

## SCHEME OF COURSE WORK (R- 2022)

### Course Details:

Course Title	ACCOUNTING AND ECONOMICS FOR ENGINEERS				
Course Code	22HM1101	L	T	P C	3 0 0 3
Program:	B.Tech				
Specialization:	Electrical & Electronics Engineering				
Semester	IV				

**Course Outcomes (COs):** At the end of the course, the student will able to

CO-1	To understand the basic concepts of business and various forms of business organisations.
CO-2	To understand the accounting system and prepare necessary books of accounts.
CO-3	To prepare, analyse and interpret the financial statements using accounting ratios.
CO-4	To study the concepts of managerial economics and apply the concepts of demand analysis.
CO-5	To describe various production theories, market structures and apply the concepts of break-even techniques for managerial decisions.

**Program Outcomes (POs):** A graduate of mechanical engineering will be able to

PO-1	Apply the knowledge of basic sciences and electrical and electronics engineering fundamentals to solve the problems of power systems and drives.
PO-2	Analyze power systems that efficiently generate, transmit and distribute electrical power in the context of present Information and Communications Technology.
PO-3	Design and develop electrical machines and associated controls with due considerations to societal and environmental issues.
PO-4	Design and conduct experiments, analyze and interpret experimental data for performance analysis.
PO-5	Apply appropriate simulation tools for modeling and evaluation of electrical systems.
PO-6	Apply the electrical engineering knowledge to assess the health and safety issues and their consequences.
PO-7	Demonstrate electrical engineering principles for creating solutions for sustainable development.
PO-8	Develop a techno ethical personality that help to serve the people in general and Electrical and Electronics Engineering in particular.
PO-9	Develop leadership skills and work effectively in a team to achieve project objectives.
PO-10	Communicate effectively in both verbal and written form.
PO-11	Understand the principles of management and finance to manage project in multidisciplinary environments.
PO-12	Pursue life-long learning as a means of enhancing the knowledge and skills.

### Course Outcome Versus Program Outcomes:

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO-1	-	-	-	-	-	-	-	-	1	1	3	1
CO-2	-	-	-	-	-	-	-	-	-	3	2	-
CO-3	-	-	-	-	-	-	-	-	-	3	2	-
CO-4	-	-	-	-	-	-	-	-	-	1	3	-
CO-5	-	-	-	-	-	-	-	-	-	1	3	-

1: Slight (Low), 2: Moderate (Medium), 3: Substantial (High), put -: No Correlation

**Program Specific Objectives (PSOs):** The student must attain the knowledge and skills to

PSO-1	Specify, analyze power systems that efficiently generate, transmit, distribute via EMS to utilize electrical power and energy.
PSO-2	Understand the principles and construction of Electrical Machines (EM), develop models for the EM and its associated speed controls for their performance through testing.
PSO-3	Analyze, Solve and test electronics and control electric drive systems using the state of the art solid state control and other components and software tools.

Course Outcome Versus Program Specific Outcomes:

COs	PSO1	PSO2	PSO3
CO-1	-	-	-
CO-2	-	-	-
CO-3	-	-	-
CO-4	-	-	-
CO-5	-	-	-

1: Slight (Low), 2: Moderate (Medium), 3: Substantial (High), put -: No Correlation

Assessment Methods:

Assignment / Quiz / Mid-Test / End Exam

Teaching-Learning and Evaluation

Week	TOPIC / CONTENTS	Course Outcomes	Sample questions	Teaching-Learning Strategy	Assessment Method & Schedule
1	UNIT - I: Business: Characteristics, Objectives, Classification of business activities - Industry and Commerce, Industry-types: primary, secondary, tertiary; Commerce-trade: types-internal, external; wholesale and retail and auxiliaries to trade	CO-1	1. Explain the characteristics and objectives of a business. 2. Classify the business activities.	Lecture Discussion	Assignment-1 Quiz-1 Mid-1
2	Forms and Features of Business Organisation: Sole Proprietorship, Partnership - Definition, kinds of partners, Advantages and limitation of partnership firm, Partnership deed,	CO-1	1. Define sole proprietorship. Explain its merits and demerits. 2. Discuss the features, advantages and limitations of partnership firm.	Lecture Discussion	Assignment-1 Quiz-1 Mid-1
3	Joint Stock Company - Concept, merits and limitations, Types, Formation of company, Public sector and private sector enterprises, Forms of public sector enterprises.	CO-1	1. Explain the steps involved in formation and registration of the company. 2. Explain the various forms or public sector enterprises.	Lecture Discussion	Assignment-1 Quiz-1 Mid-1
4	UNIT – II: Introduction to Financial Accounting: Definition, Importance, Principles - Concepts & Conventions, Double entry book keeping system,	CO-2	1. Explain the various concepts and conventions of accounting. 2. What do you mean by Double entry system of book	Lecture Discussion	Assignment-1 Quiz-1 Mid-1

