” (which includes on campus and distance-delivered courses) at UW-Madison while enrolled in the Capstone certificate program. Because a Capstone certificate is comprised of just a few courses, it is not appropriate for students who already have completed the same or similar coursework at UW-Madison or another institution.
☒ Students must earn a minimum grade of C on all attempted Capstone certificate coursework.
☒ Courses in which a student elects the pass/fail option will not meet Capstone certificate requirements.
☐ All Capstone certificate program requirements must be met; waiving requirements is not permitted.
☒ Units must maintain Capstone certificate 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 Office of the Registrar, the Graduate School, and DCS-ACSSS about approved curricular changes to the certificate. 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.

This Capstone Program is intended to be 12 credits. However, we anticipate that some students will have already taken a single, entry-level GIS or Cartography course as an undergrad. In this case, we must make
an exception for one of these courses or risk losing the student to a competitor, as both of these courses are prerequisites of our advanced capstone certificate and our Online GIS & Web Mapping MS Program. Thus, we will allow them to transfer that single 4-credit course into the Fundamentals Capstone but insist they take the other 8 credits before continuing on to the Advanced GIS Capstone.

5. Student Services & Advising

5.1. List the names of Capstone certificate program advisor(s) with title and departmental affiliation(s).
   Ian Muehlenhaus, GISPP Director, Department of Geography
   Brittney Markle, GISPP Manager, Department of Geography
   Joel Gruley, GISPP Administrative Assistant, Department of Geography

5.2. How will the resource load of the additional student services support and advising be met?
   Describe how student services and advising will be supported here. (1000 word limit)
   Do the individuals or offices have the capacity to add student services support for the Capstone certificate program? Does the program have the resources to support all aspects of advising and student support?

   The Department of Geography has hired an administrative assistant fully dedicated to GISPP to assist with day-to-day support on a half time appointment. This hire will take on many administrative duties and some student service duties that would have otherwise prevented the other GISPP staff from increasing student support. Student service responsibilities will be divided amongst all GISPP staff. As GISPP grows, we intend to hire more support staff as needed.

5.3. ☒ Confirm that program advisor(s) have been consulted and reviewed this proposal.

6. Admissions

6.1. Minimum bachelor’s degree GPA for admission to the Capstone certificate program (if relevant):
   3.0

6.2. List additional admission criteria:
   • Applicants must have a four-year Bachelor’s degree from an accredited institution of higher learning.
   • Applicants may not be enrolled in other UW-Madison graduate coursework or programs concurrently with our program.
   • Non-native English speakers must take either the TOEFL exam or the IELTS exam and submit scores during the application process. Minimum acceptable scores must meet the UW Graduate School requirements:
     o TOEFL - 92 for internet based test (IBT) and 580 for paper test.
     o IELTS - 7.0

   In order to provide greater flexibility and meet the needs of specific target student populations, each Capstone certificate program shall identify any tests and minimum scores (for example GRE and TOEFL where applicable), and other similar criteria required of applicants to the program. These elements must be clearly communicated to applicants and students. In planning, programs should give special attention to English-language proficiency for non-native English speakers and consider how proficiency
will be determined in the admission process; ESL support is not generally available to students in Capstone certificate programs.

Checklist for Verification of Admission Policy Requirements*
You will have an opportunity to provide explanation and rationale for any Admission Policy Requirements that have not been affirmed in the text box that follows the checklist.

☒ Degree-seeking students may not be concurrently enrolled in a Capstone certificate program.
☒ To be eligible for admission to a Capstone program, a student must hold an earned bachelor’s degree or equivalent credential from an accredited college or university.
☒ Prospective Capstone certificate students apply to the University and are admitted through the Adult Career and Special Student Services office in the Division of Continuing Studies (DCS-ACSSS) in consultation with the Capstone certificate faculty program director or designee. Once admitted, Capstone certificate students carry a University Special student classification (UNCS). University Special students apply via an online application system by selecting the Capstone certificate program of choice from a program list on the application. DCS-ACSSS codes the applicant for that program and defers final admission until a decision is made by the Capstone program faculty/staff. DCS-ACSSS serves as the advising, admissions, and academic dean's office for all University Special students.

*Provide explanation and rationale for any Admission Policy Requirements that have not been affirmed in the above checklist. Type explanations for Admission Policy Requirements not affirmed here.

7. Enrollment Planning and Marketing

7.1. Projected annual enrollment: 50
   Capstone certificates that will be supported by non-pooled tuition should project enrollments of at least 30 students; experience shows this is the threshold for generating sufficient revenue to meet direct program costs.

7.2. Maximum enrollment that can be supported with existing instructional and student services resources: 50

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

Should enrollment exceed our expectations we plan to hire additional qualified lectures to assist faculty associates in course instruction. We are currently compiling a list of qualified professionals that have expressed interest in teaching some of our courses. This would undoubtedly increase student exposure to professional experiences and contacts.

Should enrollment fall below our expectations, faculty associates will be expected to allocate additional time towards curriculum updates. The GIS industry is rapidly evolving and it is crucial that we keep up with (and hopefully surpass) our competitors. We already intend to allocate time for course updates; however, in the case of lower enrollments, we would take advantage of the opportunity by increasing our efforts in this mission.

7.4. Will this Capstone certificate enroll international students? Yes
Programs who will seek to enroll international students must plan accordingly. International students (any student who needs a UW I-20 for a student visa) may only enroll in a program if the Capstone certificate is offered full-time, if students are enrolled full-time, and if the program has been approved to receive international students by the US government. That approval process is conducted through the Office of International Student Services and can be initiated after academic approvals are complete; such approvals may take up to a year. Note that fully online programs are not subject to this restriction because international students do not need a visa.

7.5. What is the marketing plan for the Capstone certificate?
Describe marketing plan here. (1000 word limit)

We will work with the Division of Continuing Resources to market this program alongside the proposed Advanced GIS Capstone Certificate and our already successful Online Master’s Program. We intend to market these programs online as well as in person at popular conferences. We will market all programs together under the umbrella “GIS Professional Programs” to offer an ecosystem of educational options for prospective students.

8. Assessment

8.1. ☒ Attach an assessment plan when submitting this proposal. See the Basic Assessment Plan for Capstone Certificates for instructions and the accompanying template. The Basic Assessment Plan and Template are minimum expectations for this information. Programs that have developed plans that exceed what is specified in the basic plan may provide that information.

8.2. Provide a summary of the Capstone certificate’s assessment plan, including learning goals, key methods and assessment approaches, and how assessment information will be reviewed and acted on.
Type summary here. (1000 word limit)
There are two comprehensive student learning goals. First, students will establish a foundation of conceptual underpinnings of GIS technology in order to make informed use of GIS applications in real world problem solving. Second, students will acquire basic technological skills needed in applying GIS towards a wide variety of disciplines while gaining experience with common commercial and open-source GIS software. Learning goals will be assessed directly through rubric implementation in all course assessments to evaluate learning goal achievement and indirectly through: 1) course evaluation surveys (deployed for all courses to gain insight into the student’s experience in the course, perceptions of instruction, and improvements that could be incorporated into the curriculum) and 2) program completion surveys deployed to completing students by DCS to gain insight into the student perceptions of learning, career expectations, and improvements that could be incorporated into the curriculum and program. Direct and indirect methods will be assessed on an annual basis in addition to a 3-year review cycle by GISPP staff.

