



**PSGR
Krishnammal College for Women**



DEPARTMENT OF B COM (AM) & (FS)

CHOICE BASED CREDIT SYSTEM (CBCS)

&

**LEARNING OUTCOME BASED CURRICULAR FRAMEWORK
(LOCF)**

BACHELOR OF COMMERCE WITH ACTUARIAL MANAGEMENT

2023-2026 BATCH



PROGRAMME LEARNING OUTCOME (PLO's)

On the successful completion of the programme the student will be able to:

PLO1. Identify and analyze consequences of events involving risk and uncertainty.

PLO2. Apply appropriate modeling techniques to conduct quantitative risk analysis.

PLO3. Demonstrate understanding the concepts of Financial Mathematics and Applied Mathematics.

PLO4. Have keen analytical, project management and problem solving skills

PLO5. Be able to work both independently and in collaboration with others.

PLO6. Articulate the need for life-long learning.

PROGRAMME SPECIFIC OUTCOME (PSO's)

The students at the time of graduation will

PSO 1: To enter into a broad range of employment sectors such as Insurance, Finance, and Risk management as Actuary or Actuarial consultant.

PSO 2: To complete Actuarial examinations and other requirements for SOA/COA (The Casualty Actuarial Society and The Society of Actuaries).

PSO 3: To enrich communication, ethical values, team work, professional and leadership skill sets of students.



**BACHELOR OF COMMERCE WITH ACTUARIAL MANAGEMENT
2023 – 2026 BATCH**

Scheme of Examination

(Applicable to students admitted during the academic year 2023- 24 onwards)

Semester	Part	Subject Code	Title of the Paper	Course Type	Instruction Hours	Contact Hours	Tutorial Hours	Duration of Examination	Examination Marks			Credits
									CIA	ESE	Total	
I	I	TAM2301A/ HIN2301A/ FRE2301A	Language I Tamil I/ Hindi I/ French I/	Lang	4	58	2	3	25	75	100	3
I	II	ENG2301A	English Paper I	Eng	4	58	2	3	25	75	100	3
I	III	CM23C01	Principles of Accounting	CC	5	73	2	3	25	75	100	3
I		FS23C02	Principles of Marketing	CC	4	58	2	3	25	75	100	3
I		AM23C03	Mathematics	CC	6	88	2	3	25	75	100	4
I		AM23A01 AM23A02	Allied – Paper – I 1. Business Organization and Management ethics 2. Introduction to Information Technology	GE	5	73	2	3	25	75	100	4
I	IV	NME23B1	Basic Tamil I	AEC	2	28	2	-	100	-	100	2
I		NME23A1	Advanced Tamil I									
I		NME23ES	Foundation Course I – Introduction to Entrepreneurship	AEC	2	30	-	-	100	-	100	
II	II	TAM2302A/ HIN2302A/ FRE2302A	Language –II Tamil II / Hindi II / French II	Language	4	58	2	3	25	75	100	3
II	II	ENG2302A	English Paper II	English	4	58	2	3	25	75	100	3
II	III	CM23C04	Financial Accounting	CC	5	73	2	3	25	75	100	3
II	III	AM23C05	Principles and Practice of Insurance	CC	5	73	2	3	25	75	100	4
	III	AM23C06	Basics of Mathematical Statistics	CC	4	58	2	3	25	75	100	4

	III	AM23A03 AM23A04	Allied Customer relationship management Business Communication	GE	6	88	2	3	25	75	100	4
			** Online course (self- study)	AEC	--	--	--	--	--	--	--	Gr
	IV	NME23B2/ NME23A2	*Foundation Course Basic Tamil II/ Advanced Tamil I- Outside Regular Class Hours	AEC	2	--	--	--	100	--	100	Gr
	V	23PECM1	Professional English for Commerce and Management	AEC	2	25	5	--	100	--	100	2
	VI		Personality Development Programme		--	--	--	--	--	--	--	--
	VI	NM23GAW	General Awareness		Self- Stud y	--	--	Onlin eTest	100	--	100	Gr.
III	I	TAM2303A/ NME2303A	Language Tamil III/ French III/ Hindi III /	L	4	58	2	3	25	75	100	3
	II	ENG2303A	English Paper III	E	4	58	2	3	25	75	100	3
	III	AM23C07	General Insurance	CC	6	88	2	3	25	75	100	4
		AM23C08	Financial Mathematics I	CC	6	88	2	3	25	75	100	4
		AM23A05 AM23A06	Allied III Actuarial Statistics - I Mathematical Basis of Life Assurance	GE	5	73	2	3	25	75	100	4
		AM22SCE1/ CS23SBGP	Coursera- Risk Management in Finance / GEN-AI	SEC	3	45/41	-/4	-	100	-	100	3
		NM22UHR	Universal Human Values and human Rights*	AECC	-	-	-	-	100	-	100	Gr
	IV	NM23DTG	Design Thinking	AEC	2	30	-	-	100	-	100	2
I-IV	VI	COM15SER	Community Services-30 hrs	GC	-	-	-	-	-	-	-	-
I - V		16BONL1 16BONL2	Online Course I Online Course II	ACC	-	-	-	-	-	-	-	-

IV	I	TAM2304A/ HIN2304A/ FRE2304A	Tamil Paper IV / Hindi Paper IV/ French Paper IV	L	4	58	2	3	25	75	100	3
IV	II	ENG2304A	English Paper IV	E	4	58	2	3	25	75	100	3
IV	III	AM23C09	Financial Mathematics-II	CC	7	103	2	3	25	75	100	5
IV	III	CM23C10	Business Finance	CC	5	73	2	3	25	75	100	4
IV	III	AM23A07/ AM23A08	Actuarial Statistics II/ Actuarial Aspects of Product development	GE	5	73	2	3	25	75	100	4
III/ IV	III	CS23SBGP/ AM22SCE1	GEN-AI / Risk Management in Finance	SEC	3	45	-	-	100	-	100	3
IV	IV	NM23EII	Entrepreneurship and Innovation (IgniteX)	AECC	2	30	-	-	100	-	100	2
IV	IV	NM23EVS	Environmental Studies	AECC	SS	-	-	-	100	-	100	Gr.
IV	V	COCOACT	Co-Curricular Activities	GC	-	-	-	-	100	-	100	1
IV	VI	COM15SER	Community Services 30 Hours	GC	-	-	-	-	-	-	-	Gr.
I-V	VI	16BONL1 16BONL2	Online Course 1 Online Course 2	ACC	-	-	-	-	-	-	-	-

CC – Core Courses

CA – Continuous Assessment

GE – Generic Elective

ESE –End Semester Examination

AEC – Ability Enhancing Course

Examination System

One test for continuous assessment will be conducted on pre-determined dates i.e., commencing on the 50th day from the date of reopening. The Model exam will be conducted after completing 85th working days. Marks for ESE and CA with reference to the maximum for the courses will be as follows

2023-2024 Batch onwards

CA - Question Paper Pattern and distribution of marks UG Language and English

Section A	5 x 1 (No choice)	:	5 Marks
Section B	4 x 5 (4 out of 6)	:	20 Marks (250 words)
Section C	2 x 10 (2 out of 3)	:	20 Marks (500 words)
Total	:	45Marks	

UG- Core and Allied - (First 3 Units)

CA Question from each unit comprising of

One question with a weightage of 2 Marks	:	2 x 3 = 6
One question with a weightage of 5 Marks (Internal Choice at the same CLO level):	:	5 x 3 = 15
One question with a weightage of 8 Marks (Internal Choice at the same CLO level):	:	8 x 3 = 24
		Total: 45 Marks

End Semester Examination – Question Paper Pattern and Distribution of Marks Language and English –

UG

Section A	10 x 1 (10 out of 12)	:	10 Marks
Section B	5 x 5 (5 out of 7)	:	25 Marks (250 words)
Section C	4 x 10 (4 out of 6)	:	40 Marks (600 - 700 words)
Total	:	75 Marks	

UG - Core and Allied courses:

ESE Question Paper Pattern: 5 x 15 = 75 Marks

Question from each unit comprising of

One question with a weightage of 2 Marks	:	2 x 5 = 10
One question with a weightage of 5 Marks (Internal Choice at the same CLO level):	:	5 x 5 = 25
One question with a weightage of 8 Marks (Internal Choice at the same CLO level):	:	8 x 5 = 40

ESE Question Paper Pattern : (for Accounts Paper) 5 x 15 = 75 Marks

Question from each unit comprising of

One question with a weightage of 2 Marks	:	2 x 5 = 10
One question with a weightage of 5 Marks	:	5 x 5 = 25
One question with a weightage of 8 Marks (Internal Choice at the same CLO level) :	:	8 x 5 = 40

Continuous Internal Assessment Pattern Theory

I Year UG (23 Batch)

CIA Test	:	5 marks (conducted for 45 marks after 50 days)
Model Exam	:	7 Marks (Conducted for 75 marks after 85 days (Each Unit 15 Marks))
Seminar/Assignment/Quiz	:	5 marks Class
Participation	:	5 marks
Attendance	:	3 marks
Total	:	25 Marks

Part IV

Professional English

The course offered in alignment with TANSCH norms with 2 credits

Quiz (5x20 Marks)	:	100 Marks
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MAPPING OF PLOs WITH CLOs

COURSE	PROGRAMME LEARNING OUTCOMES					
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO5
COURSE – CM23C01						
CLO1	S	M	S	M	S	-
CLO2	S	M	S	M	M	-
CLO3	S	M	M	M	M	-
CLO4	S	M	S	M	S	-
COURSE – FS23C02						
CLO1	S	S	M	M	S	-
CLO2	S	S	M	S	M	-
CLO3	S	S	S	M	S	-
CLO4	S	S	M	M	S	-
COURSE – AM23C03						
CLO1	L	M	S	M	L	S
CLO2	L	M	S	S	L	S
CLO3	M	M	S	S	L	S
CLO4	L	S	S	S	M	S
COURSE – AM23A01						
CLO1	L	L	L	M	S	L
CLO2	L	L	L	M	S	L
CLO3	M	S	L	S	S	L
CLO4	M	S	L	M	S	L
COURSE – AM23A02						
CLO1	S	M	L	L	M	M
CLO2	S	S	S	M	S	S
CLO3	M	M	M	S	S	S
CLO4	S	S	L	M	S	S

COURSE – CM23C01						
CLO1	S	M	S	M	S	-
CLO2	S	M	S	M	M	-
CLO3	S	M	M	M	M	-
CLO4	S	M	S	M	S	-
COURSE – FS23C02						
CLO1	S	S	M	M	S	-
CLO2	S	S	M	S	M	-
CLO3	S	S	S	M	S	-
CLO4	S	S	M	M	S	-
COURSE – AM23C03						
CLO1	L	M	S	M	L	S
CLO2	L	M	S	S	L	S
CLO3	M	M	S	S	L	S
CLO4	L	S	S	S	M	S
COURSE – AM23A01						
CLO1	L	L	L	M	S	L
CLO2	L	L	L	M	S	L
CLO3	M	S	L	S	S	L
CLO4	M	S	L	M	S	L

COURSE – AM23A02						
CLO1	S	M	L	L	M	M
CLO2	S	S	S	M	S	S
CLO3	M	M	M	S	S	S
CLO4	S	S	L	M	S	S

COURSE – CM23C01						
CLO1	S	M	S	M	S	-
CLO2	S	M	S	M	M	-
CLO3	S	M	M	M	M	-
CLO4	S	M	S	M	S	-

COURSE – FS23C02						
CLO1	S	S	M	M	S	-
CLO2	S	S	M	S	M	-
CLO3	S	S	S	M	S	-
CLO4	S	S	M	M	S	-

COURSE – AM23C03						
CLO1	L	M	S	M	L	S
CLO2	L	M	S	S	L	S
CLO3	M	M	S	S	L	S
CLO4	L	S	S	S	M	S

COURSE – AM23A01						
CLO1	L	L	L	M	S	L
CLO2	L	L	L	M	S	L
CLO3	M	S	L	S	S	L
CLO4	M	S	L	M	S	L

COURSE – AM23A02						
CLO1	S	M	L	L	M	M
CLO2	S	S	S	M	S	S
CLO3	M	M	M	S	S	S
CLO4	S	S	L	M	S	S

COURSE – AM23C07						
CLO1	M	S	M	L	M	L
CLO2	S	L	M	M	S	M
CLO3	S	S	S	M	S	S
CLO4	S	S	M	M	L	S

COURSE – AM23C08						
CLO1	L	S	S	S	M	-
CLO2	L	M	S	S	M	-
CLO3	M	M	M	S	M	-
CLO4	L	S	S	S	M	-

COURSE – AM23A05						
CLO1	L	M	M	S	S	S
CLO2	L	L	M	S	S	S
CLO3	L	L	M	S	M	M
CLO4	M	S	L	S	M	L

COURSE – AM23A06						
CLO1	L	M	M	S	S	S
CLO2	L	L	M	S	S	M
CLO3	L	L	M	S	M	M

CLO4	M	M	S	L	M	S
COURSE – AM23C09						
CLO1	L	M	M	S	M	S
CLO2	M	S	M	S	S	S
CLO3	L	M	S	M	M	S
CLO4	L	M	M	S	M	M
COURSE – CM23C10						
CLO1	S	S	S	S	S	-
CLO2	S	S	S	S	M	-
CLO3	S	S	S	S	S	-
CLO4	S	S	S	M	M	-
COURSE – AM23A07						
CLO1	S	M	S	L	M	M
CLO2	L	M	S	S	M	L
CLO3	S	M	S	L	M	M
CLO4	S	S	L	M	L	L
COURSE – AM23A08						
CLO1	S	M	S	L	M	M
CLO2	L	M	S	S	M	M
CLO3	S	M	S	L	M	M
CLO4	S	S	L	M	L	L

COURSE NUMBER	COURSE NAME	Category	L	T	P	Credit
CM23C01	PRINCIPLES OF ACCOUNTING	Theory	73	2	-	3

Preamble

To e policies.

Prerequisite

- Basic Knowledge in Financial Statements

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLOS	CLO Statement	Knowledge Level
CLO1	Define the concepts and conventions in accounting.	K1
CLO2	Interpret accounting statement using basic concepts.	K2
CLO3	Apply the procedures of recording transactions and preparation of Reports.	K3
CLO4	Articulate the accounting concepts to interpret the performance of a Firm.	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	M	S	M	S
CLO2	S	M	S	M	M
CLO3	S	M	M	M	M
CLO4	S	M	S	M	S

S- Strong; M-Medium; L-Low

Syllabus

Unit Basic Accounting Concepts (AS-1) - Rectification of errors - Final Accounts – Bank Reconciliation Statement.

