Cambridge International Diploma in Computing FAQs

What is the difference between ICT/IT Skills and Computing?

IT and ICT focus on developing competencies for the computer user, whereas Computing is intended for students who wish to learn about computer systems and programming, rather than about the application of ICT.

In the area of ICT, UCLES offers qualifications which assess skills only, in a variety of applications:
- IGCSE IT
- AS/A level Applied ICT

In the discipline of Computing we offer:
- IGCSE/O level Computer Studies
- A/AS level Computing

What is its relationship with A/AS Level in Computing?

Three out of the four modules/components are identical. The only differences are the practical project (module 4), which will involve more advanced programming skills for the Diploma. The content of the Diploma's practical module goes beyond what is expected of A Level students, so it could be said to bridge the gap between an Advanced Level and Professional Level Diploma. Despite their similarities, there will be 2 separate syllabuses and sets of exam papers.

So is it more difficult than A level Computing?

It is more specialised but should be equal in terms of difficulty.

How will it be assessed?

2 written exams
Module 1 - Computer Systems, Communications and Software
Module 3 - Further Systems and Software
One practical programming project, marked by the Centre and moderated by CIE
Module 2 – Practical Programming Project
One practical project, marked by the Centre and moderated by CIE
Module 4 - Computing Project

How are Pass, Merit and Distinction awarded for each module, and for the full Diploma?

For individual modules, the raw marks will be graded along with A Level Candidates. Pass, Merit and Distinction will correspond to the appropriate grade thresholds. For the full Diploma, a candidate will need three or more modules at Distinction Level to gain a Distinction overall.

Who is it suitable for?

It is mainly suitable for students who intend to work in an IT-related job, particularly as a programmer, network manager or software engineer. These could be school or college students or adults wishing to re-train.

How long does the course take?

This will vary from centre to centre and also depend on the candidates' prior knowledge, but will normally require 360 learning hours.

Are there published mark schemes or past papers available for this syllabus?

Yes, both exam papers and mark schemes are published after the exams have taken place, and are available through our teacher support site as well as through Publications. Also available on the teacher support site are examiner reports, schemes of work and resource lists.

Where can we obtain examples of 'model' answers that have been awarded the highest grades?

A standards booklet, containing extracts from candidates' scripts, the mark awarded and comment from the Principal Examiner is available from Publications (http://www.cie.org.uk/profiles/teachers/orderpub)

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Where can I obtain books on the resource list?

Most of the textbooks can be obtained over the Internet. The following websites may be of interest:
www.amazon.co.uk
www.blackwells.co.uk

How can I get in touch with other teachers of Computing?

We have set up an email discussion group for teachers of this syllabus, which is the ideal place to ask questions about teaching, resources or what is expected of students for this or any of the other components of the syllabus. All general questions about the syllabus should be sent there. You can join this group at http://lists.ucles.org.uk/lists/listinfo/cie-comp-a

Is there a specific programming language that should be used for the Practical Programming Project?

Candidates may use any high level language.

Can my students use PHP Language to do the Practical Programming Project?

The work must have programming in it. There are 8 techniques that must be demonstrated to earn the marks, including file creation. We would advise that you look at a book published by Payne Gallway called computer Projects in VB.Net by D. Christopher.

For the Practical Programming Project can a practical project in database application be done in Visual basic using MS Access as background, if we apply all the criteria of using procedures, selection/iteration etc as mentioned in the syllabus in that project? Also, can we use the record structure of MS access instead of using arrays/records?

The Practical Programming Project must have programming in it. There is no reason why |Access cannot be used for the data storage but all the manipulation will have to be done using VB not SQL. There are 8 techniques that must be demonstrated to earn the marks, including file creation. This could not be credited with marks if the candidate has used Access because they have not programmed file creation. Access is not suitable, or at least is very restricting as far as the credit that can be given. We would advise that you look at a book published by Payne Gallway called computer Projects in VB.Net by D. Christopher.

Is it alright that we are using 'Turbo Pascal 7.0' to do our computing projects?

It is acceptable to use Turbo Pascal 7.0 for the practical programming project.

Regarding project language selection it is written in the syllabus guidelines that the candidates have a choice to select the language for the project. Some of our students have selected C++ and the others VB. Is this permissible? (We have tried to incorporate all the 8 aspects specified in the guidelines.)

Project Language Selection - C++ and VB are both acceptable and you may enter some candidates for C++ and others for VB.

Regarding the section of the syllabus – Testing (Test strategy):

a) What has to be incorporated under this?

b) Where do we get a sample from?

The syllabus refers to the need for a test plan and for selecting suitable data to test a solution. All the candidate has to do here is put that theory work into practice. The test plan is essential and is a major part of the project report. The candidate should decide which parts of the project are essential to the successful outcome of the work and devise tests to show that each works.

For example a teacher's mark book will require testing of the input of a new student, testing of imputing a new set of marks (both with marks for all students and also what happens if someone is away), tests on

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the calculation of the mean (one test when the mean is an integer and one when it is not an integer), test for selection of students who need extra help (tests at <50, >50 and =50).

The number of tests necessary will be dependent on the initial definition of the problem. This is a good example of somewhere in the project where candidates can check over each others' work and discuss the requirements for testing and the types of test data used. Candidates should not help each other by doing the work for their colleagues, but a discussion about the types of testing necessary can only help the understanding necessary for both this module and the theory module 1.

A reasonable estimate of the volume of evidence might be a page for the test table and another four pages to show the evidence of the tests (although many will be able to test the system fully with far fewer pages being used).

Evidence required:
- a comprehensive test plan, in table form, specifying the reason for the test, the test data to be used, the expected outcome and the actual outcome.
- differences between the expected outcome and the actual outcome should be explained, and the measures taken to overcome any problems should be outlined. Candidates should be encouraged to accept discrepancies as a good thing because it allows candidates to demonstrate their ability to analyse problems that arise and find a way round them. If everything works the first time then the analysis would not be possible.
- evidence that the tests have been carried out. This will probably be very simple output, at the most complicated it will only be simple screen dumps which can be fitted 2 or 4 to a page.

Regarding Module 1 – Theory:

a) How long should be the answers to the higher mark question? Should those be to the point answers or should accompany descriptions?

b) For low mark questions can answers be point-to-point specific?

Please refer to the teacher support site (https://teachers.cie.org.uk/cietss/index.htm) for mark schemes. These will indicate the types of answers that examiners are looking for.

In relation to Module 2 Practical Programming Project, the moderator report states 'Where there were detailed individual mark schemes plus notes from the teacher, it was very clear how and why marks had been awarded. This was much appreciated by the moderators'. Does this mean that students who had teachers that submitted detailed mark schemes were advantaged?

No - candidates are not disadvantaged when the teacher hasn't submitted detailed mark schemes. Moderators are trained to check teachers' marking in a consistent and thorough way. It is simply that it is quicker for moderators to check the marking of centres where teachers have made detailed notes. However, there is no requirement for your teachers to submit detailed notes.