LEARNING OUTCOMES-BASED CURRICULUM FRAMEWORK (LOCF) FOR POST-GRADUATE PROGRAMME

M.A Programme in Financial Economics

(Under Credit & Semester System)

(Syllabus Effective from 2022 Admission)

DEPARTMENT OF ECONOMICS

UNIVERSITY OF KERALA

2022

DEPARTMENT OF ECONOMICS

UNIVERSITY OF KERALA

Syllabus for M. A. Financial Economics

Programme Specific Outcomes (PSO)

PSO1: To equip students with advanced knowledge of Applied Financial Economics

PSO2: To impart skills to students to cater to the needs of the industrial and financial sectors

PSO3: To equip students to analyze financial issues in the economy by contextualizing the knowledge they have acquired

PSO4: To create academic excellence through holistic education.

M.A. FINANCIAL ECONOMICS

(Syllabus effective from 2022 Admission)

Semester	Course code	Name of Course	Number of credits
I	**Core Courses (CC)**		
	FECO-CC-511	Micro Economics-I	4
	FECO-CC- 512	Macro Economics-I	4
	FECO-CC- 513	Quantitative Techniques-I	4
	FECO-CC- 514	India's Economic Development	4
	FECO-CC- 515	Financial Economics-I	4
	Discipline-Specific Electives (DE)		
	FECO-DE- 516	Investment Banking	3
II	**Core Courses (CC)**		
	FECO-CC-521	Micro Economics-II	4
	FECO-CC- 522	Macro Economics-II	4
	FECO-CC- 523	Quantitative Techniques-II	4
	FECO-CC- 524	Financial Economics-II	4
	Discipline-Specific Electives (DE)		
	FECO-DE-525	Security Analysis and Portfolio Management	3
	FECO-DE-526	Industrial Economics	3
III	**Core Courses (CC)**		
	FECO-CC-531	Basic Econometrics	4
	FECO-CC-532	Public Finance	4
	FECO-CC-533	International Financial Management	4
	Discipline-Specific Electives (DE)		
	FECO- DE-534	Computational Finance	3
	FECO- DE-535	Financial Accounting	3
	FECO- DE-536	Marketing of Financial Services	3
	FECO - DE-537	Economics of Banking and Insurance	3
IV	**Core Courses (CC)**		
	FECO-CC-541	Corporate Finance	4
	FECO-CC- 542	Financial Econometrics	4
	FECO- CC- 543	Dissertation	6
	Discipline-Specific Electives (DE)		
	FECO-DE-544	Environmental Finance	3
	FECO-DE-545	Financial Risk Management	3
	FECO-DE-546	Project Finance and Appraisal	3
	FECO-DE-547	Law and Financial Economics	3
I	**Generic Courses (GC)**		
	FECO-GC-511	Project Finance	2
II	FECO-GC-521	Investment Banking	2
III	FECO-GC-531	Security Analysis	2
IV	FECO-GC-541	Financial Analytics	2

Programme Structure of MA Financial Economics

Terms used

OBE- Outcome Based Education CC- Core Course DE- Discipline-Specific Elective GC- Generic Course CL- Cognitive Level Re- Remember Un- Understand Ap- Apply An- Analyse Ev- Evaluate Cr- Create KC- Knowledge Category Fa- Factual Co- Conceptual Me- Meta Cognitive

Semester-wise Course Details

Course Outcomes, Course Content, Module Outcomes, Tagging and Reading List of Courses

Semester: I **Course Code: FECO-CC-511**

Course Title: Micro Economics – I **Credits: 4**

Course Learning Outcome (CLO)

- Identify appropriate economic models (e.g., models of perfectly competitive markets and various market imperfections) and apply them to analyse and predict the behaviour of individuals and firms interacting in markets.
- Articulate how individuals and society as a whole benefit or are harmed by economic markets.
- Derive the central results about decision-making and optimum choice (under certainty) of the consumers and firms from first principles.
- Determine the profit maximizing price and quantity under perfect and imperfect competition by use of marginal analysis.
- Course Outcome: Understand the assumptions that underline standard microeconomic models of individual behaviour in a world with scarce resources.
- Understand the utility maximization and expenditure minimization problems

COURSE CONTENT

Module 1: Theory of Consumer I

A. Preference and Utility- Basic Axioms of preference, Indifference Curve & Budget Set - Slope and Curvature of indifference curve –Mathematical Derivation, Properties of Indifference Curve, Properties of Budget Set, Perfect Substitutes and the Perfect complements.

B. Utility Maximization Problem (UMP) - Optimization Principal -Mathematical - Derivation and Diagrammatic Representation of UMP, Walrasian or Ordinary Demand Function, Indirect Utility Function, Homogeneity properties, Roy's Identity. Cobb Douglas Preference, Quasilinear Preference.

C. Expenditure Minimization Problem (EMP) - Optimization principal - Mathematical Derivation and Diagrammatic Representation of EMP, Derivation of Hicksian or Compensated Demand Function, Expenditure Function, Shephard's Lemma, Cobb Douglas Preference, Quasilinear Preference. Duality of UMP and EMP.

Readings:

1. Hal R. Varian, *Intermediate Microeconomics, A Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. (Chapter 2-8 and 14). The workbook by Varian and Bergstrom may be used for problems.

2. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* Cengage Learning (India), 2010. (Chapter 3 - 6).

Module Outcome:

- Analyse the decomposition of Price Effect into Income and Substitution effects
- Examine the negativity of Substitution effect through the theory of Revealed preference.
- Appreciate the normative theory of consumer behaviour.

Module 2: Theory of Consumer II

A. Decomposition of Price Effect into Income and Substitution effects-Normal Good, Inferior Good, Giffen good, Slutsky Equations, Ordinary Demand & Compensated Demand Functions, (Ch -8, Intermediate Varian)

B. Revealed preference – Revealed preference to Preference. Weak Axiom of Revealed Preference (WARP), strong Axiom of Revealed Preference (Ch 7, Intermediate Varian)

C. Normative Economics - Consumer Surplus, Equivalent and Compensating Variations (Ch 14, Intermediate Varian)

Readings:

1. Hal R. Varian, *Intermediate Microeconomics, A Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. (Chapter 2-8 and 14). The workbook by Varian and Bergstrom may be used for problems.
2. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* Cengage Learning (India), 2010. (Chapter 3 - 6).

Module Outcome:

- Learn the critical tools for analyzing the theory of a representative firm
- Develop a critical understanding of profit maximization and cost minimization.

Module 3: Theory of Firms

A. Production function – Marginal product and Average product; Diminishing Marginal Product, Isoquant and Marginal rate of technical substitution, Returns to scale, CRS, IRS, DRS, Homogeneous and Homothetic Production function, Elasticity of Substitution, Cobb Douglas production function – CES production function, VES and Translog production function, CES Production function as a generalized form of linear Production function, Fixed proportion Production function. Measuring technical Progress

B. Cost function – Optimization principal under Constraint Cost Minimization exercise and derivation of Conditional input demand function, properties of Cost functions, Shephard's Lemma, Envelope Theorem, Shortrun and Longrun costs.

C. Profit Maximization– Optimization principal, Short Run Long Run, Derivation of input demand functions and output supply function, Profit function, Properties of Profit function, Envelope Theorem and Hotelling Lemma, Producer surplus, Decomposition of Input demand function – substitution effect and output effect.

Readings:

1. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* Cengage Learning (India), 2010. (Chapter 9, 10, 11).
2. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. (Chapter 18, 19, 20, 21)

Module Outcome:

- Develop basic understanding of the concepts of game theory, classifications of the games, solution concepts and market interdependence.

- Acquire basic toolkit from game theory; develop skills in the translation of economic problems into game-theoretic framework; be able to select an appropriate solution concept;
- Be able to compute equilibrium strategies in standard Oligopolistic models under Quantity and Price Competition.

Module 4: Game Theory

Basic concepts (Agents, payoffs and strategy, payoff Matrix), Cooperative and Non Cooperative Games, Simultaneous and Sequential Move Games, Games of Complete and Incomplete Information, Dominant Strategy Equilibrium, Nash Equilibrium, Mixed Strategy Nash Equilibrium, Prisoner's Dilemma Game, Battle of Sexes, Coordination Games, Dynamic Games under complete information and Subgame perfect Nash equilibrium. Repeated Games.

Readings:

1. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* Cengage Learning (India), 2010. (Chapter 8).
2. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. (Chapter 28)

Module Outcome:

- Analyse how individuals and society as a whole benefit or are harmed by economic markets.
- Determine the profit maximizing price and quantity under perfect competition by use of marginal analysis.
- Understand the different market structure and price-output determination under perfect and Monopoly.

Module 5: Market Structure I

A. Competitive Market – Price Determination in the SR and LR for firm and industry, Supply decision of a competitive firm, and industry – breakeven point and shut down point Producer's Surplus, Long Run Supply curve of Firm, Industry supply curve.

B. Monopoly – What causes Monopoly?, Profit maximization and Output Choice, Market Power – Lerner's Index, Allocation & distribution effects of Monopoly (Inefficiency and Deadweight Loss) of Monopoly, Natural Monopoly, Durable Good Monopoly, Price Discrimination – First degree (Perfect) PD, Second Degree PD (Price Schedules) – Two part Tariff, Third degree PD (Market segregation) – Derivation of Equilibrium Condition and Elasticity rule, Peak-load pricing, Bundling, Bilateral Monopoly, Regulation of Monopoly.

Readings:

1. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* Cengage Learning (India), 2010. (Chapter 12, 14, 15).
2. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. (Chapter 22, 23, 24, 25, 27).

Module Outcome:

- Determine the profit maximizing price and quantity under Imperfect competition by use of marginal analysis.
- Able to compute equilibrium strategies in standard Oligopolistic models under Quantity and Price Competition.

Module 6: Market Structure II

Imperfect Competition – Monopolistic Competition, Oligopoly –Cournot Model – Best Response Function, Duopoly Nash Equilibrium, Determination of Quantity, Price, Profit at

the Firm and Industry level, Comparative Statics, Cournot Duopoly vs Collusion, Bertrand Model – Nash Equilibrium, Bertrand Paradox, Price vs Quantity, Bertrand Competition Under Capacity Constraints, Differentiated products, Stackelberg Model.

Readings:

1. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* Cengage Learning (India), 2010. (Chapter 12, 14, 15).
2. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. (Chapter 22, 23, 24, 25, 27)

Module Outcome:

- Determine the best strategy under non cooperative market situation using Nash Solution.
- Able to compute equilibrium strategies in non cooperative market situation using Nash Equilibrium.

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	Understand the utility maximization and expenditure minimization problems.	PO... PSO_1	Un	Co	Assignment on the negativity of Substitution effect through the theory of Revealed preference.
CO2	Develop a critical understanding of output maximisation, cost minimization and profit maximization	PO.. PSO_2	Ev	Co	Assignment on critical analysis of tools for the theory of a representative firm.
CO3	Acquire basic toolkit from game theory and articulate how individuals and society as a whole benefit or are harmed by economic markets.	PO.. PSO_5	An	Fa	Seminar on development of skills in the translation of economic problems into game-theoretic framework.
CO4	Determine the profit maximizing price and quantity under perfect and imperfect competition by use of marginal analysis.	PO.. PSO_3	An	Co	Assignment on how individuals and society as a whole benefit or are harmed by imperfect markets.
CO5	Identify appropriate economic models (e.g., models of perfectly competitive markets and various market imperfections) and apply them to analyse and predict the behaviour of individuals and firms interacting in markets.	PO.. PSO_3	Ap	Ad	Assignment on market imperfections

Additional Readings

1. Andreu Mas-Collel, Michael D Whinston and Jerry R Green (1995) Microeconomic Theory, Oxford University Press, New York

2. Hugh Gravelle and Ray Rees, Microeconomics, 3rd Edition, 2008, Pearson Education
3. Hal R. Varian, *Microeconomic Analysis,* W.W. Norton and Company/Affiliated East-West Press (India), 3rd edition, 2010.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
All questions in Section A to be answered (10x1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: I **Course Code: FECO-CC-512**

Course Title: Macro Economics – I **Credits: 4**

Course Learning Outcome (CLO)

- To promote understanding of alternative perspectives with respect to macroeconomic theories and policies.
- To enhance the analytical skills of the student towards understanding the developments in the economy.
- To introduce the student to the art of abstracting and building small models related to the macroeconomics.
- To introduce the student to the economics of Keynes and further to IS LM analytics.
- To give the student a fair exposure to the importance of regulating the financial system, and draws attention to the limitations to policymaking in an open economy.

COURSE CONTENT

Module: I Simple Theory of Income Determination and the Economics of the General Theory

Basic postulates of Classical theory of income and employment. Simple theory of income determination. The Multiplier and the algebraic derivation of the same. An appreciation of the economics of Keynes' General Theory.

Module Outcome:

MO1: To analyze the income determination in an economy in accordance with Keynes' General Theory.

Module II: Neoclassical-Keynesian synthesis or the IS LM approach and the monetarist approach

IS-LM Analytics, Definition and derivation of IS and LM curve as well as its slope and shifts. Algebraic derivation of the fiscal and monetary policy multiplier. Fiscal and monetary policy, crowding in and crowding out. Aggregate Demand and Aggregate supply analysis in the IS-LM model with fix price and flex prices – Theoretical controversies – Wealth effect – Keynes effect

Module Outcome:

MO1: Acquires the technical ability to illustrate and examine the simultaneous equilibrium in goods and money market through IS LM tools

Module III: Open Economy Macro Model

Balance of Payments and Exchange rates – International capital flows –IS-LM analysis for an open Economy – Stabilization process with fixed and flexible exchange rates – Mundell – Fleming model – Relative efficacy of monetary and fiscal policies under different exchange rate regimes.

Module Outcome:

MO1: Grasping the effectiveness of fiscal and monetary policies under different exchanges rate regimes through Mundell-Fleming model.

Module IV: Fiscal Policy

Fiscal policy, Countercyclical fiscal policies and automatic stabilisers. Arithmetic of Deficits and Debt. Evolution of the Debt to GDP ratios. Ricardian equivalence, Cyclically adjusted deficit. High debt, default risk and vicious cycles. Debt default, debt stabilisation and debt rescheduling. Debt monetization and seignorage.

Module Outcome:

MO1: Critically evaluates the Ricardian Equivalence hypothesis and issues relating to debt sustainability

Module V:Theories of Consumption and Investment

Consumption function and saving – Theories of consumption function – Absolute income hypothesis. Relative income hypothesis. Life Cycle Hypothesis and Permanent Income Hypothesis.

Investment function – Cost of capital and investment – user cost – discounted cash flow analysis. Present value criterion - Marginal Efficiency of Capital and Investment – Accelerator theory of investment – Neo-classical theory of investment – Tobin's Q-ratio.

Module Outcome:

MO1: Explain the various theories of Consumption and Investment and analyze the competing hypotheses

Module VI: Money and the Asset Markets

Components of modern financial system. Central banks and commercial banks. Markup of lending rate over policy rate. Banks, credit constraints and collateral. Role of banks under fractional reserve system. Liquidity risk, lender of last resort and deposit insurance. Solvency and bail-out. Financial system and balance sheets. Assets, liabilities and net worth. Leverage ratio Banks and macro stabilization. Importance of financial regulation.

Demand for money theories, Quantity theory approach – Keynes approach, Friedman's Restatement of Quantity theory of money

Module Outcome:

MO1: To evaluate various theories of money and banking

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To promote understanding of alternative perspectives with respect to macroeconomic theories and policies	PO1 PSO_1	Un	Co	Assignment on differences between classical economics and Keynesian economics

CO2	To enhance the analytical skills of the student towards understanding the developments in the economy.	PO1 PSO_2	An	Co	Assignment on IS LM analytics
CO3	To introduce the student to the art of abstracting and building small models related to the macroeconomics	PO5 PSO_5	Un	Fa	Seminar on fiscal and monetary policy under different exchange rate systems
CO4	To introduce the student to the economics of Keynes and further to IS LM analytics and	PO3 PSO_3	An	Co	Seminar on applications of consumption theories in India
CO5	To give a fair exposure to the importance of regulating the financial system, and draws attention to the limitations to policymaking in an open economy.	PO1 PSO_3	Ap	Me	Seminar on financial system regulations

Reading List

Module 1: Dornbusch, Fischer and Startz(2018): Chapter on *Income and Spending.*

Froyen, Richard T (2006) Chapters on Classical Employment, Output and Prices and Keynesian System (I): The Role of Aggregate Demand
Minsky, Hyman P (1985) The Legacy of Keynes Journal of Economics Education. (link below)https://digitalcommons.bard.edu/cgi/viewcontent.cgi?article=1025&context=hm_archiveKeynes, John Maynard (1937) The General Theory: Fundamental Concepts and Ideas. Quarterly Journal of Economics, February
Module 2: Dornbusch, Fischer and Startz(2018)Chapter on "Money, Interest and Prices". Froyen, Richard T (2006) Chapter on the Keynesian System (II): Money, Interest and Prices and The Keynesian System (III): Policy Effects in IS-LM model

Levacic, Rosalind and Rebmann, Alexander (1982)Macroeconomics

Module3: Dornbusch,Fischer and Startz (2012) Chapter on "International Linkages" and Froyen(2006)
Module4: Blanchard and Johnson(2018): Chapter on "Fiscal Policy: A Summing Up".

Module5: Dornbusch, Fischer and Startz (2012) Macroeconomics Chapters on "Consumption and Saving" and "Investment Spending" to be done in total.

Module 6: Carlin and Soskice(2015) Macroeconomics: Institutions, Instability and the Financial System. OUP (pp 159 to 177)

Froyen, Richard T(2006) Macroeconomics (Chapter on Demand for Money) Snowdon and Vane,() Modern Macroeconomics

AnatAdmati and Martin Hellwig(2013): The Banker's New Clothes.What's Wrong With Banking and What To Do About It? (Watch video (and follow it up with a discussion)https://www.youtube.com/watch?v=0kdYHG32oig

Additional Readings

CORE Team(2017) The Economy. Economics for A Changing World. Oxford Press.

Carlin, Wendy and Soskice(2009) Macroeconomics: Imperfections, Institutions & Policies. OUP

Patnaik, Prabhat(2020)Demand-constrained versus Supply-constrained Systems January 5, 2020 (http://www.networkideas.org/news-analysis/2020/01/demand-constrained-versus-supply-constrained-systems/)

Patnaik, Prabhat(2009) Excessive Liquidity Preference (http://www.networkideas.org/ideasact/feb09/Beijing_Conference_09/Prabhat_Patnaik.pdf

Diulio, Eugene Macroeconomic Theory, Shaum's Outline series. Tata McGraw Hill

ASSESSMENT
40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.
Model Question in OBE Format
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Semester: 1 **Course Code : FECO-CC- 513**
Course Title: Quantitative Techniques -1 **Credits: 4**
Course Learning Outcome (CLO)

- To improve the basic mathematical skills of students by familiarizing them with mathematical tools for economic decision-making.
- To evaluate economic theories by using differential and integral calculus.
- To apply mathematical tools for optimisation and taking economic decisions and
- To use differential and difference equations in illustrating dynamic stability and equilibrium and finally
- To apply the linear programming technique in economic decision making.

Course Content:

Module I: Basic Financial Mathematics

Time Value of Money, Annuities, Amortization, Yields, Bonds, Bond Price Volatility - Price Volatility, Duration, Convexity, Term Structure of Interest Rates, Introduction, Spot Rates, Extracting Spot Rates from Yield Curves, Static Spread, Spot Rate Curve and Yield Curve, Forward Rates, Term Structure Theories

Module Outcome:

MO1: Equip students on basics of financial mathematics

Module II: Numerical Methods for Finance

Numerical Methods for Finance, Numerical Differentiation and Greeks Partial Differential Equations − Weighted Monte Carlo Optimization/Calibration − Fourier Methods – Laplace Inversion − Finite Difference Methods − Mathematical Design Patterns – Stochastic Volatility.

Module Outcome:

MO1: To familiarize the students with the numerical methods for finance

Module III: Set Theory and Vectors, Matrices and Applications

Sets and set operations, Venn Diagram, Convex sets and their properties, Relations and functions and their properties - Matrices and their operations, inverse of a matrix, rank of a matrix.Determinants- Evaluation of higher order Determinant- Laplace method. Uses of Matrices and determinants in Economics- Input- output models (static and dynamic, open and closed models)-Hawkin- Simon conditions. System of Linear equations- Solution of system of Equations by Cramer's Rule and Inverse method

Module Outcome:

MO1: Tofamiliarise the students with the basics of sets and their operations
MO2: To use the tools of determinants and matrices in building models and finding their solutions

Module IV: Optimization and Application

Differential Calculus: Derivatives - Homogenous functions and Euler's Theorem, Constrained and Unconstrained optimization-Integration - Indefinite and definite integrals. Economic applications of derivatives and integrals - equilibrium of the firm, monopoly and discriminating monopoly

MO1: To capacitate the students in using the calculus in solving economic problems
MO1: To equip the students with the optimization techniques and their applications in consumer and firm behavior.

Module V:Differential and Difference Equations

Differential equations- Degree and Order of differential equations, First order linear differential equations and their solutions. Difference equations- Degree and Order of difference equations, solution of first order linear difference equations. Uses of these equations in economics-dynamic stability

***Module Outcome*:**

MO1: To use these equations in illustrating the above models.

Module VI: Linear Programming

Basic concepts, Formulation of a linear programming problem, Solution of linear programming problems by graphical and simplex methods, degenerate problem, Duality and its interpretation, Relation between the solutions of primal and dual, Dual Theorems, shadow prices and their uses.

***Module Outcome*:**

MO1: To equip the students with the Linear programming method in formulating problems in the local context and finding their solutions.

