

Switching to OCR from Eduqas

Introduction

We are really excited about our Computer Science qualification. Whether taking on the AS or the full A Level, this fantastic course is a great qualification for those with an interest in the subject. Why choose OCR Computer Science?

- The 'Big Ideas' of Computer Science are covered,
- The topics are selected and structured to underpin the knowledge and understanding needed for the next generation of Computer Scientists,
- Computer Science is enjoyable to teach and learn, giving students the essentials for related higher education courses as well as many transferable, marketable skills
- There are many opportunities for 'hands-on' practice to help develop programming techniques, linking to our programming project assessment model
- The topics are presented in a clear and logical linear order.

Our offer

- Our Computer Science team consists of Vinay Thawait, Robert Leeman and Ceredig Cattanach-Chell, all of whom are passionate about Computer Science and education. With many years of teaching experience as well as experience of leading Computer Science within schools, they are fully committed to supporting centres' delivery of Computer Science qualifications. You can contact the [team](#) by email at computerscience@ocr.org.uk or by phone on 01223 553998 and ask to speak with a subject specialist.
- We have produced a wide range of [support materials](#), from teacher guides to delivery guides, lesson elements, practical activities, candidate exemplars and more.
- Join our conversation on the [OCR Community](#), [OCR Computing Facebook](#) and [@OCR ICT](#) to talk about and share good practice.

[#OCRComputing](#) [#Programming](#) [#ComputerScience](#) [#OCRExams](#)



Key differences

OCR Computer Science	WJEC Eduqas Computer Science
<p>Qualification Support:</p> <ul style="list-style-type: none"> • A dedicated team of 3 Computer Science Subject Specialists • Customer Contact Centre • CPD hub training courses –face to face, webinars and teachers’ network meetings • Significant level of resources available to download from the subject webpage • Growing Facebook community • Extended Mock Paper Materials to help you fully prepare for the new examinations • Teacher Networks to allow face-to-face contact with the Computer Science Subject Specialists team 	<p>Qualification Support:</p> <ul style="list-style-type: none"> • Subject officer and support officer • CPD training courses • Resources available online and for download • Facebook community
<p>AS and A Level Specification:</p> <ul style="list-style-type: none"> • Written exams for both AS and A Level components (paper 1 and paper 2) • Use of Pseudocode and programming language within written exam paper 2 • AS shorter exam time-1 hour 15 mins • A Level shorter exam time – 2 hours 30 mins • Any suitable programming language (Python, C family, Java, Visual Basic, PHP and Delphi/Pascal). Ability to extend list of languages after 	<p>AS and A Level Specification:</p> <ul style="list-style-type: none"> • AS level on-screen exams for component 2 and written exam for component 1 whereas A level written exam for both components • Use of programming language (VisualBasic.Net, Python or Java) within on-screen exam paper 2 • AS longer exam time -2 hours • A Level longer exam time – 2 hours 45 mins • Limited range of programming language to choose from • The development of program code



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<p>discussion with OCR.</p> <ul style="list-style-type: none"> • Code challenge tasks to use with teaching of content • Pseudocode guide, Programming Languages guide and Project Complexity guide available online • NEA - documenting the development of program code with comments as well as the final code required • An iterative development process (Agile approach) of the solution that includes the success criteria, planning and designing; development; testing and remedial actions; and evaluation. • NEA submission requires appropriate annotated evidence e.g. screen dump or photographs taken of screen layout, to support the project report in PDF • NEA marking is based on 'best fit' approach to marking using marking scheme 	<p>not required, only the final code</p> <ul style="list-style-type: none"> • NEA - 72 GLH including teaching time • NEA submission requires a functioning copy of the solution with supporting project report in PDF • NEA marking is based on 'banded mark scheme' with stage 1 for selecting band and stage 2 for awarding marks
<p>Other:</p> <ul style="list-style-type: none"> • No network issues / resourcing needs • No worries of computer crashes • Open design methodologies choice • Agile development / iterative system lifecycle for NEA • Progression route from Entry Level Computer Science through to GCSE and A Level Computer Science 	<p>Other:</p> <ul style="list-style-type: none"> • Requires a robust network for on-screen exam • Requires contingency plan if computer crashes



Content

The content within the OCR AS and A Level Computer Science specification covers the 'Big Ideas' of Computer Science and will be very familiar. We've laid it out in a logical progression to support co-teaching the AS level and teaching the A level in a linear way.

