

Introduction to Engineering Design

Code: MME 1005

Time Period: Continuous

Form B – Course Revision Form

1

Today's Date:

09/13/2026

2

Your Email:

bbernard@highpoint.edu

3

Please list the appropriate school to oversee this proposal

Engineering

4

When should this proposal take effect?

Please input Semester and Year. E.g. Fall 2027

Fall 2027

5

What type of change do you need to request?

☐ Small Curricular Change

☐ Course Revision

☒ Both

6

What small curricular change would you like to request?

- ☐ Distribution requirements - major
- ☐ Distribution requirements - minor
- ☐ Learning Outcomes Language (edit/update existing language only)
- ☒ Course Prefix / Designator / Number / Name
- ☒ Course Description
- ☐ Adding / Changing Cross Listing
- ☐ Name change of college, school, department, program, center, institute, major, minor, concentration, or track
- ☐ Prerequisites

7

Would you like to apply these changes to additional courses in this program?

- ☐ Yes
- ☒ No

8

What course revision would you like to request?

- ☒ Learning Outcomes (add or remove specific outcomes)
- ☒ Credits
- ☐ Change Course Number (Change to Level)
- ☐ Course Repeat Option
- ☐ Adding or removing an Academic Program
- ☐ Creation of a special topics course or revisions to an existing special topics course
- ☐ Discontinuance of a course

Course Prefix / Designator / Name

1

Changes to course prefix, number, and/or name

Current course prefix, number, and name

MME 1005 Introduction to Engineering Design

Proposed new course prefix and number

MME 1005

Proposed new name

Engineering Design I

Course Description

1

Changes to course description(s)

Current Course Description (as seen in the UG Bulletin)

Students engage in open-ended problem solving, learn and apply the engineering design process, and utilize industry standard technology and software. In Introduction to Engineering Design, students dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. They work both individually and in teams to design solutions to a variety of problems using 3D modeling software and use an engineering notebook to document their work.

Proposed Revised Course Description

Introduces the engineering design process through hands-on mechanical design projects. Students engage stakeholders to define problems and derive requirements, then generate, evaluate, and refine concepts through iterative prototyping and testing. Working individually and in teams, they use freehand sketching and 2D and 3D modeling to develop and communicate their designs, documenting decisions in an engineering notebook.

Learning Outcomes Change

1

Please list the revised student learning outcomes for this course in the box below.

- Apply an engineering design process to develop solutions to open-ended mechanical problems.
- Derive design requirements and constraints from stakeholder needs.

- Create engineering graphics, including freehand concept sketches and dimensioned 2D and 3D models, to develop, document, and communicate designs.
- Construct and test physical prototypes to evaluate design performance against stated requirements.
- Evaluate design decisions against contextual factors such as safety, cost, sustainability, and societal impact.
- Contribute to the work of a collaborative engineering design team.
- Communicate design decisions and outcomes in written and oral forms.

2

Please list any revisions to units or content areas that will be required for all sections of this course in the box below.

Added Content Area - Engineering Graphics

3

If you have Gen Ed learning outcomes, please address the kinds of assessments you may use for each area that you are proposing the course be designated (i.e., Arts, Humanities, Diversity, etc.)

n/a

4

Please list any revisions to course policies that will be required for all sections of this course.

n/a

5

If you would like to specify any revisions to requirements for how contact hours must be met for all sections of this course, please indicate below (e.g., if any experiential learning activities will replace seat time)

n/a

6

If this course proposal affects any other departments, please describe the consultation and approval that you've received and from whom in the box below.

ECE 1012 Introduction to Engineering Design and CAD/CAM is a 4cr course that covers both design and graphics. MME previously had 2 separate courses MME1005 (design) 3cr and MME1010 (Graphics) 2cr. ECE students could previously complete ECE1012 or both MME1005 & MME1010 as a degree requirement. MME1005 is now adjusted to be 4 credits and contain design and graphics to make it easier for a student to change majors between these departments and allow their first semester course to transfer seamlessly into the new major. MME faculty and department chair met with ECE faculty and department chair to approve this alignment, which will simplify the ECE degree requirement to only require 1005, not both 1005&1010.

7

Is there any additional information that you would like to provide for this proposal?

It is very difficult to balance student workloads and teaching workloads for 3cr courses when most other university courses are 4cr. Standardizing this course to 4cr is good pedagogically and also administratively.

