

REQUEST TO COLLEGE CURRICULUM COMMITTEE FOR CURRICULAR IMPROVEMENTS

DEPARTMENT: IEEM PROPOSED EFFECTIVE SEMESTER: Fall 15 COLLEGE: CEAS

PROPOSED IMPROVEMENTS

Academic Program

- ☐ New degree*
☐ New major*
☐ New curriculum*
☐ New concentration*
☐ New certificate
☐ New minor
☐ Revised major
☐ Revised minor
☐ Admission requirements
☐ Graduation requirements
☐ Deletion ☐ Transfer
☐ Other (explain**)

Substantive Course Changes

- ☒ New course
☐ Pre or Co-requisites
☐ Deletion (required by others)
☐ Course #, different level
☐ Credit hours
☐ Enrollment restriction
☐ Course-level restriction
☐ Prefix ☐ Title and description
 (attach current & proposed)
☐ General education (select one)
 Not Applicable
☐ Other (explain**)

Misc. Course Changes

- ☐ Title
☐ Description (attach current & proposed)
☐ Deletion (not required by others)
☐ Course #, same level
☐ Variable credit
☐ Credit/no credit
☐ Cross-listing
☐ COGE reapproval
☐ Other (explain**)

** Other:

Title of degree, curriculum, major, minor, concentration, or certificate: Industrial & Entrepreneurial Engineering

Existing course prefix and #: Proposed course prefix and #: IEE 5200 Credit hours: 3

Existing course title:

Proposed course title: Modern Industrial Practices

Existing course prerequisite & co-requisite(s):

Proposed course prerequisite(s) *Junior standing, Senior standing or Graduate Student*

If there are multiple prerequisites, connect with "and" or "or". To remove prerequisites, enter "none."

Proposed course co-requisite(s) None

If there are multiple corequisites, they are always joined by "and."

Proposed course prerequisite(s) that can also be taken concurrently:

Is there a minimum grade for the prerequisites or corequisites? NA

The default grades are D for undergraduates and C for graduates.

Major/minor or classification restrictions:

List the Banner 4 character codes and whether they should be included or excluded.

For 5000 level prerequisites & corequisites: Do these apply to: (circle one) undergraduates graduates both

Specifications for University Schedule of Classes:

a. Course title (maximum of 30 spaces): Modern Industrial Practices

b. Multi-topic course: ☒ No ☐ Yesc. Repeatable for credit: ☒ No ☐ Yesd. Mandatory credit/no credit: ☒ No ☐ Yes

e. Type of class and contact hours per week (check type and indicate hours as appropriate)

1. ☐ Lecture
 2. ☐ Lab or discussion
 3. ☒ Lecture/lab/discussion
 4. ☐ Seminar or ☐ studio
 5. ☐ Independent study
 6. ☐ Supervision or practicum

CIP Code (Registrar's use only):

Chair/Director

Date 10/1/14

Chair, College Curriculum Committee

Date

Dean

Date:

Graduate Dean:

Date

Curriculum Manager: Return to dean ☐ Date

Forward to:

Date

Chair, COGE/ PEB / FS President

Date

FOR PROPOSALS REQUIRING GSC/USC REVIEW:

* ☐ Approve ☐ Disapprove

Chair, GSC/USC

Date

* ☐ Approve ☐ Disapprove

Provost

Date

1. Explain briefly and clearly the proposed improvement.

For the last 3 summers, the IME department has been offering this proposed course under the Special Topic Course in Industrial and Manufacturing Engineering (IME 5570) designation to gauge viability and demand. Due to its success and popularity, it is now being proposed to formalize this offering as IEE 5200.

2. Rationale. Give your reason(s) for the proposed improvement. (If your proposal includes prerequisites, justify those, too.)

Three years ago the department created a course that allowed upperclassmen and graduate students the ability to observe and analyze how advanced concepts in Capital Budgeting, Simulation, Production/Operations Management, Project Management, Quality, and Concurrent Engineering are integrated into decision-making and R&D functions at industrial and service-based enterprises. During this course, students visit 7-8 different companies to explore the many facets of contemporary practices and procedures and to contrast their observations to theory.

3. 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.

NA

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

This course offering will have a positive impact on the department's and college's programs since it is an elective course that can satisfy a requirement for many majors and graduate programs. In fact, the past three offerings have included: MBA students, graduate civil engineering students, undergraduate and graduate engineering management students and undergraduate and graduate IE students. Additionally, the proposed change will give students the appropriately named course on their transcripts, instead of "Special Topics".

5. 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.

This is an elective for both Industrial & Entrepreneurial Engineering undergraduates and Industrial Engineering Graduate students. It may accelerate their graduation time for it is offered in Summer I. Summer I is often a time when students are trying to find an elective course to meet graduation requirements.

6. 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?

Over the past three Summer I offerings of this course as IME 5570, the course has averaged 16 students. This past summer the class had 19 students. Historically there has been adequate demand and we anticipate that it will climb with the formalization and visibility of the course.

7. 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.)

No effect of resources. Course has been previously offered on Special Topics on multiple occasions.

8. General education criteria. For a general education course, indicate how this course will meet the criteria for the area or proficiency. (See the General Education Policy for descriptions of each area and proficiency and the criteria. Attach additional pages as necessary. Attach a syllabus if (a) proposing a new course, (b) requesting certification for baccalaureate-level writing, or (c) requesting reapproval of an existing course.)

NA

9. List the learning outcomes for the proposed course or the revised or proposed major, minor, or concentration. These are the outcomes that the department will use for future assessments of the course or program.

In accordance with the stated course description, at the conclusion of the semester students should have the ability to:

1. Analyze and evaluate supervisory and managerial functions of organizations.
2. Apply the knowledge, skills, and abilities learned in their respective major and compare and contrast the implementation of modern industrial practices in various industries.

