

**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