Unit II (14 Hrs)

Average due date - Bills of exchange (trade bills only) - Joint Venture (AS-27).

Unit III (15 Hrs)

Departmental Accounts - Basis for allocation of expenses. Branch Accounts (Dependent Branches - Debtors and Stock & Debtors System - Independent Branches only).

Unit IV (15 Hrs)

Hire purchase Accounts: Default and Repossession - Hire purchase Trading Account - Installment purchase system.

Unit V (15 Hrs)

Depreciation (excluding change in method of depreciation) - Investment Account (AS- 13).

S. No	Authors	Title	Publishers	Year of Publication
1.	Reddy T S & A Murthy	Financial Accounting	Margham Publications	Reprint 2021

Reference Books

S. No	Authors	Title	Publishers	Year of Publication
1.	RL Gupta & Radhasamy	Advanced Accountancy (Vol I)	Sultan Chand & Sons.	2018, 13 th ed.
2.	Jain S.P & Narang K.L	Principles of Accountancy	Kalyani Publishers	2018
3.	MC Shukla, T.S. Grewal & S.C. Gupta	Advanced Accountancy	S. Chand & sons	2016

Skill Components

- Identifying concepts and conventions adopted by a firm in their financial statement.
- Prepare a Bank Reconciliation Statement for the business concern.
- Study a firm's financial statement and present a report on the accounting policies followed.
- To calculate the due date and amount on discounting of bills for a firm.
- Analyzing the financial statement of a hire purchase company and present a report on the collection system.
- Analyse the treatment of depreciation for different firms.

Course Designers

1. Dr.S.Sujatha, Department of Commerce
2. Dr.G.Indrani, Department of Commerce

COURSE NUMBER	COURSE NAME	Category	L	T	P	Credit
FS23C02	PRINCIPLES OF MARKETING	Theory	58	2	-	3

Preamble

- To integrate the knowledge and skill, to uphold an environment of learning and creativity in the field of marketing and to manage business and equip them to contribute for the emerging challenges of marketing in the upcoming global scenario.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLOs	CLO Statement	Knowledge Level
CLO1	Define the concepts of marketing and the role of marketing in business and society	K1
CLO2	Explain the modern marketing techniques and discuss how it is used to pursue new marketing opportunities	K2
CLO3	Identify the marketing mix elements and describe the components of market mix.	K3
CLO4	Illustrate the process and new approaches in Industry	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	M	M	S
CLO2	S	S	M	S	M
CLO3	S	S	S	M	S
CLO4	S	S	M	M	S

S- Strong; M-Medium; L-Low

SYLLABUS

Unit I (12 Hrs)

Meaning and Definition of Markets & Marketing - Classification of markets, Objectives Difference between Selling and marketing – Approaches in Marketing – Evolution – Concept of Marketing – Marketing system – Functions. Buying, Assembling and Selling – Transportation – Storage and Warehouses - Standardization and Grading - AGMARK-BIS/ISI - Marketing Finance

Unit II (11 Hrs)

Product Mix: Product Planning – Classification of Products – Product Policies – Factors influencing the product mix – Product Life cycle – Management of Product life cycle – Development of new products. Price Mix: Pricing Objectives -Factors affecting Pricing Decision- Kinds of Pricing. Branding- Labelling –Packaging.

Unit III (12 Hrs)

Promotion Mix: Sales Promotion – Objectives – Factors influencing sales promotion – Kinds. Advertising – Objectives – Functions – Advantages – Limitations – Types of Advertising Difference between Advertising and Sales promotion. Physical Distribution Mix: Middlemen in Distribution-Wholesalers-Retailers - Functions – Kinds – Importance.

Unit IV (12 Hrs)

Consumer Behaviour – Consumer Buying Decisions – Characteristics of buyer - Buying Motive. New Approaches in Marketing: Web-Based Marketing-E-Marketing- Multi Level Marketing- Social Media Marketing – Neuro-marketing – Green marketing –Referral marketing Use of Plano gram in marketing.

Unit V (11Hrs)

Introduction to Industry 4.0- Need – Reasons for Adopting Industry 4.0 - Definition – Goals and Design Principles - Technologies of Industry 4.0- Skills required for Industry 4.0- Advancements in Industry 4.0. Impact of Industry on Society, Business, Government and People Introduction to 5.0.

Text Book

S. No	Authors	Title	Publishers	Year of Publication
1.	Pillai. R S & Bhagavathy.B	Modern marketing (Principles and Practices)	S.Chand &Co	2019 reprint
2.	P. Kaliraj & T. Devi	Higher Education for Industry 4.0 and Transformation to Education 5.0		

Reference Books

S. No	Authors	Title	Publishers	Year of Publication
1.	Dr.N.Rajan Nair & Sanjith R.Nair	Marketing	Sultan Chand & Sons	2018reprint
2	Sontakkai. C N	Principles of Marketing	Kalyani publishers,	16 th reprint, 2016
3.	Philip Kotler & Gary Armstrong	Principles of Marketing	Pearson Education Ltd	17 th edition Version 2018.

Skill Components

- Identify different markets and networking of products and describe how the market is segmented
- Find a product of choice and describe the different stages of the product life cycle and how it is positioned
- Study any popular e-commerce website and overview the products and services available.
- Identifying the ethics and green initiative followed in packaging and labeling of a product
- Preparing an advertisement copy for a product

Course Designer

1. Dr.K.Pavithra, Assistant Professor
2. Mrs. M.Shobana, Assistant Professor

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
AM23C03	MATHEMATICS	Theory	88	2	-	4

Preamble

- To provide students with a solid background of Mathematical constants, Algebra and Matrices.
- To concentrate on understanding the conception of Differentiation and Integration.
- To focus on understanding the concepts, analytical reasoning and developing crucial skills in order to calculate, analyze, interpret and communicate the results clearly.

Course Learning Outcomes

Upon the successful completion of the course students

CLO Number	CLO Statement	Knowledge Level
CLO1	Recall the fundamental properties of Mathematical concepts	K1
CLO2	Interpret quadratic equations and manipulate algebraic expressions and complex numbers	K2
CLO3	Illustrate the various Mathematical techniques	K2
CLO4	Identify differential and integral calculus to interpret the physical systems and processes	K3

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	L	M	S	M	L	S
CLO2	L	M	S	S	L	S
CLO3	M	M	S	S	L	S
CLO4	L	S	S	S	M	S

S- Strong; M-Medium; L-Low

Syllabus

Unit I (17 Hrs)

Mathematical constants and standard functions: Standard functions and graphs-

Exponential function- Log function- Powers of x - Transformations- Other functions: Modulus function- Integer part- Max and min- Factorial and gamma functions: Factorial notation- Gammafunction – Interpolation and Extrapolation- Iteration .(ActEd Problems only)

Unit II (18 Hrs)

Algebra: Algebraic expressions: Indices- Logarithms- Fractions. Quadratic equations: Solution by factorization- Solution by completing the square- Solution by formula. Simultaneous equations- Inequalities- Arithmetic-geometric mean inequality- Sums and products. Arithmetic and geometric progressions: Formulae- Convergence. Standard summations- Swapping the order of summation- Binomial expansions: Positive powers- Fractional or negative powers. Permutation and combination. (ActEd Problems only)

Unit III (17 Hrs)

Basics of Vectors-Notation and arithmetic- Magnitude- Scalar product. Matrices- Basic arithmetic- Multiplication- Determinants- Inverses- Simultaneous equations- Eigenvectors and eigenvalues. Complex numbers: Basic algebra- Argand diagrams- Euler's formula- Solution of polynomial equations- Difference equations. (ActEd Problems only)

Unit IV(18 Hrs)

Differentiation: - Limits: Limits- The order notation- Supremums and infimums. Differentiation- Differentiation of standard functions- Products and quotients- Chain rule- Higher order derivatives.

Stationary points: Maxima, minima and points of inflexion- Curve sketching. Partial differentiation- Extrema of functions of two variables- Lagrange multipliers. (ActEd Problem only)

Unit V (18 Hrs)

Integration: Integrals- Integration of standard functions- Integration by inspection, partial fractions, substitution (change of variable) and parts. Differentiating an integral (Leibniz's formula)- Convergence- Double integrals- Swapping the order of integration. Numerical methods for integration: The trapezium rule -Taylor and Maclaurin series. Differential equations: Solution by direct integration- Solution by separation of variables- Solution by integrating factor.(ActEd Problems only)

Note : Problems from ActEd Material only

Text Books

S. No	Author	Title of the book	Publishers	Year of Publication
1.	-	ActEd Study Materials(FAC – PC – 13)	The Actuarial Education Company	2013
Chapters : 3,4,5 (5-8),6,7,8				

Reference Books

S. No	Author	Title of the book	Publishers	Year of Publication
1.	S.Narayanan & Others	Ancillary Mathematics Volume 1	S.Viswanathan Publishers	2013
2.	Narayanan and T.K.Manivachagom Pillay	Calculus - Volume I	Printers and Publishers Pvt. Ltd. – Chennai, 2004	2014
3.	Narayanan and T.K.Manivachagom Pillay	Calculus - Volume II	Printers and Publishers Pvt. Ltd. – Chennai, 2004	2014

Skill Components

- Apply simple iterative methods to solve non-linear equations.
- Evaluate expressions and equations, properties of equalities and inequalities,

solves the algebraic equations and linear equations having one or two variables

- Calculate the modulus and argument of a complex number, represent a complex number on an Argand diagram
- Use differentiation to find the maximum or minimum value of a function over a specified range and determine the nature of stationary points.
- Solve simple ordinary first-order differential equations, including applying boundary conditions.

Course Designers:

1. Mrs.M.Harini, Assistant Professor
2. Dr.D.Sreemathi Assistant Professor

COURSE NUMBER	COURSE NAME	Category	L	T	P	Credit
AM23A01	BUSINESS ORGANIZATION AND MANAGEMENT ETHICS	Theory	73	2	-	4

Preamble

To provide students with an understanding of the basic principles and functions of management in functional areas of business and knowledge on Industry 4.0 and need for digital transformation.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the concepts related to Business	K1
CLO2	Summarizes the main Areas of Responsibility for different Functions within an Organization..	K2
CLO3	Develop Strategies for Identifying and Dealing with typical Ethical Issues in Businesses and other Organizations.	K3
CLO4	Adopt the goals of industry 4.0 and design the principles for a current scenario in management	K3

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	L	L	L	M	S	L
CLO2	L	L	L	M	S	L
CLO3	M	S	L	S	S	L
CLO4	M	S	L	M	S	L

S- Strong; M-Medium; L-Low

Unit I (14 Hrs)

Nature and Scope of Business - Business versus Profession and Employment - Characteristics of business, - Objectives and essentials of business. Forms of Business Organization– Sole Trader, Partnership Firm, Joint Stock Company and Co-operative Society – Public Enterprises

Unit II (15 Hrs)

Management -Definition - Nature and Scope – Functions – Managerial Skills – Levels of Management – Roles and Skills of a Manager -Management Functions –Managerial Levels -Managerial Types –Managerial Knowledge, Skills and Abilities-Management as a Science, Art, Profession- Management and Administration – Principles of Management.

Unit III (14 Hrs)

Planning: Meaning – Nature- Importance- Planning Process - Advantages and Limitations- Types of Plans — Strategies – Obstacles to Effective Planning - Decision Making: Steps in

Decision Making – Organization: Meaning-Nature and Importance-Process of Organization- Organization Structure- Organization Chart- Organization Manuals- Types of Organization- Departmentation - Span of Management

Unit IV (15 Hrs)

Leadership-Meaning-Importance-Functions of Leadership-Leadership Styles-Qualities of a Good Leader- Theories and Approaches to Leadership. Directing – Functions. Advantages & Disadvantages. Leading vs Managing –Leadership and Power Motivation- Meaning-Need for Motivation-Theories of Motivation.

Coordination – Meaning - Definition-Principles -Advantages & Disadvantages - Control-Meaning- Nature - Importance- Process & Techniques of Control.

Unit V (15 Hrs)

Business Ethics – Importance – Principles - Structure of ethics management -Introduction to Industry 4.0- Need – Reasons for Adopting Industry 4.0 - Definition – Goals and Design Principles - Technologies of Industry 4.0- Skills required for Industry 4.0- Advancements in Industry 4.0- – Impact of Industry 4.0 on Society, Business, Government and People - Introduction to 5.0 and its challenges.

TextBook

S.No	Authors	Title	Publishers	Year of Publication
1.	RK Sharma & Shasi KGupta	Principles of Management	Kalyani Publishers	2017
2.	Dinkar Pagre	Principles of Management	Sultan Chand & sons	2018 ed
3.	P. Kaliraj, T. Devi	Higher Education for Industry 4.0 and Transformation to Education 5.0	Bharathiyar University	2020

ReferenceBooks

S. No	Authors	Title	Publishers	Year of Publication
1.	RN Gupta	Principles of Management	S .Chand &co	2009
2.	Dr.C.N Sontakkai	Principles of Management	Kalyani Publishers,	2010
3.	T.Ramasamy	Principles of Management	Himalaya publishers	2017
4.	Robbins, De Cenzo, & Coulter.	Fundamentals of Management	Pearson	10th Ed. 2017

Related Online Contents:

1. Business Management Ethics and Communication - The Institute of Company Secretaries of India
2. Introduction to Industry 4.0 and Industrial Internet of Things by Prof.Sudip Mishra,IIT Kharagpur.
3. A Complete Guide to Industry 4.0-Udemy

Skill Components

- Preparation of different types of organisation charts
- Construct a standing plan for a new business venture
- Demonstrate different leadership styles through role play
- Studythe ethical practices followed in the organization
- Select any one company and prepare SWOT analysis
- Prepare a report of CSR activities followed in an organization

Course Designers:

1. Dr..D.Sreemathi , Assistant Professor
2. Ms.A.Divya Assistant Professor

COURSE NUMBER	COURSE NAME	Category	L	T	P	Credit
AM23A02	INTRODUCTION TO INFORMATION TECHNOLOGY	Theory	73	2	-	4

Preamble:

- To introduce the importance of computer literacy among students and exposing them to the algorithms, flow charts, programming and computer networks.
- To build familiarity in accessing information through Internet, Intranet, E-mail and e-payment system.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Recall the concepts of Computer applications and understand the role of computer in business.	K1
CLO2	Understand the types of Computer networks, methods of data processing	K2
CLO3	Apply the Technological upgradation, file maintenance process and reporting services of Internet and communication services.	K3
CLO4	Analyze the impact of e-Business and flow of payment modes in a business using SWIFT	K3

Mapping with Program Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	S	M	L	L	M	M
CLO2	S	S	S	M	S	S
CLO3	M	M	M	S	S	S
CLO4	S	S	L	M	S	S

S-Strong M- Medium L-Low

Syllabus

UNIT I (15 Hrs)

Introduction to Computers – Classification of Computers – Computer applications in Various Areas of Business - Basic Principles of Operation of Digital Computers – History & Development of Computers – (Computer Generations)* – Hardware, Software & Humanware.

