Curriculum Course Request WES Change Course EDMM 4910 - A-2018-EDMM-97; effective term: 202040

Steven E Butt
Wed 12/19/2018 3:43 PM

To: Raja G Aravamuthan <raja.aravamuthan@wmich.edu>; Said M Abubakr <said.abubakr@wmich.edu>
Cc: Holly Blanks <holly.blanks@wmich.edu>

2 attachments (45 KB)
EDMM 4910.syll.WES outcomes.3 credit.ft9.docx; Assessing WES SLO Outcomes - EDMM 4910.final.docx;

Please verify your data for New Curriculum Course Request for department: EDMM; college: A.
Go to the following URL to complete your worklist items: https://bwfr31.cc.wmich.edu:7102/wfbprod

Date of request: 21-NOV-2018

Request ID: A-2018-EDMM-97

College: A

Department: EDMM

Initiator name: Larry Mallak

Initiator email: Larry.mallak@wmich.edu

Proposed effective term: 202040

Does course need General Education approval?: Y

Will course be used in teacher education?: N

If 5000 level course, prerequisites apply to: U

Proposed course data:
WES Change Course EDMM 4910
Specific Course Change type selected: Credit hours
Specific Course Change type selected: WMU Essential Studies - Level 3: Connections

1. Existing course prefix and number:
EDMM 4910

2. Existing credit hours:
2.00

3. Proposed credit hours:

https://outlook.office.com/iowa/?realm=WMICH.EDU&exsvurl=1&ll-cc=1033&modurl=0
program educational objectives. An ability to apply written, oral, and graphical communication in both technical and non-technical environments; and an ability to identify and use appropriate technical literature.

An ability to function effectively as a member or leader on a technical team. Apply ethical, critical, and informed thought within and across disciplines. (WES Student Learning Outcome)

Work both independently and in collaboration with others to achieve goals. (WES Student Learning Outcome)

Demonstrate effective and appropriate written communication. (WES Student Learning Outcome)

G. Describe how this curriculum change is a response to student learning assessment outcomes that are part of a departmental or college assessment plan or informal assessment activities.

Initial Essential Studies review and approval AND

Senior exit surveys and interviews have for many years pointed out that EDMM 4910 requires more hours of effort than many 4-credit hour courses. As the first of two capstone courses, there is a strong focus on development of professional skills and lifelong learning. The communication-intensive nature of the capstone experience requires significant drafting and rehearsal activities.

H. Effect on other colleges, departments or programs. If consultation with others is required, attach evidence of consultation and support. If objections have been raised, document the resolution. Demonstrate that the program you propose is not a duplication of an existing one.

Initial Essential Studies review and approval AND

no effect on other programs by changing from 2 to 3 credit hours.

I. Effect on your department’s programs. Show how the proposed change fits with other departmental offerings.

Initial Essential Studies review and approval AND

2-3 credit hour change: All three technology programs in EDMMS (MFT, EDT, UEM) concurred with the change of EDMM 4910 to 3 credit hours at a Fall 2018 departmental retreat. Other changes in each program will be proposed in Spring 2019.

J. Effects on enrolled students: are program conflicts avoided? Will your proposal make it easier or harder for students to meet graduation requirements? Can students complete the program in a reasonable time? Show that you have considered scheduling needs and demands on students’ time. If a required course will be offered during summer only, provide a rationale.

Initial Essential Studies review and approval AND

2-3 credit hour change: No conflicts or difficulties are anticipated for students.

K. Student or external market demand. What is your anticipated student audience? What evidence of student or market demand or need exists? What is the estimated enrollment? What other factors make your proposal beneficial to students?

Initial Essential Studies review and approval AND

no effect on market demand by changing from 2 to 3 credit hours. This is a required course for graduation. The additional ethics and teaming/writing content is essential for our students in their professional practice and meets ABET requirements for curriculum.

L. Effects on resources. Explain how your proposal would affect department and University resources, including faculty, equipment, space, technology, and library holdings. Tell how you will staff additions to the program. If more advising will be needed, how will you provide for it? How often will course(s) be offered? What will be the initial one-time costs and the ongoing base-funding costs for the proposed program? (Attach additional pages, as necessary.)

One section is offered in Fall and Spring semesters, with a cap of 35 students to ensure that all graduating seniors are able to enroll in the senior project sequence for the two semesters prior to graduation. An average of 32 students have been enrolled in EDMM 4910 in the current and previous semester. We are aware that this is above the 30-student threshold for a Level 3 WES course.

Outside of class, students work in small, often interdisciplinary, teams under a faculty advisor, with whom they meet at least weekly. The teams receive frequent feedback on project activities, required documents, and professional behaviors from both this advisor and from the course coordinator.
EDMM 4910 – Multidisciplinary Senior Proposal

Course Syllabus – Fall 2019 (revised 12/18/18)

Instructor and
Course Coordinator: Dr. Betsy M. Aller, Associate Professor, CAPM
Office: F-227 Parkview Campus
Phone: 276-3354
E-mail: Betsy.Aller@wmich.edu
Office hours: Mondays and Thursdays, 2:00 – 3:30; others available, by appointment if possible
Text: All materials and handouts provided by Dr. Aller are required reading. Also free.

2018 Catalog Data: Problem definition, project planning and scheduling, follow-up and control techniques. Results in presentation and plan for multidisciplinary senior project. Prerequisite: Senior status and department approval.

