Pearson Edexcel GCSE Computer Science frequently asked questions

Support

What resources are there to support the course?
We are producing free teacher materials to support your delivery of the course. A two-year course planner, schemes of work and accompanying lesson activities and activity solutions are already available on the Edexcel website and you can access them by clicking on Course Materials:
http://qualifications.pearson.com/en/qualifications/edexcel-gcses/computer-science-2013.coursematerials.html#filterQuery=category:Pearson-UK:Category%2FTeaching-and-learning-materials

Will there be a textbook available?
Hodder Education has published a textbook endorsed for Edexcel GCSE Computer Science, plus online options. The link is
http://www.hoddereducation.co.uk/Product?Product=9781471837357

Will there be any tea time briefings to support us?
No, we will not be running any tea time briefings. However, if there is an issue or topic you would like help with, please contact our subject advisor team on teachingict@pearson.com.

Will Pearson be offering any training?
We have already given two Getting Ready to Teach events which are available online (see link in Support above). If there is enough interest we may be able to run more. Please email ictteam@pearson.com if you have any specific training requests.

Assessment

When will students be able to do the controlled assessment?
Students must complete their controlled assessment in Year 11 (or the year in which they sit the written paper). A new controlled assessment brief will be released in January each year, starting in early January 2015. Students will be able to complete their controlled assessment any time after the controlled assessment brief has been released but must have completed it before Edexcel requires your centre marks in May. Students will have 15 hours to complete their controlled assessment.

What programming languages will students be able to use to complete their controlled assessment?
Students will be able to complete their controlled assessment in one of the following languages:
* Python (Versions 2 or 3)
* Java
* C-derived languages: (C, C++, C#)

Note that all three tasks in the controlled assessment must be completed in the same language.

Which programming platforms should students use?
This will depend on the programming language you choose.

Will there be an opportunity to redo the controlled assessment?
The retake opportunity for GCSE Computer Science is the same as for all linear GCSEs with controlled assessment: if students wish to retake the exam, they can carry forward their result from the controlled assessment unit. However, if students wish to redo the controlled assessment, they will also have to resit the exam. You can find further guidance here: http://www.edexcel.com/quals/gcse/gcse-2012/Pages/faqs.aspx.

Will there be exemplar work available?
Yes, we will be producing graded exemplar work for the sample controlled assessment brief that is currently on the website. This will be available in January 2015.

Will there be a second SAMs and SCAMs?
We will be producing a second Paper 1 SAM and which will be available in January 2015. We are no longer planning to produce a second sample controlled assessment.

Can you give any guidance on reporting predicted grades to parents? Can you suggest approximate grade boundaries?
Grade boundaries are set as part of the awarding process so, at this point, we are unable to confirm grade boundaries.

EBacc, headline measures and progression

Will the Pearson Edexcel GCSE in Computer Science count as an EBacc qualification?
Yes: government Ministers have accepted the recommendation from the British Computer Society (BCS) that Edexcel GCSE Computer Science be recognised in the EBacc measure in performance tables from 2015 (first awarding).

From 2015, Edexcel GCSE Computer Science counts as a science option in the EBacc measure in secondary school performance tables. This means that a student who sits any three of the four separate sciences (Biology, Chemistry, Physics and Computer Science) and achieves a C or above in two of them will fulfil the science requirement of the EBacc.

For full details, please refer to the government website:
https://www.gov.uk/english-baccalaureate-information-for-schools

How will the Pearson Edexcel GCSE in Computer Science count towards the new Progress 8 headline measure?
We are pleased to say that GCSE Computer Science will count towards the second 'bucket' in the Progress 8 measure: that is to say that it can count as one of the three EBacc subjects that contribute to the measure in addition to English and Maths.   See this link for more information about Progress 8.
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/285990/P8_factsheet.pdf

Will both GCSE Computer Science and GCSE ICT count towards headline measures?
Yes: GCSE ICT and GCSE Computer Science have different national classification codes (2650 and 2610 respectively) which means they do not discount each other, and both GCSEs can count towards headline measures. As mentioned above, GCSE Computer Science can count towards the second 'bucket' in Progress 8, while GCSE ICT can count towards the third 'bucket' in Progress 8.

