National 5 Design and Manufacture (Course Code: C819 75)

SCQF Level 5 (24 Credit Points)

Why study Design and Manufacture?

This course allows you to explore the multi-faceted world of product design and manufacturing. Creativity is at the heart of this course and its combination with technology makes it exciting and dynamic.

Design and Manufacture provides you with skills in designing and communicating design proposals, allowing you to refine and resolve your design ideas effectively. The course stresses the integration of designing and making, highlighting the close relationship between designing, making, testing, and refining design ideas.

The skills you learn in this course give you a broad range of potential for jobs or careers; in the expressive arts, mathematics, science, information technology, as well as in craft, design, engineering and graphics.

Career Pathways

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

Art and Design

Construction

Engineering

Health and Medicine

Manufacturing Industries

Teaching and Classroom Support

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 Design and Manufacture**

What will I study?

This course provides a broad practical introduction to design, and materials and manufacturing processes. You will develop design skills, as well as skills in making models, prototypes and products. And, you will look at the life cycle of a product; from idea through design, manufacture, and use, including its disposal or re-use. You will learn to appreciate the tensions that exist between factors such as aesthetics, function, economics and the environment.

The course comprises **two** areas of study.

Design

You will:

- study the design process from brief to design proposal
- develop skills in initiating, developing, articulating, and communicating design proposals
- gain an understanding of the design/make/test process and the importance of evaluating and resolving design proposals on an ongoing basis
- develop an understanding of the factors that influence the design of products.

Manufacture

You will:

- study the manufacture of prototypes and products
- develop practical skills in the design/make/test process
- gain an appreciation of the properties and uses of materials, as well as a range of manufacturing processes and techniques
- evaluate and refine design and manufacturing solutions
- gain an understanding of commercial manufacture.

How will I be assessed?

Course Assessment

The course assessment has **three** components **totalling 180 marks**:

- Component 1: question paper (80 marks) – comprising 2 sections, section 1 worth 60 marks and section 2 worth 20 marks
- Component 2: assignment – design (55 marks)
- Component 3: assignment – practical (45 marks).

For the design assignment component, you will develop a design proposal in response to a set brief. For the practical assignment component, you will then create your design prototype.

Assignment component 1 (Design) will be set and externally assessed by the Scottish Qualifications Authority (SQA). Assignment component 2 (Practical) will be assessed by your teacher and subject to verification by SQA.

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

The grade awarded is based on the total marks achieved across all course assessment components.

The course assessment is graded A-D.

Study Materials

- SQA Past Papers Design and Manufacture National 5
- SQA Specimen Paper Design and Manufacture National 5
- SQA Understanding Standards Design and Manufacture
- BBC Bitesize National 5 Design and Manufacture
- UShare Study Resources

What can I go on to next?

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

- **Higher Design and Manufacture**

Further study, training or employment in:

- Art and Design
- Construction
- Engineering
- Health and Medicine
- Manufacturing Industries
- Teaching and Classroom Support