



Electricity Level 1 Syllabus

Mr. Woolard

Course Title: Electricity 1

Course No.: 8533

Course Description:

Electricity 1 is an introduction to the electrical industry and prepares students for the construction work force as well as giving practical experience to those going onto college pursuing an engineering degree. This program opens many doors of opportunity for the student who applies himself. Students are taught basic fundamentals used in real world situations. Students hone their skills using hands on experience through the use of materials, tools and equipment. Students may have the opportunity to visit and work at actual job sites. The new technology available to all students at the Northern Neck Technical Center will be used on a daily basis.

Instructional Philosophy:

Student will be given the responsibility to create and maintain residential wiring booth for course study assignments throughout the school year. Student must pass the NCCER Core Curriculum and Electricity Level 1 with an average of 70% or better to receive apprenticeship credit through NCCER.

Student Learning Goals:

To emphasize the importance of learning all the basic wiring involved in residential wiring and to enhance technical reading, writing, and speaking skills to improve employment opportunities.

To sharpen student math skills in the classroom which will prepare them for real life situations. Each student will be given an opportunity to use real life applications for the math learned in the academic setting. Their laptop will blend academic and technical information in a rigorous and relevant setting.

Assessment Plan:

Students will be given National Accredited exams through the NNCER Core Curriculum and Electricity Level 1 with a 70% minimum passing credit toward electrical apprenticeship.

Inspection of student work sheets will be assessed for the wiring in booths to include 1-line and schematics.

Each student must keep all assignments, inspection sheets, and handouts in a three-ring binder to be graded. Participation and cooperation in a "team environment" will also be assessed.

Student Organizations:

SkillsUSA

A national nonprofit organization serving teachers and preparing high school students for careers in trade, technical and skilled service occupations. Students compete on district, state and national levels. Students must be prepared with a resume, leadership skills and responsibility.

Competencies:

The VA Department of Education provides task lists (called Student Competency Records) for all technical courses taught statewide which may be accessed by going to the following site: www.cteresource.org/verso2/search Course ED numbers are indicated below each course listing.

GRADING SCALE:

A= 91-100

B= 81-90

C= 71-80

D= 61-70

F= 60 and below

COURSE REQUIREMENTS: final grade is based on:

Employability Skills	40%
Quizzes	10%
Tests	30%
Competency/Classwork	<u>20%</u>
Total	100%

Basic Skill Chart

The *Basic Skills Chart* has been designed to identify the components in the *Electricity Level!* textbook and instructor's resource that specifically encourage the development of basic Academic Skills. The academic areas addressed in the chart include reading, writing, verbal (other than reading and writing), math, science, and analytical.

- Reading* activities include assignments designed to improve comprehension of information presented in the chapter. Some are designed to improve understanding of vocabulary terms.

- Writing* activities allow students to practice composition skills, such as letter writing and informative writing.

- Verbal* activities encourage students to organize ideas, develop interpersonal and group speaking skills, and respond appropriately to verbal messages. Activities include oral reports and interviews.

- Math* activities require students to use basic principles of math, as well as computation skills, to solve typical problems.

- Science* activities call for students to use fundamental principles of science to solve typical problems.

- Analytical* activities involve the higher-order skills needed for thinking creatively, making decisions, solving problems, visualizing information, reasoning, and knowing how to learn.

Activities are broken down by chapter, and a page number is given to locate the activity

Syllabus: Electricity I

Week	Topics or Units Taught	Week	Topics or Units Taught
1.	Collect Fees, Code of Conduct / School and Classroom Rules.	19.	Module #26101, Electrical Safety review and test. Residential Wiring Projects.
2.	Collect Fees, General classroom SAFETY, Review handouts & Parent/Student handbook, etc.	20.	Module #26103, Fasteners and Anchors review. Residential Wiring Projects.
3.	Collect Fees, Core #00101, Basic Safety Complete Parent/Student handbook review	21.	Module #26103, Fasteners and Anchors review and test. Material identification & quizzes.
4.	Collect Fees, Introduction to materials, basic hand tools Residential wiring projects. Test on Core #00101.	22.	Module #26104 Electrical Theory I. Residential Wiring Projects. Material identification & quizzes.
5.	Core #00102 Math and Material identification of devices test. OSHA #500 Course	23.	Module #26104 Resistance, electrical power equations practice and review. Test on Module.
6.	Core #00102 Basic Math / Residential Wiring projects in Notebooks. Material identification & quizzes.	24.	Module #26105 Electrical Theory II series / parallel circuits breadboards. Apply Ohm's Law.
7.	Core #00103, Introduction to Hand tools & tools used in the trade. OSHA #500 Course	25.	Module #26105 Electrical Theory II Kirchoffs Voltage law circuit analysis. Residential Wiring Projects.
8.	Core #00104, Intro to Power Tools. Material identification & quizzes.	26.	Module #26105 review and Module Test. Material identification & quizzes.
9.	Core #00104, review and test. Material identification & quizzes. OSHA #500 Course	27.	Module #26106, Electrical Test equipment & Hands-on use Equipment & Residential Wiring. Residential Wiring Projects.
10.	Residential Wiring Projects in Notebooks. Material identification & quizzes.	28.	Module #26106 review and test. Material identification & quizzes.
11.	Core #00105, Intro to Blueprints. OSHA #500 Course	29.	Module #26107 Intro to "National Electrical Code"
12.	Core #00105 Review Blueprint Reading. Test on Core Blueprint Reading. Material identification & quizzes.	30.	Module #26107 & Residential Wiring Projects. Material identification & quizzes.
13.	Core #00106, Basic Rigging. Review. Residential Wiring Projects in Notebooks. Complete OSHA #500 Course	31.	Module #26107 review and Module Test.
14.	Core #00106 Test. Residential Wiring Projects. Residential Wiring Projects.	32.	Module #26108 Raceways, boxes, and fitting Residential wiring Projects.
15.	Core #00107 Basic Communication Skills. Residential Wiring Projects.	33.	Mod #26108 review / test. Material identification & quizzes.
16.	Core #00108, Basic Employability Skills.	34.	Module #26102, Hand Bending review. Residential Wiring Projects. Material identification & quizzes.
17.	Prep for Exams.	35.	Module #26102, Hand Bending review and test. Residential Wiring Projects.
18.	End of semester review / Exam prep	36.	Practical Exam / year-end review.
End of First Semester Exam		End of Second Semester Exam	

Student's Signature

Parent's or Guardian's Signature