October 23, 2017

TO: Sarah Mangelsdorf, Provost
    William Karpus, Dean, Graduate School

FROM: James P. Blanchard, Executive Associate Dean

RE: Proposed Program Change:
    Master of Engineering in Civil and Environmental Engineering-Envr Engr Option to Master of Science in Civil and Environmental Engineering-Envr Engr Option

At its October 18, 2017 meeting, the College of Engineering Academic Planning Council (APC) unanimously supported the proposed program change of the Master of Engineering in Civil and Environmental Engineering-Environmental Engineering Option to Master of Science in Civil and Environmental Engineering-Environmental Engineering Option.

The proposed program change will align with similar programs at peer institutions. Additional rationale for the program change is included in the attached proposal.

On behalf of the College of Engineering, I accept the recommendation of the APC and support the proposed program change.
Degree Name Change Proposal

Date: October 26, 2017
To: Graduate Faculty Executive Committee
From: David Noyce, Chair, Civil and Environmental Engineering (CEE)
       Michael Doran, Program Academic Director
Re: Proposed change of degree name to “Master of Science”

This proposal is to change the program name:
From: Master of Engineering in Civil and Environmental Engineering – Environmental Engineering Option
To: Master of Science in Civil and Environmental Engineering – Environmental Engineering Option

The reasons for proposing this change are presented. It is intended that the information provided meet the requirements of “Guidelines for Renaming Degrees or Academic Majors” adopted by the UAPC, May 2002.

History of Degree

The degree program was approved in 2015, with the first students admitted to the program for Fall, 2015. From an original group of eight students, the program has grown so that there are now twenty-seven students in the program, with the first group scheduled to graduate in May of 2018. Originally, EPD managed business operations for the degree and CEE managed academics and was the academic home. Since July 1, 2017, both business and academic operations for the degree programs are housed in CEE.

Although conceived by CEE as a MS degree, in part based on the required “Body of Knowledge” developed for MS degrees in environmental engineering by the American Academy of Environmental Engineers (AAEE)¹, it was originally approved by the university as one of several online master of engineering (MEng) degrees to be managed by the College of Engineering’s (COE) Department of Engineering Professional Development (EPD). In general, MEng degree programs tend to be more focused on applied engineering practice rather than on advanced technical comprehension founded on core science as are MS degree programs.

Reasons for Degree Name Change

Several reasons exist that support the name change:

1. The degree requirements are consistent with those of the recently named option program: Master of Science in Civil and Environmental Engineering – Environmental Science and Engineering option. The courses within the online program are taught with the same rigor and advanced technical foundation as those for the on-campus program.
2. Other online master’s degrees within the college of engineering², having their academic home in Mechanical Engineering and Electrical and Computer Engineering, use the MS designation for their master’s degrees.
3. The current program students support this change.

¹ AAEE is the body responsible to ABET, Inc., for the accreditation of environmental engineering degree programs.
² Electrical Engineering: Power Engineering, and Mechanical Engineering: Controls
4. Similar programs at other leading universities have the MS designation.
5. The program curriculum was developed to meet the learning goals of MS programs in environmental engineering as prepared by the American Academy of Environmental Engineers and Scientists, the organization within ABET, Inc., that accredits environmental engineering programs.
6. The learning goals for the program align with those of a MS program, as described in “Proposed Graduate Learning Goals for College of Engineering (3/2/16 draft).”
7. The program has received some negative feedback from potential program applicants and employers questioning whether a Master of Engineering program is as rigorous as a Master of Science program, and the potential implications of that for career advancement. This name change may therefore help increase student enrollment in the program, and confidence by employers in providing tuition assistance for their employees in the program.

