# **CE 130: WATER RESOURCES ENGINEERING**

## In Workflow

- 1. CE Committee Chair (j.garcia@csus.edu)
- 2. CE Chair (khan@csus.edu)
- 3. ECS College Committee Chair (abadi@csus.edu)
- 4. ECS Dean (arad@csus.edu)
- 5. Academic Services (catalog@csus.edu)
- 6. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
- 7. Dean of Undergraduate (james.german@csus.edu; renee.leonard@csus.edu)
- 8. Dean of Graduate (cnewsome@skymail.csus.edu)
- 9. Catalog Editor (catalog@csus.edu)
- 10. Registrar's Office (wlindsey@csus.edu)
- 11. PeopleSoft (PeopleSoft@csus.edu)

## **Approval Path**

 Sat, 17 Sep 2022 21:57:53 GMT Jose Garcia (j.garcia): Approved for CE Committee Chair

2. Sun, 18 Sep 2022 00:24:30 GMT Ghazan Khan (khan): Approved for CE Chair

3. Fri, 23 Sep 2022 17:03:14 GMT Masoud Ghodrat Abadi (abadi): Approved for ECS College Committee Chair

4. Mon, 26 Sep 2022 17:20:27 GMT Behnam Arad (arad): Approved for ECS Dean

## **History**

- 1. Dec 4, 2018 by Julie Fogarty (fogarty)
- 2. Jan 17, 2020 by Julie Fogarty (fogarty)
- 3. Jun 8, 2022 by 302822325

Date Submitted: Fri, 16 Sep 2022 22:24:05 GMT

Viewing: CE 130: Water Resources Engineering

Formerly known as: CE 137

Last approved: Wed, 08 Jun 2022 14:00:54 GMT

Last edit: Fri, 23 Sep 2022 17:02:41 GMT Changes proposed by: Julie Fogarty (218645519)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Ghazan Khan	khan@csus.edu	916-278-3886

#### **Catalog Title:**

Water Resources Engineering

Class Schedule Title: Water Resources Engr

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 2023 (2023/2024 Catalog)

Subject Area: (prefix)
CE - Civil Engineering

Catalog Number: (course number)

130

Course ID: (For administrative use only.)

107266

Units:

3

Is the primary purpose of this change to update the term typically offered or the enforcement of requisites at registration?

No

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

This course complies with the credit hour policy:

Yes

#### Justification for course proposal:

Changed CE 101 to be a concurrent prerequisite to remove structural barrier to student success and align all upper-division CE core courses (CE 130/140/150/160/170 and labs) as CE 150/150L already has CE 101 as a concurrent prerequisite. While skills gained from CE 101 are relevant to upper-division CE students, the course content can be taken at the same time as their core courses.

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

Hydrologic and hydraulic fundamentals which are common to water resources projects; introduction to reservoirs, dams, pipelines, channels, hydraulic machinery, ground water, water rights, statistical analysis, engineering economy applications, and water resources planning.

Are one or more field trips required with this course?

No

Fee Course?

No

Is this course designated as Service Learning?

No

Is this course designated as Curricular Community Engaged Learning?

No

Does this course require safety training?

No

Does this course require personal protective equipment (PPE)?

Νo

Does this course have prerequisites?

Yes

#### Prerequisite:

CE 1, CE 101, ENGR 115, ENGR 132, CE 130L. CE 130L may be taken concurrently. CE 101 may be taken concurrently. Not currently enrolled in CE 130.

#### **Prerequisites Enforced at Registration?**

Yes

Does this course have corequisites?

Νo

#### **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?

Nο

#### Is this course crosslisted?

Nο

#### Can this course be repeated for credit?

Nο

Can the course be taken for credit more than once during the same term?

Nο

### **Description of the Expected Learning Outcomes and Assessment Strategies:**

List the Expected Learning Outcomes and their accompanying Assessment Strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers). Click the plus sign to add a new row.

	Expected Learning Outcome	Assessment Strategies
1	Apply energy principles to closed conduits and solve for a variety of unknown quantities such as flow, diameter, and pressure.	Homework, quizzes, and exams
2	Solve problems dealing with uniform and gradually-varying open channel flow.	Homework, quizzes, and exams
3	Describe and apply hydrologic principles and processes to typical civil engineering situations.	Homework, quizzes, and exams
4	Calculate peak and continuous runoff.	Homework, quizzes, and exams
5	Describe and apply groundwater principles and processes to typical civil engineering situations.	Homework, quizzes, and exams
6	Perform simple economic and statistical analyses in water resources.	Homework, quizzes, and exams

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

CE\_130\_Fall\_2020\_Draft\_Syllabus-v2.docx

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: 535