Applied.
M.A Economics.

Semester IV

Course Code	Course Title	Course ID	L (Hrs)	T (Hrs)	P (Hrs)	L Credits	T Credits	P Credits	Total Credits	MARKS TI	MARKS TE	MARKS PI	MARKS PE	MARKS Total
Core Course(s)														
CC-A10	Economics of Growth & Development	241/AE/CC401	4	0	0	4	0	0	4	30	70			100
CC-A11	Advanced Econometrics	241/AE/CC402	4	0	0	4	0	0	4	30	70			100
Discipline Specific Elective Courses														
DSE-04 (Two from Pool of Courses in one of the specialization)	**A) Specialization: Finance** 1. Capital Markets	241/AE/DS403	3	0	0	3	0	0	3	25	50			75
			3	0	0	3	0	0	3	25	50			75
	2. Empirical Methods in Finance	241/AE/DS404												
	3. Risk Management: Theory and Practice	241/AE/DS405												
	4. Operations Research Techniques	241/AE/DS406												
	B) Specialization: International Trade & Business													
	1. International Logistics	241/AE/DS407												
	2. Capital Markets & Risk Management	241/AE/DS408												
	3. Foreign Exchange Management	241/AE/DS409												
	4. Operations Research Techniques	241/AE/DS410												
Multidisciplinary Course(s)														
MDC-04	One from Pool of Courses		3	0	0	3	0	0	3	25	50	-	-	75
Ability Enhancement Course(s)														
AEC-03	Choose One Subject from Pool of the subjects		-	-	-	-	-	-	2	-	-	-	-	50
Community Engagement/Field Work/Survey/Seminar/ Dissertation														
Dissertation	Dissertation		-	-	-	-	-	-	6	-	-	-	-	150
Total Credits									**25**					

Here, L stands for Lecture
T stands for Tutorial
P stands for Practical

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241/AE/CC401

SEMESTER IV

241/AE/CC401	Economics of Growth & Development	L	T	P	C
		4	0	0	4

Max. Marks: 100 **Written Exam: 70**

Credits: 4 **Internal Assessment: 30**

Note For the paper Setter

1. Nine Questions will be set in all and students will be required to attempt 5 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining eight questions, students will attempt 1 out of 2 questions from each of the four units (14 marks each).

Unit I

Concepts & Measurement of Economic Development **Teaching Hours: 12**

Economic growth, Economic development, Inclusive Growth and Sustainable development; MDGs and SDGs.

Measuring Development: Income Measures, Basic Needs Approach, PQLI, HDI and Capabilities Approach; Goulet's core values of development. Poverty, Inequality and Development: Measurement, Impact and Policy options.

Unit II

Theories of Growth and Development **Teaching Hours: 12**

Contributions of Adam Smith, Ricardo, Karl Marx, Schumpeter and Rostow's Theory, Harrod and Domar: Instability of equilibrium; Solow and Joan Robinson Model.

Approaches to Development: Balanced and Unbalanced Growth; Critical Minimum Efforts Theory; Low Income Equilibrium Trap; Dual Economy: Models of Lewis, Fei-Ranis, Jorgensen

Unit III

New Growth Theory **Teaching Hours: 12**

Production Function Approaches: Learning by Doing; Total Factor Productivity; Ramsay's rule and optimal saving; Golden Rule of Accumulation; Technical Progress: Hicks and Harrod; Endogenous Growth Models (Romer, Uzawa-Lucas, AK).

Unit IV

Emerging Issues in Development **Teaching Hours: 12**

Role of financial Institutions in economic development: Theory (Acemoglu and Zilibotti Model) and Evidence. New Institutional Economics: Role of Market, State and Civil Society; Post 2015 Development Agenda: Impasse in Development Studies and the Alternatives to the Impasse.

