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| **Unit** | **Name of the Topic** | **Hours** |
| 1. | **ENTREPRENEURSHIP – INTRODUCTION AND PROCESS**     * Concept, Competencies, Functions and Risks of entrepreneurship * Entrepreneurial Values& Attitudes and Skills * Mindset of an employee/manager and an entrepreneur * Types of Ownership for Small Businesses * o Sole proprietorship * o Partnerships * o Joint Stock company- public limited and private limited | 10 |

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|  | companies  Difference between entrepreneur and Intrapreneur |  |
| 2. | **PREPARATION FOR ENTREPRENEURIAL VENTURES**     * Business Idea- Concept, Characteristics of a Promising Business Idea, Uniqueness of the product or service and its competitive advantage over peers. * Feasibility Study – Concept – Locational, Economic, Technical and Environmental Feasibility. Structure and Contents of a standard Feasibility Study Report * Business Plan – Concept, rationale for developing a Business Plan, Structure and Contents of a typical Business Plan * Project Report- Concept, its features and components * Basic components of Financial Statements- Revenue, Expenses   (Revenue & capital exp), Gross Profit, Net Profit, Asset, Liability, Cash Flow, working capital, Inventory. Funding Methods-Equity or Debt.  Students are just expected to know about the features and key inclusions under, Business Plan and Project Report. They **may not** be asked to prepare a Business Plan/ Project Report/ Project Feasibility Report in the End of Semester Examination. | 20 |
| 3. | **ESTABLISHING SMALL ENTERPRISES**    Legal Requirements and Compliances needed for establishing a  New Unit-  o NOC from Local body  o Registration of business in DIC   * Statutory license or clearance * Tax compliances | 03 |
| 4. | **START-UP VENTURES**   * Concept & Features * Mobilisation of resources by start-ups: Financial, Human, Intellectual and Physical * Problems and challenges faced by start-ups. * Start-up Ventures in India – Contemporary Success Stories and Case Studies to be discussed in the class.   Case studies have been included in the syllabus to motivate and inspire students toward an entrepreneurial career from the success stories. No questions are to be set from the case studies. | 04 |
| 5. | **FINANCING START-UP VENTURES IN INDIA**     * Communication of Ideas to potential investors – Investor Pitch * Equity Funding, Debt funding – by Angel Investors, Venture Capital Funds, Bank loans to start-ups * Govt Initiatives including incubation centre to boost start-up ventures * MSME Registration for Start-ups –its benefits | 06 |
| 6. | **EXIT STRATEGIES FOR ENTREPRENEURS**  Merger and acquisition exit, Initial Public Offering (IPO), Liquidation, Bankruptcy – **Basic Concept only** | 02 |

**Examination Scheme**

* + **End Semester Examination: 60 marks**

Suggested Question Paper Scheme for End Semester Examination

**Group A: 20marks**

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| --- | --- | --- |
| Question Type | Number of questions to be set | Number of questions to be answered |
| MCQ, Fill in the blanks, True or False ( Carrying 1 mark  each) | 25 | 20 |

**Group B: 40marks**

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| Question Type | Number of questions to be set | Number of questions to be answered |
| Subjective Type questions  (Carrying 8 marks each) | 10 | 5 |

* + **Internal Assessment: 40 marks** o Class test : 20 marks o Assignment: 10 marks o Class attendance: 10 marks **Suggested Learning Resources**

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| **Sl.**  **No.** | **Title of Book** | **Author** | **Publication** |
| 1. | Entrepreneurship Development | Sangeeta Sharma | Prentice Hall of  IndiaLearning Private  Ltd |
| 2. | Entrepreneurship Development | S. Anil Kumar | New Age International |
| 3. | Fundamentals of Entrepreneurship | [Sangram Keshari](https://www.google.co.in/search?tbo=p&tbm=bks&q=inauthor:%22SANGRAM+KESHARI+MOHANTY%22)  [Mo](https://www.google.co.in/search?tbo=p&tbm=bks&q=inauthor:%22SANGRAM+KESHARI+MOHANTY%22)hanty | Prentice Hall of India  Learning Private Ltd |
| 4. | Fundamentals of Entrepreneurship | [Dr. G.K. Varshney](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Dr.+G.K.+Varshney&search-alias=stripbooks) | Sahitya Bhawan  Publication |
| 5. | Managing New Ventures:  Concepts and Caseson  Entrepreneurship | Anjan Raichaudhuri | Prentice Hall of India  Learning Private Ltd |
| 6. | How to Start a Business in India | Simon Daniel | Buuks, Chennai |
| 7. | Entrepreneurship and Small  Business Management | S.S. Khanka | S. Chand & Sons, New  Delhi |
| 8. | Entrepreneurship Development and Business Ethics | Abhik Kumar  Mukherjee & Shaunak  Roy | Oxford University  Press |
| 9. | Entrepreneurship Development and Business Ethics | Dr B Chandra & Dr B  Biswas | Tee Dee Publications |
| 10. | Entrepreneurship Development Small Business Entrepreneurship | Poornima Charantimath | Pearson Education  India |

# Syllabus of Engineering Economics & Project Management

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| Course Code: | OE302 |
| Course Title: | Engineering Economics & Project Management |
| No. of Credits: | 3 (L: 3, T: 0, P: 0) |
| Prerequisites: | NIL |
| Course Category: | Open Elective (Compulsory for all branches) |

Course Objectives:

* To acquire knowledge of basic economics to facilitate the process of economic decision making.
* To acquire knowledge on basic financial management aspects.
* To develop the idea of project plan, from defining and confirming the project goals and objectives, identifying tasks and how goals will be achieved.
* To develop an understanding of key project management skills and strategies.

