William Karpus, Dean  
Graduate School  
University of Wisconsin - Madison  

Dear Bill,

Attached are proposals for 10 new Named Options attached to 4 of our existing Master of Science programs in the College of Engineering. We are excited about the prospects for increasing our enrollment of terminal Masters students, given the targeted, accelerated nature of the proposed options. In addition, we have created these with efficiency in mind and we envision common administrative and advising staff support to help us achieve these goals.

The proposed programs are listed on the following page. These programs have been approved (unanimously) by our Academic Planning Council and we are now requesting approval from the Graduate Faculty Executive Committee.

Thank you for considering this request.

Sincerely,

James P. Blanchard  
Executive Associate Dean  
blanchard@engr.wisc.edu
Civil and Environmental Engineering
- Construction Engineering and Management
- Environmental Science and Engineering
- Geological/Geotechnical Engineering
- Structural Engineering
- Transportation Engineering
- Water Resources Engineering

Industrial and Systems Engineering
- Systems Engineering and Analytics
- Human Factors and Health Systems Engineering

Electrical and Computer Engineering
- Signal Processing and Machine Learning

Mechanical Engineering
- Automotive Engineering
A named option is a formally documented sub-major within an academic major program. Named options serve as a convenient way to distinguish a distinct curriculum or delivery format within a major. A named option is NOT a new degree or major. Authorization by the Board of Regents to deliver an academic program is at the degree/major level.

This form is to be used in concert with the Policy Guidelines for Named Options within Academic Majors. Complete the form and save as a Microsoft Word document.

1. Overview
   1.1. Named Option: Construction Engineering and Management
   1.2. Academic Major: Civil and Environmental Engineering
   1.3. Home Department: Civil and Environmental Engineering
   1.4. School/college: Engineering, School of
   1.5. Partner department(s)/units/schools/colleges: none
   1.6. Chair of the Major (name, title, email): David Noyce, Chair, danoyce@wisc.edu
   1.7. Primary faculty or staff contact for the proposal (name, title, email): Bin Ran, Professor, bran@wisc.edu
   1.8. Primary school/college dean’s office contact (name, title, email): James Blanchard, Executive Associate Dean, jake.blanchard@wisc.edu
   1.9. Briefly describe the type and purpose of the named option.
       This will be a non-pooled tuition revenue program for a Master of Science degree in Civil and Environmental Engineering. The option will provide more specificity to the credential and will thus be more attractive to students interested in studying Construction Engineering and Management, a sub-discipline of Civil Engineering. This approach will allow us to recruit from a broader audience interested in terminal Masters degrees and thus increase our graduate enrollment. The program has been designed as a 12-month, course-only, terminal program.
       What prints on the diploma: Master of Science-Civil and Environmental Engineering
       What prints on the transcript: Master of Science-Civil and Environmental Engineering, Named Option: Construction Engineering and Management
       Major: Civil and Environmental Engineering, Option: Construction Engineering and Management
   1.10. Date form completed: 9/15/2016

2. Approval Implementation and Expectations for Review
   2.1. School/College Approval Date: 10/19/2016
   2.2. GFEC Approval Date (graduate level named options only): Click here to enter a date.
   2.3. UAPC Approval Date: Click here to enter a date.
   2.4. Expected first term of student enrollment (typically the first fall after UAPC approval): Fall 2017
2.5. Year of three year progress report to GFEC (3 years after first student enrollment; graduate level named options only): 2020
2.6. Year of first program review (5 years after first student enrollment): 2022
2.7. Are all academic programs in the home department up to date for program review? No
   APIR will provide a list of programs and most recent review date if needed.
   If no, program reviews need to be completed before a new proposal is advanced at campus level (GFEC and UAPC). Please provide and information related to plans for completion of program reviews:
   The MS/PhD in Civil and Environmental Engineering last had a formal program review in 2005-06. A program review will be initiated in Spring 2017.

