

DEPARTMENT OF ECONOMETRICS



**DEPARTMENT OF ECONOMETRICS
UNIVERSITY OF MADRAS**

M.A. FINANCIAL ECONOMICS

SYLLABUS FOR 2017-18

The Department of Econometrics was established in July 1980. Since its inception, the Department has been specialising on teaching and research in quantitative economics, emphasising theoretical, methodological and conceptual aspects of economic theory along with econometric applications to socially relevant economic issues and policies. Quantitative analysis of economic data with computer applications has been the strength of the Department.

Recognising the growing importance of quantitative economics in teaching and policy decisions, the M.A Econometrics programme in 1978 along with the Ph.D. programme with a focus on applied econometrics. With the increasing demand for econometric analysis, M.A. Financial Economics and M.Phil. in Applied Economics are also offered by the Department. The Department teaching focuses on training students in computer applications and econometric softwares to impart quality learning in quantitative analysis.

The Department at present has 5 well trained faculty with specialisations in a wide range of topics.

Dr. T. Lakshmanasamy, M.A., Ph.D.

Professor and Head

Dr. D. Sathiyavan, M.A., M.Phil., Ph.D.

Associate Professor

Dr. P. Mahendra Varman, M.S., M.Phil., Ph.D.

Assistant Professor

Dr. R. Mariappan, M.A., M.B.A., M.Phil., Ph.D.

Assistant Professor

The Department has an Air-conditioned Computer and Econometrics Lab with accessories and is equipped with licensed software such as Windows, Linux, MS Office and Econometric/Statistical software packages such as SPSS, STATA, LIMDEP, SHAZAM & Eviews.

M.A. FINANCIAL ECONOMICS 2017-18

Sem.	Sub. Code	Courses	C/E	Credits	Faculty
I	Eco C 201	Mathematical Methods	C	4	D.Sathiyavan
	Eco C 202	Statistical Methods	C	4	R.Mariappan
	Eco C 203	Micro Economics – I	C	4	T.Lakshmanasamy
	Eco C 204	Indian Financial System	C	4	P.Mahendra Varman
	Eco E 201	Indian Economic Development	E	3	R.Mariappan
	Eco E 202	Monetary Economics	E	3	Faculty
	Eco E 203	Data Analysis using Computers	C	4	P.Mahendra Varman
	UOM S***	Soft Skill*	S	2	University
II	Eco C 205	Theory of Financial Economics	C	4	Faculty
	Eco C 206	Micro Economics – II	C	4	T.Lakshmanasamy
	Eco C 207	Macro Economics	C	4	P.Mahendra Varman
	Eco C 208	Financial Accounting	C	4	Faculty
	Eco E 204	Basic Econometrics	E	3	D.Sathiyavan
	Eco E 205	Development and Planning	E	3	R.Mariappan
	Eco E 206	Data Base for Economic Analysis	E	3	P.Mahendra Varman
	UOM S***	Soft Skill	S	2	University
	UOM ****	Internship	S	2	Department
	III	Eco C 209	Pricing of Financial Instruments	C	4
Eco C 210		Corporate Finance	C	4	Faculty
Eco C 211		Public Finance	C	4	T.Lakshmanasamy
Eco C 212		Banking and Insurance	C	4	Faculty
Eco E 207		Econometric Applications to Finance	E	3	D.Sathiyavan
Eco E 208		Industrial Economics	E	3	Faculty
Eco E 209		Advances in Economic Theory	E	3	T.Lakshmanasamy
UOM S***		Soft Skill	S	2	University
IV	Eco C 213	International Finance	C	4	Faculty
	Eco C 214	Financial Derivatives	C	4	Faculty
	Eco C 215	Behavioural Finance	C	4	Faculty
	Eco E 210	International Economics	E	3	Faculty
	Eco E 211	Indian Economic Issues	E	3	Faculty
	Eco E 212	Industrial Organisation	E	3	Faculty
	UOM S***	Soft Skill	S	2	University

Note: Soft skill courses are conducted by the University and students choose from the list of soft skills courses offered by the University.

Eco C 201	Mathematical Methods	4	D. Sathiyavan
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Unit 1: Basics – exponents, polynomials, functions, limits, continuity, and derivatives – rules – partial derivatives – differential and total differential – integration – rules – economic applications.