Does this GCSE offer progression to A level Computing / Computer Science?
New A levels in Computer Science will be launched for first teaching in September 2015. Pearson Edexcel will not be launching an A level in Computer Science at this time. However, the Pearson Edexcel GCSE in Computer Science will support progression to any of the new A levels in Computer Science. During development, we consulted widely with members of the computing community – employers, higher education institutions and teachers – to ensure that the content of the GCSE is relevant, fit for purpose and supports progression into higher education and employment.

The Pearson Edexcel GCSE in Computer Science aims to develop knowledge and understanding of the fundamental principles and concepts of Computer Science, as well as computational skills, all of which will set students in good stead for further study of the subject.

Delivering the course

Which of the algorithms listed in specification point 1.1.8 do students need to be able to code for themselves?
Students need to know how all of the algorithms listed in 1.1.8 work. In addition, students will need to be able to code the following algorithms: bubble sort, linear search, maximum, minimum, mean, count.

Is it sufficient for students to learn just one programming language?
Students have to complete their controlled assessment in one of the three high level languages specified by Pearson (Java, a C-derived language or Python) so they only need to learn one programming language for the purpose of assessment. However, students should understand that there are fundamental programming constructs that underpin all programming languages.

During the course, students will also become familiar with pseudocode, assembly language code, HTML and SQL.

Students need to be aware of the existence of multiple programming languages, the differences between high-level and low-level languages, and their suitability for particular tasks (specification point 4.5.2).

Will students ever have to design and code a graphical user interface (GUI) in the controlled assessment?
No. Students will only have 15 hours to complete their controlled assessment, so we will only ever ask them to design and code a textual user interface. They should, however, understand how to go about designing and coding a graphical user interface.

My school has concerns about downloading IDEs to the machines because of network restrictions. What do you advise?
We don't foresee any security issues with installing an IDE on a school network. If, however, your school will not allow it, we would recommend setting up either standalone machines or virtual machines so that students have the freedom they need and there can be no potential risks to the school network.

When teaching real numbers (specification point 3.1.2) do I need to teach fixed point numbers and floating point numbers?
Fixed point is required as per the specification. Floating point is required as per the specification. Questions involving floating point will be based on the IEEE 754 specification.

Is there any software we can use to simulate a network?
We would recommend that, wherever possible, students are given the opportunity to set up a physical network. If, however, that is not possible, there are network simulators available, including:
http://www.gcsecomputing.org.uk/support/network/NWB_SIM.swf

The network simulator gives you three options:
1. Step by step – this option walks you through the set-up process and explains each addition to the network
2. Simulation – this option asks questions about your requirements to allow you to set up a network
3. Build a network – this option allows you to set up a network without help, and to change the properties of the network until you are happy with its performance.

With regards to IP addressing (specification point 5.2.1), do students need to know about both the old standard (IPv4) and the new standard (IPv6)?
Yes. Students need to know about the existence of both standards, the difference between them (32 bits versus 128 bits) and the reason why IPv4 is being replaced with IPv6.

Which versions of HTML and CSS should we be teaching?
Students' understanding of HTML and CSS will be assessed in the written exam paper, and not in the controlled assessment. As such, the version of HTML and CSS they know should not matter. However, we would recommend teaching the latest versions available.

How much detail do students need to know about the emerging trends specified in specification point 6.1.1?
We would recommend that Students should know 6 to 8 key facts about each of the emerging trends specified, and be able to identify (potential) issues and impacts of each trend.

What laws do I have to make students aware of when discussing legal issues?
We would expect Students to be aware of the Data Protection Act, the Copyright Design and Patents Act, the Computer Misuse Act, the Health and Safety at Work Act and the Cookie Law. Students will not be expected to recall and explain all the principles of the Data Protection Act. It is important that teachers note that the specification states 'Be aware of **ethical** and **legal** issues arising from the use of computers'.