

INTERNATIONAL GCSE

Information and Communication Technology (ICT) (9-1)

GETTING STARTED GUIDE

Pearson Edexcel International GCSE in Information and Communication Technology (ICT) (4IT1)



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This guide is Issue 1. We will inform centres of any changes to this issue. The latest issue can be found on the Edexcel website: www.edexcel.com/ial

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Contents

Α	Getting started for teachers	2
	Introduction	2
	Key features of the qualification	3
	What's new?	4
	Assessment Guidance	6
	Practical examination	12
	<u>Delivery of the qualification – transferable skills</u>	13
	Course planner	14
	<u>Suggested resources</u>	17
В	Getting started for students	18
	Student guide	18

A Getting started for teachers

Introduction

This Getting Started Guide provides an overview of the new Pearson Edexcel International GCSE in Information and Communication Technology (ICT) to help you get to grips with the changes to content and assessment, and to help you understand what these mean for you and your students.

Our package of support to help you plan and implement the new specification includes:

Planning – We will provide an editable scheme of work and course planner that you can adapt to suit your department. We also provide face-to-face and online training for international and schools.

Teaching and learning – To support you in delivering the new specification, we will provide suggested resource lists and teaching activities.

Understanding the standard – Sample assessment materials will be provided.

Tracking student progress – ResultsPlus provides the most detailed analysis available of your students' examination performance. It can help you identify topics and skills where students could benefit from further learning. We also offer examWizard, which is a free exam preparation tool containing a bank of past Edexcel exam questions, mark schemes and examiner reports for a range of subjects.

Support – Our subject advisor service will ensure you receive help and guidance from us as well as enabling you to share ideas and information with each other. You can sign up to receive e-newsletters to keep up to date with qualification updates, and product and service news. Email our subject advisor: TeachingICT@pearson.com

Resources – Print and online student resources, 100% matched to the new curriculum, featuring comprehensive coverage of all topics. Specifically developed for international learners, it includes signposted skills and teacher guidance on the application of the Pearson Progression Scale, as well as online teacher support.

Key features of the qualification

- Up-to-date content, with topics that prepare students for the digital world, the workplace and provide a pathway to Level 3 qualifications and beyond.
- · Comprehensive and detailed description of subject content.
- Written and theory examinations that test a student's knowledge, understanding and application of ICT.

Paper 1: Written Paper	Paper 2: Practical Paper
Externally assessed, June availability	Externally assessed, June availability
Worth 50% of the total International GCSE	Worth 50% of the total International GCSE
1 hour 30 minutes written examination, set and marked by Pearson	3 hour practical examination, set and marked by Pearson, to take place in an examination window during May/June

Assessment objectives and weightings

		% in International GCSE
AO1	Demonstrate knowledge and understanding of Information and Communications Technology	25–27%
AO2	Apply knowledge, understanding and skills to produce ICT-based solutions	46–52%
AO3	Analyse, evaluate, make reasoned judgements and present conclusions*	24–26%

^{*}Students will be required to demonstrate approximately 15% of analysis and 10% evaluation.

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What's new?

- The Pearson Edexcel International GCSE in Information and Communication Technology (ICT) (4IT1) replaces the legacy Pearson Edexcel International GCSE in Information and Communication Technology (ICT) (4IT0).
- The content of the Pearson Edexcel IGCSE in Information and Communication
 Technology (ICT) (4IT1) reflects contemporary views of the nature of ICT, ensuring that
 this qualification is aimed at the needs of the ICT user.
- The specification has not undergone substantial change, although the format in the specification looks different. The fundamental aims and objectives remain the same.
 The content has been updated and refreshed but the assessment approach is very similar to the 4ITO specification.
- Content has been updated, reorganised and made more explicit.
- The 9-1 grading scale has been introduced to ensure comparability with GCSE specifications, and to allow greater differentiation of students.
- Weighting between the written paper and practical paper remains at 50:50. The
 weighting of AO1 has been reduced slightly and the weighting of AO3 has been
 increased slightly. This is most obvious in Paper 1 where there is a greater emphasis on
 analysis rather than evaluation.
- The written paper remains 1 hour 30 minutes. There is no longer a section of 16 multiple-choice questions. Instead, multiple-choice questions are used where they are most appropriate throughout the paper.

