



INSTITUTE OF AERONAUTICAL ENGINEERING

Dundigal, Hyderabad - 500 043

CIVIL ENGINEERING

COURSE DESCRIPTION FORM

Course Title	MANAGERIAL ECONOMICS AND FINANCIAL ANALYSIS			
Course Code	A30010			
Regulation	R13 - JNTUH			
Course Structure	Lectures	Tutorials	Practicals	Credits
	4	-	-	4
Course Coordinator	Dr. J S V GOPALA SARMA, Professor, MBA Department			
Team of Instructors	Dr. J S V GOPALA SARMA, Professor, MBA Department			

I. COURSE OVERVIEW:

The present course is designed in such a way that it gives an overview of concepts of Economics. Managerial Economics enables students to understand micro environment in which markets operate how price determination is done under different kinds of competitions. Financial Analysis gives clear idea about concepts, conventions and accounting procedures along with introducing students to fundamentals of ratio analysis and interpretation of financial statements. Break Even Analysis is very helpful to the Business Concern for Decision Making, controlling and forward Strategic Planning. Ratio analysis gives an idea about financial forecasting, financial planning, controlling the business and decision making.

II. PREREQUISITE(S):

Level	Credits	Periods/ Week	Prerequisites
UG	4	4	Managerial Economics and Financial Analysis

III. MARKS DISTRIBUTION:

Sessional Marks	University End Exam marks	Total marks
Midterm Test There shall be two midterm examinations. Each midterm examination consists of essay paper, objective paper and assignment. The essay paper is for 10 marks of 60 minutes duration and shall contain 4 questions. The student has to answer 2 questions, each carrying 5 marks. The objective paper is for 10 marks of 20 minutes duration. It consists of 10 multiple choice and 10 fill-in-the blank questions, the student has to answer all the questions and each carries half mark. First midterm examination shall be conducted for the first two and half units of syllabus and second midterm examination shall be conducted for the remaining portion. Five marks are earmarked for assignments. There shall be two assignments in	75	100

Sessional Marks	University End Exam marks	Total marks
every theory course. Assignments are usually issued at the time of commencement of the semester. These are of problem solving in nature with critical thinking. Marks shall be awarded considering the average of two midterm tests in each course.		

IV. EVALUATION SCHEME:

S. No	Component	Duration	Marks
1.	I Mid Examination	80 minutes	20
2.	I Assignment	-	5
3.	II Mid Examination	80 minutes	20
4.	II Assignment	-	5
5.	External Examination	3 hours	75

V. COURSE OBJECTIVES:

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

- I. To understand the concepts of managerial economics and financial analysis this helps in optimal decision making in business environment.
- II. To be familiar with demand concepts, types of methods or techniques of demand those are used by the entrepreneur or producer.
- III. To have a thorough knowledge on the production theories and cost while dealing with the production and factors of production.
- IV. To introduce the concepts of cost and significance, limitation of Break even analysis.
- V. An ability to study the various pricing methods which are adopted in attracting the potential customers for the different commodities.
- VI. To acquaint the significance of the project management, capital budgeting, estimation of the projects through capital budgeting methods for choosing the best and optimal projects.
- VII. To provide the optimal decisions acquiring the knowledge on financial accounting and management accounting.

VI. COURSE OUTCOMES:

After completing this course the student must demonstrate the knowledge and ability to:

1. **Describe** the economic activities performed by the businessmen
2. **Understand** the significance of demand, its analysis, measurement of demand and its forecasting.
3. **Write** the production function through the Cobb Douglas Production Function.
4. **Design and implement** different structures of markets covering how price-output is determined under different market structures.
5. **Design** Different forms of business organizations existing in the modern business.
6. **Describe** the allocation of capital which plays a vital role in a business organization.
7. **Apply** the Principle of double entry to give an exposure to the maintenance of books of records and allocation of profits in an enterprise.
8. **Understand** the Ratio analysis to give an idea about financial forecasting, financial planning, controlling the business and decision making.

VII. HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes		Level	Proficiency assessed by
PO1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	N	-----
PO2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	H	Assignments, ,Oral Discussions, Midterm and University examinations
PO3	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	S	Assignments, Midterm and University examinations
PO4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	S	Assignments, Seminars, Midterm and University examinations
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	H	Assignments, Midterm and University examinations
PO6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	N	-----
PO7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	N	----
PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	S	Assignments, Oral Discussions, Midterm and University examinations --
PO9	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.	H	Assignments, Oral Discussions, Midterm and University examinations
PO10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	S	Assignments, Oral Discussions, Midterm and University examinations
PO11	Project management and finance: Demonstrate knowledge and understanding of the engineering and management	H	Assignments, Presentations,

Program Outcomes		Level	Proficiency assessed by
	principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.		Midterm and University examinations
PO12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	S	Presentations, Midterm and University examinations