UNIT II (15 Hrs)

Components of Computer System – Input, Output & Storage Devices – Software – System Software & Application Software – Programming Languages – Machine, Assembly & High Level Languages – Flowchart – Preparation of Flowcharts – Steps and criteria in Developing a Computer Program.

UNIT III (14 Hrs)

Data Processing – Methods of Data Processing – Data Structure – File Organization – File Creation – Sorting – Merging – File Maintenance – Updation – Reporting.

UNIT IV (14 Hrs)

Communication Technology: -WWW - Intranets - Extranets - Voice Networks Data Communication Networks - Last Mile - Wireless System - Web Hosting - Application Service Providers.

UNIT V (15 Hrs)

Electronic Banking - Electronic Payments Systems- Credit Cards - Debits Cards- Digital Cash- (Mobile Payments)*- SWIFT – Mobile Computing-Cloud computing – Grid Computing. Limitations of Electronic Banking.

*Self Study

Text Books

S.No.	Author/s	Title of the book	Publishers	Year of publication

1.	R. Saravanakumar, R. Parameswaran T.Jayalakshmi	A Textbook of Information Technology	Sultan Chand & Sons,	2010
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Reference Books

S.No.	Author/s	Title of the book	Publishers	Year of publication
1	R. Parameswaran	Computer Applications in Business	S.Chand and Co. Ltd.	2010
2	Dr.S.V. SrinivasaVallabhan	Computer Applications in Business	Sultan Chand & Sons	2011
3	Renu Gupta and Gaurav Gupta	Computer Applications in Business	Mahavir Publications,	2015
4	Alexis Leon , Mathews Leon	Computer Applications in Business	Vijay Nicole	2012

Skill Components

- Empathize the purpose and function of power on a computer.
- Understand the input/output, processing and storage of data in a personal computer system.
- Categorize how technology contributes to the success of today's businesses
- Understand networking and internet concepts

Course Designers

- 1.Mrs.M.Shobana, Assistant Professor
- 2.Mrs.K.Pavithra, Assistant Professor

COURSE NUMBER	COURSE NAME	Category	L	T	P	Credit
NME23ES	INTRODUCTION TO ENTREPRENEURSHIP	Theory	30	-	-	2

Unit I (6 Hrs)

Introduction:Entrepreneurship-Introduction-Factors-Barriers-Entrepreneurial Traits and Types- Steps for starting a Small Industry- MSMEs – Social entrepreneurship.

Unit II (6 Hrs)

Entrepreneurship Development Programmes-Institutional Framework (IFCI,ICICI,IDBI,IRBI,EXIM Bank,NSIC,SIDBI,SFC,SIPCOT AND TIIC)- Role of Incentives and Subsidies

Unit III (6 Hrs)

Innovation - Types –Role- Creative Problem Solving -Incubators - Angel Investors - Venture Capital.

Unit IV (6 Hrs)

Intellectual Property-Meaning-Copy Right Registration-Patents-Trademark-Design and Procedure for registration.

Unit V (6 Hrs)

Project Preparation - Project identification and Classification - Project Formulation- Project Appraisal- Project Report Presentation.

Text Book

Author	Title of the book	Publisher	Year of publication
Gupta. C.B and Srinivasan.N. P	Entrepreneurial Development	Sultan Chand and Sons	2020
Sauhari Vinnie and Bhushan Sudhashu	Innovation Management	Oxford	2014

Reference Books				
S.No	Author(s)	Title of the Book	Publisher	Year of Publication
1	KolbBonitaM	Entrepreneurship for the creative and cultural industries	Routedge	2015
2	P.T.Vijayashree & M.Alagammai	Entrepreneurship and Small Business Management	Margham	2020

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	Credit
CM23C04	FINANCIAL ACCOUNTING	CORE	73	2	-	3

Preamble

- To enable the students to apply the conceptual principles in financial Accounting
- To develop an expertise in handling the accounts and thereby to increase their level of understanding about the financial statements relating to partnership firms, insurance claims & insolvency.
- To enhance knowledge in partnership, insurance and insolvency accounting

Prerequisite

- Basic Knowledge in accountancy

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLOs	CLO Statement	Knowledge Level
CLO1	Define the concepts of Partnership Firms, Fire Insurance Claims and Insolvency Accounts	K1
CLO2	Describe the accounting treatment of Partnership Firms, Fire Insurance Claims and Insolvency Accounts	K2
CLO3	Apply the procedures related to partnership firms, calculation of insurance claims and Insolvency Accounts	K3
CLO4	Analyze and prepare financial accounts for partnership firms in different situations, Insurance claims and Insolvency Accounts	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	M	M	S
CLO2	S	S	M	M	S
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M

S- Strong; M-Medium; L-Low

Syllabus

Unit I (15Hrs)

Partnership Accounts: Division of Profits – Fixed & Fluctuating Capital –Past Adjustments – Guarantee of Profits –Admission of a partner - **Limited Liability Partnership:** Introduction- Definition – LLP Act 2008 - Features – Advantages and Disadvantages (Theory Only)

Unit II (14Hrs)

Retirement of a Partner: Retirement Cum Admission -Death of a partner- Joint Life Policy – Accounting Treatment

Unit III (15Hrs)

Dissolution of a Firm: Insolvency– Rule in Garner Vs Murray – Piece –Meal Distribution.(Maximum Loss Method only).Sale of Partnership to a Limited Company.

Unit IV (15Hrs)

Fire Insurance Claims: Computation of Claim for Loss of Stock and loss of profit (excluding normal & abnormal loss)

Unit V (14Hrs)

Insolvency Accounts: Relevant Act- Statement of Affairs – Deficiency Accounts – The Insolvency & Bankruptcy code 2016

Text Book

S. No	Authors	Title	Publishers	Year of Publication
1.	Reddy T S & A Murthy	Financial Accounting	Margham Publications	Reprint 2023

Reference Books

S. No	Authors	Title	Publishers	Year of Publication
1.	RL Gupta & Radhasamy	Advanced Accountancy (Vol I)	Sultan Chand & Sons.	2018, 13 th ed.
2.	Jain S.P & Narang K.L	Principles of Accountancy	Kalyani Publishers	2018
3.	MC Shukla, T.S. Grewal & S.C. Gupta	Advanced Accountancy	S. Chand & sons	2019

Skill Component

- Working on practical aspects of admission and retirement with partners' capital
 - Preparation of partnership deed with important terms and conditions
 - Preparation of deficiency statement for a real time partnership firm
 - Calculation of Insurance claims for real time losses
- Case study analysis on Insolvency and Bankruptcy code

Pedagogy

- Lecture, Board, PPT Presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning

Course Designers

1. Dr. S. Sujatha, Department of Commerce
2. Dr. L. Nithya, Department of Commerce

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
AM23C05	PRINCIPLES AND PRACTICE OF INSURANCE	CORE	73	2	-	4

Preamble

- To understand the basic concept of insurance, functions and its principles
- To enable the students to learn the practical aspects of insurance
- To understand the risk methods, claim and settlements procedures

Prerequisite

- No prerequisite required..

Course Learning Outcomes

- Upon the successful completion of the course students

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the concept of risk and uncertainty and classifications of Risks	K1
CLO2	Understand the basic functions and the underlining risk and legal principles of insurance	K2
CLO3	Identify the basic operations of an insurance company and the insurance industry	K3
CLO4	Explain the insurance regulations and the use of insurance as a tool to avoid losses and reduce risk.	K4

Mapping with Programme Learning Outcome

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	S	S	M	M	L	L
CLO2	M	S	L	M	L	M
CLO3	L	S	M	M	M	S
CLO4	M	S	S	S	L	S

S- Strong; M-Medium; L-Low

Syllabus

Unit I (14 Hrs)

Concept of Risk – Classification of Risk, Peril, Hazard – **Methods of Handling risk. Risk Management:** Definition- Objectives- Characteristics Significance- Principles. Risk Management Information System-Process of Risk Management- Methods of Risk Management-**Identification, Measurement and Control of Risk. Case study in Risk management**

Unit II (14 Hrs)

Definition and Nature of Insurance- Functions -Evolution-**Kinds of Insurance Organisation-** Role and Importance – Scope of Insurance - Insurance Contract- Insurance Documents- Classification of Insurance. Reinsurance: Concepts-Characteristics-Types. Double Insurance - **Difference between Reinsurance and Double Insurance.** Over Insurance.

Unit III (15 Hrs)

Life Insurance: Concept- Types of Life Insurance- **Essentials of Life Insurance-** Life Insurance, LIC is a public sector organization and dominant player in the market *. Term Insurance- types - benefits– **Annuities –Concepts-Individual annuity & group annuities products-Riders.**

Unit IV (15 Hrs)

Assignment- Meaning- Types- Features-Nomination- Meaning-Features- Difference between Assignment and Nomination. Underwriting: Concepts-**Premium: Concepts- Types of Premium-** Factors considered in the calculation of premium- **Premium payment: lapse and Renewal.** Bonus- Types of bonus. Mortality table- Definition-Features-Insurance Policy claims – Maturity claims – Death claims.

Unit V (15 Hrs)

Insurance Professionals and Intermediaries: Agents, Brokers, Surveyors, Development Officers, Third party Administrators and Insurance Ombudsman – Web Aggregators and Insurance Marketing Firms (IMF)-Point of Sales Persons –Medical Examiners –Insurance

Repositories and electronic Issuance of Insurance policies- Banc assurance distribution channel - **Actuary- Definition- Appointment of an Actuary-** Functions of an Actuary- Duties of an Actuary- Functions of an Actuary in General Insurance business-Scope of an Actuary.

Text Book

S. No	Authors	Title	Publishers	Year of Publication
1.	Dr.P.Periasamy	Principles And Practice Of Insurance	Himalaya Publishing House	2015

Reference Books

S. No	Authors	Title	Publishers	Year of Publication
1.	M.N.Mishra and Dr.S.B.Mishra	Insurance Principles and Practice	S.Chand and Company Ltd	2011
2.	Alka Mittal , S.L.Gupta,S.	Principles of Insurance and Risk Management	S. Chand & Sons	2010
3.	NA	Practice of Life insurance (IC 02)	Insurance Institute of India	2011

Skill Components

- To understand the concept of Risk and the Methods of managing risk
- To understand the types of life insurance policies available and their benefits
- To analyse how the amount of premium is fixed for the life insurance policies
- To understand the different types of claim and the settlement procedures
- To analyse the work of an actuary in the field of insurance

Pedagogy

* Lecture, Board, PPT Presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning

Course Designers

1. Mrs. M.Shobana, Assistant Professor
2. Dr. D.Sreemathi, Assistant Professor

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
AM23C06	BASICS OF MATHEMATICAL STATISTICS	CORE	73	2	-	4

Preamble

- To impart the students with knowledge in basic Probability and statistical concepts.
- To define and introduce the concept of Random variable, their distributions and applications
- To focus on the understanding and implementation of Fundamental Statistics

Prerequisite

- Basic Knowledge in Mathematics

Course Learning Outcomes

- Upon the successful completion of the course students

CLO Number	CLO Statement	Knowledge Level
CLO 1	Recall the concepts of data and its interpretation and the measures of location	K1
CLO2	Understand the concept of independent and identical Random variables and its utilization	K2
CLO3	Understand and apply the probability distribution concepts for giving necessary inferences.	K3
CLO4	Application of statistical tests in estimation techniques and inference.	K3

Mapping with Programme Learning Outcome

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	S	L	L	S	L	M
CLO2	M	L	M	S	L	S
CLO3	S	M	S	M	L	S
CLO4	S	S	S	S	L	M

S- Strong; M-Medium; L-Low

Syllabus

Unit I (12 Hrs)

Statistical diagrams- types of data-summarizing data in tables and diagrams-comparison of data using diagrams – Measures of location: **Mean - Median - Mode**. Measures of spread: Range – Interquartile Range –**Standard deviation and Variance** - Skewness. (Stats pack Problems only)

Unit II (11 Hrs)

Basic probability- **addition and multiplication rule- Probability diagrams** – Conditional probability. (Stats pack Problems only).

Unit III (12 Hrs)

Random variable-discrete and **continuous-CDF, PDF, Mean, variance and SD, skewness and co efficient of skewness** and moments- linear and continuous functions (Stats pack Problems only)

Unit IV(12 Hrs)

Binomial and Poisson distributions - Uniform distribution and exponential distribution-PDF, CDF, Mean, variance and standard deviation – **Normal distribution – CDF, Mean, variance and SD-** standardizing normal distribution-PDF,CDF. (Simple Statspack Problems only)

Unit V(11 Hrs)

Scatterplot- **Correlation – Types – Covariance – Correlation Coefficient – Regression.** (Stats pack problems)

Text Books

S. No	Author	Title of the book	Publishers	Year of Publication
1.	-	Stats Pack(PSTA13)	Actuarial Education Company	2013

Reference Books

S. No	Author	Title of the book	Publishers	Year of Publication
1.	S.C.Gupta and V.K.Kapoor	Fundamentals of Mathematical Statistics	Sultan chand& sons	2014
2.	S.P.Gupta	Statistical Methods	Sultan chand& sons	2015

Skill Components

- To study the various forms of data and construct diagrams to understand them.
- Describe various distributions to the data available and study their behavior.
- Analysis of the data from the various distributions and know the best fit.
- Learning the basic concepts of statistics as per the requirement of ASI for the clearing ACET examination.

