CE 140L: TRANSPORTATION ENGINEERING LABORATORY

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;%20wlindsey@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 03:21:49 GMT
   Julie Fogarty (fogarty): Approved for CE Committee Chair
2. Mon, 14 Oct 2019 18:00:16 GMT
   Benjamin Fell (fellb): Approved for CE Chair
3. Fri, 25 Oct 2019 16:31:31 GMT
   Troy Topping (troy.topping): Approved for ECS College Committee Chair
4. Fri, 25 Oct 2019 16:53:19 GMT
   Kevan Shafizadeh (kevan): Approved for ECS Dean

New Course Proposal

Date Submitted:Sat, 12 Oct 2019 03:10:10 GMT

Viewing:CE 140L : Transportation Engineering Laboratory

Last edit:Mon, 14 Oct 2019 17:56:39 GMT

Changes proposed by: Julie Fogarty (218645519)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Benjamin Fell	fellb@csus.edu	916-278-8139

Catalog Title:
Transportation Engineering Laboratory

Class Schedule Title:
Transpo Engr Lab

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)
140L

Course ID: (For administrative use only.)
TBD

Units:
1

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

Does this course require a room for its final exam?
No, final exam does not require 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.

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 147 will be separated into a 3-unit lecture only session (CE 140) and a 1-unit laboratory only session (CE 140L). The new offerings will be co-requisites meaning students must take CE 140 and CE 140L 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.)
Laboratory course that supports CE 140. Activities include speed survey and safety assessment, analysis of freeway level of service, analysis of intersection delay and level of service, roadway geometry design, and pavement design using field measurements, online datasets, and state-of-the-practice software. Laboratory three 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?
Yes

Does this course require personal protective equipment (PPE)?
Yes

Course Note: (Note must be a single sentence; do not include field trip or fee course notations.)
This course requires safety training. This course requires personal protective equipment (PPE).

Does this course have prerequisites?
Yes

Prerequisite:
Complete CE 1, CE 9, CE 9L, CE 101, and ENGR 115. WPJ Score of 70+ or equivalent. Not currently enrolled in CE 140L.

Prerequisites Enforced at Registration?
Yes

Does this course have corequisites?
Yes

Corequisite:
CE 140

Corequisites Enforced at Registration?
Yes

Graded:
Letter

Approval required for enrollment?
No Approval Required

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

Laboratory Classification
CS#16 - Science Laboratory (K-factor=2 WTU per unit)
Laboratory Units
1

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) Perform Time Mean Speed (TMS) and/or Space Mean Speed Studies.
2) Calculate Freeway Level of Service (LOS) using Intelligent Transportation System (ITS) data sources.
3) Conduct data collection at signalized intersections and model traffic conditions using microsimulation software.
4) Design highway geometry including horizontal and vertical alignments and calculate highway earthwork.
5) Prepare various designs and conduct life cycle cost analysis for highway pavement.

Attach a list of the required/recommended course readings and activities:
2020 Fall - CE140L - Syllabus.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.
Lab reports (ELO 1-5)

For whom is this course being developed?
Majors in the Dept

Is this course required in a degree program (major, minor, graduate degree, certificate?)
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: 14146