

Switching to OCR from AQA

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](#), including teacher guides, 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	AQA 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"> • Qualifications manager and subject team • Customer support team • CPD training courses • Resources available • 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"> • On-screen exams for paper 1 and written exam for paper 2 • Use of programming language within on-screen exam paper 1 • AS longer exam time -1 hour 30 mins • Limited range of programming languages • No Pseudocode used • The development of program code not required, only the final code • No iterative development of the solution required • NEA project complexity guide - three



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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>different levels</p>
<p>Other:</p> <ul style="list-style-type: none"> • No network issues / resourcing needs • No worries of computer crashes • No need to indicate programming language preference • Open design methodologies choice • Agile / 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 • Must indicate programming language preference at the start of the course • No formal methodology or traditional systems lifecycle approach for NEA



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	AQA Computer Science
<p>AS Level</p> <p>Component 1: 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</p> <p>Paper 1:</p> <ul style="list-style-type: none"> • Fundamentals of programming • Fundamentals of data structures • Systematic approach to problem solving • Theory of computation
<p>AS Level</p> <p>Component 2: 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</p> <p>Paper 2:</p> <ul style="list-style-type: none"> • Fundamentals of data representation • Fundamentals of computer systems • Fundamentals of computer organisation and architecture • Consequences of uses of computing • Fundamentals of communication and networking



OCR Computer Science	AQA Computer Science
<p>A Level</p> <p>Component 1 – 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</p> <p>Paper 1:</p> <ul style="list-style-type: none"> • Fundamentals of programming • Fundamentals of data structures • Fundamentals of algorithms • Theory of computation • Systematic approach to problem solving
<p>A Level</p> <p>Component 2 – Algorithms and Problem Solving</p> <ul style="list-style-type: none"> • Thinking Abstractly • Thinking Ahead • Thinking Procedurally • Thinking Logically • Thinking Concurrently • Programming Techniques • Computation Methods • Algorithms 	<p>A Level</p> <p>Paper 2:</p> <ul style="list-style-type: none"> • Fundamentals of data representation • Fundamentals of computer systems • Fundamentals of computer organisation and architecture • Consequences of uses of computing • Fundamentals of communication and networking • Fundamentals of databases • Big data • Fundamentals of functional programming



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<p data-bbox="188 331 300 360">A Level</p> <p data-bbox="188 383 683 412">Component 3 - Programming Project</p> <ul data-bbox="236 434 791 1328" style="list-style-type: none"><li data-bbox="236 434 791 674">• Analysis of the problem (10 marks)<ul data-bbox="336 483 775 674" style="list-style-type: none"><li data-bbox="336 483 775 517">○ Problem identification<li data-bbox="336 533 775 566">○ Stakeholders<li data-bbox="336 582 775 616">○ Research the problem<li data-bbox="336 631 775 665">○ Specify the proposed solution<li data-bbox="236 689 791 929">• Design of the solution (15 marks)<ul data-bbox="336 739 775 929" style="list-style-type: none"><li data-bbox="336 739 775 772">○ Decompose the problem<li data-bbox="336 788 775 822">○ Describe the solution<li data-bbox="336 837 775 929">○ Describe the approach to testing<li data-bbox="236 945 791 1077">• Developing the solution (25 marks)<ul data-bbox="336 994 791 1077" style="list-style-type: none"><li data-bbox="336 994 791 1028">○ Iterative development process<li data-bbox="336 1043 791 1077">○ Testing to inform development<li data-bbox="236 1093 791 1328">• Evaluation (20 marks)<ul data-bbox="336 1142 791 1328" style="list-style-type: none"><li data-bbox="336 1142 791 1176">○ Testing to inform evaluation<li data-bbox="336 1191 791 1225">○ Success of the solution<li data-bbox="336 1240 791 1274">○ Describe the final product<li data-bbox="336 1290 791 1328">○ Maintenance and development	<p data-bbox="831 331 943 360">A Level</p> <p data-bbox="831 383 1174 412">Non-exam Assessment 3:</p> <ul data-bbox="879 434 1345 674" style="list-style-type: none"><li data-bbox="879 434 1345 468">• Analysis (9 marks)<li data-bbox="879 483 1345 517">• Documented design (12 marks)<li data-bbox="879 533 1345 566">• Technical solution (42 marks)<li data-bbox="879 582 1345 616">• Testing (8 marks)<li data-bbox="879 631 1345 674">• Evaluation (4 marks)



Assessment

OCR Computer Science	AQA Computer Science
<p>AS Level (H046): Component 01 Computing principles Written paper – 1 hour and 15 minutes 70 Marks 50% of total AS Level</p>	<p>AS Level (7516): Paper 1 Subject content 1-4 (programming etc.) On-screen exam – 1 hour and 30 minutes 75 Marks 50% of the total AS Level</p>
<p>AS Level (H046): Component 02 Algorithms and problem solving Written paper – 1 hour and 15 minutes 70 Marks 50% of total AS Level</p>	<p>AS Level (7516): Paper 2 Subject content 5-9 (computer systems etc.) Written paper – 1 hour and 30 minutes 75 Marks 50% of the total AS level</p>
<p>A Level (H446): Component 01 Computer system Written paper – 2 hours and 30 minutes 140 Marks 40% of total A Level</p>	<p>A Level (7517): Paper 1 Subject content 10-13 (programming etc.) On-screen exam – 2 hours and 30 minutes 100 Marks 40% of total A Level</p>
<p>A Level (H446): Component 02* Algorithms and programming Written paper – 2 hours and 30 minutes 140 Marks 40% of total A Level</p>	<p>A Level (7517): Paper 2 Subject content 14-21 (computer systems etc.) Written Exam – 2 hours and 30 minutes 100 Marks 40% of total A Level</p>



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<p>A Level (H446): Component 03* or 04* Programming project 70 Marks 20% of total A Level * Indicates synoptic assessment</p>	<p>A Level (7517): Non-exam assessment Programming project 75 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](#).

