Maelor Sixth



Computer Science WJEC A Level

Subject Leader: Mr R Collins

Introduction

Computers are used in all aspects of business, industry, government, education, leisure, and the home. In this increasingly technological age, a study of computer science is not only valuable to the learner but also essential to the future well-being of the country. In this course students learn the principles of computation and algorithms, computer programming, machine data representation, computer systems (hardware and software), computer organisation and architecture, communications and networking, databases, and the consequences of using computing.

The Course

Year 1

Unit 1 - Fundamentals of Computer Science
Computer architecture, communication, data representation, data structures, software applications, programs, algorithms, logic, programming methodologies and the impact of computer science on society.

Unit 2 - Practical Programming to Solve Problems
A series of set tasks completed on-screen by candidates. These tasks will assess the practical application of knowledge and understanding and will require the use of Visual Basic.NET

Year Two

Unit 3
Programming and Systems Development

Unit 4
Computer Architecture, Data and Communications

Unit 5
Programmed Solutions to a Problem



Assessment

AS - Year 12
Unit 1, written examination worth 25% of the A Level grade.
Unit 2, on-screen examination worth 15% of the A Level grade.

A Level - Year 13
Unit 3 and 4, written examinations worth 20% each.
Unit 5, coursework worth 20% of the A Level grade.

Entry Requirements

- GCSE Computer Science is desirable but not essential
- GCSE grade B/6 in Mathematics and English

Further Information

A Level Computer Science enables students to develop a broad range of skills in the areas of programming, system development, computer architecture, data, communication, and applications. The course will enable students to design and produce their own programs for realistic situations.



Links to Future Careers

Computer Science A Level is valued by universities and employers as it requires the development of analytical thinking and problem-solving skills.
This course also lays an appropriate foundation for further study of:

- Computer Science
- Engineering
- Physics
- Web Design
- Game Design
- System Analysis
- Cyber Security
- Business Analysis
- Network
- Software Engineering

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