

National 4 Design and Manufacture (Course Code: C719 74)

SCQF Level 4 (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.

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 3 Design and Technology**

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 to the design, manufacture, and use, including its disposal or re-use.

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

Design and Manufacture: Design (6 SCQF credit points)

In this unit you will:

- learn how to initiate, develop, explain and present simple design proposals
- learn about the design/make/test process
- appreciate the importance of evaluating and resolving work on an ongoing basis
- understand design concepts and the various factors that influence the design of products.

Design and Manufacture: Materials and Manufacturing (6 SCQF credit points)

In this unit you will:

- 'close the design loop' by manufacturing your design ideas
- develop the practical skills you need for the design/make/test process
- look at the properties and uses of materials, as well as simple manufacturing techniques

- refine and resolve design and manufacturing solutions.

Added Value Unit: Design and Manufacture Assignment (6 SCQF credit points)

In this unit you will:

- answer a straightforward product design brief
- produce a folio, a model or a prototype, or a completed product.

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 – creating ideas using computer software or by hand, keeping a portfolio of work
- written or spoken work – giving verbal presentations, producing short reports or taking part in group discussions
- projects or assignments – designing ideas for products in response to a brief.

You must pass both units plus the added value unit 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 Design and Manufacture**

Further study, training or employment in:

- Art and Design
- Construction
- Engineering
- Manufacturing Industries
- Science and Mathematics