

Electrical Trade Specialty: Scope & Sequence

Semester 1

ELE101- Electrical Trade Specialty I
(90 days: 42 class, 48 lab - 53% Lab)

District Pre-Assessment

Welcome Week (3 days - 3 class)

- Pearson, Canvas & Gradebook Overview
- NCCER & Certifications Overview
- Classroom, Lab Safety & PPE Requirements
- SkillsUSA Overview
- District pre-assessment (week 2)

Unit 1 - NCCER Core Construction (50 days - 20 class, 30 lab)

Introduction to Basic Construction Skills

- Build Your Future in Construction (M100)
- Basic Safety (M101)
- Construction Math (M102)
- Hand Tools (M103)
- Power Tools (M104)
- Construction Drawings (M105)
- Basic Rigging (M106)
- Communication Skills (M107)
- Employment Skills (M108)
- Material Handling (M109)

Leadership Skills: SkillsUSA Officer Elections and Training,
Chapter Meetings, SkillsUSA Fall Leadership Conference

Technical Standards: 1.1-17, 2.1-10, 3.1-4

ADE Professional Skills: 1. A-D, 2. A-C, 4. A-F, 7. A-C

ADE Academic Standards: ELA.11-12.W.4-W5, ELA.11-12.SL.4,
ELA.11-12.L.4, 5.NF.B.3, 6-7

Work-Based Learning: Industry Guest Speaker, Simulated Lab
Experience, Career Exploration

Certifications: NCCER Core, Lockout/Tagout (LOTO)

Optional Training: CPR/First Aid

Unit 2 - NCCER Electrical Level 1 (37 days - 19 Class, 18 Lab)

- The Electrical Industry (M1)
- Safety for Electricians (M2)
- Introduction to Electrical Circuits (M3)
- Electrical Theory (M4)
- National Electrical Code ((M5)
- Outlets, Devices, Pull and Junction Boxes (M6)
- Hand Bending (M7)

CTSO Integration (Leadership Skills): SkillsUSA Chapter Meetings,
Fundraiser, Fall Leadership Conf., Regionals Prep

Technical Standards: 1.1-1.17, 4.1-4.9, 5.1-5.10, 6.1-6.6

ADE Professional Skills: 3. A-E, 4. A-F, 2. A-C

ADE Academic Standards: ELA. 11-12. W. 4, ELA.11-12.SL.4,
ELA.11-12.L.4

Work-Based Learning: Industry Guest Speaker, Simulated Lab
Experience, Career Exploration

Semester 2

ELE102-Electrical Trade Specialty II
(90 days: 36 class, 54 lab - 60% Lab)

District Semester Assessment

Unit 2 - NCCER Electrical Level 1 Cont. (24 days - 10 Class, 14 Lab)

- Wireways, Raceways, and Fittings (M8)
- Conductors and Cables (M9)
- Electrical Construction Documents (M10)
- Residential Wiring (Rough In/Trim Out) (M11)
- Electrical Test Equipment (M12)

CTSO Integration (Leadership Skills): SkillsUSA Regionals

Technical Standards: 1.1-1.15, 2.1-2.10, 3.1-3.10, 5.1-5.10,
6.1-6.6

ADE Professional Skills: 1. A-D, 5. A-E, 6. A-C, 8. A-I

ADE Academic Standards: ELA.11-12. L.4, ELA.11-12.SL.5

Work-Based Learning: Industry Guest Speaker, Simulated Lab

Certification: NCCER Electrical 1

Certification: Fluke Digital Multimeter

Certification: OSHA-10

Unit 3 - NCCER Electrical Level 2 (38 days - 18 Class, 20 Lab)

- Alternating Current (M1)
- Motors (Theory/Application) (M2)
- Electric Lighting (M3)
- Conduit Bending (M4)
- Pulls and Junction Boxes (M5)
- Conductor Installations (M6)
- Underground Installation

CTSO Integration (Leadership Skills): SkillsUSA Regionals

Technical Standards: 1.1-1.15, 2.1-2.10, 3.1-3.10, 4.1-4.9,
5.1-5.10, 6.1-6.6

ADE Professional Skills: 1. A-D, 5. A-E, 6. A-C, 8. A-I

ADE Academic Standards: ELA.11-12. L.4, ELA.11-12.SL.5

Work-Based Learning: Industry Guest Speaker, Simulated Lab

Unit 4 - Final Capstone Project (28 days - 8 Class, 20 Lab)

District Post Assessment, ADE Technical Skills Assessment

- Capstone Project (Site-based)
- Career Preparation
- Mock Interviews
- Resumes

CTSO Integration (Leadership Skills): SkillsUSA State Conference

Technical Standards: 1.1-1.15, 2.1-2.10, 3.1-3.10, 4.1-4.9,
5.1-5.10, 6.1-6.6

ADE Professional Skills: 2. A-C, 3. A-E, 4. A-F

ADE Academic Standards: ELA.11-12.W.4, ELA.11-12.L.4,
ELA.11-12.SL.4, 7.EE.A.2

Work-Based Learning: Industry Guest Speaker, Job Application,
Mock Interview, School-Based Enterprise