The GISPP staff will review program enrollment, progression, and completion data, as well as direct and indirect assessment data with the GISPP Oversight Committee in an annual report comprised of relevant data (described above), charts/graphs with explanations, and recommendations for future changes. This report will be presented in a PDF document with an executive summary listing the strengths of the program, possible curriculum changes, and recommended changes/action items to
implement over the next year. The GISPP Oversight Committee will agree by consensus, or if a vote is called, by a simple majority which changes to implement once per year or twice per year as necessary.

9. Related Programs

9.1. This Capstone certificate will be offered as a: Capstone certificate only.

Students may not earn a Capstone certificate and Graduate/Professional Certificate of the same name. If the Capstone certificate will be offered as a Capstone certificate and a new Graduate/Professional certificate, a Graduate/Professional certificate proposal form must be completed.

9.2. Specify any other major/degree or certificate program that is related to this Capstone certificate. List any major/degree or certificate programs related to this Capstone certificate here. Related programs include those that share a student audience, represent a closely related area of study, or have program names that are similar. These programs must provide a supporting memo (see required attachments). Capstone certificates supported using non-pooled tuition cannot compete with or draw students away from existing programs that support the central tuition pool.

This would compete with and directly replace our own, existing 131-capstone certificate program within geography. It would not directly compete with any other program that we are aware of on campus. In the interest of transparency, however, we notified Nelson Institute of our plans. We received an email from Janet Silbernagel noting that this in no way overlaps with what they are doing (see Appendix C).

10. Governance & Faculty

10.1. The Capstone certificate is governed by:

☒ Existing department and school/college governance committees
☐ New Capstone certificate governance committees

- If the Capstone certificate is governed by a new committee, define and outline governance structures and procedures for the certificate program.
  Define and outline governance structures and procedures here. (1000 word limit)
  Provide information on how program faculty are identified and provisions for transition in the faculty program director. Who will appoint the director and to whom will the director report?

10.2. 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 Capstone certificate.

- GISPP Oversight Committee:
  - Lisa Naughton, Geography Department Chair/ GISPP Oversight Committee Chair
  - Jack Williams, Finance Committee Chair
  - Joe Mason, Curriculum Committee Chair
  - Qunying Huang, GIS Faculty Representative

- GISPP Staff
  - Ian Muehlenhaus, GISPP Director
  - Brittney Markle, GISPP Manager
  - Joel Gruley, GISPP Administrative Assistant
GIS Faculty:
- Qunying Huang, Assistant Professor in Geography
- A-Xing Zhu, Professor of Geography
- Robert Roth, Associate Professor of Geography
- Song Gao, Assistant Professor in Geography

11. Progress & Certificate Completion

11.1. ☒ Using SIS, the faculty program director and staff will be able to identify University Special students enrolled in the Capstone certificate program.

11.2. ☒ Using DARS, the faculty program director and staff will monitor students’ progress in the Capstone certificate program.

11.3. ☒ The faculty program director will notify the degree audit department in the Registrar’s Office and DCS/ACSSS by email (degreeaudit@em.wisc.edu, karen.ripley@wisc.edu) when a student has completed all of the requirements for the Capstone certificate. When the certificate is completed, the program faculty director or designee must notify the Registrar’s Office in order for the Capstone certificate to be recorded on the official student record and for it to print to the transcript. If the program wishes to provide a physical certificate of completion for the student, they may do so.

11.4. Identify standards for good academic standing.
- Cumulative GPA of 3.0 or above
- Minimum C grade must be earned on all course work attempted for the certificate program.

At a minimum, C grades must be earned on all course work attempted for the certificate program. Academic standing is verified by the program faculty and staff. (Only graduate-level work from the Capstone certificate that is earned with a grade of B or better is eligible for subsequent application to a UW-Madison graduate degree minimum graduate-level credit requirement.)

12. Fiscal Structure and Ongoing Commitment

12.1. The Capstone certificate program will be supported using non-pooled tuition

12.2. For programs that will be supported using standard general purpose revenue, what resources are allocated or reallocated to the Capstone certificate program? Describe Capstone certificate resources here. (1000 word limit)
Is there a source of new funding? If the funding is from reallocation, what activities will be reduced as a result? Both the proposal from the program faculty and the school/college dean’s office cover memo should specify that the resource commitment is being made to the program.

12.3. For programs supported using non-pooled tuition, what resources are allocated to the Capstone certificate program?
Describe Capstone certificate resources here. (1000 word limit)
Programs supported using non-pooled tuition must also submit the attachments listed in the required attachments section.
The GIS Professional Programs will provide administrative coverage of the new Master's, as well as student advising. The program will be supported using current revenue from our online Master's and Capstone programs.

12.4. For programs supported using non-pooled tuition, planned enrollment is expected to generate enough paid tuition to cover instructional costs, direct student support costs, and any other fixed or required costs. Although detailed fiscal plans are not required in the academic program proposal, it is helpful to provide the following summary taken from the non-pooled tuition budget:

Fiscal Annual Summary
*Please refer to Appendix D: GISPP 5 Year Budget Plan

12.5. The department or program will not consider students enrolled in the Capstone certificate for departmental financial aid.

Capstone certificate students cannot receive federal financial aid.

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

12.7. ☒ The Capstone certificate program faculty are responsible for seeking appropriate governance approval for significantly altering the Capstone certificate’s curriculum, suspending admissions or discontinuing the certificate program.

12.8. ☒ The faculty/staff will check-in with GFEC three years after first student enrollment.

12.9. ☒ The faculty/staff will engage in program review five years after implementation and at least once every ten years after that.

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

12.11. ☒ The program faculty/staff will ensure the program website and Advance Your Career materials are current and consistent across all locations where information is provided.

Required attachments

☒ 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 certificate, share a student audience, represent a closely related area of study, have overlapping faculty, or have program names that are similar.

☒ Assessment plan
See the Basic Assessment Plan and Template for Capstone Certificates for detail. The Basic Assessment Plan for Capstone Certificates and the Template are posted at http://apir.wisc.edu/certificates.htm

Programs supported using non-pooled tuition must attach:

☒ Core Criteria Checklist
☒ Additional Requirements Checklist

See the current “Non-pooled Program Requirements Process” document posted at http://apir.wisc.edu/academicplanning.htm
ASSESSMENT PLAN
GIS FUDEMENTALS CAPSTONE CERTIFICATE

Capstone Certificate Program Name: GIS Fundamentals Capstone Certificate

Faculty Director Name, Contact information, Title:
Program oversight has been delegated to an oversight committee, rather than an individual faculty
director. The GIS Professional Programs Oversight Committee consists of four rotating members and 2
ex-officio members (GISPP Director and Manager).

Current Oversight Committee Members:
• Lisa Naughton, Geography Department Chair/ GISPP Oversight Committee Chair
• Joe Mason, Curriculum Committee Chair
• Jack Williams, Finance Committee Chair
• Quning Huang, GIS Faculty Representative

GISPP Staff:
• Ian Muehlenhaus, GISPP Director
• Brittney Markle, GISPP Manager

Primary Program Contact Name, Contact information, Title:
• Ian Muehlenhaus, muehlenhaus@wisc.edu, GISPP Director
• Brittney Markle, bmarkle@wisc.edu, GISPP Manager

Date this Assessment Plan was adopted by the program faculty: 9/11/2017

Student Learning Goals (What)
Students will:

1. Establish a foundation in the conceptual underpinnings of GIS technology in order to make
   informed use of current GIS applications in real world problem solving.
2. Acquire basic technological skills needed in applying GIS towards a wide variety of disciplines
   while gaining experience with common commercial and open-source GIS software.
## Curriculum Map *(Where)*

<table>
<thead>
<tr>
<th>Capstone Certificate Program Courses</th>
<th>Establish a foundation in the conceptual underpinnings of GIS technology in order to make informed use of current GIS applications in real world problem solving.</th>
<th>Acquire basic technological skills needed in applying GIS towards a wide variety of disciplines while gaining experience with common commercial and open-source GIS software.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 377: Intro to GIS</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GEOG 370: Intro to Cartography</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GEOG 378: Geocomputing</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

## Assessment Planning *(How)*

For each learning goal, indicate how you plan to assess whether or not students are meeting the expectation, as well as when each learning goal will be assessed. Keep in mind that each academic degree program is expected to engage in at least one assessment activity per year and assessment activities, in total, must include one direct assessment method.

