Space for centre logo

Award No: **G8L5 48** Level: **SCQF Level 8**

Award Title: **Professional Development Award in Network Technology SCQF[1] at SCQF Level 8**

Introduction to the Award

This Professional Development Award (PDA) is one of a suite, which is designed to incorporate the knowledge and understanding required by popular vendor* awards into SQA's Higher National frameworks.

It meets the need for courses to be offered in a more flexible format with specialised units.

The units, which make up this PDA in Network Technology at SCQF Level 8 are contained in a number of the HN frameworks and can assist in the preparation for vendor exams by using vendor courseware. This PDA covers the knowledge and understanding associated with the Cisco Certified Network Associate (CCNA) programme.

The units include vendor-related topics but are generic in nature. The units are already in the HND Computing and HND Computing Networking frameworks. Including these PDAs in the HN frameworks, allows candidates to work towards a Higher National qualification through short courses or part time study.

World wide, vendor qualifications are increasingly popular with both candidates and employers across the computing industry sectors and all organisations employing IT specialist staff.

Target Audience

The award is aimed at developing a range of specialist technical support skills and knowledge, in the administration and design of complex networked computer systems, in line with the Cisco Network Academy Programme. It will therefore be attractive to candidates seeking employment in a position such as a network technician or engineer, or those wanting to certificate their existing skills in a similar role, prior to progressing further in their careers. Candidates may be involved in network design or technical support.

*Vendor Awards are those Awards designed and certificated by a product manufacturer or trade alliance organisation.

[1] SCQF (Scottish Credit and Qualifications Framework) helps people to understand and compare different qualifications in Scotland. (visit the website www.scqf.org.uk for more information)

Successful completion of this PDA would help prepare candidates for the Cisco Certified Network Associate (CCNA) exams and would offer the opportunity to proceed to higher levels of Cisco certification. It will also prepare candidates for progression to further study in computing or technical support, eg the HND awards in Computing or Computer Networking.

Content and Structure of the award

On successful completion of the Professional Development Award in Network Technology at SCQF Level 8, candidates will receive the Professional Development Award, in addition to the four separate units listed below, endorsed on their Scottish Qualifications Certificate (SQC).

Candidates are required to take all **four** mandatory units at SCQF Level 8 to achieve this PDA.

UNIT TITLE	CODE	CREDIT VALUE	*SCQF LEVEL
Networking Technology	DF9X 35	2	8
Routing Technology	DF9Y 35	2	8
Switching Technology	DG09 35	2	8
Internetworking Technology	DG0A 35	2	8

*The Scottish Credit & Qualifications Framework (SCQF) is a way of helping people understand and compare Scottish Qualifications, by giving them credit points which shows how much learning has been achieved and a level on a scale of 12, to show how demanding the learning is. Details can be found at www.scqf.org.uk.

At the end of the award candidates will be able to:

- Describe the characteristics of local area networks (LAN), common networking media, the principles of cable testing and build a simple LAN
- Describe the features of Ethernet networks, the operation of Ethernet switching, IP processing and routing, the operation of upper layer services, router basics
- Implement a basic router configuration and manage a router
- Describe the operation of common routing protocols, implement routing protocols, test and troubleshoot a routed LAN
- Define the principles of a TCP/IP based firewall and configure a firewall
- Describe the principles of classless routing, the common advanced routing protocols and configure advanced routing
- Describe basic switched LANs and configure a basic switched network
- Describe redundancy and spanning tree
- Describe advanced switching concepts and Implement an advanced switched network
- Describe scalable IP address schemes, WAN technologies and design techniques, ISDN WAN concepts
- Implement a PPP WAN link
- Describe Frame Relay concepts and implement a WAN frame relay link
- Describe network administration

Centre Contact details