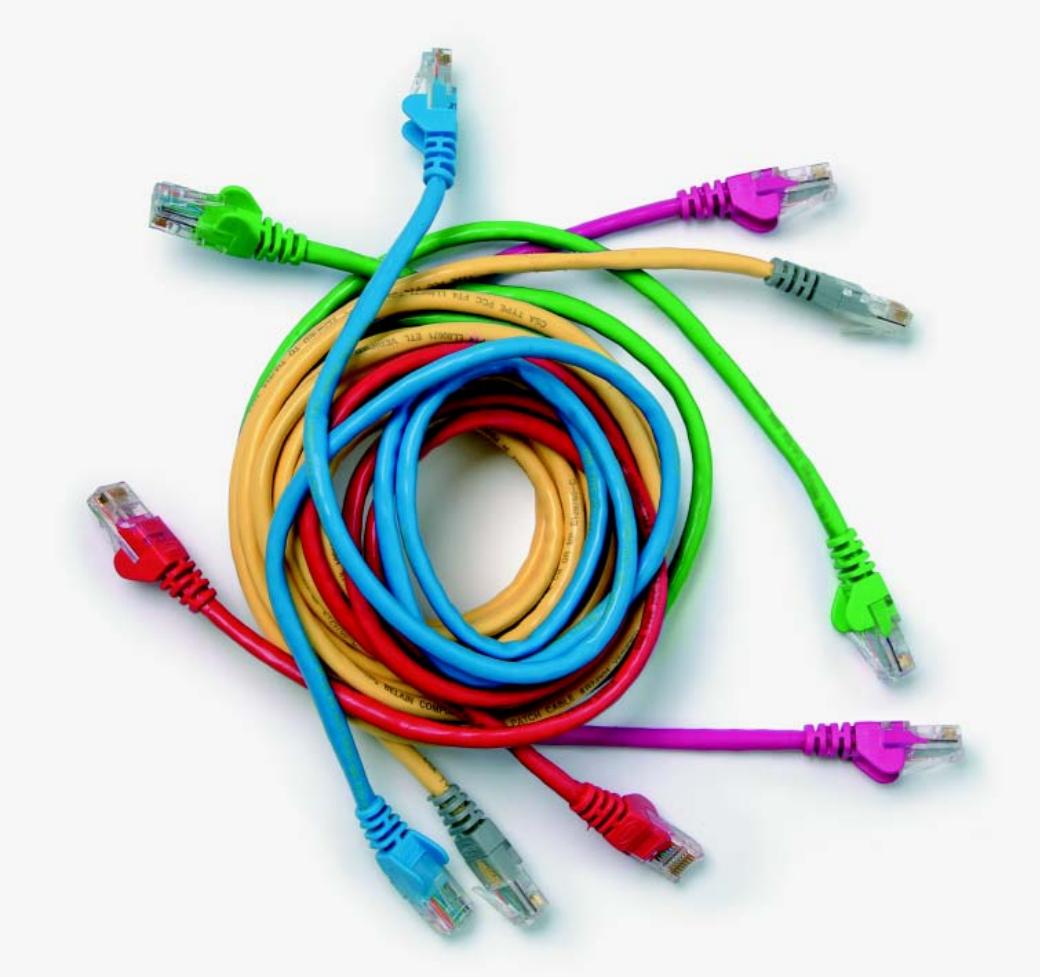
Systems and Principles Unit Syllabus

Level 3 Plan for the delivery of ICT support services and assist in the acquisition of ICT systems

7540-364

www.cityandguilds.com
September 2010
Version 1.0



About City & Guilds

City & Guilds is the UK's leading provider of vocational qualifications, offering over 500 awards across a wide range of industries, and progressing from entry level to the highest levels of professional achievement. With over 8500 centres in 100 countries, City & Guilds is recognised by employers worldwide for providing qualifications that offer proof of the skills they need to get the job done.

City & Guilds Group

The City & Guilds Group includes City & Guilds, ILM (the Institute of Leadership & Management) which provides management qualifications, learning materials and membership services, NPTC which offers land-based qualifications and membership services, and HAB (the Hospitality Awarding Body). City & Guilds also manages the Engineering Council Examinations on behalf of the Engineering Council.