### Method for assessing learning (at least one direct method required)

**Direct:** Rubrics will be implemented in all course assessments to evaluate learning goal achievement.

**Indirect:**
1. Every semester a course evaluation survey will be deployed for all courses to gain insight into the student’s experience in the course, perceptions of instruction, and improvements that could be incorporated into the curriculum.
2. Every semester DCS will deploy an exit survey to completing students to gain insight into the student perceptions of learning, career expectations, and improvements that could be incorporated into the curriculum and program.

### Timetable for assessment activity (at least one activity each year; all goals reviewed in a 3-year cycle)

Direct and indirect methods will be assessed on an annual basis and reviewed in a 3-year cycle for effectiveness.

*For examples of direct and indirect methods of assessment, see: [http://provost.wisc.edu/assessment/doing-assessment.htm](http://provost.wisc.edu/assessment/doing-assessment.htm).*
Assessment Review and Reporting (So What)

1. **Who is responsible for assessment?**

   GISPP staff is responsible for direct and indirect assessment.

2. **What is the plan for review of the assessment information?**

   Direct assessment will be completed every year by reviewing course rubrics. Indirect assessment will be evaluated yearly via student evaluations. DCS will also conduct a program exit survey and these results will be assessed annually. All of these assessments will be reviewed in a three-year cycle for effectiveness.

3. **What is the plan for production of annual summary report?**

   A report will be comprised of relevant data (described above), charts/graphs with explanations, and recommendations for future changes.

   It will be presented in a PDF document with an executive summary listing:
   - The strengths of the program
   - Possible curriculum changes
   - Recommended changes/action items to implement over the next year.

4. **How will recommendations be implemented?**

   The GISPP Oversight Committee will agree by consensus, or if a vote is called, by simple majority, regarding the changes to implement. The Oversight Committee will meet at least twice per year, or more often as necessary.

Use this form in conjunction with the “Basic Assessment Plan for Capstone Certificates” guidelines.
For information on Capstone certificates see: [http://apir.wisc.edu/certificates.htm](http://apir.wisc.edu/certificates.htm)
For information on assessment see [http://provost.wisc.edu/assessment/](http://provost.wisc.edu/assessment/)
APPENDIX A. CORE CRITERIA CHECKLIST
FOR ACADEMIC PROGRAMS WITH NON-POOLED TUITION

1. New and Additional Student Enrollments to Support Program Costs
   - ☒ The program must bring in NEW and ADDITIONAL students. Overall enrollment in all other school/college programs must not be eroded. The program cannot compete with or draw students away from existing programs that support the central tuition pool.
   - ☒ Faculty/staff must plan for sufficient enrollments to have enough tuition to cover instructional, direct student support costs, and any other fixed or required costs. Experience shows that enrollments of at least 30 students are necessary to have enough tuition to meet direct program costs.
   - ☒ School/college Budget Officers must be involved in planning and must approve plans and budgets for these programs before the program is submitted to the school/college APC for academic approval.

2. Designed for Non-Traditional Students
   - ☒ Has an applied, practice-oriented curriculum, or integrates practice with theory
   - ☒ Is offered in a modality that allows non-traditional audiences to attend (evening, weekend, online, intensive, or some combination)
   - ☒ Has demonstrated a workforce demand for the program graduates
   - ☒ Has defined learning goals that are oriented to market considerations
   - ☒ Has a clearly defined curriculum that is “self-contained”, meaning that program students are confined only to courses from the approved, prescribed curriculum
   - ☒ Has a clearly defined (often lockstep) curriculum with few options or electives that follows a predictable timeline for offerings and completion

3. Distinctly Identifiable Program (Code) With Governance Approval
   - ☒ The program must be distinctly identifiable in the student record system, either as a degree/major or as an option of a degree/major, or as a Capstone certificate.
   - ☒ The program must develop a proposal for the academic approval process, during which it must demonstrate that the school/college Dean and Budget Officer are aware and supportive of the program being run on a non-pooled tuition model.

Non-Pooled Tuition Program Requirements and Process, V.3.28.2015
APPENDIX B. ADDITIONAL REQUIREMENTS CHECKLIST FOR ACADEMIC PROGRAMS WITH NON-POOLED TUITION

Use this checklist in conjunction with the Core Criteria Checklist.

If core criteria are met, the program must adhere to the additional requirements below.

Note: Not all new programs are suited for the non-pooled program requirements. New programs that seek to take advantage of a wide range of course and curricular/program offerings on campus and are not market-oriented should be developed under traditional (101) pooled tuition funding models.

1. Fiscal Requirements:

☑ School/college budget officer has approved the budget and fiscal plan.

☐ School/college dean and budget officer are committed to assuming fiscal responsibility for costs not covered by non-pooled tuition to the program. The school/college will back up the budget with a commitment to cover any costs not met from tuition from other sources.

☒ The program structure fits within standard academic administrative structures and allocates expenses of the program so that the program does not create additional burdens on traditional/101 program resources or student services such as advising, ESL, Registrar’s Office, Bursar’s Office, Graduate School and other support services.

☒ Programs have two options for tuition. One option is to charge standard graduate tuition according to the UW-Madison tuition schedule. This includes standard rates for WI resident, MN, and non-resident students and any compulsory fees that apply. Or, for fully online programs, they have the option of charging all students one of tuition tiers (Appendix D). Although not currently allowed, it is potentially possible in the future the tiered tuition may be available to face-to-face programs. Because students who have graduate assistantships receive tuition waivers, some non-pooled tuition graduate degree programs choose to prohibit students from accepting a graduate assistantship (RA/TA/PA). If a program allows their students to take graduate assistantships they it must forgo the tuition revenue. To ensure full receipt of non-pooled tuition and to counter challenges from students, the program must adhere to the following:

☒ The program faculty/staff must disclose this program policy to students in the recommendation of admission letter, program website, program handbook, and program orientation.

☒ Please see Appendix E for links and Appendix F for a sample of a specific non-pooled program template for a recommendation of admission letter and a general template for a program handbook. The program faculty/staff must provide details on this and any other program policies the program handbook in at least the following areas: satisfactory
progress (good standing) requirements, any ways to return to good standing, and a program grievance process if done does not already exist.

2. Requirements for International Students:

☒ Programs may not admit students who need ESL services without building sufficient ESL support into their fiscal model, and having an explicit MOU with the ESL provider about funding to support the ESL services.

☒ Graduate degree/major programs must use Graduate School standards for English Proficiency. Capstone certificates should be designed so that admission requirements ensure that ESL support is not needed.

☒ If the program is NOT completely online and admits international students, the program is responsible for honoring federal visa regulations related but not limited to: length of stay requirements for visa requests, online course restrictions for visa holders, and waiting for federal program approval (up to a year) if the program represents a new degree type or capstone certificate previously not offered at UW-Madison.

