

# Fundamentals of Construction Project Management

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# Course Description:

- This course covers the principles and the practice of professional project management applied to construction projects. It emphasizes a total life cycle perspective, treating the construction project as an investment opportunity. The candidates are taken through the construction project life cycle describing the roles of tradespersons, environmental and planning regulations, commissioning and close out. Topics covered include the project development life cycle, project strategies, plan, cost and budgeting, pre- and post-contract processes, managing the project through to completion and investment realization.
- This course introduces project management and construction project management. The course will cover areas such as the role of the CPM in his day-to-day role and key issues of initiating, planning & design, executing, monitoring & control, and closing of the construction project. Key tools to be introduced are the Bar Chart, network diagrams, site diary, measurement & the payment certificate, the WBS, risk register, project charter and the PMP and the use of construction bonds, insurance & CCDC form of contract.

# Course Objective:

## By the end of this course delegates will be able to:

- Analyze the construction operational environment form a big picture view with a relationship in the national economy, the economic and business cycles, provincial and local regulatory environment to assist with investment planning options and selecting the most profitable time to invest
- Develop and apply a total project process group execution approach to assist with integration, progressive elaboration by incorporating initiation, planning, execution, monitoring & controlling, and closing methods
- Evaluate and execute projects by considering the specific knowledge areas that are applicable so as to create other implementation analyses
- Demonstrate a dynamic view of effective construction project management of all critical components

# WHO Should attend?

- Construction Engineers, Senior Construction Engineers, Construction Supervisors, Construction General Supervisors, Construction Project Managers, Engineering Technologists, Supervision Engineer, Inspection Engineers, Civil Inspectors, Foremen, Design Structural Engineers, Planners, Structural Engineers, Material Specialists, Quality Control and Quality Assurance Experts, Architects, Supervision Engineers, Team Leaders, Site Officers and Managers, Mechanical Engineers, Technical Professionals, Field Production Supervisor, Operation Engineers, Clients Representatives.

# Course outline

## **Introduction and Basic Concepts**

- Learning Concepts
- Approaches & Rules of Order
- Project, Project Management & Construction Project Management

## **Project Management Concepts**

- Alignment of all projects to the Business Need
- Projects, Programs & Portfolios
- Project organizational structures
- Organizational Behavior & Culture
- Project Integration of Process Groups & Knowledge Areas
- The Project Feasibility & Charter
- Project Scope Statement
- Project WBS
- The Project Management Plan
- Project Schedule & Cost

# Course outline

## **The Construction Project Environment: Macro**

- The Economic Cycle
- The Business Cycle
- The Construction Industry
- Key features of the Construction Industry
- Major associations in the construction industry

## **The Construction Project Environment: Organizing Work**

- The Roles of key personnel on Construction Projects
- Construction projects Regulatory Environment
- Options to Implementation Delivery of construction work
- Different perspectives of the Owner & Contractor

## **The Construction Project Environment: Contracts & Risks**

- Contract Types & Risks
- Insurances, Mobilization Advance & Bonds
- Lien & Holdbacks

# Course outline

## **Project Execution, Monitoring & Controlling**

- Using the Project Management Plan
- Managing variances & baselines
- Crashing/ Fast-tracking work
- Contract Administration

## **Project Integration for Construction Projects**

- The role of Integration
- Special Integrative areas
- Building Systems

## **Construction Procurement & Communication**

- Highlights in Construction Procurement
- The central role of Communication
- Construction Equipment

## **Construction Project Closure**

- The Context for Project Closure
- Close Procurements (Contracts)
- Close Project