



Certificate In Project Management (CIPM)

Course Overview

The Certificate In Project Management credential offered by Project Management Associates (PMA), India's not-for-profit project management association is a leading exam based credential in project management. The CIPM exam is administered by IPMC which is the certification body of PMA. PMA is also the Indian Member Association of the not-for-profit International Project Management Association (IPMA), Switzerland which is the only federally structured PM association in the world. IPMA has Member Associations across 56 countries in the world.

CIPM is divided into 8 Project Life Cycle (PLC) phases – Conceptualize, Plan, Organize, Implement, Control, Integrate, Deliver & Close Out and Knowledge Leverage. Each PLC is further subdivided into knowledge areas and concepts.

The course is extremely rich and covers all aspects of managing a project. Hard skills as well as soft skills such as leadership, motivation, negotiation, conflict resolution etc are fully covered. Additionally the important topics of Health, Safety, Security & Environment and Corporate Social Responsibility is also covered in the CIPM curriculum.

The course is based on the knowledge and skills required through the project life cycle so that users get an excellent understanding of what should be done during each phase of the project for achieving project success.



“Certificate in Project Management is based on highly structured Project Management Methodology covering 8 phases from Conceptualization to Plan, Organize, Implement, Control, Integrate, Deliver and Knowledge Leverage. This covers the entire project life cycle. It should become a must for professionals of an enterprise to create a common vocabulary.”

- **Dr. Hiroshi Tanaka**, President Project Management Association, Japan, Chairman of Global PM Forum and PM Advocate of JGC Corporation (2007)

Conceptualize

Topics Covered under this PLC

▶ Stakeholders
<ul style="list-style-type: none"> This deals with who are the project's stakeholders, understanding and prioritizing their requirements and making a plan to manage their expectations from the project.
<u>Concepts Covered under this Knowledge Area</u>
Stakeholder Requirements

▶ Business Case						
<ul style="list-style-type: none"> The requirement for taking up the project and its initial assessment by the organization - Need Emergence, Need Recognition and Need Articulation. This looks into the business justification for undertaking a project and the project's role in the company. This document is used to evaluate go / no-go for the project. The contents of the Business provide a more detailed look at what inputs should be included in a Business Case. An understanding of the financial feasibility of the project across the life of the product / service using standard techniques such as Payback Period, Net Present Value and Internal Rate of Return. Provides a comprehensive understanding of these methods to evaluate the project across the life of the product / service. The project Charter is the document that signifies that that formal authority has been given to proceed with the project. 						
<u>Concepts Covered under this Knowledge Area</u>						
<table border="1"> <tr> <td>Need Analysis Cycle</td> <td>Business Case Concepts</td> <td>Contents of Business Case</td> </tr> <tr> <td>Investment Appraisal</td> <td>PESTLE Analysis</td> <td>Project Charter</td> </tr> </table>	Need Analysis Cycle	Business Case Concepts	Contents of Business Case	Investment Appraisal	PESTLE Analysis	Project Charter
Need Analysis Cycle	Business Case Concepts	Contents of Business Case				
Investment Appraisal	PESTLE Analysis	Project Charter				

Plan

Topics Covered under this PLC

▶ Planning Management		
<ul style="list-style-type: none"> The importance of planning in project success A look at the requirements and contents of the Project Management Plan which is the basis to execute and deliver the project. 		
<u>Concepts Covered under this Knowledge Area</u>		
<table border="1"> <tr> <td>Why Plan?</td> <td>Types of Plan</td> </tr> </table>	Why Plan?	Types of Plan
Why Plan?	Types of Plan	

▶ Start Up
<ul style="list-style-type: none"> What are the activities needed to be performed to have an effective start-up process for the

project
<i>Concepts Covered under this Knowledge Area</i>
Need for proper start up

► Success Criteria
<ul style="list-style-type: none"> It is important to have a clear understanding of the qualitative and the key performance indicators (KPIs) that will be used by the different stakeholders to measure the success of the project for them.
<i>Concepts Covered under this Knowledge Area</i>
Success Criteria

► Scope Definition								
<ul style="list-style-type: none"> Scope definition looks in depth at the role and importance of scope in successful project delivery. How to understand the project's scope, detail out the scope into a Scope Statement and then decompose the scope into a Work breakdown Structure (WBS) which will be used to plan and control the project. After this the user will be able to make a suitable WBS for their project. 								
<i>Concepts Covered under this Knowledge Area</i>								
<table border="1"> <tr> <td>Scope Philosophy</td> <td>Product/ Service Description</td> <td>Scope Planning</td> <td>Scope Statement</td> </tr> <tr> <td>Scope Definition High Level</td> <td>Work Breakdown Structure</td> <td>Work Package</td> <td>Scope Management Plan</td> </tr> </table>	Scope Philosophy	Product/ Service Description	Scope Planning	Scope Statement	Scope Definition High Level	Work Breakdown Structure	Work Package	Scope Management Plan
Scope Philosophy	Product/ Service Description	Scope Planning	Scope Statement					
Scope Definition High Level	Work Breakdown Structure	Work Package	Scope Management Plan					