3. Requirements for Program/Course Enrollment:

☒ Non-pooled tuition program students can only be enrolled in one program at a time; enrollment in a second major, named option, certificate program, or courses beyond the prescribed program curriculum is not permitted. Non-compliance with this requirement will jeopardize the receipt of tuition for a non-pooled program. Regular audits will be conducted to ensure these requirements are met.

☒ To ensure full receipt of non-pooled program tuition and to counter challenges from students who want to be dually enrolled, the program must adhere to the following:

☒ The program must provide information to students about prohibitions on concurrent program enrollment and out-of-program course enrollment. Programs must note this in recruiting materials, in recommendations of admission, on the program website, program handbook, and program orientation.

☒ Please see Appendix E for links and Appendix F for language for a specific non-pooled program template for a recommendation of admission letter and a general template for a program handbook. The program faculty/staff must provide details on this and any other program policies in the program handbook in in at least following areas: satisfactory
progress (good standing) requirements, ways to return to good standing, and a program grievance process if one does not already exist.

☒ The program communicates to students each semester prior to course enrollment the expectation that students can enroll only in program courses and not in courses outside the approved, prescribed curriculum.

☒ For students who enroll in the non-pooled program and then decide they want to pursue traditional/101 programs that allow dual enrollment, the program must help the student transfer to a different program(s) that allow such activity.
PROPOSAL FORM
CAPSTONE CERTIFICATE PROGRAMS

Capstone certificates are available to University Special (non-degree seeking) students who hold a bachelor’s degree or equivalent credential from an accredited college or university and are designed to offer a focused professionally oriented educational experience. This form is to be used in concert with the Capstone certificate guidelines. Complete the form and save as a Microsoft Word document.

1. **Capstone certificate name and academic home**

   1.1. Capstone certificate name: Advanced GIS Capstone Certificate

   1.2. Home Department/Academic Unit (Name/UDDS): Geography/A482942
   
   *The home department/academic unit is responsible for the academic oversight, delivery, and administration of the certificate.*

   1.3. Home School/College: Letters and Science, College of

   1.4. Additional Department(s)/Academic unit(s) information, if relevant:
   
   N/A

   1.5. Faculty director of the Capstone certificate program (name, title, email):

   The GISPP Oversight Committee consists of four rotating members: the Departmental Chair/GISPP Oversight Committee Chair, the Curriculum Committee Chair, the Financial Committee Chair, and a faculty representative from the Cart/GIS subgroup selected by the Departmental Chair. The GISPP Director and Manager are ex officio, non-voting members.

   - **GISPP Oversight Committee**:
     - Lisa Naughton, Geography Department Chair/GISPP Oversight Committee Chair
     - Jack Williams, Finance Committee Chair
     - Joe Mason, Curriculum Committee Chair
     - Qunying Huang, GIS Faculty Representative
   
   - **GISPP Staff**
     - Ian Muehlenhaus, GISPP Director
     - Brittney Markle, GISPP Manager

   1.6. Primary Capstone certificate program contact (name, title, email): Ian Muehlenhaus, GISPP Director, muehlenhaus@wisc.edu, and Brittney Markle, GISPP Manager, bmarkle@wisc.edu

   1.7. Primary school/college dean’s office contact (name, title, email): Greg Downey, Associate Dean for Social Sciences, greg.downey@wisc.edu
1.8. Date form completed: 9/11/2017

2. Approval, Implementation, and Review

2.1. School/College Approval Date: October 17, 2017

2.2. GFEC Approval Date:

2.3. UAPC Approval Date:

2.4. Expected first term of student enrollment (usually 2-3 terms after UAPC approval; typically the following Fall term): Fall 2018

2.5. Year of three year check-in to GFEC (3 years after first student enrollment): 2021

2.6. Year of first program review (5 years after first student enrollment): 2023

2.7. Are all academic programs in the home academic unit are up to date for program review? Yes

   ▪ If no, please provide an explanation:
     Type an explanation here. (1000 word limit)

Information to be completed by RO and APIR:
  Plan Code (assigned by the Registrar’s Office):
  CIP Code (assigned by Academic Planning and Institutional Research):
  Primary Divisional Disciplinary Assignment (assigned by APIR for analysis purposes only):

3. Purpose, rationale, justification

Describe the purpose, rationale, and justification for the Capstone certificate:

3.1. What is the purpose of the Capstone certificate program? How does it contribute to the mission of the sponsoring unit(s)?
  Describe the purpose of the Capstone certificate here. (1000 word limit)

The current Geographic Information Systems (GIS) Capstone Certificate is a longstanding program with the University of Wisconsin-Madison in the Department of Geography that has maintained successful enrollment and completion since its inception in 1999. However, in recent years enrollments have largely stagnated, likely due to increased competition and the high amount of credits in our capstone. Crucially for this proposal, we see two groups of existing capstone students that are not being well served by the current Capstone. In the first group, we have many students who purposefully delay Capstone completion to keep taking all the GIS classes offered by the department (e.g., well over 30 credits). For this audience, the current Capstone curriculum does not offer enough courses to meet their needs. In the second group, some students fail to graduate due to the large credit load (22 credits, which were grandfathered in) relative to typical certificate programs at UW-Madison (15 credits max.) and the psychological hurdle of a large capstone project.
We therefore propose to offer two, stackable (i.e., students can progress through the capstone programs into the online master’s), 12 credit, 100% online capstone certificate options: 1) a GIS Fundamentals Capstone Certificate (see separate proposal) and 2) an Advanced GIS Capstone Certificate (described here). The Advanced GIS Capstone Certificate is intended to produce individuals, both inside and outside of Wisconsin, skilled in the conceptual and methodological underpinnings of advanced GIS technology and able to make informed use of current GIS applications in real world problem solving. Advanced GIS Capstone Certificate students will acquire advanced GIS and related technological skills needed in a wide variety of disciplines, while gaining experience with common commercial and open-source GIS software. The course package will provide broad competency in mapping science and spatial analysis; consisting of three elective courses, including advanced courses in cartographic design, geovisualization, geocomputing, and spatial and web programming. We provide these courses to serve multiple, diverse interest groups, namely those interested in representation (cartography), spatial analysis, and web design (programming). Other electives may be added over time, if demand so indicates.

Establishing a stackable set of online capstone certificates will contribute to the mission of the Department of Geography in two ways. First, we will significantly increase enrollment of our capstone certificate programs by allowing working professionals to take this program without leaving their jobs or home, particularly for international audiences. Second, the redesigned capstones will act as feeders into our successful and already growing Online Professional Master’s in GIS Development. Students in both online capstone certificate programs will be able to transfer several courses into the Online Professional Master’s Program if they decide to move forward with their GIS training.

The program will be run on a non-pooled program model (i.e., as a 131 fund) and is expected to be fully self-supporting. Funds generated by the program beyond program costs will be used to strengthen the Geography Department’s teaching, research, and student service missions. We intend to make this program available fall 2018, if approved.

3.2. What is the evidence that there is a student demand for the Capstone certificate program? Provide evidence of student demand for the Capstone certificate program

Although many geography programs in the nation and around the world are moving to provide training in GIS, the Cartography/GIS programs in Geography at UW-Madison have distinct advantages in this competition. The Cart/GIS program at UW-Madison Department of Geography is world-renowned and has a long tradition of excellence in the field. Our Geography Department is ranked 1st or 6th in the U.S., according to R-rank and S-rank criteria, respectively (NRC 2011). Our excellence in GIS is recognized beyond the U.S.; for example, we host an annual workshop for top graduate students from Beijing Normal University. We also have demonstrated experience in running a successful revenue-based professional program. Our current capstone certificate in GIS, developed based on the innovative idea of Chancellor Ward in 1999, has been running very successfully for over 10 years with an annual revenue of about $250,000. Through running the capstone program, we also have gained a good sense of the growing need for training in areas beyond what the current capstone certificate program offers. We also offer an online master’s in Cartography and GIS, which has exceeded our original enrollment expectations.