Unit 2: Set theory – convex and concave sets and functions – local and global maximum and minimum.

Unit 3: Optimisation – maxima and minima – constrained – Lagrangian multiplier method – first and second order conditions – solving numerical problems.

Unit 4: Linear algebra – vectors – matrix – definition – types – relations and operations – trace, partitioned matrices – determinants – rank – properties – inverse – properties of inverse – solution to a system of linear equations – existence of uniqueness of solution – Cramer’s rule – inversion method.

Unit 5: Characteristic roots and vectors – properties – quadratic forms – definiteness – distribution of quadratic function.

Books for Reference:

- Edward T. Dowling: Introduction to Mathematical Economics, Tata McGraw Hill.
- G.Hadley: Linear Algebra, Narosa Publishing House.
- A.C.Chiang: Fundamental Methods of Mathematical Economics, McGraw-Hill.
- M.D.Intriligator: Mathematical Optimization and Economic Theory, Prentice Hall Inc. Chapters 5, 7 and 8 and Appendices A and B.

Eco C 202	Statistical Methods	4	R.Mariappan
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Unit 1: Basics – frequency distribution – graphs and histograms – measures of central tendency – mean, median, mode, geometric mean, harmonic mean – merits and demerits – measures of dispersion – range, mean deviation, semi-interquartile range and variance – moments, skewness and kurtosis – grouped and ungrouped data – numerical problems.

Unit 2: Probability – concept of probability – discrete and continuous random variables – probability and cumulative distribution functions – joint probability and cumulative distribution functions – mathematical expectations and variance – concepts and theorems – moment generating and characteristic functions – problems.

Unit 3: Special probability distributions – binomial, poisson, exponential, normal, chi square, t and F distributions – probability and distribution functions – properties – relations among binomial, poisson and normal distributions – central limit theorem.

Unit 4: Sampling theory – definitions of sampling with and without replacement – type-I and Type-II errors – level of significance – rules of hypotheses testing – one-tailed and two - tailed test – sampling distributions of means and variances

– theorems – sampling distribution of proportions – sampling distributions of sums – numerical problems.

Unit 5: Estimation theory and testing of hypothesis – properties of estimates – confidence interval for population parameters and sample statistics – confidence interval for variances – maximum likelihood estimates – special tests of significance for large and small samples – numerical problems.

Books for Reference:

1. Alexander M. Mood, Franklin A. Graybill and Duane C. Boes: Introduction to the Theory of Statistics. Third Edition, McGraw-Hill.
2. Murray R. Spiegel: Theory and Problems of Probability and Statistics. McGraw-Hill Schaum's Outline Series.
3. Seymour Lipschutz and John Schiller: Introduction to Probability and Statistics, Schaum's Outlines, McGraw Hill.
4. P.K. Viswanathan: Business Statistics: An Applied Orientation, Pearson.
5. Damodar Gujarati: Essentials of Econometrics, McGraw Hill.

Eco C 203	Micro Economics – I	4	T.Lakshmanasamy
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Unit 1: Resource allocation – economic laws – market and market mechanism – demand and supply – market equilibrium – existence, uniqueness and stability of equilibrium – change, shift and dynamic adjustment – constrained optimisation.

Unit 2: Relationship between marginal, average and total quantities – short run and long run cost curves – optimum output – classification of goods – demand functions – restrictions and properties – compensated and uncompensated demand curves – elasticity – Engel curve.

Unit 3: Theory of individual decision making – preference and choice – consumer equilibrium – Slutsky equation – derivation of demand curves – utility functions – direct, indirect, additive, separable, homogenous and homothetic functions – duality – applications of indifference curve analysis – consumer surplus, taxes, subsidy, labour supply, welfare.

Unit 4: Revealed preference theory – intertemporal choice – choice under uncertainty – expected utility analysis – mean-variance approach – characteristic approach – quality choice – asymmetric information and decision making – random utility – prospect theory.

Unit 5: Theory of firm – theory of production and production functions – returns to scale – technology and technical change – optimization – duality – alternative objectives of firm – Cobb-Douglas and CES production functions – properties of production functions – multiple inputs and outputs.

