



COURSE PLAN

Department :	Humanities & Management			
Course Name & code :	Engineering Economics & Financial Management			HUM-3051
Semester:	VI			
Name of the faculty :	Dr. Sunith Hebbar, Dr. Rajesh Pai, Mr. Lidwin Kenneth, Ms. Anasuya Lingappa, Lt. Cdr. Geethalakshmi, Ms. Maitri Manjunath, Mr.Mahesh Prabhu, Mr.Ramnath Shenoy, Mr. Pranav Joshi			
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	Program Outcomes (POs)	PSO	BL (Recommended)
CO1	Compute the worth of money at various points of time.	14	30	11		2,3
CO2	Apply various Depreciation methods in determining the value of an asset.	03	08	11		2,3
CO3	Describe and apply the basic techniques of Financial statement analysis.	03	10	11		3
CO4	Evaluate the Replacement of an existing asset based on standard replacement analysis techniques.	04	14	11		3
CO5	Evaluate the best alternative in Engineering Economics problems considering risk and safety	12	38	1,3,11		3,4
Total		36	100			

COURSE LEARNING OUTCOMES (CLOS)

At the end of this course, the student should be able to:		No. of Contact Hours	Marks	Program Outcomes(POs)	Learning Outcomes (LOs)	BL (Recommended)
CLO1	Compute the worth of money at various points of time.	14	30	11	15	2,3
CLO2	Apply various Depreciation methods in determining the value of an asset.	03	08	11	15	2,3
CLO3	Describe and apply the basic techniques of Financial statement analysis.	03	10	11	15	3
CLO4	Evaluate the Replacement of an existing asset based on standard replacement analysis techniques.	04	14	11	15	3
CLO5	Evaluate the best alternative in Engineering Economics problems considering risk and safety	12	38	1,3,11	1,5,9,15	3,4
Total		36	100			

Assessment Plan

<u>IN – SEMESTER ASSESSMENTS</u>								
S. No.	Assessment Mode	Assessment Method	Time Duration	Marks	Weightage	Typology of Questions (Recommended)	Schedule	Topics Covered
1	MISAC	1 Surprise Assignment	20minutes	05	1 Question \times 5M = 5 marks (Minimum 5 questions to be given)	Bloom's taxonomy (BT) level of the question should be L3 and above.		L1-L6
		2 Mid-Term Examination	120 minutes	30		Bloom's taxonomy (BT) level of the question should be L3 and above.		L1-L14
		3 Quiz	15 minutes	05	10 MCQs \times $\frac{1}{2}$ = 5	Bloom's taxonomy (BT) level of the question should be L3 and above		L9-L18
2	FISAC	1 Surprise Assignment	30minutes	10	2 Question \times 5M = 10 marks	Bloom's taxonomy (BT) level of the question should be L3 and above		L21-L33
<u>END – SEMESTER ASSESSMENT</u>								
1	Regular/Make-Up Exam		180 Mins	50	Answer all 5 full questions of 10 marks each. Each question can have 3 parts of 2/3/4/5/6 marks.	Bloom's taxonomy (BT) level of the question should be L3 and above.	17 th week of the semester	Comprehensive examination covering full syllabus.

Flexible In-Semester Assessment Component (FISAC):

- i) ONE of the components mentioned in Table 3 is to be selected by the faculty.
- ii) The type of assessment should be informed to the students well in advance.
- iii) Syllabus for the last component of In-semester Assessment (ISAC) i.e. FISAC should cover the topics mentioned for self-study if any / topics which are not covered till MISAC 3: Quiz

Table 3: Flexible In-semester Assessment Component (FISAC)

Table 3: Types of Flexible In-Semester Assessment Component (FISAC)		
No	Type	Description
A.	Quiz/MCQs	<ul style="list-style-type: none"> * Similar to MISAC 3: Quiz/MCQs * Number of Questions: 20 * Time duration: 30 minutes
B.	Surprise Assignment	<ul style="list-style-type: none"> Similar to MISAC 1: Surprise assignment * Blooms Taxonomy (BT) level of the question should be at L3 * Faculty have to set FIVE sets of questions with each set having a minimum of TWO questions. * Each student will write the answers for ONE set of questions having a minimum of TWO questions. * Question sets have to be distributed in such way that no two adjacent students would get the same set of questions. Time Duration: 30 minutes
C.	Take Home Assignment	<ul style="list-style-type: none"> * TEN questions will be given to each student. * Questions must be at Blooms Taxonomy Level 3 or 4 * Questions will be given to the students at least A MONTH in advance. * Students have to write the answers to all the questions. * Critical evaluation is to be done to differentiate.
D.	Group Assignment	<ul style="list-style-type: none"> * The students have to be grouped in such a way that there are 3 to 4 students in each group. * Each group is to be given one question. * The questions should be at Blooms Taxonomy Level 4 or 5 * Questions are to be given well in advance (at least A MONTH before) * The questions may be in the form of case studies, design, report writing, writing reflection article of their understanding on a journal paper given by the faculty to each group etc.
E.	Seminar	<ul style="list-style-type: none"> * Students are to be given the topics for seminar relevant to the course of study. * Topics are to be given A MONTH in advance. * Should be at Blooms Taxonomy Level 4 or 5 * Topics should be related to the courses of study.