Another downfall to our current capstone program lies in its delivery. This is an in-house program intended to serve students on-campus. We are seeing increasing demand for online GIS education daily through numerous inquiries from outside the University as well as from undergraduate and graduate
students across the disciplines. Our proposed capstone certificates in GIS Fundamentals and Advanced GIS are designed to fill this void and expand the UW brand in GIS beyond Madison, Wisconsin.

3.3 What is the evidence that there is a market demand for graduates of the Capstone certificate program? Provide evidence of market demand for the Capstone certificate program

Proposals for new Capstone certificates must provide a demonstrated need for such a program: this provision must be defined in terms of external markets (i.e. external demand for the skills associated with such a certificate) and must describe how the Capstone certificate program will attract new student enrollments.

Increasingly we are seeing the impact GIS has on our everyday lives as it rapidly becomes a major expanding sector in the global economy. The United States Department of Labor identifies GIS and Geospatial Technology broadly as a key area of growth. There currently are approximately 424,000 Americans working in geospatial occupations, while an additional 148,700 jobs in geospatial occupations are expected to be created in the next ten years, a growth rate of approximately 35% (see US Department of Labor website). In addition, the initial wave of professionals in GIS who started their careers in the mid-1980s are nearing retirement age, meaning the level of demand for GIS professionals should remain high for decades to come. The 2013 NRC report, Future U.S. Workforce for Geospatial Intelligence, assessed the supply of expertise in 10 geospatial intelligence fields and identified cartography/GIS as the core area of expertise needed. It indicated that due to competition from private companies, intelligence agencies are already having difficulties finding qualified experts in GIS techniques. This shortfall is expected to continue for at least 20 years.

Over the last few decades, the tools for analysis, visualization, processing, and archiving of spatial information have become increasingly complex, prompting a large demand for individuals with formal training in Geographic Information Science. Taken together, these data support a significant need for the training our proposed scalable certificate programs will deliver. The rapid growth of similar (but not interchangeable) professional GIS training programs in competing universities like Penn State provides further evidence of the high demand for this type of skills training.

4. Curriculum

4.1. Delivery modality:

☐ Face-to-face
☒ Distance

Distance-delivered programs are those certificate or degree programs in which 50% or more of the required courses may be taken as distance-delivered courses.

4.2. Provide a complete list of requirements.

- Geog 574: Spatial Databases (elective)
- Geog 378: Geocomputing (elective)
- Geog 572: Graphic Design in Cartography (elective)
- Geog 575: Interactive Cartography & Geovisualization (elective)
- Geog 576: Spatial Web & Mobile Programming (elective)
- Geog 579: GIS & Spatial Analysis (elective)

Program requirements should provide content that leads to the completion of Capstone certificate learning goals. See section 8 Assessment.
4.3. Chart student progression through the curriculum.

<table>
<thead>
<tr>
<th>Semester students will take the course</th>
<th>Department</th>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Instructor</th>
<th>Semester &amp; year last taught</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st, 2nd, or 3rd semester</td>
<td>Geography</td>
<td>378</td>
<td>Geocomputing</td>
<td>4</td>
<td>Faculty Associate</td>
<td>Summer 2017</td>
</tr>
<tr>
<td>1st, 2nd, or 3rd semester</td>
<td>Geography</td>
<td>572</td>
<td>Graphic Design in Cartography</td>
<td>4</td>
<td>Ian Muehlenhaus</td>
<td>Fall 2017</td>
</tr>
<tr>
<td>1st, 2nd, or 3rd semester</td>
<td>Geography</td>
<td>574</td>
<td>Spatial Databases</td>
<td>4</td>
<td>Faculty Associate</td>
<td>Spring 2017</td>
</tr>
<tr>
<td>1st, 2nd, or 3rd semester</td>
<td>Geography</td>
<td>575</td>
<td>Interactive Cartography &amp; Geovisualization</td>
<td>4</td>
<td>Faculty Associate</td>
<td>Spring 2017</td>
</tr>
<tr>
<td>1st, 2nd, or 3rd semester</td>
<td>Geography</td>
<td>576</td>
<td>Spatial Web &amp; Mobile Programming</td>
<td>4</td>
<td>Faculty Associate</td>
<td>Summer 2017</td>
</tr>
<tr>
<td>1st, 2nd, or 3rd semester</td>
<td>Geography</td>
<td>579</td>
<td>GIS &amp; Spatial Analysis</td>
<td>4</td>
<td>Faculty Associate</td>
<td>Summer 2017</td>
</tr>
</tbody>
</table>

*Adjuncts will instruct as necessary

4.4. Total credits required: 12

Capstone certificate programs are usually 9 to 12 credits and may not be more than 15 credits.

4.5. Semesters to completion: 1-3

4.6. Describe the student progression (one-course per semester for several semesters, all courses taken in one intensive semester, other:

- Part-time (< 8 credits fall and spring semesters, < 4 credits summer term)
  Students can choose to take 1 course per semester for 3 consecutive semesters.
- Full-time, time-compressed, intensive
  Students can choose to take all three courses in one intensive semester.
- Other
  Students can choose to take three courses over two semesters with one light semester (1 course) and one heavy semester (2 courses).

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 Capstone certificate are numbered 300 or higher.
- Courses are offered on a regular basis (as identified in student progression chart in section 4).
- Courses have enrollment capacity for students in the Capstone certificate program.
- Courses in the proposed Capstone certificate have been approved.
☒ All of the Capstone certificate credits must be earned “in residence” (which includes on campus and distance-delivered courses) at UW-Madison while enrolled in the Capstone certificate program. Because a Capstone certificate is comprised of just a few courses, it is not appropriate for students who already have completed the same or similar coursework at UW-Madison or another institution.
☒ Students must earn a minimum grade of C on all attempted Capstone certificate coursework.
☒ Courses in which a student elects the pass/fail option will not meet Capstone certificate requirements.
☒ All Capstone certificate program requirements must be met; waiving requirements is not permitted.
☒ Units must maintain Capstone certificate 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 Office of the Registrar, the Graduate School, and DCS-ACSSS about approved curricular changes to the certificate. 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 names of Capstone certificate program advisor(s) with title and departmental affiliation(s).
   Ian Muehlenhaus, GISPP Director, Department of Geography
   Brittney Markle, GISPP Manager, Department of Geography
   Joel Gruley, GISPP Administrative Assistant, Department of Geography

5.2. How will the resource load of the additional student services support and advising be met?
Describe how student services and advising will be supported here. (1000 word limit)
*Do the individuals or offices have the capacity to add student services support for the Capstone certificate program? Does the program have the resources to support all aspects of advising and student support?*

The Department of Geography has hired An administrative assistant fully dedicated to GISPP to assist with day-to-day support on a half time appointment. This hire will take on many administrative duties and some student service duties that would have otherwise prevented the other GISPP staff from increasing student support. Student service responsibilities will be divided amongst all GISPP staff. As GISPP grows, we intend to hire more support staff as needed.

5.3. ☒ Confirm that program advisor(s) have been consulted and reviewed this proposal.