Books for Reference:

1. J.M.Henderson and R.E.Quandt: Micro Economic Theory, Tata McGraw Hill.
2. Hal R.Varian: Intermediate Micro Economics, East West Press.
3. A. Koutsoyiannis: Modern Microeconomics, Macmillan.

Eco C 204	Indian Financial System	4	P.Mahendra Varman
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Unit 1: Components of financial system – functions – design and structure – financial system and macroeconomy – national income accounts – flow of funds accounts – financial system and economic growth.

Unit 2: Indian financial system – pre and post reform developments – money market – institutions – instruments – capital market – instruments – shares – debts – derivatives – primary market – IPO – process – institutional mechanism – secondary market - listing - trading – index – stock exchange – depositors – demat account.

Unit3: Debt market – corporate bonds – government securities – primary dealers – disinvestment of PSUs – PSU bonds.

Unit 4: Derivatives – commodities types – financial types – commodity exchanges.

Unit 5: Mutual funds – types – risk – NAV – SEBI guidelines – UTI – insurance – IRDA – health – life – other insurance products – credit rating and agencies.

Books for Reference:

1. Bharati V. Pathak: The Indian Financial System, Pearson Education Ltd.
2. M.Y.Khan: Indian Financial System, Tata McGraw Hill.
3. L.M.Bhole: Financial Institutions and Markets, Tata McGraw Hill.

Eco E 201	Indian Economic Development	3	R.Mariappan
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Unit 1: Concepts of economic growth and development – major features of the Indian economy – economic and non-economic factors in economic development – obstacles to economic growth and development measures of development – GDP – Per capita income – human development index.

Unit 2: Trends and growth in GDP – agriculture, industry and service sectors – production, exports and imports – capital formation – capital-output ratio – productivity – heavy industries – small scale industries – ICT and Indian economic development – employment – infrastructure.

Unit 3: Indian economic planning – plan models – five year plans – monetary and fiscal policies – public debt and deficit financing – trade and investment policies – industrial and labour regulations.

Unit 4: Foreign trade – importance, composition, foreign trade policy, direction, balance of payments and economic reforms – trade, export and import policies – trends in imports and exports – prices and money supply – causes and policies.

Unit 5: India and international relations – WTO, bilateral relations, environment and climate change issues, trade issues – globalisation issues and global standards.

Books for Reference:

1. R.Dutt and K.P.M.Sundaram: Indian Economy, S. Chand & Company.
2. S.K.Misra and V.K.Puri: Economics of Development and Planning, Himalaya.

3. Government of India, Economic Surveys & Reserve Bank of India Annual Reports.

Eco E 202	Monetary Economics	3	Faculty
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Unit 1: Money - definition – measures – central bank balance sheet – flow of funds approach – money multiplier – central bank and commercial bank – coordination – combined balance sheet.

Unit 2: Demand for money – quantity theories – general theory – Tobin’s portfolio model – monetarism – microeconomic transactions approach.

Unit 3: Transmission of monetary policy – channels – interest rate – expected inflation – exchange rate – asset prices – Philips cure – money supply, aggregate demand – independence of central bank.

Unit 4: Theory of monetary policy – goals – instruments – rules and discretion – choice of instruments – targets and indicators – policy rules.

Unit 5: Monetary policy with fixed exchange rate – floating exchange rate – policy coordination – capital mobility and Tobin tax.

Books for Reference:

1. Keith Bain and Peter Howells: Monetary Economics, London: Palgrave.
2. Jagadish Handa: Monetary Economics, London: Routledge.

Eco E 203	Data Analysis using Computers	4	P.Mahendra Varman
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Unit 1: Overview of data characteristics – 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.

Unit 2: Data processing using Microsoft Excel – fundamentals of spreadsheets – fill handles – absolute positioning – cell operations – data sorting and filter – specific functions – frequencies – charts and chart Options – mathematical Ffnctions – transformations – matrices – solving linear equations using spreadsheet – linear programming using Excel solver – statistical functions – measures of central tendencies and dispersions – data analysis –regression – forecasting – chi-square test.

Unit 3: Introduction to Stata – Stata Description – Stata Windows – creating new data set – importing ASCII data – creating log, cmdlog and do files – generating and replacing variables – summary statistics and exploratory data analysis – frequency tables and two-way cross tabulations – regression – dummy variables and interaction effects.