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To familiarize the students with Set Theory	PO... PSO_1	Un	Co	Assignment on Set Theory and vectors
CO2	To Acquire applied knowledge of Matrices and determinants.	PO.. PSO1	Un	Co	Assignment on Matrices and determinants
CO3	To mathematically evaluate economic theories by using differential and integral calculus	PO.. PSO_5	Ev	Ad	Assignment on differential and integral calculus
CO4	To apply mathematical tools for optimisation and economic model building	PO.. PSO4	Ap	Ad	Seminar on optimisation
CO5	To use differential and difference equations in illustrating dynamic stability and equilibrium	PO.. PSO2	Ap	Ad	Assignment on differential and difference equations
CO6	To apply the linear Programming technique in economic decision making	PO.. PSO4	Ap	Ad	Assignment on linear Programming

Reading List

Chiang, A.C. (2008), Fundamental Methods of Mathematical Economics, McGraw Hill, New York.

Dowling, E.T.(2007), Introduction to mathematical Economics, Schaum's Outline Series, McGraw Hill.

Taro Yamane (2001) Mathematics for Economists : An Elementary Survey: Prentice Hall of IndiaPvt. Ltd., New Delhi

Michael Hoy and L. John (2004), Mathematics for Economics, PHI, New Delhi

Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.

Prasad (2005), Mathematical Method of Input Output Analysis, Mahamaya Publishing, New Delhi

Hadley, G (1969), Linear Programming, Addison Wesley Publishing Co., Massachusetts.
Taha, H.A.(2008), Operations Research- An introduction, Prentice hall of India, New Delhi

ASSESSMENT

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Semester: I **Course Code: FECO-CC-514**
Course Title: India's Economic Development **Credits: 4**

Course Learning Outcome (CLO)

- Students understand factual information on Indian economy.
- They analyse sectoral performance of the economy.
- Students use relevant statistics to analyse the implication of various economic policies.
- They compare and evaluate the growth and development trends of the national as well as regional economies

Course Content

Module 1: Data sources and statistical agencies in India

Statistical system in India an overview: Data collection and dissemination agencies: CSO. RBI, Census, NSSO, ASI, CMIE, Capital Labour Energy Materials- KLEMS (Global Data). National income and its components since 1951 (CSO) - Agricultural statistics at Glance (Ministry of Agriculture) , Industry (ASI and CMIE), Banking sector (RBI) Census 2011,socio-economic statistics (NSSO, National University of Educational Planning and Administration – NUEPA), Trade and External Sector (RBI).

Module Outcomes

MO1*: Students understand various data sources related to different sectors Indian economy.*
MO2*: Students apply various mathematical/statistical tools they have already learned, using relevant data and interpret the results.*

Module 2: Growth and Structural Changes of the Indian Economy

Economic growth in India- Contribution of different sectors to GDP and employment- Trends in India's national income-Trends in savings and investment since reforms- HDI related indicators of India-Millennium Development Goals- Inclusive growth in India-Economic Reforms-Rationale of internal and external reforms; Globalisation of Indian economy; W.T.O. and its impact on the different sectors of the economy; Need for and issues in good governance

Module Outcomes

MO 1: The students understand the trends and pattern of growth of Indian Economy and structural challenges.
MO 2: Students gain knowledge of transformation performance of Indian Economy.

Module.3 Agriculture Sector

Growth and productivity in agriculture across states and crops (Food crops, non-food crops - cereals pulses) - Changes in the lands systems and land reforms – major interventions in agriculture (Green revolution, white revolution, yellow revolution) – capital formation in agriculture – food security and reforms in public distribution system – Indian agriculture and WTO –reforms in agricultural prices, marketing, credit and infrastructure since 1991.

Module Outcomes

MO 1: The students identify the implications of demographic changes and evaluate population policy.
MO 2: The students recognize the problem of poverty and unemployment and evaluate various poverty alleviation programmes.

Module.4 Industry and Service Sectors

Approach to industrialization 1950 to 1991 – Reforms in industrial sector since 1991, Heavy industry, MSME SSI cottage industries and their importance - Trends in growth and

productivity in industry - Privatization and disinvestment – Transport and Communication, ICT, Power Policy and Power Production, Role of FDI and MNCs in industry and service sectors – issues in globalization.

Module Outcomes

MO1: Students evaluate the performance of industrial sector
MO2: Students identify the implications of changes in industrial policy reforms.
MO3: Students recognize various problems related to globalisation and FDI

Module.5 Development Challenges

Trends in poverty and inequality - poverty alleviation and employment generation – Demographic pattern and Demographic dividend, education and employment, health and nutrition – financing of health and education in India – Regional disparities – role of infrastructure – Financing methods and provisioning of infrastructure. Impact of Covid-19 on various sectors of Indian Economy

Module Outcomes

MO1: *The students critically examine the development process in the economy in light of the structural changes that happened since 1951.*
MO2: *Students apply theoretical knowledge to assess development outcomes.*
MO3: *Students explore the links and interconnectedness between policies and outcomes.*

Module 6: Fiscal, Monetary and Trade policies

Budget: Meaning and Components, Fiscal Policy, Problems of States Resources and Indebtedness- FRBM Act and its challenges - Financial Sector Reforms- Interest Rate Policy – Review of Monetary Policy, evolution of India's trade policies – composition and direction of India's trade – Issues in balance of payments –India in Global economy.

Module Outcomes

MO1: *Students organise data and performance indicators of the economy to hypothesise the relationships between policies and performance.*
MO2: *The students are expected to combine the understanding of the data and policies to organise critical examination of the growth process.*

Tagging Course Outcomes
Faculty Member/s

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	Students understand factual information on Indian economy.	PO... PSO_4	Un	Fa	Assignment on Growth Performance of Indian Economy since 1951
CO2	They analyse sectoral performance of the economy.	PO.. PSO_5	An	Un	Assignment on performance of the economy since economic reforms
CO3	Students use relevant statistics to analyse the implication of various economic policies.	PO.. PSO_1	An	Un	Seminar on Financial Sector Reforms
CO4	They compare and evaluate the growth and development trends of the national as well as regional economies	PO.. PSO_2	An	Un	Assignment on regional disparities in financing health and education in India

Reading List

Module 1: C.P. Chandrasekhar and JBG Tilak (Ed),(2001) India's Socio-Economic Data Base; Surveys of Selected Areas, Tulika, New Delhi.
Economic Survey, Ministry of Finance (Various Issues).

Module 2: Uma Kapila, (2010), Indian Economy Since Independence, Academic Foundation, New Delhi.
Jalan, B. (1992), The Indian Economy – Problems and Prospects, Viking, New Delhi.

Module 3: T J Byres(1998) (ed.) The Indian Economy: Major Debates since Independence, Oxford University Press, New Delhi.
A.Vaidyanathan (1994) 'Performance of Indian Agriculture since Independence',In Kaushik Basu (ed.) Agrarian Questions, Oxford University Press, USA, pp.18-74.

Module 4: R Nagaraj(2003) 'Industrial Growth and Diversification', In Uma Kapila (ed.),Indian Economy since Independence, Academic Foundation, New Delhi, Chapter-17
Indian Industry : Policies and Performance Oxford in India Readings - Times Edited by Dilip Mookherjee The Service Sector in India's Development, Gaurav Nayyar, Cambridge University Press June 2012.

Module 5: The Great Indian Poverty Debate Hardcover – 2006 by Deaton (Author), Kozel (Author) Report of the Commission on Macroeconomics and Health, 2001, Government of India.
Jandhyala B.G. Tilak (2018) Education and Development in India: Critical Issues in Public Policy and Development by | 26 September
Report of the National Commission for Enterprises in the Un-organised Sector(NCEUS),2008
Mainstreaming Unpaid Work: Time-use Data in Developing Policies by OUP India and Indira Hirway

Module 6: Anne. O. Krueger. (ed) (2002), Economic Policy Reforms and Indian Economy, Oxford University Press, New Delhi.
Chetan Ghate, (2012),The Oxford Handbook of Indian Economy, OUP, New York.

Additional Reading List

1. Ahulwalia, I.J. and I.M.D. Little (Eds) (1999), India's Economic Reforms and Development, (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
2. Brahmananda, P.R. and V.R. Panchmukhi (Eds) (2001), Development Experience in the Indian Economy: Inter-state Perspectives, Bookwell, Delhi.
3. Joshi, V. and I.M.D. Little (1999), India : Macro Economics and Political Economy, 1964-1991, Oxford University Press, New Delhi.
4. Chetan Ghat, (2012),The Oxford Handbook of Indian Economy, OUP, New York.
5. Deena Khatkhate and Reddy Y. V. (2012) (I G Patel) Of Economics, Policy and Development, An Intellectual Journey, OUP, New Delhi.
6. Government of India, *Economic Survey*, (Annual), Ministry of Finance, New Delhi.
7. Jayaraj and Subramanian S., (2010), Poverty, Inequality and Population, OUP, New Delhi.
8. Kaushik Basu (ed) (2004), *India's Emerging Economy*, Oxford University Press, New Delhi.
9. Mahenra Deve S, *India Development Report* – 2012-03, Oxford University Press, New Delhi.
10. Pulin B. Nayak, Bishwanath Goldar and Pradeep Agrawal, (ed) (2010), India's Economy and Growth, Sage , New Delhi.

11. Srinivasan, T.N. (e d) (2000), *Eight Lectures on India's Economic Reforms*, Oxford University Press, Oxford.
12. Sury M.M., (2011), Twenty Years of Economic Development in India, 1991-2011, New Century Publications, New Delhi.
13. Dandekar V.M. (1994), *Indian Economy 1947-92*, Vol. I & II, Sage Publications, New Delhi.
14. Vaidyanathan A. (2003), Indian Economic Reforms and Development, Academic Foundation, New Delhi.
15. Veena Jha,(2012), India Emerging, Academic Foundation, New Delhi.
16. World Bank (2003), *India, Sustaining Reform, Reducing Poverty,* Oxford University Press, New Delhi.
17. Yadave K. P.,(2006), Economic Planning and Restructuring, Sarup and Sons, new Delhi.
18. Zafar Ahmad Sultan, (2010) Economic Reforms and India's Foreign Trade, Regional Publications, New Delhi.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks: 60

This question paper has three sections.

All questions in Section A to be answered (10x1=10 marks)

Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: I **Course Code: FECO-CC-515**
Course Title: Financial Economics-I **Credits: 4**

Course Outcome

- To examine the structure and institutions operating within the financial ecosystem
- To elucidate the role, functions and trading procedures of stock markets and the relevant regulations governing the same
- To provide the student with a sound understanding of the concepts of cost of capital, capital structure, and optimum capital mix and their applications
- To evaluate various asset return models, portfolio risk analysis and management.
- To identify practical applications of the concepts by examining case studies of real life scenarios.

Module 1. Structure and Role of Financial System

Structure and components of the Financial system – Institutions, markets and instruments- Banking and Non-Banking-Investment banks, mutual funds, venture capital, credit rating agencies – Significance of banking and other financial institutions-Financial Innovations-Financial Markets-Money and capital markets – components and role- Internationalisation of financial markets-world stock markets- Financial Instruments – Financial Services

Module Outcome

MO1:To develop working knowledge on the various financial institutions, their integration to the banking system, money markets and stock markets of India and abroad.

Module 2. Stock Markets

Stock Exchanges – Role and functions – trading procedures and settlement – day trading and intraday trading - buying on margin and short sale -prohibited transactions – insider dealing – SEBI –its roles and regulatory functions - market abuse – money laundering –PMLA (Prevention of Money Laundering Act) - Security markets- participants - IPO - Secondary markets -G-Sec market - corporate bonds – New age Indian Bonds (Masala Bond), Regulatory Institutions - RBI, SEBI, IRDA - Financial sector reforms - pre and post reform developments – PFRDA

Module Outcome

MO1:To familiarise the student with stock markets, their functions, concepts for trading

MO2: Critically evaluate the roles of regulators and to have an overview of the Acts and Laws that are meant to both regulate and protect investors, primary and secondary markets.

Module 3. Theory of Uncertainty

Certainty equivalence - measures of risk-absolute and relative risk aversions-Measuring portfolio risk and return - minimum variance portfolio - perfectly correlated assets - optimal portfolio choice - mean variance frontier of risky and risk-free assets - effect of diversification

Module Outcome

MO1:Evaluate the risk associated with portfolios, optimal risk vs. returns, the advantage of diversification.

Module 4: Models of Asset Pricing

Models on asset returns - CAPM, APT,WACC and Fama-French three factor model - Capital market line - Security market line - efficient frontier - estimation of beta - Portfolio management- Theories – Traditional, Markowitz, Portfolio strategy, evaluation and revision.

Module Outcome

MO1: To familiarise the student with asset return models and the calculation ofthe beta coefficient

MO2: Provide sound understanding the basis of portfolio management and evaluation.

Module 5: Capital Structure Choice

The Traditional view - the Value of a Firm with Tax – Economic Value Added (EVA), Market Value Added – SOPT (Sum of Parts Analysis) - Modigliani –Miller Irrelevance Hypothesis - Choices in Financing- Debt or Equity, Cost to Capital (Ke) - Financing Mix and Trade off Theory - Signalling Hypothesis - Pecking Order - Agency cost, Start-up Finance.

Module Outcome

MO1:Analyse and interpret the cost of capital, EVA, financing models and financing start -ups.

Module 6. Case Studies

Case studies to cover the following:

a. Application of CAPM, APT, in the context of portfolio management
b. Cost of Capital in the context of industry, and Value Added
c. Analysis of live Company financial statements to understand the risk diversification
d. Security analysis
e. Bond Valuation
f. Optimum financing for listed companies

(Note: Module VI will be exempted from end semester examination and evaluation for the module will be done through continuous assessment)

Module Outcome

MO1: Identify practical applications concepts from the real life scenario

Tagging Course Outcomes

Name of Faculty member:

CO	CO Statement	PO/PSO	CL	KC	Assessment

CO1	To examine the structure and institutions operating within the financial ecosystem	PSO1	Un	Fa	Assignment on the structure and institutions within the financial ecosystem
CO2	To elucidate the role, functions and trading procedures of stock markets and the regulations governing them	PSO1	Ev	Fa	Seminar on different stock markets and stock market regulations
CO3	To provide the student with a sound understanding of the concepts of cost of capital, capital structure, and optimum capital mix and their applications	PSO3	Un	Co	Assignment on the concepts of cost of capital, capital structure and optimum capital structure
CO4	To evaluate various asset return models, portfolio risk analysis and management	PSO3	Ev	Co	Assignment on asset return models, portfolio risk analysis and management
CO5	To identify practical applications of the concepts by examining case studies of real-life scenarios	PSO1	Ev	Fa	Seminar on case studies

Basic Reading List

Reilly, Frank K. and Brown, Keith C. (2002), Investment Analysis and Portfolio Management, 7th Ed. Dryden.

Modigliani, Franco Jones, Frank (2009) Foundations of Financial market and institutions – International Edition – 4th Edition, Pearson Higher Education.

Francis, Jack Clark. (1993), Management of Investments, McGraw Hill International Edition.

Sharpe, William F. et. al. (1997), Investments, New Delhi, Prentice Hall of India.

Fisher, Donald E. and Jordan, Ronald J. (2018), Security Analysis and Portfolio Management, New Delhi, Prentice Hall of India.

Elton, E.J and M.J. Gruber. (1991), Modern Portfolio Theory & Investment Analysis, (fourth edition) John Wiley & Sons.

Houthakker, H.S. and P.J. Williamson. (1996), Economics of Financial Markets, Oxford University Press.

Prasanna Chandra. (2017), Investment Analysis and Portfolio Management, McGraw Hill.

Additional Reading List

L M Bhole. (2020), Financial Institutions and Markets, TMH New Delhi.

Brealey, R. and S. Myers. (1997), *Principles of Corporate Finance*, fifth edition, New York, McGraw Hill.

Elton, E.J and M.J. Gruber. (1991), *Modern Portfolio Theory & Investment Analysis*, (fourth edition) John Wiley & Sons.

Bhalla, V.K. (2008), Investment Management: Security Analysis and Portfolio Management, S. Chand.

I. M., Pandey. (2009), Financial Management, Vikas Publishing House.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
All questions in Section A to be answered (10x1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

DISCIPLINE-SPECIFIC ELECTIVES

Semester: I **Course Code: FECO-DE-516**

Course Title: Investment Banking **Credit: 3**

Course Learning Outcomes

CO1:Toget an overview of investment banking and innovation in fixed income instruments used in financial market.

CO2: To analyse valuation of companies and mergers and acquisitions of companies.

CO3: To understand structure of investment banking and elucidate how investment bankers compete

Course Content

Module 1. Introduction: Overview of Investment Banking

Developments in Investment Banking – operations and institutions - Functions of Investment Banks - Types of Investment Banks-Investment Banking Services - Merchant banking and Issue management - Pre issue and Post issue obligations-Corporate debt and underwriting procedures - securitization and asset backed debt securities, high yield debt investment bankers as traders and market-makers, private placements.

Module outcome

MO1 Able to understand and analyse investment banking.

Module 2. Innovation and New Products in Fixed Income Instruments

The impact of technological innovation: an overview of Fintech- Equity and debt capital market: origination, advisory, selling - IPOs and listing - equity issues; valuing an initial public offering, international equity issues, GDR, ADR, convertible securities, innovation and new equity securities, derivative securities.

Module outcome

MO1 Identify opportunities in New products in fixed income instruments.

Module 3. Mergers & Acquisitions

Introduction to valuation of companies; the law of mergers & acquisitions, markets for takeover stocks and risk arbitrageurs restructuring: theory of adding value, LBOS, MBOs, MLPs and ESOPs, practice of adding value - transaction dealing and financing -Private equity and SPACs - Joint Ventures -Takeover Defences

Module outcome

MO1 Able to analyse companies in terms of values.

Module 4. Structure of the Investment Banking

Structure of banking industry, major developments in India, and in international capital markets- changing landscape of Investment Banking Regulation of the Capital Market- SEBI regulations for merchant bankers, brokers and sub brokers, intermediaries and portfolio managers- SEBI issue and Listing of Debt securities Regulation 2008- legal basis of corporate finance and investment banking - Leverage, debt sustainability and bond financing– Securitization of debt: Meaning, Features, Special Purpose Vehicle, Types of securities able assets, Benefits of Securitization, Issues in Securitization

Module outcome

MO1 To understand the structure of investment banking in the context of India.

Module 5. How Investment Bankers Compete

Developing new business, international business, professional standards and management - Asset management, financial advisory and robo advisory - Financial engineering - dimensions of competition - fees, pricing accuracy, analyst recommendations, distributional abilities, market making prowess, debt offering capabilities, and overall reputation

Module outcome

MO1 Able to develop new business.

Tagging Course Outcomes
Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To get an overview of investment banking and innovation in fixed income instruments used in financial market.	PO... PSO_1	Un	Co	Assignment on investment banking and innovation in fixed income instruments
CO2	To analyses valuation of companies and mergers and acquisitions of companies.	PO... PSO3	Ev/Un	Co	Discuss valuation of companies
CO3	To understand structure of investment banking and elucidate how investment bankers compete	PO.. PSO_2	An/Un	Co	Seminarinvestment banking

Basic Reading List
Bodie, Z., A Kane and A.J. Marcus, *Investments,* Irwin McGraw-Hill, 2005.
Sharpe, W.F., J.A. Gordon, and J.V. Bailey, *Investments,* Prentice-Hall, 1999.
Liaw, T. *The Business of Investment Banking,* John-Wiley, 1999.
Subramanyam, P. *Investment Banking,* TATA McGraw-Hill, 2005

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.

All questions in Section A to be answered (10x1=10 marks)

Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: II **Course Code: FECO-CC-521**
Course Title: Microeconomics II **Credits: 4**
Course Learning Outcome (CLO)

- Understand the efficiency condition of competitive equilibrium and its welfare implications.
- Critically understand the fundamental theorems of Welfare economics.
- Understand the social welfare function and Pareto criteria.
- Compare the various criteria for evaluating social welfare and arriving at a social choice.
- Analyze decision making of consumer under risk and uncertainty with special emphasis on insurance choice and provide tools for measuring risk and risk aversion.
- Examine the issues of moral hazard and adverse selection arising from asymmetric information in the real world and how it leads to market failure.
- Develop a critical understanding of second or third best.
- Understand how externalities lead to market failure and the issue of underprovisioning of public goods
- Critically evaluate the importance of Behavioural Economics and its influence in constructing the new theories of firms

Module 1: General Equilibrium

Equilibrium in Exchange – Edgeworth box, Pareto Efficient Allocation Equilibrium in Competitive Market Systems – Equilibrium in Production – Edgeworth box under Production, Pareto Efficient Allocation, Production possibility Frontier, Pareto optimality and Competitive (or Walrasian) Equilibrium, Comparative Static Analysis Existence of General Equilibrium Prices.

Readings :

Chapter 13**,** C. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* Cengage Learning(India), 2010

ModuleOutcome:

- The candidate understand and explore the concept of equilibrium and efficiency which make them to apply the same in research and analysis

Module 2:Welfare Economics and Social Choice

Allocation, Paretian Value Judgements (Process Independence, Individualism, Non Paternalism, Benevolence), Social Welfare function and Pareto Criterion, Paretian Social Welfare Function Benthamite and Rawlsian Welfare Function , Compensation Principle (Hicks Kaldor Compensation Criteria, Scitovsky Reversal and Double Criteria, William Gorman's Intransitivity Problem, Samuelson's Criteria), First and Second Theorem of Welfare Economics, Theory of Second Best, Arrow's Impossibility Theorem, Rawl's theory of Justice, Equity Efficiency Trade off.

Readings :

Chapter 13, Hugh Gravelle and Ray Rees, Microeconomics, 3rd Edition, Pearson Education 2008.

S. K. Nath (1969), A Reapprasal to welfare economics, London, Routledge & Kegan Paul Ltd.

Geoffrey A. Jehle and Philips J. Reny, Advanced Microeconomic Theory, 2011, Pearson education India.

W.J. Baumal , Welfare Economics and the theory of State, Harvard University Press.

