



**Applied Technology Group**

Australia • New Zealand • Hong Kong • Malaysia • Singapore

**Applied Technology Group  
Professional Development Series  
Leading to  
Progressive Development of New Knowledge & Skills,  
Total Competency and Professional Certification  
in Project & Construction Management**

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Rev. 0**

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## 1.0 OUR COMMITMENT

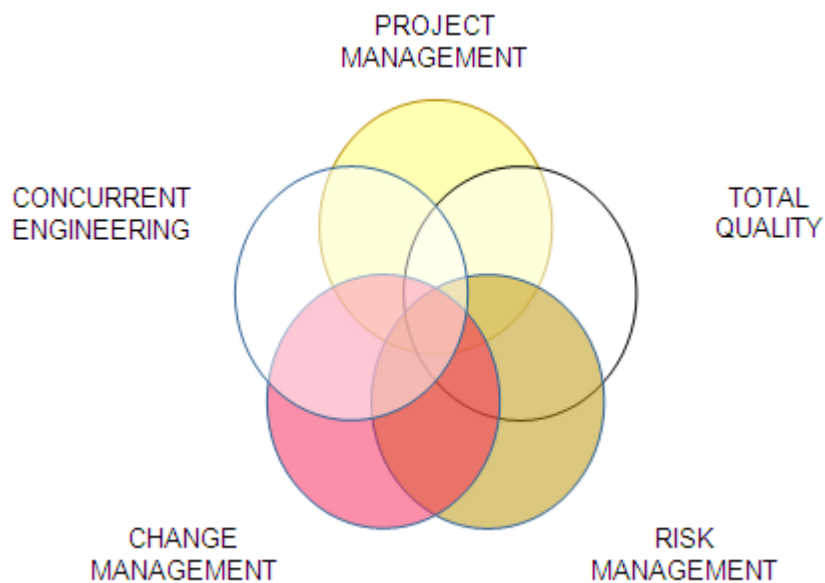
Applied Technology Group (ATG), with more than 30 years' of experience in the enhancement of skills and knowledge in various engineering fields, presents a series of professional development courses to progressively move to 21<sup>st</sup> century excellence in managing the projects. The courses are all conducted by international renowned experts in their fields, bearing impressive achievements, practical experiences and in-depth skills and knowledge.

We are committed to assisting organizations in the process of transforming to highly effective and efficient organization in handling future challenges in project and construction management, with the motto "do right the first time and every time".

## 2.0 THE VALUE OF PROJECT MANAGEMENT

In this twenty first century, the driving forces for survival require integration of processes, in which project management plays a determining role for positioning at the forefront amongst competitors.

### Integrated Processes of 21<sup>st</sup> Century



Good project management practice consistently delivers results and drives organizational success. It enables accomplishment of goals within the timeline, scope and requirements, budget and quality. It helps create strategic value chain that provides competitive advantage to move forward.

It is the:

- a) Shortest distance between concept and completion
- b) Best practices designed to improve project performance
- c) Disciplined approach to managing projects to the desired results

In the survey conducted by Center for Business Practices (2004), the findings on the benefits of effective and efficient project management are as follow:

- 97% executives say it adds value
- ROI is 28%
- *Improves* time to market 22%,
- *Improves* customer satisfaction 38%,
- *Improves* productivity 23%,

*Improves* cost performance 24%.

### 3.0 PROJECT MANAGEMENT PROFESSIONAL (PMP) CERTIFICATION

Project Management Professional (PMP) Certification is akin to the “Good Housekeeping seal of approval” for project managers. It demonstrates a standard of knowledge, professional experience, and education in project management.

PMP program is administered by the Project Management Institute (PMI), the world’s largest and well respected not-for-profit professional association based in USA. It established [PMBOK, a guide to the Project Management Body of Knowledge](#), which is the only [ANSI](#) standard for project management.

