

CE 9: PLANE AND TOPOGRAPHIC SURVEYING

In Workflow

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Approval Path

1. Sat, 12 Oct 2019 03:22:46 GMT
Julie Fogarty (fogarty): Approved for CE Committee Chair
2. Mon, 14 Oct 2019 18:01:29 GMT
Benjamin Fell (fellb): Approved for CE Chair
3. Fri, 25 Oct 2019 16:33:18 GMT
Troy Topping (troy.topping): Approved for ECS College Committee Chair
4. Fri, 25 Oct 2019 16:55:28 GMT
Kevan Shafizadeh (kevan): Approved for ECS Dean

History

1. Mar 22, 2019 by Julie Fogarty (fogarty)

Date Submitted: Sat, 12 Oct 2019 03:06:07 GMT

Viewing: CE 9 : Plane and Topographic Surveying

Last approved: Fri, 22 Mar 2019 14:01:05 GMT

Last edit: Sat, 12 Oct 2019 03:06:06 GMT

Changes proposed by: Julie Fogarty (218645519)

Contact(s):

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|-------------------|----------------|--------------------|
| Benjamin Fell | fellb@csus.edu | 916-278-8139 |

Catalog Title:

Plane and Topographic Surveying

Class Schedule Title:

Plane+Topographic Survey

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)

9

Course ID: (For administrative use only.)

107091

Units:

2

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 is a high DFW rate 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

The current offering of the 3-unit CE 9 will be separated into a 2-unit lecture only session (CE 9) and a 1-unit laboratory only session (CE 9L). The new offerings will be co-requisites meaning students must take CE 9 and CE 9L together unless a student has already successfully completed one course in the co-requisite pair.

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

Methods for the measurement of distance, direction, angles and elevations. Computational methods for locating points, closing traverses and determining areas and earthwork volumes. Horizontal and vertical curves. Introduction to legal aspects of surveying, geodetic surveys, maps, boundary surveys and new technologies used in surveying. Lecture two hours.

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:

MATH 30; MATH 30 may be taken concurrently. Not currently enrolled in CE 9.

Prerequisites Enforced at Registration?

Yes

Does this course have corequisites?

Yes

Corequisite:

CE 9L

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

2

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."

- 1) Calculate spatial locations using field measurements and coordinate geometry.
- 2) Identify different types of measurements and discuss their relative accuracy and sources of error.
- 3) Close traverses and calculate land areas
- 4) Interpret topographic surveys for the construction of civil infrastructure
- 5) Lay out vertical and horizontal curves for civil engineering projects
- 6) Describe important legal aspects of surveying

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

CE 9 (F19).doc

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.

Exams (ELO 1- 6)

Homework (ELO 1-6)

Quizzes (ELO 1-5)

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
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: 604