Systems and Principles Unit Syllabus

Level 2 Install, configure and maintain software
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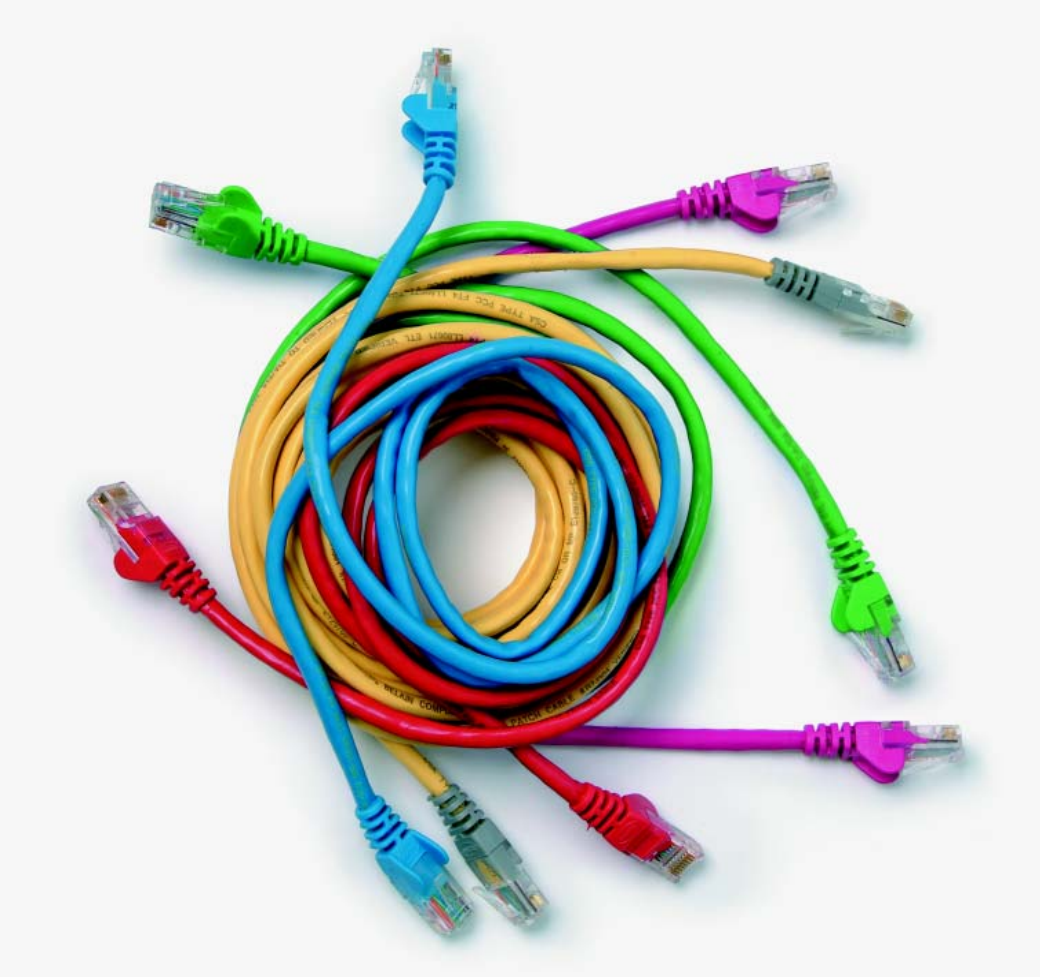

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Unit 230 Install, configure and maintain software

Syllabus Overview

Unit accreditation number **A/501/3980**

Credit value **5**

Rationale

This unit will enable the candidate to install, configure, test and maintain standard software eg word processors, web browsers, email packages etc. The candidate will be able to address common problems encountered during installation and use on stand-alone workstations.

N.B. Installation plans and recording documents should be locally produced and made specifically for the system being used for training.

Learning outcomes

There are **five** outcomes to this unit. The candidate will be able to:

- Prepare, carry out and document the installation of software
- Configure installed software
- Test and install software and resolve problems
- Operate installed software
- Uninstall standard application software

Guided learning hours

It is recommended that **30** hours should be allocated for this unit. This may be on a full time or part time basis.

Connections with other qualifications

This unit contributes towards the learning and assessment criteria required for the Level 2 Diploma in ICT Professional Competence.