Unit 4: Multivariate data analysis using SPSS – basics data management – importing data – recoding variables – creating new variables using compute command –

selecting and weighting cases – univariate analysis – cross tabulations – multiple regression analysis – LSDV regression and interaction effects.

Unit 5: Working with E-views – creating work file and importing data – creating new series – running simple statistical and econometric tools using E-views.

Books for Reference:

1. David P. Doane and Lori E. Seward: Applied Statistics in Business and Economics, Tata McGraw Hill.
2. Kultar Singh: Quantitative Social Research Methods, Sage.
3. STATA Version 8.0; Base Reference Manuals, Volume 1-4.
4. P.K.Viswanathan: Business Statistics: An Applied Orientation, Pearson.
5. Web Resources: http://www.sabine.k12.la.us/class/excel_resources.htm.

UOM S***	Soft Skill	2	University
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Eco C 205	Theory of Financial Economics	4	Faculty
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Unit 1: Decision under uncertainty – state preference approach – expected utility approach – behavioral alternatives to the EUA.

Unit 2: Mean-variance model – concepts – portfolio frontiers – two risky assets – many risky assets – optimal portfolio selection.

Unit 3: Capital asset pricing model – assumptions – asset – market equilibrium – characteristics line and the market model – security market line – risk premium and diversification.

Unit 4: Arbitrage – uncertain world – state prices and risk – neutral valuation – factor model – arbitrage pricing theory.

Unit 5: Inter-temporal choice and the equity premium puzzle – consumption and investment in a two period with certainty – lifetime portfolio selection – inter-temporal capital asset pricing models.

Books for Reference:

1. Roy E.Baiky: The Economics of Financial Markets, Cambridge University Press.
2. Jaksza Cvitanie and Zapatiro Fernando: Introduction to the Economics and Mathematics of Financial Markets, MIT Press.

Eco C 206	Micro Economics – II	4	T.Lakshmanasamy
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Unit 1: Marginalist approach – critique of neo-classical theory of firm – marginalist controversy – modern markets – alternative objectives of firm – market structure – classification of markets – pricing rules – equilibrium and disequilibrium analysis.

Department of Econometrics

- Unit 2:** Competitive market – equilibrium of a firm – short and long run analysis – monopoly – price discrimination – inefficiency and regulation of monopoly – monopolistic competition – product differentiation.
- Unit 3:** Oligopoly – rivalry and strategic behaviour – reaction functions – Cournot and Stackleberg equilibrium – kinky demand curve – cartels, mergers and takeovers – cooperative and non-cooperative behaviour – bargaining – game theoretic solutions.
- Unit 4:** Input markets – marginal productivity theory and distribution of income – competitive markets – factor market imperfections – monopoly – monopsony – exploitation – bilateral monopoly – Euler’s theorem – Clark-Wicksteed theorem.
- Unit 5:** Theory of general equilibrium – pure exchange economy – Pareto optimality – Walrasian equilibrium – welfare analysis.

Books for Reference:

1. J.M. Henderson and R.E. Quandt: Micro Economic Theory, Tata McGraw-Hill.
2. Hal R. Varian: Intermediate Micro Economics, East West Press.
3. A. Koutsoyiannis: Modern Microeconomics, Macmillan.

Eco C 207	Macro Economics	4	P.Mahendra Varman
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- Unit 1:** Basic concepts in macroeconomics – stocks and flows – static and dynamic equilibrium – national income concepts – circular flow of income – different forms of national income accounting.
- Unit 2 :** Product market – classical theory of output and employment – Keynesian theory of income determination – aggregate demand and aggregate supply – closed economy model – open economy model – role of multipliers – static vs dynamic multipliers – consumption and investment functions – income consumption relationship – marginal efficiency of capital and investment.
- Unit 3:** Money market – demand for money – classical approach to demand for money – quantity theory approach – Cambridge quantity theory – Keynes liquidity preference approach – aggregate demand for money – derivation of LM curve – theory of money supply – high powered money and money multiplier.
- Unit 4:** Integration of product and money markets – interdependence of product and money market – derivation of IS and LM curves – IS-LM model in closed economy – IS-LM model in open economy – multiplier and relationship with IS-LM model – effectiveness of fiscal and monetary policies on general equilibrium.
- Unit 5:** Foreign exchange and balance of payment –foreign exchange – exchange rate determination – floating exchange market – fixed exchange rate – controversies of free and fixed exchange rate markets - balance of payments – disequilibrium in balance of payments – causes and kinds – automatic adjustment in BOP – adjustments by policy measures – expenditure changing and expenditure switching policies – monetary approach to BOP adjustment.

