

DESIGN & MANUFACTURE: (HIGHER)

The pace of change in industry and society is constantly increasing due to the impact of new materials, processes and technologies. This course focuses on the design and manufacture of products for the market place and is designed to improve your knowledge of industrial manufacturing processes and materials. In addition you will develop understanding of the economic considerations and social implications of design and manufacture. You will be engaged in both creative and technological studies to help you develop a range of skills, including initiative, vision, flexibility and self-reliance.

Entry to the Course

This is at the discretion of the school/college but you would normally be expected to have attained one of the following

- National 5 Design and Manufacture.
- National 5 Art and Design.
- National 5 Practical Metalworking.
- National 5 Practical Woodworking.
- National 5 Graphic Communication.

Course Structure

This course has two mandatory Units:

Design and Manufacture: Design

Design and Manufacture: Materials and Manufacturing

Details of Course Assessment

The Course assessment will provide the basis for grading attainment in the Higher Design and Manufacturing Course awards. Course awards will be graded A to D, and will be based on the total score achieved in the Course assessment.

The Course assessment of the Higher Design and Manufacture Course will consist of two components:

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|---------------------|---|
| ◆ Design Assignment | 70 marks (50% of the overall grade) |
| ◆ Question Paper | 70 marks (50% of the overall grade) |

Design Assignment

This is to assess the learner's ability to apply skills, knowledge and understanding to solve a design task in a given context. It assesses the learner's ability to communicate, generate and refine ideas and apply modelling skills in presenting a potential solution.

Marks are awarded for:

- ◆ Generating ideas
- ◆ Exploring and refining ideas

- ◆ Applying graphic techniques
- ◆ Applying modelling techniques
- ◆ Applying knowledge and understanding of materials and processes
- ◆ Applying knowledge and understanding of design issues

Evidence is gathered in the form of a design folio.

Question Paper

The purpose of the question paper is to assess the learner's ability to retain and integrate knowledge and understanding from across the Course

The question paper will have two sections.

Section 1 of the question paper will have **25 marks**. It will consist of a single question based on a product, and will require extended and reasoned responses.

Section 2 of the question paper will have **45 marks**. It will consist of five or six questions. The responses will require integration of knowledge and understanding from across the Course.

Core Skills

Problem Solving (Critical Thinking, Planning and Organising, Reviewing and Evaluating).

This course is largely learner-centred and includes practical and experimental learning opportunities.

Assessment

The Units are assessed internally by the teacher. The Design Assignment Folio is internally marked and externally verified by the SQA for quality assurance purposes. The question paper is set and marked by the SQA.

Progression

Successful completion of this course may lead to:

- Advanced Higher Design and Manufacture Course,
- Other technological Courses at Higher,
- Skills for Work Courses in manufacturing or design,
- Employment, apprenticeships and/or training in manufacturing or design related fields.

And ultimately, for some, to:

- A range of Product Design or Product Design Engineering-related Higher National Certificates (HNCs) and Higher National Diplomas (HNDs),
- Degrees in Product Design or Product Design Engineering and related disciplines.

Success in the Course may support entry to similar areas of study in further education or in employment.

Further advice and information on these options is available from your Subject Teacher, Home Area Principal Teacher and Careers Adviser.