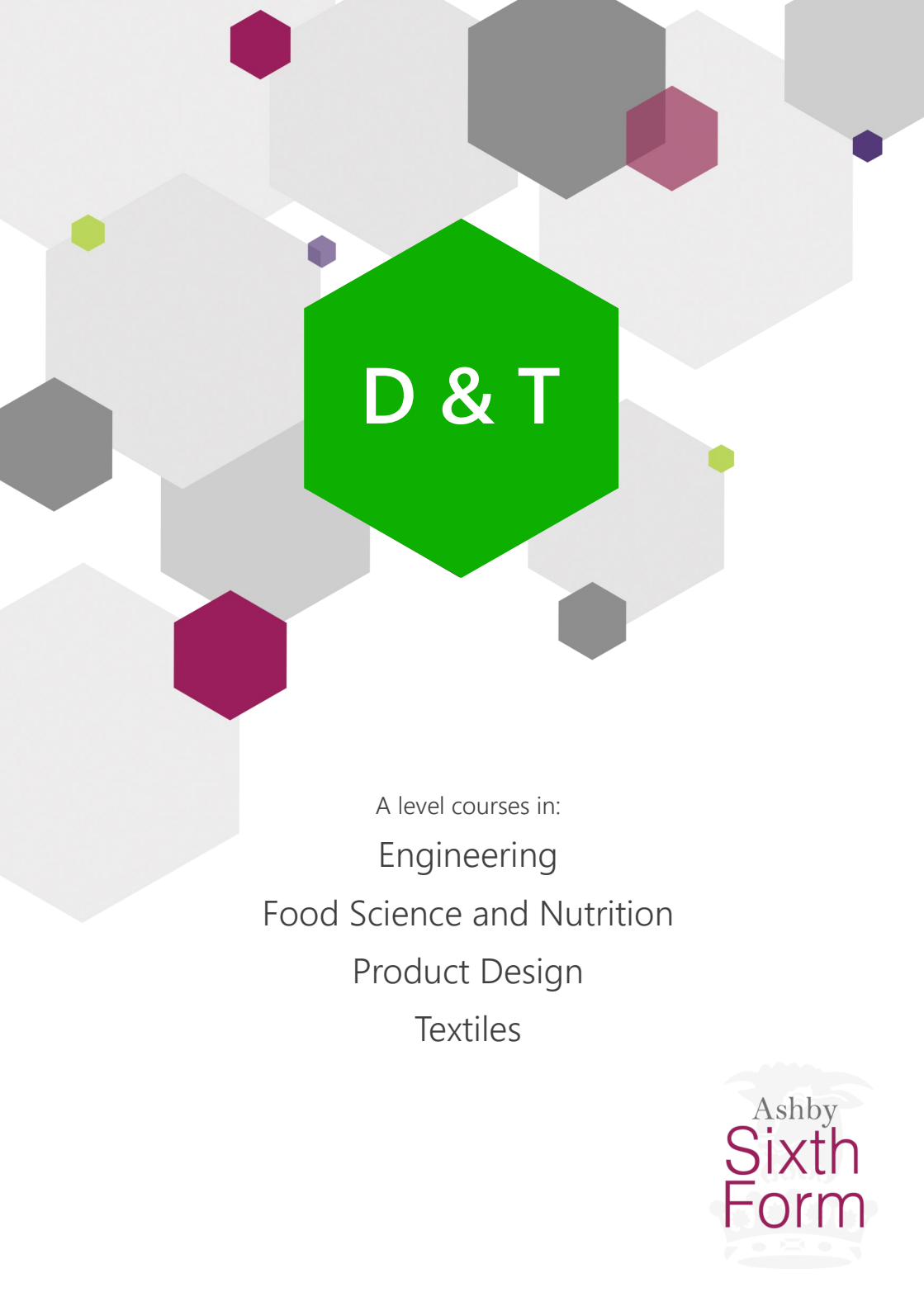




D & T

A level courses in:
Engineering
Food Science and Nutrition
Product Design
Textiles





Engineering

WHY STUDY ENGINEERING?

The aim of the course is to educate the students about the role of engineering, its application and associated skills. The content covers the following topic areas:

- Identifying requirements
- Learning from existing products and practice
- Implications of wider issues
- Design thinking and communication
- Material and component considerations
- Technical understanding
- Manufacturing processes and techniques
- Viability of design solutions
- Health and safety.

A number of these principles require mathematical and/or scientific knowledge .

COURSE CONTENT

The course will be assessed via both examination and NEA. Design engineering focuses on engineered and electronic products / systems with their analysis of:

- Function, operation, components and materials
- The selection and use of the above in commercially viable products and/or systems.

FURTHER INFORMATION

As a Post 16 student, you will be treated as a mature young adult and given access to all the facilities which will enable you to develop a broad range of skills and knowledge within the context of engineering. These skills will be vital when applying for higher education or employment.

COURSE PROGRESSION

The list below suggests some possible careers that may follow Post 16 studies in engineering: .

- Aeronautical engineering. Agricultural engineering. Automotive engineering. Computer aided engineering. Engineering product design. Mechanical engineering. Civil engineering. Industrial design. Education – teaching



Level 3

Food Science and Nutrition

WHY STUDY FOOD SCIENCE AND NUTRITION?