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Books for Reference:

1. R.Dornbusch, S.Fischer.and R.Startz: Macroeconomics, Tata McGraw Hill.
2. E.Shapiro: Macroeconomic Analysis, Galgotia Publications.
3. Gregory N.Mankiw: Macroeconomics, Macmillan.
4. D.N.Dwivedi: Macroeconomics – Theory and Policy, McGraw Hill.
5. G.Ackley: Macroeconomics – Theory and Policy, Collier Macmillan.

Eco C 208	Financial Accounting	4	Faculty
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- Unit 1:** Introduction to accounting – basic accounting terms – basis of accounting – accounting principles – accounting standards – double entry system and accounting equation.
- Unit 2:** Journal and subdivisions – posting and balancing – cash book – bank reconciliation statement – trial balance and errors – capital reserve and reserves – asset accounting.
- Unit 3:** Financial statement – with and without adjustments – financial statements of for profit and not-for profit organisations.
- Unit 4:** Accounting for shares and debentures – depreciation, provisions and reserves – hire purchase and installments.
- Unit 5:** Financial statement and annual report – cash flow statement – financial statement analysis.

Books for Reference:

1. Shantosh A. Dash, Sudharshan Sahu and Bal K.Ranjan: A New Approach to Financial Accounting, S. Chand, Delhi.
2. P.C.Tulsian and Bharat Tulsian: Tulsian’s Financial Accounting for B.Com, S. Chand, Delhi.

Eco E 204	Basic Econometrics	3	D.Sathiyavan
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- Unit 1:** Econometrics – definitions – scope – methodology – types.
- Unit 2:** Two variable regression model – assumptions – method of least squares – properties – BLUE – R-square – maximum likelihood method – testing of hypotheses using point and interval estimates – forecasting – solving problems using SPSS and STATA.
- Unit 3:** Nonlinear relationships – transformation of variables – functional forms – three variable regression model – applications using SPSS and STATA.
- Unit 4:** General linear model (matrix approach) – specification – OLS estimators – testing significance of individual and overall regression coefficients – restricted least squares – structural regression models – dummy variables – problems and application using STATA.
- Unit 5:** Violation of classical assumptions – multicollinearity – autocorrelation – heteroscedasticity – problems – causes – consequences – remedial measures – model specification and diagnostic testing.

Books for Reference:

1. Damodar N. Gujarathi: Basic Econometrics, New Delhi: Tata McGraw Hill.
2. J. Johnston: Econometric Methods, McGraw Hill.
3. STATA Version 8.0: User's Guide, Texas: Stata Press.

Eco E 205	Development and Planning	3	R. Mariappan
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- Unit 1:** Economic growth and development – problem of development – causes of underdevelopment – measures of growth and development – development issues – development strategies – examples.
- Unit 2:** Early growth models – Harrod-Domar model – Neoclassical Solow model – technological change – exogenous growth – convergence – golden rule – growth accounting approach – residual approach – total factor productivity – augmented Solow model.
- Unit 3:** Unlimited growth – increasing returns – endogenous growth – innovations – learning by doing – positive spillovers – modern concept of capital – factor mobility and growth – governments and markets – public-private partnership – social issues – health and education in development.
- Unit 4:** Endogenous growth models – growth engines – knowledge capital – human capital – public utilities and infrastructure – R&D – trade – social capital – formal and informal institutions.
- Unit 5:** Modern development issues – cost-benefit analysis – planning and development – Indian plan models.

Books for Reference:

1. Robert J. Barro and Xavier Sala-i-Martin: Economic Growth.
2. P. Aghion and S. Durlauf: Handbook of Economic Growth.
3. Kaushik Basu: The Less Developed Economy.
4. Debraj Ray: Development Economics.