Pedagogy

- Lecture, Board, PPT Presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning

Course Designers

1. Dr.G.Rekha, Assistant Professor
2. Ms. A. Divya, Assistant Professor

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	Credit
AM23A03	CUSTOMER RELATIONSHIP MANAGEMENT	ALLIED	88	2	-	4

Preamble

- To help the students to understand the concepts of CRM and its implementations.
- To know the CRM practices in service sectors.
- To understand the values of customer relationship management.

Prerequisite

- No prerequisite required

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO No.	CLO Statement	Knowledge Level
CLO1	Recall the concept of CRM, that are deployed and how it can be implemented.	K1
CLO2	Identify how CRM practices and technologies enhance the achievement of marketing, sales and service objectives throughout the customer life-cycle stages.	K2

CLO3	Summarize the customer acquisition, retention and customer loyalty.	K3
CLO4	Analyze customer relationship management strategies by understanding customers preferences for the long-term sustainability of the Organizations.	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	L	L	S	M	S	S
CLO2	S	M	S	S	M	S
CLO3	L	L	S	M	S	M
CLO4	L	S	S	M	M	S

S-Strong M-Medium L-Low

Syllabus

UNIT I (DL 18 Hrs)

Introduction of CRM and its Fundamentals - **Concept and Context of Relationship Management: Internal and External relationship management, Need and Importance of relation** with customers and other stakeholders. A Paradigm Shift- Transition from Product focus to Customer focus, **Transactional Vs Relationship Marketing**, Linkage between customer satisfaction-Customer Loyalty.

UNIT II (DL 17 Hrs)

Defining CRM, Levels of CRM, CRM as a strategic marketing tool, CRM significance to the stakeholders, Strategic CRM, Operational CRM, **Analytical CRM**, Collaborative CRM, and **Models of CRM. Types of CRM.** Importance of CRM in Modern Business Environment.

UNIT III (DL 18 Hrs)

Customer Acquisition: Acquisition of new customer, understanding customer value, **sources of customer value**, Values from products, services, people, physical evidence, customer communication, Channels etc.,. **Conceptual frame work of Customer Relationship** and its Management. Evaluation customer Relationship Marketing,

UNIT IV (DL 17 Hrs)

Customer Retention: Concept of Customer retention. Role of CRM in Customer in retention, Economics of customer retention, **Managing customer retention** or value retention/ Strategies of customer retention. **Concept and Significance of Customer Loyalty.** **UNIT V (DL 18 Hrs)**

Customer Portfolio Management: Concept and basic disciplines, Market segmentation-sales forecasting and CPM, CPM in B2B, Seven core customers' management strategies. CRM and **Customer Experience Management:** Concept of Customer experience, experiential marketing strategies and Tactics, Customer experience and Role of CRM.

S.No.	Author/s	Title of the book	Year of publication
1.	1st Edition, Tata McGraw Hill,	Jagdish N Sheth, Parvatiyar Atul, G Shainesh, Customer Relationship Management: Emerging Concepts, Tools and Applications,	June 2008
2.	Judith W.Kincaid	Customer Relationship Management Getting it Right, Pearson Education	2009

Reference Books

S.No.	Author/s	Title of the book	
1.	H.Peeru Mohamed , A Sagadevan	Custmer Relationship Management, A Step by Step Approach, Vikas Publishing House	2012
2.	Peter Fader, Wharton Digital Press, 2012	Customer Centricity –Focus on right customer for strategic advantage	2012

Skill Components

- Construct a customer relationship model in an Insurance sector.
- Demonstrate the customer preferences for long term sustainability.
- Study the customer ethical practices followed in the organization
- Design the values of customer and apply the concept of CRM
- Build the various technological tools and implementation in the organization.
- Select any one company and prepare CRM model.

Pedagogy

- Lecture, Board, PPT Presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning

Course Designers

1. Mrs.M.Shobana ,Assistant Professor
2. Mrs.A.Jennifer,Assistant Professor

COURSE NUMBER	COURSE NAME	Category	L	T	P	Credit
AM23A04	BUSINESS COMMUNICATION	ALLIED	88	2	-	4

- Preamble

- To make the students to understand the basic concepts of communication and their importance in different forms of business.
- To equip the students in writing different forms of business correspondence, reports and enhancing their speaking skills.

Prerequisite

- No prerequisite required.

Course Learning Outcome

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand and recall the concepts of Business Communication	K1
CLO2	Illustrate the importance of effective communication in business	K2
CLO3	Discuss the importance of staying connected with customers and other related professionals through Organizational communication	K3
CLO4	Impart the correct practices of the strategies of Effective Business writing.	K3

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	S	S	S	M	S	M
CLO2	S	S	S	M	S	L
CLO3	S	S	S	L	S	S
CLO4	S	M	S	M	S	S

S-Strong M- Medium L-Low

Syllabus

Unit – I (18 hrs)

Business Communication: Meaning – Importance of Effective Business Communication- Modern Communication Methods – Business Letters: Need – Functions - Kinds - Essentials of Effective Business Letters – Layout-Business Miscommunication (Barriers); improving communication

Unit – II (17 hrs)

Trade Enquiries – Import and Export Documentation- Orders and their Execution - Credit and Status Enquiries Complaints and Adjustments - Collection Letters – Sales Letters – Circular Letters – Case Studies

Unit – III (18 hrs)

Banking Correspondence - Insurance Correspondence - Agency Correspondence

Unit – IV (17 hrs)

Company Secretarial Correspondence (Includes Agenda, Minutes and Report Writing)

Unit – V (18 hrs)

Application Letters – Preparation of Resume - Interview: Meaning – Objectives and Techniques of various types of Interviews – (Public Speech)*– Characteristics of a good speech – Public relations letters.

***Self Study**

Text Book

S.No.	Author/s	Title of the book	Publishers	Year of publication
1.	Rajendra Pal J.S. Korlahalli	Essentials of Business Communication	Sultan Chand & Sons, New Delhi	2012

Reference Books

S.No.	Author/s	Title of the book	Publishers	Year of publication
1	N.S. Pradhan	Business Communication	Himalaya Publishing House	2010
2	Vikas Arora, Sheetal Khanka, Pallavi Thakur	Business Communication	Global Vision Publishing House	2010
3	Meenakshi Raan Prakash Singh	Business Communication	Oxford University Press, New Delhi	2010

Skill Component

- Identifying the concepts and conventions adopted by business communication
- Study the banking, insurance and company secretarial correspondents
- Understanding the concept of writing business, application and trade related letter

Pedagogy

- Lecture, Board, PPT Presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning

Course Designers

1. Dr.D.Sreemathi, Assistant Professor
2. Ms. K.Dharani , Assistant Professor

COURSE NUMBER	COURSE NAME	Category	L	T	P	Credit
23PECM1	PROFESSIONAL ENGLISH FOR COMMERCE AND MANAGEMENT	AEC	25	5	-	2

Objectives

1. To develop the language skills of students by offering adequate practice in professional contexts.
2. To enhance the lexical, grammatical and socio-linguistic and communicative competence of first year commerce and management students
3. To focus on developing students' knowledge of domain specific registers and the required language skills.
4. To develop strategic competence that will help in efficient communication
5. To sharpen students' critical thinking skills and make students culturally aware of the target situation

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO	CLO Statement	Knowledge Level
CLO1	Recognise their own ability to improve their own competence in using the language	K1
CLO2	Use language for speaking with confidence in an intelligible and acceptable manner	K2
CLO3	Read independently unfamiliar texts with comprehension and understand the importance of reading for life	K3
CLO4	Understand the importance of writing in academic life	K3
CLO5	Write simple sentences without committing error of spelling or grammar	K3

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	L	M	S	S	S
CLO2	L	L	S	M	M
CLO3	M	L	M	L	M
CLO4	L	M	M	L	M
CLO5	L	M	M	M	M

S- Strong; M-Medium, L- Low

Syllabus

UNIT 1: COMMUNICATION

5 hours

Listening: Listening to audio text and answering question

Listening to Instructions

Speaking: Pair work and small group work.

Reading: Comprehension passages –Differentiate between facts and opinion

Writing: Developing a story with pictures.

Vocabulary: Register specific – Incorporated into the LSRW tasks

UNIT 2: DESCRIPTION

5 hours

Listening: Listening to process description.-Drawing a flow chart.

Speaking: Role play (formal context)

Reading: Skimming/Scanning- Reading passages on products, equipment and gadgets.

Writing: Process Description –Compare and Contrast Paragraph-Sentence Definition and Extended definition- Free Writing.

Vocabulary: Register specific -Incorporated into the LSRW tasks.

UNIT 3: NEGOTIATION STRATEGIES

5 hours

Listening: Listening to interviews of specialists / Inventors in fields (Subject specific)

Speaking: Brainstorming. (Mind mapping).
Small group discussions (Subject- Specific)

Reading: Longer Reading text

Writing: Essay Writing (250 words)

Vocabulary: Register specific – Incorporated into the LSRW tasks

UNIT 4: PRESENTATION SKILLS

5 hours

Listening: Listening to lectures.

Speaking: Short talks.

Reading: Reading Comprehension passages

Writing: Writing Recommendations

Interpreting Visuals inputs

Vocabulary: Register specific – Incorporated into the LSRW tasks

UNIT 5: CRITICAL THINKING SKILLS

5 hours

Listening: Listening comprehension- Listening for information.

Speaking: Making presentations (with PPT- practice).

Reading: Comprehension passages –Note making.

Comprehension: Motivational article on Professional Competence, Professional Ethics and Life Skills)

Writing: Problem and Solution essay– Creative writing –Summary writing

Vocabulary: Register specific – Incorporated into the LSRW tasks

Textbook

Reference Books

S. No.	Authors	Title of the Book	Publishers	Year of Publication
1	Sreedharan, Josh	The Four Skills for Communication	Foundation books	2016
2	Pillai, G Radhakrishna, K Rajeevan, P Bhaskaran Nair	Spoken English for you	Emerald	1998
3	Pillai, G radhakrishna, K Rajeevan, P Bhaskaran Nair	Written English for you	Emerald	1998

COURSE CODE	TITLE OF THE COURSE	Category	L	T	P	Credit
AM23C07	GENERAL INSURANCE	Theory	88	2	-	4

Preamble

- To understand the basic concepts and functions of General insurance.
- To enable the students to understand the claim settlements of various policies.

Prerequisite

Gain basic knowledge in general insurance concepts

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO No	CLO Statement	Knowledge Level
CLO1	Recall the fundamental concepts of general insurance	K1
CLO2	Understand the various policies in general insurance	K2
CLO3	Identify the procedures and practices of claims management	K3
CLO4	Examine the protection against unforeseeable contingencies like damage and loss	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	M	S	M	L	M	L
CLO2	S	L	M	M	S	M
CLO3	S	S	S	M	S	S
CLO4	S	S	M	M	L	S

S-Strong; M-Medium; L-Low

Syllabus

UNIT I (17 Hrs)

General Insurance: Introduction–***Principles of General Insurance***–General Insurance business (Nationalization) Act 1972 – ***General Insurance Corporation- Insurance Regulatory and Development Authority [IRDA]***–Constitution, objectives, duties and powers of IRDA– General Insurance councils and other laws relating to insurance business.

UNIT II (18 Hrs)

Marine Insurance: Introduction–Nature of Marine Insurance contract- ***Kinds of Marine Insurance policies***– Premium Calculation-Important clauses in Marine Policy- ***Marine losses and Abandonment ***. Fire Insurance: Introduction– Nature and uses of Fire Insurance Contract– Types of Fire Insurance policies – Fire Insurance Claims – Rate Fixation in FireInsurance.Specialized classes of General Insurance :***Industrial all risk insurance-** Aviation Insurance –Airline Insurance –Oil and gas Insurance.*

UNIT III (18 Hrs)

Motor Vehicle Insurance (both heavy and light vehicle) –Various plans–***Third party, Personal accident Insurance- Individual and Group***. Property Insurance–Burglary, Building, Engineering Insurance- Health Insurance- Introduction - Features of health policies –Group health insurance ***Classification of health insurance product***.

UNIT IV (17 Hrs)

Miscellaneous Insurance– ***Cattle Insurance***– Public Liability Insurance–Jeweller's Block policies– Bloodstock (horse) Insurance– Sports Insurance–***Fidelity Guarantee Insurance*** –Money Insurance –Baggage Insurance-***Pedal Cycle Insurance***-Neon Sign

Insurance –(Householder’s Insurance –Banker’s Blanket policies)-Special Contingency policy-Executive Travel Policy-Employer’s Liability Policy.

UNIT V (18 Hrs)

Social Security through Insurance: **Pradhan Mantri Jeevan Jyoti Bima Yojana** (PMJJBY)- Pradhan Mantri Vaya Vandana Yojana(PMVVY)- Rashtriya Swasthya Bima Yojana- Pradhan Mantri Suraksha Bima Yojana–***Pradhan Mantri Jan-Dhan Yojana***- Auyshman Bharat & ***PM Fasal Bima Yojana–ULIPS***-Contingent Business Interruption Insurance.

*Highlighted Content offered in Blended Mode (Link Provided)

Text Book				
S.No	Author	Title	Publisher	Year and Edition
1	Dr.Periayasamy.P	Principles and Practice of Insurance	Himalaya Publishing House	2019

Reference Books				
S.No	Author	Title	Publisher	Year and Edition
1	Dr. Aanchal Aggarwal & Dr. Nupur Arora	Practice of General Insurance	JSR Publishing House	2021
2	Inderjit Singh, Ralvest Katyal, Sanjay Arora	Insurance Principles and Practices	Kalyani Publishers	2014

Skill Components

- Recent case studies are given to students related to motor and fire insurance and to find out the real compensation and their procedure.
- Students might be asked to collect the Insurance proposal forms and claim forms of various companies and can ask them to make a group presentation by highlighting its merits and demerits of it.
- Students might be asked to collect the checklist for various claims.
- Role play by the student like an agent to convince the customer for taking a policy

Pedagogy

- Lecture, Board, PPT Presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning

Course Designers

1. Ms.Dharani.K, Assistant Professor
2. Dr.K.Pavithra, Assistant Professor

COURSE CODE	TITLE OF THE COURSE	CATEGORY	L	T	P	CREDIT
AM23C08	FINANCIAL MATHEMATICS I	Theory	88	2	-	4

Preamble

- To provide grounding in interest rates and their simple applications and to exhibit how interest rates or discount rates may be expressed in terms of different time periods.
- To concentrate on understanding the concepts of accumulation and present value of annuities.