3. Background/Rationale
   3.1. How does the named option relate to the major and to other named options in the major, if relevant?
   Construction Engineering and Management is one of the major sub-disciplines of Civil and Environmental Engineering. Hence, it is complementary to our research-focused programs, but has a more practical focus (given the accelerated timetable and lack of a thesis).

   3.2. What is the purpose of the named option? How does the named option contribute to the mission of the sponsoring unit?
   The purpose of the named option is to provide a master of science – Civil and Environmental Engineering program which is course-based and accelerated (students should finish in one calendar year). The named option contributes significantly to the mission of the Department of Civil and Environmental Engineering in the following aspects by increasing the number of master-level graduate students and enhancing the reputation of the Department and UW internationally.

   3.3. What is the evidence that there is a student demand for the named option?
   An MOU was signed between Southeast University (China) and UW-Madison, in which we expect an enrollment of 20 students initially in a set of named options for the Department of Civil and Environmental Engineering. MOUs are in progress between Tsinghua University (China) and UW, which will provide additional students for the named options for the Department of Civil and Environmental Engineering. In subsequent years, enrollment across all named options is expected to grow to several hundred students (as compared to our total graduate student population of approximately 1,400). In addition to Tsinghua and Southeast Universities, we will recruit domestic students interested in 1-year, terminal Masters degrees in Construction Engineering and Management (and the additional named options that are also being developed).

4. Curriculum
   4.1. Delivery modality:
   Face-to-face

   4.2. Provide a complete list of named option requirements.
   Students are required to complete 30 credits of course works in Construction Engineering and Management.

   4.3. ☒ Attach a full curriculum including all required and elective courses.

   4.4. ☐ For undergraduate named options, attach a four year roadmap.
   Named options for undergraduate majors will have requirements totaling 120 credits and students should be able to complete the degree/major within four academic years.

   4.5. ☒ For graduate named options, attach a chart outlining minimum degree requirements and elements for satisfactory progress.
Master's level programs will include at least 30 credits of requirements. Doctoral level programs will include at least 51 credits of requirements.

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 are offered on a regular basis.
☒ Courses have enrollment capacity for students in the named option.
☒ All courses required for the named option are fully approved.
☒ Units must maintain Named Option 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 and the Graduate School (graduate level named options only) about approved curricular changes to the named option. 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.
Provide explanation for Curricular Policy Requirements that have not been affirmed here.

5. Assessment

5.1. ☒ Attach a program assessment plan when submitting this proposal.

Assessment plans for a named option should be integrated with the assessment plan for the major. See the Basic Assessment Plan for instruction and 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.

5.2. Provide a summary of the program assessment plan, including learning goals for the major and any additional learning goals that are specific for the named option, key methods and assessment approaches, and how assessment information will be reviewed and acted on.

Student Learning Goals:
1. Demonstrate a strong understanding of mathematical, scientific, and engineering principles in the field
2. Demonstrate an ability to formulate, analyze, and independently solve advanced engineering problems
3. Demonstrate creative, independent problem solving skills.
4. Apply the relevant scientific and technological advancements, techniques, and engineering tools to address these problems
5. Recognize and apply principles of ethical and professional conduct

Method for assessing learning:
The student's M.S. research/project/independent study advisor will review the applicable work (e.g. report and/or presentation) and complete the College's learning goals checklist before the end of the semester in which the research/project/independent study was completed.

Plan for review of the assessment information:
The graduate program assessment coordinator (GPAC) will lead a discussion and review of the assessment data at a faculty meeting once a year and report the program assessment results -- both the data summary and any recommendations -- to the Dean's Office. The Dean's Office will present all program assessment reports to the College Academic Planning Council (APC).

The assessment summary should highlight how the named option is included in the overall assessment plan for the major. The named option must adhere to all learning goals for the major and may also have additional learning goals that are specific for the named option.

6. Overlap and Related Programs
6.1. Specify any other degree/majors, named options, or certificates that may not be earned in combination with this named option.

