



Design and Technology Product Design

Examination Board: **EDUQAS**

Examination Code: **A602QS**

Outline of the Course

The Eduqas A Level Design and Technology: Product Design course at Stretford Grammar School offers a creative and thought-provoking approach to problem-solving through design. It equips students with the skills to design and make innovative products that respond to real-world needs, considering user, environmental, and industrial factors. The course develops knowledge of materials, manufacturing methods, sustainability, and the wider impact of design, while fostering critical thinking, communication, and project management skills. This subject is ideal for students who enjoy practical learning, working independently, and applying both creative and analytical thinking.

Topics studied in Year 12 (in order)

Technical Knowledge and Understanding (exam preparation)

- Designing and Innovation
- Human Responsibility
- Public Interaction
- Industrial and Commercial Practice
- Product Analysis and Systems
- Materials and Processes

Design and Making (coursework preparation)

- 3D CAD and CAM
- Modelling and Iterative Design
- Multi-materials Skill Building
- Mock NEA (coursework)

Topics studied in Year 13 (in order)

- NEA - Identifying and investigating design possibilities
- NEA – Developing a design brief and specification
- NEA – Generating and developing design ideas
- NEA – Manufacturing a prototype
- NEA – Analysing and evaluating design decisions and prototypes
- Theory knowledge and technical skills recall and retrieval

What will you learn?

The Eduqas A Level Product Design course is a mix of theory and practical application. You'll explore how products are conceived, designed, developed, and made – from early ideation through to manufacture and evaluation. You'll gain in-depth knowledge of materials, commercial production methods, and sustainability, alongside modern and smart technologies.

Through a blend of technical learning and hands-on project work, you'll develop skills in research, sketching, modelling, CAD/CAM, and user-focused design. The course culminates in a substantial design and make project (NEA), where you choose a context and produce a final prototype and detailed portfolio.

Here's an overview of the areas you'll study:

- **Designing and Innovation:** Explore how products meet human needs, how user-centred design works, and how innovation has shaped society.
- **Human Responsibility and Public Interaction:** Consider environmental, ethical, and social issues in design, and how people interact with products.
- **Industrial and Commercial Practice:** Learn about manufacturing processes, material selection, quality control, and product lifecycle from concept to mass production.
- **Product Analysis and Systems:** Investigate how existing products function, and analyse form, function, materials and user feedback to influence your own designs.
- **Materials and Processes:** Study a broad range of materials including timbers, polymers, metals, composites, modern and smart materials. Understand their properties, applications, and suitability for different contexts.
- **Design and Making Skills**
Develop key practical skills that underpin the NEA, including digital design using 3D CAD software, using CAM equipment (such as laser cutters and 3D printers), and iterative modelling techniques. These activities build your confidence in designing, testing, and refining ideas – essential for success in your coursework project.
- **NEA (Non-Exam Assessment):** Apply everything you've learned in a substantial personal project. You'll identify a real-world design problem, explore a context, develop ideas, test, evaluate, and create a working prototype backed by a design portfolio.

Mark Breakdown and Assessment

Component 1: Exam *Design and Technology in the 21st Century*

The examination includes a mix of structured and extended writing questions assessing learners' knowledge and understanding of:

- technical principles
 - designing and making principles
- Along with their ability to:
- analyse and evaluate wider issues in design and technology.

Component 2: Non-exam assessment (coursework)
Design and Make Project

A sustained design and make project, based on a brief developed by the candidate, assessing the candidate's ability to:

- identify, investigate and outline design possibilities
- design and make prototypes
- analyse and evaluate design decisions and outcomes, including for prototypes made by themselves and others

Website links

<https://www.eduqas.co.uk/media/kclpvixc/a-level-design-and-technology-specification.pdf>

Key Dates

Exam: May/June Year 13
 NEA: Spring Term Year 13

Further Information


Mr R. Carter – Curriculum Leader for Design Technology
r.carter@stretfordgrammar.com

What can I do after I have completed the course?

A-Level Design and Technology: Product Design is a highly regarded and creative qualification that opens the door to a wide range of degree courses, apprenticeships, and careers. It is particularly well-suited to students interested in design, engineering, architecture, manufacturing, and innovation.

Students can go on to study subjects such as Product Design, Architecture, Engineering (Mechanical, Civil, Structural or Electrical), Interior Design, Industrial Design, Graphic Design, Design Engineering and Sustainable Design. It also supports broader pathways including Construction, Project Management, Materials Science, and even Medicine or Dentistry, where problem-solving, dexterity, and design-thinking are valued.

As a subject that develops critical thinking, creativity, digital fluency, and project management skills, Product Design complements a wide range of other A Levels – including Maths, Physics, Art and Design, Geography,



Computer Science and Business – and is an excellent foundation for future study or employment in design-led industries.