

National 4 Practical Electronics (Course Code: C760 74)

SCQF Level 4 (24 Credit Points)

Why study Practical Electronics?

Electronics is vital to everyday life in our society. It continues to be a major contributor to the economy. It is important to areas such as manufacturing, finance, telecommunications, oil extraction, weather forecasting and renewable energy.

This course gives you a broad practical introduction to electronics and its impact on society. You will learn a range of practical skills through projects and investigative tasks. You will develop analysis, evaluation and problem solving skills, and learn how to use a range of tools and equipment.

The skills you learn from this course are suitable for careers in a wide range of scientific or engineering fields.

Career Pathways

To see what career areas this subject could lead to and the routes to get there, download and view these career pathways:

[Communications and Media](#)

[Engineering](#)

[Garage Services](#)

[Manufacturing Industries](#)

[Performing Arts](#)

[Transport and Distribution](#)

What do I need to get in?

The school or college will decide on the entry requirements for the course. You would normally have achieved:

- Numeracy (SCQF Level 3)

What will I study?

This course aims to help you develop a range of technological skills. You will learn analysis and problem solving skills, circuit design, safe use of tools and equipment, and evaluation of electronics. You will also learn about key concepts in electronics, and how to apply these in a variety of contexts. And, you will develop an awareness of the impact of electronics on society and the environment.

The course has **three** compulsory units, plus an **added value** unit that assesses your practical skills.

Circuit Design (6 SCQF credit points)

In this unit you will:

- learn the basics of key electrical concepts and electronic components
- analyse straightforward electronic problems, and design solutions to these problems
- look at issues relating electronics to society and the environment.

Circuit Simulation (6 SCQF credit points)

In this unit you will:

- use simulation software to help you design, construct and test simple circuits and systems, and to investigate their behaviour.

Circuit Construction (6 SCQF credit points)

In this unit you will:

- assemble a range of simple electronic circuits, using permanent and non-permanent methods
- learn practical wiring skills and assembly techniques
- carry out basic testing and fault finding.

Added Value Unit: Developing an Electronic Solution (6 SCQF credit points)

In this unit you will:

- construct a simple electronics circuit, demonstrating safe working practices
- carry out a simple test on the circuit.

How will I be assessed?

Your teacher or tutor will assess your work on a regular basis throughout the course. Items of work might include:

- practical work – using simple software, carrying out testing
- written or oral work – writing a short report or verbally explaining your work to others.

You must pass all units to gain the course qualification.

Study Materials

What can I go on to next?

If you complete the course successfully, it may lead to:

- **National 5 Practical Electronics**

Further study, training or employment in:

- Communications and Media
- Electrical and Electronic Engineering
- Engineering
- Garage Services
- Manufacturing Industries
- Performing Arts
- Transport and Distribution