Systems and Principles Unit Syllabus

Level 3 ICT Repair centre procedures 3

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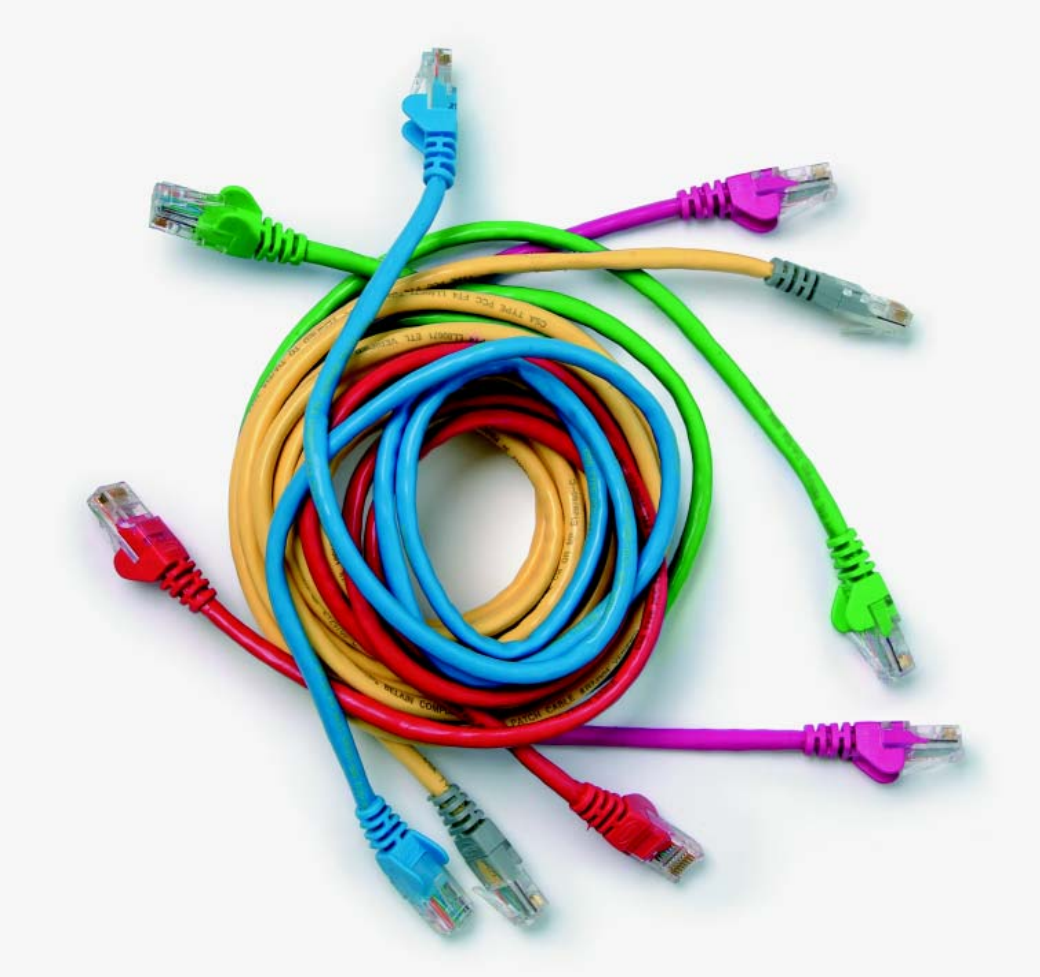

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Syllabus Overview

Rationale

This unit will enable the candidate to assess and specify technical resource requirements of a range of typical repair centres.
N.B. It is not necessary for the assessment of this unit to be undertaken in a workshop. However, the centre is advised to make available a specific location (room/building) on which the candidate can base the planning process.

Learning outcomes

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

- Describe legislative requirements for repair centre operations
- Detail specific technical resource requirements for repair centre operations
- Develop a specification for a repair centre
- Provide technical support to others

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 knowledge and understanding required for the following qualifications:

NVQ for IT Professionals (4324) Level 3

Outcome	Unit
2	33.2 Obtain technical resources for a repair centre
2, 3	33.3 Develop technical resources for a repair centre
4	33.4 Co-ordinate the implementation of technical resources
1	104.1 Check that health and safety procedures are followed
1, 2	104.2 Ensure that risks are controlled safely and effectively
1, 2	104.2 Assess the technical resource requirements of repair
1, 2	104.2 centre operations

Key Skills

Application of number	N/A
Communication	3.2, 3.3
ICT	2
Working with others	N/A
Problem solving	3.1
Improving own learning	2

Assessment and grading

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

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Outcome 1 Describe legislative requirements for repair centre operations

Practical activities

The candidate will be able to:

1 evaluate the current requirements of health and safety and environmental legislation as applicable to repair centre operations with regard to

- a electrical safety
- b COSHH
- c bench layout and design
- d floor coverings
- e ventilation and fume extraction
- f storage
- g heating and lighting of work areas
- h noise
- j personal protective equipment (PPE)
- k use of display screen equipment (DSE)
- l waste disposal.

