Cambridge TECHNICALS

OCR LEVEL 3 CAMBRIDGE TECHNICAL
CERTIFICATE/DIPLOMA IN

IT

INSTALLING AND UPGRADING SOFTWARE

/601/7290

LEVEL 3 UNIT 13

GUIDED LEARNING HOURS: 60

UNIT CREDIT VALUE: 10

OCR

INSTALLING AND UPGRADING SOFTWARE

H/601/7290

LEVEL 3 UNIT 13

AIM OF THE UNIT

This unit's aim is to provide the learners with the procedures that are needed when installing and upgrading software. With new technologies emerging almost daily, the need to install and upgrade software is becoming an essential activity whether it be for applications, communications or security.

The learners will need to understand that organisations have processes and procedures when installing and upgrading software to maintain effective systems. They will need to recognise when there is a need for an upgrade, and the need to plan for the upgrades, making sure the new software is compatible with the existing system. Then to document, test the installation for functionality and finally appreciate what is involved in the handover.

ASSESSMENT AND GRADING CRITERIA

Learning Outcome (LO) The learner will:	Pass The assessment criteria are the pass requirements for this unit. The learner can:	Merit To achieve a merit the evidence must show that, in addition to the pass criteria, the learner is able to:	Distinction To achieve a distinction the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
1 Understand why software needs installing or upgrading	P1 describe the potential prompts that initiate the installation of new or upgraded software	M1 explain the purpose and processes for customising software during the installation process	
	P2 describe the potential risks of installing or upgrading software	M2 describe the legal implications related to the software you are installing	
2 Know how to prepare for a software installation or upgrade	P3 plan an installation and an upgrade		D1 describe the precautions you would take to ensure data integrity before a software upgrade
3 Be able to install or upgrade software	P4 record and complete a software installation	M3 demonstrate how software has been customised to suit the user need	D2 justify choices for customisation of identified software for a user
	P5 record and complete a software upgrade	M4 test software upgrade for functionality	
4 Understand the completion and handover process.	P6 explain the importance of the user acceptance process		

TEACHING CONTENT

The unit content describes what has to be taught to ensure that learners are able to access the highest grade.

Anything which follows an i.e. details what must be taught as part of that area of content.

Anything which follows an e.g. is illustrative, it should be noted that where e.g. is used , learners must know and be able to apply relevant examples to their work though these do not need to be the same ones specified in the unit content.

LO1 Understand why software needs installing or upgrading

- **reasons for change:**
  - problems with existing functionality
  - additional functionality required; (e.g. add-ins, reinstallation, upgrade)
  - new hardware or peripherals
  - external prompts (e.g. bug fixes, security breaches)
  - other (e.g. company policy, maintenance).
- **justification:**
  - business requirement e.g. costs against benefits
  - system speed
  - customisation e.g. ease of use, access to software, updates, start up, macros.
- **risks:**
  - security breaches
  - loss of service
  - incompatibility issues
  - risk reduction measures (e.g. backups, low-risk time for installation, software customisation).
- **legal implications:**
  - Software copyright/licensing.

LO2 Know how to prepare for a software installation or upgrade

- installations (e.g. new software to a system)
- upgrades (e.g. replacing or updating existing software on a system)
- hardware considerations.
- **planning**
  - sequence of activities
  - resources/materials
  - timings
  - costs
  - communications (e.g. user(s), colleagues, stakeholders)
  - back ups
  - back out procedures
  - permissions and access
  - contractual requirements

- guidance on procedures (e.g. to colleagues; users)
- select loading facilities (e.g. internet, CD)
- escalation procedures.
- **Data integrity:** e.g. recovery point; copy of registry data; copy of user data.

LO3 Be able to install or upgrade software

- **installation/upgrade:**
  - disaster recovery plan
  - software requirements
  - loading facility
  - backing up the current system
  - selection installation/upgrade procedures to be followed
  - following processes
  - contractual constraints
  - obtaining access (e.g. log-on details)
  - testing installation/upgrade
  - delivery
  - software storage locations to be used
  - communications (e.g. timescales, progress and outcomes)
  - information recording (e.g. log books; licenses)
  - security
  - confidentiality.
- **loading:**
  - capabilities of loading facilities
  - media
  - speed
  - connection
  - Customisation of the software
  - Desktop customisation
  - Setting updates
  - Start-up options
  - Macros to aid use of software for the user prior image of hard drive.