Key changes

4IT0 (Legacy International GCSE ICT specification)	4IT1 (New International GCSE ICT specification)					
Changes by topic						
Topic 1 (ICT Systems)	Now split across Topic 1 (Digital Devices) and Topic 2 (Connectivity)					
Topic 2 (Impact of ICT)	Content in Topic 3 (Operating Online)					
Topic 3 (Use ICT Systems)	Now forms Topic 5 (Applying ICT) and Topic 6 (Software Skills)					
Topic 4 (Find and Select Information)	Incorporated within Topic 6 (Software Skills)					
Topic 5 (Develop, Present and Communicate Information)	Desktop publishing, video editing and audio editing have been removed					
Changes by lea	rning outcome					
LO1, LO2, LO3, LO4	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7 1.8					
LO5	2.1					
LO6	2.4					
LO7	2.5					
LO8	2.3					
LO9	2.3, 3.6, 4.1					
LO10	Content removed					
LO11	3.2, 3.3, 3.4, 3.5, 4.2					
LO12, 13	3.8, 3.9					
LO14	Content removed					
LO15	6.7					
LO16	Content removed					
LO17, LO18	3.1					
LO19	3.7					
LO20, LO21, LO22	3.9					
LO23	5.1					
LO24	5.3, 6.1					
LO25, LO26, LO27	6.1					
LO28	6.3					
LO29	6.2					
LO30	5.2, 5.3					
LO31	5.3					
LO32	6.1					
LO33	Content removed					
LO34	5.4					
	New content:					
	2.2, 4.3, 6.4, 6.5, 6.6					

Assessment guidance

Support to understand question types

Below is a list of question types that appear in the specification. We have provided examples of command words for each question type. This list is not exhaustive. If the command word(s) appear in the SAM, an extract from the SAM is included to indicate what this type of question requires from students.

QUESTION TYPE	EXAMPLES OF THE USE OF COMMAND WORD(S)					
Multiple Choice	Which one of these Requires a cross to be placed in the one correct option from a choice of four.					
Short answer	All of these cor pieces of inform	Give/State/Name All of these command words are really synonyms. They generally all require recall of one or more pieces of information.				
	1 (a) State o	one peripheral device that is used to input sound.	(1)			
	Question	Answer	Mark			
	1(a)	Microphone (1)				
		Accept: webcam	(1)			
		nation to be selected from a range of possibilities; a list or given stimulus. Ty the speed of the processor in Laptop C.	(1)			
	Question	Answer	Mark			
	1(d)	2.16 GHz				
		Do not accept:				
		Any other test from: DRF A8–10 APU	(1)			
	Calculate Obtain a nume	rical answer, showing relevant working. If the answer has a unit, this mus	t be included			
	When a statem	reason/reasons nent has been made and the requirement is only to give the reasons why. ses the Atzform website to buy toys for his son.				
	State two reasons why Iqbal may prefer to buy online rather than visiting his local s					
	Question	Answer	Mark			
	2(b)	Any two from:				
		 Can order 24–7/ when store is closed (1) Can check that toys are in stock (1) May get special online offers (1) Can easily compare prices with other stores (1) May be unable to visit the store/may not have a local store (1) 				
		Do not accept: Home delivery	(2)			
	Complete Requires the co	empletion of a table or diagram.				

(a) Describe

To give an account of something. Statements in the response need to be developed as they are often linked but do not need to include a justification or reason.

(e) Describe how cookies are used by websites.

(3)

(2)

Question	Answer	Mark
5(e)	A description to include:	
	(Cookies) are small files downloaded and stored (1), which record visits to the website (1), helps website tailor subsequent visits to suit	
	individual (1)	(3)

Explain

An explanation requires a justification/exemplification of a point.

Must require some element of reasoning/justification.

The mark scheme must have marking points that are linked. The answer must contain some element of reasoning/justification to satisfy the definition of explain.

(iii) Explain why having a large amount of RAM can benefit the user.

Question	Answer	Mark
1(f)iii	One explanation from: Laptop/programs run faster (1) because more data is stored in RAM/RAM has faster access than HDD (1) Improves multitasking (1) without problems such as lag/delay (1) Games/graphics/videos/streaming need lots of RAM (1) otherwise user will get poor quality images/buffering (1)	
	Requires linked responses for two marks	(3)

Draw

Produce a diagram/image either using a ruler or freehand.