The aim of the course is to educate students about the application of nutrition and science to food as a material. Students learn about the body's scientific need for nutrition relating to diet and health. They develop advanced level practical making skills. Students also look at food science terminology in order to produce food investigation experiments. Finally, they explore business laws and systems specific to the food industry.

COURSE CONTENT

The four units are designed to test students' understanding of nutrition and food science, their practical making skills and problem-solving. Two units are set by the school and involve developing a design brief for a client on nutrition and designing a dish using scientific development and testing. Students have an external written test on nutrition. Finally, students work as a team to analyse food safety procedures needed at events.

FURTHER INFORMATION

As an A level student, you will be treated as a mature young adult and given access to all the facilities you need to develop a broad range of skills and knowledge within the context of food science and nutrition. These skills will be vital when applying for higher education or employment.

COURSE PROGRESSION

The list below suggests possible careers for A level food science and nutrition students:

- Dietician / nutrition—funding bursaries available from the NHS for university courses studied in Wales
- NHS / medical-related—funding bursaries available from the NHS for university study
- Food technologist / engineer
- Food scientist
- Sports science and nutrition /personal trainer
- Hospitality management and business
- Food media and editing
- National account manager or buyer
- Education – teaching

ASSESSMENT

Unit	Title
1	Meeting Nutritional Needs
	Externally set and marked examination - 1.45hr
2	Meeting Nutritional Needs
	Internally set and assessed design based project
3	Ensuring Food is Safe to Eat
	Externally set practical assessment and course-work - timed conditions
4	Experimenting to Solve Food Production prob-
	Internally set and assessed making based project

Each unit is worth 25% of the qualification, but it is essential that a pass grade is achieved in each unit



A level Product Design

WHY STUDY PRODUCT DESIGN?

This creative and thought-provoking qualification gives students the practical skills, theoretical knowledge and confidence to succeed in a range of careers, particularly those in the creative industries. They will investigate historical, social, cultural, environmental and economic influences on design and technology, while enjoying opportunities to put their learning in to practice by producing prototypes of their choice.

Students will gain a real understanding of what it means to be a designer, alongside the knowledge and skills sought by higher education and employers.

COURSE CONTENT

A level product design requires students to engage in both practical and theoretical study. All students will be given opportunities in Year 12 to develop their workshop and designing skills through practical project work., alongside learning the theory topics in a more formal classroom environment. In Year 13, students will be given the opportunity to resolve a problem they have identified and carry out a research, design, make and evaluation project to resolve those issues. Remaining theory topics will also be covered to prepare them for the end of year examinations.

FURTHER INFORMATION

As an A level student, you will be treated as a mature young adult and given access to all of facilities you need to develop a broad range of skills and knowledge within the context of product design. These skills will be vital when applying for higher education or employment.

COURSE PROGRESSION

The list below suggests some possible careers that may follow A level study in product design:

- Consumer product design
- Industrial design
- Architect
- Interior design
- Graphic design
- Engineering
- Automotive design
- Education – teaching

ASSESSMENT

Unit	Title
1	Paper 1—Technical Principles 2 hours 30 minutes 120 marks 30% of A -level
2	Paper 2—Designing and Making Principles 1 Hour 30 minutes 80 Marks 20% of A-level
3	Non-exam Assessment (NEA) Practical assessment Substantial design and make project 100 marks 50% of A level



A level Textiles

WHY STUDY THIS?

The AQA examining board specification introduces students to a variety of experiences that explore a range of Fashion and Textiles processes and techniques. Students are encouraged to be creative and innovative thinkers by responding to a chosen theme, creating research and using their findings aesthetically to produce quality, meaningful and unique textile creations. Through this course they will develop the ability to problem solve, learn independently whilst gaining a wider understanding of environmental, social, moral and global issues within textiles

ASSESSMENT

COMPONENT 1: PERSONALISED PROJECT

This is a practical investigation supported by written material.

Students are required to conduct a practical investigation, into an idea, issue, concept or theme, supported by written material. The focus of the investigation must be identified independently by the student and must lead to a finished outcome or a series of related finished outcomes.

- No time limit
- 96 marks
- 60% of A-level

COMPONENT 2: EXTERNALLY SET ASSIGNMENT

- Preparatory period + 15 hours supervised time
- 96 marks
- 40% of A-level

FURTHER INFORMATION

Fashion designer, pattern cutter, quality controller, weaver, textiles technologist, fashion journalist, sample maker, trend forecaster, textiles engineer, interior designer, fashion buyer, garment technologist, footwear designer, costume designer, knitwear designer, millinery designer, fashion PR, dress maker, fashion photographer, pattern developer, wardrobe designer.

ASSESSMENT OBJECTIVES

The assessments will measure how students have achieved the following assessment objectives:

- AO1: Develop ideas through sustained and focused investigations informed by contextual and other sources, demonstrating analytical and critical understanding.
- AO2: Explore and select appropriate resources, media, materials, techniques and processes, reviewing and refining ideas as work develops.
- AO3: Record ideas, observations and insights relevant to intentions, reflecting critically on work and progress.
- AO4: Present a personal and meaningful response that realises intentions and, where appropriate, makes connections between visual and other elements.

CONTACT INFORMATION

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