► Time Management				
<ul style="list-style-type: none"> Time management section provides a very comprehensive look and covers all aspects of managing the project's time dimension in complete detail. How to further subdivide the WBS work packages into activities, sequence the activities, the four logical interrelationships of Finish-Start, Start-Start, Finish-Finish, and Start-Finish The two modifiers of Lead and Lag. How to draw networks using the network diagramming techniques of the Precedence Diagramming Method (PDM) as well as the Arrow Diagramming Method (ADM) How to analyze the network and calculate the floats, free floats and the critical path using the Critical Path Method. Use of Program Evaluation Review technique (PERT) to estimate activity durations. Calculating Standard Deviation to arrive at a duration range to complete activities and the project at different confidence factors. How to draw and read Gantt (bar) charts and Linked bar charts. In-depth look at how to construct Resource Histograms to better organize the project resources, 'S' curves and Resource leveling. Critical Chain project management is also covered and discussed. 				
<i>Concepts Covered under this Knowledge Area</i>				
<table border="1"> <tr> <td>More about WBS</td> <td>Overview of Networks</td> <td>Project Network Diagrams</td> <td>What is an Activity?</td> </tr> </table>	More about WBS	Overview of Networks	Project Network Diagrams	What is an Activity?
More about WBS	Overview of Networks	Project Network Diagrams	What is an Activity?	

Arrow Diagramming Method(ADM)	Precedence Diagramming Method(PDM)	Program Evaluation and Review Technique (PERT)	Duration estimates
Logical relationships and dependencies	Lead & Lag	Early start and early finish	Late start and late finish
Critical path	Float	Project Network Analysis	Gantt Charts
Critical Chain			

► Cost & Finance	
<ul style="list-style-type: none"> This covers the different types of estimates that are used through the project and different estimating techniques like analogous estimating used to arrive at an estimate. The cost baseline which is a time phased budget is developed to manage the project costs. 	
<u>Concepts Covered under this Knowledge Area</u>	
Cost Estimating	Cost Baseline

► Health, Security, Safety & Environment	
<ul style="list-style-type: none"> Project persons have to make many decisions in the project many of which cover crucial areas of managing the health, safety security and environment. This deals with both the standard requirements across the world including some ISO inputs. 	
<u>Concepts Covered under this Knowledge Area</u>	
Health, Safety & Environment	

► Quality Considerations		
<ul style="list-style-type: none"> A comprehensive look at how to understand the quality standards and requirements for the project. Quality Planning, Quality Assurance and Quality Control. Quality gurus that have shaped the quality movement and important quality terms to guide in managing the quality. 		
<u>Concepts Covered under this Knowledge Area</u>		
Quality Philosophy	What is Quality	Cost of Quality

► Risk & Opportunity	
<ul style="list-style-type: none"> Without effective Risk management it is not possible to deliver the project within time and cost and to the required quality. All aspects of risk management - generic concepts of Risk and Opportunity, Risk Identification using a variety of tools and techniques such as Brainstorming, Delphi, Nominal group technique, Assumption analysis, SWOT analysis etc. Risk categories, Qualitative risk assessment using Probability / Impact grid and scores and Quantitative risk assessment methods such as Decision trees, Expected Monetary Value, Monte Carlo simulation. 	
<u>Concepts Covered under this Knowledge Area</u>	

Risk vs. Project Life Cycle	Risk Identification	Risk assessment	
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▶ Communication	
<ul style="list-style-type: none"> In a project environment it is very important to have right information at the right time as the actions and decisions taken depend on these inputs. Communication is a key ingredient in projects and this part covers the basic communication model, communication channels, and types of communication and how to choose the appropriate communication channel. 	
<i>Concepts Covered under this Knowledge Area</i>	
Communication Concepts	

Organise

Topics Covered under this PLC

▶ Internal and External Interfaces	
<ul style="list-style-type: none"> This takes users across how to build effective interfaces both internally between the different stakeholders and also externally between the different organizations involved in the project. 	
<i>Concepts Covered under this Knowledge Area</i>	
Role of Interfaces	

