

## ENGINEERING MANAGEMENT

*"Bridging Technical Expertise with Strategic Leadership in Engineering Environments"*

### Schedule

Date	Venue	Fees (Face-to-Face)
12 - 16 Jul 2026	Dammam, KSA	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

### Introduction

In today's complex industrial and infrastructure projects, engineering professionals must possess not only technical proficiency but also managerial acumen. Engineering management is the discipline that integrates engineering knowledge with business leadership, project control, resource management, and organizational development.

This intensive 5-day course is designed to equip engineers, supervisors, and technical managers with the tools and mindset needed to lead engineering functions effectively. Participants will learn to manage teams, budgets, and schedules while maintaining a focus on innovation, safety, and quality.

### Objectives

By the end of this course, participants will be able to:

- Apply core principles of engineering management in project and operational settings
- Lead multidisciplinary engineering teams with confidence and clarity
- Plan and monitor engineering projects using tools and metrics
- Manage budgets, risks, and stakeholder expectations
- Align technical execution with strategic and business objectives

## Why Attend

- Strengthen your ability to lead technical teams and manage projects
- Learn how to align engineering functions with business performance goals
- Improve communication between engineering, operations, and finance
- Acquire tools for risk, cost, and quality control
- Transition successfully from technical expert to engineering leader

## Target Audience

This program is designed for:

- Project engineers and engineering managers
- Technical supervisors and team leads
- Maintenance and operations managers
- Engineering consultants and coordinators
- Professionals preparing for leadership roles in engineering

## Individual Benefits

Key competencies that will be developed include:

- Strategic planning and leadership in engineering contexts
- Project and resource management skills
- Budgeting, costing, and contract interface
- Risk identification and mitigation
- Effective communication and stakeholder management

## Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Enhanced leadership and decision-making within engineering departments
- Improved integration of engineering activities with corporate strategy
- Greater project control and reduced cost/schedule overruns
- Stronger cross-functional collaboration and communication
- Elevated team performance and accountability

## Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - Engineering leadership frameworks and trends
- Case Studies - Lessons from engineering project challenges
- Workshops - Planning, budgeting, and performance evaluation simulations
- Peer Exchange - Cross-industry discussions on leadership and project issues
- Tools - Checklists, project templates, and management dashboards

## Course Outline

**Training Hours: 7:30 AM - 3:30 PM** Daily Format: 3-4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 - 02:00

### Day 1: The Role of Engineering Management

- Module 1: Engineering Management Fundamentals (07:30 - 09:30) • Scope, functions, and importance of engineering leadership • Transitioning from engineer to manager
- Module 2: Organizational Structures and Team Roles (09:45 - 11:15) • Engineering departments and reporting lines • Role clarity, team functions, and authority levels
- Module 3: Managing the Engineering Function (11:30 - 01:00) • Coordination with operations, procurement, and HSE • Delegation and workflow planning
- Module 4: Workshop - Engineering Function Mapping (02:00 - 03:30) • Define team structure and management flow

### Day 2: Project Planning and Execution

- Module 5: Project Lifecycle and Engineering Contributions (07:30 - 09:30) • Feasibility, design, execution, and handover phases • Engineering milestones and responsibilities
- Module 6: Scheduling and Progress Monitoring (09:45 - 11:15) • Gantt charts, WBS, and milestone tracking • Earned value and KPIs
- Module 7: Budgeting and Cost Control (11:30 - 01:00) • Estimating, budgeting, and value engineering • Cost tracking and reporting
- Module 8: Workshop - Plan a Technical Project (02:00 - 03:30) • Set objectives, timelines, and resources

### Day 3: Risk, Quality, and Safety Management

- Module 9: Engineering Risk Management (07:30 - 09:30) • Risk identification, classification, and control • Mitigation planning and contingency
- Module 10: Quality Systems and Continuous Improvement (09:45 - 11:15) • QA/QC roles in engineering • Non-conformity, NCRs, and lessons learned
- Module 11: Safety and Compliance in Engineering (11:30 - 01:00) • Engineering controls for safety • Design safety, audits, and regulatory interface
- Module 12: Workshop - Identify Risks in a Case Scenario (02:00 - 03:30) • Develop a risk matrix and action plan

### Day 4: Leadership and Communication

- Module 13: Leading Technical Teams (07:30 - 09:30) • Motivation, conflict resolution, and delegation • Building high-performing teams
- Module 14: Communication and Stakeholder Engagement (09:45 - 11:15) • Reporting lines, meetings, and reporting tools • External and internal stakeholder management
- Module 15: Performance Monitoring and Feedback (11:30 - 01:00) • KPIs, appraisals, and improvement tracking • Career development and retention
- Module 16: Workshop - Conduct a Team Review Session (02:00 - 03:30) • Practice leadership communication scenarios

### Day 5: Strategy and Innovation in Engineering

- Module 17: Aligning Engineering with Business Strategy (07:30 - 09:30) • Cost, value, and innovation integration • Strategic thinking and long-term planning
- Module 18: Innovation and Digitalization Trends (09:45 - 11:15) • Engineering technologies, digital twins, BIM, AI • Change management and adoption
- Module 19: Final Case Study - Engineering Leadership Challenges (11:30 - 01:00) • Discuss a multi-disciplinary case with multiple constraints
- Module 20: Final Workshop - Create an Engineering Management Action Plan (02:00 - 03:30) • Draft a roadmap for managing your engineering function

## Certification

Participants will receive a Certificate of Completion in Engineering Management, certifying their ability to lead, manage, and optimize technical teams and processes in complex engineering environments.

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