

1610 Rigaud Brossard, (Québec), J4X 2H5 Canada

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# Seminar's Title PROJECT MANAGEMENT IN CONSTRUCTION

#### Purpose and Background

Project management as a discipline is recognized as one of the fastest growing professions in today's industries. In the construction's industry, it is one of the most important aspects of the entire construction process. It is the application of concepts, knowledge, skills, tools and techniques to meet the project objectives and increase the probability of project success. Without effective project management, projects are often running into troubles and risking failures. Not understanding the basic concept behind managing construction projects leads to missed deadlines, cost overruns, expensive changes, lost opportunities and frustrated project managers, team members and other stakeholders.

This practical course gives participants a performance edge by teaching you how to initiate, plan, execute, control and complete your projects more effectively and efficiently as projects are critical to the success of any organization. It provides participants with the knowledge of project management principles and methodologies as applied in managing projects in the construction industry and recommended by the Project Management Body of Knowledge Standards (PMBOK) Guide, Fourth Edition, a global and internationally recognized standard for the project management profession.

#### Learning Objectives

To provide practical coverage of all basic aspects of managing construction projects to meet their objectives within the specific project constraints, with minimum risks and obtain customer's satisfaction and value. The knowledge and practices covered are in complete compliance with the Project Management Institute (PMI)'s application specific to the construction industry.

#### Benefits for Participants:

- To provide participants with the knowledge of project management basic concepts and their benefits in effectively and efficiently managing construction projects.
- To provide participants with practical skills, tools and techniques of project management to be adapted to specific construction project environment.
- Understand the characteristics of successful construction projects.
- Understand the absolute imperative of planning to ensure project success
- Familiarize yourself with the today's project requirements of the various management processes having major impacts over the success or failure of construction projects.
- Identify and perform the key project management processes and phases as well as their implementation to increase the probability of success of a project and meet customer's requirements and expectation.





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# Outline

The seminar is scheduled for three (3) days; each day starting from 8 :00 AM to 5 :00 PM with a half hour coffee break during each morning and afternoon section.

# DAY 1

#### The Foundations of Project Management

- The Nature of Projects and Project Management
- Strategic Planning to Project Management
- Management Criteria versus Engineering Criteria
- Typical Construction Projects
- Common Project Characteristics
- Managing the Triple Constraints
- Project Organization Structure
- The Project Manager Responsibilities
- The Role of Senior Management
- The Role of Functional Management
- The Project Management Body of Knowledge (PMBOK) in Construction
- Value-Driven Project Management
- The Hard and Soft Skills of Project management
- Key Project Success Factors
- Critical Success Factors for a Construction Project
- Major Causes of Project Failures
- Factors in Project Management Effectiveness
- What Causes Disputes with Clients
- What Do Clients Want from Project Management
- Organizational Structures
- Project Management Maturity Level
- Basic Contract Types in Managing Projects
- The Product/Project Life Cycle
- Basic Steps in Managing a Project

#### **Project Management in Construction**

- Construction Project Life Cycle
- The Construction Project Phases
- Basic Project Management Life Cycle
- Planning and Control Task for EPC Projects
- The Generic Planning and Control Cycle





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#### DAY 2

#### **Project Initiation**

- Develop the Business Case
- Develop the Project Charter
- Identify Stakeholders

#### **Project Planning**

- Collect and Define Project Requirements
- Define Scope
- Create the Work Breakdown Structure (WBS)
- Create the Organization Breakdown Structure (OBS)
- Create the Responsibility Assignment Matrix (RAM)
- Define and Sequence Activities
- Estimating Activity Resources and Durations
- Scheduling the Project Work
- Develop the Schedule
- Estimating Costs and Determining Budgets
- Using Types of Estimates
- Key Elements of a Construction Cost Estimate
- Contingency in Cost Estimate
- Perform Value Engineering in Construction
- Plan Integrated Cost/Schedule Control (Earned Value Management)
- Plan Quality
- Develop Construction Human Resource Plan
- Plan Communications
- Plan Risk Management
- Identify Risks
- Perform Qualitative Risk Analysis
- Perform Quantitative Risk Analysis
- Plan Risk Responses
- Plan Procurements
- Plan Safety
- Plan Environment
- Plan Finance
- Identify Claim
- Quantify Claim
- Develop the Project Plan

#### Project Executing

• Direct and Manage Project Execution





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- Perform Quality Assurance (QA)
- Develop the Project Team
- Manage Project Team
- Distribute Information
- Manage Stakeholders Expectation
- Conduct Procurements
- Perform Safety Assurance
- Perform Environmental Assurance

# DAY 3

# **Monitoring and Controlling**

- Monitor and Control Project Work
- Perform Integrated Change Control
- Verify Scope
- Control Scope
- Control Cost/Schedule (Earned Value Management)
- Monitor Progress
- Perform Quality Control (QC)
- Monitor and Control Risks
- Administer Procurements
- Perform Safety Control
- Perform Environmental Control
- Perform Financial Control
- Perform Claim Prevention
- Report Project Performance