▶ Roles & Responsibilities		
<ul style="list-style-type: none"> It is the people working and interacting in the project who need clear guidance and understanding regarding their role and responsibilities to work effectively. The role and responsibilities of the Sponsor, the Project Manager and the Team members is discussed here. Also why we need a formal Responsibility Assignment Matrix with some sample responsibility assignment matrix. 		
<i>Concepts Covered under this Knowledge Area</i>		
What is HR?	Roles, Duties and Responsibilities	Responsibility Assignment Matrix

▶ Organisation Structures	
<ul style="list-style-type: none"> The organization structure affects the power and authority given to us to perform the project work. The 3 key types of organization structures - Line or Function, Matrix and Projectized are covered along with their advantages and disadvantages. 	
<i>Concepts Covered under this Knowledge Area</i>	
Types of Organization Structures	

▶ Information System	
<ul style="list-style-type: none"> Projects generate and use a tremendous amount of data. Information covers the knowledge 	

related to the capturing, generation, storage, confidentiality and deletion of the information while communication was the process of actually disseminating the required information to relevant persons.
<i>Concepts Covered under this Knowledge Area</i>
Communication Process

Implement

Topics Covered under this PLC

► Risk Management	
<ul style="list-style-type: none"> During the project implementation phase we need to monitor the identified risks and also be alert for new risks. This covers the aspect of reassessing and monitoring of risks and also the contents and importance of maintaining a Risk Register. 	
<i>Concepts Covered under this Knowledge Area</i>	
Risk Reassessment & Monitoring	Risk Register

► Teamwork	
<ul style="list-style-type: none"> The project team is of paramount importance as it is the team members that actually perform the project work. Teamwork covers different aspects needed related to different types of teams. The process of team selection and stages of team development from the Forming to the Performing stages. How to improve team communication by minimizing communication barrier and the role of ethics in project work. 	
<i>Concepts Covered under this Knowledge Area</i>	
Types of Teams	Characteristics of Teams
Barriers to Communication	Ethics

► Issue Management	
<ul style="list-style-type: none"> An issue is an unresolved problem or disagreement that can occur in any domain of the project. Issue management helps to focus on and keep track of all the issues through the use of Issue registers. 	
<i>Concepts Covered under this Knowledge Area</i>	
Issue Logs	

Control

Topics Covered under this PLC

► Procurement			
<ul style="list-style-type: none"> • Procurement is the acquisition of goods and services from outside the performing organization. Most projects involve some form of procurement. And this topic covers all aspects of procurement and contracts. • The role and need of procurement in projects. • Contract statement of work. • Different steps in the procurement cycle. • Make-or-buy analysis. • Procurement documents. • What is a contract? • Different types of Fixed Price contracts - Firm Fixed price, Fixed price with Economic Adjustment and Fixed price Incentive Fee. • Different types of Cost Reimbursable contracts - Cost Plus Fixed fee, Cost Plus percentage of Cost, Cost Plus Incentive Fee. • Time & Material and Unit price contracts. • Commonly used contract terms. 			
<u>Concepts Covered under this Knowledge Area</u>			
The need for procurement	Procurement Planning	Contracting	

► Issue Analysis	
<ul style="list-style-type: none"> • Issues are analyzed in different ways to better monitor and control the project work. 	
<u>Concepts Covered under this Knowledge Area</u>	
Issue Analysis	

► Quality		
<ul style="list-style-type: none"> • This section covers the different quality tools that are needed to check whether the results conform or do not conform to the requirements. Quality tools covered include: Statistical Quality Control, Histograms, Cause and effect diagram, Flow charts, Benchmarking and Inspections. 		
<u>Concepts Covered under this Knowledge Area</u>		
Statistical Quality Control	Histogram	Pareto Diagram
Cause and Effect	Flow Charts	Benchmarking

► Change
<ul style="list-style-type: none"> • A formal change control process is essential to manage and control the project. This section deals with the entire process and procedures of change management across the project.

Concepts Covered under this Knowledge Area

Change management concept	The need for change control	Formal change control procedures
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► **Information Management & Reporting**

- Some form of project meeting often keeps project manager and team members busy. This gives a formal look at how to plan and manage meetings more effectively and report project progress.
- Earned value management analysis provides valuable inputs regarding the health of the project and what-if analysis considering an assumed performance in future.
- Schedule Variance, Cost Variance, Schedule Performance Index, Cost Performance Index, and Estimate At Completion are all covered in detail.

