



Management And Leadership

# **Mastering Advanced Program Management in Engineering & Operations: Strategic Leadership for Managers**

## Course Introduction

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**This 5-day training program** is designed for managers in engineering and operations who are looking to advance their program management capabilities.

The program will provide advanced insights into program planning, risk management, execution strategies, team leadership, and performance monitoring.

This training will empower managers to lead complex projects and programs with strategic foresight, ensuring organizational objectives are met on time and within budget.

## Target Audience

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- Engineering & Operations Managers
- Project & Program Managers
- Senior Executives & Directors
- Industrial & Systems Engineers
- Energy, Construction & Manufacturing Leaders
- Government & Regulatory Officials
- Technology & Smart Infrastructure Professionals

## Learning Objectives

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- Effectively design, plan, and structure large engineering and operations programs.
- Align programs with organizational strategy, ensuring they meet both short-term and long-term objectives.
- Identify, assess, and manage risks inherent in engineering and operations programs.

- Develop proactive risk mitigation strategies and contingency plans for unforeseen challenges.
- Execute complex programs using industry best practices in scheduling, resource allocation, and quality management.
- Integrate Agile, Lean, and traditional project management methodologies for optimal program delivery.
- Lead and motivate cross-functional teams within engineering and operations.
- Foster collaboration, resolve conflicts, and enhance team performance.
- Utilize performance metrics and tools to monitor the health of programs and ensure they stay on track.
- Make data-driven decisions to improve program outcomes and meet program KPIs.
- Develop and manage program budgets, ensuring cost-efficiency throughout the program lifecycle.
- Manage resources effectively, balancing demand and supply across multiple engineering and operations projects.
- Design and implement an effective communication strategy for internal and external stakeholders.
- Present program updates, status reports, and strategic changes to senior leadership and clients.

## Course Outline

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### • Day 01

#### **Introduction to Advanced Program Management in Engineering & Operations**

- Defining program management in the context of engineering and operations
- Key differences between project and program management in technical fields
- Core skills required for engineering program managers
- The program management lifecycle for engineering and operations programs

## Program Design and Strategic Alignment

- Aligning engineering programs with strategic business objectives
- Developing clear program goals, outcomes, and deliverables
- Structuring programs: Dividing programs into manageable sub-projects
- Tools for creating a program roadmap and timelines
- **Activity:** Analyzing the alignment of program goals with company strategy

### • Day 02

## Advanced Risk Management in Engineering Programs

- Identifying and assessing risks in engineering and operations programs
- Tools for advanced risk analysis: Risk Registers, PESTLE, and SWOT analysis
- Developing risk mitigation plans for engineering projects
- Managing external and internal risks (e.g., regulatory, technological, operational)
- **Hands-on workshop:** Conducting a risk assessment for an engineering program

## Advanced Program Planning Techniques

- Advanced scheduling tools for engineering and operations programs.
- Resource leveling and balancing competing demands across multiple projects
- Integrating Lean and Agile methodologies into program planning
- Managing program scope and changes to the plan
- **Workshop:** Using project management software to create a detailed program plan

### • Day 03

## Optimizing Program Execution and Performance

- Leading program execution: Translating the plan into action
- Using Agile, Lean, and Waterfall methodologies in execution
- Tracking program performance and ensuring timely delivery
- Managing quality and continuous improvement in execution
- **Group role-play:** Simulating program execution challenges and solutions

### **Team Leadership and Cross-Functional Collaboration**

- Leading cross-functional teams in engineering and operations
- Motivating, empowering, and guiding multidisciplinary teams
- Conflict resolution strategies in engineering projects
- Effective delegation and decision-making
- **Role-play:** Leading a diverse team through a conflict resolution scenario

### **• Day 04**

### **Budget Management and Cost Control in Engineering Programs**

- Developing a program budget: Cost estimation and resource allocation
- Managing budgets for complex, multi-project engineering programs
- Tracking and controlling costs during execution
- Handling budget overruns and making adjustments
- **Group exercise:** Developing and managing a sample program budget

### **Performance Monitoring and Program Control**

- Setting up KPIs and performance metrics for engineering programs
- Monitoring and tracking program health with performance dashboards
- Identifying red flags and corrective actions
- Reporting program status and performance to stakeholders

- **Hands-on workshop:** Creating performance dashboards for an engineering program
- **Day 05**

#### **Stakeholder Engagement and Communication**

- Developing an effective communication strategy for internal and external stakeholders
- Reporting program progress, risks, and changes to senior leadership and clients
- Managing stakeholder expectations throughout the program lifecycle
- Communication tools and techniques for complex programs
- **Role-play:** Presenting program updates to senior management

#### **Advanced Program Leadership and Continuous Improvement**

- Leading programs through uncertainty and complexity
- Developing a culture of continuous improvement in program management

## **Confirmed Sessions**

FROM	TO	DURATION	FEES	LOCATION
April 20, 2025	April 24, 2025	5 days	4250.00 \$	KSA - Riyadh
July 28, 2025	Aug. 1, 2025	5 days	4250.00 \$	UAE - Dubai
Sept. 14, 2025	Sept. 18, 2025	5 days	2150.00 \$	Virtual - Online
Nov. 17, 2025	Nov. 21, 2025	5 days	5950.00 \$	switzerland - Geneva