ModuleOutcome:

- The candidate explore the possibility of welfare theoretic framework, which act as the building block of economic theory and empirical analysis

Module 3: Choice under Uncertainty

Risky alternatives by defining lotteries, Contingent Consumption, basic axioms (rationality, continuity, and independence on individual preferences)to obtain Von Neumann Morgenstern Expected Utility Function, Attitude of different individuals towards risk, Measures of Risk Aversion, Risk Aversion and the Concavity of Utility function, Certainty Equivalence, Insurance choice and Risks, Measures of Risk Aversion (Risk Premium, Arrow Pratt Measure, Fair Bets), Measure of Risks.

Readings :

1. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* CengageLearning (India), 2010. (Chapter 7).
2. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Nortonand Company/Affiliated East-West Press (India), 8th edition, 2010 (Chapter 12).

Module Outcome:

- The candidate explore towards introducing of risk and uncertainty which disturb the the equilibrium and efficiency conditions and make them to apply the same in research and analysis under uncertain and risky situation

Module 4: Market Failure and Information Asymmetry

Defining Asymmetric Information, Moral Hazard and Adverse SelectionProblem of first best, second or third best Principal Agent Model – Moral Hazard in Owner Manager Relationship, Moral Hazard in Insurance market, Efficiency wage model.Adverse Selection – Market for lemons, Insurance market, Rural Credit Market, Market Signaling.

Readings :

Chapter 18, C. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* Cengage Learning (India), 2010.

Module Outcome:

- The candidate exposed towards the possibilities of market failures and learns the possibility of overcoming the same.

Module 5: Market Failure, Externalities and Public Goods

Causes of Market Failure, Defining Externality and Public Goods Market Failure and Imperfect Market, Externalities and Allocative inefficiency- conditions, Efficiency and Competitive allocation, Solutions to the Externality problem – Pigovian tax, CoaseTheoremAttributes of Public GoodsPublic Goods and Market Failure, Inefficient Provision of Public GoodsLindahl Equilibrium (pricing of Public Goods)Voting and Resource Allocation – Majority Rule, Paradox of Voting, Single peaked preference and Median Voter Theorem

Readings :

Chapter 19, C. Snyder and W. Nicholson, *Fundamentals of Microeconomics,* Cengage Learning (India), 2010.

Chapter 14**,**HughGravelle and Ray Rees, Microeconomics, 3rd Edition, Pearson Education 2008.

Module Outcome:

- Exploring on the existence of externality and public good to understand the real world market situation, which help them to formulate boththeoretical and empirical analysis

Module 6: Behavioral Economics and Alternative Theories of firms

a) Behavioral economics – framing - anchoring effect – bracketing - uncertainty – law of small numbers - asset integration and loss aversion -role of time and emotions in

economic decisions - role of constraints and information - satisficing – ameliorating - path dependence - bounded rationality - altruism and common good strategic interaction and social norms .

b) Theories of the Firm: Baumol, Marris, Williamson, Cyert and March, Lust.

Module Outcome:

Explore Behavioural economics and its influence in building of alternative theories of firms

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	Understand the efficiency condition of competitive equilibrium and its welfare implications.	PO... $PSO_{1,2}$	Un	Co	Assignment on the possibilities of competitive equilibrium and welfare.
CO2	Critically understand the fundamental theorems of Welfare economics.	PO.. PSO_2	Ev	Co	Assignment on critical analysis of fundamental theorems of welfare economics.
CO3	Understand the social welfare function and Pareto criteria.	PO.. $PSO_{1,2}$	An	Co	Seminar on Welfare functions and Pareto efficiency.
CO4	Compare the various criteria for evaluating social welfare and arriving at a social choice .	PO.. PSO_3	Ev	Co	Assignment on how individuals and society as a whole benefit from social choice.
CO5	Analyze decision making of consumer under risk and uncertainty with special emphasis on insurance choice and provide tools for measuring risk and risk aversion.	PO.. $PSO_{2,3}$	Ap	Ad	Assignment on Risk and uncertainty
CO6	Examine the issues of moral hazard and adverse selection arising from asymmetric information in the real world and how it leads to market failure.	PO.. $PSO_{2,3}$	Ap	Ad	Seminar on Moral Information Asymmetry and Market Failure
CO7	Develop a critical understanding of second or third best.	$PSO_{2,4}$	Cr	Ad	Seminar or Second Best
CO8	Understand how externalities lead to market failure and the issue of underprovisioning of public goods	$PSO_{2,4}$	Un	Co	Assignment on Market Failure and public good
CO9	Critically evaluate the importance of Behavioural Economics and its influence in constructing the new theories of	$PSO_{2,4}$	An	Ad	Seminar on Behavioural Economics

	firms				

Additional Readings:

Pindyck, Robert.S, Rubinfield, Daniel, L, Mehta, Premlal, L (6th edition), *MicroEconomics (P. 561-564)*

Goodwin, Harris, Roach &Torras (3rd edn), "*Microeconomics in context, M.E Sharpe.* Inc, USA (visit www.gdae.rg/micro)

Varian H.R (2013), *Intermediate Micro Economics, East – West Press Edition (566-581)*

Krugman, Paul & Wells, Robin (2005), *Micro Economics*, Worth Publishers, New York (P-290-297)

Archibald G.C (Ed) (1971), *Theory of the firm*, Penguin (P) Ltd

Langlois, Richard N and Yu, Tony Fu- Lai, Robertson, Paul(Ed) Alternative theories of the Firm, Edward Elgar, 2003.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.

All questions in Section A to be answered (10x1=10 marks)

Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: II **Course Code: FECO-CC-522**
Course Title: Macroeconomics II **Credits: 4**

Course Learning Outcome (CLO)

- Introduce the trade off between inflation and unemployment through short run and long run Phillips curve.
- Describe the various growth theories and its policy implications
- Differentiate the perspectives of New Classical Economics from Real Business Cycle theories
- Distinguish the assumptions and policy prescriptions of Post- Keynesians from the New Keynesians.
- Identify the role of Central Bank in macroeconomic policy on the basis of three equation models and enhances the ability of the student to comprehend the issues of financial instability and crisis through original articles

COURSE CONTENT

Module I: From Philips curve to Aggregate supply curve: Exploring recent developments about the Phillips curve.

Inflation-unemployment trade-off. The Phillips curve and the orthodox Keynesian economics, Expectations augmented Phillips curve analysis. Algebraic derivation of the AS curve from the Phillips curve to be done - unemployment, sacrifice ratio and the Okun's Law. Natural rate of unemployment.

Module Outcome:

- Introduce the trade off between inflation and unemployment through short run and long run Phillipscurve.

Module II: Exogenous and Endogenous Growth Theories

Relationship between exponential growth and logs. The rule of 70. Harrod Domar model and the knife-edge problem. The Solow model. Steady state or balanced growth. Golden Rule ofaccumulation. Understanding transitional dynamics through reduction or increase in savings rate in the Solow model. Cross country differences in GDP per capita. Convergence between rich and poor countries. Conditional convergence. Human capital. Technological progress and steady state growth in Solow model. Growth accounting: measuring the impact of technology. Endogenous growth: the Romer model. Endogenous growth and endogenous technological progress. Schumpeterian growth: the Aghion-Howitt model of Creative destruction and competition and business cycle fluctuations. GreatDivergence.

Module Outcome:

- Describe the various growth theories and its policyimplications

Module III: Schools of Macroeconomics: New Classical Economics and Real Business Cycle Theory

New Classical school. Structure of new classical models. Rational expectations hypothesis. Aggregate supply hypothesis. Equilibrium business cycle theory. Policy Ineffectiveness Postulate. Dynamic time inconsistency , credibility and monetary rules. Central bank independence. Lucas critique of econometric policy evaluation.

Real Business Cycle in Historical Perspective. Cycle versus Random Walks. Supply side shocks. Business cycles: Main features and stylized facts. Structure of real business cycle model. Technology shocks. A RBC Aggregate demand and supply model.RBC Theory and Neutrality of Money. Measuring Technology shocks. Critical appreciation of real business cycle approach

Module Outcome:

- Differentiate the perspectives of New Classical Economics from Real Business Cycle theories

Module IV: Post-Keynesian economics and New Keynesian Economics

Rise and fall of Keynesian economics. Core propositions and Features of new Keynesian Economics, Neo Keynesian Economics and Post Keynesian Economics -policy prescriptions

Module Outcome:

- Distinguish the assumptions and policy prescriptions of Post- Keynesians from the New Keynesians.

Module V: Monetary Policy and the introduction to the 3 equation model (IS/PC/MR approach)

Monetary Policy. Preliminaries.

Monetary Policy , transmission of monetary policy, market interest rates, asset prices, profit expectation and confidence, exchange rate, Zero lower bound, quantitative easing, , the real interest rate and the Fisher equation, the exchange rate channel of monetary policy. Demand shocks and Demand side polices, macroeconomic policies before the global financial crisis : inflation targeting policy (all from CORE)The 3 equation model and macroeconomic policy role of central bank in stabilization. inflation and deflation. Rising inflation and distributional conflict. Benefits of low and stable inflation. Dangers of deflation. 3 equation model. IS , PC and MR curve. Taylor's central bank loss circles. Phillips curve constraint. Derivation of the monetary rule graphically.The deflation trap and 3 equation model (all from C& S 2015)

Module Outcome:

- Identify the role of Central Bank in macroeconomic policy on the basis of three equation models.

Module VI:

Financial Crisis, Financial Stability and the Economy (This section have three important readings and their links)

Module Outcome:

Enhances the ability of the student to comprehend the issues of financial instability and crisis through original articles.

Tagging Course Outcomes

Name of Faculty:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	Introduce the trade off between inflation and unemployment through short run and long run Phillips curve	PO1 PSO_1	Un	Co	Assignment on unemployment and inflation in INdia
CO2	Describe the various growth theories and its policy implications	PO1 PSO_2	An	Co	Assignment on growth theories and policy implications
CO3	Differentiate the perspectives ofNewClassical Economics from Real Business Cycletheories	PO5 PSO_5	An	Fa	Seminar on policy implications of New Classical Economics and Real Business Cycle theorists
CO4	Distinguish the assumptions and policy prescriptions of Post-Keynesians from the New Keynesians	PO3 PSO_3	An	Co	Seminar on applications of Post and New Keynesian Economics
CO5	Identify the role of Central Bank in macroeconomicpolicyonthebasisofthree equation models and comprehend the issues of financial instability	PO1 PSO_3	Ap	Me	Seminar on role of Central Bank

Reading List

Module1: Dornbusch, Fischer and Startz(2018) Macroeconomics. Twelfth Edition (Chapters titled “Aggregate Supply and the Phillips Curve” & “Unemployment”)

Gordon, Robert J (2018) Friedman and Phelps on the Phillips curve viewed from a half century’s perspective. Review of Keynesian Economics, Vol. 6 No. 4, Winter 2018, pp. 425–436.

Module2: Carlin, Wendy and Soskice, David(2015) Macroeconomics: Institutions, Instability and the Financial System. OUP (Growth, Fluctuations and Innovations Chapter 8)

Snowdon, Brian and Vane, Howard(2005) Modern Macroeconomics: its Origins, Development and Current State EE(Sec 11.2 Great Divergence pp580 -583 and Sec. 11.9 Harrod-Domar model, pp 598 to602)

Das, Mausami(2018)Nobel laureate Paul Romer’s contribution to endogenous growth theory https://www.ideasforindia.in/topics/governance/nobel-laureate-paul-romer-s-contribution-to-endogenous-growth-theory.html

Module3: Snowdon, Brian and Vane, Howard(2005) Modern Macroeconomics: its Origins, Development and Current State EE (chapters on new classical economicspp 219-271 and pp 294- 343)

Module4: Snowdon and Vane (2005)(chapters on New Keynesian economicspp357-432 and Post Keynesian school, pp 451-4720

Module5: CORE Team(2017) The Economy. Economics for A Changing World. Oxford University Press.(Chapter on Inflation, Unemployment and Monetary Policy)

Carlin, Wendy and Soskice(2009) Macroeconomics: Imperfections, Institutions and Policies. OUP (Chapter 3 titled The 3 equation model)Azad, R. &Saratchand, C. (2015). A Macro-theoretic Survey of Monetary Policy in a Closed Economy in P. Patnaik (Ed.), ICSSR Research Surveys and Explorations, Volume 3, pp. 75-116, Oxford University Press.

Module 6: Koo, Richard T (2011)The world in balance sheet recession: causes, cure, and politics

http://www.paecon.net/PAEReview/issue58/Koo58.pdf

Minsky, Hyman P (1992) The financial instability hypothesis. Working Paper Number 74.Levy Institute(http://www.levyinstitute.org/pubs/wp74.pdf)

Patnaik, Prabhat (20)The Economic Crisis and Contemporary Capitalism
(https://www.robinson.cam.ac.uk/postkeynesian/members/ahe/Patnaik.pdf

Shin, Hyun Song(2009) Reflections on Northern Rock: The Bank Run that Heralded the Global Financial Crisis. Journal of Economic Perspectives—Volume 23, Number 1—Winter 2009— Pages 101–119

Other Readings

Blanchard, Olivier and Johnson, David R(2017) Macroeconomics. Sixth Edition

Admati, Anat and Hellwig, Martin (2013): The Banker's New Clothes.What's Wrong With Banking and What To Do About It? Princeton University Press

Jones, Charles I(2019) Paul Romer: Ideas, Nonrivalry, and Endogenous Growth. Scandinavian Journal of Economics 2019(https://web.stanford.edu/~chadj/RomerNobel.pdf)

Abel, Andrew and Bernanke, Ben( ) Macroeconomics. D'Souza, Errol (2008) Macroeconomics. Pearson Education.

Jones, Charles I and Wollrath, Dietrich(2013) Introduction to Economic Growth. (The book should be used in the coming years. With some amount of algebra Jones introduces theories of economic growth)

Lavoie, Marc(2014) Post Keynesian Economics New Foundations. Edward Elgar

Patnaik, Prabhat (ed.), ICSSR Research Surveys and Explorations, Volume 3, Macroeconomics pp. 75-116, Oxford University Press.

Vasudevan, A and Ray, Partha (2018) Macroeconomic Policies for Emerging and Developing Economies. Sage

Friedman, Milton(1968) The Role of Monetary Policy. The American Economic Review. March 1968 . Volume LVII, pp 1-17

Lawrence J. Christiano, Martin S. Eichenbaum, andMathiasTrabandt (2018) On DSGE Models *Journal of Economic Perspectives—Volume 32, Number 3—Summer 2018—Pages*

113–140 Mankiw, Gregory N(2006)The Macroeconomist as Scientist and Engineer. Journal of Economic Perspectives. Volume 20, Number 4—Fall 2006—Pages 29–46

https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.20.4.29

Philippe Weil(2008)Overlapping Generations:The First Jubilee*Journal of Economic Perspectives—Volume 22, Number 4—Fall 2008—Pages 115–134*

Woodford, Michael(1999)Revolution and Evolution in Twentieth-Century Macroeconomics http://www.columbia.edu/~mw2230/macro20C.pdf,

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
All questions in Section A to be answered (10x1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: II **Course Code : FECO-CC- 523**
Course Title: Quantitative Techniques-II **Credits: 4**
Course Learning Outcome (CLO)

- To provide a strong foundation in the basics of data analysis and Probability theory
- To enhance student capabilities in making valid generalisations from sample data
- To enable the student to apply the statistical tools to data in order to improve decision making.
- To provide the student with an exposition of Research methodology and data bases
- To enhance student capabilities in drafting research proposals and preparing research reports

Module 1: Basics of Statistical Data Analysis

Graphical and tabular presentation of data (univariate and bi-variate analysis using Box Plots, Histograms, Cumulative Distribution, Cross-tabulation, Scatter Diagrams); Measures of Location and Variability, Percentiles, Skewness and Kurtosis, z-scores, Measures of Association between two variables (Covariance and Correlation)

Module Outcome

MO1: Develop a sound understanding of the basics of statistical data analysis

Module 2: Probability and Probability Distribution

Classical, relative frequency and axiomatic definitions of probability; Concepts of Joint, Marginal and Conditional probability, Bayes' Theorem and Independence, Concept of Random Variables, Features of probability distributions (Expected values, Variance and their properties); Discrete (Binomial, Poisson and hypergeometric) and Continuous (Uniform, Normal and Exponential) Probability Distributions and their applications.

Module Outcome

MO1: Enhance understanding of theory of probability

MO2: Acquire a critical understanding of various probability distribution and their applications

Module 3: Theory of Estimation

Statistical Inference, Concept of population and sample, Sampling distributions, The Central Limit theorem, Standard error, Distributions of sample mean and sample variance for a normal population, Chi-Square, t and F distributions, Estimations of populations parameters – point and Interval estimation, Properties of estimators, Confidence intervals for Mean and Variance of normal populations, Methods of estimation – Methods of least squares, Method of maximum likelihood.

Module Outcome

MO1: Develop valid generalisations from sample data

MO2: Estimate parameters of economic relations and interpret theresults

Module 4: Testing of Hypothesis

Null and alternative hypotheses, Parametric and Non-parametric tests of Hypothesis, Type I and Type II error, Critical region, Level of significance, one-tailed and two - tailed test, Power of a test, Test of significance in respect of Mean, Proportion, Variance and Correlation coefficient and their differences, Chi Square test of goodness of fit, and test for independence of attributes. Analysis of Variance – Meaning, assumptions - One way classification and two- way classifications, simple applications.

Module Outcome

MO1: Evaluate various parametric and non-parametric tests

MO2: Carry out hypothesis testing

Module 5: Research Methodology

Characteristics of scientific methodology, steps in carrying out an empirical project: posing a research question, Literature Review, Data Collection (Choosing dataset, storing data, cleaning and summarizing data); Secondary Databases in the Indian context, Questionnaire Design, Coding and Types of Data and Scales of Measurement of Variables (Qualitative vs Quantitative Data; Variables measured in Nominal, Ordinal, Interval and Ratio Scale) in primary data -based Research, Analysis of data and interpretation

Module Outcome

MO1: Examine various steps involved in carrying out an empirical research

MO2: Develop a sound understanding of various databases in the Indian context

Module 6: Preparation of Research Report

Drafting a good research proposal, writing a research report, lay-out of a research report, research ethics, avoiding plagiarism, writing a research paper, preparing a PPT presentation

Module Outcome

MO1: Draft a good research report and a research proposal

Tagging Course Outcomes

Name of Faculty Member:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To provide a strong foundation in the basics of statistical data analysis and probability theory	PSO3	Ap	Fa	Assignment on basics of statistical data analysis, probability theory and distributions
CO2	To enhance student capabilities in making valid generalisations from sample data	PSO3	Ap	Fa	Practical exercises
CO3	To enable the student to apply the tools of statistics to data in order	PSO3	An	Fa	Practical exercises

	to improve decision making				
CO4	To provide the student with an exposition of Research methodology and data bases	PSO4	Un	Co	Assignment on various steps involved in empirical research
CO5	To enhance student capabilities in drafting research proposals and preparing research reports .	PSO4	Un	Co	Assignment on preparation of research report and proposal

Reading List

Anderson, D., D. Sweeney and T. Williams (2013): "Statistics for Business and Economics", Cengage Learning: New Delhi.

Myatt, G. J. (2007): Making Sense of Data: A Practical Guide to Exploratory Data Analysi sand Data Mining, Wiley – Interscience, New Jersey

Croxton, F. E., D. J. Cowden and S. Klein (1988): Applied General Statistics, Prentice Hall of India, New Delhi

Freund, J.E and R. E Walpole (1987): Mathematical Statistics, Prentice Hall of India, New Delhi

Woolridge, J. (2012): "Introductory Econometrics: A Modern Approach", (Latest Edition), Cengage Learning: New Delhi.

Bryman A (2004): Social Research Methods. Oxford: Oxford University Press

Neuman, (2014): Social Research Methods: Qualitative and Quantitative Approaches, Pearson.

Devore, J.L. (2010): Probability and Statistics for Engineers, Cengage Learning.

Nagar,A.L. and R.K. Das (1993): Basic Statistics, Oxford University Press, New Delhi.

Taro Yamane (1973): Statistics: An Introductory analysis, Harper & Row, Edition

Milton, J.S. and J.C. Arnold (1990): Introduction to Probability and Statistics, McGraw Hill

Kothari C. R (2008): Research Methodology, Methods and Techniques, New Age International Publishers, 2nd revised edition.

Paul Oliver, (1990): 'Writing your thesis' second edition, Sage Publications, New Delhi

Dandekar, V. M. (ed.) (1972): Database of the Indian Economy, Vol II, Statistical Publishing Society, Calcutta

Government of India (1999): Guide to Official Statistics, 4th edition, Central Statistical Organisation, New Delhi

Government of India (1989): National Account Statistics: Source and Methods, Central Statistical Organisation, New Delhi

Krishna, K. L. (1997): Econometric Applications in India, OUP, New Delhi

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
All questions in Section A to be answered (10x1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: II **Course Code: FECCO-CC-524**
Course Title: Financial Economics-II **Credits: 4**

Course Learning Outcome (CLO)

CO1: To understand the modern theories of asset pricing such as efficient market hypotheses and theories of dividend policy.

CO2: To analyse valuation of fixed income securities, shares and derivatives.

CO3: To understand an overview of valuation of fixed income securities

CO4: To analys evaluation of shares.

C05: To understand and analyses market for derivatives and pricing.

