ENERGY CAREER ACADEMY FRAMEWORK GRADE 12

THEME: Skilled Energy Technician Skills and Selecting a Career Path
CREDENTIALS: OSHA-10 Certification, SkillsUSA Career Essentials: Advanced Experiences Micro-credential

MODULE 1: Introduction to Hand & Power Tools

Curriculum Source: CEWD
Please contact Julie Strzempko at julie@cewd.org to receive instructor and student materials.
Total Instructional Time: 20 hours
*Lab environment and hand/power tools required

Identify specific hand and power tools used in generation, transmission, and distribution.

1. Hand Tools: Screwdrivers--Flat and Phillips Head; Hammers; Wrenches; Pliers and Cutters--Water Pump, Needle Nose, Angled Cutting, Shear Cut Cutting; Files, Chisels, and Punches; Rulers and Measuring devices; Hand Saw; Meters; Insulation; Single Phase Analyzers

2. Power Tools: Power Hammers; Drills and Threaders; Punches; Hydraulic Hammers; Hydraulic Jack; Air Hammers; Power Nail Guns; Power Circular Saws; Portable Belt Sanders; Portable Abrasive Wheels

MODULE 2: OSHA-10 Certification

Curriculum Source: Career Safe (approved OSHA provider—course designed specifically for youth)
https://campus.careersafeonline.com/index.k2
Total instructional and testing time: 10 hours
Cost: $25 per student; computer lab needed

1) Explain the OSH Act, the functions and resources of OSHA.
2) Discuss the OSHA inspection priorities and describe the inspection process.
3) Identify the rights and responsibilities of employers and employees under the OSH Act.
4) Identify the major hazards associated with general industry work and how to avoid, protect or control them.
   This includes:
   • Slips, trips, falls associated with walking and working surfaces
   • Effective Egress and fire protection program
   • Outline the general requirements for general safety standards
   • Flammable and combustible liquids and gasses
   • Hazards of chemicals
   • Electrical hazards
5) Recognize the value of personal protective equipment, usage and limitations.
6) Describe the basic elements of a safety and health program.
MODULE 3: GIE/Get Into STEM Group Project

**Curriculum Source:** CEWD

Please contact Julie Strzempek at julie@cewd.org to receive instructor and student materials.

**Total Instructional Time:** 10 hours

1) Work in teams to create a video around how all energy careers are STEM careers to post on Get Into Energy/Get Into STEM web site. Includes writing a script, devising props, etc.

MODULE 4: Career Essentials: Advanced Experiences

**Curriculum Source:** SkillsUSA

[https://www.careeressentials.org/implement/experiences/advanced-set/](https://www.careeressentials.org/implement/experiences/advanced-set/)

**Total Instructional Time:** 50 hours

**Cost:** $35 for students when the teacher is a SkillsUSA member or the students are SkillsUSA members; $65 for nonmembers

Covers a variety of employability skills: [https://www.careeressentials.org/define/](https://www.careeressentials.org/define/)

MODULE 5: Internship Curriculum

**Curriculum Source:** CEWD

Please contact Julie Strzempek at julie@cewd.org to receive instructor and student materials.

**Total Time:** Minimum of 40 hours

1) Participate in an internship with a local energy employer.
2) Keep a daily journal of learnings.
3) Evaluate how focusing on employability skills in the energy academy helped to prepare for the internship.