Eco E 206	Database for Economic Analysis	E	P.Mahendra Varman
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- Unit 1:** Census – history of population census – demographic indicators – definitions – schedules – dissemination – database – types – other data sets from census – sample registration system - economic, education, and agricultural censuses.
- Unit 2:** National income accounting – base year – methods of estimation – types of reporting – BoP and NI – SDP – district income.
- Unit 3:** NSSO – sample – large and small samples – rounds – reports – ASI – coverage – definition of terms – reports – price and wage statistics – socioeconomic statistics – NFHS – district handbooks.
- Unit 4:** RBI – balance sheet approach – banking statistics – money supply – foreign exchange reserve – exchange rate – stock market statistics

Course List & Syllabus

Unit 5: International data – World bank, IMF, ILO, WTO, UNCTAD, UN and other international agency data – World Value Surveys – Gallop Poll.

Books for Reference:

- Websites and reports of respective ministries and organizations, like Directorate of Census Operations, CSO, NSSO of GOI, SEBI, RBI. Reports of Statistics Departments in State Governments. World organisations.

UOM S***	Soft Skill	2	University
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UOM ****	Internship	2	Department
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The Internship is for 2 credits for a duration of 4-6 weeks during the summer vacation (May-June) of the first year to be carried out in an organization. Internship is intended to gain practical knowledge related to economic concepts and econometric applications. The students are expected to learn how organizations in practice apply economic concepts and econometric techniques in their operations. The students should submit their Internship report along with the nature of work done during the Internship and the certificate from the organization where the Internship was carried out. The candidates should also present their Internship report in the seminar before the Department faculty which will evaluate the Internship work.

Eco C 209	Pricing of Financial Instruments	4	Faculty
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- Unit 1:** Risk and return – measures – expected value – time value of money – future – present – annuity – intra-year compounding.
- Unit 2:** Financial statements – GAAP – financial ratios – standardised financial statement – applications.
- Unit 3:** Bond prices – yield – yield curve – risk – rating of bonds – determinants of interest rate – convertible bonds.
- Unit 4:** Equity valuation – balance sheet valuation – dividend discount model – free cash flow model – earnings multiplier approach – price ratio – sum of parts method – equity portfolio management.
- Unit 5:** Company analysis – strategy analysis – accounting analysis – financial analysis – intrinsic values – technical analysis – technical indicators.

Books for Reference:

- Prasanna Chandra: Investment Analysis & Portfolio Management, Tata McGraw Hill.

Course List & Syllabus

Eco C 210	Corporate Finance	4	Faculty
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- Unit 1:** Long term financing – common stock – long term debt – preferred stock – capital structure – maximising firm value vs maximising stockholder interests – financial vs maximising stockholder interests – financial leverage and firm value – return to equity holder and leverage – taxes.
- Unit 2:** Limits to the use of debt – cost of financial distress – direct costs – indirect costs – reduce cost of debt – tax effects and financial distress costs – agency cost of equity – pecking – order theory – growth and debt – equity ratio.
- Unit 3:** Valuation and capital budgeting for leveraged firm – flow to equity approach – weighted average cost of capital – capital budgeting when discount rate must be estimated – beta and leverage.
- Unit 4:** Dividend policy – types of dividend – taxes, issuance cost and dividend – repurchase of stock – real world factors for dividend policy.
- Unit 5:** Long term finance stocks – debt – leasing finance – lease valuation – lease cash flow – reason for lease financing.

Books Reference:

1. Stephen A.Ross, Randolph W.Westerfi and Brad D.Jordan: Fundamentals of Corporate Finance, McGraw Hill.
2. Pierre Vernimmen: Corporate Finance – Theory and Practice, John Wiley & Sons.

Eco C 211	Public Finance	4	T.Lakshmanasamy
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- Unit 1:** Role of government – public goods and externalities – private property and law – imperfect market and regulation – welfare state and redistribution – role of state in economic growth – public finance and public sector economics.
- Unit 2:** Principles of taxation – tax incidence – taxation and efficiency – optimal taxation – taxation of income and wealth – taxation of consumption and trade – taxation and environment – tax incentives, compliance and enforcement – Trends in Indian tax revenue.
- Unit 3:** Theories of public expenditure – measuring size of public sector – public expenditure and economic growth and development – composition of public expenditure and welfare state – public expenditure in India – trends and composition – pattern of financing deficit – FRBM – FRL – issues in union financial transfers.
- Unit 4:** Fiscal policy – process of budgeting in India –classification of budgets trends – evaluation systems – types of deficits – fiscal policy – indicators — taxation – centre, state and local – public debt and management.
- Unit 5 -** Fiscal federalism in India – theories of fiscal federalism – vertical and horizontal fiscal imbalances in India – Inter-governmental financial transfers in India – political economy of Indian fiscal federalism.

