National 5 Practical Electronics (Course Code: C860 75)

SCQF Level 5 (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:

- **National 4 Practical Electronics**
- **National 4 Engineering Science**

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 comprises **three** areas of study.

Circuit Design

You will:

- learn about key electrical concepts and electronic components
- analyse electronic problems, and design solutions to these problems
- explore issues relating to electronics.

Circuit Simulation

You will:

- use simulation software to assist in the design, construction and testing of circuits and systems, and to investigate their behaviour.

Circuit Construction

You will:

- gain experience in assembling a range of simple electronic circuits, using permanent and non-permanent methods
- develop practical wiring skills and assembly techniques
- carry out testing and evaluating functionality.

How will I be assessed?

Course Assessment

The course assessment has **two** components **totalling 130 marks**:

- Component 1: question paper – worth 60 marks (scaled to 30 marks towards overall total)
- Component 2: practical activity – worth 70 marks.

For the practical activity you will be asked to solve an appropriately challenging electronics problem. This will be set by the Scottish Qualifications Authority (SQA). Your work will be assessed by a visiting SQA assessor.

The question paper will be set and externally marked by SQA.

The course assessment is graded A-D.

Study Materials

- SQA Past Papers Practical Electronics National 5
- SQA Specimen Paper Practical Electronics National 5
- SQA Understanding Standards Practical Electronics

- BBC Bitesize National 5 Practical Electronics

What can I go on to next?

Further study, training or employment in:

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