Course Content

Module 1: Informational and Allocative Efficiency of Financial Markets

The Efficient Markets Hypothesis - Informational Efficiency, Rationality, and the Joint Hypothesis - A Simple Example of Informational Efficiency - A Second Example of Informational Efficiency: Predictability of Returns—Bubbles or Rational Variations of Expected Returns? - Informational Efficiency and the Predictability of Returns - Informational Efficiency and the Speed of Adjustment of Prices to Public Information - Informational Efficiency and the Speed of Adjustment of Prices to Private Information - Information Trading, Liquidity Trading, and the Cost of Capital for a Firm - Distinguishing among Equilibrium, Stability, and Volatility. Equilibrium in Security Markets - Consumption and Portfolio Choice - First-Order Conditions - Left and Right Inverses of X - Existence and Uniqueness of Equilibrium - Representative Agent Models

Module outcome

MO1 To understand and analyse the structure of modern theories of market pricing

Module 2: Mean-Variance Analysis

The Expectations and Pricing Kernels - Hilbert Spaces and Inner Products - The Expectations Inner Product- Orthogonal Vectors - Orthogonal Projections - Diagrammatic Methods in Hilbert Spaces - Riesz Representation Theorem - The Expectations Kernel - The Pricing Kernel -The Mean-Variance Frontier Payoffs - Mean-Variance Frontier PayofFrontier ReturnsZero-Covariance Frontier ReturnsBeta PricingMean-Variance Efficient ReturnsVolatility of Marginal Rates of Substitution

Module outcome

MO1 Able to understand dividend policy

Module 3: Valuation of Fixed income securities and dividend policy

Bond Returns and Prices − Systematic and Unsystematic Risk involved in Fixed Income Securities − Present Value Model and Bond Valuation − Duration Shifts − Convexity – Bond Price Volatility − Term Structure of Interest Rates −Analysis of Bonds with Embedded Options-Bond Portfolio Management – Duration, Shift and Immunization − Passive and Active Strategies.Theories of Dividend Policy- Waltor’s Model, Gordon’s Model and

Modigliani Miller, Optimal Dividend Policy-Practical Considerations, Stability of Dividends, Forms Of Dividend-Cash, Bonus Shares And Buy Back Shares.

Module outcome

MO1 Able to understand valuation of fixed income securities.

Module 4. Valuation of Shares

A Philosophical Basis for Valuation − The Role of Valuation − Fundamental and Technical Analysis -Dividend Discount Models − Free Cash Flow to Equity Discount Models − Free Cash Flow to the Firm − Cost of Capital Approach − Firm Valuation − Estimating Equity Value per Share − Relative Valuation − Earnings Multiplier − Book Value Multiplier− Technical analysis: Significance of Trend lines, Charting, Different Charting Techniques, Dow Theory, Wave Principle-Patterns and Indicators- Moving Average-Relative Strength-Point and Figure Chart-Bar Diagram

Module outcome

MO1 Able to understand and analyse valuation of shares

Module 5. Market for Derivatives and Pricing

Insider Trading - Introduction - The Economic Effect of Insider Trading- The Effect of Insider Trading on Mitigating Problems of Agency - The Effect of Insider Trading on Protecting the Value of a Firm's Confidential Information - The Effect of Insider Trading on the Firm's Cost of Capital. Options: Call Options - Put Options - A Simple Model of the Equilibrium Price of a Call Option - The Black-Scholes Option Pricing Formula - The Put-Call Parity - Homemade Options - Implicit Options - Implicit Options in a Leveraged Firm. Futures Contracts - The Futures Price, the Spot Price, and the Future Price - The Long Side and the Short Side of a Futures Contract - Futures Contracts as Financial Securities - Futures Contracts as Transmitters of Information about the Future Values of Spot Prices - Investment, Speculation, and Hedging - Futures Prices as Predictors of Future Values of Spot Prices

Module outcome

MO1 Able to analyse derivatives and pricing

Module 6: Portfolio Restrictions&Optimal Portfolios

Short Sales Restrictions - Portfolio Choice under Short Sales Restrictions- Bid-Ask Spreads. Portfolio Choice and Wealth -Optimal Portfolios with One Risky Security - Risk Premium and Optimal Portfolios - Comparative Statics of Optimal Portfolios -Wealth - Expected ReturnRisk - Optimal Portfolios with Several Risky Securities - Optimal Portfolios - Risk-Return TradeofOptimal Portfolios under Fair Pricing - Risk Premia and Optimal Portfolios - Optimal Portfolios under Linear Risk Tolerance

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To understand the modern theories of asset pricing such as efficient market hypotheses and theories of dividend policy.	PO... PSO_1	Un	Co	Assignment on modern theories of asset pricing
CO2	To analyse valuation of fixed income securities, shares and derivatives.	PO... PSO_1	Un	Co	Discuss valuation of fixed income securities
CO3	To understand an overview of valuation of fixed income securities	PO.. PSO_2	Ev/Un	Co	Assignment on valuation of fixed income securities
CO4	To analysevaluation of shares.	PO.. PSO_5	An	Fa	Seminar on valuation of shares.
CO5	To understand and analyses market for derivatives and pricing.	PO.. PSO_3	An	Co	Assignment on market for derivatives and pricing.

Basic Reading List

Stephen F. LeRoy and Jan Werner: Principles of Financial Economics2nd edition

James Bradfield: Introduction to the Economics of Financial Markets

E.Baiky:TheEconomicsofFinancialMarkets,CambridgeUniversityPress.

JaksaCvitanie and Zapatiro Fernando: Introduction to the Economics and Mathematics of Financial Markets, MIT Press.

Copeland, T.E and J.F. Weston, Financial Theory and Corporate Policy. Addison Wesley, 1992.

Brealey.R and S.Myers, Principles of Corporate Finance, fifth edition, New York, McGraw Hill, 1997.

Panjer.H.H. Financial Economics: With applications to Investments, Insurance and

Pensions, Actuarial Foundation, 1998.

Houthakker.H.S and P.J.Williamson, Economics of Financial Markets Oxford

University Press, 1996

Additional Reading List

Hull.J. Options, Futures and other Derivatives, fifth edition, Prentice Hall, 2002.

Jayanth Varma: Derivatives and Risk Management, Tata McGraw Hill

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

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DISCIPLINE-SPECIFIC ELECTIVES

Semester II **Course Code: FECO-DE-525**
Course Title: Security Analysis & Portfolio Management **Credits: 3**

Course Learning Outcome (CLO)

- To develop the necessary skills for Investment in Security Market
- To understand the fundamental concepts, theories and opportunities of security market investments
- To understand the risk –return relationship in market
- To give an opportunity to understand the importance of portfolio management and strategies to be followed
- To maximize the investment return through the process of Diversification.

MODULE I: Investment and valuation

Investment – definition – Nature and Characteristics – Investment process –Institutions and markets – Securities – money market instruments –investment vs. speculation.Risk-Return-Different types -Risk Measurement –- Total Risk- Systematic Risk- Use of Beta, Variance – Computation of Risk and Return- Risk Premium –Expected Return -Risk Return Trade Off.Valuation of Securities – Valuation of Bonds – methods of estimating Bond returns – Valuation of shares – discounted dividend models – PE ratio multiplier Model.

Module Outcome

MO1: The student gets an understanding of the different types of investment and valuation methods

MODULE II: Security Analysis

Security Analysis – Fundamental analysis – Economy analysis- Industry Analysis – company analysis. Technical analysis – Dow Theory – Elliot Wave Theory – Chart patterns-Mathematical indicators. Efficient Market Hypothesis – weak form – semi strong form – strong form – tests of efficient market hypothesis - Random walk theory.

Module Outcome

MO2: The student will get familiarized on the theories of security analysis.

MODULE III: Capital Market Theories

Capital Market Theory – Capital Market Line (CML) – Security Market Line (SML) - Capital Asset Pricing Model (CAPM) – Arbitrage Pricing Theory (APT) -Zero beta Model - Multi Factor Models - Security Valuation and APT - Empirical Tests of APT -Estimating Risk in a Multi-factor Setting

Module Outcome

MO3: The student will get familiarized with the capital market theories.

MODULE IV: Portfolio theories

Measurement of Expected Risk and Return ofPortfolio- Alternative Measures of Risk-Portfolio Theory – portfolio analysis- portfolio selection – Markowitz Portfolio Theory – single Index Model- portfolio Revision- formula plans- Portfolio Evaluation –Sharpe's Single Index Model - Lagrange Multiplier Theory- Treynor ratio- Jensen’s performance measure – Information RatioPerformance Measures -The Efficient Frontier and Investor Utility

Module Outcome

MO4: The student will get familiarized with the portfolio theories.

MODULE V: Portfolio Management Strategy

Passive Equity Portfolio Management StrategyIndex - Portfolio Construction Techniques - Tracking Error, Methods of Index Portfolio – InvestmentFundamental Active Strategies; TechnicalStrategies - Market Anomalies; Value vs. GrowthInvestments - Investor Behaviour and Stock Returns – AnalysisandValuationof Bonds - Bond Valuation - Computing Bond Yields - Calculation of future bond prices; Yield curve - Determination of interest rates.

Module Outcome

MO5: The student will get an exposure of various strategies on portfolio management

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To develop the necessary skills for Investment in Security Market	PSO2	Ap	Me	Practical Test using real data
CO2	To understand the fundamental concepts, theories and opportunities of security market investments	PSO1	Un	Co	Assignment on security market investment
CO3	To understand the risk –return relationship in market	PSO4	Un	Co	Seminar on Risk-return relationship
CO4	To give an opportunity to understand the importance of portfolio management and strategies to be followed	PSO3	An	Me	Case study analysis and presentation of best practices
CO5	To maximize the investment return through the process of Diversification.	PSO3	Ap	Me	Practical Test using real data

References

Avadhani,V.A.Security Analysis and Portfolio Management. HimalayaPublishingHouse,Mumbai2008.Print.

Benjamin Grahm: Security Analysis

Bhalla,V.K. Investment Management. New Delhi: S.Chand&Corporations, 2008.Print.

Fisher,E.Donald and Ronald J.Jordan, Security Analysis and PortfolioManagement,NewDelhi:PHI Learning,2008.Print.

Goldman Sachs: Introducing GS Sustain, 2007

Kevin,S. Security Analysis and Portfolio Management. New Delhi.PHILeaning,2008.Print

Prasannachandra., Investment Analysis and Portfolio Management, TataMcGraw Hill, New Delhi:2008.Print.

Other Readings

http:// www. Unglobalcompact.org/docs/summit2007/gsesgembargoeduntil030707pdf.

http://www.focusinvestor.com/Graham1.pdf.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.

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Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: II **Course Code: FECO-DE-526**
Course Title: Industrial Economics **Credits: 3**
Course Learning Outcome (CLO)

- To provide the student with a sound understanding of various concepts theories in industrial economics
- To identify major determinants of pricing and investment decisions of the firm
- To evaluate various theories of industrial location and identify industrial location trends in India
- To identify the role of technological innovations in determining industrial progress and market structure
- To equip the student to compare the Indian industrial scenario in the pre – and post reform period

Course Content

Module I Industrial Economics: Nature, Scope and Basic Concepts
Nature and scope– Basic concepts – Plant, Firm, Cartel, MRTP company, Industry, Industrial structure, Market, Market structure, Market power, Market conduct, Market performance – standard forms of market structure- organizational pattern of firms – Ownership and control –Objectives of the Firm, Marginal theories on the Firm, Managerial theories of the Firm, Behavioural theories of the Firm- Pricing Decisions-Marginal cost pricing, Full cost pricing, Administered prices

Module outcome
MO1: provide a sound understanding of basic concepts related to firm, industry and the market as well various theories of the firm
MO2: Explain different types of pricing decisions of the firm

Module II Investment Decisions
Investment decisions - Pricing decisions – Investment decisions – Project appraisal – risk and uncertainties- – OECD and UNIDO approaches to investment decisions - Sensitivity analysis - Financial statements and ratio analysis-Industrial finance-Sources of finance -contribution of various sources in the Indian context- role of foreign capital for direct and portfolio investment – FDI and policy of Government of India since Independence
Module outcome
MO1: Evaluate various approaches to investment decisions of the firms
MO2: Identify the role of foreign capital in industrial progress

Module III Theories of Industrial Location
Industrial location – determinants – Theories of Industrial location – Weber and Sargent Florence – Factors affecting location –Industrial location trends in India- Regional growth – regional imbalances -Regional Backwardness- Regional imbalances in the industrial development of India
Module outcome
MO1: Critically evaluate theories of industrial location
MO2: Identify the major trends in industrial location in India and to point out regional imbalances

Module IV Technological Change and Market Structure

Technological changes -the process of Innovation- Measurement of innovative activities – Research and Development (R&D)-Adoption and diffusion of new technology -Market structure and innovation -Empirical findings- Measures of concentration - Concentration ratio - Hirschman - Herfindahl index- determinants of efficiency and profitability- Indicators of industrial productivity

Module outcome

MO1: Examine the role of technology in industrial progress and determining the market structure

MO2: Provide an understanding of measures of industrial concentration

Module V Indian Industry

Classification of Industries – Industrial policy in India – Role of public and private sector, small scale industry in India- – phases and recent trends of industrial growth in India – industrial sickness – causes and effects – Public sector reforms, privatization liberalization and disinvestments –industrial proliferation and environmental preservation, pollution control policies – Current problems of selected industries – iron and steel, cotton textiles, jute, sugar, coal, cement – rural and cottage industries-. Structure of Industrial Labour – Employment dimensions of Indian Industry – Industrial legislation, industrial relations, exit policy and social security – labour market reforms in India

Module outcome

MO1: Compare industrial scenario in India in the pre reform and post reform period

MO2: Identify current problems of selected industries as well asto have an understanding of environmental pollution due to industrialization

Tagging Course Outcomes

Name of the faculty member**:**

CO	CO Statement	PO/PSO	CL	KC	Assessment
CO 1	To provide the student with a sound understanding of various concepts and theories in industrial economics	PSO3	Un	Co	Assignment on basic concepts and theories in industrial economics
CO 2	To identify major determinants of pricing and investment decisions of the firm	PSO3	An	Fa	Assignments on pricing and investment decisions of the firm
CO 3	To evaluate various theories of industrial location and identify industrial location trends in India	PSO3	Ev	Fa	Assignments on theories of industrial location

CO 4	To identify the role of technological innovations in determining industrial progress and market structure	PSO3	Un	Fa	Assignment on industrial innovations and market structures
CO 5	To equip the student to compare the Indian industrial scenario in the pre – and post reform period .	PSO3	An	Fa	Seminar on the structure, pattern and trends in industrial growth in India as well as various industrial policies

References

Ahluwalla. I.J, (1985): Industrial growth in India, Oxford University Press, New Delhi.

Bains, J.S. (1996): Industrial Organisation, Chelthanham, U.K.

Barthwal. R.R. (1985): Industrial Economics, Wiley Eastern Ltd., New Delhi.

Cherunilam, F. (1994): Industrial Economics: Indian Perspective (3rd Edition), Himalaya Publishing House, Mumbai.

Das, N. (1969): The Public Sector in India, Vora and Company, Bombay.

Dasgupta, P.S., Marglin and A. Sen (1972): Guideline for Project Evaluation, Unido Publications, New York.

Desai. B. (1991): Industrial Economy in India, (3rd Edition), Himalayan Publishing House, Mumbai.

Divine, P.J. and R.M. Jones et al. (1976): An Introduction to Industrial Economics, George Allen and Unwin Ltd., London.

Penrose E, (1959):The Theory of the Growth of the Firm, Blackwell, Oxford University Press, 1959.

Fog, B. (1959): Industrial Pricing Policies, North Holland, Amsterdam.

Meier. G.M. (Ed.) (2000): Leading issues in Economic Development, Oxford University Press,

Kamien, M.T.and N.L. Schwartz (1982), Market Structure and Innovation, Cambridge University Press, Cambridge.

Mamoria and Mamoria (2000), Dynamics of Industrial Relations in India (15th Edition) Himalaya Publishing House, Mumbai.

Uma Kapila (2021):Indian Economy: Performance and Policies, Academic Foundation, New Delhi

Banerjee, A. (2000): Note Toward a Theory of Industrialization in the Developing World, M.I.T. Retrieved from https://economics.mit.edu/files/513.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

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Semester: III **Course Code: FECCO-CC-531**
Course Title: Basic Econometrics **Credits: 4**

Course Learning Outcome (CLO)

- To familiarize students with the concepts and application of cross section, time series and panel data analysis.
- To equip students to analyse real life data with the help of econometric tools.
- To help students to increase their analytical power substantially along with enhancement of other cognitive skills.

COURSE CONTENT

Module1:Regression Analysis with Cross-Sectional Data: The Simple Regression Model

What Is Econometrics? Steps in Empirical Economic Analysis; The Structure of Economic Data; Cross-Sectional Data; Time Series Data; Pooled Cross Sections; Panel or Longitudinal Data - Definition of the Simple Regression Model - Deriving the Ordinary Least Squares Estimates -Guass Markov Theorem- Properties of OLS on Any Sample of Data; Goodness-of-Fit- Units of Measurement and Functional Form - Regression through the Origin - Interpreting cross-section regression result and the analysis of residuals

Module Outcome :

Cross-section data analysis using simple regression technique with the help of software.

Module2:Regression Analysis with Cross-Sectional Data: Multiple Regression Analysis: Estimation

Motivation for Multiple Regression; The Model with Two Independent Variables; The Model with k Independent Variables - Mechanics and Interpretation of Ordinary Least Squares; Obtaining the OLS Estimates; Interpreting the OLS Regression Equation Estimates; Goodnessof-Fit; Regression through the Origin - The Expected Value of the OLS Estimators Including Irrelevant Variables in a Regression Model; Omitted Variable Bias: The Simple Case; Omitted Variable Bias: More General Cases - The Gauss-Markov Theorem - Sampling Distributions of the OLS Estimators - Testing Hypotheses about a Single Population Parameter: The t Test - Confidence Intervals - Testing Hypotheses about a Single Linear Combination of the Parameters -The F Test; Testing Exclusion Restrictions; Relationship between F and t Statistics; The R-Squared Form of the F Statistic; Computing p-Values for F Tests; The F Statistic for Overall Significance of a Regression; -Reporting Regression Results

Module Outcome:

- To have Cross-section data analysis using multiple regression technique with the help of gretl software (freely downloadable from http://gretl.sourceforge.net/)

Module 3: Multiple Regression Analysis with Qualitative Information: Binary (or Dummy) Variables and Heteroskedasticity

Describing Qualitative Information A Single Dummy Independent Variable Using Dummy Variables for Multiple Categories; Incorporating Ordinal Information by Using Dummy Variables Interactions Involving Dummy Variables; Interactions among Dummy Variables;

Allowing for Different Slopes; The White Test for Heteroskedasticity Weighted Least Squares Estimation;

Module Outcome:

- Application of dummy variables in analysing the qualitative data and the problem of heteroskedasticity.

Module 4: Regression Analysis with Time Series Data

The Nature of Time Series Data Examples of Time Series Regression Models; Static Models; Finite Distributed Lag Models; A Convention about the Time Index Finite Sample Properties of OLS under Classical Assumptions; Unbiasedness of OLS; The Variances of the OLS Estimators and the Gauss-Markov Theorem; Inference under the Classical Linear Model Assumptions Functional Form, Dummy Variables, and Index Numbers -Seasonality Stationary and Weakly Dependent Time Series; Stationary and Non-stationary Time Series; Weakly Dependent Time Series Asymptotic Properties of OLS Using Highly Persistent Time Series in Regression Analysis; Highly Persistent Time Series; Transformations on Highly Persistent Time Series; Deciding Whether a Time Series Is integrated of order 1 i.e. I(1). Running time series regression and interpreting the results

Module Outcome:

Time series data analysis using simple regression technique with the help of gretl software.

Module 5: Serial Correlation and Heteroskedasticity in Time-series Regressions (ARMA, GARCH)

Unit root test Properties of OLS with Serially Correlated Errors; Goodness-of-Fit; Serial Correlation in the Presence of Lagged Dependent Variables Testing for Serial Correlation; A t Test for AR(1) Serial Correlation with Strictly Exogenous Regressors; The Durbin-Watson Test under Classical Assumptions; Testing for AR(1) Serial Correlation without Strictly Exogenous Regressors; Testing for Higher Order Serial Correlation Correcting for Serial Correlation with Strictly Exogenous Regressors; Obtaining the Best Linear Unbiased Estimator in the AR(1) Model; Feasible GLS Estimation with AR(1) Errors Comparing OLS and FGLS; Correcting for Higher Order Serial Correlation Differencing and Serial Correlation Serial Correlation-Robust Inference after OLS Heteroskedasticity in Time Series Regressions; Heteroskedasticity-Robust Statistics; Testing for Heteroskedasticity; Autoregressive Conditional Heteroskedasticity; Heteroskedasticity and Serial Correlation in Regression Models (ARCH/GARCH) GARCH Models – Paris-Winsten, Cochrane-Orcutt transformation, Applications

Module Outcome:

The problem of serial correlation and heteroskedasticity in time series regression and their solution.

Module 6: Pooling Cross Sections across Time: Simple Panel Data Methods

Pooling Independent Cross Sections across Time; The Chow Test for Structural Change across Time Policy Analysis with Pooled Cross Sections Two-Period Panel Data Analysis; Organizing Panel Data Policy Analysis with Two-Period Panel Data Differencing with More Than Two Time Periods; Potential Pitfalls in First Differencing Panel Data Fixed Effects

Estimation; The Dummy Variable Regression; Fixed Effects or First Differencing? Fixed Effects with Unbalanced Panels - Random Effects Models; Random Effects or Fixed Effects? The Correlated Random Effects Approach - Applications

Module Outcome:

Panel or pooled data analysis using simple regression technique with the help of gretl software.