May require labelling/annotation to express meaning.

Used when symbolic representations need to be manipulated.

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Extended

Discuss

Compare different points of view, giving evidence for each one. Should include a conclusion.

Extended questions will use a levels-based mark scheme as in this example.

(e) Pat's company offers training that includes some classes at a local college as well as independent study. She is required to submit assignments throughout the course.

Discuss how Pat might use onlone services to complete her training successfully.

(8)

Level	Mark	Descriptor			
	0	No rewardable material.			
1	A limited number of points will be identified, which may only support of point of view.				
		At least one point will have evidence to support it.			
		The discussion wil have few (if any) links to the scenario.			
		There may be a conclusion but this is likely to be a simple statement.			
		The response will lack clarity and organisation.			
A range of points will be identified, which compare different points of though the discussion may be unbalanced.					
		Some points will be supported by evidence.			
		The comparisons will include links to the scenario but may include some generic points.			
		A conclusion will be included. which will link with the comparison, though the link may be implicit.			
		The response will show some fovus but may not be well organised.			
3	6-8	The discussion compares a range of different points of view.			
		Most points will be supported by evidence.			
		The majority of the discussion will link to the scenario.			
		A conclusion will be given that clearly links to the comparisons made in the discussion.			
		The response will show good focus and organisation.			

A levels-based mark scheme provides the **descriptors** (right-hand column) that markers will use to establish the **level** (left column) from which it is most appropriate to award a **mark** (middle column) for a response.

Descriptors relate to the mark at the top of a level. A mark is awarded on a best-fit basis, so candidates could be awarded a mark from a level even if their response does not match every descriptor from it.

Analyse

Examine elements in detail; this will involve reviewing a given scenario / goal to identify relevant points / issues / information / outcomes and explaining how each of these relates to / impacts on the scenario / goal.

Justify

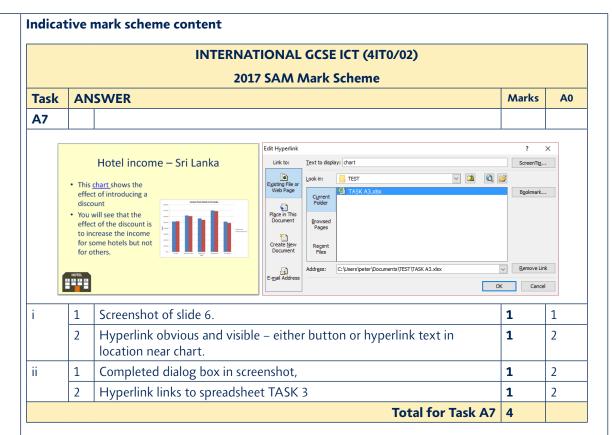
Used in an extended question where a quote / statement is given and students need to support / provide evidence to support the statement.

Evaluate

Review information then bring it together to form a conclusion, drawing on evidence including strengths, weaknesses, alternative actions, relevant data or information. Come to a supported judgement of a subject's qualities in relation to its context.

Support to understand Assessment Objectives

AO1 25-27%	Demonstrate knowledge and understanding of Information and Communication Technology (ICT)				
	Example question (3cii – Paper 1)				
	(i) State two drawbacks of using open source software. (2)				
	Indicative mark scheme content				
	Question Answer				
	3(c)(ii) Any two from:				
		■ May not have as many features as proprietary software (1)			
		■ May not haev bug-fixing/patch supports (1)			
		Not all software types have an open source version (1)			
		May not be compatible with propretary software (used by the college) (1)	(2)		
AO2 46-52%					
10 32 70	Example ques	stion (Task A7 – Paper 2)			
	Jayesh wants to	o include a hyperlink to the spreadsheet TASK A3 on slide 6.			
	(i) Insert a hy	yperlink to TASK A3 at a suitable point on slide 6.			
	Display sid	de 6 with the hyperlink visible.			
	Take a screenshot of slide 6. (2)				
	PASTE the screenshot into the document TASK A7.				
	RESAVE	ETASK A7.			
	DO NO	T PRINT at this stage.			