Students will not be permitted to earn more than one named option offered by CEE. Students will also not be allowed to earn this named option and the related MS degree (MS CEE) with no option.

7. Admissions & Enrollment

7.1. For graduate programs proposing a named option with admissions requirements that are distinct from the major with no named option, explain the admissions criteria and process.

The same admissions criteria will be used for both the named option and the major. To the extent possible, the College of Engineering plans to centralize the admission of all related programs to enhance efficiency of the process. The Civil and Environmental Engineering Department will make the final decision on all admissions to the option.

7.2. What is the projected annual enrollment in the named option?

Initially 5 in this option, with the expectation that the option enrollment will grow to approximately 20 students per year.

7.3. What is the maximum enrollment (using existing instructional and student resources)?

10

7.4. What are the contingency plans for supporting enrollments higher than the stated maximum enrollment?

The first 10 students can be supported with current capacity (other than the need for additional administrative support) and beyond that additional TA’s will be hired to support the additional students. At some point, we would need to add additional sections to some courses and, at that point, we would support additional faculty associates using revenue from this program. It is difficult to predict the enrollment that might trigger this, but one could imagine it being on the order of 40 students for this option.

Checklist for Verification of Admission Policy Requirements for Undergraduate Named Options*

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.

☒ Named option admission requirements are consistent with admission requirements for the major with no named option, if the major has any admission requirements beyond admission to the University. Admission limits should be related to interest or aptitude for the content and not based solely on a high GPA cutoff

☐ The named option will be declared and canceled using the e-Declaration process in the student information system.

☐ Undergraduates will not be advised to declare or remain enrolled in a named option if it will extend their time to graduation. Undergraduate students are to be discouraged from earning more than one named option that represents an area of curricular emphasis within the major.

*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.

8. Advising

8.1. List name(s) of major and named option advisor(s) with title and departmental affiliation(s).

Major: Civil and Environmental Engineering

Named option advisor(s):

Faculty: Awad S. Hanna, Jeffrey S. Russell
Affiliated faculty: Hussain Bahia, David R. Bohnhoff, David Noyce
Adjunct faculty: Norman Doll, Tom Gunkel, John S. Nelson, Charles Quagliana
Teaching faculty: Jeff Aiken, Joel Boado, Kevin Krause, Jeff Niesen, Roberta Oldenburg

8.2. Describe how there will be sufficient advising and academic support for all students in the major (both the existing major’s students and the new students that will be served by the named option).
The Construction Engineering and Management Program has more than 15 faculty, affiliated faculty, adjunct faculty and teaching faculty, who can advise graduate students and teach courses.

8.3. ☒ Confirm that major and named option advisor(s) have been consulted and reviewed this proposal.

9. Governance & Faculty

9.1. ☒ The named option must be governed by the same department or academic unit that oversees the major. Any sub-committee governing the named option must report to the faculty governance committee for the major.

9.1.1. If a sub-committee governs the named option, describe procedures including how faculty are identified and provisions for transitions in the committee.

9.2. List core faculty and staff with title and departmental affiliation(s).

Core faculty: Professors Awad Hanna, Jeffrey Russell, Department of Civil and Environmental Engineering
Adjunct faculty: Norman Doll, Tom Gunkel, John S. Nelson, Charles Quagliana, Department of Civil and Environmental Engineering

10. Fiscal Structure and Ongoing Commitment

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

All expenses will be covered by program revenue. Since the program is delivered in a face-to-face format, the costs related to delivery and technology are minimal and difficult to quantify. Assessment will be addressed within Civil and Environmental Engineering using the same processes to be employed for existing majors. These processes are being developed now.

10.2. How will the named option impact staffing needs beyond the immediate program? How are those needs being met?

We envision hiring one or two full time staff members to assist with admissions, advising, and administration of this program. These will be shared across several named options, so the costs to each individual program will be minimal. Additional TAs and graders may be required to assist with individual courses. In some cases, new courses will be created and those costs will be born by that program. This will require sufficient enrollment to justify the costs and will not occur within the first year. As staffing needs grow to support enrollment, tuition revenue will be used to fund that staff expansion.

