

# Applied Information and Communication Technology (ICT)

**Course Title:** Advanced Level in Applied Information & Communication Technology (Syllabus 9713)

## Overview

This course will be offered for the first time in September 2008 and replaces the current AQA AS/A Level in Information & Communication Technology, which will be withdrawn in 2010. Students following this syllabus will develop, and learn to apply, a broad range of ICT skills, while also gaining an understanding of the way ICT is used in the world of work. The syllabus introduces students to the structure and use of ICT systems within a wide range of organisations, including the use of a variety of computer networks. As a result, students learn about ICT system life cycles, and how these affect the workplace. They also gain an understanding of the wider impact of ICT on society in general.

## Entry Requirements

Minimum grade I at CXC IT (Technical Proficiency) or grade B at GCSE, together with good written English skills are required. Students inexperienced in the use of Microsoft Office applications (particularly 'Excel' and 'Access') will be severely disadvantaged. Acceptance on the course will be based on the above criteria and on performance in short practical and written entry tests.

## Aims

The aims of the Advanced Subsidiary GCE curriculum in Applied ICT are to:

- help develop a broad range of ICT skills and knowledge of the uses of ICT in vocational contexts, as a basis for progression into further learning in ICT-related fields, including progression from AS to A2;
- develop an understanding of the constituent parts, uses and applications of ICT systems within a range of organisations, including the use of basic computer networks;
- develop an understanding of the effect of these ICT systems on society in general;
- develop an understanding of the main systems life cycle and apply this understanding to workplace scenarios.

In addition, the aims of the Advanced GCE curriculum in Applied ICT are to encourage candidates to:

- apply their knowledge and understanding of ICT and use these skills in vocational contexts;
- develop an understanding of the constituent parts, uses and applications of ICT systems within a wide range of organisations, including the use of a range of computer networks;
- develop an understanding of project management skills and other problem solving skills.

## Assessment Objectives

The two Assessment Objectives in Applied Information and Communication Technology are:

- A Practical Skills
- B Knowledge and understanding

A description of each assessment objective follows.

### A Practical Skills

At AS level candidates should be able to:

1. select appropriate software for the task;
2. communicate effectively with other ICT users using e-mail and search for appropriate information using the internet;
3. prepare, create, amend and edit documents and interactive presentations;

4. create both flat-file and relational database structures, add data, check the data entry, perform searches, reorganise data by sorting and present calculated values based on the data;
5. create graphs and charts;
6. integrate data from several sources;
7. output data in different forms;
8. create and test a data model using a spreadsheet, extract and summarise data in a variety of forms.

### **B Knowledge and Understanding**

At AS level candidates should be able to demonstrate knowledge and understanding in relation to:

1. the functions and uses of the main hardware and software components of ICT systems including portable communication systems;
2. the ways in which organisations use ICT;
3. the impact on society of the use of ICT in the home;
4. the stages of the systems life cycle and the methods used within each of these stages;
5. ICT and computing terminology.

### **A Practical Skills**

At A2 level candidates should be able to fulfil all of the practical skills from AS level and:

1. create a mail merged document using a word processor and data handling package;
2. create an automated procedure which enables a user to select both the required document and the data to merge it with.

### **B Knowledge and Understanding**

At A2 level candidates should be able to demonstrate all the knowledge and understanding from AS level and extend their knowledge and understanding in relation to:

1. the ways in which an extensive range of organisations use information and communication technology;
2. the impact on society of the use of a wide range of ICT on-line applications;
3. the networking of information-processing systems and the use of on-line services.

## **Scheme of Assessment**

### **AS Level**

| <b>Paper</b> | <b>Type</b>    | <b>Duration</b> | <b>Maximum Mark</b> | <b>Weight</b> |
|--------------|----------------|-----------------|---------------------|---------------|
| <b>1</b>     | Written        | 1 hr 15 mins    | 80                  | 20%           |
| <b>2</b>     | Practical Test | 2 hrs 30 mins   | 120                 | 30%           |

### **A Level**

In addition to Papers 1 and 2.

| <b>Paper</b> | <b>Type</b>    | <b>Duration</b> | <b>Maximum Mark</b> | <b>Weight</b> |
|--------------|----------------|-----------------|---------------------|---------------|
| <b>3</b>     | Written        | 1 hr 15 mins    | 80                  | 20%           |
| <b>4</b>     | Practical Test | 2 hrs 30 mins   | 90                  | 30%           |

Candidates start with AS and progress to A2 to do the full Advanced Level.

### **AS Level**

All candidates will be entered for Papers 1 and 2.

**Paper 1** - A written paper assessing the knowledge and understanding in sections 1 to 4 below. This paper will consist of compulsory questions. Candidates will answer in the spaces provided on the question paper. The questions will generally test sections 1 to 4 of the curriculum content, although knowledge and understanding demonstrated in the practical test may also be assessed.

**Paper 2** - A practical test assessing selected skills, and may assess some underpinning knowledge and understanding from sections 1 to 4 below.

### **A2 Level**

All candidates will be entered for Papers 3 and 4.

**Paper 3** - A written paper assessing the knowledge and understanding in sections 1 to 7 below. This paper will consist of compulsory questions. Candidates will answer in the spaces provided on the question paper. The questions will generally test sections 1 - 7 of the curriculum content, although knowledge and understanding demonstrated in the practical test may also be assessed.

**Paper 4** - A practical test assessing selected skills, and may assess some underpinning knowledge and understanding from sections 1 to 7 below.

### **Practical Tests**

The two practical tests will each comprise a number of tasks to be taken under controlled conditions. The practical tests focus on the candidates' ability to carry out practical tasks and to show the appropriate knowledge and understanding to enable them to complete the tasks efficiently. Candidates are assessed on their ability to complete these tasks using the most appropriate software and with the most appropriate methods.

### **Curriculum Content**

The subject content is set out in six interrelated curriculum areas. These sections should be read as an integrated whole and not as a progression. The six areas are as follows:

1. ICT systems including portable communication devices
2. How organisations use ICT
3. Impact of ICT on society
4. Computer Networks
5. Problem solving using ICT
6. Systems life cycle

The six areas are split into seven sections to enable a balance between AS level and A2 level. The seven sections are as follows:

#### **At AS Level**

1. ICT systems including portable communication devices
2. How organisations use ICT – Part 1
3. Impact of ICT on society – Part 1
4. Systems life cycle

#### **At A2 Level**

5. How organisations use ICT – Part 2
6. Impact of ICT on society – Part 2
7. Computer networks

Candidates should be familiar not only with the types of software available and the range of Information Technology knowledge and skills detailed in the course syllabus, but also with their uses in practical contexts.

No marks will be awarded for using brand names of software packages or hardware.

Teaching methods include: self-study materials; practical demonstrations and workshops; and formal lectures.

### **Career Opportunities**

Whatever your intended career path, good ICT skills and knowledge are increasingly becoming a standard requirement. Universities and Colleges acknowledge this, and now integrate ICT elements within most 'traditional' subject courses. Your ICT AS or A Level can therefore be applied to a variety of courses at the higher level. Wherever you apply to work or study, ICT skills will be viewed positively and will help you carry out your work or studies more effectively. Although the Applied ICT A Level is not designed to provide you with the advanced knowledge of programming and system architecture that Advanced Level 'Computing' would, it does prepare you for many ICT-based careers, and careers that have become heavily ICT dependent.