

Decker Bradley Hains

Subject: Curriculum Course Request New Course CCE1100 - A-2020-CCE-10; effective term: 202140

From: Decker Bradley Hains <decker.hains@wmich.edu>

Sent: Monday, October 12, 2020 11:09 AM

To: Xiaoyun Shao <xiaoyun.shao@wmich.edu>; Osama Abudayyeh <osama.abudayyeh@wmich.edu>

Subject: Curriculum Course Request New Course CCE1100 - A-2020-CCE-10; effective term: 202140

Please verify your data for New Curriculum Course Request for department: CCE; college: A.

Go to the following URL to complete your worklist items: <https://bwfp1.cc.wmich.edu:7102/wfbprod>

Date of request: 07-OCT-2020

Request ID: A-2020-CCE-10

College: A

Department: CCE

Initiator name: Decker Hains

Initiator email: decker.hains@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:

New Course CCE1100

New course selected: This new course is not seeking approval as a general education course.

1. Proposed course prefix and number:

CCE1100

2. Proposed credit hours:

2.0

3. Proposed course title:

Introduction to Engineering Practice

4. Proposed course prerequisites:

NONE

5. Proposed course corequisites:

NONE

6. Proposed course prerequisites that may be taken concurrently (before or at the same time):

NONE

7. Minimum grade for prerequisites (default grades are D for Undergrad and C for Grad):

NONE

8. Major and/or minor restrictions:

Not Applicable

9. List all the four-digit major and/or minor codes (from Banner) that are to be included or excluded:

NONE

10. Classification restrictions:

Not Applicable

11. List all the classifications (freshman, sophomore, junior, senior) that are to be included or excluded:

NONE

12. Level restriction:

Not Applicable

13. List the level (undergraduate, graduate) that is to be included or excluded.

Not Applicable

14. Do prerequisites and corequisites for 5000-level courses apply to undergraduates, graduates, or both?

Not Applicable

15. Is this a multi-topic course?

No

16. Proposed course title to be entered in Banner:

Intro to Engineering Practice

17. Is this course repeatable for credit?

No

18. Is this course mandatory credit/no credit?

No

19. Select class type:

Lecture

20. How many contact hours per week for this course?

2.0

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.

Combines two, one-credit hour introductory courses in our department into one, two-credit hour course.

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

This increases flexibility for scheduling in the following semesters, and provides a more focused, and better overall introductory experience for our students.

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. Describe the civil engineering profession, the Civil Engineering Body of Knowledge, specialty areas in civil engineering, and the role of the American Society of Civil Engineers in advancing the profession.
- 2 Describe and demonstrate effective communication techniques using various media.
- 3 Describe key concepts in leadership, teamwork, and project management.
- 4 Demonstrate effective teamwork techniques to complete an introductory analysis and design project.
- 5 Describe the engineering design process and apply critical thinking and problem-solving skills to solve basic engineering problems using select engineering analysis tools and software.
- 6 Describe three common ethical frameworks and the ASCE Code of Ethics and analyze a situation involving an ethical dilemma.

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.

Seniors consistently provided feedback at the exit survey indicating that they wished the introductory course was more focused and not spread out over two semesters. They indicated that they would prefer a two-credit hour course in one semester to allow them to better focus on developing critical, basic engineering skills, as well as introducing them to the civil engineering profession.

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.

None. This is an internal change with no effect on other departments or colleges or programs.

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

We are essentially combining two introductory courses into one course which provides students critical basic engineering skills earlier in their studies. This better sets them up for success in subsequent courses.

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.

No effect on enrolled students. We will keep the original two courses, CCE1001 and CCE1002 on the books for at least a year to account for any issues with enrolled students. These are entry-level courses so there are no anticipated conflicts. With other associated program changes, this proposal makes it easier for students to graduate.

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?

This benefits students by having them complete a more comprehensive introductory course for our program in one semester versus over two semesters. Moreover, students will be more aligned as a cohort. Students tend to not take one-credit hour courses as seriously as they should and this allows a more concentrated focus on basic skills and concepts required for the CCE program. A two-credit hour courses promotes more belonging to the program and provides a better overall first experience in the program.

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.)

No effect. We will be deleting two, one-credit hour introductory courses. This 2-credit hours course replaces those courses. We are actually increasing efficiency in the program for both faculty and students but combining and revising our introductory courses.

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.

No affect on transfer agreements. This change will make it easy for transfer students by eliminating the need to take two, one-credit hour introductory courses and instead take one, two-credit hour introductory course.

O. Current catalog copy:

NONE- New course.

P. Proposed catalog copy:

An introduction to the engineering analysis and design process for civil engineers. Topics include: an introduction to the civil engineering profession and the specialty areas in civil engineering; communicating as an engineering; leadership, teamwork and group dynamics; an introduction to project management; critical thinking and problem solving techniques in the engineering design process; an

introduction to basic engineering analysis tools with an emphasis on engineering software tools; and an introduction to engineering ethics, sustainability, and the impacts of engineering solutions on society.

Department Curriculum Chair approver: Xiaoyun Shao

Department Curriculum Chair comment:

Date: 12-OCT-2020