Tagging Course Outcomes

Name of Faculty Member:

CO	CO Statement	PO/PSO	CL	KC	Assessment
CO1	To provide the student with a sound understanding of the concepts and applications of econometrics	PSO3	Un	Co	Assignment on various concepts and applications of econometrics
CO2	To equip student to estimate and interpret parameters of economic relationships using data	PSO4	An	Fa	Practical exercises
CO3	To enable the student to forecast future values of economic variables	PSO4	An	Fa	Practical exercises
CO4	To introduce the student to regression analysis with qualitative information	PSO3	An	Fa	Assignment on the use of dummy variable
CO5	To provide the student with a fair exposure to the causes, consequences and remedial measures of econometric problems	PSO3	Un	Fa	Assignment on Multicollinearity , heteroscedasticity, autocorrelation and other econometric problems
CO6	To give the student an exposure to simultaneous equation models	PSO3	An	Fa	Assignment on identification problem, ILS,2SLS and 3SLS

Reading List

Gujarati, D., D. C. Porter & Sangeetha G. (2017): Basic Econometrics, 5thEdition, McGraw Hill Education, New Delhi

Wooldridge J., (2012): Introductory Econometrics: A Modern Approach, Thomson South-Western College Pub.,

Baltagi, B. H.,(2011): Econometrics, 5th edition, Springer

Kennedy, P., (2003): A Guide to Econometrics, 5th Edition, The MIT Press

Morgan, M.S., (1990): The History of Econometric Ideas, Cambridge University Press

Studenmund, A.H. (2017): Using Econometrics: A Practical Guide, Addison Wesley Publishing Company. Boston

Christopher D.,(2011): Introduction to Econometrics, 4 th edition, OUP, Indian edition, 2011.

Wooldridge J. M. (2010): Econometric Analysis of Cross Section and Panel Data, 2ndEdition, MIT Press

Angrist, J. D. and J. S. Pischke (2008) : Mostly Harmless Econometrics: An Empiricist's Companion, Princeton University Press, New Jersey.

Dielman, T.E. (2005): Applied Regression Analysis, India Edition, Thomason Brooks/Cole.

Kmenta, J.(1986): Elements of Econometrics, Macmillan Publishing Company, New York.

Lardaro, Leonard (1993): Applied Econometrics, HarperCollins College Publishers, New York.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.

All questions in Section A to be answered (10x1=10 marks)

Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: III **Course Code: FECO-CC-532**
Course Title: Public Finance **Credits: 4**

Course Learning Outcomes:

The course aims to deliver students with a thorough understanding of the main theoretical concepts in public economics. The course emphasizes on the analytical approach towards the topics by dealing with simple algebra and diagrammatic analysis for better understanding. At the end of the course, students should be

1. able to understand the need for government, public choice and voting mechanism provision of public goods in the economy
2. analyse the problem posed by externalities and how is it managed efficiently
3. understand different tenets of taxation as incidence, equity and efficiency
4. discuss the trade-off between equity and efficiency of taxes
5. understand Ramsey rule (optimal commodity taxation rule), tax evasion and discuss factors affecting tax evasion
6. analyse the nature of Indian tax structure and the understanding of the form of GST adopted in India
7. understand theory of fiscal federalism and analyse the objectives and recommendations of finance commission of India.
8. critically understand and evaluate the public policies.

Course Content

Module I: Role of Government and Theory of Public Expenditure (15)

Government as an agent for economic planning and development-Allocation, distribution and stabilization functions-Keynesian case for stabilization policy – Wagner's law of increasing state activities – Wiseman-Peacock hypothesis– Puretheory of public expenditure – Structureand growth of public expenditure and social cost-benefit analysis –Rentseeking and directly unproductive profit seeking (DUP) activities

Readings

1. Stiglitz
2. Cullis& Jones
3. C.V.Brown and P.R. Jackson
4. Musgrave, R.A.
5. Musgrave, R.A. and P.B. Musgrave

Module Outcomes

- After completing this module the students will be able to
  - Understand and rationalises various theories on the role of government in an imperfect market setting
  - evaluate the impact of expenditure by the government and its shortcomings

Module II: Market failure, Public Good and Political Process (15)

Principal reasons for market failure and intervention of government; Provisions of private goods, public goods, and merit goods;Pareto optimal provision of public goods, impure public goods, voluntary provision of pure public goods, Theory of Clubs, Lindahl solution of public provision of pure public goods-Collective decision making, voting by tax payers, design of voting rules, Arrow's Impossibility Theorem, Majority Voting Rule

Readings

1. Cullis& Jones
2. C.V.Brown and P.R. Jackson

Module Outcomes

- After completing this module the students will be able to
  - Understand and rationalises the cause and consequences of market failure public good and the process involves to rationalise the provisions of public good

Module III: Problem of Allocation and Externalities (10)

Allocation of resources - Voluntary exchange models – Impossibilityof decentralized provision of public goods (contributions of Samuelson and Musgrave); Demand revealing schemes for public goods — Contributions of Clarks& Groves, Theory of club goodsProblem of externalities, public sector solution to externality, taxes versus regulation and Coase theorem

Readings

1. Cullis& Jones
2. C.V.Brown and P.R. Jackson
3. Musgrave, R.A.

Module Outcomes

- After completing this module the students will be able to
  - Understand and rationalises the core issues of allocation and externalities
  - evaluate the impact of demand revealing schemes of public good

Module IV: Theory of Taxation: Incidence, Efficiency and Evasion of Tax (20)

Principles of taxation; tax incidence in perfectly and imperfectly competitive markets; dead weight loss of the tax on consumers and producers, taxation of savings and labour income; principles of optimal taxation, application to design of income tax structure, optimal commodity taxation – Ramsey rule; Tax evasion activities, tax evasion decision by the individuals, factors affecting tax evasion decision, criticisms of economic analysis of tax evasion; India's tax system - structure and reforms, form of Goods and Services Tax (GST) adopted in India, criticisms and limitations of GST

Readings

1. Stiglitz,
2. C.V.Brown and P.R. Jackson
3. Cullis& Jones,
4. M. Govinda Rao and Sudhanshu Kumar (2017). "Envisioning Tax Policy for Accelerated Development in India", Working Paper No. 190, National Institute of Public Finance and Policy (NIPFP).
5. GOI (2019), "Goods and Services Tax – Concept and Status - As On 01st June, 2019", Central Board Of Indirect Taxes And Customs (CBIC), Department Of Revenue, Ministry Of Finance Government Of India,.
6. Das Surajit (2017), "Some concerns regarding Goods and Service Tax", Economic and Political Weekly, Vol. 52(9), 04 March, 2017.
7. S.A. Alam (2016), "GST and the States: Sharing Tax Administrations", Economic and Political Weekly, Vol. 51, No. 31 (July 30, 2016).

Module Outcomes

- After completing this module the students will be able to
  - Understand, rationalises and applies various theories on the theory of taxation incidence and optimisation

- evaluate the impact of tax and tax incidence in determining and optimising tax structure in India

Module V: Theory of Fiscal Federalism (20)

The decentralization theorem, optimum size of local community, Tiebout hypothesis, intergovernmental grants - effects and critique; evolution of fiscal federalism in India, Fifteenth Finance commission – challenges and recommendations; Critical Role of NITI Aayog in the absence of Planning Commission to maintaining fiscal federalism; Transfer of resources from Union and States to local bodies

Readings

1. Cullis& Jones
2. C.V.Brown and P.R. Jackson
3. M. Govinda Rao (2005). "Changing Contours of Federal Fiscal Arrangements in India" in AmareshBagchi (ed.) Readings in Public Finance, Oxford Unity Press.
4. V. Bhaskar (2018), "Challenges Before the Fifteenth Finance Commission", Economic and Political Weekly, Vol. LIII, No, 10, March 10, 2018.
5. G. R. Reddy (2018), "Upholding Fiscal Federalism - Terms of Reference of the Fifteenth Finance Commission", Vol. LIII, No, 10, March 10, 2018.
6. GOI (2019), "Report for the year 2020-21 - XV Fifteenth Finance Commission",

Module Outcomes

- After completing this module the students will be able to
  - Understand and rationalises the issues of fiscal federalism in a theoretical and empirical context

Module VI: Theory of Public Debt (20)

Classical view of public debt – Compensatory aspect of debt policy – Burden of public debt – Sources of public debt – Debt through created money – Public borrowings and price level – Crowding out of private investment and activity - Principles of debt management andrepayment

Readings

1. Singh, Charan (2018) Debt Management in India,
2. Buchanan, J.M. (1958), Public Principles of Public Debt, A Defence and Restatement,

Module Outcomes

- After completing this module the students will be able to
  - Understand and rationalises various issues of debt and debt management in India

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	able to understand the need for government, the public choice and voting mechanism provision of public goods in the economy	PO... PSO_1	Un	Co	Assignment on the role of government and public good in catering people's interest
CO2	analyse the problem posed by externalities and how is it managed efficiently	PO.. PSO_2	An	Co	Assignment on Externality and Efficiency

CO3	understand different tenets of taxation as incidence, equity and efficiency	PO.. PSO_5	Un	Co	Seminar on taxation, incidence and other principles
CO4	discuss the trade-off between equity and efficiency of taxes	PO.. PSO_3	An	Fa	Seminar on the trade off between equity and efficiency of taxes.
CO5	understand Ramsey rule (optimal commodity taxation rule), tax evasion and discuss factors affecting tax evasion	PO.. $PSO_{1,3}$	Ap	Fa	Assignment on the contribution of Ramseys principle and tax evasion.
CO6	Analysethe nature of Indian tax structure and the understanding of the form of GST adopted in India	PO. $PSO_{2,3}$	An	Fa	Seminar on India' Recent tax structure
CO7	analyse the objectives and recommendations of finance commission of India	$PSO_{2,4}$	An	Fa	Assignment on finance commission and fiscal federalism
CO8	critically understand and evaluate the public policies	$PSO_{2,3,4}$	Cr	Ad	Seminar on how to evaluate public policies

Readings:

1. Buchanan, J.M. (1958), Public Principles of Public Debt, A Defence and Restatement, Richard D. Irwin Homewood.
2. C.V.Brown and P.R. Jackson, (1982), Public Sector Economics, Oxford, Martin Robertson.
3. John Cullis and Philip Jones (2009), *Public Finance and Public Choice – Analytical Perspectives*, 3rd edition, Oxford University Press.
4. Joseph E. Stiglitz (2000), *Economics of the Public Sector*, 3rd edition, W. W. Norton and Co.
5. Musgrave, R.A. and P.B. Musgrave (1976), Public Finance in Theory and Practice, McGraw Hill, Kogakusha, Tokyo.
6. Musgrave, R.A. (1959), The Theory of Public Finance, McGraw Hill, Kogakhusa, Tokyo.
7. Singh, Charan (2018) Debt Management in India, Cambridge University Press

Additional Readings:

1. Jonathan Gruber (2016), *Public Finance and Public Policy*, 5th edition, Worth Publishers.
2. Auerbach, A. J. and M. Feldstein (eds.), *Handbook of Public Economics*, vol. 1 (1985), vol. 2 (1987), vol. 3 (2002), vol. 4 (2002), vol. 5 (2013) Elsevier, Amsterdam.
3. Atkinson, A. and J. E. Stiglitz (2015), *Lectures on Public Economics*, Princeton University Press.
4. Hindriks, J., G. Myles (2013), *Intermediate Public Economics*, 2nd edition, MIT Press.
5. Rosen, H. and T. Gayer (2014), *Public Finance*, 10th edition, McGraw-Hill.

6. Holley H. Ulbrich (2003), *Public Finance in Theory and Practice*, 2nd edition, Routledge.
7. David N. Hyman (2007), *Public Finance – A Contemporary Application of Theory to Policy*, 8th edition, Thomson.
8. Harvey S. Roesn (2001), *Public Finance*, 6th edition, McGraw-Hill Irwin.
9. AmareshBagchi (2005), *Readings in Public Finance*, Oxford University Press. Delhi.
10. M. Govinda Rao and MihirRakshit (2011), *Public Economics Theory and Policy – Essays in Honor of AmareshBagchi*, Sage Publications.
11. Y. V. Reddy and G. R. Reddy (2019), *Indian Fiscal Federalism*, Oxford University Press.
12. GOI (2017), "GST – Concept and Status - as on 3rd June, 2017", Central Board of Excise and Customs, Department of Revenue, Ministry of Finance.
13. Pinaki Chakraborty (2019), "Fiscal Federalism in India", The India Forum, April 5 2019.
14. M. Govinda Rao (2018), "Finance Commission: Redefining the federal fiscal landscape?", Financial Express, Published on May 1, 2018.
15. Lekha Chakraborty (2019), "Indian Fiscal Federalism at the Cross-roads: Some Reflections", Working Paper No. 260, NIPFP.
16. R. Kavita Rao and Sacchidananda Mukherjee (2019), *Evolution of Goods and Services Tax in India*, Cambridge University Press.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
All questions in Section A to be answered (10x1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: III **Course Code: FECO-CC-533**
Course Title: International Financial Management **Credits :4**

Course Learning Outcome (CLO)

- Understand the basis of balance of payments
- Students will improve their understanding of exchange rate determination.
- Students will be able to discuss and explain international finance.
- Explain the connection between different institutional structure and international finance.
- Understand the relevant connections between theory and real-world examples, through different policies, readings and case studies.
- To get an in depth understanding of various derivative securities and markets. Improve the conceptual understanding as well as practical knowledge about derivative markets in India.

Course Content

Module 1. Balance of Payments

Exchange Rate. Balance of Payments: Components of the BOP. Autonomous and Compensating transactions. Basic balance. Equilibrium in BOP-Elasticity and Absorption approach, Monetary approach, Devaluation and Marshall- Lerner Condition. Swan diagram, Mundell-Fleming Model-Structure and Trends in India's BOP. International Investment Position, Services Trade.

Module Outcome:

- To create the ability to use different concepts in balance of payments.

Module 2. Exchange rate Determination

Exchange-rate Regimes.: The Bretton Woods and the Present System-Foreign Exchange market: Spot and Forward market. Arbitrage . Fixed vs Flexible. Floating Exchange rate. Determination of the value of Indian Rupee. Foreign exchange operations-Currency Derivatives- Futures, Options and Swaps-Eurocurrency and Eurobond Markets.

Module Outcome:

- To enable the students to analyse the exchange rate determination.

Module 3. International Investment and Financing

Investment and borrowing with transaction costs, international dimension of cash management, portfolio investment international capital asset pricing, capital budgeting for foreign direct investment

Module Outcome:

• To understand various issues in international investment and financing

Module 4. Institutional Structure of International Finance

The eurodollar, euro currency markets, multinational banking, international trader with letters of credit, financing international trade, institutions regulating international trade GATT, WTO, free – trade areas, customs union, NAFTA, ASEAN

Module Outcome:

• To relate the institutional structure in international finance

Module 5. International Financial Market Regulation

Foreign Exchange Management Act (FEMA1999) − Reserve Bank of India Regulation and Guidelines with Respect to External Commercial Borrowings (ECB) − NRI Remittances − Clearing Corporation of India Ltd− Regulations and Guidelines Regarding International Capital Flows − SEBI and Regulations of FIIs − Foreign Exchange Derivatives and Hedging − Financial Stability and Regulation of Foreign Exchange Flows in India-Principles of Pricing Forwards − Futures and Options on Futures Contracts − Forwards and Futures Hedging − Pricing of Index Futures Contracts − Stock Index Arbitrage. Principles of Call and Put Option Pricing − Binomial and Black – Scholes Option Pricing Models − Factors Affecting Option Prices − Basic and Advanced Option Strategies

Module Outcome:

• To identify challenges in the international financial market.

Module 6 Commodity Derivatives

Evolution of Commodity Derivative Markets in India − Products − Participants – Functions − Instruments Available for Trading − Pricing of Commodity Futures − Hedging − Speculation − Arbitrage − Trading − Clearing and Settlement − Risk Management – RegulatoryFramework.

Module Outcome:

Able to evaluate the commodity market and regulations

Tagging Course Outcomes

Faculty Member/s:

CO	**CO Statement**	**PO/ PSO**	**CL**	**KC**	**Assessment**
CO1	Understand the basis of balance of payments	PSO_1	Un	Co	Assignment on the advantages of international trade and BoP
CO2	Students will improve their understanding of exchange rate determination.	PSO_2	Ev	Co	Discuss exchange rate determination
CO3	Students will be able to discuss and explain international finance.	PSO_5	An	Fa	Seminar on international finance
CO4	Explain the connection between different institutional structure and international finance.	PSO_3	An	Co	Assignment on institutional structure and international finance.
CO5	Understand the relevant connections between theory and real-world examples, through different policies, readings and case studies.	PSO_3	Ap	Ad	Discuss and critically evaluate real world examples and issues
CO6	To get an in depth understanding of various derivative securities and markets. Improve the conceptual	PSO2	Ev	Co	Assignments and seminar.

	understanding as well as practical knowledge about derivative markets in India.				

Basic Reading List

1. Appleyard and Field ―International Economics, McGraw Hill Education Pvt Ltd (2014)
2. Dominic Salvatore. ―Introduction to International Economics, John Wiley &Sons,Inc.
3. Sawyer and Sprinkle, International economics, Prentice –Hall of India Pvt ltd, 2004
4. Bo Sodersten and Geoffrey Reed, ―International Economics. Macmillan (2008)
5. Maurice D. Levi, International Finance, Routledge,2009.
6. Pilbeam, Keith, 1998. International Finance, Macmillan.
7. Piet Sercu (2009) International Finance – Putting Theory into Practice, Princeton.
8. Levi, M.D. *International Finance: The Markets and Financial Management of Multinational Business*, 3rd Edition, McGraw Hill International Editions, Finance Series, 1996.
9. Shapiro, Alan C. (2006) Multinational Financial Management, 8/e, Wiley & Sons. ISBN 0471737690.
10. Eiteman, D. K., Stonehill, A. I., Moffeit, M. H. (1999) Multinational Business Finance, 8th Ed., Addison Wesley.
11. Levich, Richard M. (2001), International Financial Markets Prices and Policies,2nd Ed.,McGrow-Hill
12. Hull, John, C. (2009), Options, Futures, and Other Derivatives, Pearson Prentice Hall.
13. Kolb, Robert W., and Overdahl, James A. (2003), Financial Derivatives, John Wiley & Sons, Inc.
14. Chance, Don M., and Brooks, Robert (2008), Introduction to Derivatives and Risk Management. Thomson South Western.
15. Whaley, Robert E. (2006), Derivatives: Markets, Valuation, and Risk Management, John Wiley & Sons, Inc.
16. Schofield, Neil C. (2007), Commodity Derivatives: Markets and Applications, John Wiley & Sons.
17. Bhalla V.K.(6th Edition) International Financial Management, Anmol Publications, Pvt Ltd.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.

All questions in Section A to be answered (10x1=10 marks)

Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

DISCIPLINE-SPECIFIC ELECTIVES

Semester: III **Course Code: FECO-DE-534**
Course Title: Computational Finance **Credits : 3**
Course Learning Outcome (CLO)

- To give an understanding of financial data and its characteristics.
- To provide an introduction to the computational issues in financial problems.
- To train in applying the open-source language, R, in financial data
- To equip the students in forecasting cross section and time series financial data.
- To understand and analyse financial data by using open-source software Gretl.

COURSE CONTENT

Module 1: Overview of data characteristics

Introduction to financial data, Features of financial data-key terms and definitions – population – sample – variable – parameter – statistic – types of Data – metric – non-metric - nominal – ordinal – interval and ratio – sources of data – step by step approach to statistical investigation – methods of data analysis –descriptive method – inferential method – data-base availability.

Module Outcome

MO1: The student will get an understanding of financial data and its characteristics

Module 2: Basic of R

R- Introduction-Loading R and R-studio-Getting R packages- R-read, Communication with R, R interfaces, R syntax, R code, R help, basic operations in R- vectors, matrices and lists in R, vector algebra, matrix algebra, computing asset returns-- Functions in R Creating functions, calling functions, computing yields, bisection method, Newton-Raphson method, computing price volatility --Graphics in R -Ggplot, spot rates, extracting spot rates from yield curves, spot rate curve and yield curve - manipulate and analyse financial data.

Module Outcome

MO2: The student will get familiarised with the basics of R and how to work with it using data from financial sector

Module 3: Financial data analysis using R

Data Frames in R - Organizing values into data frames, loading frames from files and merging them, working with real-world data- testing for correlation between data sets, linear models and installing additional packages, Basic R statistics, Covariance, correlation, autocorrelation, linear combinations of random variables, descriptive statistics- histograms, sample means, variances, co-variances and autocorrelations - random variables- Univariate random variables and distributions, characteristics of distributions, the normal distribution, linear function of random variables, quantiles of a distribution, value-at-risk - hypothesis tests-Regression with cross section data (Solving examples using financial sector data) -

Module Outcome

MO3: The student will learn how to solve data from financial sector.

Module 4: Working with R
Linear time series models for stationary series, such as AR, MA, ARMA, and for unit-root non-stationary series; volatility analysis- ARCH, GARCH models (Solving examples using financial sector data).

Module Outcome

MO4: Learn to work with time series modelling

Module 5: Gretl for Finance

Opening data-examining variables-summary statistics -correlation matrix-cross tabulation – principal component (Solving examples using financial sector data)

Module Outcome

MO5: Familiarise the software Gretl and use by applying financial sector data.

Module 6: Modelling using Gretl

Building the model-forecasting -simple linear and multiple linear models using problems of finance – Limited dependent variables – Logit – Probit.- Forecasting of time series data – Univariate time series – Multivariate Time series (Solving examples using financial sector data).