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Suggested Readings

- Adelman, I. (1961). Theories of Economic Growth and Development, Stanford University Press, Stanford.
- Barro, R. J. & Sala-i-Martin, X. (2004). Economic Growth. MIT Press.
- Behrman, S. & Srinivasan, T.N (Eds.).(1995). Handbook of Development Economics, Vol. 3. Elsevier, Amsterdam.
- Brown, M. (1966). On the Theory and Measurement of Technical Change. Cambridge University Press, Cambridge.
- Chakravarti, S. (1982). Alternative Approaches to the Theory of Economic Growth. Oxford University Press, New Delhi.
- Chenery, H. & Srinivasan, T.N. (Eds.) (1989). Handbook of Development Economics, Vol. 1 & 2. Elsevier, Amsterdam.
- Ghatak, S. (1986). An Introduction to Development Economics. Allen and Unwin, London.
- Gillis, M., Perkins, D.H., Romer, M. & Snodgrass, D.R. (1992). Economics of Development. W.W. Norton, New York.
- Higgins, B. (1959). Economic Development. W.W. Norton, New York.
- Jones, H.G. (1975). An Introduction to Modern Theories of Economic Growth. Nelson, London.
- Kindleberger, C.P. (1977).Economic Development. McGraw Hill, New York.
- Meier, G.M. & Rauch, J.E. (2005).Leading Issues in Economic Development. Oxford University Press, New Delhi.
- Meier, G.M. & Rauch, J.E. (2005).Leading Issues in Economic Development. Oxford University Press, New Delhi.
- Menard, C. & Shirley, M.M. (2008). Handbook of New Institutional Economics. Springer Science & Business Media.
- Schultz, Paul T. & Strauss, J. (Eds.). (2008). Handbook of Development Economics, Vol. 3. Elsevier, Amsterdam.
- Sen, A.K. (Ed.). (1990). Growth Economics. Penguin, Harmondsworth.
- Thirlwal, A.P. (1999). Growth and Development. Macmillan, U.K.
- Todaro, M.P. & Smith, S.C. (2003). Economic Development. Pearson Education, Delhi.

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241/AE/CC402

241/AE/CC402	Advanced Econometrics	L	T	P	C
		4	0	0	4

Max. Marks: 100 **Written Exam: 70**

Credits: 4 **Internal Assessment: 30**

Note For the paper Setter

1. Nine Questions will be set in all and students will be required to attempt 5 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining eight questions, students will attempt 1 out of 2 questions from each of the four units (14 marks each).

Course Objectives

The objective of this course designed to disseminate the applications of advanced econometrics techniques. By the end of the course, students should be able to develop econometric models and interpret the econometric and statistical results reported in other studies.

Course outcomes

CO1: To equip the students with basic understanding of pooled data models and time series analysis.

CO2: To be able to estimate the various forecasting models and apply various tests.

CO3: Students will be able to estimate the long run and short run relationship between the economic variables

CO4: Students will be able to check the direction of causality among the variables.

Unit-I

Dynamic Econometric Models **Teaching Hours: 12**

Auto-regressive and Distributed lag models: lagged independent variables, impact multiplier, interim multiplier, and long-run multiplier, Koyck approach, partial adjustment model, adaptive expectation model, Estimation of Auto- regressive models; Granger Causality Test.

Unit –II

Simultaneous equation models **Teaching Hours: 12**

The Simultaneous equation bias and inconsistency of OLS estimators; structural and reduced form of simultaneous equation models; identification problem; estimation procedures; indirect least squares (ILS), instrumental variables (IV), and two stage least squares (2SLS).

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Unit-III

Time series Econometrics **Teaching Hours: 12**

Key concepts - stochastic process; stationary and non-stationary process, purely random process, Random walk models co-integration, integrated variables,
Deterministic and stochastic trends and unit root. Techniques of forecasting - ARMA, ARIMA Models, Box-Jenkins methodology.

Unit-IV

Modeling Economic Time Series **Teaching Hours: 12**

Trends and Volatility: ARCH process, GARCH model, ARCH-M model; Dicky-Fuller tests, Augmented Dicky-Fuller test, Phillips Perron test. Introduction to VAR model, estimation and identification in time series analysis.

Panel Data Models: Pooled OLS; Random Effects Model; Fixed Effects Model.

