CE 231: HYDROMETEOROLOGY

In Workflow

1. CE Committee Chair (fogarty@csus.edu)
2. CE Chair (khan@csus.edu)
3. ECS College Committee Chair (mohammed.eltayeb@csus.edu)
4. ECS Dean (arad@csus.edu)
5. Academic Services (torsetj@csus.edu; cnewsome@skymail.csus.edu)
6. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
7. Dean of Undergraduate (james.german@csus.edu; celena.showers@csus.edu)
8. Dean of Graduate (cnewsome@skymail.csus.edu)
9. Catalog Editor (torsetj@csus.edu)
10. Registrar's Office (wlindsey@csus.edu)
11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Thu, 17 Sep 2020 02:35:48 GMT
   Julie Fogarty (fogarty): Approved for CE Committee Chair
2. Thu, 17 Sep 2020 16:12:55 GMT
   211448342: Approved for CE Chair
3. Thu, 01 Oct 2020 16:28:21 GMT
   Gareth Figgess (figgess): Approved for ECS College Committee Chair
4. Fri, 16 Oct 2020 17:18:59 GMT
   Kevan Shafizadeh (kevan): Approved for ECS Dean
5. Wed, 04 Nov 2020 21:38:48 GMT
   Katie Dickson (katie.dickson): Approved for Academic Services
6. Wed, 16 Dec 2020 16:54:11 GMT
   Julie Fogarty (fogarty): Approved for Senate Curriculum Subcommittee Chair
7. Thu, 14 Jan 2021 16:25:04 GMT
   Celena Showers (celena.showers): Approved for Dean of Undergraduate
8. Thu, 11 Feb 2021 00:14:30 GMT
   Chevelle Newsome (cnewsome): Approved for Dean of Graduate
9. Mon, 13 Sep 2021 21:16:42 GMT
   Janett Torset (torsetj): Rollback to Initiator
10. Mon, 20 Sep 2021 18:51:11 GMT
    Julie Fogarty (fogarty): Approved for CE Committee Chair
11. Mon, 20 Sep 2021 18:52:54 GMT
    Ghazan Khan (khan): Approved for CE Chair
12. Fri, 24 Sep 2021 17:34:43 GMT
    Mohammed Eltayeb (mohammed.eltayeb): Approved for ECS College Committee Chair
13. Fri, 24 Sep 2021 17:36:05 GMT
    Behnam Arad (arad): Approved for ECS Dean

New Course Proposal

Date Submitted: Mon, 20 Sep 2021 16:31:14 GMT

Viewing: CE 231 : Hydrometeorology

Last edit: Fri, 24 Sep 2021 17:34:22 GMT

Changes proposed by: Cristina Poindexter (218654892)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Cristina Poindexter	cristina.poindexter@csus.edu	916-278-6982

Catalog Title:

Hydrometeorology

Class Schedule Title:

Hydrometeorology

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 2022 (2022/2023 Catalog)

Subject Area: (prefix)
CE - Civil Engineering

Catalog Number: (course number)
231

Course ID: (For administrative use only.)
107726

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?
Spring term only - odd years

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:
Graduate CE courses are being renumbered to clarify course topic areas to help students plan their path to graduation and be consistent with the undergraduate CE course numbers. Prerequisites numbers are being changed to reflect course number changes that occurred in the undergraduate program in 2019-2020. This course also has a new undergraduate-level statistics prerequisite, ENGR 115, which replaces the previous graduate-level statistics prerequisite, ENGR 203.

This is not a new course. It is being proposed as a new course so that the existing number can be reused for another course. There is a change to the course title (from Modern Hydrologic Techniques to Hydrometeorology) and catalog description for this course to more clearly communicate the content of the course to students.

Course Description: (Not to exceed 80 words and language should conform to catalog copy.)
Analyses of hydrologic processes closely linked to the atmosphere: evaporation, evapotranspiration, precipitation, and snowmelt. Penman and Penman-Montieth evaporation models, the eddy covariance method for land-atmosphere vapor and energy fluxes, atmospheric rivers and their impact on California water resources.

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 130 or CE 131 and ENGR 115.

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):
Seminar

Seminar Classification
CS#05 - Seminar (K-factor=1 WTU per unit)
Seminar 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."
After successfully completing this course, you will be able to:

1. Sketch temperature and wind speed profiles in the atmosphere incorporating the effects of atmospheric stability
2. Apply the technique of eddy covariance to determine energy and vapor fluxes
3. Identify and quantify different components of a surface energy budget
4. Use and compare different methods for quantifying evaporation such as the Penman and Penman-Montieth models
5. Analyze atmospheric rivers and their impacts on California water resources
6. Compare methods for seasonal water supply forecasting
7. Summarize and critique a journal article in the area of hydrology

Attach a list of the required/recommended course readings and activities:
CE_231_Syllabus_20210924.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.
Homework Assignments (ELO's 1-6)
Exams (ELO's 1-6)
Project (ELO 7)

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

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?

Yes

Indicate which department(s) will be affected by the proposed course:

Department(s)
Civil Engineering

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

Graduate (Masters) Learning Goals:

Critical thinking/analysis
Communication
Information literacy
Disciplinary knowledge
Professionalism

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

Is this a Graduate Writing Intensive (GWI) course?

No

Reviewer Comments:

Janett Torset (torsetj) (Mon, 13 Sep 2021 21:16:42 GMT): Rollback: Rolled back at the request of the department.

Key: 14322