6. **Admissions**

6.1. Minimum bachelor’s degree GPA for admission to the Capstone certificate program (if relevant): 3.0

6.2. List additional admission criteria:
- Applicants must have a four-year Bachelor’s degree from an accredited institution of higher learning.
- Applicants must have a minimum background in GIS; including, two undergraduate level courses in introductory GIS and/or cartography. Equivalent work experience will also be considered.
• Applicants may not be enrolled in other UW-Madison graduate coursework or programs concurrently with our program.
• Non-native English speakers must take either the TOEFL exam or the IELTS exam and submit scores during the application process. Minimum acceptable scores must meet the UW Graduate School requirements:
  o TOEFL - 92 for internet based test (IBT) and 580 for paper test.
  o IELTS - 7.0

In order to provide greater flexibility and meet the needs of specific target student populations, each Capstone certificate program shall identify any tests and minimum scores (for example GRE and TOEFL where applicable), and other similar criteria required of applicants to the program. These elements must be clearly communicated to applicants and students. In planning, programs should give special attention to English-language proficiency for non-native English speakers and consider how proficiency will be determined in the admission process; ESL support is not generally available to students in Capstone certificate programs.

Checklist for Verification of Admission Policy Requirements*
You will have an opportunity to provide explanation and rationale for any Admission Policy Requirements that have not been affirmed in the text box that follows the checklist.

☒ Degree-seeking students may not be concurrently enrolled in a Capstone certificate program.
☒ To be eligible for admission to a Capstone program, a student must hold an earned bachelor’s degree or equivalent credential from an accredited college or university.
☒ Prospective Capstone certificate students apply to the University and are admitted through the Adult Career and Special Student Services office in the Division of Continuing Studies (DCS-ACSSS) in consultation with the Capstone certificate faculty program director or designee. Once admitted, Capstone certificate students carry a University Special student classification (UNCS). University Special students apply via an online application system by selecting the Capstone certificate program of choice from a program list on the application. DCS-ACSSS codes the applicant for that program and defers final admission until a decision is made by the Capstone program faculty/staff. DCS-ACSSS serves as the advising, admissions, and academic dean's office for all University Special students.

*Provide explanation and rationale for any Admission Policy Requirements that have not been affirmed in the above checklist.
Type explanations for Admission Policy Requirements not affirmed here.

7. Enrollment Planning and Marketing

7.1. Projected annual enrollment: 50
   *Capstone certificates that will be supported by non-pooled tuition should project enrollments of at least 30 students; experience shows this is the threshold for generating sufficient revenue to meet direct program costs.*

7.2. Maximum enrollment that can be supported with existing instructional and student services resources: 50

7.3. Describe plans for supporting enrollments that are much higher or much lower than the anticipated enrollment.
Should enrollment exceed our expectations we plan to hire additional qualified lectures to assist faculty associates in course instruction. We are currently compiling a list of qualified professionals that have expressed interest in teaching some of our courses. This would undoubtedly increase student exposure to professional experiences and contacts.

Should enrollment fall below our expectations faculty associates will be expected to allocate additional time towards curriculum updates. The GIS industry is rapidly evolving and it is crucial that we keep up with (and hopefully surpass) our competitors. We already intend to allocate time for course updates; however, in the case of lower enrollments, we would take advantage of the opportunity by increasing our efforts in this mission.

7.4. Will this Capstone certificate enroll international students? Yes

Programs who will seek to enroll international students must plan accordingly. International students (any student who needs a UW I-20 for a student visa) may only enroll in a program if the Capstone certificate is offered full-time, if students are enrolled full-time, and if the program has been approved to receive international students by the US government. That approval process is conducted through the Office of International Student Services and can be initiated after academic approvals are complete; such approvals may take up to a year. Note that fully online programs are not subject to this restriction because international students do not need a visa.

7.5. What is the marketing plan for the Capstone certificate?

Describe marketing plan here. (1000 word limit)

We will work with the Division of Continuing Resources to market this program alongside the proposed GIS Fundamentals Capstone Certificate and our already successful Online Master’s Program. We intend to market these programs online as well as in person at popular conferences. We will market all programs together under the umbrella “GIS Professional Programs” to offer an ecosystem of educational options for prospective students.

8. Assessment

8.1. ☒ Attach an assessment plan when submitting this proposal.

See the Basic Assessment Plan for Capstone Certificates for instructions and the accompanying template. The Basic Assessment Plan and Template are minimum expectations for this information. Programs that have developed plans that exceed what is specified in the basic plan may provide that information.

8.2. Provide a summary of the Capstone certificate’s assessment plan, including learning goals, key methods and assessment approaches, and how assessment information will be reviewed and acted on.

Type summary here. (1000 word limit)

There are two comprehensive student-learning goals. First, students will become grounded in the conceptual underpinnings of advanced GIS technology in order to make informed use of complex GIS applications in real world problem solving. Second, students will acquire advanced technological skills needed in applying GIS towards a wide variety of disciplines while gaining experience with common commercial and open-source GIS software. Learning goals will be assessed directly through rubric implementation in all course assessments to evaluate learning goal achievement and indirectly
through: 1) course evaluation surveys (deployed for all courses to gain insight into the student’s experience in the course, perceptions of instruction, and improvements that could be incorporated into the curriculum) and 2) program completion surveys deployed to completing students by DCS to gain insight into the student perceptions of learning, career expectations, and improvements that could be incorporated into the curriculum and program. Direct and indirect methods will be assessed on an annual basis in addition to a 3-year review cycle by GISPP staff.

The GISPP staff will review program enrollment, progression, and completion data, as well as direct and indirect assessment data with the GISPP Oversight Committee in an annual report comprised of relevant data (described above), charts/graphs with explanations, and recommendations for future changes. This report will be presented in a PDF document with an executive summary listing the strengths of the program, possible curriculum changes, and recommended changes/action items to implement over the next year. The GISPP Oversight Committee will agree by consensus, or if a vote is called, by a simple majority which changes to implement once per year or twice per year as necessary.

9. Related Programs

9.1. This Capstone certificate will be offered as a: Capstone certificate only.

_Students may not earn a Capstone certificate and Graduate/Professional Certificate of the same name._

_If the Capstone certificate will be offered as a Capstone certificate and a new Graduate/Professional certificate, a Graduate/Professional certificate proposal form must be completed._

9.2. Specify any other major/degree or certificate program that is related to this Capstone certificate.

List any major/degree or certificate programs are related to this Capstone certificate here. _Related programs include those that share a student audience, represent a closely related area of study, or have program names that are similar. These programs must provide a supporting memo (see required attachments). Capstone certificates supported using non-pooled tuition cannot compete with or draw students away from existing programs that support the central tuition pool._

This would compete with and directly replace our own, existing 131-capstone certificate program within geography. It would not directly compete with any other program that we are aware of on campus. In the interest of transparency, however, we notified Nelson Institute of our plans. We received an email from Janet Silbernagel noting that this in no way overlaps with what they are doing (see Appendix C).

10. Governance & Faculty

10.1. The Capstone certificate is governed by:

☒ Existing department and school/college governance committees
☐ New Capstone certificate governance committees

- If the Capstone certificate is governed by a new committee, define and outline governance structures and procedures for the certificate program.

Define and outline governance structures and procedures here. (1000 word limit)

_Provide information on how program faculty are identified and provisions for transition in the faculty program director. Who will appoint the director and to whom will the director report?_
10.2. 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 Capstone certificate.

