

Course Type	Course Code	Name of Course	L	T	P	Credit
DC	NMSC508	Project Management	3	1	0	4

#### Course Objective

The uniqueness of each project needs an expertise to bring the most productive outcome for the organization and society.

This course is framed to offer you a knowledge sharing through the application of tools, techniques and discussions of case studies

#### Learning Outcomes

After attending this course, the students will be expected to get a developed understanding on:

- How to evaluate and select a project
- How to manage and control the stakeholders, cost, schedule and quality while managing all the project risks and other threats.
- This course will bring the learnings on different qualitative skills and quantitative tools to understand and lead a successful project.

Unit	Topics to be Covered	Lecture Hours (L) and Tutorial Hours (T)	Learning Outcome
1	Introduction to Project Management and Project lifecycle	1 (L)	Understanding of what is project and project management, the drivers of project management, and project governance, etc.
2	Organization Structure and Culture	2 L+1 T	Understanding of existing project management structures in organizations. Relationship of Program, portfolio, and project.
3	Project Selection techniques -Financial Analysis -Non- Financial Analysis Market and Demand Analysis Technical Analysis	3 L+1 T	Understanding of organization's strategy and Project Selection Criteria: Financial (NPV and Payback methods) and non-financial (MCDM techniques etc.)
4	Defining the Project: Project scope planning and Work Breakdown Structure	3 L+1 T	Understanding on how to establish Project Priorities by creating the Work Breakdown Structure and responsibility matrix and its communication Plan
5	Project scheduling: Estimations of Project time and cost reducing Project duration. Scheduling resources	9 L+2 T	<p>-Developing, constructing and computing the Project Network, AOA and AON fundamentals using Forward and Backward pass information, CPM, slack and float, Probability Models in networks, PERT etc.</p> <p>-Understanding on how to crash the Project durations by construction of Project cost-duration graph and its evaluation.</p> <p>-Understanding on types of Resource Constraints, Resource Allocation Methods, splitting activities, critical chain approach.</p> <p>-Understanding the factors influencing the Quality of Estimates, and guidelines for estimating times,</p>

			costs and resources, Top-down and bottom-up estimating, learning curves, etc.
6	Measuring Project Performance: Implementation and Control	4 L+2 T	Understanding on how to monitor and control the projects using Earned value analysis technique, cost-schedule graph, Gantt Chart, etc.
7	Agile Project Management methods	2 L+1T	Understanding the adaptive project management techniques in the volatile scenarios and changing customer requirements. Change management in projects.
8	Managing Projects Risks	6 L+2 T	Understanding on Risk Management Processes, Risk identification, assessment, mitigation and risk control etc. Monte Carlo Analysis and Decision Tree Analysis
9	Project Quality Management	2 L	Understanding the Six sigma tools and other quality control tools in project management
10	Procurement Management	2 L	Understanding the steps of the procurement activities, contract management for projects, etc.
11	Project Leadership and Managing teams and stakeholders	2 L	Learning the five-stage team development model, Managing stakeholders, ethics of Project management, conflict management etc.
12	Project Audits and Project Closure Detailed Project Report	2 L	-Understanding the types of Project Closure, post completion evaluation and documentations etc. -Discussion on the documentations in a detailed project report
13	Project Management Information systems	4L+4T	Understanding the supporting information system to perform, manage, and control the projects.
	<b>Total</b>	<b>42 L+14 T</b>	

**Text Books:**

1. Gary, C.F., Larson, E.W. and Desai, G.V., Project Management: The Managerial Process, Edition VI, McGraw Hill Education (India) Private Limited, 2004.
2. Maley, Claude H. Project management concepts, methods, and techniques. Auerbach Publications, 2012.

**Reference Books:**

1. PMBOK® Guide – Seventh Edition (2021).
2. Meredith, Mantel and Gopalan, Project Management: Core Text Book, Wiley India, 2006.