

ME 123: WIND, HYDRO AND OCEAN ENERGY

In Workflow

1. ME Committee Chair (akuma@csus.edu)
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3. ECS College Committee Chair (troy.topping@csus.edu)
4. ECS Dean (kevan@csus.edu)
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11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Wed, 17 Apr 2019 19:41:49 GMT
Akihiko Kumagai (akuma): Approved for ME Committee Chair
2. Wed, 17 Apr 2019 19:44:05 GMT
Akihiko Kumagai (akuma): Approved for ME Chair
3. Fri, 19 Apr 2019 20:41:09 GMT
Troy Topping (troy.topping): Approved for ECS Committee Chair
4. Fri, 26 Apr 2019 23:56:39 GMT
Kevan Shafizadeh (kevan): Approved for ECS Dean
5. Wed, 08 May 2019 15:02:02 GMT
212408496: Approved for Academic Services
6. Wed, 15 May 2019 19:02:43 GMT
Katherine Chalmers (chalmers): Rollback to Initiator
7. Tue, 27 Aug 2019 16:40:29 GMT
Akihiko Kumagai (akuma): Approved for ME Committee Chair
8. Tue, 27 Aug 2019 16:41:40 GMT
Akihiko Kumagai (akuma): Approved for ME Chair
9. Fri, 30 Aug 2019 17:25:05 GMT
Troy Topping (troy.topping): Approved for ECS College Committee Chair
10. Fri, 30 Aug 2019 17:31:53 GMT
Kevan Shafizadeh (kevan): Approved for ECS Dean

Date Submitted: Mon, 12 Aug 2019 16:06:38 GMT

Viewing: ME 123 : Wind, Hydro and Ocean Energy

Last edit: Mon, 12 Aug 2019 16:06:36 GMT

Changes proposed by: Dongmei Zhou (102063583)

Contact(s):

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Catalog Title:

Wind, Hydro and Ocean Energy

Class Schedule Title:

Wind, Hydro and Ocean Energy

Academic Group: (College)

ECS - Engineering & Computer Science

Academic Organization: (Department)

Mechanical Engineering

Will this course be offered through the College of Continuing Education (CCE)?

Yes

Please specify:

CCE and Stateside

Catalog Year Effective:

Spring 2020 (2019/2020 Catalog)

Subject Area: (prefix)

ME - Mechanical Engineering

Catalog Number: (course number)

123

Course ID: (For administrative use only.)

201472

Units:

3

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:

Update the prerequisite from ENGR132 and ENGR124 to ME120 and ENGR124
Update expected learning outcome #1 that was not commented as "not measurable"

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

Exploring sustainable energy and power generation, through study of wind, hydro and ocean energy systems, including the characterization, theory, operation, analysis, modeling, planning impacts and design process.

This Form A needs to be approved in parallel with the approval of the Form A for ME 120.

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 124 and ME120.

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):

Lecture

Lecture Classification

CS#02 - Lecture/Discussion (K-factor=1WTU per unit)

Lecture 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."

Students will be able to:

- 1) Describe mechanisms and operations of wind, hydro, and ocean energy conversion to electricity systems
- 2) Formulate, solve and analyze problems associated with wind (land, off-shore, airborne), hydro (large and small scale), and ocean (wave, tide, current, saline) energy systems
- 3) Assess the sustainability value and importance of wind, hydro and ocean energy through their system performance, efficiency, economics and environmental impacts
- 4) Connect the mechanisms of electricity generation using turbomachinery to alternative renewable energy sources discussed in this course –wind, hydro, and ocean

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 (ELOs 1-4)

Quizzes (ELOs 1,3,4)

Projects, report and presentation (ELOs 1-4)

Exams (ELOs 1-4)

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
Personal and social responsibility
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

Reviewer Comments:

212408496 (Wed, 08 May 2019 15:01:59 GMT):Fall 2019 CMS Entry deadline has passed. Effective term changed to next available, Spring 2020.

Katherine Chalmers (chalmers) (Wed, 15 May 2019 19:02:43 GMT):Rollback: Expected Learning Outcome #1 is not measurable as written.

Key: 3302