

CE 274A: SOIL DYNAMICS AND EARTHQUAKE ENGINEERING

In Workflow

1. CE Committee Chair (fogarty@csus.edu)
2. CE Chair (fellb@csus.edu)
3. ECS College Committee Chair (figgess@csus.edu)
4. ECS Dean (kevan@csus.edu)
5. Academic Services (torsetj@csus.edu;%20cnewsome@skymail.csus.edu)
6. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
7. Dean of Undergraduate (james.german@csus.edu;%20celena.showers@csus.edu)
8. Dean of Graduate (cnewsome@skymail.csus.edu)
9. Catalog Editor (torsetj@csus.edu)
10. Registrar's Office (w lindsey@csus.edu)
11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Thu, 17 Sep 2020 02:36:30 GMT
Julie Fogarty (fogarty): Approved for CE Committee Chair
2. Thu, 17 Sep 2020 16:17:34 GMT
Benjamin Fell (fellb): Approved for CE Chair
3. Thu, 24 Sep 2020 00:50:56 GMT
Gareth Figgess (figgess): Rollback to CE Chair for ECS College Committee Chair
4. Fri, 25 Sep 2020 18:14:11 GMT
Benjamin Fell (fellb): Approved for CE Chair
5. Thu, 01 Oct 2020 16:36:19 GMT
Gareth Figgess (figgess): Approved for ECS College Committee Chair
6. Fri, 02 Oct 2020 15:54:24 GMT
Kevan Shafizadeh (kevan): Approved for ECS Dean

Date Submitted: Thu, 17 Sep 2020 02:34:49 GMT

Viewing: CE 274A : Soil Dynamics and Earthquake Engineering

Formerly known as: CE 284

Last edit: Fri, 25 Sep 2020 18:13:50 GMT

Changes proposed by: Julie Fogarty (218645519)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Richard Armstrong	richard.armstrong@csus.edu	530-220-2015

Catalog Title:

Soil Dynamics and Earthquake Engineering

Class Schedule Title:

Soil Dyn. & Eq. Engineering

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)

274A

Course ID: (For administrative use only.)

107801

Units:

3

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

Spring term only - odd 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.

When coding this course for the catalog, please drop the A on this course so it is simply the number CE 274 (another course using CE 274 is being changed concurrently to a different number).

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

Introduction to vibration theory; wave propagation in soils and dynamic behavior of soils and foundations; dynamic tests; analysis of dynamically loaded foundations; causes of earthquakes; earthquake magnitude and zones; ground motions induced by earthquakes; earthquake-resistant design of foundations and earth dams.

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 170 and CE 170L.

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):

Seminar

Seminar Classification

CS#05 - Seminar (K-factor=1 WTU per unit)

Seminar 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) Identify critical seismological characteristics for a seismic hazard analysis
- (2) Utilize seismic hazard analysis software and interpret and apply results
- (3) Recognize the connection between soil dynamic principles and site response effects
- (4) Conduct site response analyses with analysis software and interpret and apply results
- (5) Select soil shear strengths appropriate for different soil response conditions
- (6) Determine the seismic-stability of retaining wall and shallow foundations
- (7) Calculate the seismic-demands on piles with analysis software and interpret results
- (8) Select soil-structure interaction and correctly induce into a structural analysis

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

CE_275_Course_Syllabus_Armstrong.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.

Problem sets: ELOs (2), (3), (5), (6), (7), and (8)

Examinations: ELOs (1), (2), and (4)

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
Information literacy
Disciplinary knowledge
Intercultural/Global perspectives
Professionalism
Research (optional)

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

Reviewer Comments:

Gareth Figgess (figgess) (Thu, 24 Sep 2020 00:50:56 GMT): Rollback: Per CE Chair Email Request

Key: 594