



*Training Course:
Project Planning, Scheduling*

*23 - 27 September 2024
Cape Town (South Africa)
DoubleTree by Hilton Cape Town - Upper Eastside*

Training Course: Project Planning, Scheduling

Training Course code: MA4104 From: 23 - 27 September 2024 Venue: Cape Town (South Africa) - DoubleTree by Hilton Cape Town - Upper Eastside Training Course Fees: 5950 € Euro

Introduction:

Project Planning and Scheduling is one of the most important activities for a Project Manager when starting and managing any type of project. Many mistakes are made during the first few weeks shaping the project scope, leading up to a plan and a schedule. During my career as Project Manager and Manager of Project Management Offices, I have come across many emerging and junior Project Managers who were lacking the initial understanding of what was important for the lead up to building a schedule.

Course Objectives:

Additionally, the seminar does not assume prior knowledge of the topics covered in the course. New concepts and tools are introduced gradually to enable delegates to progress from the fundamental to the advanced concepts of project risk management.

The Benefits

- This Fundamental Program takes the practice of project planning, scheduling to a new level to ensure maximum results
- The most recent developments in the field are included to provide fresh inputs to your project management efforts
- The course takes a practical rather than a theoretical approach by introducing a case study so that new skills can be applied with immediate effect
- High-quality videos of substantial projects of different kinds are screened and discussed during the seminar
- Group activities and exercises will ensure mastery of the practical application of new skills learned
- The use of software programs to facilitate the incorporation of many advanced techniques are introduced
- Related project management fields such as risk are continuously incorporated to provide an integrated view of the total project management process
- Delegates will have excellent opportunities for interaction and discussion of best practices at their respective organizations
- This course will equip delegates with the skills and knowledge to significantly improve all levels
- The program will be an important stepping stone in terms of personal career development in that it prepares delegates for the internationally recognized Project Management Professional PMP exam

The Results

This intensive seminar will provide delegates with a proven set of critical skills and techniques for the development of a systematic and dynamic project plan and schedule, as well as the ability and skills to develop accurate and reliable conceptual and detailed estimates used for project proposals and final estimates. This will enable delegates to:

- Maintain continuous project performance and delivery control
- Accurately estimate and allocate project costs and resources
- Measure, forecast, and control project performance by employing earned value techniques
- Compressor accelerate the schedule when required by adverse circumstances

- Manage and mitigate schedule, cost, scope, and resource risks associated with the project
- Develop a line of balance schedules and velocity diagrams for repetitive or recurring work
- Benefit from the financial effects of the learning curve on recurring work
- Develop a project recovery plan for budget and schedule overruns
- Produce clear and concise project progress reports
- Prepare budget estimates that will enable the owner-organization to make informed decisions as to the feasibility of a potential project
- Compare the costs of alternative strategies or technical approaches to ensure the most economical project at the desired level of quality
- Structure of the contract compensation arrangement to provide the highest level of incentives to complete the project on schedule and within the determined budget
- Keep accurate control of the progressive budgeting process based on the various stages of design
- Prepare accurate budget estimates through the programming phase, the schematic design phase, and finally the design development phase
- Understanding the most appropriate contracting structure to ensure the desired project results
- Apply proper risk analysis to effectively mitigate risks at minimal costs, and to determine appropriate contingencies for residual risks
- Obtain the skills required to prepare and manage the bidding process

Target Audience:

This course is designed for project planning engineers, project cost estimators, project designers, project planners and schedulers, contract professionals, project procurement and purchasing staff, and project control and business services professionals who have the responsibility for project proposals in client and contracting companies.

