

DEPARTMENT OF MATHEMATICS

COURSE STRUCTURE & SYLLABI

(For the students admitted from year 2023-2024 onwards)

**Programme : DIPLOMA IN INSURANCE AND ACTUARIAL SCIENCE
(UNDER UGC NSQF SCHEME)**



JAMAL MOHAMED COLLEGE (AUTONOMOUS)

Accredited with A++ Grade by NAAC (4th Cycle) with CGPA 3.69 out of 4.0
(Affiliated to Bharathidasan University)

TIRUCHIRAPPALLI – 620 020

DIPLOMA IN INSURANCE AND ACTUARIAL SCIENCE (UNDER UGC NSQF SCHEME)

Sem.	Course Code	NSQF Level	Course	Course Title	Ins. Hrs /Sem.	Credit	Marks		Total
							CIA	ESE	
I	23DIA1CC1	4	General	Principles of Insurance	60	4	25	75	100
	23DIA1CC2	4	General	Practice of Life Insurance	60	4	25	75	100
	23DIA1CC3	4	General	Life Insurance Agent	60	4	25	75	100
	23DIA1CC4	4	Skill	Mathematics of Finance - I	90	6	25	75	100
	23DIA1CC5	4	Skill	Practice of Life Insurance - Case Study	90	6	25	75	100
	23DIA1IN1	4	Skill	Life Insurance Agent - Internship Report*	180	6	--	100	100
				Total	540	30	125	475	600
II	23DIA2CC6	5	General	Regulations of Insurance Business	60	4	25	75	100
	23DIA2CC7	5	General	Practice of General Insurance	60	4	25	75	100
	23DIA2CC8	5	General	Mutual Fund for Distributors and Employees	60	4	25	75	100
	23DIA2CC9	5	Skill	Mathematics of Finance - II	90	6	25	75	100
	23DIA2CC10	5	Skill	Practice of General Insurance - Case Study	90	6	25	75	100
	23DIA2IN2	5	Skill	Mutual Fund for Distributors and Employees - Internship Report*	180	6	--	100	100
				Total	540	30	125	475	600

* Students may be permitted to undergo Internship for specified number of hours either in on campus or off campus or both.

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23DIA1CC1	General	60	4	25	75	100
Course Title		PRINCIPLES OF INSURENCE					

SYLLABUS		
Unit	Contents	Hours
I	Risk management, The concept of insurance and its evolution.	12
II	The business of insurance, The insurance market.	12
III	Insurance customers, The insurance contract.	12
IV	Insurance terminology, Life assurance products.	12
V	General insurance products.	12

Text Book(s):
Principles of Insurance (IC-01), Study material published by Secretary- General, Insurance Institute of India, Mumbai (August2019).

Course Coordinators:

Dr. A. Prasanna

Dr.V.Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23DIA1CC2	General	60	4	25	75	100
Course Title		PRACTICE OF LIFE INSURANCE					

SYLLABUS		
Unit	Contents	Hours
I	Life insurance organisation, Premiums and bonuses.	12
II	Plans of life insurance, Annuities.	12
III	Group insurance, Linked life insurance policies.	12
IV	Applications and acceptance, Policy documents.	12
V	Premium-Payment, Life insurance Corporation (L.I.C.) of India, Lapse and revival, Assignment, nomination and surrender of policy, Policy claims.	12

Text Book(s):
P. Venugopal, Secretary- General, Practice of Life Insurance (IC-02) , Insurance Institute of India, Mumbai , March, 2019.

Course Coordinators:

Dr. A. Prasanna
Dr.V.Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23DIA1CC3	General	60	4	25	75	100
Course Title		LIFE INSURANCE AGENT					

SYLLABUS		
Unit	Contents	Hours
I	Applications, Pricing And Valuation Of Life Insurance	12
II	Documentation In Life Insurance	12
III	Underwriting In Life Insurance	12
IV	Service Aspects Of Life Insurance Agent	12
V	Health Insurance Concepts-I	12

Text Book(s):
Study material published by P. Venugopal, Secretary- General, (eBook) Insurance Institute of India Insurance Agents Life (IC-38) , Mumbai , 2016
UNIT I Chapter 10 & 11 , Text Book Pages From 172 TO 204
UNIT II Chapter 12 TO 14, Text Book Pages From 205 – 206
UNIT III Chapter 15 , Text Book Pages From 267-288
UNIT IV Chapters 2 &3 , Text Book Pages From 27-69
UNIT V Chapters 17-19 , Text Book Pages 303-398

Course Coordinators:

Dr. A. Prasanna
Dr.V.Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23DIA1CC4	Skill	90	6	25	75	100
Course Title		MATHEMATICS OF FINANCE - I					

SYLLABUS		
Unit	Contents	Hours
I	Simple interest- the time between dates-equations of value-partial payments- #simple discount#-promissory notes.	18
II	Compound interest- accumulated values- compound interest tables- present values- nominal and effective rates of interest- discount and discounted values.	18
III	Compound interest- Varying rates of interest-equation of values- equated time payment-Level Annuities.	18
IV	Level Annuities-Annuities certain Annuities certain- present values-accumulated values- Annuity due- present values- accumulated values- deferred annuity certain.	18
V	Accumulated values- deferred annuity due- present values- accumulated values- Perpetuity-Variable annuities.	18