This course meets the student learning outcomes in the WMU Essential Studies Level 3: Connections, Local and National Perspectives course category. (3 credits)

WES Student Learning Outcomes
1. Apply ethical, critical, and informed thought within and across disciplines
2. Work both independently and in collaboration with others to achieve goals
3. Demonstrate effective and appropriate written communication

Prerequisites by Topic:
1. Working technical knowledge of appropriate domain.
2. Ability to organize and communicate ideas in written and verbal format.
3. Familiarity with word processing and presentation software.
4. Ability to coordinate and communicate with classmates and faculty.

Course Grading:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outstanding work</td>
<td>93-100%</td>
</tr>
<tr>
<td>BA</td>
<td>88-92%</td>
</tr>
<tr>
<td>Good work</td>
<td>82-87%</td>
</tr>
<tr>
<td>CB</td>
<td>78-81%</td>
</tr>
<tr>
<td>Average work</td>
<td>72-77%</td>
</tr>
<tr>
<td>DC</td>
<td>68-71%</td>
</tr>
<tr>
<td>Unacceptable work</td>
<td>60-67%</td>
</tr>
<tr>
<td>Failing work</td>
<td>less than 60%</td>
</tr>
</tbody>
</table>
Objective 4:
- Understand and demonstrate activity duration estimating techniques.
- Develop and use Gantt chart / timeline for group project.

Objective 5:
- Conduct library and online search for resources.
- Write review of technical research relevant to project components.
- Document resources using appropriate and professional citation.
- Demonstrate understanding of what constitutes plagiarism and consciously avoid it.

Objective 6:
- Develop interim report outline, revised research review, and professional quality interim project report.
- Write interim report abstract.
- Write professional letter of transmittal
- Gain approval of group interim project report.

Objective 7:
- Gain approval for team and for senior design project from faculty advisors.
- Conduct self-evaluation of personal/technical strengths and weaknesses.
- Demonstrate involvement in and support for team activities.

Objective 8:
- Give interim reports and rehearsal presentations.
- Give final group presentation on project and progress to date to expanded audience.
- Demonstrate knowledge and use of presentation visuals and software.
- Attend and evaluate Senior Engineering Design Project Conference presentation(s).

Objective 9:
- Attend student professional society activities, industry tours, conferences, etc.
- Submit trip report on professional society meeting, or alternative professional activity.
- Attend and report on professional development lectures (CEAS Lecture Series, others).

Engineering Ethics Assignment

This four-week segment requires you to discuss and undertake some activities in engineering ethics. You may contribute to the design of this assignment by suggesting activities or readings we should examine. The ethics assignment will involve reading, analysis of resource materials, class discussion, and writing. An assignment sheet is provided (see pp. 7-8 of your class handouts), and each student will submit an original, insightful, and professional quality paper. Participation in the ethics class activities and your individual paper constitutes eight percent (8%) of your course grade. This assignment and assessment of it fulfills the WMU Essential Studies Level III Connections, Local and National Perspectives course category.

Grading

Your course grade will be based on your class participation and on your written, oral, and in-class activities. Team activities will typically have both a team grade and an individual evaluation as well. The grading criteria and specifics will be discussed and identified on assignment sheets as appropriate. In general, I use the following standards in assigning letter grades (or percentage equivalents) on written material:
## Assessing WMU Essential Studies Student Learning Outcomes for EDMM 4910

**Rev. 12/18/18**

### Level III - Connections

#### Local and National Perspectives

<table>
<thead>
<tr>
<th>WMU Essential Studies Student Learning Outcome</th>
<th>Assignments and/or Learning Activities that meet the criteria within the rubric that is aligned with the SLO</th>
<th>When the SLO assessment will take place</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>X</strong> Apply ethical, critical, and informed thought within and across disciplines</td>
<td>&quot;Engineering and Professional Ethics&quot;: 4-week sequence, starting with review of engineering codes of ethics; progressing through submission of possible paper topics and class discussion; and culminating in a paper on personal involvement / observations of ethical concerns or challenges in the student's professional settings spanning disciplines of design, production, quality, human resources, and supply chain. A sample paper is provided as a model if needed.</td>
<td>Content delivery in the first quarter of the semester. Topics paper due the following week, with feedback provided. Final paper due four weeks after sequence begins.</td>
</tr>
</tbody>
</table>

### Choose One Student Learning Outcome From Below

<table>
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<td><strong>X</strong> Work both independently and in collaboration with others to achieve goals</td>
<td>All students in the senior capstone course work in teams to create options to ultimately solve a problem or develop a product or process. Teams must collaborate on interactions with advisor / sponsor / instructor; they create design options and identify the best one. Because teams are typically interdisciplinary, students must depend on multiple perspectives and identify strengths and approaches to best achieve the project goal.</td>
<td>Teams are formed in the first half of the course. Weekly meeting minutes provide insight into team functioning and effectiveness. Qualitative and quantitative peer evaluations are made mid- and end of semester.</td>
</tr>
</tbody>
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### Additionally, Select One Level I Student Learning Outcome From Below

<table>
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</tr>
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<tbody>
<tr>
<td><strong>X</strong> Demonstrate effective and appropriate written communication</td>
<td>Each student creates multiple written documents: resume (draft, with comments, and final); individual project objectives statement (with feedback); and portions of a technical research review and a final report. Evaluation rubrics are provided and covered in class.</td>
<td>All written documents receive feedback. Resume draft due week 2; final week 4. Objectives statement due week after projects assigned; revised version due 2 weeks later. Technical research review due week 10. Final report due finals week.</td>
</tr>
</tbody>
</table>