OCR Computer Science	WJEC Eduqas Computer Science
<p>AS Level (H046)</p> <p>Component 01: Computing Principles</p> <ul style="list-style-type: none"> • Structure and Function of Processor • Types of Processor • Input, Output and storage • Operating Systems • Applications Generation • Introduction to Programming • Databases • Networks • Web Technologies • Data Types • Data Structures • Boolean Algebra • Computing Related Legislation • Ethic, moral and cultural issues 	<p>AS Level (B500QS)</p> <p>Component 1: Fundamentals of Computer Science</p> <ul style="list-style-type: none"> • Hardware and communication • Logical operations • Data transmission • Data representation and data types • Data structures • Organisation of data • Database system • The operating system • Software applications • Algorithms and programs • Principles of programming • System analysis • Software engineering • Program construction • The need for different types of software system and their attributes • Practical programming • Data security and integrity processes • Economical, moral, legal, ethical and cultural issues relating to Computer Science



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<p>AS Level (H046) Component 02: Algorithms and Problem Solving</p> <ul style="list-style-type: none"> • Thinking Abstractly • Thinking Ahead • Thinking Procedurally • Thinking Logically • Programming Techniques • Software Development • Algorithms 	<p>AS Level (B500QS) Component 2: Practical Programming to Solve Problems</p> <ul style="list-style-type: none"> • A series of set tasks completed on-screen • Practical application of knowledge and understanding • Use of programming language - Visual Basic.NET, Python or Java
<p>A Level (H446) Component 01 – Computer Systems</p> <ul style="list-style-type: none"> • Structure and Function of Processor • Types of Processor • Input, Output and storage • Systems Software • Software Development • Types of Programming Language • Compression, Encryption and Hashing • Databases • Networks • Web Technologies • Data Types • Data Structures • Boolean Algebra • Computing Related Legislation • Ethic, moral and cultural issues 	<p>A Level (A500QS) Component 1: Programming and System Development</p> <ul style="list-style-type: none"> • Data structures • Logical operations • Algorithms and programs • Principles of programming • Systems analysis • System design • Software engineering • Program construction • Economic, moral, legal, ethical and cultural issues relating to Computer Science
<p>A Level (H446) Component 02 – Algorithms and Problem Solving</p> <ul style="list-style-type: none"> • Thinking Abstractly • Thinking Ahead 	<p>A Level (A500QS) Component 2: Computer Architecture, Data, Communication and Applications</p> <ul style="list-style-type: none"> • Hardware and communication • Data transmission



OCR Computer Science	WJEC Eduqas Computer Science
<ul style="list-style-type: none"> • Thinking Procedurally • Thinking Logically • Thinking Concurrently • Programming Techniques • Computation Methods • Algorithms 	<ul style="list-style-type: none"> • Data representation and data types • Organisation and structure of data • Databases and distributes systems • The operating system • The need for different types of software systems and their attributes • Data security and integrity processes
<p>A Level (H446) Component 3 - Programming Project</p> <p>Non-exam Assessment – no time limit 'Best fit' approach to award marks based on the marking criteria</p> <ul style="list-style-type: none"> • Analysis of the problem (10 marks) <ul style="list-style-type: none"> ○ Problem identification ○ Stakeholders ○ Research the problem ○ Specify the proposed solution • Design of the solution (15 marks) <ul style="list-style-type: none"> ○ Decompose the problem ○ Describe the solution ○ Describe the approach to testing • Developing the solution (25 marks) <ul style="list-style-type: none"> ○ Iterative development process ○ Testing to inform development • Evaluation (20 marks) <ul style="list-style-type: none"> ○ Testing to inform evaluation ○ Success of the solution ○ Describe the final product ○ Maintenance and development 	<p>A Level (A500QS) Component 3: Programmed Solution to a Problem</p> <p>Non-exam Assessment – 72 GLH Banded mark scheme -</p> <ul style="list-style-type: none"> ○ Stage 1-deciding on the band ○ Stage 2-deciding on the marks • Discussion (5 marks) • Investigation (10 marks) • Design (15 marks) • Prototype (10 marks) • Post-prototype refinement of design (5 marks) • Software development (25 marks) • Developmental testing (5 marks) • Testing (10 marks) • Evaluation (15 marks)