Assessment and grading

Assessment will be by means of a **set assignment** covering both practical activities and underpinning knowledge.

Unit 230 Install, configure and maintain software

Outcome 1 Prepare, carry out and document the installation of software

Practical activities

The candidate will be able to:

1 check availability of resources recommended in software installation instructions, eg
   - a optical media drive
   - b RAM
   - c processor type and speed
   - d operating system compatibility
   - e licence details

2 perform data back-up prior to carrying out a new installation

3 virus check installation software

4 install software according to manufacturer's instructions and given installation plan, eg
   - a a device driver
   - b a web browser
   - c an email/office management/communications package
   - d a word processor
   - e a spreadsheet application
   - f a presentation package
   - g an anti-virus package/anti spyware/anti malware
   - h a graphics package
   - j a simple database

5 check that the system functions after installation of software

6 complete registration documentation and/or installation records

7 report any problems encountered.

8 comply with relevant legislation, regulations and external standards.

Underpinning knowledge

The candidate will be able to:

1 identify the installation procedures for various types of software

2 identify parameters used in manufacturers' minimum system requirements for software, eg
   - a RAM
   - b free disk space
   - c installed operating system
   - d processor type

3 identify typical values for system specifications, eg
   - a RAM
   - b free disk space
   - c installed operating system
   - d processor type

4 state the reasons for back-up procedures and identify standard methods used eg
   - a optical media rewriter
   - b flash drive
   - c removable hard drive

5 state the reasons for checking the installation source (eg disk, download site) for viruses

6 identify additional information that will be required during installation, eg
   - a passwords
   - b product identification numbers
   - c serial numbers
   - d user details

7 identify common types of problems that can occur during installation and ways of resolving them, eg
   - a failure to install
   - b missing or corrupted file
   - c failure to operate correctly
   - d incompatibility with other applications
   - e password locked
   - f application or OS crash

8 describe the main software licensing features to be considered when installing software eg
   - a freeware
   - b shareware
   - c single user
   - d multi user
   - e corporate licence

Underpinning knowledge continued

9 describe common procedures for software registration and documentation, eg

- a on-line registration
- b postal registration
- c version numbers and installation dates on workstation records
- d recording licence, version numbers and installation dates on central (company) software register.

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Outcome 2 Configure installed software

Practical activities

The candidate will be able to:

1 modify software configuration according to instructions and document the changes made

2 configure to restore default settings

3 add and remove components of installed software, eg

- a additional features of a single application eg email scanning in an anti-virus application
- b applications within an integrated suite of software eg contacts database within a virtual office package

4 upgrade existing software by

- a downloading from the Internet/LAN
- b using upgrade supplied on disk.

Underpinning knowledge

The candidate will be able to:

1 state why individual users may need the software settings modified, eg
   - a different email settings
   - b default storage locations
   - c default printer
   - d colours/fonts
   - e toolbar icons

2 identify examples of components of software that may be installed as separate elements, eg
   - a email applications in office suites
   - b email scanner in anti-virus application
   - c presentation package in an office suite

3 identify methods that can be used to restore default settings of software

4 identify reasons for upgrading application software, eg
   - a new printer
   - b new scanner
   - c manufacture issues (new version, service pack)
   - d repairing bugs
   - e security upgrade.

5 state the importance of working with regard to
   - a professional and ethical standards
   - b integrity and confidentiality

6 describe how to source, gather and collate information from external sources about resolutions and fixes.

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Outcome 3 Test and install software and resolve problems

Practical activities

The candidate will be able to:

1 prepare a software test plan, including
   - a system being used
   - b tests/monitoring to be undertaken
   - c diagnostics to be used
   - d expected results
   - e recording of results

2 test software following installation, eg
   - a a device driver
   - b a web browser
   - c an email/office management/communications package
   - d a word processor
   - e a spreadsheet application
   - f a presentation package
   - g an anti-virus/anti-spyware/anti-malware package
   - h a graphics package
   - j a simple database

3 test software, listed in 3.2, in response to a reported problem

4 use simple initial corrective actions to resolve problems eg
   - a correctly shutting down and restarting the operating system
   - b using the operating system to close software applications
   - c closing and restarting software applications
   - d restoring default settings in software applications
   - e configuring software settings

5 use utility software, eg
   - a system monitor, file checker etc, supplied with operating system
   - b a proprietary utilities package

6 repair damaged software by reinstalling software components

7 report outcome of repair procedures and provide a testing report.