Therefore PMP certification by PMI is international recognized and highly regarded credential in project management. ATG has provided this option in the event that MOD would like to pursue international recognition for its qualified personnel.

To qualify for PMP exam, the requirements are:

Category 1	Category 2
University degree <ul style="list-style-type: none"><li>■ Minimum 4,500 hours PM experience</li><li>■ Minimum 36 months and maximum 96 months PM experience</li><li>■ Minimum 35 contact hours of PM instruction</li></ul>	High school diploma or equivalent <ul style="list-style-type: none"><li>■ Minimum 7,500 hours PM experience</li><li>■ Minimum 60 months and maximum 96 months PM experience</li><li>■ Minimum 35 contact hours of PM instruction</li></ul>

## 4.0 CONSTRUCTION MANAGEMENT OVERVIEW

Construction Management is project management that applies to construction sector in particular. The functions of construction management require all the knowledge and skills in project management to ensure the construction projects are completed in time at the right quality within the effective and efficient use of allocated resources and administration of contracts, whilst managing safety and environment aspects. Construction Management professional practice forms principles of the responsibilities. Legal aspects are scrutinized under contract management.

The outline is as follows:

1. Introduction & Organizing for CM
2. Construction Management Process and Inputs, Project Life Cycle
3. Cost Estimation
4. Construction Pricing & Tendering
5. Project delivery Systems, Construction Planning, work scheduling
6. Types of Construction Contracts
7. Project Risk Management: Overview & Process
8. Contract Administration
9. Legal Structures in Construction Industry
10. Financial management in Construction Project
11. Case studies in Construction Management

## 5.0 TRAINING FRAMEWORK

ATG provides a total training solution for organizations to achieve the milestone in achieving excellence in project and construction management. We provide a training framework that would lead the candidates to total competency and professional certification in project management and construction management for this twenty first century era.

We envision the training sessions as a three-level approach with an optional module in alternative software application:

Level One:	Fundamental Module
Level Two:	Professional Module
Level Three:	Professional Certification
Optional Module:	Primavera Application

## **5.1 LEVEL ONE: FUNDAMENTAL MODULE**

We shall begin preparing the participants with the essential concepts of project management in a 2-day course, immediately followed by implementation of this knowledge using Microsoft Project 2010 in another 2 days.

We feel Quality Management is underlying foundation and forms core of all projects, hence it is elaborated in a 2-day course in this level to ensure quality culture is cultivated in all approaches.

Subsequently, the construction management will be covered as elective in 2 days to guide the participants, who are involved in construction projects such as roads, bridges, dams, airports or residential/commercial construction. to apply project management skills in the construction industry.

## **5.2 LEVEL TWO: PROFESSIONAL MODULES (10 COURSES, TOTAL 20 DAYS)**

In this level, we help the participants to enrich their understanding and gather valuable experiences from our international speakers/facilitators in highly developed best practice knowledge, skills and techniques for managing known and unknown complexities associated in modern projects.

There are in total 7 short courses of 2-day session each, designed in sequence of progressive approach to enlighten the participants the best methodology and practices in project management. In addition, 3 more short courses are proposed as electives for those participants who would like to achieve competency in construction management.

## **5.3 LEVEL THREE: PROFESSIONAL CERTIFICATION**

This 5-day intensive certification course is designed to prepare candidates to pass the PMI®'s PMP® (Project Management Professional) Certification Exam. It is based on the Guide to the Project Management Body of Knowledge (PMBOK®) Fourth Edition. There will be 36 PDUs granted for the PMP requirement.

## **5.4 OPTIONAL MODULE: PRIMAVERA APPLICATION**

As Primavera software is increasingly popular especially for complex projects, we provide this optional module in a single course of 2 days for MOD in the event this software is under review and evaluation for adoption to manage projects. Higher levels in this application can be arranged if necessary.

