Cambridge TECHNICALS

OCR LEVEL 3 CAMBRIDGE TECHNICAL

CERTIFICATE/DIPLOMA IN

IT

PROJECT PLANNING WITH IT

V601/7321

LEVEL 3 UNIT 9

GUIDED LEARNING HOURS: 60

UNIT CREDIT VALUE: 10

OCR

PROJECT PLANNING WITH IT

Y/601/7321

LEVEL 3 UNIT 9

AIM OF THE UNIT

Businesses require employees to have some knowledge of project planning. This unit will provide the learner with the skills required to plan and run a project of their own. It is recommended that learners may choose to develop a plan for a practical project they intend to run or to achieve other related units within the qualification.

The aim of this unit is to help the learner understand how projects are managed and to be able to plan a project using IT. Learners will learn how to follow the project plan and review the process that they have followed.

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 how projects are managed	P1 illustrate typical phases of a project life cycle		
	P2 explain the resources available to support the project manager	M1 compare different project methodologies	
	P3 discuss issues affecting project management	M2 explain the impact identified issues would have on a project	
2 Be able to plan projects using IT	P4 produce a project specification		
	P5 plan a defined project using IT	M3 create a PERT chart for your defined project	D1 evaluate the use of Gantt and PERT Charts in project planning
3 Be able to follow project plans	P6 follow a project plan to carry out a defined project		
4 Be able to review the project management process	P7 carry out a review of the project management process		D2 recommend improvements for future projects using the findings from the project review

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 how projects are managed

Life cycle
- analysis phase (e.g. defining the goal, problem analysis, investigation of current system, feasibility study and preparing a project proposal)
- design phase (e.g. producing possible solutions, designing aspects of the system)
- implementation phase (e.g. creation, creating user documentation, testing, training, launching and maintenance)
- evaluation phase (e.g. feedback from user, review of project).

Resources
- data (e.g. previous system, research)
- people (e.g. project managers, developers and programmers)
- funding
- equipment
- project management software packages e.g. Microsoft Project, OpenProj.

Project Issues
- lack of management leadership
- communication (e.g. between project managers and clients)
- external factors changing (e.g. finance, staff members etc)
- conflicts between staff and/or clients
- unrealistic timescales
- poor testing
- quality of product
- tracking progress of project
- following guidelines (internal and external) and legislation.

- **project methodologies** (e.g. Prince2, Waterfall Model, The Traditional Approach, Critical Path Method (CPM), individual methodologies as required by a client)

LO2 Be able to plan projects using IT

Project specification
- identify clients, stakeholders and target audience
- identify requirements for project solution
- outline project scope
- benefits of project
- success criteria
- constraints
- specify project deliverables (e.g. product, documentation, training and support needs)
- issues (e.g. ethical, sustainable, health and safety).

Project plan
- software packages (e.g. Microsoft Project, OpenProj or a spreadsheet package)
- creation of project plan (e.g. Gantt Chart)
- tasks
- timings, deadlines and milestones
- dependencies and sequential tasks
- resources
- costings.

Charts
- software (e.g. drawing packages, graphics packages, project management software)
- parallel activities
- Gantt charts
- PERT charts.

LO3 Be able to follow project plans

Run project
- maintaining project plan
- adjusting project plan
- documents (e.g. for communications with clients/ stakeholders, reporting)
- milestone reviews (e.g. meetings, project maintenance).

Product deliverables
- test plan/table
- completed criteria

- project solution
- user documentation.

LO4 Be able to review the project management process

Review
- milestones
- project specification
- final product
- external factors (e.g. uncontrolled variables which affected the project)
- costings/budgets
- feedback from users.

Review of project management skills
- milestones
- deadlines met
- actual resources usage
- management skills
- costs
- effectiveness
- risk management.

Recommendations for improvements
- project management skills
- final product
- resources usage (e.g. suppliers, equipment)
- future projects.

DELIVERY GUIDANCE

Understand how projects are managed

Learners should be introduced to the concept of the project life cycle and what is involved in the various stages. This could be group working through a project discussing the phases and researching each phase in smaller groups to identify what is carried out at each stage and why. This could be discussed as a larger group and applied to different projects and the outcomes and details compared and approaches discussed.