Target Competencies:

- Ability to deliver projects on time and within budget.
- Understanding of what it takes to be a successful project manager.
- Skill and confidence to plan and control projects successfully and the ability to sidestep the most common project management pitfalls and problems.
- Appreciation of the philosophy, framework, standards and approaches to the delivery of the projects.
- Understanding and practicing effective project management techniques in successfully completing and handing over projects.
- Developing an initial project budget for the owner
- Determining project feasibility
- Designing the project within the owner's budget
- Evaluating alternative design concepts and project components
- Preparing bids
- Establishing project budgets
- Substantiating claims and resolving disputes
- Preparing a Schedule of Values

Course Outline:

Day 1 Project Scope Planning and Definition Fundamentals

- Scope Planning
- Work Breakdown Structures WBS
- Work Packages
- Statement of Work SOW - Technical Baseline

- Scope Execution Plan
- Triple Constraints - Time, Cost, Scope
- Project Quality Issues
- Project Risk Analysis
- Project Deliverables
- Resource Requirements

Day 2 Project Schedule Planning and Critical Path Method

- Precedence Network Diagramming
- Job Logic Relationship Chart
- Critical Path Analysis
- Project Float Analysis
- Lead and Lag Scheduling
- Activity Duration Estimation
- Milestone Charts
- Gantt Chart - Schedule Baseline
- Project Estimating Processes
- Production and Productivity Planning

Resource Allocation and Resource Levelling

- Management of Resources
- Planning and Scheduling Limited Resources
- Resource Allocation Algorithms for Resource Prioritisation
- Solving Resource Contention
- Resource Levelling when Project Duration is Fixed
- The Brooks Method of Resource Allocation
- Increasing the Workforce
- Solving Interruptions to the Schedule
- Scheduling Overtime

Day 3 Accelerating the Project Schedule

- Circumstances Requiring Project Acceleration
- Time-Cost-Scope Trade-off
- Project Time Reduction
- Direct Project Costs
- Indirect Project Costs
- Options for Accelerating the Schedule
- Crashing the Schedule - How?
- Pre-Accelerated Schedule
- Developing a Crash Cost Table
- Acceleration in Practice
- The Optimal Acceleration Point
- Gantt Chart for Accelerated Schedule
- Network Activity Risk Profiles
- Additional Considerations
- Multiple Critical Paths
- Project Cost Reduction

Project Contingency Planning

- Program Evaluation and Review Technique PERT
- Path Convergence Analysis
- Solving the Path Convergence Problem
- Network Risk Profile Types
- Normal Distribution
- PERT, Probability and Standard Deviation Formulae
- Calculating the Standard Deviation
- Standard Deviation for Critical Path
- Z-Values: The Probability of Project Completion at a Required Date
- True Critical Path
- Network Activity Risk Profiles

Day 4 Line of Balance Scheduling - The Planning of Recurring Activities

- Preparing a Line of Balance Schedule
- Velocity Diagrams and Linear Scheduling
- Velocity Diagram Production Rate Calculations
- Linear Sequence of Activities as a Series of Velocity Diagrams
- Balancing the Schedule
- Calculations for a Line of Balance Schedule
- Line of Balance Formulae
 - Target Units per Week
 - Determining Crew Size
 - Actual Rate of Output
 - Time to Complete One Activity
 - Elapsed Time for Recurring Activity
- The slope of Line from Activity Start to Activity Finish
- Balanced Project Schedule without Buffers Finish-Start
- Inserting Buffers
- Comparison of Unbalanced with Balanced Schedules
- Measuring Planned Progress on Schedule
- Velocity Diagram Reflecting Expected Conditions
- Actual Progress and Work Conditions
- Variable Conditions

Day 5 Project Execution Management, Control, and Reporting

- Progress Tracking and Monitoring
- Project Cost Management
- Earned Value Control Process
- Schedule Variances
- Cost Variances
- Progress Control Charts - Trend Analysis
- Schedule and Cost Variance Forecasting
- Labour Management and Cost Control
- Materials Management and Cost Control
- Earned Value Analysis
- Earned Value Reporting

Project Recovery Plan Development

- Project Variance Analysis and Quantification



- Schedule Performance Index SPI
- Cost Performance Index CPI
- Setting Schedule and Cost Control Limits
- Project Recovery Data Assessment
- Schedule and Cost Recovery Analysis
- Schedule and Cost Recovery Plan
- Project Recovery Baselines and Controls

Registration form on the Training Course: Project Planning, Scheduling

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