Module Outcome

MO6: Building models using Gretl and interpret the results
Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To give an understanding of financial data and its characteristics.	PSO1	Un	Co	Practical test using computer
CO2	To provide an introduction to the computational issues in financial problems.	PSO3	Ap	Co	Practical test using computer
CO3	To train in applying the open-source language, R, in financial data	PSO4	An	Me	Practical test using computer
CO4	To equip the students in forecasting cross section and time series financial data.	PSO2	An	Me	Practical test using computer
CO5	To understand and analyse financial data by using open-source software Gretl.	PSO4	An	Me	Practical test using computer

Basic Reading List

Analysis of Financial Time Series, 3rd Edition, by Ruey S. Tsay.
An Introduction to Analysis of Financial Data with R, 1st Edition, by Ruey S. Tsay
Schmueli and Lichtendahl, *Practical Time Series Forecasting with R*, Second Edition, Axelrod Publishers.
Hyndman and Athanasopoulos, *Forecasting Principles and Practice: Second Edition*, available online.
David P. Doane and Lori E. Seward: Applied Statistics in Business and Economics, Tata McGraw Hill.
Wooldridge, J. M., *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2001
Enders, W., *Applied Econometric Time Series*, second edition, John Wiley and Sons, 2006
Econometrics with gretl, https://core.ac.uk/download/pdf/6394932.pdf
http://www.learneconometrics.com/gretl/using_gretl_for_POE5.pdf

Additional Reading List

Singh and Allen, *R in Finance and Economics: A Beginner's Guide*, World Scientific, 2017.
Tsay, *An Introduction to Analysis of Financial Data With R*, Wiley.
Lander, *R for Everyone*, Addison-Wesley.
Diebold, *Elements of Forecasting*, fourth edition
Kultar Singh: Quantitative Social Research Methods, Sage.
P.K.Viswanathan: Business Statistics: An Applied Orientation, Pearson.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
All questions in Section A to be answered (10x1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: III **Course Code: FECO-DE-535**
Course Title: Financial Accounting **Credits: 3**
Course Learning Outcome (CLO)

- To create basic awareness about the various steps involved in the preparation of various financial statements.
- To familiarize students with the basic principles of profitability analysis.
- To familiarize the students with basic awareness about accounting procedures
- To understand how the financial accounts of the firms are useful for decision makers

COURSE CONTENT

Module 1: Basic Principles

Financial Accounting & Accounting Standards- Accounting Equations − Users of Accounting Statements, Importance − Objectives and Principles − Accounting Concepts and Conventions − Principle of Double Entry Book Keeping and The Generally Accepted Accounting Principles (GAAP).

Module Outcome

MO1: Familiarization with basic awareness about accounting procedures

Module 2: Accounting Process

Accounting Cycle; Journal; Rules of debit and credit; Compound journal entry; Opening entry; Relationships between Journal and Ledger; Rules regarding posting; Trial balance; Subdivisions of a journal.

Module Outcome

MO2: Learn basic steps to prepare financial statements

Module 3: Financial Statements

Introduction, Meaning, Objectives and Characteristics of Final Accounts, Adjustments before Preparing Final Accounts, Closing Entries - Trading Account, Profit and Loss Account, Balance Sheet, Treatment of Adjustments, Practical Problems- Statement of Cash Flows − Funds from Operations − Preparation and Analysis of Cash Flow Statement and Funds Flow Statement.

Module Outcome

MO3: Preparation of financial statements.

Module 4: Analysis of Companies' Annual Reports

Provisions of the Companies Act 2013 − Provision Affecting Preparation − Presentation & Analysis of Audit Reports & Directors' Reports, Du Pont Analysis, Basic Understanding of Ratio Analysis: Profitability, Liquidity, Activity, Solvency, Leverage or Capital structure ratios. Non-financial (strategic) models used for analysis of company performance.

Module Outcome

MO4: Analysis of financial statements**.**

Module 5: Profitability Analysis

per-share analysis, common-size analysis, percentage change analysis, segment profitability analysis, and alternative measures of income - rate of return analysis as a summary of firm

performance, and demonstrate how to interpret the return on assets (ROA) and its components: profit margin and total assets turnover -Analyze and interpret return on common shareholder' equity (ROCE) and its components - Link economic and strategic factors to ROA and ROCE - benefits and limitations of using ratios like ROA and ROCE as part of understanding the historical performance of a company.

Module Outcome

MO5: Computation of profitability and to evaluation of the performance of a company
Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To create basic awareness about the various steps involved in the preparation of various financial statements.	PSO1	Ap	Me	Assignment on financial statements
CO2	To familiarize students with the basic principles of profitability analysis.	PSO2	Ap	Me	Practical test using real data
CO3	To familiarize the students with basic awareness about accounting procedures	PSO4	Un	Co	Seminar on accounting procedures
CO4	To prepare and analyse the different financial statements.	PSO3	Ap	Me	Practical test using real data
CO5	To understand how the financial accounts of the firms are useful for decision makers	PSO5	An	Me	Case study analysis and presentation

Basic Reading List:

Anthony, Robert N., Hawkins, David F. and Merchant, Kenneth A. (2005), Accounting: Text and Cases,TMH.
Bernstein, L.,Wild, John, (1999),Analysis of Financial Statements, 5/ e, McGraw-Hill.
Bhattacharya, Ashish K. (2007), Introduction to Financial Statement Analysis, Elsevier India (P) Ltd.
Bhattacharyya, Asish K. (2006), Financial Accounting for Business Managers, PHI.
D'Souza, Dolphy,(2009),Indian Accounting Standards and GAAP In 2 Vol., Snow White Publications Pvt. Ltd.
Ghosh, T.P., (2010), Understanding IFRS, Taxmann.
Gupta, Ambrish (2007), Financial Accounting Management An Analytical Perspective, Pearson Education.
Horngreen (2007), Financial Accounting, 8/e, Pearson Education.
Stice and Stice (2007), Financial Accounting Reporting and Analysis, Thomson.
Weygandt, Kieso, Kimmel (2006), Financial Accounting, 4/e, Wiley India Edition

Additional Reading List

IM Pandey, Financial Management.Vikas Publishing house Pvt Ltd. 10th ed. 2010
Jain and Narang, Financial Accounting, Kalyani Publishers Delhi.2003.
James C Van Horne, Financial Management and Policy, Pearson Education Ltd, 2004.

James C Van Horne, Fundamentals of Financial Management, Pearson Education Ltd., 2005
Janet Walker, Accounting in a Nutshell: Accounting for the Non-Specialist.Elsevier,2006.
Jonathan Berk and Peter DeMarzo, Financial management, Pearson Education,2010.
KGC Nair, Introduction to Accounting, Chand Publications, Trivadrum.2001.
Khan and Jain, Financial Management, Tata Mac Graw Hill Education, 2007.
Lasher, Financial Management, Cengage India Ltd, 7th Ed.1999.
Prasanna Chandra, Fundamentals of Financial Management, McGraw Hill Education, 6th Ed.2010
R.M Srivastava, Financial Management and Policy, HPH, 2010
R.P Rustagi, Elements of Financial Management, Taxman Allied services Pvt Ltd.2011
RL Gupta and Radhaswamy, Financial Statement Analysis, Sultan Chand,2011
S.N Maheswari, Financial Accounting, Vikas Publishing house Pvt ltd, 5thEd2009.
Sharma and Shashi K Gupta, Financial Management. Kalyani Publishers, 2014
Sharma and Vithal, Financial Accounting for Management, Macmillan India ltd 1989.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
All questions in Section A to be answered (10x1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: III **Course Code: FECO-DE-536**
Course Title: Marketing of Financial Services **Credits : 3**
Course Learning Outcome (CLO)

- To introduce the concepts and techniques of service marketing and to cover all-important aspects of marketing of services.
- To increase students' understanding of marketing practices and strategies as applied in the service sector.
- To help the students to evaluate various avenues of distribution of financial services and products.
- To enable the students to set up and promoting financial products and customer service or experience portals that enable customers to sign up for services online, change products and services online.

COURSE CONTENT

Module 1: Financial Products and Services
Introduction to the entire product spectrum of financial services − Business logic, and how they converge and compete with one another and the value addition by specific financial services − Classification of financial products into Core Product — Banks' savings/current accounts, term deposits, insurance- life and general insurance, pension, all other value added services as unique selling points (USP's).

Module Outcome

MO1: Awareness about concepts and techniques of service marketing

Module 2: Marketing the Financial Products and Services

Difference between Marketing financial services and marketing physical goods and marketing other services − Transfer of Information vs. Transfer of Physical Goods − Role of IT in marketing financial services - Relational Transactions vs One-Time Transaction.

Module Outcome

MO2: Understanding on how the financial products are different from other products

Module 3: Market Segmentation, Targeting and Positioning in the FSI

Need for Segmentation − Segmentation Approaches − Segmentation Bases Target – Market Selection − Undifferentiated Marketing − Differentiated Marketing – Concentrated Marketing − Positioning − Organizational Positioning in Financial Markets − Need for Customer Service − Ways of Improving Customer Service − Dimensions of Service Quality. Regulation of Financial Services in India.

Module Outcome

MO3: Techniques in financial services and applying in real world

Module 4: Financial Product Designing and Launching in the FSI

The critical factors in product development and product launching − The concept of service product − Product Management − Levels of a Product Factors − Influencing Product Strategies Product Mix Strategies − Branding in Financial − Product development and launching in various financial services.

Module Outcome

MO4: Designing of financial services and the strategies used

Module 5: Distribution of Financial Products and Services

Concept of Distribution − Crucial components in the delivery of financial services − Multiple delivery channels − Promotion − Marketing information & research – Public relations and publicity − Image building − The cost of delivery − Role of information technology − Product pricing in various FS sectors − Relationship and Database Marketing − Globalization and its impact on financial services.

Module Outcome

MO5: Lessons on distribution especially promotion of financial services

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To introduce the concepts and techniques of service marketing and to cover all-important aspects of marketing of services.	PSO2	Un	Co	Assignment on marketing of services
CO2	To increase students' understanding of marketing practices and strategies as applied in the service sector.	PSO1	Ap	Me	Seminar on practices and strategies
CO3	To help the students to evaluate various avenues of distribution of financial services and products.	PSO3	An	Me	Seminar on FSI
CO4	To enable the students to set up and promoting financial products and customer service or experience portals that enable customers to sign up for services online, change products and services online.	PSO2	Ap	Me	Case study analysis and presentation

Basic Reading List

Estelami, Hooman (2006), Marketing of Financial Services, Dog Ear Publishing LLC.

Farquhar, Jillian and Meidan, Arthur (2010), Marketing of Financial Services, 2nd Ed. Palgrave MacMillan.

Pezzullo, Mary Ann (1998), Marketing Financial Service, American Bankers Association.

Additional reading list

Freedman, R. S. (2006). *Introduction to financial technology*. Elsevier.

Introduction to financial technology [1 ed.] 9780123704788, 0123704782 Academic PressBryan Foss, Tim Hughes, Merlin Stone, Peter Cheverton Key Account Management in Financial Services: Tools and Techniques for Building Strong Relationships with Major Clients 9780749441876, 0749441879

Christine Ennew, Nigel Waite Financial Services Marketing: An international guide to principles and practice [1 ed.] 0750669977, 9780750669979, 9780080465609 Butterworth-Heinemann

Evelyn Ehrlich; Duke Fanelli, Evelyn Ehrlich, Duke FanelliThe Financial Services Marketing Handbook: Tactics and Techniques that Produce Results 1576601560, 9781576601563, 9781417552559

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.

All questions in Section A to be answered (10x1=10 marks)

Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: III **Course Code: FECO-DE-537**
Course Title: Economics of Banking and Insurance **Credits : 3**

Course Learning Outcome (CLO)

- To understand an overview of working of commercial banks
- To grasp the fundamentals of risk management
- To analyse the role of insurance and basic principles of insurance.
- To understand the different methods of insurance pricing.
- To understand and analyses the existing regulations.

Course Content

Module 1: Overview of working of Commercial Banks

Types of Banks and their Functions: Scheduled banks, Commercial banks, Public sector banks, private sector banks, Local area banks, NBFCs, Mutually aided co-operative societies, Concepts of Retail Banking, Corporate Banking, (Wholesale Banking); SME Banking, Retail Loans segment and Requirements of SMEs, Rural Banking, Cooperative Banks, Nationalized Banks, RRBs, NABARD Micro Finance, Deposit Products - services rendered by Banks - Fixation of Bench mark Prime lending Rate; and New Base Rate Mechanism.

Module outcome

MO1 Able to understand and analyse working of commercial banks.
MO2 Identify opportunities in different banking fields and products.

Module 2: Risk Management – Credit, Business and Market

Credit Risk: Factors of Credit Risk - Risk Mitigation, Basic Risk Management frame work. Credit Risk Management frame work – securitization, Credit derivatives, Operational risk and Integrated Risk Management – Banking Business Risk – Identification, Off-Balance Sheet Exposures, Risk Regulations in Banking, Basel I, II and III, Market Risk : Risk identification, Measurement, monitoring and control, reporting Managing Trading liquidity.

Module outcome

MO1 Able toanalyse and identify factors influencing risk management

Module 3 : Principles of Insurance

Definition, Principles and relevance of Life insurance and General insurance: Types, principles, and growth, Credibility theory: approaches to credibility theory, credibility premium formulae and standard elementary models

Module outcome

MO1 Able to apply the principles of insurance.

Module4: Insurance Pricing

Insurance cost and fair premium – Actuarial Science pricing techniques- individual risk theory and collective risk theory; financial pricing of Insurance - capital asset pricing model; present value model and option pricing model. Net premiums for insurance products and annuity schemes; automobile insurance, homeowners insurance, life insurance and annuities, employee benefits and group medical coverage, retirement plans.

Module outcome

MO1 Understand different types of insurance and pricing

Module 5: Regulations of Insurance

The Indian Contract Act, 1872 − the Insurance Act 1938 − Provision of Indian Stamp Act - General Insurance Business (Nationalization) Act 1972 − Consumer Protection Act 1986 – Malhotra Committee Report – IRDA Act, 1999Insurance Bill 2000.

Module outcome

MO1: Capable to evaluate the regulations in insurance market

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To understand an overview of working of commercial banks	PSO_1	Un	Co	Assignment on basics of commercial bank
CO2	To grasp the fundamentals of risk management	PSO_1	Un	Co	Discuss fundamentals of risk management
CO3	To analyse the role of insurance and basic principles of insurance.	PSO_2	Ev/Un	Co	Assignment on critical analysis principles of insurance.
CO4	To understand the different methods of insurance pricing.	PSO_5	An	Fa	Seminar on different types of insurance pricing
CO5	To understand and analyses the existing regulations.	PSO_3	An	Co	Assignment on different regulations-empirical works

Basic Reading List

1. Contemporary Banking in India, Ed. Naina Lal Kidwai, 1st Ed. Business World.
2. Machiraju, H. R. , Modern Commercial Banking ,New Age International, (2008)
3. Sinkey, Joseph, Commercial Bank Financial Management , Prentice Hall; 6 edition (2002)
4. Freixas, Xaviar, Microeconomics of Banking, 2nd Ed. MIT Press.
5. Chorafas, Dimitris N., Handbook of Commercial Banking, Palgrave Macmillan. , (1998).
6. Gup, Benton E. Kolari , James W., Commercial Banking: Management of Risk, Wiley; 3 edition (2004).
7. Harrington and G. Niehaus, Risk Management and Risk, Tata McGraw-Hill, second edition, 2004.
8. Rajeda, G. Principles of Risk Management and Insurance, eighth edition,
9. Pearson Education, 2004.Harriett, E.J. and L.L. Dani, Principles of Insurance: Life, Health, and Annuities, second edition, Life Office Management Association, 1999
10. Black, K. and H. Skipper, Life and Health Insurance, Pearson Education, thirteenth edition, 2004

Additional Reading List

1. Baye, Jensen (1999), Money, Banking and Financial Markets : An Economic Approach : AITBS Publishers and Distributors, New Delhi
2. Croushore, Dean (2007) – Money and Banking (A Policy Oriented Approach) Houghton Muffin Company, New York
3. Howells, Peter and Bain Keith (2002) : The Economic of Money, Banking and Finance : A European Text Pearson Education Ltd.
4. Pande, GS (2006) : Principles and Practice of Insurance, Kalyani Publications, New Delhi

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.
All questions in Section A to be answered (10*1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5*4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3*10=30 marks)

Semester: IV **Course Code: FECO-CC-541**
Course Title: Corporate Finance **Credits: 4**
Course Learning Outcome (CLO)

- To introduce various financing strategies available for corporate finance.
- To equip the students to identify the basics of capital structure.
- To give insights into the valuation and capital budgeting for leveraged firm.
- To equip the students analyzing dividend policy of various firms.
- To familiarize the students with the best practices followed in corporate finance.

COURSE CONTENT

Module 1: Long term financing

Internal Funds − Common stock – long term debt – preferred stock – capital structure – Long term finance stocks Debt – leasing finance – lease valuation – lease cash flow – reason for lease financing. Warrants and Convertibles, maximising firm value vs maximising stockholder interests — financial leverage and firm value – return to equity holder and leverage – taxes. Financial Markets/Institutions − Issue of securities − Venture Capital − Initial Public Offering − Security Sales and Auctions – Private Placements and Public Issue - Junk Bonds.

Module Outcome

MO1: The student gets an understanding of the different types of long-term financing instruments available in corporate finance

Module 2: Capital structure and corporate strategy

Modigliani and Miller Theorem, Modigliani and Miller with corporate and personal taxation, bankruptcy costs, agency costs of debt and outside equity, debt overhang problem, equity – debt conflict capital structure, financial distress and pecking order of financing decisions. Flow to equity approach – weighted average cost of capital – capital budgeting when discount rate must be estimated – beta and leverage.

Module Outcome

MO2: The student will get familiarized on capital structure and its theories.

Module 3: Valuation and capital budgeting for leveraged firm

Measures of Investment - Choice Investment and Financing Decisions − Time Value of Money − Net Present Value – Internal Rate of Return − Discounted Payback Period − Cost of Capital − Selection of Criteria Risk, Return and Opportunity Cost of Capital Valuation of Bonds and Common Stock Scenario Testing and Sensitivity Analysis Strategy − Practical Problems in Budgeting − Agency, Compensation and Performance Measure.

Module Outcome

MO3: Equip students to measure the investments in corporates.

Module 4: Dividend policy

Types of dividend – taxes, issuance cost and dividend – repurchase of stock – real world factors for dividend policy. Dividend discount model: One, two and multi stage growth and other related models, price earnings approach to stock valuation. Information content of financial decisions: Information content of dividends, mm theory revisited, Lintner's smoothened partial adjustment model, clientele theory of dividends, share repurchases: value addition, adverse selection theory, asymmetric information: agency costs, role of insiders and firm value, corporate decisions and behavioural finance.

Module Outcome

MO4: Students will be equipped to decide the dividend policy

Module 5: Cost of capital

Leveraged and unleveraged cost of capital -Computation of specific sources of capital - Cost of Debt - Perpetual / Irredeemable debt- Redeemable debt- Cost of Preference Capital- Perpetual PreferenceCapital- Cost of Equity Capital -Dividend method- Constant growth model (Gordan Model)-Earning Model- Capital Asset Pricing Model- Cost of Retained Earnings- Cost of Rights Issue - Weighted average cost of capital.

Module Outcome

MO5: Computation of cost of different types of capital will be acquired

Module 6: Regulation in Corporate

Mergers and acquisitions: Types and Motives behind M & A, Financial evaluation of a merger and takeovers. Failure and reorganisation: Voluntary Settlement, bankruptcy costs, direct and indirect, role of the regulator, industry associations and trade unions, dissolution and law suits, valuation aspects.

Module Outcome

MO6: Familiarise with the different regulatory mechanisms available in corporate

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To introduce various financing strategies available for corporate finance.	PSO1	Un	Co	Assignment on various financial strategies

CO2	To equip the students to identify the basics of capital structure.	PSO3	Un	Co	Seminar on the different aspects of capital structure
CO3	To give insights into the valuation and capital budgeting for leveraged firm.	PSO3	Ap	Me	Practical Test on valuation and capital budgeting using real data
CO4	To equip the students analyzing dividend policy of various firms.	PSO4	An	Me	Seminar on analyzing dividend policies of different firms
CO5	To familiarize the students, best practices followed in corporate finance.	PSO2	Ap	Me	Case study analysis and presentation of best practices followed in corporate world.

Reference:

1. Stephen A.Ross, Randolph W.Westerfi and Brad D.Jordan: Fundamentals of Corporate Finance, McGrew Hill.
2. Pierre Vernimmen: Corporate Finance – Theory and Practice, John Wiley & Sons.
3. Brealey, R and S.C.Myers, (2006): principles of corporate finance, New York. Mc. Graw hill
4. FamaE.F and MH.Miller,(1972): The theory of Finance,Ny, Hoh, Rinchart and Winston
5. Grimblatt, M and S Titnan,(2002): Financial markets and corporate strategy, Singapore lrwin,Mc. Graw Hill.
6. Ross, Stephen, Westerfield, Randolph, Jaffe, Jaffrey (February 2002), Corporate Finance, 6th Ed., McGraw-Hill Companies.
7. Berk, Jonathan, and DeMarzo, Peter (2007), Corporate Finance, Pearson International.
8. Brealey, R.A., Myers, S.C. and Allen, F. (2003), Principles of Corporate Finance, 7th Ed, McGrowHill.
9. Copeland, T., Weston, F., and Shastri, K. (2004), Financial Theory and Corporate Policy, 4th Ed., New York: Addison-Wesley.

Additional Reading

1. Brealey, R. A., Myers, S. C., & Allen, F. (2006). Principles of Corporate Finance (McGraw&Hill Irwin, New York).
2. Chandra, P. (2011). *Financial management*. Tata McGraw-Hill Education.
3. Thomas, C., & Weston, J. F. (1988). *Financial theory and corporate policy* (No. 658.15/C78f/3a. ed.).
4. Khan, M. Y. (2004). *Financial services*. Tata McGraw-Hill Education.
5. Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of financial economics*, *5*(2), 147-175.
6. Rustagi, R. P. (2006). Financial Analysis & Financial Management.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.

All questions in Section A to be answered (10*1=10 marks)

Five questions in Section B to be answered not exceeding 400 words (5*4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3*10=30 marks)

Semester: IV **Course Code: FECO-CC-542**
Course Title: Financial Econometrics **Credits: 4**
Course Learning Outcome (CLO)

- Provides students an analytical overview of time series data, models of time series and its applications in finance.
- Equipsstudents to understand the tools of univariate and multivariate time series analysis
- Enhances student capabilities in the forecasting
- Provides students an analytical exposition of panel data regression models

CO5: enables students to use statistical software packages for econometric data analysis

COURSE CONTENT

Module 1: Classical time series analysis

utility of time series analysis – components of time series data – measurement of trend, seasonality and cycles – moving averages and smoothing techniques to time series analysis - classical time Series decomposition models – additive and multiplicative models – forecasting using smoothing techniques and time series decomposition methods – applications in finance .

