Oxford Cambridge and RSA Examinations

RECOGNISING ACHIEVEMENT

Design & Technology – Student Guide for Advanced Subsidiary/Advanced GCE Specifications

Product Design
Systems and Control Technology

These specifications build on the experience of GCSE and allow you to further your studies through either Product Design or Systems and Control Technology.

You will have the opportunity to study, propose and realise prototype solutions to designing and making opportunities closely linked to the real world of product/system manufacture.

Before you start this course

It would be helpful if you have studied Design & Technology and have achieved success at GCSE level.

Other subjects which would go well with Design & Technology are Physics, Mathematics or Art.

With a qualification in Design & Technology you could go on to higher education, further education or work in the engineering, manufacturing or design industries.

There are 8 units of assessment available in this subject. You will need to be assessed in 6 of these units.

To get a certificate for Advanced Subsidiary GCE , you will need to have studied for and been assessed on your performance in 3 AS units (out of 4).

To get a certificate for Advanced GCE, you will need to have studied and been assessed on your performance in 3 AS units, together with 3 A2 units (out of a further 4).

The assessment units for AS are:

Unit 2518 System Case Study

This study is based on the investigation of a system taken from a context supplied by OCR. This study will require you to consider the opportunities, implications and responsibilities of the use of design and technology in society. The report you produce will be marked by OCR.

Unit 2519 Product Study: Analysis and Development

For this unit you will examine an existing product and make design proposals for its development. You will be required to present your conclusion in the form of a folder and a model. This will be marked by your teacher/tutor and moderated by OCR.

Unit 2520 Product Design 1

Section A Common Core will require you to answer 3 questions out of 5 on Generic Design.

Section B will require you to answer 2 questions out of 7, based on your experience of materials, components and processes within the context of products and applications.

Unit 2521 Systems and Control Technology 1

Section A Common Core will require you to answer 3 questions out of 5 on Generic Design.

Section B will require you to answer 2 systems context based questions out of 3.

The Advanced Subsidiary GCE qualification is made up of:

- Units 2518, 2519 and 2520 if you are taking Product Design;
- Units 2518, 2519 and 2521 if you are taking Systems and Control Technology.

The assessment units in A2 are:

Unit 2522 Designing

This will provide open-ended opportunities for design where you will choose the nature of the task (for Unit 2523). The work you produce should represent up to 40 hours work. The work should be presented as a folder along with other supporting material. This unit will be marked by your teacher/course tutor and moderated by OCR.

Unit 2523 Making and Evaluating

This will involve you in the realisation of what you have designed in Unit 2522.

The product produced should have the possibilities for quantity manufacture clearly identified.

The realisation of the product should represent up to 40 hours of work. This unit will be marked by your teacher/course tutor and moderated by OCR.

Unit 2524 Product Design 2

Section A will require you to answer 2 questions out of 7 based on Product Design.

The questions will draw from the specific material areas of cards, textiles, plastics, woods and metals. The questions will relate to processes and components in their application to product analysis and design.

Section B will require you to make initial design thinking responses to a new situation by choosing one problem from the 5 that will be posed.

A theme/scenario sheet will be published and given to you before this examination to allow for preparation and research. Preparation work must not be brought into the examination.

Unit 2525 Systems and Control Technology 2

Section A will require you to answer 2 questions out of 3 based on Systems contexts.

Section B will require you to make initial design thinking responses to a new situation by choosing one problem from the 3 that will be posed.

A theme/scenario sheet will be published and given to you before this examination to allow for preparation and research. Preparation work must not be brought into the examination.

The Advanced GCE qualifications is made up of:

- Units 2522, 2523 and 2524 if you are taking Product Design;
- Units 2522, 2523 and 2525 if you are taking Systems and Control Technology.

The assessment structure for Design & Technology is:

Unit 2518
System Case Study

Examined (90 marks) 30% AS (15% Adv).

+

Unit 2519
Product Study: Analysis & Development

Product Analysis and Design Proposal – 50%. Presented as 1st generation model and tested – 50%. Centre marked, moderated by OCR (120 marks) 40% AS (20% Adv).

+

1 of

Unit 2520
Product Design 1

2 hour examination: Section A, 3 out of 5 questions on Generic Design: in Section B, 2 out of 7 questions based on experience of materials, etc. (90 marks) 30% AS (15% Adv).

Unit 2521
Systems and Control Technology 1

2 hour examination: Section A, 3 out of 5 questions on Generic Design: in Section B, 2 out of 3 questions, systems context based. (90 marks) 30% AS (15% Adv).

= **AS**

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Unit 2522
Designing Coursework

Taken with Unit 2523 as a double unit. Centre marked, moderated by OCR. (90 marks) 15%.

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Unit 2523
Making and Evaluating Coursework

Realisation of Product designed for Unit 2522, including possibilities for quantity commercial manufacture in the evaluation. Centre marked, moderated by OCR. 15%.

+

1 of

Unit 2524
Product Design 2

2½ hour examination: Section A, Application of Knowledge & Understanding (1hr) 2 questions out of 7: Section B, Design Thinking (1½hr). Pre-published theme/scenario (with preparation time). You choose 1 from 5 given focus design area question. (120 marks) 20%.

Unit 2525
Systems and Control Technology 2

2½ hour examination: Section A, Application of Knowledge & Understanding (1hr) 2 questions out of 3: Section B, Design Thinking (1½hr). Pre-published theme/scenario (with preparation time). You choose 1 from 3 given focus design area question. (120 marks) 20%.

= **A2**

For more information, please view the OCR website: **www.ocr.org.uk**
or contact OCR Information Bureau 01223 553998 at OCR Head Office, 1 Hills Road, Cambridge CB1 2EU.