Prerequisite

- Basic Knowledge in Financial terms

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO No.	CLO Statement	Knowledge Level
CLO1	Recall the concepts of different interest rates for a single sum of money or a series of cash flows.	K1
CLO2	Illustrate how to take into account the time value of money using the concepts of compound interest and discounting	K2
CLO3	Make use of the applications of real and money interest rates.	K3
CLO4	Categorize and use the more important compound interest functions, including annuities certain	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	L	S	S	S	M
CLO2	L	M	S	S	M
CLO3	M	M	M	S	M
CLO4	L	S	S	S	M

S-Strong M- Medium L-Low

Syllabus

UNIT I (17 Hrs)

Principles of Actuarial Modeling*: Models-Why models are used –How Models are Used-Modeling- the benefits and limitations-*Stochastic and deterministic models* - Discrete and continuous state spaces and time sets – scenario – based and proxy models – suitability of a model Time value of money-Interest -**Simple Interest- Compound Interest, accumulation** factors – The Principle of consistency –Present values -Discount rate -**Simple Discount- Compound discount**

UNIT II (18 Hrs)

Nominal Rates -nominal rate of interest and discount- accumulating and discount using nominal interest and discount rates - The **force of Interest**—Accumulating and discounting using using force of interest –Derivation - **Relationships between effective, nominal and force of interest rates**. Force of interest as a function of time -present value –Applications of force of interest

UNIT III (18 Hrs)

Real and money interest rates - **Deflationary conditions - Usefulness of real and money interest rates**. Discounting and accumulating - Present value of cash Flows-Discrete cash flows-Continuously payable cash flows (payment streams) – valuing cash flows: constant interest rate – payment streams – sudden changes in interest rate -Interest income.

UNIT IV (17 Hrs)

Level of Annuities –Introduction -Present Values and accumulation of Annuities payable continuously- Present Value of Annuities where payments are increasing continuously and payable continuously- ***Present Value of Annuities where payments and interest both are varying continuously***.

UNIT V (18 Hrs)

Introduction -*** Deferred annuities*** - Annual payments (arrear and Advance) – Continuously payable annuities –Annuities payable *pthly*-Non- integer value of n- Increasing annuities- Annual payments (arrear and Advance) - **Varying annuities**- Annual Payments - Continuously Payable annuities- **Decreasing payments**-Special Cases: Irregular Payments-Compound increasing rates.

***Highlighted Content offered in Blended Mode (Link Provided)**

Text Books

S.No.	Author/s	Title of the book	Publishers	Year and Edition
1.	IFOA	CM1 Actuarial Mathematics	The Actuarial Education Company on behalf of the Institute and Faculty of Actuaries	2019

Reference Books:

S.No.	Author/s	Title of the book	Publishers	Year and Edition
1.	McCutcheon, J.J.Scott-William F	An Introduction to Mathematics of Finance	Oxford, Butterworth-Heinemann	2015
2.	Eugene Don and Joel Lerner, W. Taylor	Basic Business Mathematics	Schaum's Outline Series, McGraw Hill	2015

Skill Components

- Express how a compound interest model can be used to represent the effect of investing a sum of money over a period.
- Discount and accumulate a sum of money or a series (possibly infinite) of cash flows to any point in time at different interest rates.
- Demonstrate a knowledge and understanding of real and money interest rates.

Pedagogy

- Lecture, Board, PPT Presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning

Course Designers

1. Mr. Jennifer. A, Assistant Professor
2. Ms. A. Divya, Assistant Professor

COURSE CODE	TITLE OF THE COURSE	CATEGORY	L	T	P	CREDIT
AM23A05	ACTUARIAL STATISTICS-I	Theory	73	2	-	4

Preamble

- To impart the students with knowledge in the concepts of Probability Distributions.
- To define and introduce the concept of Sampling and statistical Inference.
- To focus on the understanding and implementation of Data Analysis.

Prerequisite

Gain basic knowledge in Statistical tools

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Recall and classification of variables according to their properties and implications.	K1
CLO2	Sampling and defining the nature of variables for statistical testing and formulation of distributions.	K2

CLO3	Estimating and analyzing the variables and their distributions, defining the errors associated.	K3
CLO4	To infer and make conclusive decisions for the results obtained after testing.	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	L	M	M	S	S	S
CLO2	L	L	M	S	S	S
CLO3	L	L	M	S	M	M
CLO4	M	S	L	S	M	L

S-Strong; M-Medium; L-Low

Syllabus

UNIT I (DL15 Hrs)

Probability distributions-key factors of discrete and continuous distributions-
Poisson Process(CS1 Problems Only).

UNIT II (DL14 Hrs)

MGF of a random variable- *MGF series, formula for moments* - CGF and properties of MGF and CGF (CS1 Problems Only)

UNIT III (DL15 Hrs)

Joint Distributions - Expectations of functions of two variables – *Convolutions*
- Using generating functions to derive distributions of linear combinations of independent random variables.(CS1 Problems Only)

UNIT IV (DL14 Hrs)

Conditional Expectation – *Central limit theorem*-normal approximation-continuity corrections and comparing stipulated samples. (CS1 Problems Only)

UNIT V (DL15 Hrs)

Sampling and statistical inference- sample, population- sampling distributions-
usage of the test statistic. Point estimation: Method of moments - Method of maximum likelihood – *Unbiasedness*.

* Highlighted Content offered in Blended Mode (Link Provided)

Text Books

S.No	Author	Title of the book	Publishers	Year and Edition
1.	Institute and Faculty of Actuaries.	CS 1 Actuarial Statistics I(Combined Materials Pack for exams-2019)	The Actuarial Education Company.	2019

Reference Books

S.No	Author	Title of the book	Publishers	Year and Edition
1.	S.C.Gupta and V.K.Kapoor	Fundamentals of Mathematical Statistics	Sultan Chand & sons	2014
2.	S.P.Gupta	Statistical Methods	Sultan Chand & sons	2015

Skill Components

- To develop and know the different distributions and their CGF and MGF and their behavior.
- To extensively apply the Sampling Techniques and arrive at Statistical Inferences.
- To learn the Estimation of a data and do Data analysis.
- To arrive at conclusions and give favorable outcome.

Pedagogy

- Lecture, Board, PPT Presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning

Course Designers

- Dr.Sreemathi, Assistant.Professor
- Mrs.M.Shobana, Assistant Professor

COURSE CODE	TITLE OF THE COURSE	CATEGORY	L	T	P	CREDIT
AM23A06	MATHEMATICAL BASIS OF LIFE ASSURANCE	Theory	73	2	-	4

Preamble

- To impart the students with knowledge about the Life Assurance Products.
- To define the methods of Valuation of the products and the risk involved
- To focus on the understanding of the life products valuation and calculations involved in it.

Prerequisite

- Gain basic knowledge in Mathematical concepts

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	To Familiarize with the Life Assurance Products and their Valuations	K1
CLO2	To identify and learn reserving and valuation methods	K2
CLO3	To implement techniques and test the assurance data	K3
CLO4	To apply special additions and adjustments for accurate calculation and inference	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	L	M	M	S	S	S
CLO2	L	L	M	S	S	M
CLO3	L	L	M	S	M	M
CLO4	M	M	S	L	M	S

S-Strong; M-Medium; L-Low

Syllabus

UNIT I (15 Hrs)

Life insurance Products-***Money back Products***-***Annuity Products***–Office Premiums- Adequacy and consistency of premiums(Related Simple problems to the topics mentioned)

UNIT II (15 Hrs)

Policy Values-Kinds of policies and their values-Problems associated with the policy values –Retrospective and Prospective approach-***Alteration and Surrender of the policy values***.

UNIT III (15 Hrs)

Data for Valuation-***Valuation Methods***-Net premium method-Modified Net

Premium Method- Gross Premium Method- Gross Premium Bonus reserve- ***Problems associated with the methods of valuation***-Estate and Trading Profits.

UNIT IV(14Hrs)

Special Reserves and adjustments- Surplus and its distribution- ***Revisionary bonusSystem***.

UNIT V (14 Hrs)

Asset Share and applications of asset share-Surrenders and alterations.

*** Highlighted Content offered in Blended Mode (Link Provided)**

Text Books

S. No	Author	Title of the book	Publishers	Year and Edition
1.	Ajay Kumar Srivatsava & Gorakh Nath Agarwal-FIAI	IC-81 Mathematical Basis Of Life Assurance	Insurance Institute of India	2014

Reference Books

S. No	Author	Title of the book	Publishers	Year and Edition
1.	Alka Mittal ,S.L.Gupta,S	Principles of Insurance and Risk Management	S.Chand & Sons	2010
2.	M.N.Mishra and Dr.S.B.Mishra	Insurance Principles and Practice	S.Chand and CompanyLtd	2011

Skill Components

- To know the various Life assurance products and learn how to maintain adequacy of funds for the same.
- To know the policy values and methods of valuation.
- Apply the adjustments required in the policy values
- The concepts of asset share to be applied and risks involved to be studied

Pedagogy

- Lecture, Board, PPT Presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning

Course Designers

1. Mrs.M.ShobanaAssistant.Professor
2. Dr.K.Pavithra, Assistant Professor

COURSE CODE	TITLE OF THE COURSE	Category	L	T	P	Credit
CS23SBGP	SBS I - Gen-AI	Theory	44	1	-	3

Preamble

The objective of this course is to understand the breadth and depth of Generative Artificial Intelligence (Gen AI) and to impart knowledge on its ethical implications, practical applications, and emerging trends.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the fundamental concepts and ethical considerations of Generative AI.	K2
CLO2	Apply AI principles in practical settings using basic AI tools and platforms	K3
CLO3	Develop advanced skills in specialized AI applications such as text analysis, natural language processing, and image recognition.	K3

CLO4	Explore emerging trends in AI, integrating advanced AI tools into diverse professional practices.	K4
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Mapping with Programme Outcomes

CLOs	P01	P02	P03	P04	P05
CL01	S	S	S	S	M
CL02	S	S	S	S	S
CL03	S	S	M	S	S
CL04	S	M	S	M	S

S- Strong; M-Medium

SBS I: Gen-AI - CS23SBGP

(45 Hrs)

Unit 1: Introduction to Gen AI

(9 hours)

Understanding Gen AI: Definition and scope of Gen AI - Overview of its applications in various fields - Introduction to essential skills needed for Gen AI. Ethical Considerations: Discussion on ethical guidelines and responsible use of AI - Understanding the impact of AI on society and individuals.

Hands-on Activity: Exploring AI Tools

- Working with appropriate content creation Gen-AI tools to engage with ChatGPT to explore various subjects, simulate interviews, or create imaginative written content.
- Working with appropriate writing and rephrasing Gen-AI tools to drafting essays on designated topics and refining the content with improved clarity, coherence, and correctness.

Unit 2: Basic AI Concepts

(8 hours)

Introduction to AI: Basic concepts and terminology of artificial intelligence - Examples of AI in everyday life - Real-world examples of AI applications in different domains. Machine Learning Basics: Understanding the principles of machine learning - Overview of supervised and unsupervised learning.

Hands-on Activity: Simple AI Projects

- Working with appropriate educational content creation Gen-AI tools to generate quizzes and flashcards based on classroom material.
- Working with appropriate language learning Gen-AI tools to practice and enhance language skills through interactive exercises and games across multiple languages.

Unit 3: AI in Practice

(9 hours)

Text Analysis and Natural Language Processing (NLP): Introduction to NLP concepts and techniques - Hands-on exercises analyzing text data and extracting insights. Image Recognition and Processing: Basics of image recognition algorithms and techniques - AI Tools for Text and Image Processing

Hands-on Activity: Text and Image Projects

- Working with appropriate image processing Gen-AI tools to experiment with AI-generated images.
- Working with appropriate object recognition Gen-AI tools to identify various objects such as text, images, products, plants, animals, artworks, barcodes, and QR codes.

Unit 4: AI for Productivity and Creativity

(9 hours)

AI-enhanced Productivity and creativity Tools: Overview of productivity and creativity tools enhanced with AI capabilities - Tips for integrating AI into daily tasks and workflows. AI and Jobs: Exploring how AI impacts jobs and industries - Discussion on opportunities and challenges - Exploration of AI-powered creative tools and applications.

Hands-on Activity: Productivity and Creativity

- Working with appropriate content creation Gen-AI tools to generate interactive videos / blog posts / art / drawing / music and storytelling experience.
- Working with appropriate resume generation Gen-AI tools to create professional resumes efficiently.

Unit 5: Future of Gen AI and Final Project

(9 hours)

Emerging Trends in Gen AI - Applications of Generative AI - Ethical and Societal Impact of Gen AI - Future Directions and Challenges - Case Studies in Generative AI.

Hands-on Activity: Trends in Gen AI

- Working with appropriate speech generation Gen-AI tools to customize synthetic speech for virtual assistance across different applications.
- Working with appropriate data analysis Gen-AI tools to perform data analysis, visualization, and predictive modeling tasks.
- Working with appropriate Gen-AI design tools to simplify the creation of visually appealing presentations.
- Working with appropriate website builder Gen-AI tools to develop professional websites with AI assistance.

Pedagogy

- Demonstration of AI Tools, Lectures and Case studies.

