



9054

EXPLORATION OF ELECTRICAL
TRADES TECHNOLOGY (9)

15S/15E/15M

10S/10E/10M

An Electrical Trades Technology Course

9054: EXPLORATION OF ELECTRICAL TRADES TECHNOLOGY (9) 15S/15E/15M AND 10S/10E/10M

Course Description

This is an optional course intended for students wishing to sample the electrical trades. The emphasis is on hands-on activities. Students are introduced to safety, tools, and equipment for electrical/electronic systems.

Goal 1: Describe and apply **health and safety** practices.

GLO 1.1: Describe and apply **health and safety** practices.

- SLO 9.1.1.1: Identify safety and health requirements. (A2.1)
- SLO 9.1.1.2: Describe the importance of using personal protective equipment (PPE), and identify PPE and procedures related to PPE. (A2.2) (TSA 16)
- SLO 9.1.1.3: Outline the safety principles for working on and around electrical equipment. (A2.3) (TSA 18)
- SLO 9.1.1.4: Identify fire safety and outline workplace fire safety principles. (A2.4) (TSA 19)
- SLO 9.1.1.5: Recognize and control hazards. (A2.6)
- SLO 9.1.1.6: Identify the hazards in confined spaces and the preparation needed to work in a confined space. (A2.7) (TSA 20)
- SLO 9.1.1.7: Identify first aid/CPR. (A2.8)
- SLO 9.1.1.8: Explain the Workplace Hazardous Material Information System (WHMIS), and identify the safety requirements as they apply to WHMIS. (A2.9) (TSA 13)
- SLO 9.1.1.9: Identify and control hazards (A2.10)
- SLO 9.1.1.10: Create and maintain a safe and organized working environment.

GLO 1.2: Demonstrate awareness of electrical safety as it pertains to the ***Trade Safety Awareness Manual***.

No applicable SLOs.

Goal 2: Demonstrate the safe and appropriate **identification, selection, operation, maintenance, and management of equipment and tools.**

GLO 2.1: Demonstrate the safe and appropriate **identification, selection, operation, maintenance, and management of equipment and tools.**

SLO 9.2.1.1: Demonstrate the safe and appropriate identification, selection, and operation of equipment and tools.

SLO 9.2.1.2: Demonstrate the safe and appropriate maintenance and management of equipment and tools.

SLO 9.2.1.3: Demonstrate awareness of DC instruments.

Goal 3: Demonstrate the safe and appropriate **identification, selection, installation, maintenance, and management of devices and materials.**

GLO 3.1: Demonstrate the safe and appropriate **identification, selection, installation, maintenance, and management of devices and materials.**

SLO 9.3.1.1: Correctly identify devices and materials.

SLO 9.3.1.2: Maintain and manage devices and materials.

SLO 9.3.1.3: Interpret information (including colour) found on cables and conductors.

Goal 4: Demonstrate an understanding of **electrical theory (fundamentals).**

GLO 4.1: Demonstrate an understanding of **electrical theory.**

SLO 9.4.1.1: Demonstrate awareness of Ohm's law.

SLO 9.4.1.2: Demonstrate awareness of the theory behind and the differences between series and parallel circuits.

Goal 5: Demonstrate an understanding of the **design, layout, and interpretation of branch circuits and systems.**

GLO 5.1: Demonstrate an understanding of the **design, layout, and interpretation of branch circuits and systems.**

No applicable SLOs.

Goal 6: Demonstrate the procedures used to **install and terminate branch circuits and systems.**

GLO 6.1: Demonstrate the procedures used to **install and terminate branch circuits and systems.**

SLO 9.6.1.1: Construct circuits.

Goal 7: Demonstrate an understanding of the **testing, troubleshooting, and documentation of branch circuits and systems.**

GLO 7.1: Demonstrate an understanding of the **testing, troubleshooting, and documentation of branch circuits and systems.**

SLO 9.7.1.1: Troubleshoot circuits.

Goal 8: Describe and demonstrate the transferable **cross-curricular** knowledge and skills.

GLO 8.1: Read, interpret, and communicate information.

No applicable SLOs.

GLO 8.2: Apply the knowledge and skills from **mathematics.**

No applicable SLOs.

GLO 8.3: Apply the knowledge and skills from the **sciences.**

SLO 9.8.3.1: Describe fundamental terms such as current, voltage, resistance, and power.

GLO 8.4: Apply the knowledge and skills from **information and communication technology.**

No applicable SLOs.

Goal 9: Understand **career opportunities and working conditions.**

GLO 9.1: Describe **apprenticeship, education, career opportunities, professional organizations, and working conditions** related to electrical trades technology and associated fields.

No applicable SLOs.

Goal 10: Demonstrate awareness of **sustainability**.

GLO 10.1: Describe the impact of **human sustainability** on the health and well-being of tradespersons working in the electrical trades and those who use their services.

No applicable SLOs.

GLO 10.2: Describe the electrical trade's **sustainability practices and impact on the environment**.

SLO 9.10.1.1: Minimize wastage of materials.

GLO 10.3: Describe **sustainable business practices** within the electrical trades.

No applicable SLOs.

Goal 11: Demonstrate awareness of **ethical and legal standards** as they pertain to the electrical trades.

GLO 11.1: Demonstrate awareness of **ethical and legal standards**.

No applicable SLOs.

GLO 11.2: Demonstrate an understanding of **electrical codes**.

SLO 9.11.2.1: Demonstrate problem-solving skills.

GLO 11.3: Demonstrate respectful interactions with individuals of different **cultures**.

No applicable SLOs.

Goal 12: Demonstrate employability skills.

GLO 12.1: Demonstrate fundamental employability skills.

SLO 9.12.1.1: Demonstrate regular and punctual attendance.

SLO 9.12.1.2: Demonstrate the ability to communicate respectfully and effectively with teachers, supervisors, co-workers, and students.

SLO 9.12.1.3: Demonstrate accountability by taking responsibility for their actions.

SLO 9.12.1.4: Demonstrate adaptability, initiative, and effort.

SLO 9.12.1.5: Demonstrate teamwork skills.

SLO 9.12.1.6: Demonstrate the ability to stay on task and effectively use time in class and work environments.

SLO 9.12.1.7: Demonstrate the responsible use of wireless communication devices.

GLO 12.2: Demonstrate an awareness of cultural competence and its importance in the workplace.

No applicable SLOs.

GLO 12.3: Demonstrate an understanding of the business operation of an electrical trades facility.

SLO 9.12.3.1: Participate in classroom and workstation cleanup.

GLO 12.4: Demonstrate critical thinking skills in planning, procedures, analysis, and diagnosis.

SLO 9.12.4.1: Demonstrate an awareness of the need for critical thinking and problem solving.

Goal 13: Understand the evolution, technological progression, and emerging trends in the electrical trades.

GLO 13.1: Understand the evolution, technological progression, and emerging trends in the electrical trades.

No applicable SLOs.