Text Book(s):	
1. Foundation of Actuarial Science (IC-28), Study Material Published by Insurance Institute of India, Mumbai, Reprinting February 2017.	
2. Peter Zima and Robert L. Brown, Mathematics of Finance, Tata McGraw-Hill Publishing Company Limited, New Delhi, Second edition, 2005	
Unit I	Chapter 3 Section 3.1 to 3.6 T.B2
Unit II	Chapter 1 Section 1 to 7 T.B1
Unit III	Chapter 1 Section 8 to 10 T.B1 Chapter 2 Section 1 to 3 T.B1
Unit IV	Chapter 2 Section 4 to 10 T.B1
Unit V	Chapter 2 Section 11 to 15 T.B1 Chapter 3 Section 1 to 3 T.B1
Reference Book(s):	
An introduction to the Mathematics of Finance, MC Cutchoon and Scoot-Hoinenmann Professional Publishing.	

Course Coordinator:

Dr. A. Prasanna
Dr. V. Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23DIA1CC5	Skill	90	6	25	75	100
Course Title		PRACTICE OF LIFE INSURANCE – CASE STUDY					

S.no	Contents	Hours
1	Calculate Premium for given age	90
2	Calculate Bonus	
3	Comparing Plans	
4	Difference between group insurance and individual insurance	
5	Difference between unit linked policy and ordinary life policy	
6	Calculate interest for revival of lapsed policies	
7	Calculate surrender values	
8	Policy Claims – Survival – Maturity - Death benefits	

Course Coordinators:

Dr. A. Prasanna
Dr.V.Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
I	23DIA1IN1	Skill	180	6	-	100	100
Course Title		LIFE INSURANCE AGENT-INTERNSHIP					

S.no	Contents	Hours
1	Applications, Pricing and valuation	180
2	Documentation	
3	Under writing	
4	Service Aspects	
5	Health Insurance	

Course Coordinators:

Dr. A. Prasanna

Dr.V.Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23DIA2CC6	General	60	4	25	75	100
Course Title		REGULATIONS OF INSURANCE BUSINESS					

SYLLABUS		
Unit	Contents	Hours
I	Development of insurance legislation in India and insurance act 1938, IRDAI functions and insurance councils.	12
II	IRDAI and its licencing functions, Regulations on conduct of business-I.	12
III	Regulations on conduct of business-II, Policy holders rights of assignment, nomination and transfer.	12
IV	Protection of policy holders interest, Dispute resolution mechanism.	12
V	Financial regularity aspects of solvency margin and investments, International trends in insurance regulation.	12

Text Book(s):
Study material published by Deepak Godbole, Secretary- General, Insurance Institute of India Regulations of Insurance Business (IC-14), , Mumbai , July, 2019

Course Coordinators:

Dr. A. Prasanna

Dr.V.Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23DIA2CC7	General	60	4	25	75	100
Course Title		PRACTICE OF GENERAL INSURANCE					

SYLLABUS		
Unit	Contents	Hours
I	Introduction to general insurance, Policy documents and forms	12
II	General insurance products – Part- 1 (Fire and Marine), General insurance products – Part- 2 (Motor, Liability, Personal accident and Speciality insurance).	12
III	General insurance products – Part- 3 (Engineering & other insurance).	12
IV	Underwriting, Rating and premiums.	12
V	Claims, Insurance reserves and accounting.	12

Text Book(s):
Published by Sharad Shrivastva, Secretary- General, Insurance Institute of India, Practice of General Insurance (IC-11), Mumbai, 2011

Course Coordinators:

Dr. A. Prasanna
Dr.V.Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23DIA2CC8	General	60	4	25	75	100

