DESIGN AND TECHNOLOGY
A LEVEL

ST HILDA'S COLLEGE

Course Content

Technical Principles

- Material applications, classification, methods for testing & investigating
- Performance characteristics of materials
  - Performance characteristics of polymer based sheet and film, papers and boards, woods, metals, polymers, elastomers, Biodegradable polymers, Composites, Smart materials, Modern materials
- Enhancement of materials
- Forming, redistribution and addition processes
- The use of finishes
- Modern industrial and commercial practice
- Digital design and manufacture
- The requirements for product design and development
- Health and safety
- Protecting designs and intellectual property
- Design for manufacturing, maintenance, repair and disposal
- Feasibility studies
- Enterprise and marketing in the development of products
- Design communication

Designing & Making Principles

- Design methods and processes
- Design theory
- How technology and cultural changes can impact on the work of designers
- Design processes
- Critical analysis and evaluation
- Selecting appropriate tools, equipment and processes
- Accuracy in design and manufacture
- Responsible design
- Design for manufacture and project management
- National and international standards in product design

Teaching and Learning

Students will develop a range of skills including problem solving, planning, design communication, CAD/CAM, practical skills, evaluation and analysis.
The course aims to give students a wide overview of the modern world of design and how it is increasingly relevant to society. Half of the A Level is developing a portfolio to gain a thorough experience of the design process. A Level D&T is sought after by many HE establishments, and is valued in collaboration with Maths and Physics.
Practical skills will be assessed in the NEA.

Assessment

Paper 1

What's assessed: Technical principles
How it's assessed: Written exam: 2 hours and 30 minutes
• 120 marks
• 30% of A-level

Questions: Mixture of short answer and extended response.

Paper 2

What's assessed: Designing and making principles
How it's assessed: Written exam: 1 hour and 30 minutes
• 80 marks
• 20% of A-level Questions Mixture of short answer and extended response questions.

- Section A: • Product Analysis: 30 marks • Up to 6 short answer questions based on visual stimulus of product(s).
- Section B: • Commercial manufacture: 50 marks • Mixture of short and extended response questions

Non-exam assessment (NEA)

What's assessed: Practical application of technical principles, designing and making principles. How it's assessed:• Substantial design and make project
• 100 marks
• 50% of A-level
Evidence: Written or digital design portfolio and photographic evidence of final prototype.

Progression

A qualification in A Level D&T allows students to pursue many career opportunities:
Product Design, industrial Design, all disciplines of Engineering, fashion design, games design, project management, graphic design, interior design. Skilled technicians, professional tradespeople, automotive design, aerospace. This list is endless!

Entry Requirements

Grade 5 minimum GCSE D&T, English and Maths.

Examination Board

AQA

Further Details

Mr Fitzpatrick