Assessment

OCR Computer Science	WJEC Eduqas Computer Science
<p>AS Level (H046) Component 01 Computing principles Written paper – 1 hour 15 minutes 70 Marks 50% of total AS Level</p>	<p>AS Level (B500QS) Component 1 Fundamentals of Computer Science Written paper – 2 hours 100 Marks 70% of the total AS Level</p>
<p>AS Level (H046) Component 02 Algorithms and problem solving Written paper – 1 hour 15 minutes 70 Marks 50% of total AS Level</p>	<p>AS Level (B500QS) Component 2 Practical programming to solve problems On-screen exam – 2 hours 15 minutes 60 Marks 30% of the total AS level</p>
<p>A Level (H446) Component 01 Computer system Written paper – 2 hours 30 minutes 140 Marks 40% of total A Level</p>	<p>A Level (A500QS) Component 1 Programming and system development Written exam – 2 hours 45 minutes 100 Marks 40% of total A Level</p>
<p>A Level (H446) Component 02* Algorithms and programming Written paper – 2 hours 30 minutes 140 Marks 40% of total A Level</p>	<p>A Level (A500QS) Component 2 Computer architecture, data, communication and applications Written Exam – 2 hours 45 minutes 100 Marks 40% of total A Level</p>



OCR Computer Science	WJEC Eduqas Computer Science
<p>A Level (H446) Component 03* or 04* Programming project Non-exam assessment – no time limit 70 Marks 20% of total A Level * Indicates synoptic assessment</p>	<p>A Level (A500QS) Component 3 Programmed solution to a problem Non-exam assessment – 72 GLH 100 Marks 20% of total A Level</p>



Want to switch to OCR?

If you're an OCR-approved centre, all you need to do is download the specification and start teaching.

Your exams officer can complete an [intention to teach form](#) which enables us to provide appropriate support to them. When you're ready to enter your students, you just need to speak to your exams officer to:

1. Make estimated entries by 10 October so we can send you any early release materials, prepare the question papers and ensure we've got enough examiners.
2. Make final entries by 21 February

If you are not already an OCR-approved centre please refer your exams officer to the [centre approval section](#) of our admin guide.

Non-Examination Assessment

This qualification has one non-exam assessment which takes the form of the Programming project (Component 03 or 04). The project is a substantial piece of work which assesses a variety of different skills including the development and demonstration of computational thought processes. The assessment guidance within the specification page 18 3f- non-exam assessment should be considered before learners embark on this particular assessment.

Next steps

1. Familiarise yourself with the specification, sample assessment materials and teaching resources on the [Computer Science](#) qualification page of the OCR website.
2. Browse the [online delivery guides](#) for teaching ideas and use the [Scheme of Work builder](#) to create your personal scheme of work.
3. [Get a login](#) for our secure extranet, [Interchange](#) – allows you to access the latest past/practice papers and use our results analysis service, [Active Results](#).
4. Sign up to receive [subject updates](#) by email.
5. Sign up to attend a [training event](#) or take part in webinars on specific topics running throughout the year and or our Q&A webinar sessions every half term.
6. Attend one of our free [teacher network events](#).