			keeping?		
5	Bases of accounting - Cash basis and Accrual basis Journal, Ledger,	CO-2	1. Explain the basis of accounting system. 2. Numerical problems on Journal and ledger.	Lecture Discussion Problem Solving	Assignment-1 Quiz-1 Mid-1
6	Subsidiary books and Trial Balance.	CO-2	1. Explain the different subsidiary books. 2. Numerical problems on subsidiary books and trial balance.	Lecture Discussion Problem Solving	Assignment-1 Quiz-1 Mid-1
7	UNIT–III: Financial Statements: Objective, Importance and Limitations, Trading Account, Profit and Loss Account, Balance Sheet	CO-3	1. Explain the importance and objectives of financial statements. 2. Describe the significance of profit and loss account.	Lecture Discussion Problem Solving	Assignment-1 Quiz-1 Mid-1
8	Grouping of assets and liabilities, Preparation of final accounts with simple adjustments.	CO-3	1. Simple Numerical problems on Final Accounts without and with adjustments	Lecture Discussion Problem Solving	Assignment-1 Quiz-1 Mid-1
9	Mid-Test 1				
10	Interpretation of financial statements: Accounting Ratios - Objectives, Classification,	CO-3	1. Explain the limitations accounting ratios. 2. What are the different types of ratios which indicate the financial position of the firm?	Lecture Discussion Problem Solving	Assignment-2 Quiz-2 Mid-2
11	Limitations and Computation (simple numerical problems).	CO-3	1. Numerical problems on ratios	Lecture Discussion Problem Solving	Assignment-2 Quiz-2 Mid-2
12	UNIT – IV: Managerial Economics: Definition, Nature and Scope of Managerial Economics  Demand Analysis: Definition, types of demand, Demand Determinants, Law of Demand and its exceptions	CO-4	1. Explain the nature and scope of managerial economics. 2. What is the law of demand? Explain its limitations.	Lecture Discussion	Assignment-2 Quiz-2 Mid-2
13	Elasticity of Demand: Definition, Types, Significance of Elasticity of Demand	CO-4	1. What is elasticity of demand? Explain its types. 2. Explain the significance of elasticity of demand.	Lecture Discussion Problem Solving	Assignment-2 Quiz-2 Mid-2
14	Demand Forecasting: Definition, methods of demand forecasting	CO-4	1. What is demand forecasting? 2. Explain the survey methods of demand forecasting.	Lecture Discussion	Assignment-2 Quiz-2 Mid-2
15	UNIT - V: Production Function: Concept, Law of Variable Proportions, Iso-quants and Iso-costs and Least Cost Combination of Inputs.	CO-5	1. Explain the law of variable proportion with an illustration. 2. What are Iso-quants? Explain its	Lecture Discussion	Assignment-2 Quiz-2 Mid-2

			features.		
16	Cost Analysis: Types of Cost (Short run and Long run, Fixed and Variable cost, Marginal cost, Opportunity cost and Replacement cost). Break-Even Analysis (BEA) - Determination of Break-Even Point (Simple numerical problems)	CO-5	<ol style="list-style-type: none"> <li>1. Discuss the different types of costs.</li> <li>2. Explain break-even analysis with an example.</li> <li>3. Numerical problems on break even analysis.</li> </ol>	Lecture Discussion Problem Solving	Assignment-2 Quiz-2 Mid-2
17	Managerial applications and limitations of BEA Types of markets: Perfect, Monopoly and Monopolistic markets – Concepts and Features.	CO-5	<ol style="list-style-type: none"> <li>1. Explain the managerial applications of BEA.</li> <li>2. Discuss the features of perfect competitive market.</li> </ol>	Lecture Discussion	Assignment-2 Quiz-2 Mid-2
18	Mid-Test 2				
19/ 20	END EXAM				