

From: [Matt Cavalli](#)
To: [Decker Bradley Hains](#)
Cc: [Holly Blanks](#)
Subject: Curriculum Course Request Change Course ENGR 1002 - A-2020-ENGR-14; effective term: 202140
Date: Thursday, October 15, 2020 10:52:39 PM

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

Date of request: 14-OCT-2020

Request ID: A-2020-ENGR-14

College: A

Department: ENGR

Initiator name: Matthew Cavalli

Initiator email: matthew.cavalli@wmich.edu

Proposed effective term: 202140

Does course need General Education approval?: N

Will course be used in teacher education?: N

If 5000 level course, prerequisites apply to: U

Proposed course data:

Change Course ENGR 1002

Specific Course Change type selected: Description

Specific Course Change type selected: Other (explain**)

1. Existing course prefix and number:
ENGR 1002

2. Other (** explain)
Offering term changed, as well

A. Please choose Yes or No to indicate if this class is a Teacher Education class:
No

B. Please choose the applicable class level:
Undergraduate

C. Please respond Yes if this is a current general education course and/or a course being submitted for the new WMU Essential Studies program. Please respond No if it is neither.
No

D. Explain briefly and clearly the proposed improvement.
The course description and offering schedule have not been updated recently. The course content and scheduling have evolved and need to be modified.

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

The course description and offering schedule have not been updated recently. The course content and scheduling have evolved and need to be modified.

F. List the student 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.

1) Students will improve their ability to interpret word problems into mathematical equations and solve those equations using principles of algebra.

2) Students will be able to articulate how the concepts of algebra apply to solving technical problems and provide examples.

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.

This course was originally developed to complement ENGR 2100 to support CEAS students who are starting in MATH 1110 (Algebra II). Based on best practices in the literature, it aims to help students see applications of mathematical concepts to technical problems both to provide them with additional practice as well as to motivate their success in math.

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.

N/A - concepts in ENGR 1002 are placed in the semester based on input from the MATH 1110 schedule, but there is not a direct dependence of either course on the other.

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

N/A

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.

ENGR 1002 is integrated into the class schedule for students in the CEAS Preparatory cohort so conflicts are avoided. Students can choose not to enroll in ENGR 1002 but it is strongly encouraged.

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?

About 2/3 of the CEAS Preparatory cohort end up enrolling in ENGR 1002. Students who do well in the course tend to also do well in MATH 1110 and to move into their pre-engineering major. There has not been a direct assessment of the role that ENGR 1002 plays in this process since it always occurs in tandem with both ENGR 2100 and MATH 1110.

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.)

N/A

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.

N/A

O. Current catalog copy:

Introduction to Engineering Analyses and exploration of the career opportunities and demands of the engineering and engineering technology professions. Topics include problem-solving, using computer spreadsheet program for engineering analyses, teamwork, communications, and career opportunities and demands of the engineering and engineering technology professions.

Credits: 1 hour

When Offered: Spring

P. Proposed catalog copy:

Designed for first-year CEAS Preparatory students. Focus on applications of algebra concepts to problem-solving in the applied sciences. Intended to complement MATH 1110 by exploring the breadth of applications for math in engineering, computer science, and technology while providing additional experience in mathematical modeling and problem-solving.

Credits: 1 hour

When Offered: Fall

Department Curriculum Chair approver: Matthew Cavalli

Department Curriculum Chair comment:

Date: 14-OCT-2020

Department approver: Matthew Cavalli

Chair comment:

Date: 15-OCT-2020