How to teach this Assessment Objective

Practise using software features within a scenario-based context. Focus on following a brief and highlight the importance of following a brief to produce solutions that meet a client's needs. Practise evidencing work using screenshots or tools such as 'Snipping tool' in MS Windows.

AO3 Analyse, evaluate, make reasoned judgements and present conclusions. 24-26% Students will be required to demonstrate approximately 15% of analysis and 10% evaluation.

Example question (5f - Paper 1)

(f) Jasmine would like to purchase videos and music from the internet to access on her tablet.
 Discuss the factors that Jasmine should consider before purchasing and downloading video and music online.

Indicative mark scheme content

Level	Mark	Descriptor			
	0	No rewardable material.			
A limited number of points will be identified, which may only so point of view.		A limited number of points will be identified, which may only support one point of view.			
		At least one point will have evidence to support it.			
		The discussion wil have few (if any) links to the scenario.			
		There may be a conclusion but this is likely to be a simple statement.			
		The response will lack clarity and organisation.			
		A range of points will be identified, which compare different points of view, though the discussion may be unbalanced.			
		Some points will be supported by evidence.			
		The comparisons will include links to the scenario but may include some generic points.			
		A conclusion will be included. which will link with the comparison, though the link may be implicit.			
		The response will show some fovus but may not be well organised.			
3	6-8	The discussion compares a range of different points of view.			
		Most points will be supported by evidence.			
		The majority of the discussion will link to the scenario.			
	A conclusion will be given that clearly links to the comparisons mad discussion.				
		The response will show good focus and organisation.			

How to teach this Assessment Objective

Suggested Practice Activity A

Class discussions followed by analysis of key content points raised during the discussion and any conclusion(s) reached.

Suggested Practice Activity B

Marking exercise: Analysis of an exemplar response alongside the levels-based mark scheme. Highlight key content in the response, developments of key points and clarity of response.

A

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Practical examination

Paper 2 is a three-hour practical, computer-based examination including printing and collating.

The practical examination is based on Topics 5 and 6. It is scenario-based and consists of two sections, with several tasks in each section. It comprises 50% of the qualification and allows candidates to demonstrate and apply their knowledge and understanding of ICT. The assessment is software-independent and most centres will be able to use their existing software for the practical aspects of the course.

Candidates are required to be able to use software effectively to create and edit documents, spreadsheets, databases, graphics, web pages and presentations. They must also be able to explain why products are suitable for purpose and audience and review outcomes.

Suitable free/open source applications can be used in the examination. Details can be found on the Edexcel website on the International GCSE ICT pages. Datafiles for the examination are provided to centres just before the examination window.

Candidates' responses to Paper 2 are submitted as printed documents. They must enter the task number, their name, candidate number and centre number on each document before printing.

A desktop computer must be made available to each candidate on a 1:1 basis. The computer must be capable of running the appropriate software related to the unit, i.e.

- art/imaging and graphics software
- spreadsheet software
- word processing software
- · database software
- multi-media/presentation software
- web authoring software (this may be other application software, such as word processing software).

Candidates' desktops should be 'locked down' to ensure that they cannot access email, the internet or intranet. Candidates may not access any saved work they may have created prior to the examination.

This examination is offered within a window. Candidates must complete the paper in one sitting. Centres may need to use more than one sitting during the window.

Delivery of the qualification – transferable skills

Why transferable skills?

Ensuring that International GCSE qualifications will help improve student outcomes through the acquisition of transferable skills, as well as subject content and skills, is a key aim for Pearson.

In recent years, higher education institutions and employers have consistently flagged the need for students to develop a range of transferable skills to enable them to respond with confidence to the demands of undergraduate study and the world of work.

Through our teaching materials and support offered we want to:

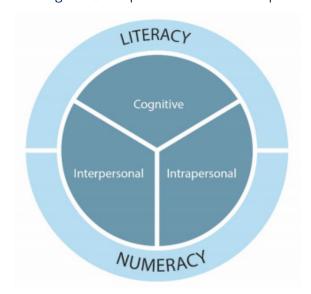
- 1. increase awareness of transferable skills that are already being assessed (for both students and teachers)
- 2. indicate where, for teachers, there are opportunities to teach additional skills that won't be formally assessed, but that would be of benefit to students.

What are transferable skills?

