Curriculum Course Request WES Change Course ME 4800 - A-2018-ME-117; effective term: 202040

Koorosh Naghshineh

Tue 12/18/2018 7:43 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 (43 KB)
ME4800_WES_Syllabus_F18.docx, ME4800_WES_Assessment_F18.docx

Please verify your data for New Curriculum Course Request for department: ME; college: A. Go to the following URL to complete your worklist items: https://bwfp1.cc.wmich.edu:7102/wfbprod

Date of request: 20-NOV-2018

Request ID: A-2018-ME-117

College: A

Department: ME

Initiator name: Bade Shrestha

Initiator email: bade.shrestha@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 ME 4800
Specific Course Change type selected: Description
Specific Course Change type selected: WMU Essential Studies - Level 3: Connections

1. Existing course prefix and number:
ME 4800

2. Level 3: Connections:
Indicate which course category the course should be placed in:
Local and National Perspectives

https://outlook.office.com/owa/?realm=WMICH.EDU&exsvurl=1&ll-cc=1033&modurl=0
I. Effect on your department’s programs. Show how the proposed change fits with other departmental offerings. Initial WMU Essential Studies review and approval

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 WMU Essential Studies review and approval

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 WMU Essential Studies review and approval

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 session in each Fall and spring semester. Not offered online.

Despite a large enrollment numbers, students are subdivided into a group of 3-4 students in their capstone design project facilitating effective learning. Each such group is supervised by a different faculty mentor as well as a different industrial mentor, allowing for exchange of ideas.

M. With the change from General Education to WMU Essential Studies, this question is no longer used.

For courses requesting approval as a WMU Essential Studies course, a syllabus identifying the student learning outcomes and an action plan for assessing the student learning outcomes must be attached in the Banner Workflow system.

Not Applicable

N. (Undergraduate proposals only) Describe, in detail, how this curriculum change affects transfer articulation for Michigan community colleges. For course changes, include detail on necessary changes to transfer articulation from Michigan community college courses. For new majors or minors, describe transfer guidelines to be developed with Michigan community colleges. For revisions to majors or minors, describe necessary revisions to Michigan community college guidelines. Department chairs should seek assistance from college advising directors or from the admissions office in completing this section.

Initial WMU Essential Studies review and approval

O. Current catalog copy:
An engineering experience in completing an open-ended design project including synthesis, analysis, evaluation, and presentation. Classroom discussion subjects include legal, ethical and professional aspects of engineering practice.

P. Proposed catalog copy:
An engineering experience in completing an open-ended design project including synthesis, analysis, evaluation, and presentation. Classroom discussion subjects include legal, ethical and professional aspects of engineering practice. This course meets the student learning outcomes in the WMU Essential Studies Level 3- Connections, Local and National Perspectives Course Category.

Department Curriculum Chair approver: Kapseong Ro

Department Curriculum Chair comment:

https://outlook.office.com/owa/?realm=WMICH.EDU&exsvurl=1&ll-cc=1033&modurl=0
COURSE OUTLINE AND GRADING POLICY

Course: ME 4800 Mechanical and Aerospace Engineering Project

Semester: Fall 2018

Catalog Data: ME 4800 Mechanical and Aerospace Engineering Project (Credit: 3 hr. (1-6))

Description: An engineering experience in completing an open-ended design project including synthesis, analysis, evaluation, and presentation. Classroom discussion subjects include legal, ethical and professional aspects of engineering practice. This course meets the student learning outcomes in the WMU Essential Studies Level 3- Connections, Local and National Perspectives Course Category.

Objective:
- To develop a solution to an open ended engineering design problem and to apply different methods of intellectual inquiry, investigation and discovery (WMU Essential Studies SLO)
- To prepare an oral presentation and a written report that presents a solution to the design problem and to demonstrate effective and appropriate written communication (WMU Essential Studies SLO)
- To prepare for professional practice by developing a communication channel with industrial mentors and by working effectively as a team.
- To develop an understanding of the legal, ethical and professional aspects of engineering practice and to apply ethical, critical, and informed thought within and across disciplines (WMU Essential Studies SLO)

Class Hour: Mondays; 11:30 to 12:20 PM

Class Room: Room: D 208, Parkview Campus


Prerequisite: ME 4790 and (Group 2 elective or AAE 4500 or AAE 4600.)

Instructor: Dr. Bade Shrestha, Professor, P. Eng.
Department of Mechanical and Aerospace Engineering,
Ph: 269-276 3432
Email: Bade.Shrestha@wmich.edu

Office: Room G 223, Parkview Campus
CB: 75.0 - 79.9 
C: 70.0 - 74.9 
E: Below 70.0 

Important Notice:

“Students are responsible for making themselves aware of and understanding the University policies and procedures that pertain to Academic Honesty. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. The academic policies addressing Student Rights and Responsibilities can be found in the Undergraduate Catalog at http://catalog.wmich.edu/content.php?catoid=24&navoid=974 and the Graduate Catalog at http://catalog.wmich.edu/content.php?catoid=25&navoid=1030. If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct. You will be given the opportunity to review the charge(s) and if you believe you are not responsible, you will have the opportunity for a hearing. You should consult with your instructor if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.”
<table>
<thead>
<tr>
<th></th>
<th>Loose end</th>
<th>Work on final report and presentation</th>
<th>Hard copy to Mentor and a Hard copy and a CD in pdf format to instructor</th>
<th>Final report submission</th>
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</thead>
<tbody>
<tr>
<td>12</td>
<td>Loose end</td>
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</table>
Each senior design team is required to submit a comprehensive engineering technical design report on their project to the faculty mentor, the sponsoring company mentor and the course instructor at the end of the semester. This final technical engineering report is a culmination of engineering design, analysis, and simulations of a product or a process or a significant improvement of thereof. It contains all documentations of design calculations, simulations results, set of design specifications and drawings, and project aims, outcomes, recommendations and conclusions.

8. Senior design project presentation to public:

The student group will also present their results at the Senior Engineering Design Project (SEDP) conference sponsored by the College of Engineering and Applied Sciences. The SEDP is open to the public, and is held at the WMU Elson S. Floyd Hall. The representatives of the company are invited to this public forum in which the project findings will be presented. The name of the sponsoring company will be included in promotional materials that are produced for the SEDP event upon a written consent from the sponsor.
# ME 4800 WMU Essential Studies Assessment

## 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>
</table>
| X Apply ethical, critical, and informed thought within and across disciplines | Ethics of Engineering Practice-Individual report - focused on the ethical requirements for engineers with case study  
Group ethic report and presentation-address application of fundamentals and cannons of ethics and discuss with the class during presentation.  
Final Senior Design Project Report- a comprehensive engineering technical design report on critical information within and across disciplines. | Due on 4th week  
On the day of ethics case presentation  
Due on 14th week |

### Choose One Student Learning Outcome From Below

<table>
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</thead>
</table>
| X Apply different methods of intellectual inquiry, investigation and discovery | Final Senior Design Project Report- a comprehensive engineering technical design report on their project is a culmination of engineering design, analysis, and simulations of a product or a process or a significant improvement of thereof. | Project review report – week 2 and 8  
½ report – week 9  
Final project report – week 14 |
| □ Work both independently and in collaboration with others to achieve goals | | |
| □ Develop sensitivity to diversity and inclusion | | |
| □ Develop practices for planetary sustainability | | |