		<ul style="list-style-type: none"> * Topics should be in the field of recent developments in the courses of study. * Students have to collect the data regarding the seminar topic and submit a report. * Students should make a presentation for about TEN minutes using Power Point.
F.	Quiz / Assignment based on invited talks	<ul style="list-style-type: none"> * Faculty have to arrange for the invited talk in the emerging areas in the courses of study. * Quiz / Assignment is to be conducted on the topic of the invited talk. * Questions should be at Blooms Taxonomy Level 4 or 5
G.	Development of Software / Apps	<ul style="list-style-type: none"> * Faculty has to define the problem statement. * Problem Statements are to be given well in advance (at least A MONTH before the scheduled date of submission) * Should be at Blooms Taxonomy Level 4 or 5. * Students have to develop the software / mobile apps using the appropriate software language / platform and submit a report on the same. * If it is a group activity, contribution of each individual student has to be assessed and evaluated.
H.	Mini Project	<ul style="list-style-type: none"> * Faculty has to define the problem statement. * Problem Statements are to be given well in advance (at least A MONTH before the due date for submission) * Should be at Blooms Taxonomy Level 4 or 5 * Students have to develop prototypes/models (physical/software based) * A report covering all important aspects of the project has to be submitted by the students * If it is a group activity, the contribution of each individual student has to be assessed and evaluated.

LESSON PLAN

L No	TOPICS	Course Outcome Addressed
1	Introduction to the course and the evaluation criterion	1
2	Time value of money meaning and importance, Interest meaning and types	1
3	Time value equivalence, Interest factors for discrete compounding, Problems	1
4	Compound and Annuity based interest formula with Examples	1
5	Compound and Annuity based interest formula with Examples	1
6	Compound and Annuity based interest formula with Examples	1
7	Arithmetic gradient series factor, Problems	1
8	Nominal and effective interest rate, Problems	2
9	Nominal and effective interest rate, Problems	2
10	Nominal and effective interest rate, Problems	2
11	Examples applying all the formulas and Nominal and effective interest rate, concepts	2
12	Economic evaluation of alternatives: Bases for comparison of alternatives, Importance and assumptions, Present worth and Future worth Methods, Problems	2
13	Economic evaluation of alternatives: Present Worth Method - LCM method and Study period method, Problems	2
14	Economic evaluation of alternatives: Present Worth Method - LCM method and Study period method, Problems	2
15	Economic evaluation of alternatives: Capitalized equivalent amount	2
16	Economic evaluation of alternatives: Capitalized equivalent amount	3
17	Economic evaluation of alternatives: Annual worth method and its importance, Determining Annual equivalent amount, Problems	3
18	Economic evaluation of alternatives: Capital recovery with return, Application numerical on annual worth method	3
19	Economic evaluation of alternatives: Rate of return method	3
20	Economic evaluation of alternatives: Rate of return method	4
21	Replacement Analysis: Reasons, Evaluation of replacement alternatives	4
22	Replacement Analysis: Evaluation of replacement alternatives with unequal lives , Replacement Analysis: Economic life of an asset, Application based numerical	4
23	Replacement Analysis: Economic life of an asset, Application based numerical	4
24	Depreciation: Methods of depreciation with numerical	2
25	Depreciation: Methods of depreciation with numerical	2
26	Break-even Analysis: Meaning, Assumptions and Applications, Break even analysis for single product and multi product firms	2
27	Break-even Analysis: Break even analysis for evaluation of investment alternatives, minimum cost analysis.	2
28	Break-even Analysis: Break even analysis for evaluation of investment alternatives, minimum cost analysis.	2
29	Financial Management: Nature and objectives, Scope and functions , Financial Statement Analysis: Understanding the financial statement	5
30	Introduction to Financial Statement and its Analysis	5
31	Financial Statement Analysis: Ratio analysis, Problems	5
32	Financial Statement Analysis: Ratio analysis, Problems	1

33	Financial Statement Analysis: Ratio analysis, Problems	1
34	Risk and its concepts, Evaluation of Project Risks	1
35	Risk and its concepts, Evaluation of Project Risks	1
36	Risk and its concepts, Evaluation of Project Risks	1

Course Articulation Matrix

CO	PO1	PO2	PO3	PO4	PO6	PO8	PO11	PSO1	PSO2
CO1	2	3	2	1	1		1	2	1
CO2	1	1	1					1	
CO3	2	2		1				1	
CO4	2	3	3	2	1		2	2	1
CO5	1	1	2	1		1	2	1	
Average Program Articulation Level	1.6	2	1.6	1	1	1	1	1.4	0.4

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

FACULTY	SECTION	FACULTY	SECTION
Mr. Lidwin Kenneth	IT A, AIML A	Ms. Maitri M	CIV A, B
Dr Sunith H	EE A, IT C, CSE C	Lt Cdr Geethalakshmi	IT B, AIML B
Dr Rajesh Pai	E&I B	Ms. Anasuya KL	CCE A, CSE D
Mr. Mahesh Prabhu	E&I A & Media	Mr. Ramnath Shenoy	EE B, CCE B, CSE A
Mr. Pranav Joshi	EE C, CCE C, CSE B		

References:

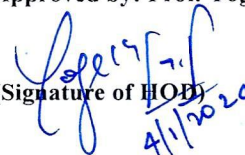
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2. B Blank, L. T., Tarquin, A. (2017). Engineering Economy. United Kingdom: McGraw-Hill Education.
3. White, J. A., Case, K. E., Pratt, D. B., LaScola Needy, K., Grasman, K. S. (2020). Fundamentals of Engineering Economic Analysis. United Kingdom: Wiley.

Submitted by: Dr. Sunith Hebbar


(Signature of the faculty)

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Approved by: Prof. Yogesh Pai


(Signature of HOD)
4/1/2024
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