Course Designer

1. Mrs. S. Ponmalar, Assistant Professor

COURSE CODE	TITLE OF THE COURSE	CATEGORY	L	T	P	CREDIT
NM23DTG	DESIGN THINKING	THEORY	30	-	-	2

Preamble

- To expose the students to the concept of design thinking as a tool for innovation
- To facilitate them to analyze the design process in decision making
- To impart the design thinking skills

Course Learning Outcomes

On the successful completion of the course, students will be able to:

CLO Number	CLO Statement	Knowledge Level
CLO 1	Understand the concepts of Design thinking and its application in varied business settings	K1
CLO 2	Describe the principles, basis of design thinking and its stages	K2
CLO 3	Apply design thinking process in problem solving	K3
CLO 4	Analyze the best practices of design thinking and impart them in business and individual day to day operations.	K4

Mapping with Programme Learning Outcomes

CLOs	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5
CLO 1	S	M	M	S	S
CLO 2	M	S	S	M	M
CLO 3	S	S	S	M	S
CLO 4	S	S	S	S	S

S-Strong; M-Medium; L-Low

Syllabus

UNIT – 1 (6 Hours)

Design Thinking Overview: Introduction to Design Thinking and Design Research Strategies - Design Thinking Skills

UNIT – II (6Hours)

Design Thinking Mindset : Principles of Design Thinking - Basis for design thinking -

Design Thinking Hats - Design thinking team

UNIT – III (6 Hours)

Empathize: Definition - Listen & Empathize with the Customers and / or Users
– Tools and Techniques

UNIT – IV (6 Hours)

Define : Definition - Defining the Problem - Tools and Techniques - Journey mapping and Ideate - definition - Ideation techniques

UNIT – V (6 Hours)

Prototype: Definition - Prototype Alternate Solutions - Test the Solutions - Visualization -Story Telling - Cautions and Pitfalls - Best Practices

Text Book

S.No.	Author(s)	Title of the Book	Publisher	Year of Publication
1.	ChristianMueller-Roterberg	Handbook of Design Thinking Tips& Tools for how to design thinking	Amazon Kindle Version	2018
2	Gavin AmbrosePaul Harris	Design Thinking	AVA Publishing Switzerland	2010
3	Sambhrant Srivastava and Vijay Kumar	A Text Book of DESIGN THINKING	Vayu Educationof India	2022

Reference Books

S. No.	Author(s)	Title of the Book	Publisher	Year of Publication
1	Maurício Vianna Ysmar Vianna Isabel K. Adler Brenda Lucena Beatriz Russo	Design Thinking - BusinessInnovation	MJV Press	2011
2	Moritz Gekeler	A practical guide to designthinking	Friedrich- Ebert-Stiftung	2019
3	J. Berengueres	The Brown Book of DesignThinking	UAE University College, Al Ain	2014

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
AM23C09	FINANCIAL MATHEMATICS II	THEORY	103	2	-	5

Preamble

- To impart a fundamental skill in constructing loan schedule.
- To understand the procedure related to Financial instruments Valuation.
- To expose knowledge and the ability to measure the investment performance of a fund.
- To enlarge the idea of interest rates that varies by term and stochastic interest rates.

Prerequisite

- Basic Knowledge in financial mathematics.

Course Learning Outcomes

On the successful completion of the course students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Recall the generalized cash-flow model to describe financial Transactions and to define an equation of value	K1
CLO2	Understand the relation between a present value, asset of cash flows and interest, as well as understand the interest rate risk	K2
CLO3	Apply financial valuation concepts to practical situations such as in investment project appraisals or in financial markets	K3
CLO4	Analyze and assess the principles underlying the evaluation of the main securities that are available in the financial markets	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	L	M	M	S	M	S
CLO2	M	S	M	S	S	S
CLO3	L	M	S	M	M	S
CLO4	L	M	M	S	M	M

S-Strong-M-Medium-L- Low

Syllabus

UNIT I (21 Hrs)

Equations of Value- Introduction- **The equation of value and the yield on a transaction- The theory-** Solving for an unknown quantity(Security S, Present value (P), Amount of a payment (D or R), Timing of a payment (n), interest rate (i))- Example applications- Uncertain payment or receipt- **Probability of cash flow-** Higher discount rate

UNITII (21 Hrs)

Loan Schedules- Introduction -**Calculating the capital outstanding-** Introduction- The theory: Prospective loan calculation- **Retrospective loan calculation.** Calculating the interest and capital elements- The loan schedule- Installments payable more frequently than annually.

UNITIII (20 Hrs)

Project Appraisal- Introduction- Accumulated value- **Net present values- Internal rate of return-**Payback periods.

UNITIV (20 Hrs)

Fixed-interest securities- Calculating the price and yield- Notax- Income tax- **Capital gains tax-** Capital gains test-Finding the yield where there is capital gains tax. Optional redemption dates- **Uncertain income securities-** Equities- Property.

UNITV (21 Hrs)

Term structure of Interest rates-Discrete-time rates: Discrete-time spot rates-Discrete-time forwardrates-Continuous-timerates: Continuous-timespotrates-Continuous-timeforwardrates-Instantaneous forward rates-**Theories of the term structure of interest rates-Why interest rates vary over time-**The theories – expectations theory – Liquidity- preference- Market segmentation- Yields to maturity-**Par yields.**

Text books

S. No	Author	Title of the book	Publishers	Year and Edition
1	IFOA	CM1 Actuarial Mathematics	The Actuarial Education Company on behalf of the Institute and Faculty of Actuaries	2019

Reference Books

S. No	Author	Title of the book	Publishers	Year and Edition
1	McCutcheon,J.J. Scott-William F	An Introduction to Mathematics of Finance	Oxford, Butterworth-Heinemann	2015
2	Eugene Donand Joel Lerner,W.Taylor	Basic Business Mathematics	Schaum's Outline Series, McGrawHill	2015

Blended Learning Links

Unit No	Topic	Reference Link
I	The equation of value and the yield on a transaction- The Theory	https://www.youtube.com/watch?v=Nuy8kWznXVI
	Probability of cash flow	https://www.youtube.com/watch?v=Nuy8kWznXVI
II	Calculating the capital outstanding	https://www.youtube.com/watch?v=qV-yO5GSwdg
	Retrospective loan calculation	https://www.youtube.com/watch?v=fWv9fECRLHA
III	Net present value	https://www.youtube.com/watch?v=enpBDVo3kZ0
	Internal rate of return	https://www.youtube.com/watch?v=OSDDrZZaV8E
	Payback periods	https://www.tutor2u.net/business/reference/payback-period
IV	Capital gains tax	https://www.youtube.com/watch?v=4Vjgsa4AOXsh https://www.youtube.com/watch?v=6jEok0E1uao
	Uncertain income securities	https://www.youtube.com/watch?v=ydhVF2Qg7oU
V	Theories of the term structure of interest rates	https://youtu.be/HI5zOAxBoDw https://www.investopedia.com/terms/e/expectationstheory.asp
	Why interest rates vary over Time	https://www.coursehero.com/file/44631548/Week-11-additional-notes-CM1-TS-Theoriespdf/
	Par yields	https://www.youtube.com/watch?v=xuyf64xdNVE

Skill Components

- Illustrate how duration and convexity of a cash flow sequence may be used to estimate the sensitivity of the value of the cash flow sequence to a shift in interest rates.
- Depict how an equation of value can be adjusted to allow for uncertain receipts or payments.
- To calculate a schedule of repayments under a loan and identify the interest and capital components of annuity payments
- Describe in the form of a cash flow model the operation of financial instruments.

Pedagogy

- Chalk and talk, PPT, Discussion, Assignment, Quiz, Case study

Lecture Plan

Module No.	Topic	CLO	No. of Hours	Content Delivery Method	Learning Methods
Unit I (21 Hrs)					
1	Equations of Value- Introduction	CLO1, CLO2,	3	Chalk and Talk, PPT	Experiential Learning
2	The equation of value and the yield on a transaction- The theory	CLO1, CLO2, CLO3	4	Videos	Participatory Learning

3	Solving for an unknown quantity (Security S , Present value (P), Amount of a payment (D or R) - Timing of a payment (n), interest rate (i))	CLO1, CLO3, CLO4	4	Chalk and Talk, Demo, PPT	Problem-based Learning
4	Example applications- Uncertain payment or receipt	CLO2, CLO3	4	Videos	Participatory Learning
5	Probability of cash flow	CLO3	4	Chalk and Talk, Demo, PPT	Problem-based Learning
6	Higher discount rate	CLO2, CLO3, CLO4	2	Chalk and Talk, Demo, PPT	Problem-based Learning
Unit II (21 Hrs)					
1	Loan Schedules- Introduction	CLO1, CLO2	5	Chalk and Talk	Experiential Learning
2	Calculating the capital outstanding	CLO2, CLO3, CLO4	5	Videos	Problem-based Learning
3	Introduction- The theory: Prospective loan calculation	CLO3, CLO4	5	Chalk and Talk, Demo, PPT,	Problem-based Learning
4	Retrospective loan calculation	CLO3, CLO4	5	Chalk and Talk, Videos	Participatory Learning
Unit -III (20 Hrs)					
1	Project Appraisal- Introduction- Accumulated value	CLO1, CLO2, CLO3	6	Chalk and Talk, PPT	Problem-based Learning
2	Net present values	CLO2, CLO3, CLO4	8	Chalk and Talk, Demo, PPT, Videos	Problem-based Learning
3	Internal rate of return Payback periods	CLO3, CLO4	6	Chalk and Talk, Demo, PPT, Videos	Participatory Learning
Unit IV (20 Hrs)					
1	Fixed-interest securities- Calculating the price and yield- No tax- Income tax	CLO1, CLO2, CLO3	5	PPT	Experiential Learning
2	Capital gains tax	CLO2, CLO3, CLO4	4	Chalk and Talk, Demo, PPT	Problem-based Learning
3	Capital gains test- Finding the yield where there is capital gains tax	CLO3, CLO4	4	Chalk and Talk, Demo, PPT	Problem-based Learning
4	Optional redemption dates	CLO2, CLO3, CLO4	4	Flipped Class, PPT	Participatory Learning
5	Uncertain income securities- Equities- Property.	CLO1, CLO2, CLO4	4	PPT	Experiential Learning
Unit V (21 Hrs)					

1	Term structure of Interest rates-Discrete-time rates: Discrete-time spot rates - Discrete-time forward rates	CLO1, CLO2, CLO3	3	Chalk and Talk, PPT	Participatory Learning
2	Continuous-time rates: Continuous-time spot rates- Continuous-time forward rates	CLO2, CLO3, CLO4	4	Chalk and Talk, Demo,PPT,Video s	Experiential Learning
3	Instantaneous forward rates	CLO3	2	Flipped Class,PPT	Problem-based Learning
4	Theories of the term structure of interest rates	CLO1, CLO2 CLO4	2	Chalk and Talk,,Videos	Experiential Learning
5	Why interest rates vary over time	CLO1, CLO2	2	Chalk and Talk,,Videos	Participatory Learning
6	The theories – expectations theory – Liquidity- preference- Market segmentation	CLO1, CLO2 CLO3	4	Chalk and Talk, Demo,PPT,Video s	Experiential Learning
7	Yields to maturity	CLO3 CLO4	2	Flipped Class,PPT	Problem-based Learning
8	Par yields	CLO2, CLO3 CLO4	2	Videos	Experiential Learning

Course Designers

1. Dr. K. Pavithra, Assistant Professor
2. Dr. M. Shobana, Assistant Professor

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
CM23C10	BUSINESS FINANCE	THEORY	73	2	-	4

Preamble

- To understand the concepts of business finance and their applications in managerial decision-making.
- To analyse the short-term and long-term decision-making techniques
- To examine the various determinants of dividends

Prerequisite

- No prerequisite required

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	State the concepts and approaches in finance	K1
CLO2	Demonstrate the possibilities for the optimum acquisition and application of the financial resources	K2
CLO3	Analyse the techniques required to select the feasible financial requirements of a Business Concern	K3
CLO4	Apply the concepts and tools of the financial decisions for adequate returns to the shareholders	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
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CLO1	S	S	S	S	S
CLO2	S	S	S	S	M
CLO3	S	S	S	S	S
CLO4	S	S	S	M	M

S- Strong; M-Medium; L-Low

Syllabus

Unit I (14 Hours)

Business Finance : Meaning and Definition – ***Approaches to Finance Function*** – Scope – Financial Decisions - Profit Maximization Vs Wealth maximization. Sources of Finance. **Financial Planning**: Objectives –Characteristics – ***Steps in financial planning – Limitations of Financial Planning. Role of Financial Manager***. **Time Value of money** – Practical Applications of Time Value Techniques – AI for TVM Calculation

Unit II (15 Hours)

Capital Budgeting: – Meaning – Need–***Importance – Kinds and Process of Capital Budgeting***– Cash Flow Estimation- Capital Budgeting Appraisal Methods: Traditional Methods - Payback Period – Accounting Rate of Return (ARR). Discounted Cash-flow Methods: Net Present Value (NPV) – Net Terminal Value - Internal Rate of Return – Profitability Index. **Cost of Capital**: Meaning – ***Significance – Classification of Cost***–Computation of Cost of Capital: Cost of Debt, Preference, Equity, Retained Earnings and Weighted Average Cost of Capital – Integration of AI to estimate cost of capital.

Unit III (15 Hours)

Capital Structure: Introduction – Importance – Factors Determining the Capital Structure***Theories of Capital Structure: Net Income Approach- Net Operating Income Approach-Traditional Approach and Modigliani and Miller Approach***. **Leverage**: Meaning – Types of Leverage – Impacts of Financial Leverage – Integration of AI for Trading and Equity.

Unit IV (15 Hours)

Capitalisation: Concept – Need- Theories of Capitalisation – ***Fair capitalization – Over Capitalization – Under Capitalization – Watered Stock – Over Trading and Under Trading.***
Working Capital Management: Meaning – Classification-***Importance- Factors Determining the Working Capital Requirements***– Management of Working Capital – Methods of Estimating Working Capital Requirements – Integration of AI for estimation of working capital.

Unit V (14 Hours)

Receivables Management: Forming of credit policy. Inventory Management – Tools and Techniques. **Dividend Policy**: Determinants of Dividend Policy – ***Types of Dividend Policy – Advantages and Disadvantages of Stable Dividend Policy – Theory of Relevance***and Irrelevance - IKS principles in Dividend Policy - IKS inspired Dividend Policy Strategies.

***Distribution of marks : Theory 40 % Problems 60 %**

***Highlighted Content offered in Blended Mode (Link Provided)**

Text Book

Sl.No.	Author name	Title of the book	Publisher	Year & Edition
1	Shashi. K. Gupta Sharma R. K	Financial Management	Kalyani Publishers	2018

Reference Books

Sl.No.	Author name	Title of the book	Publisher	Year & Edition
1	Ravi. M. Kishore	Financial Management - Problems and	Taxmann Publications Pvt Ltd	2017 Edition

		Solutions		
2	Khan & Jain	Financial Management	Tata McGraw Hill	2018
3	Maheshwari S. N	Financial Management	Sultan Chand & Sons	15 th Edition 2019
4	Alan C. Shapiro Peter Moles	International Financial Management	Wiley	2016 Edition

Skill Components

- Preparation of financial planning for the concern
- Application of time value techniques to the real situations
- Analyse the capital structure of different companies belongs to different industries
- Estimate the cost of capital for the funds raised by the company
- Application of capital budgeting techniques to select the project proposals.
- Analyse the financial statements and Estimate the working capital requirements of the company.