Suggested Readings

- Berndt, E.R. (1991) "The Practice of Econometrics" Reading, Mass: AddisonWesley,
- Gujrati, Damodar, N. (1995), Basic Econometrics, Mc Graw Hill, New Delhi.
- Intriligator, M., R.G. Bodkin, and C. Hsiaq. (1996), Econometric Models, Techniques and Applications.
- Prentice Hall, Johnson, J. (1984), Econometric Methods. New York: Mc Graw-Hill.
- Kmenta, J. (1986), Elements of Econometrics. New York: Macmillan,
- Krishna, K.L. ((1997) (Ed), Econometric Application in India Oxford University Press, New Delhi.
- Lott, W., and S.C. Ray. (1992), Applied Econometrics: Problems and Data Sets. Fort Worth, Tex: The Dryden Press.
- Maddala, G.S. (1977), Econometrics. Mc Graw-Hill, Inc. Page 38 of 41
- Ramanathan, Ramu. (2002), Introductory Econometrics with Applications. South Western: Thomson.

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241/AE/DS401

241/AE/DS403	Capital Markets	L	T	P	C
		3	0	0	3

Max. Marks: 75 **Written Exam: 50**

Credits: 3 **Internal Assessment: 25**

Note for the paper Setter

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Course Objectives

Capital Market course aims to equip the participants with necessary theoretical knowledge and practical application on stock markets so that students can apply the same in researching equity markets for wealth creation. It aims in simplifying finance and is a total value for money which provides a complete horizon on various aspects of capital market jargons.

Course Outcomes

CO1: Basic understanding of the concept of Capital Market.
CO2: Understand the basic features of Indian Capital Market and its regulatory framework.
CO3: Role of OTCEI in Indian Capital Market and the electronic stock exchange system.

UNIT I

Introduction **Teaching Hour:12**

Financial markets – Definition, Role, Functions, Constituents; Financial Instruments, Indian Financial Market, Global Financial Market, Capital Market: Evolution and growth, Constituents, Capital Market Instruments, Types, Preference shares, Equity Shares, Non - voting equity shares, Company fixed deposits, Warrants, Debentures and Bonds, Global Debt Instruments.

Unit II

Indian Capital Market & Its Regulation **Teaching Hour:13**

Meaning, Functions, Intermediaries, Role of Primary Market, Methods of floatation of Capital, Abuses in New Issues Market, Problems of New Issues Market, IPO's, Investor Protection in Primary Market, Recent Trends in Primary Market, Regulatory Framework - Committees on Regulatory Framework; SEBI: Objectives, Management, Powers and Functions, Regulatory role: Investor Protection, Insider Trading, Rationale, Insiders, Insider information, Connected persons.

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UNIT III

Over The Counter Exchange Of India (OTCEI) **Teaching Hour:11**

Concept, Features, Benefits OTCEI Vs Other Stock Exchanges; Depository Services, Banks Vs Depository, Demat Account, Electronic Settlement of Trade, Role of CDSL and NSDL; Speculation, Online Stock Trading; Debt Market: Types, Role, Price Determination.

Suggested Readings:

- Capital Markets, Financial Management, and Investment Management and Analysis, Second Edition by Frank J. Fabozzi and Capital Markets, Financial Management, and Invest
- Capital market in India by Rajesh Chakarbati published by Sage Publication (First Edition)
- Gurusamy, Capital Markets, Vijay Nicole Imprints, 2014, Chennai.
- Frank J. Fabozzi, Franco Modigliani, Capital Markets Institutions and Instruments Prentice Hall. 2000. New Delhi.
- Mahesh Kulkami & Dr Suhas Kulkami. Capital Markets and Financial Services, Nirali Publications, 2001, Mumbai.
- Rajesh Chakraborthy, Sankar D.E, Capital Markets in India, Sage Publications, 2011, New Delhi

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241/AE/DS402

241/AE/DS404	Empirical Methods in Finance	L	T	P	C
		3	0	0	3

Max. Marks: 75 **Written Exam: 50**

Credits: 3 **Internal Assessment: 25**

Note for the paper Setter

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Course objective

The main objective of the course is to provide students with a strong foundation in using empirical research techniques to analyze financial data and draw meaningful insights. This course typically focuses on applying statistical and econometric methods to real-world financial data sets.