## 5.5 SUMMARY OF TRAINING FRAMEWORK

Summary of Training Framework – Leading to Project Management and Construction Management Excellence

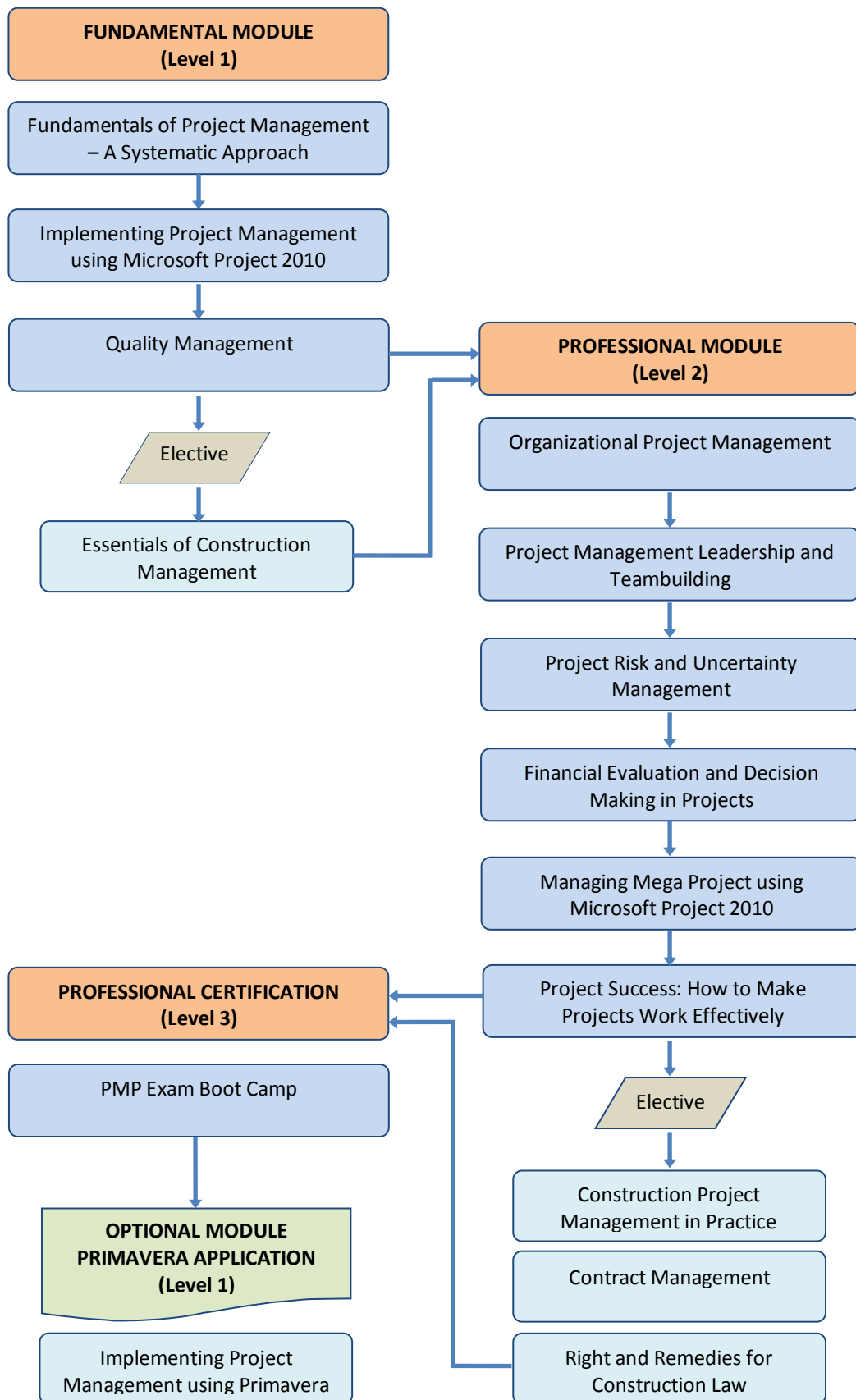
Training Framework Leading to Project & Construction Management Excellence Rev. 0 dated March 1, 2015				
No.	Course Title	Learning Outcome	No of Days	Level
<b>I Fundamental Module</b>				
1.	Fundamentals of Project Management – A Systematic Approach	*Master fundamental project management knowledge, skills, concepts, tools & techniques with cross references to world class USA-based PMBOK® standard. *Understand & apply the best practices in Initiating, Planning, Monitoring and Controlling, Executing, and Terminating phases of a Project Life Cycle.	2	1
2.	Implementing Project Management using Microsoft Project 2010	*Apply basic Microsoft Project software applications and its tools and techniques in enhancing efficiency and productivity in managing projects. *Master the fundamentals of developing and scheduling a project plan, analyse Critical Path, crash and fast-track project duration.	2	1
3.	Quality Management	*Develop and improve quality programs. *Select appropriate QA and QC activities, tools and metrics.	2	1
<b>Elective</b>				
4.	Essentials of Construction Management	*Construction management process and inputs. *Project life cycle. *Development of construction project network.	2	1
<b>II Professional Module</b>				
1.	Organizational Project Management	*Understand organizational project management maturity. *Understand and set up organizational project management governance.	2	2
2.	Project Management Leadership and Teambuilding	*Learn the “dos’ by project managers to develop project leadership competence. *Establish effective teams – how can teams be understood, developed and improved.	2	2
3.	Project Risk and Uncertainty Management	Be able to clearly identify, categorise and classify risks/uncertainties in the contexts of financial challenges, management issues and operational constraints. Develop the ability to gather& evaluate information for objective risk/uncertainty analysis.		2
4.	Financial Evaluation and Decision Making in Projects	*Clear understanding of financial and economic aspects of project management. *Analytical and problem-solving skills in relation to financial and economic aspects of project management.	2	2

