Scheduling and Cost Control

Develop effective measures for scheduling and controlling projects as you put the tools of project management to work. In this course you'll focus on managing the constraints you face in any project: limits on time, human resources, materials, budget and specifications. Discover proven ways to work within your identified constraints, without letting predefined limits curtail creativity or innovation.

From the opening morning, you'll get hands-on experience, practicing your skills in building project requirements and the work breakdown structure. You'll learn a sound, logical framework for scheduling and controlling project activities. And you'll master techniques for estimating, forecasting, budgeting, monitoring, controlling, analyzing and reporting costs and interpreting the meaning of earned-value data.

Individual and small-group exercises feature scenarios that help hone these skills, and a comprehensive toolkit provides practical field guidance. The course materials also include comprehensive reference materials specific to each unit of the course.

Discover a number of sophisticated tools and techniques that you can use to manage time and costs effectively on every type of project. This is one of the program's most popular courses; classes fill up quickly, so register early.

Recommendation: Please bring a calculator to class.

Participants in this course will receive ESI's Earned Value Formula Finder, which puts the information you need to determine cost, schedule, estimate at completion and estimate to complete values for your projects right at your fingertips.

Course Length: 4 days

What you will learn:

- Use the work breakdown structure to develop a network diagram
- Calculate schedules using PERT/CPM
- Identify, assign and tabulate resource requirements
- Predict costs and work time using specific levels and estimate types
- Plan for contingencies and anticipate variations
- Predict future project performance based on historical data
- Monitor changes and close out projects on time

Course Topics

- **Essential Background**
  - Overview of the project management life cycle
  - The triple constraint
  - Planning tools
  - Project requirements—a review
  - The work breakdown structure—a review

- **Resource Allocation and Estimating**
  - Using estimates for scheduling and cost control
  - The basic rules of estimating
  - Levels of estimating and estimate types
    - Top-down vs. bottom-up
    - Order of magnitude
    - Budget
    - Definitive
  - Four estimating methodologies
  - Identifying controllable costs
    - Resource
    - Material
    - Direct
    - Indirect

- ○ Planning for risk with contingency
- ○ Building the project resource pool
  - ▪ Using resources to build estimates
  - ▪ The responsibility matrix
- ○ Time-controlled estimates
- ○ Resource-limited estimates

- **Scheduling**
  - ○ Network scheduling
  - ○ Validating schedules
  - ○ Arrow diagrams and precedence diagrams
  - ○ Basic scheduling and network calculations
  - ○ Advanced precedence relationships and the critical path
  - ○ Alternative constraints
  - ○ Gantt and milestone charts

- **The Baseline**
  - ○ Establishing baselines
  - ○ Understanding types of baselines
  - ○ Time-phased distribution of costs
  - ○ Cumulative cost curves

- **Managing Change within the Project**
  - ○ The process of control
  - ○ Identifying sources of change
  - ○ Screening change
  - ○ Updating the project plan
  - ○ Communicating change

- **Evaluation and Forecasting**
  - ○ Causes of variances
  - ○ Establishing the "data date" for evaluation
  - ○ Controlling costs and schedule late in the project
  - ○ Components of the project audit
  - ○ Considerations in establishing a monitoring system
  - ○ Earned value
  - ○ Advanced earned-value forecasting tools

Course topics continued:

- **The Exit Strategy**
  - ○ Steps in completing the project
  - ○ Scope verification
  - ○ Contract closeout

- **Administrative closure**

PMBOK® *Guide* knowledge areas covered in this course:
- Project Scope Management
- Project Time Management
- Project Cost Management
- Project Risk Management
- Project Procurement Management