Course Outcomes

CO1: To Investigate market efficiency and anomalies by analyzing historical financial data and testing hypotheses related to stock returns and market trends.
CO2: To study behavioural biases and anomalies in financial market.
CO3: To study behavioural biases and anomalies in corporate finance
CO4: Understand economic data, geopolitical events, regulatory changes, and technological advances that affect investors' decisions.

Unit I

Information Perception Cognitive Information **Teaching Hours: 14**

Perception, peculiarities (biases) of quantitative and numerical information perception, Weber law, subjective probability, representativeness, anchoring, asymmetric perception of gains and losses, framing and other behavioral effects.
Human Preferences and Market efficiency Decision-making under risk and uncertainty, decision-making in historical prospective.

Unit II

Behavioral Factors & Financial Markets **Teaching Hours: 10**

Fundamental information and financial markets, market predictability, the concept of limits of arbitrage, asset management and behavioral factors, active portfolio management: return statistics and sources of systematic underperformance, technical analysis and behavioral factors

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Unit III

Behavioral Factors and Corporate Finance **Teaching Hours: 12**

Behavioral factors and corporate decisions on capital structure and dividend policy, capital structure dependence on timing of good and bad corporate news announcement, mergers and acquisitions: the Winner's curse and market timing, systematic excessive optimism and overconfidence in managers' decisions, company name and its market value, sunk costs and mental accounting, evolutionary explanations for behavioral effects, evidence from behavioral game theory, systematic approach to using behavioral factors in corporate decision-making

Reading List:

1. Plous, S., The Psychology of Judgment and Decision Making, McGraw-Hill, 1993
2. Shleifer, A., Inefficient Markets: An Introduction to Behavioral Finance, Oxford University Press, 2000
3. Shefrin, H., Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing, Oxford University Press, 2006
4. Prechter, R. R. (Jr.) and P. M. Kendall, Pioneering Studies in Socioeconomics, New Classics Library, 2003

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241/AE/DS403

241/AE/DS405	Risk Management: Theory and Practice	L	T	P	C
		3	0	0	3

Max. Marks: 75 **Written Exam: 50**

Credits: 3 **Internal Assessment: 25**

Note for the paper Setter

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Course objective

The objective of this course is to provide a comprehensive introduction to the study of management. It provides an insight into contemporary knowledge, time tested principles, basic concepts, evolving theories and practices in the field of risk management.

Course Outcomes

CO1: Students will gain the necessary insights into the planning activity and the dynamics of decision making.
CO2: Analyse the structure of a risk management and understand the principal elements of the organisation in executing its practices.
CO3: Students gains good amount of knowledge regarding risk management.

Unit-I

Introduction to Risk Management **Teaching Hours: 10**

Sources of risk, currency risk, fixed income risk, equity risk, commodity risk, market risk measurement, VaR as downside risk, definition, parameter, elements of VaR system, stress testing.

Unit -II

VaR Methods and Hedging **Teaching Hours: 12**

An overview of VaR methods, VaR local and full valuation, delta normal methods, historical simulation, Monte Carlo simulation, examples of VaR applications.

Hedging

Hedging liner risk, optimal hedging, hedge ratio as regression coefficient, duration hedging, beta hedging, non-linear risk hedging, delta and dynamic hedging

Unit-III

Credit Risk Management **Teaching Hours: 14**

Settlement risk, introduction to credit risk, measuring credit risk, credit exposure, types of credit derivatives, credit default swap, pricing and hedging credit derivatives, measuring credit VaR, credit risk models, Basel accord, the Basel market risk charges.