Timing of Change

This is a fully online program, requiring about three academic years for students to meet graduation requirements. The first students were admitted for the Fall 2015 semester, and this group of students will graduate in the Spring of 2018. It is proposed that the change be in place well in advance of this time so that the first program graduates can receive the MS degree designation. Current students, should they desire, may receive the MEng rather than the MS degree designation, although no students have indicated that they wish the MEng degree designation. Once the change is approved, The Department of Civil and Environmental Engineering will list and market this program as an MS degree, and students joining or re-entering the program following approval of the change will receive an MS degree on graduation. It is requested that approval for the degree name change be granted prior to the start of the Spring 2018 semester.

Similarly Named Degrees and Potential Degree Name Overlap

The Department of Civil and Environmental Engineering offers three master’s degrees in environmental engineering or allied concentration areas.

Master of Science in Civil and Environmental Engineering
An “in residence” student may be awarded this degree after completing a course of study in a specialty area. There are numerous specialty areas, including environmental engineering. This program includes a thesis option, as well as an independent research and report option. There is no “course only” option available. Students in the program pay the standard graduate school tuition rates.

Master of Science in Civil and Environmental Engineering – Environmental Science and Engineering Option
This “in residence” degree program was recently approved. It is an accelerated “course only” program and does not include a thesis option. Students in this program pay tuition in accordance with a standard fee per semester schedule, having somewhat higher tuition for non-WI/MN residents.

Master of Engineering in Civil and Environmental Engineering – Environmental Engineering Option
This is the degree where the name change is requested, with the first three words in the degree name being replaced with “Master of Science.” This degree program is principally distinguished from the other two “in residence” master’s programs (described above) in that the program is offered fully online. Students may meet
program requirements by taking 30 credits of coursework within a prescribed curriculum, or by customization of the program to meet their particular career goals. Customization may include up to six credits of mentored independent study. A thesis option is not available. The program has a “flat rate” tuition model, with current tuition set at $1,300 per credit. The program is clearly separable from the other two programs (above) due to:

1. The program is a totally online program rather than an “in residence” program like the others.
2. The program has a different tuition schedule than the other two programs.
3. The program has a different governance, application and admission process.
4. The program is a named option (unlike the first program above), but excludes “Science and” from the option name (as compared with the second program above), focusing on environmental engineering. Although several environmental science courses are available to students, students cannot focus in their individual program primarily on environmental science as is the case with the second program above.
5. College of Engineering and Department of Civil and Environmental Engineering web pages, and other materials for describing available master’s programs will accentuate the program differences, to minimize the potential for students applying to the wrong program.
6. The online graduate school application drop-down menu, where prospective students choose the program(s) to apply to, currently clearly indicates that the subject program is online (online is in parentheses on the drop-down page). This should be continued to minimize potential confusion to applicants in filling out the application.

Readiness of Students to Adopt Degree Name Change

Students in the program were asked if they supported the proposed change, and overwhelmingly voiced their approval of the change.

Delivery and Tuition Pool Status

The current method of course delivery for the program (fully online), curriculum and learning goals, tuition pool (131-nonpooled) status, and tuition rate ($1,300 per credit for all students) are to remain unchanged.

Current Degree Name Status

Following authorization of the name change by the university, the current degree name will no longer be used for this degree program. Students currently admitted to the program will be offered the choice of the present (Master of Engineering) degree designation on graduation should they choose this name in favor of the proposed new name (Master of Science). As previously stated, students in the program favor the proposed new degree name.
Approvals History

This proposal has been previously approved by:

- The executive committee for the degree program (July 20, 2017) – A copy of meeting minutes is attached (Item 4).

- The faculty of the Department of Civil and Environmental Engineering (September 12, 2017) – A copy of meeting minutes is attached (Item 2).

- The College of Engineering Academic Planning Council (October 18, 2017) – a copy of a supportive memorandum from James P. Blanchard, Executive Assoc. Dean of the College of Engineering dean is attached.
<table>
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<tr>
<th>Plan Code</th>
<th>Degree Type</th>
<th>Report Transcript Description</th>
<th>Subplan Description</th>
<th>Admitting Status</th>
<th>Budget Model</th>
<th>Delivery</th>
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<td>MS</td>
<td>Civil and Environmental Engineering</td>
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