Learners should be made aware of a range of resources that they may use within different projects and discuss the resources and types to understand what the scope of the term resource covers. They could discuss the resources as a group in relation to the projects previously reviewed and identify the resources that they think would require for that project. Learners should be encouraged to research the roles and responsibilities of the various positions involved in a project e.g. project managers, product developers, programmers and system analysts to identify their use as resources and the implications within the project. This could be done in small groups where each group is provided with one job role and then they could give feedback to the main group.

Learners should also review the hardware and software requirements for a given project, considering the data to be maintained, the reporting etc. A demonstration on how to create a Gantt chart using the relevant software should be given by the tutor, learners should then be encouraged to create a brief Gantt chart using the previous project as a basis. An activity on how to use the critical path method to create a PERT Chart could be carried out either individually or as a group. Different project methodologies could be given to learners working in pairs and they could be encouraged to identify benefits and drawbacks for their project method. They could then give feedback to the group.

Learners should be encouraged to identify issues which may affect a project, they can use information from other projects they have reviewed as a starting point for group working. For each issue that they identify they should be encouraged to find a solution for it. Case studies of big projects that have failed to meet targets e.g. late delivery of project, over budget could be used for the learners to identify what the problems

were, how they affected the project and what could have been done differently. A wider group discussion of issues will ensure wider coverage and awareness for learners.

Be able to plan projects using IT

Learners need to be taught the requirements for a project specification and should be provided with details of the kinds of information that should be included in a project specification. They should then explore the details needed for the specification as smaller groups with consideration for end of project reporting – if it isn't recorded, it can't be reported. Learners should then develop and complete a brief project specification for a given project, this could be done by learners listing items required for a specification and listing ideas for each of the items either on their own or in pairs/small groups. The brief project details could then be discussed further as a larger group to ensure that all areas were covered in detail and to identify further details required within a specification to ensure accuracy in planning.

Learners should be shown how to use a project planning tool such as Microsoft Project, OpenProj or possibly spreadsheet software to create a Gantt chart. They should be shown how to add resources, deadlines, dependencies and milestones to the Gantt chart and be taught the importance of accuracy of information. Learners could then create a Gantt chart for the given project previously used. They should be shown how to create a PERT chart using relevant software rather than by hand.

Using the Gantt and PERT charts previously created, in pairs learners could discuss the advantages and disadvantages for each of the chart types and software used. They could then give feedback to the group.

Be able to follow project plans

Learners should be shown how to monitor progress on a project plan and amend activities using project management software. Learners could be shown how to create minutes for a meeting in order to record and evidence the activities, decisions and actions made within meetings which have taken place. Learners should be encouraged to develop and use an effective way of annotating/recording details of activities for reference and review of the project. They could practice this as part of a group and compare against

the outcomes required to ensure the initial information is recorded, accurate and maintained.

Be able to review the project management process
Learners could look at some example project plans and identify how they feel they could have been improved. Using the project plans that were previously created, these could be distributed within the group to ensure they do not only evaluate their own projects, that they consider different styles, approaches and content. Learners should identify improvements to the process and the structure of the projects for the benefit of the project manager and for the organisation. Improvements and changes may also be identified from the minutes and notes/annotations that they have created throughout the project.

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

Assessment Criterion P1

The assessment criterion P1 could be evidenced by the use of a report or presentation, delivered to a group that could be supported by tutor observation and/or recorded evidence. The learner is required to show an understanding of a project lifecycle and illustrate the typical phases. They must describe each of the following phases; analysis, design, implementation and evaluation. The learners could also provide any supporting images/diagrams.

Assessment Criteria P2, M1

The assessment criterion P2 could be evidenced by the use of a report or presentation, delivered to a group that could be supported by tutor observation and/or recorded evidence. The learner is required to describe and explain the resources available in order to support a project manager throughout a project including data, roles and responsibilities of people involved with the project, funding, equipment and project management software.

For the merit criterion M1, the learner should provide a detailed comparison of project methodologies. At least three different project methods should be fully described and compared providing advantages and disadvantages for each of them. This could be presented as a report or annotated table.