LO4 Understand the completion and handover process

- **handover processes:**
  - configuration to customer/user needs
  - handover to the customer/user
  - user acceptance testing
  - backout e.g. restoration of original system.
- **product registration:**
  - purpose of registration
  - benefits of registration
  - licensing
  - contractual implications.
- **Data integrity:**
  - system recovery point
  - registry data
  - user data.

DELIVERY GUIDANCE

The structure of this unit is that it can be delivered in order of learning outcomes and it is expected that this unit will be delivered wherever possible as practical exercises. Giving the learners as much practice on installing, upgrading and configuring computer systems. Learners will need access to computer systems in which they are allowed to upgrade, install and configure.

Centres might find they encounter some practical issues when delivering this unit. They will need learners to gain the practical experience on upgrading and installing software, this could be expensive but note that there is open source software available and this could be an alternative. The learners will benefit from having as many different types of software to install and to upgrade as the centre has available.

Understand why software needs installing or upgrading
Why upgrade or install software?
The tutor could deliver a session on what prompts to look for when considering changing or upgrading software. This could be followed by either group or individual activities where learners could discuss the potential problems with an existing system, what additional functionality could be found on popular software, software bug and fixes and what signs to look for.

They will need to understand when to consider looking at whether new hardware will be needed with a software installation or upgrade. Group exercise with learners looking at the requirements of older versions of software, and increased requirements for newer versions/releases. They could then discuss as a wider group the hardware implications of these across a range of software types.

Learners will need to look into justifications for changing the software. Here they could work in groups to a given scenario in which they need to provide a business case, justifying any changes. They could then present and justify their findings to the wider group. They should also consider the risks involved when installing or upgrading the software and what can be done to minimise the risks again as group activities or discussions.

Learners will need to discuss customisation and customisation options for particular software types, i.e. desktop, start-up options, updates, macros etc and any legal

implications that might happen when installing legal and illegal software. They should understand the benefits of customisation to organisations and users and this works well as a group discussion where learners can suggest ideas for customisation and the advantages.

Know how to prepare for a software installation or upgrade
Learners will need to look at the procedures needed when preparing for a software installations or upgrades. They should be taught the importance of planning, and ensuring that they take into consideration the factors as identified in the teaching content. It is therefore important that they consider this across a range of different software; e.g. operating systems, application software, drivers etc. Learners could be given additional meaningful scenarios in which they plan the installations, they could then report this back to the group with their proposals and compare their options to identify any considerations they may have missed. They should be encouraged to look at the hardware specifications to ensure that it is suitable for the new software as a high priority. They should also include considerations for preserving data integrity of the system and problems if this is not considered. It may be that learners all work on different scenarios, but then use each others plans later to install different software or carry out upgrades and it is therefore in their best interests to ensure that all other learners have accurate plans.

This would then give them a comprehensive plan for installing the planned software.

Be able to install or upgrade software
Using the planning documentation they have finalised, the learners will then follow their plan sourcing all the materials and resources identified and carrying out the installation. Learners will need to have as much practice as possible in installing, upgrading and configuring software and looking at the processes, procedures having practice on using different loading facilities.

Learners will also benefit from the practical activity of installing software and monitoring the process and then upgrading the same piece of software to a later release and comparing the differences in the process and the activities.

Learners will need to implement a range of customisations which they have previously discussed for the different software types and identify what these are and how they are beneficial, i.e. desktop, start-up options, updates, macros etc.

With the software installed learners will need to be taught the importance of testing, how to test the new software and tests to be carried out and whether it is working as expected.

Understand the completion and handover process
With the software upgraded/installed and tested the learners will need to discuss what is involved with the handover, looking at the configuration to meet the customer's needs, the customer's acceptance and the importance of this stage of the installation process which is largely overlooked. Here a role play might help the learner's appreciate the importance of the handover and the documentation needed.

