UNIVERSITY OF MICHIGAN-FLINT
COURSE CHANGE REQUEST for GenEd Distribution

** This change is not effective for registration or publication until this request has been reviewed by the Provost. **

Change Effective for Term: Fall 2010  
School/College: College of Arts and Sciences (CAS)  
Department: Engineering (EGR)

Subject: EGR  
Course Number: 310  
Check here for NO CHANGE: ☐

☐ INACTIVATE Course  ☐ INACTIVATE Crosslisting(s)

INSTRUCTIONS: Only where a change is requested, please complete the Requested Change column below; leave other lines blank. Add separate page(s) if space provided is not sufficient for your response.

AS CURRENTLY OFFERED

1. Title: Engineering Economics  
2. Credit Hours: (3).
3. Repeat Status: (see CURRENT Course Description below)
4. Crosslisting(s):
5. GE Distribution:

REQUESTED CHANGE

to:

to: Total ___ -or- Variable ___ to ___
to: Max of ___ credits -or- ___________

to: FYE First Year Experience  
    CAP Capstone
    H Humanities  
    S Social Science
    GB Global Studies  
    F Fine Arts
    HW Health & Well Being  
    FQ Finance & Qnt Lit
    N Nat Science and/or
    NL Nat Sci Lab
    T Technology

6. CURRENT Course Description:
Decision-making process in engineering with economic analysis; the role of quality and cost considerations in manufacturing; economies of scale; cash flow analysis; decisions involving capital expenditures, incremental analysis of multiple options, make or buy, rate of return, and present/future value analysis; income tax and interest considerations.

UM-FLINT RECEIVED  
OCT 07 2009  
College of Arts & Sciences  
Dean’s Office

REQUESTED BY:  
Department Chair  
Date  
Department Chair of Crosslist(s) or Prerequisite(s)  
Date  
Dean  
Date

REVIEWED BY:  
Catalog Editor  
Date  
Provost  
Date  
Catalog Coordinator (Registrar’s Office)  
Date

Dean of Crosslist(s) or Prerequisite(s)  
Date  
GECAC  
Date

I:\Catalog\Course Change Request Form for GenEd Dist.doc  Revised 7/22/09
REQUEST FOR GENERAL EDUCATION DISTRIBUTION DESIGNATION

Directions: Please indicate which learning outcomes will be addressed in this course (place the corresponding number and outcome where indicated). A minimum of five learning outcomes must be addressed for a course to be eligible for general education distribution designation. Please provide a brief narrative as to how the course objectives/key concepts address each learning outcome selected, and indicate what tools for assessment will be used.

<table>
<thead>
<tr>
<th>Course Title: Engineering Economics</th>
<th>Department: CSEP</th>
<th>Course Prefix: EGR</th>
<th>Course Number: 310</th>
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</thead>
<tbody>
<tr>
<td>No. 3 Learning Outcome: Demonstrate the ability to think critically</td>
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<tr>
<td>Narrative: This course will provide knowledge and understanding of different economic analysis tools and techniques. Students will be required to perform economic analysis using appropriate tools and make critical decision. The decision making process and their impact on individual, organization, and society will be considered as there may be conflicting issues between economic and non-economic or social benefits.</td>
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<td>Assessment tools: Homework assignments, papers, and discussions where students will demonstrate their critical thinking skills.</td>
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<td>No. 4 Learning Outcome: Demonstrate the ability to think creatively</td>
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<td>Narrative: This course will devote a portion of its focus to orient students to creative thinking process using brainstorming, team discussion, Classroom discussion about how to select from multiple projects and multiple priorities with limited resources will require innovative techniques to maximize benefit of different stakeholders in the project.</td>
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<tr>
<td>Assessment tools: Homework assignments, papers and discussions will be used.</td>
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<td>No. 5 Learning Outcome: Produce Competent Written Work</td>
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<td>Narrative: This course will require students to perform economic analysis comparing different alternatives and produce a written report demonstrating their writing skill. The report will require use of sources from industry, journals, and other available credible sources. The report will require students to provide justification and argument about how and why their decision is superior.</td>
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<td>Assessment tools: Final Paper and presentation will be used.</td>
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<td>No. 9 Learning Outcome: Demonstrate knowledge of economics, finance, and quantitative literacy; health and well-being; and science and technology</td>
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<td>Narrative: This course will provide knowledge and skills for making sound economic decisions using concepts such as rate of return, breakeven analysis, payback, depreciation, tax, etc. Students will become familiar with cost/benefit analysis of equipments and services to make best economic decision considering tangible as well as non-tangible benefits.</td>
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<td>Assessment tools: Examinations and quizzes will be used as assessment tools</td>
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<td>No. 12 Learning Outcome: Apply knowledge to complex issues such as social justice, globalization, economic growth and distribution, environmental sustainability, public health, etc, in increasingly broad spheres of influence</td>
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<td>Narrative: The influence of good decision-making and the consequences on individuals, organizations, society and the world will be covered. For example, how the cost of energy and energy usage can influence the economic growth and sustainability along with the economic benefit of environmentally sustainable energy technologies will be investigated by the students.</td>
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<tr>
<td>Assessment tools: Homework assignments, quizzes, and examinations will be used for assessment.</td>
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