N= None

S = Supportive

H = Highly Related

VIII. HOW PROGRAM SPECIFIC OUTCOMES ARE ASSESSED:

Program Specific Outcomes		Level	Proficiency assessed by
PSO1	UNDERSTANDING: Graduates will have an ability to describe, analyze, and solve problems using mathematics and systematic problem-solving techniques.	N	-----
PSO2	ANALYTICAL SKILL: Graduates will have an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	N	-----
PSO3	BROADNESS: Graduates will have a broad education necessary to understand the impact of engineering solutions in a global, economic, and societal context.	S	Assignments, Midterm and University examinations

N – None

S – Supportive

H - Highly Related

VII. SYLLABUS:

UNIT-I: Introduction & Demand Analysis:

Introduction to Managerial Economics: Definition, Nature and Scope of Managerial Economics – Demand Analysis: Demand Determinants, Law of Demand and its exceptions. Elasticity of Demand: Definition, Types, Measurement and Significance of Elasticity of Demand. Demand Forecasting, Factors governing demand forecasting, methods of demand forecasting

UNIT-II: Production & Cost Analysis:

Theory of Production and Cost Analysis: Production Function – Iso-quants and Iso-costs, MRTS, Least Cost Combination of Inputs, Cobb-Douglas Production function, Laws of Returns, Internal and External Economies of Scale. Cost Analysis: Cost concepts, Opportunity cost, Fixed vs. Variable costs, Explicit costs vs. Implicit costs, out of pocket costs vs. Imputed costs, Break-even analysis, Determination of Break – Even point (Simple Problems) , Managerial Significance of BEA.

UNIT-III: Markets& New Economic Environment:

Market structures: Types of competition, Features of perfect competition, Monopoly and monopolistic competition. Price determination& Price Statistics: Price Output determination in case of perfect competition and monopoly. Pricing objectives and policies of pricing, Methods of pricing. Business features and evaluation of different forms of Business organization: Sole proprietorship, partnership, Joint Stock

Company, public enterprises and their types, New Economic Environment: changing business environment in post-liberalization scenario.

UNIT-IV: Capital Budgeting:

Capital and its significance, types of capital, estimation of fixed and working capital requirements, methods and sources of raising capital- Trading Forecast, Capital budget, Cash Budget. Features of capital budgeting proposals, methods of capital budgeting – payback method, Accounting rate of return (ARR), Net Present Value Method (simple problems).

UNIT-V: Introduction to Financial Accounting and Financial Analysis:

Accounting Concepts and Conventions, Introduction to IFRS– Double – Entry Book keeping, Journal, Ledger, Trial balance, Final accounts (Trading Account, Profit and Loss Account and Balance Sheet with simple adjustments.) Financial Analysis through Ratios: Significance, limitations of Ratio Analysis and Ratios Computation, Analysis and Interpretation of Liquidity Ratios (Current Ratio and quick ratio). Activity Ratios (Inventory turnover ratio and Debtor Turnover ratio), Capital structure Ratios (Debt-Equity ratio, Interest Coverage ratio) and profitability ratios (Gross profit Ratio, Net profit ratio, Operating Ratio, P/E Ratio and EPS), Du Pont Chart.

TEXT BOOKS:

1. A.R. Aryasri (2007) Managerial Economics and Financial Analysis, 3rd Ed, TMH.

REFERENCE BOOKS:

1. Managerial Economics, Dwivedi, 5th Ed, Vikas Publication House Pvt.Ltd.
2. S.N. Maheshwari & S.K.Maheshwari, Financial Accounting, 4th Ed, Vikas Publication House Pvt.Ltd, 2012.
3. R.Narayana Swamy, Financial Accounting- A managerial Perspective, Pearson,2012.
4. J.V.Prabhakar Rao & P.V.Rao, Managerial Economics & Financial Analysis, Maruthi Publishers, 2011.
5. M.Kasi Reddy & Saraswathi, Managerial Economics and Financial Analysis, PHI New Delhi,2012.
6. Varshney & Maheswari, Managerial Economics, Sulthan Chand, 2009.

X. COURSE PLAN:

At the end of the course, the students are able to achieve the following course learning outcomes.

Lecture No.	Topics to be Covered	Course Learning Outcomes	Reference
1-2	Introduction to Managerial Economics: Definition, Nature and Scope of Managerial Economics.	Explain about managerial economics according to the business	T1: 1.3
3-4	Demand Analysis: Demand Determinants of Demand, Definitions, Assumptions and Exceptions of Law of Demand and Demand Function.	Describe about demand analysis, the Law of Demand and Demand Function.	T1: 2.2
5-8	Definitions, Significance of Elasticity of Demand, Types and Measurement of Elasticity of Demand and Factors influencing Elasticity of Demand.	Understand elasticity of the demand of the product, different types, Measurement of Elasticity of Demand and Factors influencing on Elasticity of Demand.	T1: 3.3
9-11	Methods of demand forecasting and Factors Governing Demand Forecasting.	State different methods of Demand Forecasting and the factors governing Demand Forecasting.	T1: 4.6