*If there is no change in staffing, please describe how the duties of current employees will evolve to support this named option.*

10.3. For named options supported using non-pooled tuition, provide a fiscal annual summary including planned enrollment, estimated paid tuition, instructional costs, and estimated excess tuition available for reinvestment in keeping with the separate guidelines for non-pooled programs.

See attached.

10.4. For graduate programs supported using pooled tuition, provide a plan for how new graduate students will be funded.

N/A

**Required attachments**

☒ Cover letter from the Dean of the school/college that will be the home of the named option

*When a proposal for a new named option is forwarded for approval, it will have a cover letter to the provost from the supporting dean.*

☐ Supporting letters/memos

*Proposals must be accompanied by letters or memos submitted by the chair or director of other academic units that have overlapping interest. These notes may comment on shared resources,*
competition for students or other ways in which the programs will interact surrounding the named option. This will include departments/schools/colleges, share a student audience, represent a closely related area of study, have overlapping faculty, or have program names that are similar.

☑️ Full curriculum including all required and elective courses
☐ For undergraduate named options, attach a four year roadmap.
☒ For graduate named options, attach a chart outlining minimum degree requirements and elements for satisfactory progress.
☒ Assessment plan

Named options supported using non-pooled tuition must attach:
☒ Core Criteria Checklist
☒ Additional Requirements Checklist

See the current Non-pooled Program Requirements Process document posted at https://kb.wisc.edu/vesta/page.php?id=59300
Curriculum for UW Master of Science Degree Program
Department of Civil and Environmental Engineering

Credits Requirement: 30

Suggested Course Credit Allocation:

<table>
<thead>
<tr>
<th>Semester</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall Semester</td>
<td>12</td>
</tr>
<tr>
<td>Spring Semester</td>
<td>12</td>
</tr>
<tr>
<td>Summer Session</td>
<td>6</td>
</tr>
</tbody>
</table>

M.S. in Civil and Environmental Engineering

Option: Construction Engineering and Management

Toward the degree requirement of 30 credits, up to 6 credits can be taken from any 500-level or higher course within the College of Engineering that has been approved for graduate level credit. In addition, at least 15 credits must be at the graduate level.
Option: Construction Engineering and Management

Fall Semester (12 Credits from the following)

- CEE 491 (3 credits) Legal Aspects in Engineering (F)
- CEE 497 (3 credits) Mechanical Systems for Construction (F)
- CEE 498 (3 credit) Project Management (F, S)
- CEE 592 (3 credits) Construction Labor Productivity Management (F)
- CEE 669 (1 credit) Special Topics - Field Engineering Workshop (Civil)
- CEE 669 (1 credit) Special Topics - Field Engineering Workshop (Electrical)
- CEE 669 (1 credit) Special Topics - Field Engineering Workshop (Mechanical)
- CEE 669 (3 credits) Special Topics - Architecture Design for Construction

Spring Semester (12 Credits from the following)

- CEE 492 (3 credits) Integrated Project Estimating and Scheduling (S)
- CEE 496 (3 credits) Electrical Systems for Construction (S)
- CEE 498 (3 credit) Project Management (F, S)
- CEE 669 (3 credits) Special Topics - Lean Project Delivery
- CEE 669 (3 credits) Special Topics - Leadership
- CEE 699 (1 credit) Graduate Student Seminar

Summer Session (6 Credits from the following)

- CEE 498 (3 credit) Construction Project Management
- CEE 669 (1-6 Credits) Independent Study
### Master's Degrees: MS in Civil and Environmental Engineering, Option: Construction Engineering

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Graduate Degree Credit Requirement</td>
<td>30 credits</td>
</tr>
<tr>
<td>Minimum Graduate Residence Credit Requirement</td>
<td>16 credits</td>
</tr>
<tr>
<td>Minimum Graduate Coursework (50%) Requirement</td>
<td>At least 50% of credits applied toward the graduate degree credit requirement must be completed in graduate-level coursework.</td>
</tr>
</tbody>
</table>

**Prior Coursework Requirements: Graduate Work from Other Institutions**

With program approval, students are allowed to count no more than 9 credits of graduate coursework from other institutions. Coursework earned five or more years prior to admission to a master's degree is not allowed to satisfy requirements.

