

Design and Manufacture - National 4

The course is practical, exploratory and experiential in nature. It combines elements of creativity and designing for aesthetic or visual impact with a requirement to consider a product's function and performance. It helps the learner appreciate the tensions that exist between factors such as aesthetics, function, economics and the environment.

The aims of the course are to enable learners to develop:

- skills in the design and manufacturing of models, prototypes and products
- knowledge and understanding of manufacturing processes and materials
- an understanding of the impact of design and manufacturing technologies on our environment and society

Course structure: The course has two units and an Added Value Unit

Design unit:

Learners who complete this unit will be able to:

1. Identify factors that influence design and apply these in a simple design task
2. Develop and communicate design concepts for a simple design task
3. Evaluate an existing product

Materials and Manufacturing unit:

Learners who complete this unit will be able to:

1. Investigate materials for manufacturing tasks in a workshop context
2. Prepare for manufacturing tasks in a workshop context
3. Plan and implement a manufacturing sequence for a prototype
4. Review manufacturing processes and a finished prototype

Added Value unit: Design and Manufacture assignment:

Learners will apply skills from both of the units to produce an effective overall response to a brief.

Assessment method

To gain an award for this course, learners need to pass the "Design" and the "Materials & Manufacturing" units and the "Added Value" unit. Each unit is graded Pass or Fail.

