



Electricity and Renewable Energy Syllabus

Course Fees

Instructor: Amy L. England

Student Organization Fee \$17.00

Office Phone: 757-874-4444 (ext. 5534)

Uniform Shirt- Flame resistant- \$48.00

Office Hours: 10:00am-11:00am

Total Cost **\$65.00**

Email: amy.England@nhrec.org

Course: Electricity and Renewable Energy (Course #8533 and #8534)

Campus: Woodside Lane Campus

Textbook: NCCER Electrical 9th Edition (Pearson)

[National Electrical Code® \(NEC®\)](#)

All of this information can be found at <http://www.cteresource.org/verso/>

Course Description:

Electricity and Renewable Energy is a 1-year program that teaches the basic concepts used by electricians to install premises wiring, devices, fixtures, and power equipment, as well as maintain and troubleshoot wiring installations. Students will learn to navigate the [National Electrical Code® \(NEC®\) Code](#) in order for students to be in full compliance with local and national codes. This program has an operational lab that will provide a hands-on approach to real world wiring methods performed today. Students in this program will also explore alternative renewable energy sources and will learn about hydrogen fuel cells, solar panels, and wind generators. This program is part of the National Center for Construction Education and Research. As the demand for electricity grows, so do the needs for alternative renewable energy resources. Therefore, the need for further career opportunities in this field also increases. Since we depend so much on electricity and other energy sources for the way we live and work, careers in this field will always be in high demand.

Instructional Philosophy:

In this course we will be utilizing the following forms of instruction

- Classroom lecture and discussions
- Labs- hands on activities
- Quizzes and tests
- Videos and PowerPoint presentations
- Internet research
- Guest Speakers from Industry

Prerequisites:

The prerequisites for this course are the completion of Algebra 1 and English 10 with a grade of “C” Or better.

Length of course: 1-year program

Evaluation Methods:

- Related Instruction:** (33%) [Theory](#)
- Employability Skills:** (34%) [Readiness to Work](#)
- Competencies:** (33%) [Demonstrated Skills](#)

Assessment Plan:

Grades for this course will be based on the following levels of performances:

Grade Performance Standards

- A 90-100
- B 80-90
- C 70-79
- D 60-69
- F 0-59

****LATE ASSIGNMENTS WILL NOT BE ACCEPTED!!!!****

Employability Rubric:

Students will be graded weekly on employability skills. They will be expected to be professional; as would be required in the field. Points will be deducted for **each** occurrence which may reflect in their weekly grade!

Workforce Wednesday Assignment= 20 pts

Unexcused Absence= 10 pts

Insubordinate Behavior= 10 pts

Phones Out= 5 pts

Participation= 5 pts

PPE= 5 pts

Work Shirt (On required days only TBD)= 5 pts

Tardy/ Leaving Early without Permission= 5 pts

Inappropriate Language= 5 pts

OSHA 10:

*Students will be required to successfully obtain their OSHA 10 Certification before participating in any hands-on activities in the lab.

NCCER Accreditation:

*Students will be proctored for each NCCER module test. Successful completion of each module testing with a final average score of 70% or better will receive the Level 1 NCCER accreditation.

Attendance:

The Attendance Policy is outlined in the Student Code of Conduct Manual. (**PLEASE READ**)

Classroom rules and regulations:

Follow the Students code of conduct (Students Rights and Responsibilities Handbook)

Students should be on time

No talking during the teacher or guest speaker's presentation

No cell phones or other electronic device use in the classroom (unless given explicit approval by the instructor.)

Students will be required to maintain a 3-ring binder (provided by NHREC)

Students will be respectful to others at all times

Students will be required to wear PPE while working in the Lab

Student must bring their Chromebooks, 3- ring binder, loose leaf paper, and writing utensils everyday

Related competencies are available on the CTE Resource Website listed above.

Virginia's All Aspects of Industry—Planning Management, Finance, Technical and Production Skills, Underlying Principles of Technology Labor Issues, Community, Health, Safety, and Environmental Issues.

Virginia's Workplace Readiness Skills—Demonstrate reading skills, math skills, writing skills, speaking and listening, and computer literacy on a level required for employment in chosen trade. Reasoning, problem solving, and decision-making. “Understanding the big picture”: strong work ethic, positive attitude, independence, initiative, self-presentation skills, satisfactory attendance, and participating as a team member to accomplish goals.

Career Opportunities:

- Electrician
- Maintenance Technician
- Solar Power Technician
- Hydrogen Power Technician
- Telecommunication Tech
- Security System Technician
- Audio Video Technician
- Fire Alarm Technician
- Project Management
- Sole Proprietor

******Students driving to New Horizons must purchase a parking decal for \$25.00. Students will be sent home a parking decal form to complete. Make sure to send current registration and current insurance card to be copied and placed in file. Lost decals are \$15.00 replacement fee and temporary decals for one day are \$2.00.***