SUGGESTED ASSESSMENT SCENARIOS AND TASK PLUS GUIDANCE ON ASSESSING THE SUGGESTED TASKS

Some of assessment criteria are well suited to written reports but these can equally be assessed with discussions, or presentations that can be recorded as evidence. The practical work ideally will be assessed as the individual learner completing the installations but can be assessed as a group as long as it is clear that all learners in the group make equal contribution to the group. If witness statements are used they will need to have the practical described.

Here are four suggested assessments that cover all the criteria.

Assessment Criteria P1, P2, M1, M2

Learners need to be given a system on which they will need to provide a justification of either a new system or an upgrade. This could be a theoretical system but it would be more beneficial if the students had a physical system to work from.

For P1 Learners could create a report or presentation which describes the prompts that could initiate the installation of new or upgraded software. They will also need to identify any prompts that would appear on a computer and any other signs that the computer would benefit from an upgrade. For P2 Learners will need to look at the potential risks when installing or upgrading software generally on computer systems. Learners could be provided with a variety of case studies to enable them to look at a mixture of risks. Learners could provide reports, or presentations that give descriptions of appropriate risks. They would need to look at at least three different risks.

For merit criterion M1 learners will need to explain of the purpose and process of customising at least three different software installations. This should be documented with appropriate images/screen captures and could be in the form of a report or presentation.

For merit criterion M2, learners will need to describe the legal implications that are related to installing the software, learners will need to look at the copyright issues when installing software, the legalities and implications and they should clearly present their explanations which could be in the form of a report or presentation with examples and detail.

Assessment Criteria P3, D1

Learners will need to plan both an upgrade and a new installation given a system and the user's requirements. This will need to be a physical system which the students will then upgrade.

For P3 learners need to show they have planned the installation and an upgrade. The learners will need to show they have considered all the planning activities detailed in the teaching content. This planning documentation with detail could be presented as a report in which explanations are made for all the activities.

For distinction criterion D1 learners will need to describe the precautions that they would take to ensure data integrity before the software upgrade. Learners could show they have considered and completed some or all of the activities. This would need to be evidenced by narrative, well annotated screenshots, photos, video plus narration and could be in the form of a report.

Assessment Criteria P4, P5 ,P6, M3, M4, D2

Ideally using the plans created for P3 learners will need to perform **both** the installation and the upgrade, and to explain the user acceptance procedures.

For P4 learners will need to have a completed record of the installation
For P5 learners will need to have a completed record of the upgrade
These must be clearly evidenced using observation reports, witness statements, records, photographs etc as supporting documentation and could be presented in the form of a report or presentation including all the actions taken during the upgrade and installation.

For P6 learners should explain the importance of the user acceptance process. This documentation could explain the process relating to either the upgrade or installation performed in P4 or P5.

For merit criterion M3 the learner should demonstrate they have customised the software they have installed to suit the user. There should be at least two different customisations. The use of annotated screenshots, photos etc will help support the evidence for this assessment criteria and may be in the form of a report.

For merit criterion M4 the learner will need to show they have tested the software upgrade for functionality. This should be evidenced with the learner creating a test plan/table that will test the software for the functionality and including annotated screenshots of the testing showing what functions are being tested.
It would be expected that at least six tests have been completed with details of the test, expected outcome, actual outcome, changes needed and retest to demonstrate the software/system is working as expected. Screenshots will support the evidencing of testing.

For distinction criterion D2 the learner will need to justify the customisations they have completed for the user in M3. These justifications could be in a report or presentation document that includes the purpose for the chosen customisations.

MAPPING WITHIN THE QUALIFICATION TO THE OTHER UNITS

Unit 8: IT technical support

LINKS TO NOS

5.1 Systems Development
7.4 IT Application Management/Support
7.5 T Technology Management and Support
7.10 IT/Technology Asset and Configuration Management

CONTACT US

Staff at the OCR Customer Contact Centre are available to take your call between 8am and 5.30pm, Monday to Friday.

We're always delighted to answer questions and give advice.

Telephone 02476 851509
Email cambridgetechnicals@ocr.org.uk
www.ocr.org.uk