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

This course is/has been offered to:

- 1) Give students an opportunity to see how multiple companies implement topics the students have learned in their tenure at WMU. This has been particularly important for our students that have not had opportunities to complete internships or have not completed internships at more than one company. With our increasing international population in CEAS, this has given many students a work-place related experience that they would not have had otherwise.
 - 2) Provide an additional relevant course and real-world experience(s) in the summer.
11. (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.

NA

NEW Catalog Copy:

IEE 5200 Modern Industrial Practices

Students will observe and analyze how advanced concepts in Capital Budgeting, Simulation, Production/Operations Management, Project Management, Quality, and Concurrent Engineering are integrated into decision-making and R&D functions at industrial and service-based enterprises. Students will visit companies and explore the many facets of contemporary practices and procedures.

Prerequisites & Corequisites: Prerequisites: Junior standing, Senior standing or Graduate Student

Credits: 3 hours

Lecture Hours - Laboratory Hours: (1 - 6)

MODERN INDUSTRIAL PRACTICES

IME 5200

2014/15 Catalog Data

Students will observe and analyze how advanced concepts in Capital Budgeting, Simulation, Production/Operations Management, Project Management, Quality, and Concurrent Engineering are integrated into decision-making and R&D functions at industrial and service-based enterprises. Students will visit companies and explore the many facets of contemporary practices and procedures.

Textbook:

No required textbook.

Course Instructor:

Dr. T.K. Fredericks, E-223, Parkview Campus, Phone: 269.276.3360, FAX: 269.276.3353,
E-mail: tycho.fredericks@wmich.edu, Office Hours: Wednesdays 11-12, or by appointment.

Dr. Anil Kumar,

Teaching Assistant:

Ms. Fehime Utkan fehime.utkan@wmich.edu Office hours by appointment only.

Prerequisites by Topic:

1. Principles of objective presentation of factual material, logical organization, summarization, ethical practices, information gathering techniques, oral communications, and listening through practical applications. (IME 102)
2. Basic knowledge of supervisory and managerial functions, presentation software, World Wide Web, and e-mail.

Objectives:

In accordance with the above stated course description, at the conclusion of the semester students should have the ability to:

3. Analyze and evaluate supervisory and managerial functions of organizations. (a,b,e,f,j,k)
4. Apply the knowledge, skills, and abilities learned in Work Design and apply them to an industry-based problem. (a,b,c,d,e,f,g,j,k)

Topics (Tentative):

May 9 – No Tours – Outline on Topics (Assignment #1) – 5 Major Topics

May 14: 5 Outlines due via e-mail by 5pm;

May 16:	Leave: TBD	Tour Starts: TBD
		Tour Starts: TBD
May 23:	Leave: TBD	Tour Starts: TBD
		Tour Starts: TBD
May 30:	Leave: TBD	Tour Starts: TBD
		Tour Starts: TBD
June 6:	Leave: TBD	Tour Starts: TBD
		Tour Starts: TBD
June 13:	Leave: TBD	Tour Starts: TBD
		Tour Starts: TBD
June 20:	Presentation Day	

Evaluation:

Grades will be assigned according to the following criteria.

Outlines (5) – (Individual Assignment)	15%
Papers (10) – (Individual Assignment)	65%
Presentation (1) – (Individual Assignment)	10%
Host/Setup Duties – (Group Assignment)	10%
	100%

Course Requirements:

Outlines: Five outlines with subjective and objective evaluation techniques are required to be e-mailed in on Wednesday, May 14, 2014.

Papers: A one-page report on each tour (topic) is required. The objective of the paper is to evaluate and critically review how the topic you have been assigned is executed at the companies visited. Additionally be sure to compare and contrast all companies visited

to date. Remember each week you will be writing about a different topic. The papers are due on the Wednesday (no later than 5pm) following the tour and must be e-mailed to Fehime. (All papers must be typed). Late papers will not be accepted and if you did not go on a tour you cannot submit a paper.

Presentation: A 5 minute presentation (Power Point) on your choice of one of the 5 topics you wrote about during the semester is to be presented on June 21, 2013. Be sure to compare and contrast all companies.

Host/Setup Duties: Each group (4-5 students) will be required to setup 2 tours and act as a "host" at some point during the session. Each host group will be required to send a thank you note to the companies they arranged for IME 5570 to visit.

Professional conduct during the tours is expected and required. Please dress professionally. You never get a second chance to make a first impression. Safety glasses, close-toed shoes, and long pants are required. Please do not bring any photographic or video equipment with you. Be on time or be left behind.

Grading Scale

A	= 90 - 100
BA	= 88 - 89.9
B	= 80 - 87.9
CB	= 78 - 79.9
C	= 70 - 77.9
DC	= 68 - 69.9
D	= 60 - 67.9
E	= Below 60

Performance Criteria

The students should be able to:

Objective 1

- 1.1 Accurately apply standard problem solving techniques to multiple types of work environments. (1,3,4,5)
- 1.2 Determine the appropriate type of chart to use to solve problems identified in objective 1.1 (1,3,4,5)
- 1.3 Accurately interpret data gathered from charts. (1,3,4,5)

Objective 2

- 4.1 Accurately define a problem and its corresponding constraints. (4)
- 4.2 Function as a productive and effective member of a team. (4)
- 4.3 Document work in a scholarly manner. (4)
- 4.4 Present information and ideas in a professional manner. (4)

Course Coordinator:

Dr. T.K. Fredericks, Department of Industrial and Manufacturing Engineering. Office: E-223 Parkview Campus, Phone 269.276.3360; FAX 269.276.3353, e-mail: tycho.fredericks@wmich.edu