

Introduction to Exploratory Electronics

The purpose of the Introduction to Exploratory Electronics industry recognized certification is to challenge learners to design new circuits for innovative electronics products, such as those commonly found in modern households, and in doing so, solve typical electrical problems that may be encountered by electrical and electronics engineers. As learners explore and practice the skills needed to design and build electronics circuits, they will gain some of the basic knowledge of DC and AC circuits and semiconductors that would be required to become electronics or electrical engineers or technicians.

Industry Recognized Certification Topics

- Voltage
- Current
- Resistance
- Power
- Series and Parallel Circuits
- Electronic Components
- Test Equipment
- Circuits for indication, detection, measurement, and isolation
- Schematic Diagrams
- Building and testing electronic circuits
- Ohm's Law
- Total voltage, current, resistance, and power in a series and parallel circuit

Core Competencies

- Apply Ohm's Law to gain an understanding of voltage, current, and resistance
- Practice wiring and testing electronic circuits by connecting many different types of components, including passive types (such as resistors, capacitors, and inductors) and semiconductors (such as diodes, transistors, and thyristors)
- Learn to use electronic equipment, such as a digital multimeter, signal generator, and power supply
- Build electronic circuits, such as an amplifier and oscillator, to solve real-world problems

Equipment

- Multimedia presentation
- MindSight installation and user guide
- Exploratory Electronics training system
- IEC power cable (linecord)
- Digital multimeter
- 4 mm–2 mm safety measuring adapter
- 4 mm red safety lead, 500 mm long
- 4 mm blue safety lead, 500 mm long
- Electric motor and rotary disk set

