

GUJARAT TECHNOLOGICAL UNIVERSITY

BRANCH NAME: INDUSTRIAL ENGINEERING

SUBJECT NAME: PROJECT MANAGEMENT

SUBJECT CODE: 2181501

B.E. 8th SEMESTER

Type of course: Core

Prerequisite: No specific pre-requisite. Students should have basic knowledge of management.

Rationale: The concept of project management exists because it helps assure completion of a project successfully. This course covers the basics of project management where students will learn what project management involves and how to approach it successfully. This course includes how to break down a complex project into manageable segments and use of effective project management tools and techniques to arrive at solution and ensure that the project meets its deliverables and is completed within budget and on schedule.

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks						Total Marks
L	T	P		Theory Marks			Practical Marks			
			ESE (E)	PA (M) PA ALA		ESE (V) ESE OEP		PA (I)		
4	0	2	6	70	20	10	20	10	20	150

Content:

Sr. No.	Content	Total Hrs	% Weight age
1	Concept of Project : Meaning and introduction, Project Identification	3	5
2	Project selection & Preparation of project report. Project appraisal : (A) Technical Appraisal (B) Commercial Appraisal (C) financial Appraisal (D) Economic Appraisal (E) Appraisal of Management (F) Social Appraisal	12	20
3	Small scale Industries: Importance, definition. Ancillaries industries, Village industries, Tiny sector	3	5
4	Various agencies supporting SSI like SFCs, NSIC, SSICs, DICs, Commercial banks, State Directorate of Industries, IDBI, ICICI, and State Technical Consultancy Organizations. Various schemes for financing SSI.	12	20
5	Location of Industries in less developed (Industrially backward) areas, Incentives available. Constitution of Industrial Unit. Common problems and Pitfalls in running an Industrial Unit	4	5
6	Project Management Techniques : Bar chart & Milestone chart	3	5

7	Network analysis : Development of Network, Time estimates, Time computations	6	8
8	Program Evaluation & Review Techniques (PERT), Critical Path Method (CPM). Applications, advantages and limitations of PERT & CPM. Project cost considerations, Project duration, and updating and Resource allocation: Resource smoothening and leveling.	21	32

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
35	30	10	15	5	5

Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above Levels (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Reference Books:

1. The Industrial economy of India by S.C. Kuchhal, Chaitanya pub. House.
2. Industrial finance of India by S.K.Basu
3. An insight into management accounting by John Siger, Pengvin
4. Principles of engineering economy by E.L.Grant, Prentice- Hall of India.
5. Guide lines for project evaluation by United nations 1968.
6. Investment location and size of plant by P.S.Florence.
7. The finance and analysis of capital projects by A.J. Morrett and A. Sykee, Longmans.
8. Appraisal and control of project costs by R. Pilcher, Mcgraw- hill.
9. Project management and control by (vol 1,2, & 3) R.L. Martins
10. PERT/CPM Principles and applications by L. S. Srinath, East West Press. PERT & CPM by dr. B.C. Punmia & K.K. Khandelwal

Course Outcome:

After learning the course the students should be able to understand / apply:

- What project management is all about and how to approach it successfully?
- The selection of a project and defining the goals of the project.
- The importance of planning, management, team building, and organization for project.
- The issue of budgeting in project management, including cost of project.
- Importance & role of small scale industries and role of various supporting agencies.
- The importance of estimating, guessing, and milestones in project scheduling.
- Network analysis techniques such as CPM & PERT.
- How variables and risks should be approached when planning a project.

List of Experiments:

1. Study about project identification.
2. Study about project Appraisal :
3. Study about SSI and ancillary Industries.
4. Study about role of various supporting agencies.
5. Study about incentives available for unit in backward areas.
6. Study about bar charts, Milestone Charts
7. Study about Network Analysis Techniques (PERT & CPM).
8. Assignment on Network construction
9. Assignment on CPM problems
10. Assignment on PERT problems

Major Equipment: None

List of Open Source Software/learning website: [www. nptel.ac.in](http://www.nptel.ac.in)

ACTIVE LEARNING ASSIGNMENTS: Preparation of power-point slides, which include videos, animations, pictures, graphics for better understanding theory and practical work – The faculty will allocate chapters/ parts of chapters to groups of students so that the entire syllabus to be covered. The power-point slides should be put up on the web-site of the College/ Institute, along with the names of the students of the group, the name of the faculty, Department and College on the first slide. The best three works should submit to GTU.