- **GISPP Oversight Committee:**
  - Lisa Naughton, Geography Department Chair/ GISPP Oversight Committee Chair
  - Jack Williams, Finance Committee Chair
  - Joe Mason, Curriculum Committee Chair
  - Qunying Huang, GIS Faculty Representative

- **GISPP Staff**
  - Ian Muehlenhaus, GISPP Director
  - Britney Markle, GISPP Manager
  - Joel Gruley, GISPP Administrative Assistant

- **GIS Faculty:**
  - Qunying Huang, Assistant Professor in Geography
  - A-Xing Zhu, Professor of Geography
  - Robert Roth, Associate Professor of Geography
  - Song Gao, Assistant Professor in Geography

11. Progress & Certificate Completion

11.1. ☒ Using SIS, the faculty program director and staff will be able to identify University Special students enrolled in the Capstone certificate program.

11.2. ☒ Using DARS, the faculty program director and staff will monitor students’ progress in the Capstone certificate program.

11.3. ☒ The faculty program director will notify the degree audit department in the Registrar’s Office and DCS/ACSSS by email (degreeaudit@em.wisc.edu, karen.ripley@wisc.edu) when a student has completed all of the requirements for the Capstone certificate. *When the certificate is completed, the program faculty director or designee must notify the Registrar’s Office in order for the Capstone certificate to be recorded on the official student record and for it to print to the transcript. If the program wishes to provide a physical certificate of completion for the student, they may do so.*

11.4. Identify standards for good academic standing.

- Cumulative GPA of 3.0 or above
- Minimum C grade must be earned on all course work attempted for the certificate program.

*At a minimum, C grades must be earned on all course work attempted for the certificate program. Academic standing is verified by the program faculty and staff. (Only graduate-level work from the Capstone certificate that is earned with a grade of B or better is eligible for subsequent application to a UW-Madison graduate degree minimum graduate-level credit requirement.)*

12. Fiscal Structure and Ongoing Commitment

12.1. The Capstone certificate program will be supported using non-pooled tuition.
12.2. For programs that will be supported using standard general purpose revenue, what resources are allocated or reallocated to the Capstone certificate program? Describe Capstone certificate resources here. (1000 word limit) 
Is there a source of new funding? If the funding is from reallocation, what activities will be reduced as a result? Both the proposal from the program faculty and the school/college dean’s office cover memo should specify that the resource commitment is being made to the program.

12.3. For programs supported using non-pooled tuition, what resources are allocated to the Capstone certificate program? Describe Capstone certificate resources here. (1000 word limit) 
Programs supported using non-pooled tuition must also submit the attachments listed in the required attachments section. 
The GIS Professional Programs will provide administrative coverage of the new Master's, as well as student advising. The program will be supported using current revenue from our online Master's and Capstone programs.

12.4. For programs supported using non-pooled tuition, planned enrollment is expected to generate enough paid tuition to cover instructional costs, direct student support costs, and any other fixed or required costs. Although detailed fiscal plans are not required in the academic program proposal, it is helpful to provide the following summary taken from the non-pooled tuition budget:
Fiscal Annual Summary
*Please refer to Appendix D: GISPP 5 Year Budget Plan

12.5. The department or program will not consider students enrolled in the Capstone certificate for departmental financial aid. 
Capstone certificate students cannot receive federal financial aid.

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

12.7. The Capstone certificate program faculty are responsible for seeking appropriate governance approval for significantly altering the Capstone certificate’s curriculum, suspending admissions or discontinuing the certificate program.

12.8. The faculty/staff will check-in with GFEC three years after first student enrollment.

12.9. The faculty/staff will engage in program review five years after implementation and at least once every ten years after that.

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

12.11. The program faculty/staff will ensure the program website and Advance Your Career materials are current and consistent across all locations where information is provided.
Required attachments

☒ 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 certificate, share a student audience, represent a closely related area of study, have overlapping faculty, or have program names that are similar.

☒ Assessment plan
See the Basic Assessment Plan and Template for Capstone Certificates for detail. The Basic Assessment Plan for Capstone Certificates and the Template are posted at [http://apir.wisc.edu/certificates.htm](http://apir.wisc.edu/certificates.htm)

Programs supported using non-pooled tuition must attach:

☒ Core Criteria Checklist
☒ Additional Requirements Checklist

See the current “Non-pooled Program Requirements Process” document posted at [http://apir.wisc.edu/academicplanning.htm](http://apir.wisc.edu/academicplanning.htm)
ASSESSMENT PLAN
ADVANCED GIS CAPSTONE CERTIFICATE

Capstone Certificate Program Name: Advanced GIS Capstone Certificate

Faculty Director Name, Contact information, Title:
Program oversight has been delegated to an oversight committee, rather than an individual faculty director. The GIS Professional Programs Oversight Committee consists of four rotating members and 2 ex-officio members (GISPP Director and Manager).

Current Oversight Committee Members:
- Lisa Naughton, Geography Department Chair/ GISPP Oversight Committee Chair
- Joe Mason, Curriculum Committee Chair
- Jack Williams, Finance Committee Chair
- Qunying Huang, GIS Faculty Representative

GISPP Staff:
- Ian Muehlenhaus, GISPP Director
- Brittney Markle, GISPP Manager

Primary Program Contact Name, Contact information, Title:
Ian Muehlenhaus, muehlenhaus@wisc.edu, GISPP Director
Brittney Markle, bmarkle@wisc.edu, GISPP Manager

Date this Assessment Plan was adopted by the program faculty:

Student Learning Goals (What)
Students will:

1. Become grounded in the conceptual and methodological underpinnings of advanced GIS technology in order to make informed use of complex GIS applications in real world problem solving.
2. Acquire advanced technological skills needed in applying GIS towards a wide variety of disciplines while gaining experience with common commercial and open-source GIS software.
Curriculum Map *(Where)*

<table>
<thead>
<tr>
<th>Capstone Certificate Program Courses</th>
<th>Become grounded in the conceptual underpinnings of advanced GIS technology in order to make informed use of complex GIS applications in real world problem solving.</th>
<th>Acquire advanced technological skills needed in applying GIS towards a wide variety of disciplines while gaining experience with common commercial and open-source GIS software.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEOG 378: Geocomputing <em>(elective)</em></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GEOG 574: Spatial Databases <em>(elective)</em></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GEOG 572: Graphic Design in Cartography <em>(elective)</em></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GEOG 575: Interactive Cartography &amp; Geovisualization <em>(elective)</em></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GEOG 576: Spatial Web &amp; Mobile Programming <em>(elective)</em></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>GEOG 579: GIS &amp; Spatial Analysis <em>(elective)</em></td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Assessment Planning *(How)*

<table>
<thead>
<tr>
<th>Assessment Planning <em>(How)</em></th>
<th>For each learning goal, indicate how you plan to assess whether or not students are meeting the expectation, as well as when each learning goal will be assessed. Keep in mind that each academic degree program is expected to engage in at least one assessment activity per year and assessment activities, in total, must include one direct assessment method.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method for assessing learning (at least one direct method required)</td>
<td><strong>Direct:</strong> Rubrics will be implemented in all course assessments to evaluate learning goal achievement. <strong>Indirect:</strong> 1) Every semester a course evaluation survey will be deployed for all courses to gain insight into the student’s experience in the course, perceptions of instruction, and improvements that could be incorporated into the curriculum. 2) Every semester DCS will deploy an exit survey to completing students to gain insight into the student perceptions of learning, career expectations, and improvements that could be incorporated into the curriculum and program.</td>
</tr>
<tr>
<td>Timetable for assessment activity (at least one activity each year; all goals reviewed in a 3-year cycle)</td>
<td>Direct and indirect methods will be assessed on an annual basis and reviewed in a 3-year cycle for effectiveness.</td>
</tr>
</tbody>
</table>
*For examples of direct and indirect methods of assessment, see: [http://provost.wisc.edu/assessment/doing-assessment.htm](http://provost.wisc.edu/assessment/doing-assessment.htm).