Underpinning knowledge

The candidate will be able to:

1 describe the regulatory requirements for data protection, confidentiality and software licensing.

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Outcome 2 Detail specific technical resource requirements for repair centre operations

Practical skills

The candidate will be able to:

1 locate and extract information (from eg Internet, industry codes of practice) on specific technical and safety requirements for repair centre operations, eg

- a test equipment
- b diagnostic software
- c tools
- d fire extinguishers
- e service manuals

2 identify resource requirements for a repair centre, eg

- a benches
- b fume extraction
- c fire protection
- d warehousing/storage

3 evaluate information gained and decide on its applicability to specific repair centre operations

- a base unit repair
- b laptop repair
- c printer/photocopier repair
- d CD-ROM/DVD drive repair
- e keyboards.

Underpinning knowledge

The candidate will be able to:

1 describe the specific technical and safety requirements for, eg

- a antistatic protection areas
- b soldering stations
- c equipment testing areas
- d equipment cleaning areas (including high voltage and laser)
- e equipment and spares storage areas
- f clean rooms
- g areas for repair and test of high voltage equipment such as monitors and lasers
- h restricted access areas
- j electro-magnetic compatibility (EMC) testing.

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Outcome 3 Develop a specification for a repair centre

Practical activities

The candidate will be able to:

1 identify issues affecting the provision of technical resources, eg
   - a cost
   - b legal requirements
   - c staff training
   - d technical specification
   - e contractual requirements

2 identify sources to obtain manufacturers' test and repair specifications for equipment to be repaired, eg
   - a Internet
   - b manufacturers' manuals
   - c help and information files within the system

3 identify sources to obtain health and safety and environmental legislation, eg
   - a Internet
   - b Health and Safety Executive (HSE)
   - c Department for Environment, Food and Rural Affairs (DEFRA)

4 produce a report outlining the risk factors, options to minimise them and recommendations as to the most appropriate options in a given example, eg
   - a electric shock
   - b static damage
   - c manual handling injuries
   - d fire
   - e poor lighting
   - f health damage from hazardous substances
   - g hearing damage
   - h excess heat and cold
   - j training
   - k security (data and property)

5 produce repair centre work instructions for using test equipment.

Underpinning knowledge

The candidate will be able to:

1 describe the main steps to the development of specifications for repair centre operations
   - a define work flow processes (eg stages, equipment)
   - b decide on basic layout (including domestic/welfare arrangements)
   - c carry out a risk assessment and quantify the risks
   - d decide on optimum methods of risk minimisation
   - e modify layout and equipment lists to minimise risks
   - f define basic operating procedures

2 describe workflow processes typical to a repair centre eg
   - a storage
   - b spares
   - c test and verification
   - d soak testing
   - e repackaging
   - f software imaging

3 explain the importance of producing operating procedures for a new resource and describe methods of doing so

4 explain the importance of operator training in the newly introduced procedures

5 outline the problems that could occur when obtaining technical resources and the methods for dealing with them
   - a item out of stock
   - b expense
   - c lead time too long
   - d does not operate as advertised

6 outline methods for carrying out workplace risk assessments for planned new operations and recording findings
   - a be aware of hazards
   - b decide who is at risk and how
   - c evaluate hazards and establish that existing precautions are adequate
   - d review and revise the effectiveness of precautions
   - e record findings
   - f take steps to minimise risks

7 Explain why it is important to recover business data that has become lost or corrupted.

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Outcome 4 Provide technical support to others

Practical activities

The candidate will be able to:

1 produce local repair work instructions to cover
- a equipment/tools required
- b health and safety considerations
- c dismantling procedure
- d labelling of connectors
- e removal of unserviceable items
- f unpacking, handling and visual checking of replacement items
- g pre-installation, configuration of replacement items
- h installation of replacement items
- j reassembly of major units

2 produce local work instructions for post repair testing to cover
- a connection of equipment
- b software requirements
- c configuration of equipment under test
- d test(s) to be carried out, (functional, diagnostic, stress)
- e expected results and tolerances
- f test report format.

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 Describe legislative requirements for repair centre operations	☐	
2 Detail specific technical resource requirements for repair centre operations	☐	
3 Develop a specification for a repair centre	☐	
4 Provide technical support to others	☐	

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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