Fall 2025

College of the Redwoods

Course Information

Semester & Year: Fall 2025

Course ID & Section #number: CT-33-E9099

Instructor's name: Robert Satava

Day/Time of required meetings: Tuesday 6:05pm-9:15pm

Location: HU112

Number of proctored exams: 2

Course units: 3

Instructor Contact Information

Office location: N/A

hours: N/A

Phone number: N/A

Email address: robert-satava@redwoods.edu

Required Material

Required Textbook: *Photovoltaic Systems, 3rd edition,* by James P. Dunlop

Catalog Description

A course designed to provide students with essential information and training to work with residential solar photovoltaic systems including providing fundamentals of AC/DC, the National Electric Code, and principles of a residential solar photovoltaic systems. The course content is aligned with the North American Board for Certified Energy Practitioners (NABCEP) PV Entry Level Exam. Students will be given the opportunity to sit for the NABCEP exam at the conclusion of the course.

Course Student Learning Outcomes

- Conduct a solar site analysis to determine if a site is appropriate for a solar photovoltaic (PV)system installation.
- Properly size and calculate the cost of a solar photovoltaic system with regards to electrical load, solar resource data and type of solar system.
- Identify building codes specific to solar photovoltaic (PV) systems.

Course Calendar

Date	Topic	What's Due
8/26	Welcome to class/ Course Introduction	
9/2	Introduction to Photovoltaic Systems	Read chapter 1 complete quiz on Canvas
9/9	Solar Radiation	Read chapter 2 complete quiz on Canvas
9/16	Site Surveys and Preplanning	Read chapter 3 complete quiz on Canvas and review site survey worksheet and analysis
9/23	System Components and Configurations	Read chapter 4 complete quiz on Canvas
9/30	Cells, Modules, and Arrays	Read chapter 5 complete quiz on Canvas
10/7	Batteries	Read chapter 6 complete quiz on Canvas and review battery worksheet
10/14	Mid Term Exam Review	Discussions and review of Mid Term material
10/21	Midterm Exam 6:05p-8:05p (In-class)	*Final day to turn in worksheets
10/28	Charge Controllers	Read chapter 7 complete quiz on Canvas
11/4	Inverters	Read chapter 8 complete quiz on Canvas
11/11	System Sizing	Read chapter 9 complete quiz on Canvas
11/18	Mechanical Integration	Read chapter 10 complete quiz on Canvas
11/25	Fall Break – No Classes	
	Electrical Integration	Read chapter 11 complete quiz on Canvas

Date	Topic	What's Due
12/9	Final Exam Review	Discussions and review of Final material
12/16	Final Exam 6:05p-8:05p (In-class)	

Evaluation & Grading Policy

Student Contribution

Students are expected to spend time reading assigned material, answering chapter review questions, and studying for tests as necessary outside of normal class time. Attendance is critical in this course. Lectures may contain material not included in the textbook and students will be responsible for this material. The student will be expected to participate in all lectures, preferably as “interactive aides”, but minimally as “active listeners”. Each student is responsible for all material presented in this course regardless of class attendance. Students will be expected to adhere to the College of the Redwoods Student Code of Conduct and Discipline at all times.

Course Participation Policy

In every occupation participation is critical and this course is no different. Everyone has a task and something to contribute, we all depend on each other in order to realize our goals. In order to fully participate, students must be present and actively engaged in whatever the current task is. Punctuality is an important part of participation. If someone is late for work, it not only reflects poorly on their character, it puts the entire process behind schedule. Absences may be excused for medical reasons and some family related reasons such as a death in the immediate family. Any student seeking an excused absence should be able to provide proof of their reason for absence prior to the absence being excused.

Attendance is required: 10 points for each class attended (0 points if class is missed, 5 points if you are late or leave early)

Assignments/Exams

Assignments and exams are to be completed as assigned. Assignments and exams are posted in Canvas with a description of how to complete the assignments and when it is due. If there are questions about the requirements for any assignment or exam, it is the student’s responsibility to seek clarification from the instructor. There will be no

substitutions for assigned course work, as a general rule.

Late and/or Missing Work

By default, all late and missing work is the responsibility of the student and should be completed as assigned. The instructor assumes no obligation to offer make-up work or any type of alternative arrangement for late and/or missing assignments.

Missed Assignments/Exams

Some assignments and exams can only be completed if students are in class. If a student must miss a class, for any reason, their ability to make up the missed assignment is up to the discretion of the instructor. If a student must miss an exam, it is their responsibility to notify the instructor PRIOR to the scheduled exam. A student's ability to make up a missed exam is mostly dependent on how much notice the instructor is given. The process for makeup exams entails students making an appointment with the Testing Center at the Academic Support Center in the Learning Resource Building on campus. The exam must be made up prior to the post exam review that follows the original exam date. Typically, an exam is scheduled on a certain day and the following week the exam is returned to students and a post exam review is held in class. Therefore, typically, a makeup exam must be completed either before, or within a week of, the original exam date.

Drug and Alcohol Policy

Being under the influence of drugs or alcohol during class is unacceptable and is a violation of the student code of conduct. Any student suspected of being under the influence of drugs or alcohol will be asked to leave. Further action may include referral to the Chief Student Services Officer and/or removal from the program.

Prerequisites / Co-requisites / Recommended Preparation

None

Educational Accessibility & Support

College of the Redwoods is committed to providing reasonable accommodations for qualified students who could benefit from additional educational support and services. You may qualify if you have a physical, mental, sensory, or intellectual condition which causes you to struggle academically, including but not limited to:

- Mental health conditions such as depression, anxiety, PTSD, or bipolar disorder
- Common ailments such as arthritis, asthma, diabetes, autoimmune disorders and diseases
- Temporary impairments such as a broken bone, recovery from significant surgery, or a pregnancy-related disability
- Neurodevelopmental disorders such as a learning disability, intellectual disability, autism, acquired brain injury, or ADHD
- Vision, hearing, or mobility conditions

Available services include extended test time, quiet testing environments, academic assistance and tutoring through the **LIGHT Center (https://www.redwoods.edu/services/sass/light.php)**, counseling and advising, alternate formats of course materials (e.g. audio books or E-texts), assistive technology, learning disability assessments, approval for personal attendants, interpreters, priority registration, on-campus transportation, adaptive physical education and living skills courses, and more. If you believe you might benefit from disability- or health-related services and accommodations, please contact **Student Accessibility Support Services (SASS) (https://www.redwoods.edu/services/sass/index.php)**.

If you are unsure whether you qualify, please contact SASS for a consultation: **@redwoods.edu (mailto:SASS@redwoods.edu)**.

SASS office locations and phone numbers

Eureka campus

- Phone: 707-476-4280,
- Locations: Student Services building, first floor SS113

Del Norte campus

- Phone: 707-465-2353
- Location: Main building, near the Library

Klamath-Trinity campus

- 707-476-4280