

Suggested Learning Programme for Acme IT PLC

Qualifications:

- Edexcel BTEC Level 3 Certificate in ICT Systems and Principles (QCF)
- BTEC Level 3 Diploma in Professional Competence for IT and Telecoms Professionals (QCF)

Certificate in ICT Systems and Principles

The Certificate is the qualification that delivers the knowledge a person needs to have a good grounding in technical IT. It is delivered in the classroom over 4 to 5 months and comprises three units:

- Systems Architecture
- Principles of ICT Systems and Data Security
- Networking Principles

Systems Architecture

This unit covers how information is represented and processed in a computer, communication processes in networks and distributed systems and distributed applications and transaction processing. It also involves knowledge and use of an operating environment.

Principles of ICT Systems and Data Security

This unit introduces the common types of threat to ICT systems and data and methods of protecting against them. It also covers an awareness of the applications of cryptography to ICT systems and data.

Networking Principles

This unit provides the skills and understanding required to design, install and maintain networked systems. It covers topologies, the OSI model and TCP/IP.

Diploma in Professional Competence for IT and Telecoms Professionals

This qualification is primarily concerned with the application of skills learned in the certificate. In practice however, a great deal of new learning takes place. There is a large amount of flexibility in the units chosen. Only Health and Safety and “Developing your own Effectiveness and Professionalism” are mandatory. Each unit carries a number of credits. 72 credits are needed to achieve the qualification.

Suggested Programme for Acme PLC

Core Units

Health and Safety at work	3 credits – (15)
Developing your own Effectiveness and Professionalism	9 credits – (45)

Total 12 credits

Suggested Optional units (minimum 15 credits)

Technical Fault Diagnosis	12 credits – (75)
Working with ICT Hardware and Equipment	12 credits – (100)
Software Installation and Upgrade	12 credits – (100)
Security of ICT Systems	12 credits – (100)
MTA: Networking Fundamentals	10 credits
MTA: Web Development Fundamentals	10 credits

Total 68 credits

Minimum credits needed = 72

Total credits in this programme = 80

Unit Descriptions

Health and Safety at work

This unit explores compliance with health and safety legislation when working in ICT.

Developing your own Effectiveness and Professionalism

This unit involves personal development, team working and an understanding of IT professional practice and legislation.

Technical Fault Diagnosis

This unit develops a detailed understanding of the process, methods and information that are used in the diagnostic process and their practical application in the diagnosis to a range of faults. It also covers selection of remedies for identified faults and maintenance of relevant records.

Working with ICT Hardware and Equipment

Hardware and equipment in the context of ICT can include: cables, PC boards, racks, rack mounted equipment, poles, masts, aerials, large computer systems. Work can be carried out on, for example: a single monitor or keyboard by a technical courier, single or networked systems or a telephone exchange by a team of technicians/engineers.

Software Installation and Upgrade

This is the ability to install or upgrade software on any ICT system following agreed processes. It includes:

- preparation and planning
- installation or upgrade and
- configuration and handover to the customer.

The software installation/upgrade target can be any system capable of running software which can be interactively installed or upgraded.

Examples include base stations, switches and hubs, control systems and mobile, desktop and server computers

A competent person at level 3 can plan and carry out or control a wide range of installations or upgrades.

Security of ICT Systems

To develop knowledge, understanding and skills to ensure the security of an IT system and its data using security tools and assisting in the security auditing process.

MTA: Networking Fundamentals

Provides a good level of understanding of network hardware and software including:

- Concepts of the internet, intranet, and extranet
- Network Hardware
- Protocols and Services
- Name Resolution
- TCP IPv 4 & v6

MTA: Web Development Fundamentals

Provides a good foundation for developing applications for the web. It gives a foundation in technologies such as ASP.NET and AJAX and covers the following tasks:

- Programming Web Applications
 - Working with Data and Services
 - Configuring and Deploying Web Applications
 - Working with Client-Side Scripting
 - Troubleshooting and Debugging Web Applications
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