### SESSION PLAN

**COURSE:** ABE Level 4 Project Management

**ELEMENT:** Element 2 - Project planning (plus one assessment criterion from element 4 – see below)

## **LEARNING OUTCOME 2**

**Develop a project plan based on a set of input data (Weighting 25%)**

2.1 Construct a network diagram from a set of tasks

2.2 Develop a simple Gantt chart from a set of tasks

2.3 Apply critical path analysis to determine the planned duration of a project

2.4 Calculate the start and finish dates of a project and its tasks

## **FROM LEARNING OUTCOME 4**

4.3 Explain a range of tactics that could be used to recover lost time

**NUMBER OF SESSIONS:** Two - approximately 9-11 hours in total, plus homework

**SESSION TOPICS:** Session 5: Project planning, critical path analysis and Gantt charts

Session 6: Saving time on a project plan

**Note to tutors: This is the recommended session plan for Learning Outcome 2, Element 2 of the ABE Level 4 Project Management. You should follow the plan, using the resources (referenced as ‘slides’ here) and activities provided. It is important to enhance all sessions with local examples and case studies, involving the learners ACTIVELY wherever possible.**

### SESSION 5: Project planning, critical path analysis and Gantt charts (5-6 hours)

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| **Topic** | **Tutor Activity** | **Slides** | **Learner Activity** | **Formative Assessment** |
| Introduction to session and learning outcomes | Use file: **4UPM Tutor Presentation E2**  2.1: Construct a network diagram from a set of tasks  2.3: Apply critical path analysis to determine the planned duration of a project  2.2: Develop a simple Gantt chart from a set of tasks  2.4: Calculate the start and finish dates of a project and its tasks | 1-3 |  |  |
| A worked example to explain network analysis | Work through the slides explaining the basic concept and steps involved in network analysis  Creating the network diagram  Refer to the study guide for more information, where helpful. | 4-10 | Work closely with the tutor to understand the table concept |  |
| Critical Path Analysis (CPA) | Explain the application of CPA to the worked house building example.  Isolating the critical path  Why the critical path is important  Use the study guide for support.  A break could follow this activity | 11-14 | Work closely with the tutor to understand the diagram concept |  |
| Developing Gantt charts | Work through each element of the scenario explaining how to create a simple Gantt chart.  Gantt charts – overview  Convert the original network diagram into a Gantt chart  Show the calendar view  Follow this with another worked example (hotel project), showing that the information on network diagrams and Gantt charts should match.  A break could follow this activity followed by more practice for the class in Gantt chart creation. | 15-25 | It is suggested that the students have a go at creating the hotel project network diagram – BEFORE revealing the answer.  The repeat the process for the Gantt chart for the same project. |  |
| Blitz Tutorial Exercises | This exercise has been structured into three sequential parts to be covered completely in class. | 26-27 | Practice repeatedly until the basic concepts are understood. Learners to work in pairs. | E2 LO2 Activity 1:  Blitz Alloys Project part 1  E2 LO2 Activity 2:  Blitz Alloys Project part 2  E2 LO2 Activity 3:  Blitz Alloys Project part 3 |
| Start and finish dates of projects | Answering the key question:  When will all the work start – and more importantly – when will it be finished? | 28 |  |  |

### SESSION 6: Saving time on a project plan (4-5 hours)

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| **Topic** | **Tutor Activity** | **Slides** | **Learner Activity** | **Formative Assessment** |
| Introduction to the session and learning outcomes | Use file: **4UPM Tutor Presentation E2**  4.3: Explain a range of tactics that could be used to recover lost time  *(Note that this topic is being taught out of sequence with the syllabus order as it is relevant here. For ease of referencing the activity and slides fall within ‘Element 2’.)* | 30-31 |  |  |
| Theoretical background to saving time by analysing the project network diagram (critical path) | Work through the slides explaining the basic concept and steps involved in saving time on the critical tasks highlighted during network analysis  Look at individual task durations  Possible tactics for decreasing project duration  Review example schedule  Review project example  Consider suggestions to save time in project example  Other tactics for decreasing duration of a task  A short break could be taken after this activity | 32-41 | Work closely with the tutor to understand the key concepts |  |
| Saving time when a project is in progress and time savings need to be found by the project manager | Explain the application using the worked example provided on the slides.  A break could follow this activity | 42-49 | Work closely with the tutor to understand the subject |  |
| The Football Stadium exercise I | Explain the exercise and emphasise how important it is to create a neat network diagram for the project which will then enable further analysis.  Without a neat diagram, it is very difficult to derive useful analysis. | 50-51 | Tackle the first part of the exercise – (a) and (b) | E2 LO2 Activity 4:  Football Stadium |
| The Football Stadium exercise II | If they have the benefit of a neat network diagram, then analysing the time savings options should now be straightforward. | 50-51 | Tackle the second part of the exercise – (c) | E2 LO2 Activity 4:  Football Stadium |