

# CE 170C: SOIL MECHANICS

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## In Workflow

1. CE Committee Chair (fogarty@csus.edu)
2. CE Chair (fellb@csus.edu)
3. ECS College Committee Chair (troy.topping@csus.edu)
4. ECS Dean (kevan@csus.edu)
5. Academic Services (torsetj@csus.edu;%20212408496@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 (212408496@csus.edu;%20torsetj@csus.edu;%20cnewsome@skymail.csus.edu)
10. Registrar's Office (wwd22@csus.edu;%20w lindsey@csus.edu;%20sac19595@csus.edu;%20danielle.ambrose@csus.edu;%20h.skocilich@csus.edu;%20205109584@csus.edu)
11. PeopleSoft (PeopleSoft@csus.edu)

## Approval Path

1. Sat, 12 Oct 2019 03:22:31 GMT  
Julie Fogarty (fogarty): Approved for CE Committee Chair
2. Mon, 14 Oct 2019 18:01:05 GMT  
Benjamin Fell (fellb): Approved for CE Chair
3. Fri, 25 Oct 2019 16:32:41 GMT  
Troy Topping (troy.topping): Approved for ECS College Committee Chair
4. Fri, 25 Oct 2019 16:54:54 GMT  
Kevan Shafizadeh (kevan): Approved for ECS Dean

## History

1. Dec 3, 2018 by Julie Fogarty (fogarty)

Date Submitted: Tue, 17 Sep 2019 16:28:46 GMT

## Viewing: CE 170C : Soil Mechanics

### Formerly known as: CE 171A

**Last approved: Mon, 03 Dec 2018 15:01:56 GMT**

**Last edit: Sat, 05 Oct 2019 03:45:41 GMT**

Changes proposed by: Richard Armstrong (211213341)

### Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Richard Armstrong	richard.armstrong@csus.edu	(916) 278-6812

### Catalog Title:

Soil Mechanics

### Class Schedule Title:

Soil Mechanics

### 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 2020 (2020/2021 Catalog)

### Subject Area: (prefix)

CE - Civil Engineering

**Catalog Number: (course number)**

170C

**Course ID: (For administrative use only.)**

107396

**Units:**

3

Changes to a course's units impact any related programs. As a result, a corresponding change must also be submitted for those programs

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

Fall, Spring

**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:**

There are high DFW rates for many of the combined CE lecture/lab courses. This leads to delayed graduation since repeating students need to be accommodated and those seeking to take the course for the first time are prevented from enrolling in the limited laboratory seats.

Separating the civil engineering lab and lecture experiences will:

- 1) open up the limited lab seats available for students first attempting the course;
- 2) enable students who have failed the combined lab/lecture courses to better spend their time on the lecture content when repeating the course if they have already successfully completed the lab activities

Undergraduate CE courses are being renumbered to clarify course pre- and co-requisites and topic areas to help students plan their path to graduation. Prerequisites numbers (not courses) are being changed to reflect course number changes.

The current offering of the 4-unit CE 171A will be separated into a 3-unit lecture only session (CE 170C) and a 1-unit laboratory only session (CE 170L). The new offerings of CE 170C and CE 170L are to be taken by student concurrently.

Through curriculum paper forms in 2016, each CE course had the "Not currently enrolled in CE XXX" as a prerequisite approved, so that students could not register for a "CE" prefix course if they were currently enrolled in it. This was to prevent students who thought they were failing from giving up or taking up a seat they didn't need if they passed the course. That prefix managed to make it into the online system for only one or two classes and is being put through curriculum workflow again.

The writing proficiency prerequisite (WPJ) is only placed on the lab component of the course.

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

Composition and properties of soils; soil classification; soil compaction; soil-water interaction, including permeability and seepage analyses; soil stresses; soil compressibility, consolidation, and settlement analysis; soil shear strength.

**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 1, CE 100, CE 101, and ENGR 112. Not currently enrolled in CE 170C.

**Prerequisites Enforced at Registration?**

Yes

**Does this course have corequisites?**

Yes

**Corequisite:**

CE 170L

**Corequisites Enforced at Registration?**

Yes

**Graded:**

Letter

**Approval required for enrollment?**

No Approval Required

**Course Component(s) and Classification(s):**

Discussion

**Discussion Classification**

CS#04 - Lecture /Recitation (K-factor=1 WTU per unit)

**Discussion 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) Demonstrate basic concepts and principles of soil mechanics using analytical and experimental procedures.
- 2) Calculate values related to soil composition, soil classification, soil index properties, soil-water interaction, seepage, stresses within soil, soil consolidation, and soil shear strength.
- 3) Apply soil mechanics to some Geotechnical engineering problems.

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

CE\_170C\_Course\_Syllabus\_Armstrong.pdf

**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.**

Homework, exams, and laboratory assignments (ELO 1, 2, 3)

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

Yes

**Has a corresponding Program Change been submitted to Workflow?**

Yes

**Identify the program(s) in which this course is required:**

**Programs:**

BS in Civil Engineering

**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?**

No

**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**

**Undergraduate Learning Goals:**

Competence in the disciplines

Knowledge of human cultures and the physical and natural world

Integrative learning

Intellectual and practical skills

**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

## **GE Course and GE Goal(s)**

**Is this a General Education (GE) course or is it being considered for GE?**

No

Key: 553