8

Sample Syllabus

To upload, please select the *add a new document* link to upload your files. Once uploaded, please select the files within the dropdown menu.

[Syllabus-F27-MME1005-EngineeringDesignI.docx](#)

9

Additional documents

NOTE: This is a two-step process.

Please select the *add a new document* link to upload your files. Once uploaded, please select the files within the dropdown menu.

No document was selected.

Credits Change

- 1 Choose the course's revised number of credits from the list below
A standard lecture or lecture/laboratory course is 4 credits.

4

- 2 Please describe the rationale for this change

The MME freshman year was previously 4 courses each 3cr, 2cr, 3cr, 2cr. This was difficult to schedule for students and faculty. The curriculum will work both pedagogically and administratively much better in the newly proposed format with 3 courses of 4cr, 4cr, and 2cr. Same total credits, mostly the same content, just reorganized, and slightly modernized. In this specific course, we combine Graphics into Design, which mirrors the ECE freshman fall course. This similar structure will also make it easier for undecided engineering students to change majors between departments now that our first semesters are more closely aligned.

Gen Ed & Academic Program Information

- 1 Is this a revision to meet new Gen Ed requirements?

☐ Yes
☒ No

2

Is this course part of an academic program?

- ☒ This course does not currently fulfill academic program requirements
- ☐ Honors Scholars
- ☐ Service Learning
- ☐ Study Abroad
- ☐ Environmental Studies
- ☐ Latin American Studies
- ☐ Legal Studies
- ☐ East Asian Studies
- ☐ Jewish Studies

3

Does this course, as revised, include any community engagement?

- ☐ Yes
- ☒ No

4

Is this course part of GoGlobal?

- ☐ Yes
- ☒ No

5

Does this course count towards a major or a minor?

- ☒ Yes
- ☐ No

6

Please list the course and whether it is required or electives for the major/minor.

Course Prefix and Number

MME1005

Name of Major and/or Minor

Mechanical Engineering

Is this a required or elective course?

Required

Course Prefix and Number

MME1005

Name of Major and/or Minor

Mechatronic Engineering

Is this a required or elective course?

Required

Course Prefix and Number

MME1005

Name of Major and/or Minor

General Engineering

Is this a required or elective course?

Required

Course Prefix and Number

MME1005

Name of Major and/or Minor

Electrical Engineering

Is this a required or elective course?

Elective

Course Prefix and Number

MME1005

Name of Major and/or Minor

Computer Engineering

Is this a required or elective course?

Elective

7

Is this course cross listed?

☐ Yes

☒ No

Upload Documentation

- 1 Please attach any documentation that is needed for this proposal.

To upload, please select the *add a new document* link to upload your files. Once uploaded, please select the files within the dropdown menu.

No document was selected.

Department Chair Feedback

- 1 Feedback/Comments
Please provide any feedback or comments for the proposer.

- 2 Today's Date

09/15/2026

DEANS

- 1 What is your decision regarding this Course Revision form? (Please select a radial button below and also choose the corresponding workflow action on the bottom of this form)

- ☐ Inter-Collegiate : General Education
- ☐ Inter-Collegiate : Honors Council
- ☐ Inter-Collegiate : Non-General Education
- ☐ Inter-Collegiate : Study Abroad
- ☐ Inter-Collegiate : Service Learning
- ☒ Intra-Collegiate
- ☐ Small Change

2

Feedback/Comments

Please provide any feedback or comments for the proposer.

3

Today's Date

09/15/2026

Intra-Collegiate: School EPC Feedback (FOR CHAIR ONLY)

1

COMMITTEE MEMBERS: Please review the form. Once your review is complete, click "Continue Later" at the bottom of the page or "Exit" at the top right of the screen. Do not enter comments or submit the form.

CHAIR: At the committee meeting, present this form and enter the committee's comments into the comment box below, then click "Submit."

[1] Discussion was had on whether there was intention for MME 1015 (new name) to have MME 1005 (new name) as a pre-requisite (not clear from the form). Supplementary information provided by one of the committee members was able to resolve the concern (while the preferred order is 1005 and then 1015, students can take the courses in either order).

[2] Discussion was had regarding the minimum required meeting times (in-class and lab components). It was determined from an official HPU source & the provided syllabus that the course does meet (and exceed) the minimal requirements.

[3] Discussion was had regarding overlap of some SLO's between the courses MME 1005 and MME 1015. Supplementary information provided by one of the committee members was able to resolve the concern.

2

Today's Date

09/29/2026