

COURSE SYLLABUS

DIVISION: Workforce Services

Revised: January 2015

CURRICULA IN WHICH COURSE IS TAUGHT: Alternative Energy Career Studies Certificate

COURSE NUMBER AND TITLE: ENE 195 – Introduction to Battery Technology (2 Credits)

CREDITS: 2

HOURS/WEEK LECTURE: 2 / 4

HOURS/WEEK LAB: 2

LECTURE/LAB COMBINATION: 2 (0)

I. CATALOG DESCRIPTION: Course covers the need for renewable energy in today’s world, depletion of fossil fuels, battery overview, history, theory, types and chemistry, cell charging and discharging, battery management systems, communication systems, electric vehicles, solar and other applications.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES IN WHICH IT IS TAUGHT:
 Courses provides the opportunity for students to learn the history of renewable energy in today’s world.

III. REQUIRED BACKGROUND: None

IV. COURSE CONTENT / COURSE OUTLINE:

- Need for renewable energy in today’s world
- Depletion of fossil fuels
- Battery Overview safety, history and theory
- Battery types and Chemistry
- Cell charging
- Cell discharge testing
- Battery management systems
- Communication systems
- Electric Vehicles, solar and other application

VI. LEARNER OUTCOMES:

VI. EVALUATION:

Upon completing the course, student will be able to Assemble advance technology lithium batteries Conduct quality testing Wire battery management electronics Charge lithium batteries with various chargers	Combination of attendance, participation, quizzes, homework, projects and test
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Conduct battery discharge capacity tests Wire battery packs together Test to troubleshoot and repair batteries, chargers and electronic control boards.	
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The course supports the following competencies and objectives:

DCC Educational Objectives

1. Communication
2. Critical Thinking
3. Computational and Computer Skills
4. Understanding Culture and Society