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Suggested Readings:

- Crouhy, M., Galai, D., & Mark, R. (2014). *The essentials of risk management* (2nd ed.). McGraw-Hill Education.
- Lam, J. (2014). *Enterprise risk management: From incentives to controls* (2nd ed.). Wiley.
- Hopkin, P. (2018). *Fundamentals of risk management: Understanding, evaluating and implementing effective risk management* (5th ed.). Kogan Page.
- Hubbard, D. W. (2020). *The failure of risk management: Why it's broken and how to fix it* (2nd ed.). Wiley.
- Aven, T. (2015). *Risk analysis* (2nd ed.). Wiley.
- Bessis, J. (2015). *Risk management in banking* (4th ed.). Wiley.
- Jorion, P. (2007). *Value at risk: The new benchmark for managing financial risk* (3rd ed.). McGraw-Hill Education.
- Power, M. (2007). *Organized uncertainty: Designing a world of risk management*. Oxford University Press.
- Choudhry, M. (2013). *An introduction to banking: Liquidity risk and asset-liability management* (2nd ed.). Wiley.
- McNeil, A. J., Frey, R., & Embrechts, P. (2015). *Quantitative risk management: Concepts, techniques, and tools* (Revised ed.). Princeton University Press.

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241/AE/DS404

241/AE/DS406	Operations Research Techniques	L	T	P	C
		3	0	0	3

Max. Marks: 75 **Written Exam: 50**

Credits: 3 **Internal Assessment: 25**

Note for the paper Setter

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Course objective

Operations research aims to introduce students to use quantitative methods and techniques for effective decisions–making; model formulation and applications that are used in solving business decision problems.

Course Outcomes

CO1: Learn about the origin, definition and scope of operations research, formulation and solution of linear programming problems by different methods.

CO2: Understand the transportation and assignment problems and their solutions by different methods.

CO3: Knowledge of different queuing models and their solutions by single and multiple servers.

CO4: Learn about the different inventory control models.

Unit-I

Operations Research **Teaching Hours: 12**

Origin, definition and its scope, Linear Programming: Formulation and Solution of linear programming problems by Graphical and Simplex methods, Big - M and Two-phase methods, Degeneracy, Duality in linear programming.

Unit-II

Transportation Problems **Teaching Hours: 12**

Basic Feasible Solutions, Optimum solution by stepping stoneand modified distribution methods, unbalanced and degenerate problems, trans-shipment problem. Assignment problems: Solution by Hungarian method, unbalanced problem, case of maximization, travelling salesman and crew assignment problems.

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Unit-III

Queuing and Inventory Control Models **Teaching Hours: 12**

Basic components of a queuing system, General birth-death equations, steady-state solution of Markovian queuing models with single and multiple servers (M/M/1, M/M/C, M/M/1/k, M/M/C/k).

Economic order quantity (EOQ) model with uniform demand and with different rates of demands in different cycles, EOQ when shortages are allowed, EOQ with uniform replenishment, Inventory control with price breaks.

Reference Books:

- F. Hillier and G.J. Lieberman, Introduction to Operation Research, Holden Day,1990.
- H. A. Taha, Operation Research-An Introduction, Printice Hall of India, 2017.
- J.K. Sharma, Mathematical Model in OperationS Research, Tata McGraw Hill,1989.
- Kanti Swaroop, P.K. Gupta, Man Mohan, Operations Research, Sultan Chand and Sons, 2010.
- N.S.Kambo, Mathematical Programming Techniques, McGraw Hill, 2008.
- P. K. Gupta, and D.S. Hira, Operations Research, S. Chand & Co., 1976.
- S. D. Sharma, Operation Research, Kedar Nath Ram Nath Publications, 2009.

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241/AE/DS405

241/AE/DS407	International Logistics	L	T	P	C
		3	0	0	3

Max. Marks: 75 **Written Exam: 50**

Credits: 3 **Internal Assessment: 25**

Note for the paper Setter

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the four units (12 marks each).

Course objective

It aims to perceive the students the international logistics management and implementations and documentations of international trade. Within this scope, it has been targeted to introduce various sub concepts collectively through the baseline of international logistics and global marketing along with the processes for the entities of foreign trade management to enable students to understand the effects of the international logistics on international economy and relations.