Pedagogy

- Lecture, Group Discussion, Case study, Role playing, Activity based learning

Lecture Plan

UNIT – I (14 Hours)					
Sl. No	LECTURE	TOPIC	CONTENTS	ACTIVIT Y	CLOs
1	1	Business Finance – Meaning and Definition	In Class Discussion using PPT	Quiz	CLO 1, CLO 2
2	2 – 3	Approaches to Finance Function (Online Learning)	https://www.businessmanagementideas.com/financial-management/finance-function-meaning-and-approaches/3746 https://www.economicdiscussion.net/financial-management/objectives-of-financial-management/33260	Quiz	CLO 2, CLO 3
3	4 – 5	Scope – Financial decisions. Profit Maximization Vs Wealth maximization	In Class Lecture using PPT &chalk and talk	Interaction and discussion	CLO 3
4	6 – 7	Sources of Finance	In Class Lecture using PPT &chalk and talk	Assignment	CLO 3 , CLO 4
5	8 – 9	Financial Planning – Objectives – characteristics	In Class Lecture using PPT &chalk and talk	Assignment	CLO 3, CLO 4
6	10-11	Steps in financial planning	https://www.policybazaar.com/life-insurance/general-info/articles/complete-guide-to-financial-planning/	Quiz	CLO3, CLO4
7	12	Limitations of Financial Planning. Role of Financial Manager. (Online Learning)	https://www.wikiaccounting.com/five-limitations-of-financial-planning/ https://www.yourarticlelibrary.com/company/financial-planning-company/financial-plan-objectives-significance-and-limitations/71562	Assignment	CLO 3, CLO 4

8	13 -14	Time Value of money – Practical Applications of Time Value Techniques. AI for TVM Calculation	In Class Discussion using PPT	Assignment	CLO 3, CLO 4
UNIT – II (15 Hours)					
9	15	Capital Budgeting – Meaning – Need	In Class Lecture using PPT & chalk and talk	Assignment	CLO 1, CLO 2
10	16	Importance – Kinds and Process of Capital Budgeting (Online Learning)	Importance - https://www.wallstreetmojo.com/capital-budgeting-importance/ Kinds and Process of Capital Budgeting https://www.deskera.com/blog/capital-budgeting/ https://cleartax.in/s/capital-budgeting https://quickbooks.intuit.com/in/resources/budgeting/capital-budgeting/	Assignment	CLO 2, CLO 3
11	17-21	Cash Flow Estimation- Capital Budgeting Appraisal Methods: Traditional Methods - Payback Period – Accounting Rate of Return (ARR). Discounted Cash-flow Methods: Net Present Value (NPV) – Net Terminal Value - Internal Rate of Return – Profitability Index	In Class Lecture using PPT & chalk and talk	Interaction and Discussion	CLO 3, CLO 4
12	22	Cost of Capital – Meaning	In Class Lecture using PPT	Interaction and Discussion	CLO 3, CLO 4
13	23-24	Significance – Classification of Cost (Online Learning)	https://www.yourarticlelibrary.com/financial-management/cost-of-capital/classification-of-cost-of-capital-5-types-with-calculations/66471 https://www.investopedia.com/terms/c/costofcapital.asp	Quiz	CLO3, CLO 4
14	25-29	Computation of Cost of Capital: Cost of Debt, Preference, Equity, Retained Earnings and Weighted average Cost of Capital- Application of AI to estimate cost of capital.	In Class Lecture using PPT & chalk and talk	Assignment	CLO 3, CLO 4
UNIT – III (15 Hours)					
15	30-32	Capital Structure – Introduction Importance – Factors Determining the Capital Structure	In Class Lecture using PPT & chalk and talk	Assignment	CLO 1, CLO 2

16	33-35	Theories of Capital Structure: Net Income Approach- Net Operating Income Approach (Online Learning)	https://www.youtube.com/watch?v=sSdDej6jpBs	Quiz	CLO 2, CLO 3, CLO 4
17	36-38	Traditional Approach and Modigliani and Miller Approach (Online Learning)	https://www.youtube.com/watch?v=0wBkjFkR-xg	Quiz	CLO 2, CLO 3, CLO 4
18	39-41	Leverage – Meaning – Types of Leverage	In Class Lecture using PPT & chalk and talk	Interaction and Discussion	CLO 1, CLO 2
19	41-44	Impacts of Financial Leverage - Significance and Limitations.	In Class Lecture using PPT	Interaction and Discussion	CLO 2, CLO 3, CLO 4
UNIT IV (15 Hours)					
20	45-47	Capitalisation – Concept – Need- Theories of Capitalisation	In Class Lecture using chalk and talk	Interaction and Discussion	CLO 1, CLO2
21	48-50	Fair capitalization – Over Capitalization – Under Capitalization (Online learning)	https://www.economicsdiscussion.net/financial-management/capitalisation/33417	Assignment	CLO2, CLO3
22	51-52	Watered Stock – Over Trading and Under Trading. (Online learning)	https://www.wallstreetmojo.com/watered-stock/	Assignment	CLO2, CLO3
23	53-54	Working Capital Management – Meaning – Classification-	In Class Lecture using PPT	Interaction and Discussion	CLO2, CLO3
24	55-56	Importance- Factors Determining the Working Capital Requirements	https://corporatefinanceinstitute.com/resources/accounting/working-capital-management/	Quiz	CLO2, CLO3
25	57-59	Management of Working Capital – Methods of Estimating Working Capital Requirements.	In Class Lecture using Chalk and talk	Interaction and Discussion	CLO2, CLO3, CLO4
UNIT V (14 Hours)					
26	60-64	Receivables Management Forming of credit policy .Inventory Management – Tools and Techniques.	Self-Study	Assignment	CLO1, CLO2
27	65-67	Dividend Policy – Determinants of Dividend Policy	In Class Lecture using Chalk and talk	Assignment	CLO2, CLO3
28	68-70	Types of Dividend Policy – Advantages and	https://corporatefinanceinstitute.com/resources/	Quiz	CLO2, CLO3

		Disadvantages of Stable Dividend Policy	equities/dividend- policy/		
29	71	Theory of Relevance (Online learning)	https://www.youtube.com/watch?v=Yy2Y7LKEQLo&t=13s	Quiz	CLO2, CLO3, CLO4
30	72-73	Theory of Irrelevance.	In Class Lecture using Chalk and talk	Assignment	CLO2, CLO3, CLO4

Course Designers:

1. Dr. B. Thulasipriya, Department of Commerce
2. Dr. S. Sujatha, Department of Commerce

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
AM23A07	ACTUARIAL STATISTICS II	THEORY	73	2	-	4

Preamble

- To present the fundamental basis for many other areas in the mathematical sciences including statistics, modern optimization methods and risk modeling.
- To impart knowledge to the students on the concepts of statistical methods of testing and drawing inferences.
- To define and introduce the concept of Testing and Decision Making.
- To focus on the understanding and implementation of Data Analysis.

Prerequisite

- Basic Knowledge in Actuarial statistics.

Course Learning Outcomes

On the successful completion of the course students

CLO Number	CLO Statement	Knowledge Level
CLO1	Classification of Data variables into Class Intervals according to their properties.	K1
CLO2	Testing Data variables and statistics for meaningful Interpretations.	K2
CLO3	Estimating and analysing the variables and their distributions, defining the errors associated and correlating the variables along with their classification of the losses assessed into loss Distributions.	K3
CLO4	To infer and make conclusive decisions for the results obtained after testing and define prior and Posterior implications.	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO 1	S	M	S	L	M	M
CLO 2	L	M	S	S	M	L
CLO 3	S	M	S	L	M	M
CLO 4	S	S	L	M	L	L

S- Strong; M-Medium; L-Low

Syllabus

UNIT I (15 Hrs)

Confidence Interval- Derivation of confidence intervals- **Confidence Intervals for Normal distribution** - Confidence Intervals for binomial and Poisson parameters - **Confidence Intervals for two sample problems** - paired data (simple problems from CS I)

UNIT II (14 Hrs)

Hypothesis testing- Null and alternate hypothesis-Test statistic- **type I and type II error-likelihood ratio**- critical region - level of significance-probability value and Power of a test-

Applications to Normal, Poisson, Binomial and paired data. (Simple problems from CS I)

UNIT III (15 Hrs)

Data analysis- Bivariate Correlation Analysis - Multivariate Correlation Analysis. **Linear Regression** – Simple bivariate linear model – **Full normal model and inference.** (simple problems from CS I)

UNIT IV (14 Hrs)

Generalised Linear models - **Exponential family** – Linear Predictor – **Link functions.** (simple problems from CS I)

UNIT V (15 Hrs)

Estimation- Bayes theorem- **Bayesian estimation vs classic estimation**-likelihood function- prior and Posterior distribution- **relationship between prior and Posterior** – **conjugate distributions, uninformative prior distributions and loss distributions.** (Simple problems from CS I)

Text Books

S. No	Author	Title of the book	Publishers	Year and Edition
1.	-	CS 1 Actuarial Statistics I (Combined Materials Pack for exams -2019) (From Chapter 8)	The Actuarial Education Company on behalf of the Institute and Faculty of Actuaries.	2019

Reference Books

S. No	Author	Title of the book	Publishers	Year and Edition
1.	S.C.Gupta and V.K.Kapoor	Fundamentals of Mathematical Statistics	Sultan chand& sons	2014
2.	S.P.Gupta	Statistical Methods	Sultan chand& sons	2015

Blended Learning links

Unit No	Topic	Reference Link
I	Confidence Interval-	https://youtu.be/-iYDu8fIFXQ
	Confidence Intervals for Normal distribution	https://youtu.be/p_KApjpyBE
	Confidence Intervals for binomial and Poisson parameters	https://youtu.be/7VhEcdcz32s
	Confidence Intervals for two sample problems	https://youtu.be/Le8qzbDhunE https://youtu.be/sJyZ9vRhP7o
II	Hypothesis testing- Null and alternate hypothesis	https://youtu.be/zJ8e_wAWUE https://youtu.be/8Aw45HN51A https://youtu.be/wiYJWyfdGg4
	Test statistic	https://youtu.be/QZ7kgmhdIwA
	type I and type II error	https://youtu.be/Hdbbx7DIweQ
	likelihood ratio- level of significance- probability value and power of a test	https://youtu.be/kzY0wJYalrY https://www.youtube.com/watch?v=tOsqcj1vp4gd
III	Data analysis- Bivariate Correlation Analysis	https://youtu.be/cdJNoDJYSQM https://youtu.be/cdJNoDJYSQM
	Multivariate Correlation Analysis.	https://youtu.be/8lupGBjyWMY
	Linear Regression	https://youtu.be/BG9G6VYVMFs https://youtu.be/xTpHD5WLuoA
	Simple bivariate linear model	https://youtu.be/zPG4NjIkCjc https://youtu.be/1zduyWeBOh0
	Full normal model and inference.	https://youtu.be/tFRXsngz4UQ https://youtu.be/FXvW0xKXAAE
IV	Generalised Linear models	https://youtu.be/wqIcv3Wehug

		https://youtu.be/SqN-qlQOM5A
	Exponential family	https://youtu.be/VFZ8b_xeTc https://youtu.be/djT6-YamHaA
	Link functions	https://youtu.be/iZ6wSDOhYXs https://youtu.be/f--fD8Y0RnA
V	Estimation- Bayes theorem.	https://youtu.be/HZGCoVF3YvM
	Bayesian estimation vs classic estimation.	https://youtu.be/iMjDOTIb3-Q https://youtu.be/ZnkRbtZLPm4
	relationship between prior and Posterior	https://youtu.be/CHwM6dIec44 https://youtu.be/pG0S2u188bg
	uninformative prior distributions loss distributions.	https://youtu.be/GvvyZ2PIu0 https://youtu.be/PdaihO22_ZI

Skill Components

- To assign Confidence interval for single and double sample distributions.
- Test the Hypothesis according to the CI's
- Plot the Regression and Correlation concepts of data analysis in the Insurance field.
- Identify the difference between the Bayesian methods and classical methods of estimation and analysis of insurance claims.
- Learn the loss distributions and their applications in the Insurance Calculations.

Pedagogy

- Chalk and talk , PPT, Discussion , Assignment, Quiz, Case study

Contents and Presentation Schedule

Module No.	Topic	CLO	No. of Hours	Content Delivery Method	Learning Methods
Unit –I (15 Hrs)					
1	Confidence Interval-	CLO1	2	Chalk and Talk, PPT	Experiential Learning
2	Confidence Intervals for Normal distribution	CLO2, CLO3	2	Videos	Blended Learning
3	Confidence Intervals for binomial and Poisson parameters	CLO2, CLO3	4	Chalk and Talk, Demo,PPT	Problem-based Learning
4	Confidence Intervals for two sample problems	CLO3, CLO4	4	Videos	Blended Learning
5	Paired data	CLO3, CLO4	3	Chalk and Talk, Demo,PPT	Problem-based Learning
Unit II (14 Hrs)					
1	Hypothesis testing- Null and alternate hypothesis	CLO1, CLO2	4	PPT	Experiential Learning
2	Test statistic	CLO1, CLO2, CLO3	1	Chalk and Talk, PPT	Problem-based Learning
3	type I and type II error	CLO1, CLO2, CLO3	3	Flipped Class,PPT	Blended Learning
4	likelihood ratio-	CLO3, CLO4	1	PPT	Blended Learning

5	level of significance-probability value and power of a test	CLO3, CLO4	2	Chalk and Talk, PPT, Videos	Problem-based Learning
6	Applications to poisson, binomial and paired data	CLO3, CLO4	3	Chalk and Talk, PPT, Videos	Problem-based Learning
Unit –III (15 Hrs)					
1	Data analysis- Bivariate Correlation Analysis	CLO1, CLO2, CLO3	4	Chalk and Talk, PPT	Problem-based Learning
2	Multivariate Correlation Analysis.	CLO1, CLO2, CLO3	3	Chalk and Talk, Demo, PPT, Videos	Problem-based Learning
3	Linear Regression –	CLO1, CLO2, CLO3	2	Chalk and Talk, Demo, PPT, Videos	Blended Learning
4	Simple bivariate linear model	CLO3, CLO4	2	Chalk and Talk, PPT, Videos	Problem-based Learning
5	Full normal model and inference. (simple problems from CS I)	CLO3, CLO4	4	Videos	Blended Learning
Unit IV (14 Hrs)					
1	Generalised Linear models	CLO1, CLO2, CLO3	3	Chalk and Talk	Experiential Learning
2	Exponential family	CLO1, CLO2, CLO3	4	Videos	Blended Learning
3	Linear Predictor	CLO3, CLO4	4	Chalk and Talk, Demo, PPT,	Problem-based Learning
4	Link functions. (simple problems from CS I)	CLO3, CLO4	3	Chalk and Talk, Videos	Blended Learning
Unit V (15 Hrs)					
1	Estimation- Bayes theorem.	CLO1, CLO2, CLO3	3	Chalk and Talk, PPT	Participatory Learning
2	Bayesian estimation vs classic estimation.	CLO1, CLO2, CLO3	3	Chalk and Talk, Demo, PPT, Videos	Blended Learning
3	likelihood function- prior and posterior distribution.	CLO2, CLO3	3	Flipped Class, PPT	Problem-based Learning
4	relationship between prior and Posterior	CLO3, CLO4	2	Chalk and Talk,, Videos	Blended Learning
5	Conjugate distributions, uninformative prior distributions loss distributions.	CLO3, CLO4	4	Chalk and Talk,, Videos	Blended Learning

Course Designers

1. Dr. M.Shobana, Assistant Professor
2. Mrs. A. Jeniffer, Assistant Professor

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
AM23A08	ACTUARIAL ASPECTS OF PRODUCT DEVELOPMENT	THEORY	73	2	-	4

Preamble

- To familiarize the students with the concept and process involved in designing insurance products and also setting assumptions.
- To provide the students with an understanding of pricing insurance products and the various factors that influence pricing and determination of premium rates.
- To develop skills to effectively apply actuarial techniques in various steps of product design and pricing

Prerequisite

- Basic Knowledge in Insurance.