## Group-A

### Unit-I (INTRODUCTION, THEORY OF DEMAND & SUPPLY) [9 hours]

1.1 Introduction to Engineering Economics, the relationship between Engineering and Economics

1.2 Resources, scarcity of resources, and efficient utilization of resources.

1.3 Opportunity cost, Rational Choice Theory

1.4 **Theory of Demand:**

* The law of demand
* Different types of demand (Individual demand & Market demand)
* Determinants of demand
* Demand function
* Change in demand (Shift of demand curve) and the change in quantity demanded.
* Definition and types of Elasticity of demand (price, income & cross price elasticity) with mathematical derivation, Concept of elastic and inelastic goods, Measurement of price elasticity of demand (Point elasticity and Arc elasticity), Variation of price elasticity on different points of a linear demand curve, ranging from zero to infinity, Relationship between price, total revenue and price elasticity of demand (mathematical derivation).

1.5 **Theory of Supply**:

* Definition of supply
* Determinants of supply
* Supply function
* Supply curve and shift of supply curve.

1.6 **Market mechanism:**

* Definition of Market
* Price mechanism: determination of equilibrium price and quantity demand & supply (Numerical examples with graphical illustration).
* Stability of equilibrium.
* Basic comparative static analysis: Change in equilibrium due shift of demand & supply curve (Numerical problems with graphical illustration).

### Unit-II (THEORY OF PRODUCTION & COSTS) [10 hours]

2.1: **Theory of Production:** Concept of production (goods & services), Different factors of production (fixed and variable factors), Short-run Production function (Graphical illustration), law of return (graphical and mathematical derivation), and Long run production function (returns to scale).

2.2: **Theory of Cost:** Short-run and long-run cost curves with graphical illustration, basic concept on total cost, fixed cost, variable cost, marginal cost, average cost etc. with the diagrammatic concept., Relationship between AC AND MC.

2.3: Economic concept of profit, profit maximization (numerical problems)

### UNIT-III (DIFFERENT TYPES OF MARKET AND ROLE OF GOVERNMENT) [4 hours]

3.1: Perfect Competition: Features of Perfectly Competitive Market.

3.2: Imperfect Competition: Monopoly, Monopolistic Competition, and Oligopoly.

3.3: Role of government in Socialist, Capitalist and Mixed Economy structure with example.

## Group-B

### Unit-I (CONCEPT OF PROJECT) [4 hours]

1.1: Definition and classification of projects

1.2: Importance of Project Management.

1.3: Project life Cycle [Conceptualization→Planning→Execution→Termination]

### Unit-II (FEASIBILITY ANALYSIS OF A PROJECT) [10 hours]

2.1: Economic and Market analysis.

2.2: Financial analysis: Basic techniques in capital budgeting – Payback period method, Net Present Value method, Internal Rate of Return method.

2.3: Environmental Impact study – adverse impact of the project on the environment.

2.4: Project risk and uncertainty: Technical, economical, socio-political, and environmental risks.

2.5: Evaluation of the financial health of a project – Understanding the basic concept of Fixed & Working Capital, Debt & Equity, Shares, Debentures etc., and different financial ratios like Liquidity Ratios, Activity Ratios, Debt-equity ratio & Profitability Ratio (Basic concept only).

N.B: Knowledge of financial statements is not required; for the estimation of ratios the values of the relevant variables will be provided.

### Unit-III (PROJECT ADMINISTRATION) [8 hours]

3.1: **Gantt Chart** – a system of bar charts for scheduling and reporting the progress of a project (basic concept).

3.2: **Concept of Project Evaluation and Review Technique (PERT)** and **Critical Path method (CPM)**: basic concept and application with real-life examples.

**Examination** **Scheme:**

A. Semester Examination pattern of 60 marks:

1. Objective type Question (MCQ, Fill in the blanks, and Very Short question-1 mark each): At least five questions from each unit. [Total marks: 20]

1. Subjective questions: Five questions to be answered taking at least two from each group. [Total marks: 5x8=40]

1. Assignment (10 Marks)

Guideline for Assignment (10 Marks)

Students may be instructed to prepare a report on a project (preferably the based on the Major Project in 6th Semester), using a popular project management software in IT/Computer Laboratory, under the guidance of the Lecturer in Computer Science & Technology and Lecturer in Humanities.

1. Class Test: Two examinations 20 marks each. Take best of two.

1. Attendance: 10 Marks

*Suggested* *reference* *books:*

1. *Principles* *of* *Economics* *–* *Case* *and* *Fair,* *Pearson* *Education*

*Publication*

1. *Principles* *of* *Economics* *–* *Mankiw,* *Cengage* *Learning*
2. *Project* *planning,* *analysis,* *selection,* *implementation* *and* *review* *–* *Prasannachandra* *–* *Tata* *McGraw* *Hill.*

*Project* *Management* *–* *Gopala* *krishnan* *–* *Mcmillan* *India* *Ltd.*