Road and Bridge Project Management and Implementation

28 February – 11 March 2027
Manama (Bahrain)



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Introduction

Roads and bridges are critical components of infrastructure development, driving economic growth and enhancing regional connectivity. This specialized training course is designed to equip professionals with the technical, managerial, and regulatory skills necessary to successfully plan, manage, and execute road and bridge projects.

The course covers the entire project lifecycle — from feasibility studies and engineering design to construction supervision, cost control, safety, and environmental compliance. Participants will gain hands-on knowledge in project management road maps, bridge project management, and road management best practices to ensure projects are delivered on time, within budget, and to the highest quality standards.

Course Objectives

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

- Understand the lifecycle of road and bridge projects from feasibility to commissioning.
- Apply project management techniques including planning, scheduling, and budgeting.
- Interpret design standards, engineering drawings, and technical specifications for road and bridge projects.
- Monitor project implementation in accordance with quality, safety, and environmental requirements.
- Manage procurement, stakeholder engagement, and contract management effectively.
- Ensure road safety management services and compliance with international standards.

Course Outlines

Day 1: Fundamentals of Road and Bridge Projects

- Overview of road and bridge infrastructure.
- Importance of transportation infrastructure in national development.
- Project lifecycle: planning, design, execution, and closure.
- Key stakeholders in public infrastructure projects.
- Common challenges and risk factors in road and bridge project management.



Day 2: Feasibility Studies and Preliminary Planning

- Site selection and route alignment for optimal performance.
- Traffic and environmental impact assessments for sustainable design.
- Topographic and geotechnical surveys for site analysis.
- Preliminary cost estimation and economic justification.
- Risk assessment and mitigation planning for project stability.

Day 3: Engineering Design and Specifications

- Road design standards and geometric design elements.
- Types of bridges and structural design considerations.
- Pavement design: flexible vs. rigid road surfaces.
- Drainage systems and erosion control mechanisms.
- Preparation and interpretation of engineering drawings.

Day 4: Project Planning and Scheduling

- Work breakdown structure WBS and task sequencing.
- Critical Path Method CPM and Gantt Charts for scheduling.
- Resource allocation and productivity planning.
- Time-cost trade-offs and schedule optimization.
- Monitoring tools: MS Project, Primavera for real-time project tracking.

Day 5: Budgeting, Cost Control, and Financing

- Cost estimation methods for accurate project budgeting.
- Budget preparation and financial planning for road and bridge projects.
- Cost monitoring and control mechanisms to prevent overruns.
- Public and private sector funding options for infrastructure projects.
- Financial reporting and auditing for transparency and accountability.

Day 6: Procurement and Contract Management

- Types of contracts: EPC, BOT, FIDIC, and more.
- Tendering processes and bid evaluation.
- Contract negotiation and administration for successful execution.
- Dispute resolution and claims management.
- Coordination with subcontractors and suppliers for smooth project flow.



Day 7: Construction Supervision and Site Management

- Site setup and logistics planning for efficient workflow.
- Earthworks, roadbed preparation, and bridge foundations.
- Material testing and quality assurance for durability and compliance.
- Construction progress monitoring and documentation.
- Ensuring compliance with health, safety, and environmental regulations.

Day 8: Quality Control and Risk Management

- Quality management systems ISO 9001 in infrastructure projects.
- Inspection and testing protocols to ensure standard compliance.
- Non-conformance reporting and corrective action planning.
- Risk identification and response strategies for project stability.
- Effective document control and record-keeping for project traceability.

Day 9: Environmental and Social Safeguards

- Environmental management plans EMP for sustainable construction.
- Pollution control: air, water, and noise mitigation.
- Social impact mitigation and resettlement policies.
- Stakeholder consultation and community engagement.
- Compliance with national and international environmental standards.

Day 10: Project Closure and Sustainability

- Final inspection and handover procedures for completed projects.
- Post-construction evaluation and lessons learned.
- Maintenance planning and infrastructure asset management.
- Innovations in road and bridge construction technologies.
- Course wrap-up, group presentations, and certification ceremony.

Why Attend This Course: Wins & Losses!

- Master Road and Bridge Project Lifecycles: Understand each phase from feasibility to commissioning.
- Improve Planning and Cost Control Skills: Learn to schedule, budget, and optimize costs effectively.
- Interpret Technical Drawings and Specifications: Develop the ability to read and analyze engineering designs.
- Ensure Quality and Safety Compliance: Monitor construction activities to meet international standards.
- Expand Career Opportunities: Enhance your skills for roles in road management, bridge management, and infrastructure development.



Conclusion

By the end of this course, participants will have the confidence and skills to lead and manage road and bridge projects from concept to completion.
They will be equipped to plan strategically, supervise effectively, mitigate risks, and deliver sustainable infrastructure that supports national development goals.

Join this course to become a leader in road and bridge management, ensuring that critical infrastructure projects are delivered on time, within budget, and with exceptional quality.