**Prior Coursework Requirements: UW-Madison Undergraduate**

No credits from a UW-Madison undergraduate degree are allowed to count toward the degree.

**Prior Coursework Requirement: UW-Madison University Special**

With program approval and payment of the difference in tuition (between special and graduate tuition), students are allowed to count no more than 9 credits of course work numbered 300 or above taken as a UW-Madison University Special students. Coursework earned five or more years prior to admission to a master’s degree is not allowed to satisfy requirements.

**Credits per Term Allowed**

15 credits

**Program-Specific Courses Required**

No
<table>
<thead>
<tr>
<th>Overall Graduate GPA Requirement</th>
<th>3.00</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Other Grade Requirements</strong></td>
<td>The Graduate School requires an average grade of B or better in all coursework (300 or above, not including research credits) taken as a graduate student unless conditions for probationary status require higher grades. Grades of Incomplete are considered to be unsatisfactory if they are not removed during the next enrolled semester.</td>
</tr>
<tr>
<td><strong>Probation Policy</strong></td>
<td>The Graduate School regularly reviews the record of any student who earned grades of BC, C, D, F, or Incomplete in a graduate course (300 or above), or grade of U in research credits. This review could result in academic probation with a hold on future enrollment or in being suspended from the Graduate School.</td>
</tr>
<tr>
<td><strong>Advisor / Committee</strong></td>
<td>Every graduate student is required to have an advisor. To ensure that students are making satisfactory progress toward a degree, the Graduate School expects them to meet with their advisor on a regular basis.</td>
</tr>
<tr>
<td><strong>Assessments and Examinations</strong></td>
<td>No formal examination required.</td>
</tr>
<tr>
<td><strong>Time Constraints</strong></td>
<td>Master’s degree students who have been absent for five or more consecutive years lose all credits that they have earned before their absence. Individual programs may count the coursework students completed prior to their absence for meeting program requirements; that coursework may not count toward Graduate School credit requirements.</td>
</tr>
<tr>
<td><strong>Language Requirements</strong></td>
<td>Contact the program for information on any language requirements.</td>
</tr>
</tbody>
</table>
ASSESSMENT PLAN TEMPLATE:
GRADUATE ACADEMIC DEGREE PROGRAMS

This assessment plan template outlines a systematic approach to reviewing the student learning experience for your graduate academic degree program. A simple, straightforward assessment plan includes:

- **What** – What are students expected to learn? *Student learning goals that have been submitted can be viewed at Inside Assessment (https://provost.wisc.edu/inside-assessment/).*
- **Where** – Where in the curriculum are students expected to learn and apply the knowledge and skills specified as the learning goals? *A curriculum mapping worksheet is provided on the last page of this template.*
- **How** – How do program faculty know (what is the evidence) that students are learning what they expect them to learn? *Examples of direct and indirect methods of assessment can be found on the UW Madison Assessment website (http://provost.wisc.edu/assessment/doing-assessment.htm).*
- **So What** – After reviewing the assessment activity findings (evidence), determine if students are meeting the expectations. Validate that expectations are being met or consider ways to improve. *Information about annual assessment reporting can be found on the UW Madison Assessment website.*

More information about developing learning goals and an assessment plan guide is available at the UW-Madison Assessment website (http://provost.wisc.edu/assessment/basic-assessment-plan.htm).

