



Quality Management & Operational Excellence

Strategic Engineering Management and Operational Excellence

Course Introduction

This outline provides a comprehensive overview of Engineering Management and Operations Excellence, covering key aspects from foundational concepts to advanced techniques and future trends. It's designed to equip engineering managers with the knowledge and skills needed to effectively lead teams, manage projects, improve operations, and drive innovation in their organizations.

Throughout the course, incorporate practical exercises, case studies, and group discussions to reinforce learning and provide opportunities for application of concepts. Consider including activities such as:

- Developing a project plan for an engineering project
- Conducting a process improvement exercise
- Role-playing leadership scenarios
- Creating a technology roadmap for an engineering department

Target Audience

- Engineering Managers
- Team Leaders in Engineering Fields
- Project Managers in Engineering and Technology
- Operations Managers in Engineering Companies
- Product Development Engineers with Management Roles
- Professionals Transitioning from Technical to Managerial Roles
- Manufacturing and Process Improvement Specialists
- Quality Assurance Managers
- R&D Leaders in Engineering
- Technology Managers
- Professionals in Emerging Technology Sectors (AI, IoT, Robotics, etc.)
- Sustainability and Green Engineering Leaders
- Professionals in Engineering Consulting Firms
- Engineers Aspiring to Leadership or Management Positions

Learning Objectives

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

- Identify the role and responsibilities of an engineering manager
- Learn key leadership principles in engineering contexts
- Recognize the importance of aligning engineering goals with business objectives
- Learn essential project management methodologies and tools
- Interpret how to effectively plan and execute engineering projects
- Develop skills in risk management and resource allocation
- Identify principles of operations excellence
- Learn various process improvement methodologies
- Develop skills in implementing continuous improvement initiatives
- Learn effective team leadership strategies for engineering teams
- Understand techniques for talent development and retention
- Develop skills in conflict resolution and team motivation
- Identify the role of technology management in engineering
- Learn strategies for managing technological change and innovation
- Explore emerging trends and their impact on engineering management

Course Outline

• 01 Day One

Foundations of Engineering Management

- Introduction to Engineering Management
- Leadership in Engineering: Styles and Best Practices
- Strategic Planning and Goal Setting in Engineering
- Aligning Engineering Projects with Business Objectives
- Ethical Considerations in Engineering Management

• 02 Day Two

Project Management For Engineers

- Project Management Methodologies (e.g., Waterfall, Agile, Lean)

- Project Planning and Scheduling Techniques
- Resource Allocation and Management
- Risk Assessment and Mitigation in Engineering Projects
- Project Monitoring and Control

• 03 Day Three

Operations Excellence and Process Improvement

- Introduction to Operations Excellence
- Lean Manufacturing Principles
- Six Sigma Methodology and Tools
- Total Quality Management (TQM)
- Implementing Continuous Improvement Programs
- Key Performance Indicators (KPIs) for Engineering Operations

• 04 Day Four

Team Leadership and Talent Management

- Building and Leading High-Performance Engineering Teams
- Talent Acquisition and Retention Strategies
- Performance Management and Feedback
- Conflict Resolution in Engineering Teams
- Fostering Innovation and Creativity
- Managing Remote and Distributed Engineering Teams

• 05 Day Five

Technology Management and Future Trends

- Technology Management in Engineering Organizations
- Managing Technological Change and Innovation
- Emerging Technologies and Their Impact on Engineering (e.g., AI, IoT, Robotics)
- Sustainability and Green Engineering Practices
- Future Trends in Engineering Management
- Course Review and Action Planning

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 27, 2025	May 1, 2025	5 days	4250.00 \$	KSA - Riyadh
June 15, 2025	June 19, 2025	5 days	2150.00 \$	Virtual - Online
Sept. 22, 2025	Sept. 26, 2025	5 days	4250.00 \$	UAE - Abu Dhabi
Nov. 24, 2025	Nov. 28, 2025	5 days	5950.00 \$	USA - Los Angeles