Concepts Covered under this Knowledge Area

Meeting	Information management fundamentals	Estimate at completion(Cost)
Estimate at completion(Time)		

► **Team Performance**

- The project manager needs to control the team performance by leading the team, motivating them and being proactive in resolving any conflicts that arise.
- Leadership styles like autocratic, democratic, bureaucratic, laissez-fair, directive and supportive are detailed out.
- Key motivation theories covered are Maslow's Hierarchy of Needs theory, Herzberg's two Factor theory and McGregor's X and Y theory.
- Different conflict resolution techniques like avoiding, smoothing, compromising, forcing and problem solving are discussed.

Concepts Covered under this Knowledge Area

Motivation Theories	Leadership	Conflict Resolution
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Integrate

Topics Covered under this PLC

► **Conformance**

- As the work is completed the different work packages have to be integrated together and checked that they conform to the requirements.

Concepts Covered under this Knowledge Area

Ensuring Conformance

► Problem Solving		
<ul style="list-style-type: none"> • Problem solving looks into a formal process to solve problems. Problem solving is a skill and competence that requires creative, out-of-box thinking by all persons associated with the project. 		
<i>Concepts Covered under this Knowledge Area</i>		
Problem Solving		

► Project Integration		
<ul style="list-style-type: none"> • Project Integration addresses the different aspects of the project work that has to be integrated through the project phases to deliver the project results. 		
<i>Concepts Covered under this Knowledge Area</i>		
Project definition	Manage project execution	Monitoring and control

► Product Integration		
<ul style="list-style-type: none"> • Product integration deals with the integration and testing of the product/service being delivered by the project. Need to manage external and internal components and interfaces to deliver the final product/service. • Sequencing of the components based on - functionality, complexity, dependencies, resource availability etc. • Testing of the components functional and performance characteristics against the acceptance criteria. 		
<i>Concepts Covered under this Knowledge Area</i>		
Integration platform	Sequence for integration	Evaluate products

► Integration Effectiveness		
<ul style="list-style-type: none"> • Use of priority setting techniques like Dot Voting, Weighted Voting and Consensus decision making. • Using an Issue histogram to analyze all the integration related issues. • Document management. 		
<i>Concepts Covered under this Knowledge Area</i>		
Priority setting	Issue histogram	Documentation

Deliver & Closeout

Topics Covered under this PLC

▶ Project/Product delivery	
<ul style="list-style-type: none"> • Use of priority setting techniques like Dot Voting, Weighted Voting and Consensus decision making. • Using an Issue histogram to analyze all the integration related issues. • Document management. 	
<u>Concepts Covered under this Knowledge Area</u>	
Delivery checklist	Project acceptance

▶ Contract Administration	
<ul style="list-style-type: none"> • Managing the contract is an important task in the project. This area deals with knowledge and skills required to ensure that all the contract terms are being fully met by the contractor. 	
<u>Concepts Covered under this Knowledge Area</u>	
Contract Administration	Project/Product Warranties

▶ Close out		
<ul style="list-style-type: none"> • Once the project work has been completed the project has to be closed. Close out of each contract after verifying the work is completed and updating the records • Legal close out. • Releasing of all the resources. • Administrative closure of the project. 		
<u>Concepts Covered under this Knowledge Area</u>		
Purchase order close out	Contract Close Out	Resource Close Out
Legal Close Out	Project Close Out report	

▶ Post Project Evaluation	
<ul style="list-style-type: none"> • A project evaluation report written at the end of the project is very useful for lessons learned from the project for use in future projects. 	
<u>Concepts Covered under this Knowledge Area</u>	
Project evaluation	

Knowledge Leverage

Topics Covered under this PLC

► Project	
<ul style="list-style-type: none"> This section covers fundamentals of project management discipline. What is a project and how it differs from operations. What is project management? Historical look at the development of project management across the centuries. Project life cycle concepts. Triple constraints of project management 	
<u>Concepts Covered under this Knowledge Area</u>	
What is a Project?	Operation vs. projects

► PM Fundamentals		
<ul style="list-style-type: none"> This section covers fundamentals of project management discipline. What is a project and how it differs from operations. What is project management? Historical look at the development of project management across the centuries. Project life cycle concepts. Triple constraints of project management 		
<u>Concepts Covered under this Knowledge Area</u>		
Why Modern PM is the Key discipline	Historical Perspective	Project Management
Triple Constraints	Project Life Cycle	Uncertainties vs. life cycle
Value addition vs. life cycle	Cost of change vs. life cycle	Amount at stake vs. life cycle

► Corporate Social Responsibility (CSR)
<ul style="list-style-type: none"> Today corporate social responsibility is becoming more and more important. This concept looks at integration of social and environmental concerns in the organizations business operations
<u>Concepts Covered under this Knowledge Area</u>
Corporate Social responsibility