Please email your program’s Assessment Plan Template and Curriculum Map Worksheet to regina.lowery@wisc.edu by July 1, 2016.
Assessment Plan – M.S. (research-oriented) Degree Programs in the College of Engineering

Whether program personnel decide to paste information into this template or to utilize a pre-existing document, all bolded items must be included and clearly labeled.

Identifying Information
School/College:  College of Engineering
Graduate Degree/Major Program Name:    Master of Science, Option: Construction Engineering and Management
Graduate Degree Level (M.S., M.A., Ph.D., DMA, etc.):   M.S.
Faculty Director Contact/Title:  Gustavo Parra-Montesinos, Associate Chair for the Graduate Program (He is responsible for assessment of all graduate programs in CEE).
Primary Contact Information:  gparra@engr.wisc.edu     (608) 890-4960

Student Learning Goals (What)
Assessment of graduate-level learning goals is one of the many ways in which our campus ensures the integrity of its degrees and the quality of the student experience.  List the graduate student learning goals for this academic degree program below.  Feel free to add rows if the academic degree program has more than five learning goals.
The student learning goals that have been submitted for your academic degree/major program can be found on the Inside Assessment website (https://provost.wisc.edu/inside-assessment/).

1. Demonstrate a strong understanding of mathematical, scientific, and engineering principles in the field
2. Demonstrate an ability to formulate, analyze, and independently solve advanced engineering problems
3. Demonstrate creative, independent problem solving skills.
4. Apply the relevant scientific and technological advancements, techniques, and engineering tools to address these problems
5. Recognize and apply principles of ethical and professional conduct
Plan for Assessing Each Student Learning Goal

For each of the degree major/program student learning goals, indicate how the program plans 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. While programs do not need to assess each learning goal every year, all learning goals must be assessed within a period of three years.

<table>
<thead>
<tr>
<th>Assessment Planning (How)</th>
<th>Learning Goal #1</th>
<th>Learning Goal #2</th>
<th>Learning Goal #3</th>
<th>Learning Goal #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method for assessing learning (at least one direct method required)</td>
<td>The student’s M.S. independent study advisor will review the applicable work (e.g. report and/or presentation) and complete the College’s learning goals checklist before the end of the semester in which the research/project/independent study was completed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Timetable for assessment activity (at least one activity each year; all goals reviewed in a 3-year cycle)</td>
<td>Annually</td>
<td>Data collected at the end of every semester (via the learning goals checklist) will be compiled in aggregate form and reviewed annually.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For examples of direct and indirect methods of assessment, see: http://provost.wisc.edu/assessment/doing-assessment.htm. You may elect to copy and paste this table multiple times if your program has more than five learning goals.

Also provide answers to the following questions as part of your assessment plan.

1. **Who is responsible for assessment?** (identify an individual or team who will coordinate the implementation of the plan on an annual basis):

   The department graduate program coordinator (staff) will remind all faculty members serving as M.S. research/project/independent study advisors to complete the learning goals checklist at the end of the semester in which the research/project/independent study was completed. The student's research/project/independent study advisor (faculty) is responsible for completing the learning goals checklist and submitting it to the department graduate program assessment coordinator (GPAC) – a role filled by a faculty member appointed by the department chair. The GPAC will compile and summarize the department's learning goals assessment data on an annual basis.

2. **What is the plan for review of the assessment information?** (typically during an annual meeting of the program faculty and staff; note that at this meeting the program may want to review enrollment information, course progression, degree completion, and other structural features of the student experience in addition to the evidence about student learning):

   The GPAC will lead a discussion and review of the assessment data at a faculty meeting once a year and report the program assessment results – both the data summary and any recommendations --
to the Dean’s Office. The Dean’s Office will present all program assessment reports to the College Academic Planning Council (APC).

3. **What is the plan for production of an annual summary report?** (the annual summary report includes the materials that form the basis of discussion at the annual meeting of the program faculty and staff, along with any recommendations made after considering the student learning assessment information presented):
   The Dean's Office will compile an annual College-wide summary report consisting of the individual reports from each CoE graduate program and a brief statement of any additional recommendations provided by the CoE APC.

