

## Software Systems Development

**Note: This course is not currently taught in Foyle, but may be available in another school.**

### Entrance Requirements

GCSE Course Undertaken	Minimum Grade Required
<b>GCSE Full/Short Course</b>	<b>B</b>
<b>GCSE Mathematics</b>	<b>B</b>
<b>(GCSE Further Mathematics would be desirable)</b>	

The AS is the first part of the full Advanced GCE course. It is possible to take the AS “stand-alone” qualification. The AS units are assessed at a standard appropriate for students who have completed half of the full course.

The A2 is the second part of the full advanced GCE course. Assessed at a standard appropriate for students who have completed the full course, the A2 units include both synoptic assessment and an element of scratch and challenge.

The full Advanced GCE award is based on students' marks from AS (40%) and the A2 (60%). An A\* will be awarded to the candidates who attain an overall grade A in the qualification and an aggregate of at least 90% of the uniform marks across the A2 units.

### The specification aims to encourage students to:

- develop a genuine interest in software systems development with a focus on programming;
- develop an understanding of systems approaches and modelling techniques to support software development;
- develop software development skills that will prepare them for work in today's software industry;
- participate in the development of a software project using a complete software development process;
- apply their skills to relevant work-related scenarios;
- work with others in group settings;
- research, develop and present their findings in a variety of formats;
- develop advanced study skills in preparation for third level education;
- demonstrate their understanding and application of key concepts through challenging internal and external assessment.

For further information about this CCEA AS and A Level Software Systems Development specification please visit: [www.ccea.org.uk](http://www.ccea.org.uk)

**Unit AS 1: Introduction to Object Oriented Development**

This unit provides students with a thorough understanding of object oriented systems. Students adopt an object oriented approach to problem solving. Object concepts are defined and implemented. The unit enables students to develop object oriented skills. It helps students to appreciate the benefits of developing applications in this type of environment.

**Unit AS 2: Event Driven Programming**

This unit provides students with an opportunity to implement and develop object oriented technologies in an event driven environment. Students are able to state requirements and design, implement, test and evaluate their application.

**Unit A2 1: Systems Approaches and Database Concepts**

This unit provides students with a thorough understanding of the reasons for systems development. It also provides them with an understanding of fundamental systems analysis and design concepts. It provides a detailed study of design methodologies. The unit introduces students to project management concepts and testing strategies that assist the systems development process. The unit introduces important database concepts enabling the student to understand relational database systems, implemented through Structured Query Language (SQL)

**Unit A2 2: Implementing Solutions**

This unit provides students with an opportunity to design and implement a solution to a given problem using the knowledge and skills acquired in the preceding units. The students implement an agreed design using an appropriate software tool. The unit allows them to experience the elements of the systems development process. We require students to build their solutions using an RDMS through an event driven programming environment.

**Scheme of Assessment**

Unit	Assessment	Weightings	Completion
<b>AS 1:</b> Introduction to Object Oriented Development	2 hour external examination paper	50% of AS 20% of A Level	Year 13
<b>AS 2:</b> Event Driven Programming	Internal Assessment of a portfolio	50% of AS 20% of A Level	Year 13
<b>A2 1:</b> Systems Approaches and Database Concepts	2 hour external paper based on a pre-released case study	30% of A Level	Year 14
<b>A2 2:</b> Implementing Solutions	Internal Assessment of a portfolio	30% of A Level	Year 14