Course Outcomes

CO1: Provide a framework of knowledge, theory and understanding relative to international logistics and supply chain management and to examine appropriate strategies for successful operation in the 21st century.

CO2: Embrace the thinking of global logistics systems and minor league international logistics operators as they implement policies to secure global supply chain development.

CO3: Learner can identify and place into practice information-based decision making approaches to logistic problems with regards to operational grounding.

Unit – I

Introduction **Teaching Hours: 12**

Concept, objectives and scope; logistics interface with marketing; Logistics System elements, Relevance of International logistics, logistics as a strategic resource, Principles for logistics excellence.

Unit - II

Structure of Shipping Industry **Teaching Hours: 12**

General Structure of Shipping Industry: Characteristics, liner and tramp operations; Liner conferences; Freight structure and practices; chartering principles; UN convention on shipping.

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Unit- III

Transportation **Teaching Hours: 12**

Developments in Ocean Transportation: Containerization: Inland container depots; Multi-modal transportation and CONCOR; Highlights of the Multi-modal Transport of Goods Act 1993, Role of intermediaries including freight forwarders, Shipping agents, freight brokers and Stevedores.

Suggested Readings:

- Annual Reports, INSA.
- Annual Reports, CONCOR.
- Bowersox, Dhohld J.and Closs David J., Logistical Management, Tata McGraw-Hill
- Coyle, Bard and Langley, The management of Business Logistics, Thomson.
- Pierre Davd, International Logistics, Biztantra.
- Bloomberg David J., Stephan Lemay& Joe B. Hanna., Logistic, PHI.
- Shipping Documents and Reports, UNCTAD.
- Krishnaveni, M., Logistice Management and World Seaborne Trade, Himalaya Publishing House, New Delhi.

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241/AE/DS406

241/AE/408	Capital Markets & Risk Management	L	T	P	C
		3	0	0	3

Max. Marks: 75 **Written Exam: 50**

Credits: 3 **Internal Assessment: 25**

Note for the paper Setter

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Course objective

The objective of the course is to introduce state of the art tools necessary for planning, executing and maintaining risk management in today's environment.

Course Outcomes

CO1: To identify and explain risk management in international business environments.
CO2: Illustrate an awareness of ethical issues in international business.
CO3: Explain and apply risk management frameworks when operating in global business environments.

Unit-I

Introduction **Teaching Hours: 10**

The concept of risk, Benefit of risk management, Country risk analysis, Cultural diversity and Multi National Corporations.

Unit-II

Financial risk **Teaching Hours: 14**

Financial risk management, Management of credit risk, Political risk and its management. Foreign Exchange Risk Management

Risk management

Risk management through derivative: Swaps Forwards, Futures, Options, Option prices models, interest rate derivatives, foreign currency derivatives.

Unit-III

Value at Risk **Teaching Hours: 12**

Concept of value at risk, Approaches for calculating value at risk, introduction to assets liability management. Organisational and Accounting issues in Risk Management. Case studies in risk management.

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Suggested Readings:

- Milind S., International Financial Management, John Wiley and Sons.
- Chance, D.M., An introduction to Derivatives and Risk Management, Harcourt College Publishers.
- Marrison, C, Fundamentals of Risk management, TMH Publication.

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241/AE/DS407

241/AE/DS409	Foreign Exchange Management	L	T	P	C
		3	0	0	3

Max. Marks: 75 **Written Exam: 50**

Credits: 3 **Internal Assessment: 25**

Note for the paper Setter

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Course objective

The objective of this paper is to understand concepts and techniques of foreign exchange. It provides an introduction to futures and overview of financial future markets and also deals with foreign exchange contracts and managing the exchange risk.

Course Outcomes

CO1: Gains a brief idea on the concepts and techniques of foreign exchange.
CO2: Shall provide an interest on student's career in foreign exchange and control.
CO3: To make students career in foreign exchange and control.

