

**n NIRMA UNIVERSITY**  
**Institute of Technology**  
**Bachelor of Technology - Civil Engineering**  
**Semester- V/VI/VII**

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| <b>Course Code</b>  | 2CLOE29            |
| <b>Course Title</b> | Project Management |

**Course Outcomes:**

At the end of the course, students will be able to

1. choose the most appropriate project alternative
2. plan, schedule and control the project
3. appraise accounts and finance of the project
4. apply management principles to optimize the resources and implement quality and safety

**Syllabus:**

**Teaching Hours: 45**

**Unit 1: Project Selection, Initiation and Performance Measurement** **Hour: 09**

Factors affecting project, project life cycle, identification, appraisal, negotiation, approval, project feasibility, project cost estimation, cost-benefit analysis, budget planning, source of finance, performance indicators, performance improvement, project closure.

**Unit 2: Project Planning and Network Techniques** **Hour: 14**

Work break down structure, Bar chart, CPM and PERT: development of network, time estimates and computation, analysis of network, time-cost trade off, updating and resource allocation. Use of software in management, management information system

**Unit 3: Resource Management** **Hour: 08**

Personnel Management: Special characteristics, manpower planning, recruitment, placement, training and induction, motivation, performance appraisal, industrial relation, aspect of administration, motivation, public relation, welfare measures. Material Management: Objectives, scope, functions, stages of material management, inventory control.

**Unit 4: Accounting and Financial Management** **Hour: 09**

Accounting: Concept, objectives, types, principles. Finance Management: Finance as resource, functions, control, cost analysis. Financial statements: Balance sheet, profit and loss account, fund and cash flow statement. Financial Analysis: Financial ratio, types, significance Methods, factors, purpose, financial analysis. C-V-P analysis: concept, assumption, fixed and variable cost, breakeven point, margin of safety, utility.

## Unit 5: Quality and Safety Management

Hour: 05

Quality management: Objectives, Total quality management, cost and value of quality. Safety Management: Need and importance of safety, occupational safety and health act, safety programme

### Self-Study:

The self-study contents will be declared at the commencement of semester. Around 10% of the questions will be asked from self-study contents.

### Suggested Readings:

1. Nagarajan, *Project Management*, New Age International Publishers
2. Mishra and Soota, *Modern Project Management*, New Age International Publishers
3. Wiest, D. and Levy, K. *Management Guide to PERT/CPM*, PHI learning Pvt. Ltd.
4. Chandra, P. *Financial Management: Theory and Practice*, Tata McGraw Hill
5. Gopalakrishnan, P. *Materials Management*, Prentice Hall
6. Aswathappa, K. *Human Resource Management: Text and Cases*, Tata McGraw Hill.
7. Chandra, P. *Projects: Planning, analysis, selection, financing, implementation and review*, McGraw Hill Education

L= Lecture, T= Tutorial, P= Practical, C= Credit

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w.e.f. academic year 2020-21 and onwards