**Assessment Review and Reporting (So What)**

1. **Who is responsible for assessment?**
   
   GISPP staff is responsible for direct and indirect assessment.

2. **What is the plan for review of the assessment information?**
   
   Direct assessment will be completed every year by reviewing course rubrics. Indirect assessment will be evaluated yearly via student evaluations. DCS will also conduct a program exit survey and these results will be assessed annually. All of these assessments will be reviewed in a three-year cycle for effectiveness.

3. **What is the plan for production of annual summary report?**
   
   A report will be comprised of relevant data (described above), charts/graphs with explanations, and recommendations for future changes.

   It will be presented in a PDF document with an executive summary listing:
   - The strengths of the program
   - Possible curriculum changes
   - Recommended changes/action items to implement over the next year.

4. **How will recommendations be implemented?**
   
   The GISPP Oversight Committee will agree by consensus, or if a vote is called, by simple majority, regarding the changes to implement. The Oversight Committee will meet at least twice per year, or more often as necessary.

Use this form in conjunction with the “Basic Assessment Plan for Capstone Certificates” guidelines.
For information on Capstone certificates see: [http://apir.wisc.edu/certificates.htm](http://apir.wisc.edu/certificates.htm)
For information on assessment see [http://provost.wisc.edu/assessment/]
APPENDIX A. CORE CRITERIA CHECKLIST
FOR ACADEMIC PROGRAMS WITH NON-POOLED TUITION

1. New and Additional Student Enrollments to Support Program Costs
   ☒ The program must bring in NEW and ADDITIONAL students. Overall enrollment in all other school/college programs must not be eroded. The program cannot compete with or draw students away from existing programs that support the central tuition pool.
   ☒ Faculty/staff must plan for sufficient enrollments to have enough tuition to cover instructional, direct student support costs, and any other fixed or required costs. Experience shows that enrollments of at least 30 students are necessary to have enough tuition to meet direct program costs.
   ☒ School/college Budget Officers must be involved in planning and must approve plans and budgets for these programs before the program is submitted to the school/college APC for academic approval.

2. Designed for Non-Traditional Students
   ☒ Has an applied, practice-oriented curriculum, or integrates practice with theory
   ☒ Is offered in a modality that allows non-traditional audiences to attend (evening, weekend, online, intensive, or some combination)
   ☒ Has demonstrated a workforce demand for the program graduates
   ☒ Has defined learning goals that are oriented to market considerations
   ☒ Has a clearly defined curriculum that is “self-contained”, meaning that program students are confined only to courses from the approved, prescribed curriculum
   ☒ Has a clearly defined (often lockstep) curriculum with few options or electives that follows a predictable timeline for offerings and completion

3. Distinctly Identifiable Program (Code) With Governance Approval
   ☒ The program must be distinctly identifiable in the student record system, either as a degree/major or as an option of a degree/major, or as a Capstone certificate.
   ☒ The program must develop a proposal for the academic approval process, during which it must demonstrate that the school/college Dean and Budget Officer are aware and supportive of the program being run on a non-pooled tuition model.
APPENDIX B. ADDITIONAL REQUIREMENTS CHECKLIST
FOR ACADEMIC PROGRAMS WITH NON-POOLED TUITION

Use this checklist in conjunction with the Core Criteria Checklist

If core criteria are met, the program must adhere to the additional requirements below.
Note: Not all new programs are suited for the non-pooled program requirements. New programs that seek to take advantage of a wide range of course and curricular/program offerings on campus and are not market-oriented should be developed under traditional (101) pooled tuition funding models.

1. Fiscal Requirements:

☐ School/college budget officer has approved the budget and fiscal plan.

☐ School/college dean and budget officer are committed to assuming fiscal responsibility for costs not covered by non-pooled tuition to the program. The school/college will back up the budget with a commitment to cover any costs not met from tuition from other sources.

☒ The program structure fits within standard academic administrative structures and allocates expenses of the program so that the program does not create additional burdens on traditional/101 program resources or student services such as advising, ESL, Registrar’s Office, Bursar’s Office, Graduate School and other support services.

☒ Programs have two options for tuition. One option is to charge standard graduate tuition according to the UW-Madison tuition schedule. This includes standard rates for WI resident, MN, and non-resident students and any compulsory fees that apply. Or, for fully online programs, they have the option of charging all students one of tuition tiers (Appendix D). Although not currently allowed, it is potentially possible in the future the tiered tuition may be available to face-to-face programs.

Because students who have graduate assistantships receive tuition waivers, some non-pooled tuition graduate degree programs choose to prohibit students from accepting a graduate assistantship (RA/TA/PA). If a program allows their students to take graduate assistantships they it must forgo the tuition revenue. To ensure full receipt of non-pooled tuition and to counter challenges from students, the program must adhere to the following:

☒ The program faculty/staff must disclose this program policy to students in the recommendation of admission letter, program website, program handbook, and program orientation.

☒ Please see Appendix E for links and Appendix F for a sample of a specific non-pooled program template for a recommendation of admission letter and a general template for a program handbook. The program faculty/staff must provide details on this and any other program policies the program handbook in at least the following areas: satisfactory
progress (good standing) requirements, any ways to return to good standing, and a program grievance process if done does not already exist.

2. Requirements for International Students:

☒ Programs may not admit students who need ESL services without building sufficient ESL support into their fiscal model, and having an explicit MOU with the ESL provider about funding to support the ESL services.

☒ Graduate degree/major programs must use Graduate School standards for English Proficiency. Capstone certificates should be designed so that admission requirements ensure that ESL support is not needed.

☒ If the program is NOT completely online and admits international students, the program is responsible for honoring federal visa regulations related but not limited to: length of stay requirements for visa requests, online course restrictions for visa holders, and waiting for federal program approval (up to a year) if the program represents a new degree type or capstone certificate previously not offered at UW-Madison.

3. Requirements for Program/Course Enrollment:

☒ Non-pooled tuition program students can only be enrolled in one program at a time; enrollment in a second major, named option, certificate program, or courses beyond the prescribed program curriculum is not permitted. Non-compliance with this requirement will jeopardize the receipt of tuition for a non-pooled program. Regular audits will be conducted to ensure these requirements are met.

☒ To ensure full receipt of non-pooled program tuition and to counter challenges from students who want to be dually enrolled, the program must adhere to the following:

☒ The program must provide information to students about prohibitions on concurrent program enrollment and out-of-program course enrollment. Programs must note this in recruiting materials, in recommendations of admission, on the program website, program handbook, and program orientation.

☒ Please see Appendix E for links and Appendix F for language for a specific non-pooled program template for a recommendation of admission letter and a general template for a program handbook. The program faculty/staff must provide details on this and any other program policies in the program handbook in at least following areas: satisfactory
progress (good standing) requirements, ways to return to good standing, and a program
grievance process if one does not already exist.

☒ The program communicates to students each semester prior to course enrollment the
expectation that students can enroll only in program courses and not in courses outside the
approved, prescribed curriculum.

☒ For students who enroll in the non-pooled program and then decide they want to
pursue traditional/101 programs that allow dual enrollment, the program must help the
student transfer to a different program(s) that allow such activity.