Books for Reference:

1. R.A.Musgrave and P.Musgrave: Theory of Public Finance.
2. Joseph E Stiglitz: Economics of the Public Sector.
3. Sudipto Mundle: Public Finance: Policy Issues for India, OUP.
4. C.Rangrajan and D.K.Srivastava: Federalism and Fiscal Transfers in India, OUP.
5. EPW and Journal articles.

Eco C 212	Banking and Insurance	4	Faculty
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- Unit 1:** Banks – definition-process of credit creation – reserve requirements – banking regulation act – role of RBI – type of banks – PSU banks – private and foreign banks –NABARD and rural banks – nationalisation of banks – expansion of branches and social role of banks.
- Unit 2:** Priority sector lending – other lending – base rate and prime lending rate – deposit mobilisation – composition of deposits and lending – consortium of banks – NPA – issues and remedies.
- Unit 3:** Narasimhan committee of banking reforms – changes in banking regulation – deregulation of interest rates – capital adequacy and BASEL norms – governance issues.
- Unit 4:** Insurance – basic issues – definition of insurance – risk pooling and risk transfer – economic and legal perspectives –,social vs private insurance – life vs non-life insurance – classification of life, health and general insurance policies.
- Unit 5:** Expected utility and demand for insurance – moral hazard and insurance demand – concept of risk management – essentials of risk management – elements of risk management – risk assessment – risk control and risk financing – worldwide risk sharing – concept of reinsurance – fundamentals of reinsurance – types of reinsurers – reinsurance distribution systems – reinsurance markets in developing countries.

Books for Reference:

1. D.L.Bickelhaupt: General Insurance, Irwin Inc., Burr Ridge, Ill.
2. K.Black, K. Jr. and H.D. Skipper Jr.: Life and Health Insurance, Prentice Hall.
3. Nityananda V. Sharma: Banking and Financial System, Cambridge Uni. Press .

Eco E 207	Econometric Applications to Finance	3	D.Sathiyavan
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- Unit 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 .

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Unit 2: Tools of modern time series analysis – stochastic and stationary process – tests of stationary – trend vs difference stationary process – Dickey-Fuller and augmented Dickey-Fuller tests – spurious regression and co-integration of time series – Engle-Granger test – CRDW test – error correction mechanism.

Unit 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 – economic applications.

Unit 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 – applications in finance.

Unit 5: Modeling 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 – applications in finance.

Books for Reference:

1. D.N.Gujarati and Sangeetha: Basic Econometrics, Tata McGraw-Hill.
2. Chris Brooks: Introductory Econometrics for Finance, Cambridge University Press.
3. T.M.J.A. Cooray: Applied Time Series – Analysis and Forecasting, Narosa Publications.

Eco E 208	Industrial Economics	3	Faculty
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Unit 1: Firm and organisation – Hoffman’s hypothesis of market economies – Simon Kuznet’s concept of secular changes in industrial development – Chenery’s patterns of industrial change – theories of industrial location – Weber and Sargent Florence – product differentiation – market concentration – economies of scale – market structure – diversification of the firm, size and growth, profitability, productivity, efficiency and capacity utilisation of firm – theories of product pricing – pricing of public utilities.

Unit 2: Industrialisation in India – trends and pattern – public and private sectors – industrial growth in India – large, medium and small scale industries – capital and consumer goods industries – industrial policy – public-private partnership – exports and imports – issues in industry – productivity – concentration, employment and labour – social security – technology – industrial relations – exit policy – industrial finance – sickness – trade unions – disputes – regulation – manufacturing policies.

Unit 3: Institutional finance – ICICI, EXIM Bank, NHB, IDBI, IFCI, IIBI, SFCs, NIDC, SIDBI, SIDCS, UTI, LIC, General Insurance Corporations, commercial banks – international finance – FDI – joint ventures – domestic market resources.

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Unit 4: Service sector in India – growth – pattern – share in employment, trade, exports – impact of ICT on industrialisation.

