

CE 245: PAVEMENT DESIGN

In Workflow

1. CE Committee Chair (fogarty@csus.edu)
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11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Thu, 17 Sep 2020 02:36:05 GMT
Julie Fogarty (fogarty): Approved for CE Committee Chair
2. Thu, 17 Sep 2020 16:13:55 GMT
Benjamin Fell (fellb): Approved for CE Chair
3. Thu, 01 Oct 2020 16:31:29 GMT
Gareth Figgess (figgess): Approved for ECS College Committee Chair
4. Fri, 02 Oct 2020 15:50:42 GMT
Kevan Shafizadeh (kevan): Approved for ECS Dean

New Course Proposal

Date Submitted: Thu, 17 Sep 2020 02:26:59 GMT

Viewing: CE 245 : Pavement Design

Last edit: Thu, 17 Sep 2020 02:26:58 GMT

Changes proposed by: Julie Fogarty (218645519)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
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Catalog Title:

Pavement Design

Class Schedule Title:

Pavement Design

Academic Group: (College)

ECS - Engineering & Computer Science

Academic Organization: (Department)

Civil Engineering

Will this course be offered through the College of Continuing Education (CCE)?

No

Catalog Year Effective:

Fall 2021 (2021/2022 Catalog)

Subject Area: (prefix)

CE - Civil Engineering

Catalog Number: (course number)

245

Course ID: (For administrative use only.)

202619

Units:

3

In what term(s) will this course typically be offered?

Spring term only - even years

Does this course require a room for its final exam?

Yes, final exam requires a room

Does this course replace an existing experimental course?

No

This course complies with the credit hour policy:

Yes

Justification for course proposal:

Graduate CE courses are being renumbered to clarify course topic areas to help students plan their path to graduation and be consistent with the undergraduate CE course numbers. Prerequisites numbers (not courses) are being changed to reflect course number changes that occurred in the undergraduate program in 2019-2020.

This is not a new course. It is being proposed as a new course so that the existing number can be reused for another course. There is no change to the content (course description, ELOs, assessment) for this course. It is simply a number change.

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)

Fundamental principles of pavement analysis, design, and evaluation. Topics include pavement materials, mechanics, traffic and environmental loadings, pavement performance, design methods, construction and economic evaluation.

Are one or more field trips required with this course?

No

Fee Course?

No

Is this course designated as Service Learning?

No

Does this course require safety training?

No

Does this course require personal protective equipment (PPE)?

No

Does this course have prerequisites?

Yes

Prerequisite:

CE 140 and CE 170.

Prerequisites Enforced at Registration?

Yes

Does this course have corequisites?

No

Graded:

Letter

Approval required for enrollment?

No Approval Required

Course Component(s) and Classification(s):

Lecture

Lecture Classification

CS#02 - Lecture/Discussion (K-factor=1 WTU per unit)

Lecture Units

3

Is this a paired course?

No

Is this course crosslisted?

No

Can this course be repeated for credit?

No

Can the course be taken for credit more than once during the same term?

No

Description of the Expected Learning Outcomes: Describe outcomes using the following format: 'Students will be able to: 1), 2), etc.'

Students will be able to:

1. Explain the fundamental theories and practical methods of material characterization and traffic loading calculations applied in flexible and rigid pavement design.
2. Discuss pavement design variables and their impacts on pavement performance.
3. Apply pavement design concepts using various design approaches including AASHTO method, California method, and the new mechanistic-empirical (M-E) pavement design method.
4. Apply analysis tools for pavement life cycle cost evaluations and construction analysis.
5. Conduct economic evaluations of different pavement design alternatives.

Attach a list of the required/recommended course readings and activities:

CE 245.docx

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above.

Quizzes (ELO 3,4)
 Homework (ELO 1 - 4)
 Class exercises (ELO 1 - 4)
 Exams (ELO 3, 4)
 Final Project (ELO 3 - 5)

For whom is this course being developed?

Majors in the Dept

Is this course required in a degree program (major, minor, graduate degree, certificate?)

No

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer)?

No

Will there be any departments affected by this proposed course?

Yes

Indicate which department(s) will be affected by the proposed course:**Department(s)**

Civil Engineering

I/we as the author(s) of this course proposal agree to provide a new or updated accessibility checklist to the Dean's office prior to the semester when this course is taught utilizing the changes proposed here.

I/we agree

University Learning Goals

Graduate (Masters) Learning Goals:

Critical thinking/analysis
Communication
Information literacy
Disciplinary knowledge
Professionalism

Is this course required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

No

Is this a Graduate Writing Intensive (GWI) course?

No

Key: 14320