Underpinning knowledge

The candidate will be able to:

1 explain the purpose of testing software following installation

2 explain the purpose of testing software in response to reported problems

3 describe the difference between expected results and actual results

4 describe factors that can cause software not to perform as expected, eg

- a conflicts with other software components
- b accidental deletion or relocation of software files
- c incompatibility with hardware

5 identify common types of faults that can occur in applications software, eg

- a application and/or operating system crashes
- b software error messages
- c data file(s) corrupted by application
- d corrupted and/or missing application file(s)
- e application fails to start/shut down
- f functions within the application fail to function correctly

6 state how to identify common types of faults from the results of simple tests, using

- a standard functional tests and troubleshooting guides supplied with the application
- b self-test applications supplied with the application

7 state that simple corrective actions are

- a correctly shutting down and restarting the operating system
- b using the operating system to close software applications
- c closing and restarting software applications
- d restoring default settings in software applications
- e configuring software settings

8 describe the purpose of various utility software packages and state the types of problems the software is designed to resolve eg

- a virus checkers
- b disk checking tools
- c disk defragmentation tools
- d uninstallers

9 identify the differences between, and possible problems with the following procedures

- a uninstalling and then reinstalling the software
- b installing over existing software

10 state common procedures to follow when

- a attempted repair is successful eg
  - i inform supervisor
  - ii maintain error logs and maintenance records
- b attempted repair is unsuccessful eg
  - i inform supervisor
  - ii maintain error logs and maintenance records

Underpinning knowledge continued

11 identify actions to be taken on completion of testing, eg
   a submitting test report
   b reporting identified errors
   c following maintenance procedures.

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Outcome 4 Operate installed software

Practical activities

The candidate will be able to:

1 open different software applications on a workstation, eg
   - a a device driver eg printer, scanner, camera, etc
   - b a web browser
   - c an email/office management/communications package
   - d a word processor
   - e a spreadsheet application
   - f a presentation package
   - g an anti-virus/anti-spyware/anti-malware package
   - h a graphics package
   - j a simple database

2 open individual files within software applications listed in 4.1

3 enter data into a file

4 save a file to a default location using both the same and different file names

5 print test data from the software applications listed in 4.1

6 close files and shut down software applications listed in 4.1

7 adjust basic settings of software to suit individual needs eg
   - a toolbars
   - b file locations
   - c language.

Underpinning knowledge

The candidate will be able to:

1 The candidate will be able to describe the main functions of different types of standard application software, eg

- a word processor
- b anti-spyware
- c databases
- d spreadsheets
- e anti-malware
- f graphics
- g presentations
- h utility software
- j email
- k browsers
- l games
- m device driver
- n anti-virus
- p multimedia
- q firewall.

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Outcome 5 Uninstall standard application software

Practical activities

The candidate will be able to:

1 record registration details of software to be uninstalled

2 carry out any required back-up of data before software is uninstalled

3 uninstall software

4 check the integrity of a system after the removal of software

5 complete software records.

Underpinning knowledge

The candidate will be able to:

1 explain the reasons for maintaining accurate registration details of installed and uninstalled software

2 identify types of software which affect data when uninstalled eg

- a email software
- b .dll files
- c shared files

3 identify correct un-installation techniques for standard software

4 describe incorrect methods of removing software and possible unwanted effects upon a system

5 describe operating system functions for adding/removing software

6 explain the importance of keeping up-to-date records.

Unit record sheet

Use this form to track your progress through this unit.

Tick the boxes when you have covered each outcome. When they are all ticked, you are ready to be assessed.

Outcome	✓	Date
1 Prepare, carry out and document the installation of software	☐	
2 Configure installed software	☐	
3 Test and install software and resolve problems	☐	
4 Operate installed software	☐	
5 Uninstall standard application software	☐	

Candidate Signature ..... **Date** .....

City & Guilds Registration Number .....

Quality nominee (if sampled) ..... **Date** .....

Assessor Signature ..... **Date** .....

External Verifier Signature (if sampled) ..... **Date** .....

Centre Name ..... **Centre Number** .....

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