4. **How will recommendations be implemented?** (explain the general process by which recommendations will be implemented):
   The annual College-wide summary report, including any APC recommendations, will be shared with each GPAC for implementation in individual programs.

   For Undergraduate Degree Program Assessment Plan Template, see http://provost.wisc.edu/assessment/
Graduate Degree Program Curriculum Mapping Worksheet (Where)

This worksheet, or similar document, must be included with the submission of the program’s assessment plan.

- **Learning Goals** – Enter the academic degree program learning goals identified in the assessment plan on the top row of the following chart. (If the learning goals have been submitted to the Office of the Provost, a pre-populated template is available; contact regina.lowery@wisc.edu) Feel free to add columns if the academic degree/major program has more than five learning goals.

- **Degree/Major Program Courses/Experiences** – List all degree requirements (in some cases co-curricular experiences may also be included). Feel free to add rows as needed.

- Indicate with a check (X) where the course or learning experience contributes to each of the learning goals. Courses may contribute to multiple learning goals.

<table>
<thead>
<tr>
<th>Curriculum Map (Where)</th>
<th>Enter program-level learning goals and check (X) which course or experience contributes to which learning goal.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree Program Required Courses or Experiences</td>
<td>Learning Goal #1</td>
</tr>
<tr>
<td>M.S. coursework</td>
<td>X</td>
</tr>
<tr>
<td>Research or project experience</td>
<td></td>
</tr>
<tr>
<td>Culminating report and/or presentation</td>
<td>X</td>
</tr>
</tbody>
</table>

*Add additional rows as needed to capture all requirements.

Minimally, all of the courses/experiences required to complete the major degree program should be listed. Optionally, elective courses may be included in addition to the required courses.

Please email your program’s Assessment Plan Template and Curriculum Map Worksheet to regina.lowery@wisc.edu by July 1, 2016.

For Undergraduate Degree Program Assessment Plan Template, see http://provost.wisc.edu/assessment/
Master of Science in Civil and Environmental Engineering  
Construction Engineering and Management Option

In the first year, this program will only enroll approximately 5 students. Hence, impact on existing programs will be minimal and the instructional costs will be minimal. We do anticipate hiring an extra TA from the revenue generated by this option to ensure that there is no impact on existing programs. As the program grows, we anticipate needing to add additional staff to assist. If at any time this program requires the addition of course sections to handle the load, the new sections will be supported entirely by revenue from this program. However, this is not anticipated and the extra load will be handled by the addition of TAs as needed. Beyond the instructional needs, there will be a need for administrative staff to help with many aspects of this program and others being currently proposed. These new staff members will:

- Assist with admissions across all named options
- Assist with on-boarding issues, such as visas, housing, enrollment, travel, etc.
- Develop and coordinate social events for students
- Assist with marketing

These staff members will work across all named options. In addition, we will provide partial salary support for a faculty member assigned to maintaining the relationships that we are developing with Tsinghua and Southeast Universities.

**Summary Budget for the Construction Engineering and Management option**

<table>
<thead>
<tr>
<th>Item</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Steady State</th>
</tr>
</thead>
<tbody>
<tr>
<td># of students</td>
<td>5</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>revenue</td>
<td>$150k</td>
<td>$300k</td>
<td>$600k</td>
</tr>
<tr>
<td>Retained revenue (80%)</td>
<td>$120k</td>
<td>$240k</td>
<td>$480k</td>
</tr>
<tr>
<td>TA support (shared)</td>
<td>$5k</td>
<td>$10k</td>
<td>$20k</td>
</tr>
<tr>
<td>Staff support (shared)</td>
<td>$5k</td>
<td>$20k</td>
<td>$40k</td>
</tr>
<tr>
<td>Faculty support (shared)</td>
<td>$5k</td>
<td>$5k</td>
<td>$10k</td>
</tr>
</tbody>
</table>