

Course No. 1705

Engineering Management & Leadership Training Course

ENGINEERING MANAGEMENT
INDUSTRIAL ENGINEERING, MAINTENANCE & OPERATIONS

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The Engineering Management & Leadership Training Course provides a comprehensive framework for developing the management, leadership, and strategic capabilities required by engineering professionals moving into supervisory, managerial, and executive roles. The course focuses on integrating engineering expertise with effective leadership, project management, decision-making, financial awareness, and organizational performance.

Modern engineering organizations operate in complex environments where technical excellence alone is not sufficient. Engineering managers must coordinate multidisciplinary teams, manage competing priorities, control resources, communicate with stakeholders, manage risks, and ensure that engineering activities remain aligned with organizational objectives and business requirements.

The program explores the essential responsibilities of engineering management, including engineering planning, team leadership, performance management, resource allocation, delegation, communication, problem-solving, decision-making, risk management, and continuous improvement. Participants will learn how to transition effectively from technical specialists to capable engineering leaders.

A strong focus is placed on leading engineering teams and managing performance in demanding technical environments. Participants will develop practical approaches for motivating technical professionals, managing conflicts, building accountability, conducting effective meetings, delegating responsibilities, and developing high-performing multidisciplinary teams.

The course also addresses strategic engineering leadership, project and operational decision-making, cost and resource management, stakeholder engagement, change management, and organizational excellence. Through engineering-focused case studies, leadership exercises, management simulations, and practical workshops, participants will develop the capabilities required to lead engineering functions effectively and deliver measurable organizational value.

Objectives

- Analyze the principles and responsibilities of modern engineering management and leadership.
- Develop effective leadership approaches for managing engineering professionals and multidisciplinary teams.
- Apply structured decision-making and problem-solving techniques to engineering management challenges.
- Improve engineering planning, resource allocation, delegation, and workload management.
- Strengthen communication, collaboration, negotiation, and stakeholder management skills.
- Develop performance management approaches for engineering teams and individual professionals.
- Apply risk management principles to engineering operations, projects, and technical decision-making.
- Manage conflicts and address performance and behavioral challenges within engineering teams.
- Align engineering activities with organizational strategy, business objectives, and operational priorities.
- Improve cost awareness, resource utilization, productivity, and engineering performance.
- Lead organizational change and continuous improvement within engineering functions.
- Develop an integrated Engineering Management & Leadership framework by the end of the course.

Who Should Attend

This training course is designed for Engineering Managers, Engineering Directors, Lead Engineers, Senior Engineers, Project Engineers, Technical Managers, Maintenance Managers, Operations Managers, and engineering professionals preparing for leadership responsibilities.

It is particularly relevant to professionals working in engineering, construction, EPC, oil and gas, manufacturing, utilities, infrastructure, energy, industrial, and technical organizations. The program is also suitable for engineers transitioning from technical specialist roles into supervisory or managerial positions.

The course will benefit engineering leaders responsible for multidisciplinary teams, technical functions, projects, assets, operations, and organizational performance. Participants will gain

practical management and leadership tools that can be immediately applied to engineering teams and technical environments.

Learning Outcomes

- Explain the key principles and practices of effective engineering management.
- Apply leadership approaches appropriate for technical and multidisciplinary engineering teams.
- Develop clear engineering objectives, priorities, responsibilities, and performance expectations.
- Improve resource planning, delegation, workload distribution, and team productivity.
- Apply structured approaches to engineering decision-making and problem-solving.
- Communicate effectively with engineers, executives, clients, contractors, and other stakeholders.
- Manage conflicts and challenging situations within technical teams.
- Develop performance indicators and performance management practices for engineering functions.
- Identify and manage engineering risks affecting projects, operations, resources, and business objectives.
- Improve cost awareness and resource utilization within engineering activities.
- Lead change, innovation, and continuous improvement within engineering organizations.
- Develop a practical leadership and management action plan for improving engineering team and organizational performance.

Course Outline

DAY 01

Foundations of Engineering Management & Leadership

- The evolving role of the engineering manager
- Engineering leadership versus technical expertise
- Management responsibilities across engineering functions
- Leadership styles and their application in technical environments
- Setting engineering objectives, priorities, and expectations

DAY 01 — CONTINUED

PRACTICAL APPLICATION

Assess personal engineering leadership capabilities and identify priority development areas

DAY 02**Leading High-Performance Engineering Teams**

- Building and developing high-performing engineering teams
- Delegation, accountability, and responsibility management
- Motivation and engagement of technical professionals
- Managing multidisciplinary and cross-functional teams
- Effective communication and engineering team meetings

PRACTICAL APPLICATION

Develop a team-performance framework for a multidisciplinary engineering team

DAY 03**Engineering Decision-Making, Problem-Solving & Risk**

- Structured engineering decision-making
- Root-cause analysis and systematic problem-solving
- Managing uncertainty and competing engineering priorities
- Engineering risk identification and mitigation
- Managing technical issues, escalation, and critical decisions

PRACTICAL APPLICATION

Analyze an engineering management problem and develop a structured decision and risk-response plan

DAY 04

Performance, Resources & Stakeholder Management

- Engineering performance management and KPIs
- Resource planning, workload management, and productivity improvement
- Cost awareness and efficient utilization of engineering resources
- Stakeholder communication and relationship management
- Managing conflicts, negotiations, and difficult conversations

PRACTICAL APPLICATION

Develop an engineering performance dashboard and stakeholder management approach

DAY 05

Strategic Engineering Leadership & Organizational Excellence

- Aligning engineering functions with business strategy and organizational objectives
- Leading engineering change and transformation
- Innovation and continuous improvement in engineering organizations
- Developing engineering leadership pipelines and future capabilities
- Building a culture of accountability, excellence, and collaboration

FINAL WORKSHOP

Develop an integrated Engineering Management & Leadership action plan covering leadership priorities, team performance, resource management, decision-making, risk management, stakeholder engagement, KPIs, change, and continuous improvement.

Register or Request More Information

Course page: <https://quest-training.com/courses/engineering-management-leadership-training-course>

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