Equal opportunities

City & Guilds fully supports the principle of equal opportunities and we are committed to satisfying this principle in all our activities and published material. A copy of our equal opportunities policy statement *Access to assessment and qualifications* is available on the City & Guilds website.

Copyright

The content of this document is, unless otherwise indicated, © City & Guilds Limited and may not be copied, reproduced or distributed without prior written consent.

However, approved City & Guilds centres and learners studying for City & Guilds qualifications may photocopy this document free of charge and/or include a locked PDF version of it on centre intranets on the following conditions:

- centre staff may copy the material only for the purpose of teaching learners working towards a City & Guilds qualification, or for internal administration purposes
- learners may copy the material only for their own use when working towards a City & Guilds qualification
- the *Standard Copying Conditions* on the City & Guilds website.

Please note: National Occupational Standards are not © City & Guilds Limited. Please check the conditions upon which they may be copied with the relevant Sector Skills Council.

Publications

City & Guilds publications are available on the City & Guilds website or from our Publications Sales department at the address below or by telephoning +44 (0)20 7294 2850 or faxing +44 (0)20 7294 3387.

Every effort has been made to ensure that the information contained in this publication is true and correct at the time of going to press. However, City & Guilds' products and services are subject to continuous development and improvement and the right is reserved to change products and services from time to time. City & Guilds cannot accept liability for loss or damage arising from the use of information in this publication.

City & Guilds
1 Giltspur Street
London EC1A 9DD
T +44 (0)844 543 0000 (Centres)
+44 (0)844 543 0033 (Learners)
F +44 (0)20 7294 2400
www.cityandguilds.com
centresupport@cityandguilds.com

Contents

Unit 364 Plan for the delivery of ICT support services and assist in the acquisition of ICT systems

Syllabus Overview		2
Outcome 1	Determine customer requirements for ICT systems and support services	3
Outcome 2	Evaluate available ICT systems and services against customer requirements	6
Outcome 3	Prepare and present suitable options for the acquisition of ICT systems and support services	8
Outcome 4	Develop plans to ensure that the ICT infrastructure delivers the required functionality, capacity and level of support	10
Unit record sheet		12

Unit 364 Plan for the delivery of ICT support services and assist in the acquisition of ICT systems

Syllabus Overview

Unit accreditation number **M/501/3992**

Credit value **13**

Rationale

This unit will enable the candidate to evaluate a customer's current ICT system and support provision, assess future requirements and make detailed recommendations on system and support services acquisition. It will also enable the candidate to produce implementation and contingency plans for the enhancement of the customer's system.

Learning outcomes

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

- Determine customer requirements for ICT systems and support services
- Evaluate available ICT systems and services against customer requirements
- Prepare and present suitable options for the acquisition of ICT systems and support services
- Develop plans to ensure that the ICT infrastructure delivers the required functionality, capacity and level of support

Guided learning hours

It is recommended that 90 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 outcomes and assessment criteria required for the Level 3 Diploma in ICT Professional Competence.

Assessment and grading

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

Unit 364 Plan for the delivery of ICT support services and assist in the acquisition of ICT systems

Outcome 1 Determine customer requirements for ICT systems and support services

Practical activities

The candidate will be able to:

1 identify and document the requirements of the customer for ICT system functionality and capacity, eg
   - a current:
     - i documents they process/use
     - ii information they store/keep
     - iii how they use stored information
     - iv transactions made with others
     - v reports or documents they need to produce
     - vi designs they produce
     - vii what communications systems they use
     - viii who they communicate with
   - b proposed:
     - i number of users
     - ii data processing
     - iii transaction processing
     - iv design (eg graphics, web design, CAD)

2 identify and document the details of the customer's current system support provision

3 identify and document any customer constraints on the required ICT systems and services
   - a implementation timescale
   - b compatibility with existing systems
   - c physical/environmental
   - d availability
   - e regulatory
   - f financial
   - g reliability

Practical activities continued

4 carry out physical and electronic audits and monitoring to determine the extent and configuration of the customer's existing system, eg
   - a details of system components (printers, servers, workstations, etc)
   - b details of system configuration (layout, transmission media, topology, etc)
   - c details of the current operating system(s) and application software (location, version, revision, licensing and usage)
   - d details of current security arrangements (firewalls, virus protection, authorisations, password systems, etc)
   - e load distribution and levels over a period

5 identify sources of information on ICT systems eg
   - a websites
   - b sales brochures
   - c product specifications.