Module Outcome

- Student understands classical time series analysis

Module 2: Tools of modern time series analysis

stochastic and stationary process – tests of stationary – trend vs difference stationery process – Dickey-Fuller and augmented Dickey-Fuller tests – spurious regression and co-integration of time series – Engle-Granger test – CRDW test – error correction mechanism.

Module Outcome

- Student understands modern time series analysis

Module 3: Univariate time series analysis and forecasting

linear time series analysis – autocorrelation function and partial auto-correlation function – auto-regressive (AR) models, moving average (MA) models, Box-Jenkins (BJ) ARMA and ARIMA models – identification – estimation and forecasting with ARIMA models (solving examples using financial sector data)

Module outcome

- Student analyses univariate time series analysis

Module 4: Multivariate time series analysis and forecasting

vector autoregressive (VAR) models – advantages and problems – estimation and forecasting with VAR – impulse response function – Johansen Co-integration test on VAR – Granger causality test (solving examples using financial sector data)

Module outcome

- Student learns to do econometric forecasting

Module 5: Modelling volatility and auto-correlation in time series

Motivation and test for non-linearity – historical and implied volatility – auto-regressive conditional heteroscedasticity (ARCH) model – generalised ARCH model (solving examples using financial sector data)

Module outcome

- Student models volatility in time series

Module 6: Panel Data Regression Models

Why panel data? Estimation of panel data using the fixed effect approach and random effect approach

Module outcome

- Student undertakes panel data regression analysis

Tagging Course Outcomes

Name of Faculty:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	provides students an analytical overview of time series data, models of time series and its applications in finance	PO1 PSO3	Ap	Ap	Assignment on application of time series in financial data
CO2	equips students to understand the tools of univariate and multivariate time series analysis	PO1 PSO3	An	Ap	Assignment on AR, MR, ARIMA models
CO3	enhances student capabilities in the forecasting	PO1 PSO3	An	Ap	Practical exercises
CO4	provides students an analytical exposition of panel data regression models	PO1 PSO3	An	Ap	Assignment on fixed effect vs random effect model
CO5	enables students to use statistical software packages for econometric data analysis	PO1 PSO3	An	Ap	Practical exercises

Basic Reading List

Module 1

Wooldridge, J. M., *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2001

T.M.J.A. Cooray: Applied Time Series – Analysis and Forecasting, Narosa Publications.

Module 2

D.N.Gujarati and Sangeetha: Basic Econometrics, Tata McGraw-Hill.

Chris Brooks: Introductory Econometrics for Finance, Cambridge University Press

T.M.J.A. Cooray: Applied Time Series – Analysis and Forecasting, Narosa Publications.

Module 3

Wooldridge, J. M., *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2001

D.N.Gujarati and Sangeetha: Basic Econometrics, Tata McGraw-Hill.

Chris Brooks: Introductory Econometrics for Finance, Cambridge University Press

T.M.J.A. Cooray: Applied Time Series – Analysis and Forecasting, Narosa Publications.

Module 4

Wooldridge, J. M., *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2001

D.N.Gujarati and Sangeetha: Basic Econometrics, Tata McGraw-Hill.

Chris Brooks: Introductory Econometrics for Finance, Cambridge University Press

T.M.J.A. Cooray: Applied Time Series – Analysis and Forecasting, Narosa Publications.

Module 5

D.N.Gujarati and Sangeetha: Basic Econometrics, Tata McGraw-Hill.

Chris Brooks: Introductory Econometrics for Finance, Cambridge University Press

Module 6

D.N.Gujarati and Sangeetha: Basic Econometrics, Tata McGraw-Hill.
Chris Brooks: Introductory Econometrics for Finance, Cambridge University Press

Additional Reading List

Hamilton, J. D., *Time Series Analysis*, Princeton University Press, 1994

Enders, W., *Applied Econometric Time Series*, second edition, John Wiley and Sons, 2006

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
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Three questions in Section C to be answered not exceeding 1200 words (3*10=30 marks)

Semester: IV **Course Code: FECO-CC- 543**

Course Title: Dissertation **Credits: 6**

Course Outcome: To develop research aptitude and skills among the students.

DISCIPLINE-SPECIFIC ELECTIVES

Semester: IV **Course Code: FECO-DE-544**
Course Title: Credits: Environmental Finance **Credit: 3**

Course Learning Outcome (CLO)

- To describe, understand and discuss current developments and trends in the area of environmental finance.
- To analyze environmental problems in an alternative approach.
- To manage green financing.
- To develop a model of sustainable financial analysis to value a financial project of
- their choice.
- To evaluate the sustainability of a corporate/investment project by means of appropriate accounting/metrics/models

Course content

Module 1 : General introduction to environmental finance

Environmental finance-Traditional Vs Alternative investment in environmental finance- The environmental finance & investment value chain – system components.

Module outcome

MO1 Understand the concepts and applications of environmental finance

Module 2: Sustainable finance

General introduction to sustainable finance -From the limitations of our current economic models towards a new paradigm of sustainable development- Introduction to Environmental & Weather Derivatives Markets - Emissions Markets Architecture - Introduction to Carbon Offsets - Markets for Renewable Energy- Securitisation of Rainfall Risk -Sustainability and the Transition Challenge; - - Financing the Sustainable Development Goals.

Module outcome

MO1 Able to define and evaluate the different aspects of sustainability in finance.
MO2 Able to apply environmental finance to achieve sustainability.

Module 3: Green bonds: Tracking green performance

Corporate green bonds – issuer and buyer, Standardization of green bonds-Green bond underwriting and auditing

Module outcome

MO1 Able to analyse different approaches for investments and finance.
MO2 Identify opportunities for the public and private sectors to issue green bonds and green loans.

Module 4 : Financing the transition towards a sustainable world in practice

Kyoto Protocol; EU Emissions Trading System (ETS) and the role of the Clean-Development Mechanism (CDM) and JI (Joint Implementation) - Buying and selling offsets- Project finance structures and special purpose entities (SPE).Sustainable value systems: cross-industry functional ecosystems, Structuring funds: Investment objectives, investments and assets. Examples: smart grid, smart mobility, green chemistry

Module outcome

MO1: Able to apply financing mechanism to solve environmental issues.

Module 5: Best corporate practices, governance and behaviour

An overview of the environmental and social challenges of our times-Best corporate practices-Governance and Behaviour, Coalitions for Sustainable Finance- Strategy and Intangibles: Changing Business Models.

Module outcome

MO1 Gain an understanding of the role and interplay between different stakeholders and opportunities for future development

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To describe, understand and discuss current developments and trends in the area of environmental finance.	PO... PSO_1	Un	Co	Assignment on the application of environmental finance.
CO2	To analyze environmental problems in an alternative approach	PO.. PSO3	Ev	Co	Assignment on the tools and theories of sustainable finance
CO3	To manage green financing	PO.. PSO2	An	Fa	Assignments and readings to support green financing
CO4	To develop a model of sustainable financial analysis to value a financial project oftheir choice.	PO.. PSO4 and PSO5	Ap	Co	Active and voluntary participation in class discussions
CO5	To evaluate the sustainability of a corporate/investment project by means of appropriateaccounting/metrics/models	PO.. PSO4 and PSO5	Ev	Co	1.Discuss the scope of investment terms-risk, ethics and corporate responsibility 2. Read, analyse and criticize research papers on various topics pertaining to sustainable finance

Reading list

Module 1

https://www.linkedin.com/pulse/climate-finance-public-discourse-literacy-gaps-from-k-12-adriaens?published=u
2. Facts, figures, and trends (Bloomberg NEF, 2018; UNPRI Annual Report, 2016; Canvas)

Module 2

1. Dirk Schoenmaker and Willem Schramade (2019) Principles of Sustainable Finance, Oxford University Press.
2. Hens et Rieger (2010). Financial Economics, A concise introduction to classic and behavioral finance. Springer.
3. Schoenmaker, D. and W. Schramade (2018). Principles of Sustainable Finance. Oxford Univ. Press.

Module 3

1. New Alpha Source for Asset Managers: Environmentally-Enhanced Investment Portfolios. http://www.sristudies.org/bib_gl2.html
2. UNEP Finance Initiative: http://www.unepfi.org/publications/investment/index.html
3. Climate Bonds Taxonomy (http://www.climatebonds.net/standards/taxonomy)

Bonds and Climate Change (HSBC and the Climate Bonds Initiative)

Module 4

1. Sustainable Investing, Chapter 5: Observations from the Carbon Emissions Markets: Implications for Carbon Finance
2. Groobey et al. (2010). Project finance primer for renewable energy and cleantech projects (Canvas)
3. Adriaens and Tahvanainen, 2016. Financial Innovation for Industrial Renewal, ETLA Press,Chapters 3 and 6 (free download at https://www.etla.fi/en/publications/financialtechnology-for-industrial-renewal/)

Module 5

Breaking the tragedy of the horizon – climate change and financial stability" - Mark Carney, Chariman of the Bank of England download
"Green Finance Strategy - Transforming Finance for a Greener Future", BEIS July 2019 download
"A call for action: Climate change as a source of financial risk", Network for Greening the Financial System First comprehensive report, 2019 download
"Adapt Now: A Global Call For Leadership On Climate Resilience" - Global Commission on Adaptation, 2019 download

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
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Semester: IV **Course Code: FECO-DE-545**
Course Title: FINANCIAL RISK MANAGEMENT **Credit: 3**

Course Learning Outcome (CLO)

- To identify and evaluate the risk involved in stock market and credit of financial markets
- To enhance the analytical skills of the student towards evaluating the financial risks in market
- To introduce the students on various models of risk management in financial sector
- To educate the students on how to reduce and eliminate harmful threats related to financial sector
- To give the student a fair exposure to the importance of better communication of risk within organisation.

COURSE CONTENT

Module: I Introduction to Financial Risk Management

Terminologies/Basic tenets of risk management, The meaning of risk, Types of risks – Market, Credit, Operational, Reputational, Legal & Compliance risks, like fixed income, foreign exchange, credit and equity. Risk Identification and assessment need to quantify their risk- Overview of risk management process Risk measurement Risk management/control Continual monitoring and feedback

Module Outcome

MO1: Acquiring an understanding of different types of risk and key concepts of risk management.

Module II: Market Risk- Risk identification and assessment

Analysis of the organization's portfolio and reviewing the asset classes which form a part of this portfolio. Identity the risk factors pertaining to each of the asset classes in the portfolio. Study/Analyse the factors (eg: market liquidity, transaction costs, counterparty risk etc.) which have to be looked into before making the decision to hedge an exposure, Mean variance framework for an organization's portfolio risk, Importance of normal distribution in finance, set correlations and their contribution to portfolio risk, Relation between the increasing number of assets and its contribution to reduction of portfolio un-systematic risk.

Module Outcome
MO1: Identifying and assessing the market risk using major tools to evaluate the same
Module III: Market Risk - Risk measurement

Risk measurement parameters commonly used/monitored in market risk management: Portfolio Beta, PV01, Portfolio duration (Macaulay duration, modified duration, effective duration),Key rate duration, Convexity, spread analysis (Z-spread, Option adjusted spread), Yield curve analysis (concepts of bootstrapping of the yield curve), forward rates, Growing importance of OIS curve.

Module Outcome
MO1: Familiarizes with the risk measurement parameters used in market risk management

Module IV: Volatility and Market risk measurement models

Understanding volatility, Definition and insight into portfolio volatility, Volatility smiles, Introduction to volatility surfaces, Popular methods to measure portfolio volatility followed in the financial industry, Concept of Value at Risk, Types of VaR measures (VaR, incremental VaR, stressed VaR, etc.) Methodologies for measurement of VaR: Variance-Covariance VaR, Historical VaR, Monte-carloVaR, Calculation of a portfolio VaR, VaR reporting to RBI, measuring risk using Value-at-Risk

Module Outcome

MO1: Familiarizing what volatility is and how the market risk can be measured.

Module V: Market Risk - Market Risk Management/Control

Role of derivatives in market risk management, Forward contracts Futures contracts Options contracts Swaps contracts Using interest rate derivatives (Cap, Floor, Collar etc.) Greeks Analysis: Definitions of various Greeks measurement and analysis (Delta, gamma, theta, rho) Concept of delta hedging using options, introduction to gamma hedging and vega hedging

Module Outcome

MO1: Bringing in the role of derivatives in market risk management and the methods to control the risk

Module VI: Credit Risk

Risk identification and assessment: Introduction to credit risk, Credit risk management process, Risk measurement: Credit risk management strategies – Credit VaR, Analysis of counterparty credit ratings and adjustment of credit spreads in the valuation etc., Market Risk management/control:Introduction to Credit Value Adjustments (CVA) in financial instrument valuations, Credit default swaps (CDS), collateral management - Continual monitoring and feedback for market and Credit Risk Management:

Module Outcome:

MO1: Capable toidentify credit risk and the management of credit risk

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To identify and evaluate the risk involved in stock market and credit of financial markets	PO1 PSO2	Un	Co	Assignment on risk identification and assessment.
CO2	To enhance the analytical skills of the student towards evaluating the financial risks in market	PO1 PSO3	An	Me	Practical problems in financial market.
CO3	To introduce the students on various models of risk management in financial sector	PO5 PSO4	Cr	Co	Seminar on the different models of risk management.
CO4	To educate the students on how to reduce and eliminate harmful threats related to financial sector	PO3 PSO4	Ev	Me	Problem solving using case study method.

CO5	To give the student a fair exposure to the importance of better communication of risk within organisation.	PO1 PSO5	Ap	Me	Seminar on communicating risk.

Reading List

Constantin Zopounidis and EmiliosGalariotis. Quantitative Financial Risk Management: Theory and Practice (Frank J. Fabozzi Series) 1st Edition, Kindle Edition

Donald R. Van Deventer, Kenji Imai &Mark Mesler Advanced Financial Risk Management: Tools and Techniques for Integrated Credit Risk and Interest Rate Risk Management (Wiley Finance)

Peter Christoffersen Elements of Steve L. Allen. Financial Risk Management: A Practitioner's Guide to Managing Market and Credit Risk Financial

Risk Management

Additional Readings

Charles S. Tapiero (2004) Risk and Financial Management: Mathematical and Computational Methods

Jean-Philippe Bouchaud and Marc Potters:Theory of Financial Risks: From Statistical Physics to Risk Management

Malevergne, Yannick, Sornette, Didier: Extreme Financial Risks From Dependence to Risk Management

Ngai Hang Chan and Hoi Ying Wong: Simulation Techniques in Financial Risk Management (Statistics in Practice) 2nd Edition, Kindle Edition by Format: Kindle Edition

Niklas Wagner (Editor) Credit Risk: Models, Derivatives, and Management (Chapman and Hall/CRC Financial Mathematics Series) 1st Edition, Kindle Edition by Format: Kindle Edition

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.

All questions in Section A to be answered (10x1=10 marks)

Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: IV **Course Code: FECO-DE-546**

Course Title: Project Finance and Appraisal **Credit: 3**

Course Learning Outcome (CLO)

- To familiarise the students with the types of project appraisal
- To give an understanding of the risk analysis involved in projects
- To equip the students in the various aspects of project financing
- To give training on costing and valuation of projects
- To provide an understanding of practical aspects like, project administration, negotiation and preparation of project report.

COURSE CONTENT

Module 1: An Overview of Project Finance

Introduction to project finance and overview of the project finance, market, project life cycle and its impact on the feasibility − Project identification and formulation − Different types of needs leading to different types of projects under BMRED (Balancing, Modernization, Replacement, Expansion and Diversification) − Considerations involved in decision under each of these types − Macro parameters in project selection − Different considerations for project under private, public and joint sectors − Project formulation: preparation of project profile, project report and detailed project report − Broad criteria for pre-investment decisions.

Module Outcome

MO1: Familiarisation of project finance and project preparation

Module 2: Project Financing

Pattern of financing − Sources of finance − Impact of taxation − Public loans − Small savings − Surplus of public enterprises − Deficit financing − Foreign aid − Public sector project financing − Role of tax planning in project financing − Syndication − Leverage Leases − Various debt instruments and innovative Structures − Equator principles – securitizing project loans − PPP Models of Project Finance − PPP models from Supply and Service Contracts − Management Agreements − Leasing, DBO, BOT, BOO, Privatization

Module Outcome

MO2: Holistic acquaintance on different project financing types and methods

Module 3: Project Cost Systems

Project cost accounting and monitoring − Appointment of contractor and its problems − Labour and equipment costs − Accounting − Codification − Development of cost data − Labour time − Reporting− Direct measurement of work quantities − Labour cost analysis − Equipment accounting − Activity-based cost accounting − Production rates for estimates − Control of cost − Computer application to cost control − Concepts and uses of Project Evaluation and Review Techniques (PERT) − Cost as a function of time.

Module Outcome

MO3: Practical knowledge on project cost accounting and monitoring

Module 4: Project evaluation

Project evaluation and reviews techniques/cost mechanisms − Accountant's role in project evaluation and review techniques/cost budgeting − Determination of least cost duration − Post project evaluation. Valuing Projects: Appraising a Project by Discounting and Non-

Discounting Criteria − Appraising Projects with Special Features − FCF Approach − ERR Approach − Real Options – Issues in valuing long term projects.

Module Outcome

MO4: Practical knowledge on project cost evaluation and approaches
Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To familiarise the students with the types of project appraisal	PSO1	Un	Co	Assignment on different types of project appraisal
CO2	To give an understanding of the risk analysis involved in projects	PSO2	Un	Co	Practical test on risk analysis
CO3	To equip the students in the various aspects of project financing	PSO1	Ap	Me	Practical test on Costing and valuation of projects
CO4	To give training on costing and valuation of projects	PSO3	Ap	Me	Practical test on Costing and valuation of projects
CO5	To provide an understanding of practical aspects like, project administration, negotiation and preparation of project report.	PSO2	Un	Me	Case study analysis and presentation

Reading List:
Benjamin, C. (2003), Modern Project Finance: A Casebook, John Wiley & Sons, Inc.
Chandra, Prasanna (2006), Projects: Planning, Analysis, Financing, Implementation, and Review, 6th Ed., Tata McGraw Hill.
Finnerty, John D (2007), Project Financing: Asset Based Financial Engineering, 2nd Ed. John Wiley & Sons Inc.
Grundy, Tony (2003), Strategic Project Management, 1st ed. PA (I) Pvt. Ltd.
Nevitt, Peter K., Fabozzi, Frank J. (2000), Project Financing, 7th Ed. Euromoney Books.
Additional reading list
Fight, A. (2005). Introduction to project finance. Elsevier.
Frame, J. D., & Frame, J. D. (2003). Project finance: tools & techniques. University of Management & Technology.
Gatti, S. (2013). Project finance in theory and practice: designing, structuring, and financing private and public projects. Academic Press.
Scott, F., & Martens, C. P. (2000). International project finance. Brill Nijhoff.
Tan, W. (2007). Principles of project and infrastructure finance. Routledge.
Yescombe, E. R. (2002). Principles of project finance. Elsevier.

ASSESSMENT
40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.
Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.

All questions in Section A to be answered (10x1=10 marks)

Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester IV **Course Code: FECO-DE-547**

Course Title: Law and Financial Economics **Credits: 3**

Course Learning Outcome (CLO)

After concluded the course the students are expected to be able to

- understand theoretical and empirical analysis of various issues in the law and economics.
- Apply the central parts of law and economics to describe how its methods of analysis explain economic efficiency
- Evaluate the importance of the legal aspects to make the economic rationale workable and vice versa.
- Able to understand and critically apply the theories of property rights for rationalizing economic interaction
- Able to understand and critically apply the theories of contract for rationalizing economic interaction
- Able to apply the principles of accident liability and negligence liability in determining economic decision of accident and dealing with strangers.
- Critically examines the rationale of why do people commit crime and the economic reason vis a vis the legal justice
- Critically evaluate the possibilities of dispute resolution and litigation processes

Course Content:

Module I

Why law and finance need to be studied? – Positive and normative approach of Law and Finance, Civil Law and Common Law traditions, Indian Court Structure, nature of legal disputes, evolution of legal rules, Criteria for analyzing legal and financial economic issues – Efficiency criteria – Pareto, Kaldor-Hicks and Nash Equilibrium, Fairness Criteria

Module Outcome:

Understand the rationale of the analysis of financial economicsandLaw

Specific Reading:

Cooter and Ulen first two chapters and references during the lectures
https://2012books.lardbucket.org/books/the-law-corporate-finance-and-management/

Module II

The Nature and Function of Property Rights – the definition, emergence, incentives, enforcement of property rights, Property Law and Coase Theorem– Contract formation – Justification, Interpretation and Incompleteness of Contract, The Elements of Valid and Invalid Contracts – Efficient Breach Model – Enforcement of Contracts

Module Outcome:

Critically comprehend and evaluate the application of Property right theories and Contract theories to dealing with financial economics and its implication in legal life

Specific Reading:

https://2012books.lardbucket.org/books/the-law-corporate-finance-and-management/
References during the lectures

Module III

Liability and Deterrence: Basic Theory – Unilateral and Bilateral Accidents, Levels of Care and Activity, Extensions of the Analysis of Deterrence - Problems in the Negligence Determination, Deterrent Rules of Negligence and Liability, Risk-Bearing, and Insurance - Risk Aversion and the Socially Ideal Solution to the Accident Problem, The Accident Problem in the Absence of Liability and Insurance, Further analysis of the Accident Problem

Module Outcome:

Critically comprehend and evaluate and able to apply the importance of contract and liability rules and its implications in economic and legal life

Specific Reading:

https://2012books.lardbucket.org/books/the-law-corporate-finance-and-management/

References during the lectures

Module IV

Distinguishing Crimes and Torts - Crimes Are Intentional, Other Reasons for Public Enforcement, Property Rules, Liability Rules, and Criminal Sanctions for financial economic analysis, The Economic Model of Crime – Does punishment deter crime - Optimal Punishment, The Optimal Fine, Gain Versus Harm-Based Fines, Fines and Imprisonment, Economics of the Death Penalty

The Litigation Process, Procedural Rules and Litigation Costs, Basic Theory of Litigation, Fundamental Divergence between the Private and the Socially Desirable Level of Suit, Settlement versus Trial,

Module Outcome:

Critically comprehend and evaluate and able to apply the importance and rationale of the motive of crime and punishment in socio-economic life

Specific Reading:

https://2012books.lardbucket.org/books/the-law-corporate-finance-and-management/

References during the lectures

Module V

Partnership Operation and Termination - Introduction to Partnerships and Entity Theory, Partnership Formation, Hybrid Business Forms – Limited Partnership and Limited Liability Companies, Corporation: General Characteristics and Formation, Legal Aspects of Corporate Finance, Securities Regulation, Liability and Discharge, Legal Aspects of Banking Consumer Credit Transactions

Specific Reading:

https://2012books.lardbucket.org/books/the-law-corporate-finance-and-management/

References during the lectures

Module Outcome:

Critically comprehend, evaluate and able to apply the theoretical and empirical possibilities of judicial process, litigation, and settlement to have a better socio-economic condition.