# **Project Closure**

- Develop the Project Punch List
- Close Project or Phase
- Close Procurements
- Perform Financial Administration and Records
- Perform Claim Resolution

# Discussions and Case Study Video Presentation

**Seminar's Instructor:** Dr. Nghi M. Nguyen, Ph.D., P.E., PMP, M.ASCE. President and CEO of NDV Project Management Services, Inc (NDV) since 1995, Dr, Nghi Nguyen has had more than 30 years of progressive, domestic and international consultingand training experience in the field of project/program/portfolio management on major construction, aerospace, defence and high-technology projects with leading Canadian and U.S. corporation such as the SNC-Lavalin





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Group, Lockheed Martin, CAE and the Canadian Space Agency and NASA. Prior to founding NDV in 1995, he served as Program Control Manager for the multi-billion dollar Canadian Patrol Frigate (CPF) program, the largest and most complex shipbuilding program in Canadian history for Lockheed Martin Canada (formerly Unisys Systems Canada).

As an internationally recognized project management consultant and trainer, Dr. Nguyen has assisted clients with project management approaches to effectively and efficiently complete projects and attain their objectives. He is a specialist in project management training, consulting, definition, development, identification of project objectives, constraints and methodologies. Dr. Nguyen worked as a project management consultant for the Canadian Space Agency (CSA) on projects associated with the International Space Station (ISS) program, the 16nation effort, lead by NASA, to build the permanently orbiting laboratory in space, the largest and most sophisticated international engineering project ever undertaken in the history of the world as well as for SNC-Lavalin International on China's Three Gorges hydro-electric development project, the largest construction project in the world to date, and was involved in a number of projects in the Information Technology (IT) and Oil and Gas (O&G) sectors, among them was the construction of the \$ 5 billion Hibernia Oil Production Platform in St John, Newfoundland, Canada. Dr. Nguyen has delivered project management seminars for the American Society of Civil Engineers (ASCE), International Institute for Learning, Inc (IIL) in the USA, EuroMatech and Britannia of the U.K., Glariden Global in Singapore and various organizations in Asia and Vietnam as well as those associated with the engineering organizations worldwide.

An internationally recognized speaker, author and presenter, Dr. Nguyen has written and presented numerous technical papers on project/program management related topics in international conventions and congresses in Canada, the U.S., Europe, Asia and the Caribbean, sponsored by professional associations such as the Project Management Institute (PMI), the American Consulting Engineering Council (ACEC), The Association for the Advancement of Cost Engineering (AACE) International, American/Canadian Society of Civil Engineers (ASCE/CSCE), the Pan-Pacific Business Association (PPBA), the American Institute of Aeronautics and Astronautics (AIAA), the Caribbean Council of Engineering Association (CCEA) and the Parisbased association Francais des Ingenieurs et Techniciens d'Estimation et de Planification de Projects (AFITEP). Since 1995, Dr. Nguyen has conducted numerous project management seminars for thousands of project managers practising in all industries in a variety of topics in many countries including Canada, the U.S.A., the U.K., France, Spain, Germany, the Netherlands, Austria, Norway, Switzeland, Cyprus, China, Hong Kong, Thailand, Singapore, Malaysia, Japan, Indonesia, Vietnam, Australia, New Zealand, the U.E.A.(Dubai and Abu Dhabi), Kuwait, Saudi Arabia, Colombia and Barbados.

Educated at McGill and Concordia Universities in Montreal, Quebec, Canada, Dr. Nguyen holds B.S., M.S. and Ph.D. degrees in Civil Engineering and Construction & Project Management, is a Certified Project Management Professional (PMP) and has been a part-time professor at the Faculty of Engineering and Computer Science at Concordia University, teaching project management courses at both undergraduate and graduate levels since 1997. He has also lectured under the United Nations Development Programme (UNDP), McGill University





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Executive Institute, the Maastricht MBA programme (a joint programme between the Maastricht School of Management of the Netherlands and the School of Industrial Management of Ho Chi Minh City University of Technology, Vietnam) and is a registered civil engineer and project manager in both Canada and the USA. Dr. Nguyen was certified as a PMP (Project Management Professional) by the Project Management Institute (PMI) in 1995. He served as a member of the Canadian Advisory Council (CAC), set up by The Standards Council of Canada (SCC) to participate in the development of the International Organization for Standardization (ISO)'s project management standard released in September 2012 as ISO 21500 for project management as well as provided recommendations as Draft Reviewer and Contributor to the PMBOK<sup>®</sup> Guide – Fifth Edition of the Project Management Institute (PMI) released in January 2013, both considered by project management standards. Dr. Nghi Nguyen has also been serving the same role to the "soon-to-be-released" PMBOK<sup>®</sup> Sixth Edition to be published in 2017 by PMI.

