MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

(A constituent unit of MAHE, Manipal)

COURSE PLAN

Department	:	Humanities and Management
Course Name & code	:	Engineering Economics and Financial Management & HUM 3051
Semester & branch	:	VI & CIV,E&I,MTE,CSE,CCE,ICT,EEE
Name of the faculty	:	Dr. Sunith Hebbar, Dr. Rajesh Pai, Mr. Lidwin Kenneth, Ms. Maitri Manjunath, Ms. Anasuya Lingappa, Lt. Cdr. Geethalakshmi, Mr.Mahesh Prabhu

No of contact hours/week:

L	T	P	C
2	1	0	3

Course Outcomes (COs)

	At the end of this course, the student should be able to:	No. of Contact Hours	Marks
CO1:	Compute the worth of money at various points of time.	14	30
CO2:	Apply various Depreciation methods in determining the value of an asset.	03	08
CO3:	Describe and apply the basic techniques of Financial statement analysis.	03	10
CO4:	Evaluate the Replacement of an existing asset based on standard replacement analysis techniques.	04	14
CO5:	Evaluate the best alternative in Engineering Economics problems considering risk and safety	12	38
	Total	36	100

Assessment Plan

Components	Assignments	Sessional Tests	End Semester/ Make-up Examination
Duration	20 to 30 minutes	60 minutes	180 minutes
Weightage	20 % (4 X 5 marks)	30 % (2 X 15 Marks)	50 % (1 X 50 Marks)
Typology of Questions	Understanding/ Comprehension; Application; Analysis; Synthesis; Evaluation	Knowledge/ Recall; Understanding/ Comprehension; Application	Understanding/ Comprehension; Application; Analysis; Synthesis; Evaluation
Pattern	Answer one randomly selected question from the problem sheet (Students can refer their class notes)	MCQ: 10 questions (0.5 marks) Short Answers: 5 questions (2 marks)	Answer all 5 full questions of 10 marks each. Each question may have 2 to 3 parts of 3/4/5/6/7 marks
Schedule	4, 7, 10, and 13th week of academic calendar	Calendared activity	Calendared activity
Topics Covered	Quiz 1 (L 1-6 & T 1-3) **(CO1,CO4)**	Test 1 (L 1-L10 & T 1-5) **(CO1, C04)**	Comprehensive examination covering full syllabus. Students are expected to answer all questions **(CO1-5)**
	Quiz 2 (L **7-12** & T 4-6) **(CO1,CO4)**		
	Quiz 3 (L 13-L18 & T 7-9) **(CO1,CO2,CO4)**	Test 2 (L 11-L20 & T 6-9) **(CO1, CO2, CO4)**	
	Quiz 4 (L 19-L24 & T 10-12) **(CO1,CO3, CO4)**		

Lesson Plan

L. No./ T. No.	Topics	Course Outcome Addressed
L0	Introduction to the course and the evaluation criterion	CO1
L1	Time value of money meaning and importance, Interest meaning and types	CO1
L2	Time value of money meaning and importance, Interest meaning and types	CO1
T1	Interest factors for discrete compounding, Problems	CO1
L4	Time value of money meaning and importance, Interest meaning and types	CO1
T2	Interest factors for discrete compounding, Problems	CO1
L5	Arithmetic gradient series factor, Problems	CO1
T3	Application numerical on seven interest factors	CO1
L6	Nominal and effective interest rate, Problems	CO1

L7	Nominal and effective interest rate, Problems	CO1
T4	Application numerical with nominal and effective interest rate	CO1
L8	Economic evaluation of alternatives: Bases for comparison of alternatives, Importance and assumptions, Problems	CO1
L9	Economic evaluation of alternatives: Present Worth Method - LCM method and Study period method, Problems	CO5
T5	Economic evaluation of alternatives: Bases for comparison of alternatives, Importance and assumptions, Problems	CO5
L10	Economic evaluation of alternatives: Capitalized equivalent amount	CO5
L11	Economic evaluation of alternatives: Annual worth method and its importance, Determining Annual equivalent amount, Problems	CO5
T6	Economic evaluation of alternatives: Capital recovery with return, Application numerical on annual worth method	CO5
L12	Economic evaluation of alternatives: Rate of return method	CO5
L13	Economic evaluation of alternatives: Rate of return method	CO5
T7	Economic evaluation of alternatives: Rate of return method, Application based numerical	CO5
L14	Replacement Analysis: Reasons, Evaluation of replacement alternatives	CO4
L15	Replacement Analysis: Evaluation of replacement alternatives with unequal livesReplacement Analysis: Economic life of an asset, Application based numerical	CO4
T8	Replacement Analysis: Economic life of an asset, Application based numerical	CO4
L16	Depreciation: Meaning, Physical and functional depreciation, Methods of depreciation	CO2
L17	Depreciation: Methods of depreciation with numerical	CO2
T9	Depreciation: Methods of depreciation with numerical	CO2
L18	Break-even Analysis: Meaning, Assumptions and Applications, Break even analysis for single product and multi product firms	CO5
L19	Break-even Analysis: Break even analysis for evaluation of investment alternatives, minimum cost analysis.	CO5
T10	Break-even Analysis: Break even analysis for evaluation of investment alternatives, minimum cost analysis.	CO5
L20	Financial Management: Nature and objectives, Scope and functions	CO3
L21	Financial Statement Analysis: Introduction, Types and importance	CO3
L21	Financial Statement Analysis: Understanding the financial statement	CO3
L22	Financial Statement Analysis: Ratio analysis, Problems	CO3
T11	Financial Statement Analysis: Ratio analysis, Problems	CO3
T12	Financial Statement Analysis: Ratio analysis, Problems	CO3
L23	Safety and Risk, Assessment of Safety and Risk	CO5

L24	Risk Benefit Analysis and Reducing Risk.	CO5

References:

1.	Thuesen G. J, "Engineering Economics", Prentice Hall of India, New Delhi, 2005.
2.	Blank Leland T. and Tarquin Anthony J., "Engineering Economy", McGraw Hill, Delhi, 2002.
3.	Chan S. Park, "Contemporary Engineering Economics", 4th Edition, Pearson Prentice Hall, 2007.
4.	Prasanna Chandra, "Fundamentals of Financial Management", Tata McGraw Hill, Delhi, 2006.
5.	Mike W. Martin and Roland Schinzinger, "Ethics in Engineering", Tata McGraw Hill, New Delhi, 2003.
6.	Govindarajan M, Natarajan S, Senthil Kumar V. S, "Engineering Ethics", Prentice Hall of India, New Delhi, 2004
7.	Charles B. Fleddermann, "Engineering Ethics", Pearson Prentice Hall, New Jersey, 2012.

Submitted by: Ms. Maitri Manjunath

(Signature of the faculty)

Date: 31-01-2023

Approved by: Dr. Yogesh Pai for Nuthalapati

HUMANITIES & MANAGEMENT MIT MANIPAL 576 104

(Signature of HOD)

Date: 31-01-2023

FACULTY MEMBERS TEACHING THE COURSE (IF MULTIPLE SECTIONS EXIST):

FACULTY	SECTION	FACULTY	SECTION
Mr. Lidwin Kenneth	IT,CSE		

Ms. Maitri Manjunath	CIV,EEE,E&I		
Mr. Mahesh Prabhu	CCE		
Ms. Anasuya k. Lingappa	EEE,CIV		
Lt. Cdr. GeethaLakshmi	CSE,MT		
Dr. Rajesh Pai	CSE,IT		
Dr. Sunith Hebbar	CCE,ICE,CSE		