Specific Reading: References during the lectures

Tagging Course Outcomes

Faculty Member/s:

CO	**CO Statement**	**PO/ PSO**	**CL**	**KC**	**Assessment**
CO1	understand theoretical and empirical analysis of various issues in the law and economics.	PO... PSO_1	Un	Co	Assignment on the tools and concepts of law and economics
CO2	Apply the central parts of law and economics to describe how its	PO.. PSO_2	Ap	Co	Assignment on application of tools within the conceptual framework

	methods of analysis explain economic efficiency				
CO3	Evaluate the importance of the legal aspects to make the economic rationale workable and vice versa.	PO.. PSO_5	Ev	Co	Seminar on the evaluation of economic and legal rational to aid each other
CO4	Able to understand and critically apply the theories of property rights for rationalizing economic interaction	PO.. PSO_3	Ev	Co and Ad	Assignment/Seminar on critical evaluation of property rights
CO5	Able to understand and critically apply the theories of contract for rationalizing economic interaction	PO.. PSO_3	Ap	Ad	Assignment and Seminar on Contract theories and its applications
CO6	Able to apply the principles of accident liability and negligence liability in determining economic decision of accident and dealing with strangers.	PO $PSO_{2,4}$	Ap	Ad	Assignment and Seminar on liability rule and its application
CO7	Critically examines the rationale of why do people commit crime and the economic reason vis a vis the legal justice	PO $PSO_{2,4}$	Ap	Ad	Assignment and Seminar on the rationale of crime and punishment
CO8	Critically evaluate the possibilities of dispute resolution and litigation processes	PO $PSO_{2,4}$	Ap	Ad	Assignment and Seminar on judicial process with reference to India

Additional Reading

1. David Friedman (2000) Law's Order: What Economics has to do with Law and Why It Matters, Princeton University Press. New Jersey
2. John Rawls (1972) A Theory of Justice. Harvard University Press: Cambridge MA
3. Robert D Cooter and Thomas Ulen (2012) Law and Economics, Addison Wesley-Pearson
4. Steven Shavell (1987) Economic Analysis of Accident Law" Harvard University Press: Cambridge MA
5. Steven Shavell (2004) "Foundations of Economic Analysis of Law, Harvard University Press: Cambridge MA
6. Thomas J Micely (2004) "Economic Approach to Law", Stanford University Press
7. YoramBarzel (1997) "Economic Analysis of Property Rights", Cambridge University Press
8. Babu, P G, Thomas Eger, A V Raja, Hans Bernd Schafer and T S Somasekar (eds.)(2010) Economic Analysis of Law in India: Theory and Application *Oxford University Press*, New Delhi
9. Ostrom, Elinor (1990) Governing the Commons: The Evolution of Institutions for Collective Action, Cambridge University Press
10. Becker, Gary (1968) "Crime and Punishment: An Economics Analysis," *Journal of Political Economy*, Vol. 76, pp. 169-217.
11. Brown, John (1973) "Toward an Economic Theory of Liability," *Journal of Legal Studies*, Vol. 2, pp. 323-349.
12. Calabresi, Guido (1961) Some Thoughts on Risk Distribution and the Law of Torts, *The Yale Law Journal*, 70, 4, 499-553
13. Calabresi, Guido, and A. Douglas Melamed (1972) "Property Rules, Liability Rules, and Inalienability: One View of the Cathedral," *Harvard Law Review*, Vol. 85: 1089-1128.
14. Coase, Ronald (1960) "The Problem of Social Cost," *Journal of Law and Economics*, Vol. 3, pp. 1-44.
15. Coleman, Jules (1980) "Efficiency, Utility, and Wealth Maximization." *Hofstra Law Review* 8(3): 509-51.
16. Cooter, Robert (1985) "Unity in Torts, Contracts, and Property: The Model of Precaution," *California Law Review*, Vol. 73, pp. 1-51.
17. Cooter, Robert and Daniel L. Rubinfeld (1989) "Economic Analysis of Legal Disputes and Their Resolution," *Journal of Economic Literature*, Vol. 27, pp. 1067-1097.
18. Demsetz, Harold (1967) "Toward a Theory of Property Rights," *American Economic Review*, Vol. 57, pp. 347-359.
19. Donohue, John J. III and Steven D. Levitt (2001) "Legalized Abortion and Crime," *Quarterly Journal of Economics* 116(2): 379-420.
20. Dworkin, Ronald (1980) "Why Efficiency: A Response to Professors Calabresi and Posner." *Hofstra Law Review* 8(3): 563-90.
21. Farmer, Amy and Dek Terrell (2001) "Crime versus Justice: Is There a Trade-off?" *The Journal of Law and Economics*, Vol. XLIV (October): pp. 345- 366.
22. Friedmann, Daniel (1989) "The Efficient Breach Fallacy," *Journal of Legal Studies*, Vol. 18, pp. 1-24.
23. Gilbert, Richard and Oliver Williamson (1998) "Antitrust Policy," in *The New Palgrave Dictionary of Economics and the Law*, P. Newman, ed., Vol. 1, pp. 82-88.
24. Hardin, Garrett (1968) "The Tragedy of the Commons" *Science* 162: 1243-48.
25. Hirshleifer, Jack (1971) "The Private and Social Value of Information and the Reward to Inventive Activity," *American Economic Review*, Vol.61, pp. 561- 574.

26. Klein et al. (2002) “Economics of Copyright ‘Fair Use’ in a Networked World.” *American Economic Review.* May
27. Kronman, Anthony (1978) "Mistake, Disclosure, and Information," *Journal of Legal Studies*, Vol. 7, pp. 1-34.
28. Landes, William (1971) An Economic Analysis of Courts, *Journal of Law and Economics*, 14, 1, 61-107
29. Landes, William and Richard Posner (1985) “A Positive Economic Theory of Products Liability,” *Journal of Legal Studies*, Vol. 14, pp. 535-567.
30. Levitt, Stephen (2004) “Why Crime Fell in the 1990s: Four Factors that Explain the Decline and Six That Do Not” *Journal of Economic Perspectives* 18(1): 163-190
31. Miceli, Thomas J. and Kathleen Segerson (2007) *The Economics of Eminent Domain: Private Property, Public Use, and Just Compensation*, Foundations and Trends in Microeconomics, Vol. 3, Issue 4.
32. Murthy, Ramana and SiddikRabiyath (2010) Disposal Rates, Pendency and Filing in Indian Courts: an Empirical Study of the Two States of Andhra Pradesh and Kerala, in Babu, P G, Thomas Eger, A V Raja, Hans Bernd Schafer and T S Somasekar (eds.) Economic Analysis of Law in India: Theory and Application *Oxford University Press*, New Delhi
33. Posner, Richard (1977) "Gratuitous Promises in Economics and Law," *Journal of Legal Studies*, Vol. 6, pp. 411-426.
34. Posner, Richard A. (2005) “Intellectual Property: The Law and Economics Approach” *JEP* 19(2): pp. 57-73.
35. Posner, Richard and Andrew Rosenfield (1977) "Impossibility and Related Doctrines in Contract Law: An Economic Analysis," *Journal of Legal Studies*, Vol. 6: 83- 118.
36. Priest, George (1977) “The Common Law Process and the Selection of Efficient Rules,” *Journal of Legal Studies*, Vol. 6, pp. 65-82.
37. Rubin, Paul (1977) “Why is the Common Law Efficient?” *Journal of Legal Studies*, Vol. 6, pp. 51-63.
38. Shavell, Steven (1980) “Damage Measures for Breach of Contract,” *Bell Journal of Economics*, Vol. 11, pp. 466-490.
39. Stigler, George (1970) “The Optimum Enforcement of Laws,” *Journal of Political Economy*, Vol. 78, pp. 526-536.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).

60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60

This question paper has three sections.

All questions in Section A to be answered (10x1=10 marks)

Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)

Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Generic Courses

Semester: I **Course Code: FECO-GC-511**
Course Title: Project Finance **Credit: 2**

Course Learning Outcome (CLO)

- To familiarise the students with the types of project appraisal
- To give an understanding of the risk analysis involved in projects
- To equip the students in the various aspects of project financing
- To give training on costing and valuation of projects
- To provide an understanding of practical aspects like, project administration, negotiation and preparation of project report.

COURSE CONTENT

Module 1: An Overview of Project Finance

Introduction to project finance and overview of the project finance, market, project life cycle and its impact on the feasibility − Project identification and formulation − Different types of needs leading to different types of projects under BMRED (Balancing, Modernization, Replacement, Expansion and Diversification) − Considerations involved in decision under each of these types − Macro parameters in project selection − Different considerations for project under private, public and joint sectors − Project formulation: preparation of project profile, project report and detailed project report − Broad criteria for pre-investment decisions.

Module Outcome

MO1: Familiarisation of project finance and project preparation

Module 2: Project Financing

Pattern of financing − Sources of finance − Impact of taxation − Public loans − Small savings − Surplus of public enterprises − Deficit financing − Foreign aid − Public sector project financing − Role of tax planning in project financing − Syndication − Leverage Leases − Various debt instruments and innovative Structures − Equator principles – securitizing project loans − PPP Models of Project Finance − PPP models from Supply and Service Contracts − Management Agreements − Leasing, DBO, BOT, BOO, Privatization

Module Outcome

MO2: Holistic acquaintance on different project financing types and methods

Module 3: Project Cost Systems

Project cost accounting and monitoring − Appointment of contractor and its problems − Labour and equipment costs − Accounting − Codification − Development of cost data − Labour time − Reporting− Direct measurement of work quantities − Labour cost analysis − Equipment accounting − Activity-based cost accounting − Production rates for estimates − Control of cost − Computer application to cost control − Concepts and uses of Project Evaluation and Review Techniques (PERT) − Cost as a function of time.

Module Outcome

MO3: Practical knowledge on project cost accounting and monitoring

Module 4: Project evaluation

Project evaluation and reviews techniques/cost mechanisms − Accountant's role in project evaluation and review techniques/cost budgeting − Determination of least cost duration − Post project evaluation. Valuing Projects: Appraising a Project by Discounting and Non-Discounting Criteria − Appraising Projects with Special Features − FCF Approach − ERR Approach − Real Options – Issues in valuing long term projects.

Module Outcome

MO4: Practical knowledge on project cost evaluation and approaches

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To familiarise the students with the types of project appraisal	PSO1	Un	Co	Assignment on different types of project appraisal
CO2	To give an understanding of the risk analysis involved in projects	PSO2	Un	Co	Practical test on risk analysis
CO3	To equip the students in the various aspects of project financing	PSO1	Ap	Me	Practical test on Costing and valuation of projects
CO4	To give training on costing and valuation of projects	PSO3	Ap	Me	Practical test on Costing and valuation of projects
CO5	To provide an understanding of practical aspects like, project administration, negotiation and preparation of project report.	PSO3	Un	Me	Case study analysis and presentation

Reading List:

Benjamin, C. (2003), Modern Project Finance: A Casebook, John Wiley & Sons, Inc.
Chandra, Prasanna (2006), Projects: Planning, Analysis, Financing, Implementation, and Review, 6th Ed., Tata McGraw Hill.
Finnerty, John D (2007), Project Financing: Asset Based Financial Engineering, 2nd Ed. John Wiley & Sons Inc.
Grundy, Tony (2003), Strategic Project Management, 1st ed. PA (I) Pvt. Ltd.
Nevitt, Peter K., Fabozzi, Frank J. (2000), Project Financing, 7th Ed. Euromoney Books.

Additional reading list

Fight, A. (2005). Introduction to project finance. Elsevier.
Frame, J. D., & Frame, J. D. (2003). Project finance: tools & techniques. University of Management & Technology.
Gatti, S. (2013). Project finance in theory and practice: designing, structuring, and financing private and public projects. Academic Press.
Scott, F., & Martens, C. P. (2000). International project finance. Brill Nijhoff.

Tan, W. (2007). Principles of project and infrastructure finance. Routledge.
Yescombe, E. R. (2002). Principles of project finance. Elsevier.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
All questions in Section A to be answered (10x1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5x4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3x10=30 marks)

Semester: II **Course Code: FECO-GC-521**

Course Title: Investment Banking **Credit: 2**

Course Learning Outcomes

CO1:Toget an overview of investment banking and innovation in fixed income instruments used in financial market.

CO2: To analyse valuation of companies and mergers and acquisitions of companies.

CO3: To understand structure of investment banking and elucidate how investment bankers compete

Course Content

Module 1. Introduction: Overview of Investment Banking

Corporate debt and underwriting procedures securitization and asset backed debt securities, high yield debt investment bankers as traders and market-makers, private placements.

Module outcome

MO1 Able to understand and analyse investment banking.

Module 2. Innovation and New Products in Fixed Income Instruments

equity issues; valuing an initial public offering, international equity issues, GDR, ADR, convertible securities, innovation and new equity securities, derivative securities.

Module outcome

MO1 Identify opportunities in New products in fixed income instruments.

Module 3. Mergers & Acquisitions

Introduction to valuation of companies; the law of mergers & acquisitions, markets for takeover stocks and risk arbitrageurs restructuring: theory of adding value, LBOS, practice of adding value

Module outcome

MO1 Able to analyse companies in terms of values.

Module 4. Structure of the Investment Banking

Structure of banking industry, major developments in India, and in international capital markets- legal basis of corporate finance and investment banking

Module outcome

MO1 To understand the structure of investment banking in the context of India.

Module 5. How Investment Bankers Compete

Developing new business, international business, professional standards and management.

Module outcome

MO1 Able to develop new business.

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To get an overview of investment banking and innovation in fixed income instruments used in financial market.	PO... PSO_1	Un	Co	Assignment on investment banking and innovation in fixed income instruments
CO2	To analyses valuation of companies and mergers and acquisitions of companies.	PO... PSO3	Ev/Un	Co	Discuss valuation of companies
CO3	To understand structure of investment banking and elucidate how investment bankers compete	PO.. PSO_2	An/Un	Co	Seminarinvestment banking

Basic Reading List

Bodie, Z., A Kane and A.J. Marcus, *Investments,* Irwin McGraw-Hill, 2005.

Sharpe, W.F., J.A. Gordon, and J.V. Bailey, *Investments,* Prentice-Hall, 1999.

Liaw, T. *The Business of Investment Banking,* John-Wiley, 1999.

Subramanyam, P. *Investment Banking,* TATA McGraw-Hill, 2005

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
All questions in Section A to be answered (10*1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5*4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3*10=30 marks)

Semester: III **Course Code: FECO-GC-531**

Course Title: Security Analysis **Credit: 2**

Course Learning Outcomes

CO1: To develop the necessary skills for Investment in Security Market

CO2: To understand the fundamental concepts, theories and opportunities of security market investments

CO3: To understand the risk –return relationship in market

CO4: To give an opportunity to understand the importance of portfolio management and strategies to be followed

CO5: To maximize the investment return through the process of Diversification.

Course Content

MODULE I: Investment and valuation

Investment – definition – Nature and Characteristics – Investment process –Institutions and markets – Securities – money market instruments –investment vs. speculation.Risk-Return-Different types -Risk Measurement –- Total Risk- Systematic Risk- Use of Beta, Variance – Computation of Risk and Return- Risk Premium –Expected Return -Risk Return Trade Off.Valuation of Securities – Valuation of Bonds – methods of estimating Bond returns – Valuation of shares – discounted dividend models – PE ratio multiplier Model.

Module Outcome

MO1: The student gets an understanding of the different types of investment and valuation methods

MODULE II: Security Analysis

Security Analysis – Fundamental analysis – Economy analysis- Industry Analysis – company analysis. Technical analysis – Dow Theory – Elliot Wave Theory – Chart patterns-Mathematical indicators. Efficient Market Hypothesis – weak form – semi strong form – strong form – tests of efficient market hypothesis - Random walk theory.

Module Outcome

MO2: The student will get familiarized on the theories of security analysis.

MODULE III: Capital Market Theories

Capital Market Theory – Capital Market Line (CML) – Security Market Line (SML) - Capital Asset Pricing Model (CAPM) – Arbitrage Pricing Theory (APT) -Zero beta Model - Multi Factor Models - Security Valuation and APT - Empirical Tests of APT -Estimating Risk in a Multi-factor Setting

Module Outcome

MO3: The student will get familiarized with the capital market theories.

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment

CO1	To develop the necessary skills for Investment in Security Market	PSO2	Ap	Me	Practical Test using real data
CO2	To understand the fundamental concepts, theories and opportunities of security market investments	PSO1	Un	Co	Assignment on security market investment
CO3	To understand the risk –return relationship in market	PSO4	Un	Co	Seminar on Risk-return relationship

Basic Readings

Avadhani,V.A.Security Analysis and Portfolio Management. HimalayaPublishingHouse,Mumbai2008.Print.
Benjamin Grahm: Security Analysis
Bhalla,V.K. Investment Management. New Delhi: S.Chand& Corporations, 2008.Print.
Fisher,E.Donald and Ronald J.Jordan, Security Analysis and PortfolioManagement,NewDelhi:PHI Learning,2008.Print.
Goldman Sachs: Introducing GS Sustain, 2007

Other Readings

http:// www. Unglobalcompact.org/docs/summit2007/gsesgembargoeduntil030707pdf.
http://www.focusinvestor.com/Graham1.pdf.

ASSESSMENT

40% Continuous / Formative Assessment (see PG Regulations).
60% End-semester/Summative Assessment: 3 hour written Exam.

Model Question in OBE Format

Time: 3 hours Maximum Marks : 60
This question paper has three sections.
All questions in Section A to be answered (10*1=10 marks)
Five questions in Section B to be answered not exceeding 400 words (5*4= 20 marks)
Three questions in Section C to be answered not exceeding 1200 words (3*10=30 marks)

Semester: IV **Course Code: FECO-GC-541**

Course Title: Financial Analytics **Credit:2**

Course Learning Outcome (CLO)

- To give an understanding of financial data and its characteristics.
- To provide an introduction to the computational issues in financial problems.
- To understand and analyse financial data by using open-source software Gretl.
- To equip the students in forecasting cross section and time series financial data.

COURSE CONTENT

Module 1: Overview of data characteristics

Introduction to financial data, Features of financial data-key terms and definitions – population – sample – variable – parameter – statistic – types of Data – metric – non-metric - nominal – ordinal – interval and ratio – sources of data – step by step approach to statistical investigation – methods of data analysis –descriptive method – inferential method – data-base availability.

Module Outcome

MO1: The student will get an understanding of financial data and its characteristics

Module 2: Gretl: An Introduction

Opening data-examining variables-summary statistics -correlation matrix-cross tabulation – principal component.

Module Outcome

MO2: The student will learn how to solve data from financial sector.

Module 3: Gretl for Modelling

Building the model-forecasting -simple linear and multiple linear models using problems of finance – Limited dependent variables – Logit – Probit.

Module Outcome

MO3: Familiarise the software Gretl and use by applying financial sector data.

Module 4: Time series modelling using Gretl

Modelling and forecasting time series data – Univariate time series – Multivariate Time series.

Module Outcome

MO4: Learn to work with time series modelling

Tagging Course Outcomes

Faculty Member/s:

CO	CO Statement	PO/ PSO	CL	KC	Assessment
CO1	To give an understanding of financial data and its characteristics.	PSO1	Un	Co	Practical test using computer
CO2	To provide an introduction to the computational issues in financial problems.	PSO3	Ap	Co	Practical test using computer
CO3	To understand and analyse financial data by using open-source software Gretle.	PSO4	An	Me	Practical test using computer
CO4	To equip the students in forecasting cross section and time series financial data.	PSO4	An	Me	Practical test using computer

Basic Reading List

Analysis of Financial Time Series, 3rd Edition, by Ruey S. Tsay.
Hyndman and Athanasopoulos, *Forecasting Principles and Practice: Second Edition*, available online.
David P. Doane and Lori E. Seward: Applied Statistics in Business and Economics, Tata McGraw Hill.
Wooldridge, J. M., *Econometric Analysis of Cross Section and Panel Data*, MIT Press, 2001
Enders, W., *Applied Econometric Time Series*, second edition, John Wiley and Sons, 2006
Econometrics with gretl, https://core.ac.uk/download/pdf/6394932.pdf
http://www.learneconometrics.com/gretl/using_gretl_for_POE5.pdf

Additional Reading List

Singh and Allen, *R in Finance and Economics: A Beginner's Guide*, World Scientific, 2017.
Diebold, *Elements of Forecasting*, fourth edition
Kultar Singh: Quantitative Social Research Methods, Sage.
P.K.Viswanathan: Business Statistics: An Applied Orientation, Pearson.

ASSESSMENT

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