UNIT-I

Foreign Exchange Market **Teaching Hours: 12**

Function and Structure of the Forex markets, Foreign exchange market participants, Types of transactions and Settlements Dates, Exchange rate quotations, Nominal, Real and Effective exchange rates, Determination of Exchange rates in Spot markets. Exchange rates determinations in Forward markets. Exchange rate behaviour-Cross Rates Arbitrage profit in foreign exchange markets, Swift Mechanism. Triangular and locational arbitrage.

UNIT-II

International Parity Relationships & Forecasting Exchange rate **Teaching Hours: 12**

Measuring exchange rate movements-Exchange rate equilibrium – Factors effecting foreign exchange rate and forecasting foreign exchange rates. Interest Rate Parity, Purchasing Power Parity & International Fisher effects. Covered Interest Arbitrage.

UNIT-III

Foreign Exchange exposure and Foreign exchange risk Management **Teaching Hours: 12**

Management of Transaction exposure Management of Translation exposure- Management of Economic exposure.

Hedging against foreign exchange exposure – Forward Market- Futures Market- Options Market- Currency Swaps-Interest Rate Swap- problems on both two way and three way swaps. Cross

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currency Swaps-Hedging through currency of invoicing- Hedging through mixed currency invoicing.

Suggested Readings

- Eun & Resnick, International Financial Management, Tata McGraw Hill.
- Eiteman, Moffett and Stonehill, Multinational Business Finance, Pearson.
- Jeff Madura, International Corporate Finance, Cengage Learning.
- Alan C. Shapiro, Multinational Financial Management, Wiley India Pvt. Ltd.
- Apte P. G, International Financial Management –6/e, TMH.
- Maurice Levi, International Finance, Routledge.
- Paul Einzip, A Textbook on Foreign Exchange
- NY Buckley, Multinational Financial, Prentice Hall of India.
- Paul Roth, Mastering Foreign Exchange and Money Markets, Pitman.

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241/AE/DS408

241/AE/DS4010	Operations Research Techniques	L	T	P	C
		3	0	0	3

Max. Marks: 75 **Written Exam: 50**

Credits: 3 **Internal Assessment: 25**

Note for the paper Setter

1. Seven Questions will be set in all and students will be required to attempt 4 questions.
2. Question No. 1 will be compulsory and will consist of 7 short answer type questions of 2 marks spread over the entire syllabus (2x7=14 marks).
3. For the remaining six questions, students will attempt 1 out of 2 questions from each of the three units (12 marks each).

Course objective

Operations research aims to introduce students to use quantitative methods and techniques for effective decisions–making; model formulation and applications that are used in solving business decision problems.

Course Outcomes

CO1: Learn about the origin, definition and scope of operations research, formulation and solution of linear programming problems by different methods.

CO2: Understand the transportation and assignment problems and their solutions by different methods.

CO3: Knowledge of different queuing models and their solutions by single and multiple servers.

CO4: Learn about the different inventory control models.

Unit-I

Operations Research **Teaching Hours: 12**

Origin, definition and its scope, Linear Programming: Formulation and Solution of linear programming problems by Graphical and Simplex methods, Big - M and Two-phase methods, Degeneracy, Duality in linear programming.

Unit-II

Transportation Problems **Teaching Hours: 12**

Basic Feasible Solutions, Optimum solution by stepping stoneand modified distribution methods, unbalanced and degenerate problems, trans-shipment problem. Assignment problems: Solution by Hungarian method, unbalanced problem, case of maximization, travelling salesman and crew assignment problems.

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Unit-III

Queuing and Inventory Control Models **Teaching Hours: 12**

Basic components of a queuing system, General birth-death equations, steady-state solution of Markovian queuing models with single and multiple servers (M/M/1, M/M/C, M/M/1/k, M/M/C/k).

Economic order quantity (EOQ) model with uniform demand and with different rates of demands in different cycles, EOQ when shortages are allowed, EOQ with uniform replenishment, Inventory control with price breaks.

Reference Books:

- F. Hillier and G.J. Lieberman, Introduction to Operation Research, Holden Day,1990.
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