Assessment Criteria P3, M2

The assessment criterion P3 could be evidenced by the use of a report or presentation delivered to a group that could be supported by tutor observation and/or recorded evidence. The learner must discuss the issues which can affect a project to include; lack of management leadership, communication, external factors changing, conflicts between staff and/or clients, unrealistic timescales, poor testing, quality of product, tracking progress, following legislation.

The merit criterion M2 should be evidenced by the learner explaining the impact of the issues outlined for assessment criterion P3 would have on a project. This should include a description of how these issues would impact the project's success or failure including some examples of projects that have failed and some reasons for their failure. This could be an extension of P3 or a separate document.

Assessment Criterion P4

The assessment criterion P4 must be evidenced by the learner producing a project specification. The learner is required to include the following in their project specification; identification of clients, stakeholders and target audience, requirement for the project solution, outline the project solution, benefits of the suggested project solution, how success of the project solution will be measured, any constraints which need to be considered, identifying the project deliverables and any ethical, sustainable and health and safety issues. This could be presented as a report.

Assessment Criteria P5, M3, D1

The assessment criterion P5 must be evidenced by the learner creating a project plan/Gantt chart for a defined project using appropriate IT software. The project plan/Gantt chart must include activities, deadlines, milestones, dependencies and resources as a minimum. The project plan/Gantt chart could be created in project management software such as Microsoft Project, OpenProj or spreadsheet software. This could be evidence by the submission of the project plan and accompanying documentation.

The merit criterion M3 could be evidenced by the project plan/Gantt chart information being used to create a PERT chart. The learner must ensure that both the project plan/Gantt chart and PERT chart are detailed to meet the full scope of a multi-task/multi-resource project and contain all required activities and deadlines. The PERT chart should also identify activities which could be run parallel.

For distinction criterion D1 the learner must evaluate the use of Gantt and PERT charts, identifying advantages and disadvantages for both chart types. The learner is also required to review and compare the different software used to create the chart. This could be evidenced by a report with screen captures, charts and narrative .

Assessment Criterion P6

The assessment criterion P6 must be evidenced by the learner updating and adjusting the project plan/Gantt chart produced for P5 as the project progresses. The project plan/Gantt chart should display the activities that have been completed. At each milestone a review of the project should be carried out by the learner and documented separately. Before and after screen prints of the project plan/Gantt chart could be used as supporting evidence to show that the plan has been followed during the project with changes that have been made highlighted the reasons identified. Notes and additional evidence against activities maintained by the learner could also be used to support this.

Assessment Criteria P7, D2

The assessment criterion P7 could be evidenced by the use of a report or presentation delivered to a group that could be supported by tutor observation and/or recorded evidence. The learner must show that they have reviewed their project at each milestone, compared it with the project specification outlined for assessment criterion P4, and have reviewed the final product, identifying factors which affected the project. They should also evidence the feedback received. The learner must review their project management skills throughout explaining why deadlines or milestones were missed and budgets not met.

The distinction criterion D2 should be evidenced by a comprehensive evaluation of the project process and the actual outcomes, providing detailed suggested improvements for the project and product along with suggestions of what could be done differently with any future projects.

SUGGESTED SCENARIOS

- Updating the presently used IT system as it has been outgrown by the company.
- Converting a presently used paper based system into a new IT system (e.g. database, spreadsheet).
- A business wishes to start selling their products/services online (e.g. website).
- A small business has grown and taken on more staff, they are now looking to set up a network.

RESOURCES

Learners will need access to word processing software. It is also desirable that the learners have access to project management software such as Microsoft Project or OpenProj (free open source software), if this is not possible then spreadsheet software is acceptable. Learners will also need access to the internet.

MAPPING WITHIN THE QUALIFICATION TO THE OTHER UNITS

Unit 10 Developing computer games

Unit 12 Website production

Unit 14 Computer animation

Unit 16 2D animation production

Unit 17 Interactive media authoring

Unit 18 Web animation for interactive media

Unit 19 Spreadsheet modelling

LINKS TO NOS

4.8 IT/Technology infrastructure design and planning

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.

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