Underpinning knowledge

The candidate will be able to:

1 describe the reasons for determining customer requirements

2 describe commonly used methods of obtaining valid customer feedback
   - a oral communication
     - i face-to face
     - ii telephone
   - b written communication
     - i email
     - ii questionnaire

3 describe the features of different levels of support, eg
   - a on site repair
   - b hours per day/days per week/response times
   - c return to workshop
   - d warranty
   - e contracted time and materials
   - f escalation
   - g technical courier
   - h expertise of technician

4 describe commonly available ICT systems and services
   - a hardware
   - b software
   - c development, eg designing, creating, implementing and integrating ICT components
   - d support, eg training, maintenance, advice and assistance

Underpinning knowledge continued

5 describe the type of constraints which customers may impose
   - a implementation timescale
   - b compatibility with existing systems
   - c physical/environmental
   - d availability
   - e regulatory
   - f financial
   - g reliability

6 describe available sources of information on ICT systems and providers of ICT services and how to assess their reliability. Sources should include:
   - a direct eg from the
     - i manufacturer
     - ii service provider
   - b independent eg
     - i press reviews
     - ii existing users

7 describe how ICT systems are specified in terms of function and capacity
   - a function:
     - i inputs
     - ii processes
     - iii outputs
   - b capacity:
     - i access, eg number of simultaneous users, speed of response
     - ii processing
     - iii storage

8 describe how ICT services are specified
   - a services to be provided
   - b periods of availability
   - c procedures to be followed when requesting and delivering services

9 explain that changes to systems need to be supported by clearly defined benefits and a business case.

Unit 364 Plan for the delivery of ICT support services and assist in the acquisition of ICT systems

Outcome 2 Evaluate available ICT systems and services against customer requirements

Practical activities

The candidate will be able to:

1 evaluate the obtained system and support information by
   - a comparing it with customer requirements
   - b identifying shortfalls
   - c documenting the results
   - d creating or amending plans

2 select suitable equipment to meet customer needs, eg
   - a stand-alone PC
   - b networked PC
   - c server
   - d operating system (eg MS Windows/Unix/proprietary)
   - e applications software

3 create documentation to define a customer's service requirements in detail, eg reports, procedures, presentation.

Underpinning knowledge

The candidate will be able to:

1 describe the factors to be taken into account when assessing obtained information against customer needs and constraints
   - a implementation timescale
   - b compatibility with existing systems
   - c physical/environmental
   - d regulatory
   - e financial
   - f reliability

2 describe areas of ICT system use that may be inefficient, covering:
   - a hardware
     - i location
     - ii quantity
     - iii type
     - iv configuration)
   - b software
     - i ease of use
     - ii functionality
     - iii configuration
   - c use of materials
     - i type
     - ii wastage
   - d services
     - i coverage
     - ii level
     - iii availability

3 describe suitable formats for recording evaluation results
   - a spreadsheets
   - b database
   - c documents

4 describe defects which can arise in information when it is collected
   - a inaccuracies
   - b duplications
   - c omissions
   - d inconsistencies
   - e redundancies.

