GCE DIGITAL TECHNOLOGY

Examination Board: CCEA

Overview

The GCE Digital Technology specification:

- Is made up of a combination of AS and A2 Units;
- Enable progression to study at further and higher education level, training and employment
- Enable candidates to apply their knowledge in realistic ICT and Computing contexts
- Emphasise the development of the transferable skills necessary in a changing and dynamic working environment.

AS LEVEL

Unit	Content	Assessment
1 - Approaches to System Development	In this unit, students develop knowledge and understanding of the various approaches to the development of complex systems, the key stages in the development process and the outputs produced at each stage. The content of this unit underpins the learning that will take place in each of the three subsequent units. Key terms such as software crisis, systems analyst, fact finding techniques, DFD's, test plans, changeovers, RAD, Agile etc. use of Programming environments will be necessary for understanding and practice.	External Written Examination 1 hour 30 minutes 50% of AS 20% of A Level
2 - Fundamentals of Digital Technology	In this unit, students develop knowledge and understanding of the various approaches to the development of complex systems, the key stages in the development process and the outputs produced at each stage. The content of this unit underpins the learning that will take place in each of the three subsequent units. Key terms such as software crisis, systems analyst, fact finding techniques, DFD's, test plans, changeovers, RAD, Agile etc. use of Programming environments will be necessary for understanding and practice.	External Written Examination 1 hour 30 minutes 50% of AS 20% of A Level

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A LEVEL		
Unit	**Content**	**Assessment**
1 - Information Systems	In this unit students learn to extend your previous knowledge from the AS in Fundamental Technologies and learn about the additional areas of Computing such as networks and their protocols, technologies used such as repeaters and how they work. The purpose and use of MAC and IP addresses. How Collision detection works and its importance in a network system. The areas of transmission will be focused, how information is transmitted, checked and error detections applied or corrected. The use of databases is a key element in this section of learning and focuses on Normalisation of data to 3rd Normal form and also takes into account the use of Entity Relationship Diagrams, DFDs and SQL language. The investigation into Artificial intelligence and the current developments available in Japan and the US at present. The understanding of Expert systems being used through the medical and business professions. The introduction of Cloud Technology and the implication from a legal perspective for all this technology in our lives.	External Written Examination 2 hour 30 minutes 40% of A Level
2 - Application Development	In this unit students have the opportunity to become involved in a real-world situation where they can apply their skills, knowledge and understanding of digital technology to solve a problem for a specified client. Students apply their practical skills to produce a solution and associated detailed documentation for the client. They can adopt a range of approaches. You will be required to understand normalisation to third level, relational database structures, queries and the development of a relational database to implement a model. You will be required to design, implement, test and document solutions to given problems. You will be required to develop and apply project management skills to their work. You will be required to examine and apply standard ways of working in this context.	Portfolio 20% of Final A2 Mark

Careers

Technical Manager, Information Technology Manager, Systems Development Manager, Computer Operator, Data Centre Manager, Network Manager, User Support Manager, Technical Support Manager, Project Manager, Systems Analyst, Business Analyst, Systems Developer/Programmer, Help Desk Supervisor, Help Desk Operator, Information Technology Trainer, PC Support Officer, User Support Analyst, Technical Support Officer, Database Administrator, Network and Communications Analyst, Network and Communications Support Officer, Programmer, Web Designer, Web Analyst, Graphic Designer, Software Engineer, Telecommunications Engineer, Sales Consultant, ICT Teacher/Lecturer, Systems Integrator, Network Administrator, Systems Operator