CE 151: INTRODUCTION TO GIS IN CIVIL ENGINEERING

In Workflow

1. CE Committee Chair (fogarty@csus.edu)
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10. Registrar's Office (wlindsey@csus.edu)
11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Thu, 17 Sep 2020 23:04:39 GMT
   Julie Fogarty (fogarty): Approved for CE Committee Chair
2. Fri, 18 Sep 2020 15:26:02 GMT
   Benjamin Fell (fellb): Approved for CE Chair
3. Fri, 16 Oct 2020 17:55:55 GMT
   Gareth Figgess (figgess): Approved for ECS College Committee Chair
4. Fri, 16 Oct 2020 17:57:28 GMT
   Kevan Shafizadeh (kevan): Approved for ECS Dean

History

1. May 13, 2019 by Julie Fogarty (fogarty)
2. Sep 25, 2019 by Janett Torset (torsetj)

Course Deactivation Proposal

Date Submitted: Thu, 17 Sep 2020 22:12:01 GMT

Viewing: CE 151 : Introduction to GIS in Civil Engineering

Last approved: Wed, 25 Sep 2019 15:14:35 GMT

Last edit: Thu, 17 Sep 2020 22:12:00 GMT

Changes proposed by: Julie Fogarty (218645519)

Catalog Title:

Introduction to GIS in Civil Engineering

Class Schedule Title:

GIS in Civil 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:

Spring 2021 (2021/2022 Catalog)

Subject Area: (prefix)

CE - Civil Engineering

Catalog Number: (course number)

151

Course ID: (For administrative use only.)
202422

Units:
3

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

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

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)
Fundamental geographic information system (GIS) concepts; GIS data acquisition and analysis; GIS analytical methods. Lab exercises with GIS software used to introduce students to typical uses of GIS in civil engineering. This course may be paired with the graduate-level course GIS Applications in Civil Engineering. Lecture two hours; lab 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?
No

Does this course require personal protective equipment (PPE)?
No

Does this course have prerequisites?
Yes

Prerequisite:
ENGR 115, CE 9, and either CE 137, CE 147, CE 170A, or CE 171A.

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):
Laboratory
Lecture

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

Laboratory Units

1

Lecture Classification

CS#01 - Large Lecture (K-factor=1 WTU per unit)

Lecture 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.'

Students will be able to:

1. Demonstrate knowledge of fundamental GIS concepts and principles.
2. Differentiate geospatial data types, data sources, and metadata management techniques.
3. Develop basic GIS skills using core components and functionality of ArcGIS and other software.
4. Apply ArcGIS and other software to create, manipulate and query geospatial data.
5. Demonstrate the use of GIS as an analysis and display tool of quantitative and spatial data.
6. Demonstrate the ability to work with GIS data and apply basic analytical methods to solve spatial problems.
7. Develop the ability to work with GIS data and apply specific geoprocessing techniques to solve civil engineering problems.
8. Analyze GIS results for civil engineering projects.
9. Effectively convey GIS information and analyses to decision makers

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

2018 Fall - CE151- Syllabus - Final.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.

Assignments, quizzes, labs, exams, project (ELO 1-9)

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?

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: 542