Lecture No.	Topics to be Covered	Course Learning Outcomes	Reference
12-16	Production function, features of Iso-Quants, Iso-Costs, MRTS, Least Cost Combination of Inputs and Cobb-Douglas Production Function, Different types of Internal Economies, External Economies and Law of Returns.	Demonstrate the Production function, features of Iso-Quants and Iso-Costs, different types of Internal Economies, External Economies and Law of Returns with appropriate examples	T1:5.3
17	Cost concepts, fixed vs Variable costs, explicit vs implicit costs, out of pocket costs vs Imputed costs.	Illustrate different types of costs	T1: 5.29
18	Break-even Analysis (BEA). Managerial Significance of BEA.	Explain the Significance and Limitations of Break-Even Analysis	T1: 7.13
19-21	Determination of Break-Even Point (Simple Problems)	Calculate Break-Even Point (Simple Problems)	T1: 7.1
22-26	Market structures: Types of competition, Features of Perfect Competition, Monopoly and Monopolistic competition Markets and determination of price –output under Perfect Competition, Monopoly and Monopolistic competition markets.	Illustrate the features, price-output determination under Perfect Competition, Monopoly and Monopolistic competition Markets.	T1: 8.4
27-30	Objectives and Policies of Pricing-Methods of Pricing: Cost Plus Pricing, Marginal Cost Pricing, Sealed Bid Pricing, Going Rate Pricing, Limit Pricing Market Skimming Pricing, Penetration Pricing, Two-Part Pricing, Block Pricing, Bundling Pricing, Peak Load Pricing, Cross Subsidization	Demonstrate the Objectives, Policies and Methods of Pricing Strategies and Price Methods.	T1:8.21
31-35	Characteristic features of Business, Definitions, Features, Merits and Demerits of Sole Proprietorship, Partnership, Joint Stock Company.	Describe Features of business, Definitions of Various forms of Business Units.	T1:9.3
36-38	Definitions, Features, Merits and Demerits of Public Enterprises and their types and Changing Business Environment in Post-liberalization scenario	State the Merits & Demerits of Different types of Public Enterprises and Changing Business Environment to Post Liberalization Scenario.	T1: 9.26
39-41	Capital and its significance, Types of Capital, Working capital requirements, Methods and sources of rising finance, Trading Forecast, Capital Budget and Cash Budget.	Explain the significance and classification of capital, Methods and Sources of Raising Finance.	T1: 11.3
42-45	Nature and Significance of capital budgeting, Methods of Capital Budgeting (PBP, ARR, IRR, NPV,PI) Simple Problems.	Demonstrate the concept of capital budgeting and allocations of the resources through capital budgeting methods and compute simple problems.	T1:12.1
46-49	Significance of Financial Accounting and	Illustrate the Significance of	T1:13.4

Lecture No.	Topics to be Covered	Course Learning Outcomes	Reference
	Accounting Terminology and Accounting Cycle.	Financial Accounting, Double Entry, Accounts, Accounting Concepts and Conventions	
50-58	Meaning, Advantages and Limitations of the Journal, Ledger and Trial Balance and Final Accounts and Simple Problems from Journal, Ledger, Trail Balance and Final Accounts with simple adjustments.	Explain the meaning, advantages and Limitations of the Journal, Ledger and Trial Balance and Final Accounts and Solve simple Problems.	T1:13.15
59	Meaning, Definitions and Limitations of Ratio Analysis.	Describe Meaning, Definitions and Limitations of Ratio Analysis	T1:14.18
60-65	Computation, Analysis and Interpretation of Liquidity Ratios, Activity Ratios, Leverage Ratios and Profitability Ratios.	Compute different types of Financial Ratios (Problems)	T1:14.4

XI. MAPPING COURSE OBJECTIVES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Objectives	Program Outcomes												Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO 1	PSO2	PSO3
I		H	S	H	H			S	H	S	H	H			H
II		H	H	H	S			H	H	S	S	S			S
III		S	S	S	S			S	S	H	H	H			H
IV		H	H	H	H			S	H	S	S	S			H
V		S	S	S	S			H	S	S	S	H			S
VI		H	H	S	H			S	H	H	H	S			S
VII		S	S	H	S			H	H	S	S	H			H

S – Supportive

H - Highly Related

XII. MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Outcomes	Program Outcomes												Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1		H	S	S	H			H	S	H	S	H			H
2		S	H	H	S			H	H	S	S	S			S
3		S	H	H	H			S	S	H	H	H			H
4		H	S	S	S			H	S	H	S	H			S
5		S	S	H	S			H	H	S	H	S			H
6		S	H	H	H			S	S	S	H	H			S

7		H	S	S	S			H	H	S	S	S			H
8		H	S	H	H			H	H	S	H	H			H

S – Supportive

H - Highly Related

Prepared by: Dr. J S V GOPALA SARMA, Professor, MBA.

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