Course Learning Outcomes

On the successful completion of the course students

CLO Number	CLO Statement	Knowledge Level
CLO1	To familiarize the Insurance products and their attributes.	K1
CLO2	To learn Pricing and its calculation methods.	K2
CLO3	To implement Premium Calculation techniques and apply the reinsurance concept.	K3
CLO4	To Solvency Margin and reserving adjustments for accurate calculation and inference.	K4

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO 1	S	M	S	L	M	M
CLO 2	L	M	S	S	M	M
CLO 3	S	M	S	L	M	M
CLO 4	S	S	L	M	L	L

S- Strong; M-Medium; L-Low

Syllabus

UNIT I (15 Hrs)

Insurance product- Definition- Attributes- **Parties involved in insurance product transactions**- Product design- Why product design- Factors affecting product design-**Role of regulations in product design.**

UNIT II (14 Hrs)

Pricing of Products: Meaning of price and premium-**Methods of pricing and price determination**- Components of premium-**Issues in determining premium**- Regulatory influences on pricing.

UNIT III (15 Hrs)

Interest Rate: Assumptions setting process- **Importance of interest rates in calculation of premiums**-Concept of interest rates- Determination of interest rates-A simple example- **Interest rate risk.** Mortality and Morbidity Rates: Reasons for use of parameters- Mortality and morbidity rates-**Determining mortality and morbidity rates**-Experience analysis- Mortality or morbidity experience studies.

UNIT IV (15 Hrs)

Persistency/Withdrawal Rates: Reasons for use of persistency-Withdrawal Rates- **Determining**

withdrawal rate- Withdrawal experience analysis- A Simple example- Withdrawal risk. Commission Rates: **Importance of commission rates-** Understanding the concept of commission rates- Determining commission rates.

UNIT V (14 Hrs)

Reinsurance Support: **Meaning and need for reinsurance-** Types of reinsurance arrangement- **Regulation on reinsurance.**

Text Books

S. No	Author	Title of the book	Publishers	Year and Edition
1.	NA	IC-92 Actuarial Aspects of Product Development	Insurance Institute of India	2016
		Chapters – 1,2,3,5,7,8,9,10,10B,12,13		

Reference Books

S. No	Author	Title of the book	Publishers	Year and Edition
1	Alka Mittal , S.L.Gupta,S.	Principles of Insurance and Risk Management	S. Chand & Sons	2014
2	M.N.Mishra and Dr.S.B.Mishra	Insurance Principles And Practice	S.Chand and Company Ltd	2016

Blended Learning Links

Unit No	Topic	Reference Link
I	Parties involved in insurance product transactions	(797) did you know of these insurance products? ankur warikoo hindi video – youtube (797) parties of life insurance contract – youtube
	Parties involved in insurance product transactions	(797) did you know of these insurance products? ankur warikoo hindi video – youtube (797) parties of life insurance contract – youtube
	Role of regulations in product desig	(797) Lec 01 Introduction to Product Design and Development – youtube
II	Methods of pricing and price determination	(797) How to Solve a Case Study: Pricing Strategies in 5 Minutes – youtube How are Premiums Calculated for CIBC Payment Protector™ Insurance for Credit Cards? – Bing video
	Issues in determining premium	(797) which factors determine your life insurance premium ? – youtube
III	Importance of interest rates in calculation of premiums	Interest Rate Risk Definition and Impact on Bond Prices (investopedia.com)
	Interest rate risk.	(797) Interest Rate Risk – youtube
	Determining mortality and morbidity rates	(797) Level Of Prevention & Measurement of Morbidity & Mortality Rate – youtube
IV	Commission Rates: Importance of commission rates	(797) Insurance Agent Commission Structure Training – youtube
	Determining commission rates	(797) Commission Rates for Independent Life Insurance Agents – What Contract Levels Should You Get? – youtube
V	Meaning and need for reinsurance	(797) Reinsurance – youtube
	Regulation on reinsurance.	(797) Solvency Ratio & Solvency Margin What is the difference? Audit of Insurance Company ican – youtube

Skill Components

- To understand different insurance products and how the products are developed.
- To analyze how premium amount is fixed for the life insurance Policies.

- To understand the different rates used for premium fixation for insurance products.
- Demonstrate how reinsurance can save insurers from grave consequences.

Pedagogy

- Lecture, Board, PPT Presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning.

Contents and Presentation Schedule

Module No.	Topic	CLO	No. of Hours	Content Delivery Method	Learning Methods
Unit –I (15 Hrs)					
1	Insurance product- Definition- Attributes	CLO1, CLO2	3	Chalk and Talk, PPT	Experiential Learning
2	Parties involved in insurance product transactions	CLO1, CLO2	3	Videos	Blended Learning
3	Product design- Why product design	CLO1, CLO2, CLO3	3	Chalk and Talk, Demo,PPT	Problem-based Learning
4	Factors affecting product design	CLO3, CLO4,	3	Videos	Participatory Learning
5	Role of regulations in product design	CLO3, CLO4	3	Chalk and Talk, Demo,PPT	Blended Learning
Unit II (14 Hrs)					
1	Pricing of Products: Meaning of price and premium- Components of premium	CLO1, CLO2, CLO3	3	PPT	Experiential Learning
2	Methods of pricing and price determination	CLO1, CLO2, CLO3	3	Chalk and Talk, PPT	Blended Learning
3	Issues in determining premium	CLO1, CLO2, CLO4	4	Flipped Class,PPT	Blended Learning
4	Regulatory influences on pricing	CLO3, CLO4	4	PPT	Experiential Learning
Unit –III (15 Hrs)					
1	Interest Rate: Assumptions setting process	CLO1, CLO2, CLO3	2	Chalk and Talk, PPT	Problem-based Learning
2	Importance of interest rates in calculation of premiums	CLO1, CLO2, CLO3	2	Chalk and Talk, Demo,PPT, Videos	Blended Learning
3	Concept of interest rates	CLO1, CLO2, CLO4	2	Chalk and Talk, Demo,PPT, Videos	Participatory Learning
4	Determination of interest rates-A simple example	CLO3, CLO4	2	Chalk and Talk, PPT, Videos	Problem-based Learning
5	Interest rate risk.	CLO3, CLO4	1	Videos	Blended Learning

6	Mortality and Morbidity Rates: Reasons for use of parameters	CLO1, CLO2, CLO4	2	Chalk and Talk, PPT	Problem-based Learning
7	Mortality and morbidity rates	CLO1, CLO2, CLO4	1	Flipped Class,PPT	Participatory Learning
8	Determining mortality and morbidity rates	CLO 3, CLO 4	1	Videos	Experiential Learning
9	Experience analysis- Mortality or morbidity experience studies.	CLO3, CLO4	2	Chalk and Talk, Demo,PPT,Videos	Participatory Learning
Unit IV (15 Hrs)					
1	Persistency/Withdrawal Rates: Reasons for use of persistency	CLO1, CLO2, CLO3	3	Chalk and Talk	Experiential Learning
2	Withdrawal Rates- Determining withdrawal rate	CLO1, CLO2, CLO3	2	Videos	Blended Learning
3	Withdrawal experience analysis- A Simple example	CLO1, CLO2, CLO4	2	Chalk and Talk, Demo,PPT,	Problem-based Learning
4	Withdrawal risk.	CLO3, CLO4	2	Chalk and Talk, Videos	Participatory Learning
5	Commission Rates: Importance of commission rates	CLO3, CLO4	2	Videos	Blended Learning
6	Understanding the concept of commission rates	CLO3, CLO4	2	Chalk and Talk, Demo,PPT,	Problem-based Learning
7	Determining commission rates	CLO2, CLO3, CLO4	2	Chalk and Talk, Videos	Problem-based Learning
Unit V (14 Hrs)					
1	Reinsurance Support: Meaning and need for reinsurance-	CLO1, CLO3, CLO3	5	Chalk and Talk, Videos	Blended Learning
2	Types of reinsurance Arrangement	CLO1, CLO2, CLO3	5	Videos	Problem-based Learning
3	Regulation on reinsurance.	CLO2, CLO3, CLO4	4	Chalk and Talk, Videos	Blended Learning

Course Designers

1. Dr.M.Shobana ,Assistant Professor
2. Dr..D.Sreemathi, Assistant Professor

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
NM23EII	Entrepreneurship and Innovation (Ignite X)	THEORY	30	-	-	2

Ignite Course

Course Learning Objectives

1	Inspire; develop entrepreneurial mind-set and attributes; entrepreneurial skill sets for venture creation and intrapreneurial leadership
2	Apply process of problem-opportunity identification and validation through developing a macro perspective of the market, industries and customers while using design thinking principles.
3	Understand and analyse Customer and Market segmentation, estimation of Market size, Customer personae development and validation
4	Understand and Initiate Solution design, Prototyping for Proof of Concept. Understand MVP development and validation to determine Product-Market fit
5	Craft initial Business and Revenue models, financial planning and pricing strategy for profitability and financial feasibility of a venture. Understand relevance and viability of informal and formal funding with respect to different business models.
6	Understand and develop Go-to-Market strategies with a focus on digital marketing channels.
7	Understand and apply story telling skills in presenting a persuasive and defensible Venture Pitch.

Course Content

Unit I: Entrepreneurship Fundamentals & Context

Meaning and concept, attributes and mindset of entrepreneurial and intrapreneurial leadership, role models in each and their role in economic development. Gamified role play based exploration aligned to one's short term career aspiration and ambition. An understanding of how to build entrepreneurial mindset, skillsets, attributes and networks while on campus.

Core Teaching Tool: Simulation, Game, Industry Case Studies (Personalized for students – 16 industries to choose from), Venture Activity

Unit II: Problem & Customer Identification

Understanding and analysing the macro-Problem and Industry perspective, technological, socio-economic and urbanization trends and their implication on new opportunities. Identifying passion, identifying and defining problem using Design thinking principles. Analysing problem and validating with the potential customer. Iterating problem-customer fit. Understanding customer segmentation, creating and validating customer personas. Competition and Industry trends mapping and assessing initial opportunity.

Core Teaching Tool: Several types of activities including Class, game, Gen AI, 'Get out of the Building' and Venture Activity.

Unit III : Solution design & Prototyping, Opportunity Assessment and Sizing

Understanding Customer Jobs-to-be-done and crafting innovative solution design to map to customer's needs and create a strong value proposition. Developing Problem-solution fit in an iterative manner. Understanding prototyping and MVP. Developing a feasibility prototype with differentiating value, features and benefits. Initial testing for proof-of-concept and iterate on the prototype.

Core Teaching Tool: Venture Activity, no code Innovation tools, Class activity

Unit IV : Business & Financial Model, Go-to-Market Plan

Introduction to Business model and types, Lean approach, 9 block lean canvas model, riskiest assumptions to Business models. Importance of Build - Measure – Lean approach Business planning: components of Business plan- Sales plan, People plan and Financial plan, Financial Planning: Types of costs, preparing a financial plan for profitability using financial template, understanding basics of Unit economics and analysing financial performance. Introduction to Marketing and Sales, Selecting the Right Channel, creating digital presence, building customer acquisition strategy. Choosing a form of business organization specific to your venture, identifying sources of funds: Debt & Equity, Map the Start-up Lifecycle to Funding Options.

Core Teaching Tool: Founder Case Studies – Sama and SecurelyShare; Class activity and discussions; Venture Activities.

Unit V: Scale Outlook and Venture Pitch readiness

Understand and identify potential and aspiration for scale vis a vis your venture idea. Persuasive Storytelling

and its key components. Build an Investor ready pitch deck.

Core Teaching Tool: Class activity and discussions; Venture Activities.

References

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3. Osterwalder, A., & Pigneur, Y. (2010). Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers. John Wiley & Sons.
4. Chowdhry Ajay, (2023) Just Aspire: Notes on Technology, Entrepreneurship and the Future,
5. Simon Sinek (2011) Start With Why, Penguin Books limited
6. Brown Tim (2019) Change by Design Revised & Updated: How Design Thinking Transforms Organizations and Inspires Innovation, Harper Business
7. Namita Thapar (2022) The Dolphin and the Shark: Stories on Entrepreneurship, Penguin Books Limited
8. Collins Jim, Porras Jerry, (2004) Built to Last: Successful Habits of Visionary Companies
9. Burlington Bo, (2016) Small Giants: Companies That Choose to Be Great Instead of Big
10. Saras D. Sarasvathy, (2008) Effectuation: Elements of Entrepreneurial Expertise, Elgar Publishing Ltd

Web Resources

1. Learning resource- IgniteX Course Wadhvani platform (Includes 200+ components of custom created modular content + 500+ components of the most relevant curated content)