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Project Management — Complete Syllabus (Open Elective-3, Option 1)

BTEUP Diploma in Electrical Engineering • 6th Semester • Session 2026-27

Subject 6.4.1 (Open Elective-3, Theory) (Q) • 50 Marks internal • 2 Credits • L 2 - P 0 •

Choose this OR Internet of Things • Qualifying only

About this document: Open Elective-3 (6.4) is a (Q) qualifying subject — compulsory to appear and pass, but marks are not included for percentage and division. Choose either this theory course or Internet of Things, or a certification course (not less than 20 hrs) from the approved providers.

Examination Scheme

Code	Paper	Type	L - P	Credits	Internal	External	Total
6.4	Project Management (Open Elective-3)	Theory (Q)	2 - 0	2	50	—	N/A
Open Elective-3 Total				2	50	—	N/A

What This Subject Aims To Do

To help students develop the idea of a project plan — from defining and confirming the project goals and objectives, to identifying tasks and how goals will be achieved.

Unit-Wise Complete Topic List

Unit	Topic	Periods	Marks Share
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I	Concept of a project	04	18%
II	Capital budgeting process	06	22%
III	Financial estimates and projections	06	20%
IV	Basic techniques in capital budgeting	06	20%
V	Project administration	06	20%

UNIT-I: Concept of a project (04 Periods, 18%)

Topics: Classification of projects - importance of project management - The project life cycle - establishing project priorities (scope-cost-time) project priority matrix - work break down structure.

UNIT-II: Capital budgeting process (06 Periods, 22%)

Topics: Planning - Analysis - Selection - Financing - Implementation - Review; Generation and screening of project ideas - market and demand analysis - Demand forecasting techniques; Market planning and marketing research process - Technical analysis.

UNIT-III: Financial estimates and projections (06 Periods, 20%)

Topics: Cost of projects - means of financing - estimates of sales and production - cost of production - working capital requirement and its financing - profitability, projected cash flow statement and balance sheet; Break even analysis.

UNIT-IV: Basic techniques in capital budgeting (06 Periods, 20%)

Topics: Non discounting and discounting methods - payback period - Accounting rate of return - net present value - Benefit cost ratio - internal rate of return; Project risk; Social cost benefit analysis and economic rate of return; Non-financial justification of projects.

UNIT-V: Project administration (06 Periods, 20%)

Topics: Progress payments, expenditure planning, project scheduling and network planning, use of Critical Path Method (CPM), schedule of payments and physical progress, time-cost trade off; Concepts and uses of PERT cost as a function of time, Project Evaluation and Review Techniques/cost mechanisms; Determination of least cost duration; Post project evaluation; Introduction to various Project management software.

Reference Books (as listed in the syllabus)

- Project planning, analysis, selection, implementation and review – Prasannachandra – Tata McGraw Hill
- Project Management – the Managerial Process – Clifford F. Gray & Erik W. Larson – McGraw Hill
- Project management - David I Cleland - McGraw Hill International Edition, 1999
- Project Management – Gopala krishnan – Mcmillan India Ltd.
- Project Management - Harry - Maylor - Pearson Publication

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Source: BTEUP 3rd Year curriculum (folder2627), approved in C.D.C. meeting held on 16.07.2026. Topic lists follow the official syllabus; short explanations are the author's own plain-English summaries, not syllabus text.

Please confirm with your own polytechnic for any local changes.

