

**DEPARTMENT:**

**DESIGN & TECHNOLOGY**

**TITLE OF COURSE:**

**DESIGN AND MANUFACTURE**

**LEVEL:**

**HIGHER**

**RECOMMENDED ENTRY LEVELS**

- A pass in National 5 Design and Manufacture at grade A or B
- A pass in National 5 English at grade A or B
- A pass in National 5 Art and Design at grade A or B

**COURSE CONTENT**

Design and Manufacture provides a broad and practical experience in product design and manufacture. It provides opportunities for learners to gain skills in designing and communicating design proposals, highlighting the close relationship between designing, prototyping, testing, and refining design ideas. There are opportunities for learners to apply practical skills and their understanding of the properties and uses of materials and manufacturing processes. The course combines elements of creativity and designing for aesthetic or visual impact with elements of designing for the practicalities of manufacturing. It helps the learner appreciate the importance of form, function, performance and how these factors affect product design. It helps students develop strategies for the evaluation of these factors and to refine and resolve their designs accordingly.

This course consists of two units:

**UNIT 1**          Design

**UNIT 2**          Materials and Manufacturing

**METHODOLOGY:**

The Course includes practical and experiential learning opportunities within the world of design and manufacturing and helps learners appreciate that some products are designed to create an emotional or visual impact, while others are more functional in their requirements. Working predominantly in a classroom setting students will initiate, develop and communicate design proposals; solve design problems in applied contexts; and evaluate, refine and resolve design proposals and manufacturing practicalities. There will also be the opportunity for students to manufacture working prototypes of their design solutions.

The **aims** of the course are to:

- Develop skills in the design and manufacturing of models, prototypes and products
- Build knowledge and understanding of manufacturing processes and materials
- Understand the impact of design and manufacturing technologies on our environment and society
- Develop the ability to read drawings and diagrams, as well as communicating design ideas through graphic methods
- Develop creative skills to devise and develop practical solutions to design problems

**ASSESSMENT**

- Units **internally** assessed – project portfolio and practical work
- Added Value Assignment – extended design and manufacture project (100 marks)
- **Externally** assessed exam (100 marks)