**Training Framework (contd.)****Leading to Project & Construction Management Excellence  
Rev. 0 dated March 1, 2015**

No.	Course Title	Learning Outcome	No of Days	Level
5.	Managing Mega Project using Microsoft Project 2010	*Develop and master advance techniques in project scheduling and monitoring *Manage a mega project with interaction of various departments and scopes of works.	2	2
6.	Project Success: How to Make Projects Work Effectively	*Identify the critical success factors for projects. *Learn 30 factors affecting the success and ways to overcome.	2	2
7.	Integrated Cost and Schedule Control in Modern Projects	*Understand the project management trade-offs on balancing the triple-constraints *Explain the integrated cost and schedule control processes	2	2
<b>Electives</b>				
8.	Construction Project Management in Practice	*Understand construction management of complex projects in practice *Understand the development of complex project networks.	2	2
9.	Contract Management	*Learn all aspects of project procurement, legal implications and best practices.	2	2
10.	Rights and Remedies for Construction Law	*Examine the legal relationships, obligations, rights and remedies of diverse parties. *Apply conflict management.	2	2
<b>III Professional Certification</b>				
1.	PMP Exam Boot Camp	*Focus on preparation to take the PMP or CAPM exams *Become familiar with PMBOK terms, definitions and processes	2	3
<b>IV Optional Module - Primavera Application</b>				
1.	Implementing Project Management using Primavera	*Sound understanding on how to optimize time for realistic project implementation and exercise schedule compression techniques. *Framework for evaluating alternative delivery techniques and implications in scheduling and control.	2	1



## 5.6 TRAINING FLOWCHART



## 7.0 CONSULTING SERVICE

To ensure success in this training program, ATG provides additional service if necessary to mentor the project managers to apply their skills and knowledge they acquire on their existing or upcoming projects in the aspects of:

- developing the project management system;
- setting the software templates;
- managing the projects.

This is also for reinforcement of the learning outcome and realization of the benefits to MOD.