The Organisation for Economic Co-operation and Development (OECD) defines skills, or competencies, as 'the bundle of knowledge, attributes and capacities that can be learned and that enable individuals to successfully and consistently perform an activity or task and can be built upon and extended through learning.'[1]

To support the design of our qualifications, the Pearson Research Team selected and evaluated seven global 21st-century skills frameworks. Following on from this process, we identified the National Research Council's (NRC) framework ^[2] as the most evidence-based and robust skills framework, and have used this as a basis for our adapted skills framework.

The framework includes cognitive, intrapersonal skills and interpersonal skills.



- [1] (OECD (2012), Better Skills, Better Jobs, Better Lives (2012):http://skills.oecd.org/documents/OECDSkillsStrategyFINALENG.pdf)
- [2] Koenig, J. A. (2011) Assessing 21st Century Skills: Summary of a Workshop, National Research Council)

A Getting started for teachers

Course planner

Two-year course planner

Term	Year of Study	Topic/Paper	Guided Learning Hours	Notes
Term 1	Year 1	Theory focus - Digital Devices: Types, features and ICT to meet specific needs Software Skills: File Management	11	Exam preparation: Focus on short response questions
Term 1	Year 1	Theory focus - Digital Devices: Software, processors Software Skills: Graphics	11	
Term 2	Year 1	Theory focus - Digital Devices: Peripheral devices and memory Software Skills: Presentation	11	
Term 2	Year 1	Theory focus - Connectivity: Types, requirements Software Skills: Database management	11	Exam preparation: Focus on open response questions
Term 3	Year 1	Theory focus - Connectivity: Factors, benefits Software Skills: Web authoring	11	
Term 3	Year 1	Theory focus - Connectivity: Securing data Theory focus - Operating Online: Potential risks to data and personal information Software Skills: Word processing	11	
Term 1	Year 2	Theory focus - Operating Online: Types and use of online communities Software Skills: Spreadsheets	11	
Term 1	Year 2	Theory focus - Operating Online: Implications of the use of digital technologies, availability of information online	11	Exam preparation: Focus on extended questions
Term 2	Year 2	Theory focus – Online Goods and Services: Types and Impact of services. Online software	11	Includes time for mock exams.
Term 2	Year 2	Theory focus - Operating Online: Impacts of the internet on individuals, organisations and society. Online working from home	11	Further opportunity to prepare for extended questions
Term 3	Year 2	Revision (including Applying ICT)	11	Skills work to cover Topic 5

Three-year course planner

Term	Year of Study	Topic/Paper	Guided Learning Hours	Notes
Term 1	Year 1	Theory focus - Digital Devices: Types, features and ICT to meet specific needs Software Skills: File Management	7	Exam preparation: Focus on short response questions
Term 1	Year 1	Theory focus - Digital Devices: Software	7	
Term 2	Year 1	Theory focus - Digital Devices: Peripheral devices (storage and input)	7	
Term 2	Year 1	Theory focus - Connectivity: Memory and processors Software Skills: Graphics	7	
Term 3	Year 1	Theory focus - Connectivity: Peripheral devices (input & output) Software Skills: Presentation	7	
Term 3	Year 1	Theory focus - Applying ICT: Data and Information Software Skills: Databases	7	
Term 1	Year 2	Theory focus - Applying ICT: Using software applications Software Skills: Web authoring	7	
Term 1	Year 2	Theory focus - Online Goods and Services: Types of service Software Skills: Spreadsheets	7	
Term 2	Year 2	Theory focus – Online Goods and Services: Online software Software Skills: Spreadsheets	7	
Term 2	Year 2	Theory focus - Online Goods and Services: Impact of online services Software Skills: Word Processing	7	Exam preparation: Focus on open response questions
Term 3	Year 2	Theory focus - Connectivity: Types of digital communication Software Skills: Word Processing	7	
Term 3	Year 2	Theory focus - Connectivity: Factors influencing the choices of digital communication in a network. Requirements for connecting to a network, including the internet	7	
Term 1	Year 3	Theory focus - Connectivity: Benefits of using a LAN/ home network - Operating online: Online working from home	7	