Course Title	MUTUAL FUND FOR DISTRIBUTORS AND EMPLOYEES
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SYLLABUS		
Unit	Contents	Hours
I	Basic of Mutual Funds: Investors and their Financial Goals - Savings or Investments? - Different Asset Classes -Investment Risks - Risk Measures and Management Strategies - Risk profiling - Understanding Asset Allocation - Taking Professional Help in Investment Decisions - Concept of a Mutual fund - Classification of Mutual Funds Growth of the mutual fund industry in India. Regulatory Frame work and Scheme Related Information - Role of Securities and Exchange Board of India- Due Diligence Process by AMCs for Distributors of Mutual Funds - Investor Grievance Redress Mechanism- AMFI Code of Conduct for Intermediaries- SCHEME RELATED INFORMATION- Mandatory Documents - Non-Mandatory Disclosures.	12
II	Fund Distribution Practice : The role and importance of mutual fund distributors - Different kinds of mutual fund distributors- Modes of distribution- Pre-requisites to become Distributor of a Mutual Fund - Revenue for a mutual fund distributor - Due Diligence Process by AMCs for Distributors of Mutual Funds-	12
III	Valuation and Taxation OF Mutual Funds:Fair Valuation Principles- Computation of Net Assets of Mutual Fund Scheme and NAV- Dividends & Distributable Reserves- - Applicability of taxes in respect of mutual funds - Capital Gains - Dividend income - Setting off Gains and Losses under Income Tax Act - Securities Transaction Tax - Tax benefit under Section 80C of the Income Tax Act - Tax Deducted at Source (TDS) - Applicability of GST	12
IV	Fund Process and Performance: The NFO process- Investment Plans and Services- Mutual Fund Investors Filling the Application Form for Mutual Funds - Financial Transactions with Mutual Funds - Cut-off Time and Time Stamping -KYC Requirements for Mutual Fund Investors - Systematic Transactions - Operational aspects of Systematic Transactions - Non-Financial Transactions in Mutual Funds. General and Specific Risk Factors - Factors that affect mutual fund –performance - Measures of Returns- SEBI Norms regarding Representation of Returns by Mutual Funds in India- Measures of Risk - Certain Provisions with respect to Credit risk - MUTUAL FUND SCHEME –PERFORMANCE - Benchmarks and Performance Price Return Index or Total Return Index- Basis of Choosing an appropriate performance benchmark- Benchmarks for equity schemes - Benchmarks for Debt schemes - Benchmarks for Other Schemes - Quantitative Measures of Fund Manager Performance- Scheme Performance Disclosure	12
V	MUTUAL FUND SCHEME SELECTION : Scheme Selection based on Investor needs, preferences and risk-profile- Risk levels in mutual fund schemes- Scheme Selection based on investment strategy of mutual funds- Selection of Mutual Fund scheme offered by different AMCs or within the scheme Category -Selecting options in mutual fund schemes - Do's and Don'ts while selecting mutual fund schemes	12

Text Book(s):
Workbook for NISM – V- A: Mutual Fund Distributor Certification Examination, e BookPublished by National Institute of Securities Market, Mumbai ,March, 2020

Course Coordinators: Dr. A. Prasanna & Dr.V.Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23DIA2CC9	Skill	90	6	25	75	100
Course Title		MATHEMATICS OF FINANCE - II					

SYLLABUS		
Unit	Contents	Hours
I	Variable Annuities-Annuities with frequency different from that with interest is convertible	18
II	Redemption of loan- amortization of a debt- outstanding principal- interest portion & principal content in a particular repayment- Redemption of a loan by a sinking fund	18
III	Lender's sinking – further consideration on redemption of loan- Capital redemption policy- pure premiums – office premium.	18
IV	Further compound interest and investment yields-nominal and effective rates of discount- relation between $i(m)$ and $d(m)$ - the average yield on the life fund-weighted rate of return-money weighted rate of return- time weighted rate of return-linked internal rate of return.	18
V	Bonds- purchase price-callable bonds- premium and discount-other types of bonds	18

Text Book(s):
1. Foundation of Actuarial Science (IC-28), Study Material Published by Insurance Institute of India, Mumbai, Reprinting February 2017.
2. Peter Zima and Robert L.Brown , Mathematics of Finance, ,Tata McGraw-Hill Publishing Company Limited, New Delhi, Second edition, 2005
UNIT I: Chapter 3 Section 4 and 5 T.B.1
UNIT II: Chapter 4 Section 1 to 4 T.B.1
UNIT III: Chapter 4 Section 5 to 8 T.B.1
UNIT IV: Chapter 5 Section 1 to 6 T.B.1
UNIT V: Chapter 8Section 8.1 to 8.7 T.B.2
Reference Book(s):
An introduction to the Mathematics of Finance, MC Cutchoon and Scoot-Hoinenmann Professional Publishing.

Course Coordinators:

Dr. A. Prasanna

Dr.V.Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23DIA2CC10	Skill	90	6	25	75	100
Course Title		PRACTICE OF GENERAL INSURANCE - CASE STUDY					

S.no	Contents	Hours
1	Claim Process	90
2	Actuaries	
3	Insurance Proposal Form	
4	Insurance claim form common questions	
5	New Insurance Product	
6	Renewal Notice	
7	Claim documents	
8	Claims - Problems	

Course Coordinators:

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Dr.V.Krishnan

Semester	Course Code	Course Category	Ins. Hrs /Sem.	Credits	Marks for Evaluation		
					CIA	ESE	Total
II	23DIA2IN2	Skill	180	6	-	100	100
Course Title		MUTUAL FUND FOR DISTRIBUTORS AND EMPLOYEES -INTERNSHIP					

S.no	Contents	Hours
1	Filling KYC Forms for Individuals and non –Individuals, Application Form /Service Request Filling for Clients	180
2	NAV Calculation and Return on Investment	
3	Taxation for Mutual Fund Returns	
4	Technology in Mutual Fund Transactions Provided by Regulatory Bodies along with CAMS/Karvy	
5	Key Information Memorandum Analysis (KIM)	

Course Coordinators:

Dr. A. Prasanna

Dr. V. Krishnan