

# Information & Communication Technology

**Course Title:** Information and Communication Technology (Syllabus 0417)

## Overview

The Information Communication Technology syllabus combines theoretical and practical studies focusing on the ability to use common software applications, including word processors, spreadsheets, databases, interactive presentation software, e-mail, web browsers and authoring packages. Students will develop a greater awareness of how applications are used in the workplace, and consider the impact of new technologies on methods of working and on social, economic, ethical and moral issues. The skills learnt will be useful to students in their work across the curriculum, and will prepare them for future employment.

## Aims

The aims of the curriculum are the same for all candidates. These are set out below and describe the educational purposes of a course in Information and Communication Technology for the IGCSE examination. They are not listed in order of priority.

The aims are to:

1. help students to develop and consolidate their knowledge, skills and understanding in Information and Communication Technology;
2. encourage students to develop further as autonomous users of Information and Communication Technology;
3. encourage students to continue to develop their Information and Communication Technology skills in order to enhance their work in a variety of subject areas;
4. provide opportunities for students to analyse, design, implement, test and evaluate Information and Communication Technology systems;
5. encourage students to consider the impact of new technologies on methods of working in the outside world and on social, economic, ethical and moral issues;
6. help students to grow in their awareness of the ways in which Information and Communication Technology is used in practical and work-related situations.

## Assessment Objectives

The two assessment objectives in Information and Communication Technology are:

### **A Practical Skills**

### **B Knowledge and Understanding**

An expansion of each assessment objective follows.

### **A Practical Skills**

Students should be able to efficiently:

1. use e-mail and the Internet to gather and communicate information;
2. use word processing facilities to prepare documents;
3. use database facilities to manipulate data to solve problems and represent data graphically;
4. integrate data from different sources into a single document or report;
5. produce output in a specified format;

6. use a spreadsheet to create and test a data model, extracting and summarising data;
7. represent data as information in a variety of chart formats;
8. create a structured website with style sheets, tables and hyperlinks;
9. create and control an interactive presentation.

### **B Knowledge and Understanding**

Students should be able to demonstrate knowledge and understanding in relation to:

1. the functions of the main hardware and software components of computer systems;
2. the networking of information-processing systems;
3. the ways in which information and communication technology is used and the effects of its use;
4. the stages and methods of system analysis and design;
5. computing terminology.

### **Specification Grid**

Assessment Objective Weighting

<b>Practical Skills</b>	60%
<b>Knowledge and Understanding</b>	40%

### **Scheme of assessment**

All candidates will be entered for Papers 1, 2 and 3.

**Paper 1** (2 hours) is a written paper of 100 marks assessing the skills in Assessment Objective B. The paper will contain mainly questions requiring a short response, a word, a phrase or one or two sentences, although there will be some questions requiring a more extended response.

There will be no choice of questions. The questions will test sections 1–8 of the curriculum content.

**Paper 2** (2 hours 30 minutes) is a practical test of 80 marks assessing skills in sections 9–16.

**Paper 3** (2 hours 30 minutes) is a practical test of 80 marks assessing skills in sections 9–16.

### **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 candidate's ability to carry out practical tasks rather than to explain the theory of how the tasks are completed. Candidates are assessed on their ability to complete these tasks.

### **Weighting of Examination Papers**

<b>Paper 1</b>	40%
<b>Paper 2</b>	30%
<b>Paper 3</b>	30%

## **Curriculum Content**

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

1. Types and Components of Computer Systems
2. Input and Output Devices
3. Storage Devices and Media
4. Computer Networks
5. Data Types
6. The Effects of Using ICT
7. The ways in which ICT is used
8. Systems Analysis and Design

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

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

## **Assessment Criteria for Practical Tests**

The curriculum content for the practical tests is set out in eight sections. The sections are as follows:

9. Communication
10. Document Production
11. Data Manipulation
12. Integration
13. Output Data
14. Data Analysis
15. Website Authoring
16. Presentation Authoring

Each section is broken down into a series of more specific assessment objectives which candidates should be able to meet. For each specific objective, there are one or more performance criteria that will be used by the examiners to mark the candidate's work.

The majority of the performance criteria will be tested.

## **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. Wherever you apply to work or study, ICT skills and qualifications will be viewed positively and will help you carry out your work or studies more effectively.