

EEE 143: POWER SYSTEM LABORATORY

In Workflow

1. EEE Committee Chair (pheedley@csus.edu)
2. EEE Chair (mahyar.zarghami@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 (w lindsey@csus.edu)
11. PeopleSoft (PeopleSoft@csus.edu)

Approval Path

1. Fri, 09 Apr 2021 22:32:29 GMT
Perry Heedley (pheedley): Approved for EEE Committee Chair
2. Sat, 08 May 2021 00:53:59 GMT
Mahyar Zarghami (mahyar.zarghami): Approved for EEE Chair
3. Fri, 17 Sep 2021 17:21:05 GMT
Mohammed Eltayeb (mohammed.eltayeb): Approved for ECS College Committee Chair
4. Fri, 17 Sep 2021 17:36:47 GMT
Behnam Arad (arad): Approved for ECS Dean

History

1. Feb 28, 2021 by Mahyar Zarghami (mahyar.zarghami)

Date Submitted: Fri, 09 Apr 2021 22:32:11 GMT

Viewing: EEE 143 : Power System Laboratory

Last approved: Mon, 01 Mar 2021 04:40:13 GMT

Last edit: Sat, 24 Apr 2021 01:33:14 GMT

Changes proposed by: Mahyar Zarghami (214200923)

Contact(s):

Name (First Last)	Email	Phone 999-999-9999
Mahyar Zarghami	mahyar.zarghami@csus.edu	916-278-7113

Catalog Title:

Power System Laboratory

Class Schedule Title:

Power System Laboratory

Academic Group: (College)

ECS - Engineering & Computer Science

Academic Organization: (Department)

Electrical and Electronic 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)

EEE - Electrical and Electronic Engineering

Catalog Number: (course number)

143

Course ID: (For administrative use only.)

126926

Units:

1

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:

Based on the proposed changes, EEE 130 is removed from the list of prerequisites and EEE 142 maybe taken concurrently instead.

The EEE department is changing an upper division course for the EEE major requirement through a Form B. (EEE141 is now a major requirement while EEE130 is now an elective). Other electives related to the power area for EEE department should be looked into for possible changes as well.

We have revised the contents of EEE 143 based on the modifications made to EEE 141, EEE 142, and EEE 130. Based on this, EEE 130 will no longer be required as a prerequisite for this lab.

The new pre-requisite will be: EEE142, which may also be taken concurrently.

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

Simulation and measurements on single-phase and three phase circuits, power generation, paralleling, and integration of multiple generation systems, transmission line operations including voltage regulation and line compensation.

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:

EEE 142 (EEE 142 maybe taken concurrently) and (WPJ score of 70+, or at least a C- in ENGL 109M or ENGL 109W).

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

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."

After completion of this course, students will be able to:

1. Test and compare hands-on experiments with simulations related to measurement of electrical quantities such as: voltage, current, resistance, inductance, capacitance, real and reactive power in single-phase and three-phase systems.
2. Test and compare hands-on experiments with simulations regarding integration of multiple power generation sources with the grid.
3. Develop transmission line operations including voltage regulation and line compensation through scaled down utility system and/or other proper simulation platforms.

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

EEE 143 Course Outline_ABET - Schedule.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.

- Exams (ELOs 1-3)
- Lab reports (ELOs 1-3)
- Participation and teamwork (ELOs 1-3)

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
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: 1690