A Getting started for teachers

Term	Year of Study	Topic/Paper	Guided Learning Hours	Notes
Term 1	Year 3	Theory focus - Connectivity: Securing data on a network - Operating online: Potential risk to data and types and use of online communities	7	Exam preparation: Focus on extended questions
Term 2	Year 3	Theory focus - Operating Online: Impacts of the internet on individuals, organisations and society	7	Includes time for mock exams.
Term 2	Year 3	Theory focus - Operating Online: Implications of the use of digital technologies and availability of information online and the use of online information	7	
Term 3	Year 3	Revision (including Applying ICT)	7	Skills work to cover Topic 5

Suggested resources

Name of resource	Link	Notes	
BBC Bitesize	http://www.bbc.co.uk/education/ subjects/zqmtsbk	Multimedia learning and revision tools	
BCS Glossary of Computing (14th Edition) -	https://www.amazon.co.uk/BCS- Glossary-Computing-Aline-Cumming/ dp/1780173261	The definitive subject glossary	
iGCSE ICT	http://www.igcseict.info/	Useful for teachers who are new to International GCSE ICT	
Revise ICT	http://www.reviseict.co.uk/	Online revision tool	
GCSE ICT Revision	http://apps.appshed.com/391435/	Online revision tool	
In Pictures	http://inpics.net/	Software tutorials	
GCSE IT app by Assessment Wiz	https://itunes.apple.com/gb/app/gcse-it- by-assessment-wiz/id779484521?mt=8	Revision app	
ICT GCSE revision app	https://itunes.apple.com/gb/app/ict-gcse-revision/id594470760?mt=8	Revision app	
Teach ICT	http://www.teach-ict.com/gcsehome.html	Useful for teachers who are new to teaching ICT	
Subject Advisor	TeachingICT@pearson.com		
ResultsPlus		A free online results analysis tool that provides information to help raise student attainment. By providing detailed, digestible information on exam performance, teachers can help their students improve their performance by highlighting potential focus areas. ResultsPlus also enables teachers to compare the results of their cohort with schools across the world.	
Pearson Edexcel published resources available in 2017		Print and online student resource, 100% matched to the new curriculum, featuring comprehensive coverage of all topics. Specifically developed for international learners, it includes signposted skills and teacher guidance on the application of the Pearson Progression Scale, as well as online teacher support.	
examWizard	https://www.examwizard.co.uk/	examWizard is a free exam preparation tool containing a bank of past Edexcel exam questions, mark schemes and examiner reports for a range of GCSE and GCE subjects.	
		Saves you time by enabling you to create your own mock exams, topic tests, homework or revision activities in minutes.	
		Links directly to associated examiner reports and mark schemes!	

Getting started for students

Student guide

Why study the Pearson Edexcel International GCSE in ICT?

This course will enable you to:

B

- explore how digital technology impacts on the lives of individuals, organisations and society
- learn about current and emerging digital technologies and the issues raised by their use, in a range of contexts, by individuals and organisations
- develop awareness of the risks that are inherent in using ICT and the features of safe, secure and responsible practice
- broaden and enhance your ICT skills and capability
- · work with a range of digital tools and techniques to produce effective ICT solutions in a range of contexts
- learn how to reflect critically on your own and others' use of ICT and how to adopt safe, secure and responsible practice.

What do I need to know, or be able to do, before taking this course?

We recommend that students are able to read and write in English at Level B2 of the Common European Framework of Reference for Languages, otherwise there are no prior learning requirements for this qualification.

Is this the right subject for me?

Have a look at our qualification overview to get an idea of what's included in this qualification. Then, why not get in touch with our student services, students@pearson.com, to discuss any outstanding questions you might have?

You could also have a look at http://qualifications.pearson.com/en/campaigns/pearsonqualifications-around-the-world.html#tab-Edexcel to find out what students and education experts around the world think about our qualifications.

How will I be assessed?

Through 100% examination, one written paper and one practical paper. You will need access to a computer and printer to complete this qualification, refer to our ICE (Instructions for the Conduct of the Examination) document on the subject page for more information.

What can I do after I've completed the course? You can progress onto further study of ICT and Computer Science or Computing at AS and A Levels, and then onto higher education.

What next?

Talk to your subject teacher at school or college for further guidance, or if you are a private candidate you should visit http://qualifications.pearson.com/en/support/support-for-you/ students.html



For information about Edexcel, BTEC or LCCI qualifications visit qualifications.pearson.com

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