

# Project Management Fundamentals

<b>Audience</b>	This course is intended for the person who has little or no previous experience in project management. It introduces students to some of the general principles of project management. These principles are not specific to a particular project or project management software. This is an appropriate first class for a student planning to learn project management software.
<b>Description</b>	The course uses a combination of lecture, hands-on practice, and independent exercises to introduce students to the general principles of project management. This includes defining the project, activities and dependencies, scheduling, change control, managing costs, and measuring project success. Having had this class, students will be well-equipped to take a class using project management software.
<b>Objectives</b>	Upon successful completion of the class, students should be able to: <ul style="list-style-type: none"><li>■ define the objectives of a project,</li><li>■ understand the importance of planning and be able to plan a project,</li><li>■ identify and analyze the project activities using a PERT chart,</li><li>■ sequence the project dependencies identifying potential problems and opportunities,</li><li>■ develop the project schedule,</li><li>■ use a Gantt chart,</li><li>■ understand the importance of the critical path,</li><li>■ understand the change control system,</li><li>■ estimate costs and set up the project budget,</li><li>■ understand how duration effects costs,</li><li>■ measure project performance,</li><li>■ understand how to use project performance reports.</li></ul>
<b>Length</b>	1 day
<b>Beyond this Level</b>	When you have successfully completed this class, the next class you should consider is Project Level 1. This course uses Microsoft Project software. Topics include creating and revising tasks, sequencing tasks using dependencies and constraints, revising a schedule using a critical path, tracking progress, reporting variances, and manipulating project data. Resource management, costs, and multiple projects are addressed in the Level 2 course.



## **I. Define the Project**

- A. Project participants
  - 1. Determine influence of stakeholders
- B. Project objectives and planning
  - 1. Benefits of project planning
  - 2. Prioritizing constraints

## **II. Activities and Dependencies**

- A. Project activities
  - 1. Creating a WBS
- B. Sequence activities
  - 1. Identifying types of project activities
  - 2. Creating a PERT chart
- C. Analyze activities
  - 1. Determining an appropriate level of detail
  - 2. Creating activity analysis form
  - 3. Assigning work
- D. Estimate activities
  - 1. Estimating project activities
  - 2. Identifying problems and opportunities
- E. Sequence dependencies
  - 1. Sequencing dependencies
  - 2. Identifying the effect of slack

## **III. Project Scheduling**

- A. Develop the project schedule
  - 1. Identifying benefits of schedule development
  - 2. Understanding schedule development constraints
- B. Schedule development
  - 1. Identifying mathematical analysis techniques
  - 2. Understanding network diagrams
  - 3. Identifying arrow charting methods
  - 4. Understanding Gantt charts
- C. The CPM and PERT
  - 1. Understanding CPM scheduling
  - 2. CPM calculations
  - 3. Understanding critical path
  - 4. Understanding duration compression
  - 5. Calculating float

## **IV. Project Change Control**

- A. Define project change control
  - 1. Understanding change control system
  - 2. Accommodating change
  - 3. Understanding change control board

## **V. Financial Issues**

- A. Estimate costs
  - 1. Analyzing historical information
  - 2. Identifying financial issues in an organization
  - 3. Estimating cost
  - 4. Identifying the project budget
  - 5. Understanding duration effects on cost estimates
  - 6. Identifying problems while estimating costs

## **VI. Project Performance**

- A. Measure project performance
  - 1. Determining project performance
  - 2. Using calculations in earned value analysis
  - 3. Controlling project cost
- B. Report project performance
  - 1. Understanding project reports
  - 2. Understanding progress reports
  - 3. Understanding status reports
  - 4. Understanding project costs
  - 5. Closing projects
  - 6. Understanding final project report