Unit 364 Plan for the delivery of ICT support services and assist in the acquisition of ICT systems

Outcome 3 Prepare and present suitable options for the acquisition of ICT systems and support services

Practical activities

The candidate will be able to:

1 present a range of possible system solutions in a clear and timely way, making recommendations, and taking into account, eg

- a cost
- b timescales
- c limitations
- d benefits
- e maintainability
- f availability
- g reliability

2 prepare and present two alternative specifications for a service level agreement (SLA), to include, eg

- a on-site / return to workshop / time and parts / remote
- b response timescales (same day / next day / office hours / 24 hours / Monday-Friday / 7 days
- c warranty arrangements
- d consultancy
- e preventative maintenance
- f life cycle management
- g training
- h helpdesk
- j on-line assistance

3 gather customers requirements taking their SLA into account

4 negotiate effectively and empathetically with customers

5 be fully accountable for the quality and effectiveness of designs and plans.

Underpinning knowledge

The candidate will be able to:

1 describe methods of improving the efficiency of ICT system use covering:
   - a hardware/software, eg re-configuration, upgrades, replacement
   - b use of materials, eg other sources, storage, stock control
   - c services, eg improved response rates

2 describe the factors contributing to technical assessments or evaluations of potential improvements
   - a cost
   - b impact on customer organisation
   - c effectiveness

3 describe the essential points of a service level agreement (SLA), eg
   - a details of parties to the agreement
   - b level of service to be delivered
   - c any penalties for failure to conform
   - d any bonuses for delivery above target
   - e start and finish times
   - f measurement criteria
   - g equipment covered

4 explain the importance of negotiation and of accurately communicating relevant information to all customers
   - a design and plan activities
   - b SLAs
   - c support activities and agreements

5 identify required customer ICT skills

6 identify that designs and plans should
   - a only include services and equipment approved for use
   - b be monitored
   - c use structured processes and procedures

7 explain the importance of being accountable for designs and plans

8 explain the importance of reviewing SLAs to support
   - a systems changes
   - b business requirements.

Unit 364 Plan for the delivery of ICT support services and assist in the acquisition of ICT systems

Outcome 4 Develop plans to ensure that the ICT infrastructure delivers the required functionality, capacity and level of support

Practical activities

The candidate will be able to:

1 create a plan to implement previously agreed changes to system and support services including, eg
   - a upgrade/replacement of existing system hardware/software
   - b enhancements to support provision
   - c changes to system functionality, capacity and maintenance
   - d user training requirement as a result of the changes
   - e methods of monitoring the effectiveness of the support provision

2 devise change control documentation for use during change implementation

3 develop an outline contingency plan to enable recovery from
   - a hardware failure (PC, server, mainframe)
   - b environmental disaster (flood, fire, earthquake etc)
   - c power failure
   - d major loss of data
   - e serious security breaches to enable
     - i business continuity in another location
     - ii recovery of existing system function
     - iii restoration of data.

Underpinning knowledge

The candidate will be able to:

1 describe methods to measure the effectiveness of customer support functions

2 explain reasons why the effectiveness of service delivery should be monitored and recorded

3 explain reasons why change control must be maintained, eg

- a conformance to BS/ISO standards
- b to define the current state of IT systems and services
- c to ensure work is carried out in a controlled manner
- d to prevent misunderstandings and unauthorised modifications to an ICT system or service

4 explain why customer's staff may require coaching, eg

- a new product(s)
- b new service(s)
- c new procedure(s)
- d new staff
- e skill uplift needed

5 describe the business/commercial reasons for contingency planning

6 describe the relative value of data compared to systems

7 describe different back-up methods for a range of data types, eg

- a invoices
- b payroll
- c HR records

8 describe different levels of contingency planning, eg

- a hardware
- b range
- c PC
- d server
- e mainframe
- f power
- g business continuity.

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	**Determine customer requirements for ICT systems and support services**	☐	
2	**Evaluate available ICT systems and services against customer requirements**	☐	
3	**Prepare and present suitable options for the acquisition of ICT systems and support services**	☐	
4	**Develop plans to ensure that the ICT infrastructure delivers the required functionality, capacity and level of support**	☐	

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** .....

Published by City & Guilds
1 Giltspur Street
London
EC1A 9DD
T +44 (0)844 543 0000 (Centres)
+44 (0)844 543 0033 (Learners)
F +44 (0)20 7294 2400
www.cityandguilds.com

City & Guilds is a company registered in England and Wales (company number 16513878)