Unit 5: International organisations and industry – ILO – WTO – bilateral and multilateral trade agreements – MNCs – impact of globalisation, privatisation and liberalisation.

Books for Reference:

1. R.R.Barthwal: Industrial Economics, Wiley Eastern Ltd.
2. F.Churunilam: Industrial Economics: Indian Perspective, Himalaya.
3. S.C.Kuchhal: Industrial Economy of India, Chaitanya Publishing House.
4. Reserve Bank of India: Report on Currency and Finance.

Eco E 209	Advances in Economic Theory	3	T.Lakshmanasamy
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Unit 1: Consumer theory – non-market production – Lancaster’s characteristics approach – Becker’s home production model – Lewis’s time allocation model – Hirschleiffer’s analysis of Uncertainty – Akerlof’s information asymmetry and quality demand model.

Unit 2: Becker’s human capital theory – Mincer’s post schooling investment model – Labour supply models – valuation of time and leisure – value of life – Sen’s welfare approach – capabilities and functioning.

Unit 3: Public goods – Buchanan’s public choice approach – Stiglitz private use of public interest – club goods – externalities and social returns – spillovers and increasing returns.

Unit 4: Open economy macro models – disequilibrium analysis – environment and climate change – global impacts.

Unit 5: Game theory – Nash equilibrium – sequential equilibrium – signaling and sorting.

Books for Reference:

1. Handbook of Economics series books, North Holland Elsevier.

UOM S***	Soft Skill	2	University
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Eco C 213	International Finance	4	Faculty
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Unit 1: Exchange rate determination – purchasing power parity – Balassa and Samuelson model – monetary models of exchange rate determination – flexible price monetary model – Dornbusch sticky price model – Frankel real interest rate differential model.

Unit 2: Portfolio balance model – risk premium – derivation of asset demand funds – equilibrium – forex operation effect – fixed, floating & managed exchange rates.

Department of Econometrics

Unit 3: International monetary system – Brettonwoods system – post-Brettonwoods era – Euro currency and euro bounds market.

Unit 4: currency derivatives – exchange traded futures and options contract pricing – Garman and Kohlhagen options pricing formula – swaps market.

Unit 5: International debt crisis – characteristics of MICs – types of capital flows – origin and emergence of debt crisis – management of debt crisis.

Books for Reference:

1. Keth Pilbean (2006) International Finance, 3rd edition, Palgrave Macmillan.
2. Piet Sercu (2009) International Finance – Putting Theory into Practice, Princeton.

Eco C 214	Financial Derivatives	4	Faculty
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Unit 1: Introduction – forward and futures markets – cost of carry model for futures and forwards – risk management – using futures and forwards – how and why do firms hedge?

Unit 2: Options and their payoffs – option markets – risk neutral valuation – binomial option pricing model.

Unit 3: Black-Scholes option pricing model – uses of options – simple option strategies – the Greeks of the Black-Scholes model.

Unit 4: Warrants and convertible bonds – interest rate and currency swaps – caps floors and swaption.

Unit 5: Derivatives accounting – corporate risk management – risk management in financial institutions.

Books for Reference:

1. Jayanth Varma: Derivatives and Risk Management, Tata McGraw Hill.
2. N.R.Parasuraman: Fundamentals of Financial Derivatives, Wiley India Limited.
3. Susan Thomas: Derivatives Markets in India, Tata McGraw Hill.

Eco C 215	Behavioural Finance	4	Faculty
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Unit 1: Standard financial theories and criticism – efficient markets hypothesis (EMH) – evidence against EMH – theoretical foundations of efficient markets – limits to arbitrage – what hampers arbitrage exploitation? – BF model of an asset market – DeLong, Shleifer, Summers, Waldmann Model (DSSW model) – current BF research on financial markets.

Unit 2: Behavioural finance – Kahnemenn and Tversky prospect theory – loss aversion – understanding of frame dependence – frame and accessibility – framing outcomes – framing and weighting of events – framing consequences – decision-making under risk – narrow framing – framing and mental accounting – framing and insurance decisions.

Department of Econometrics

Unit 3: Heuristics and biases in investment behavior – familiarity and investment – diversification heuristics – 1/n buffet rule – representativeness and investment – path dependence.

Unit 4: Financial anomalies – January effect and small firm effect – winner’s curse – equity premium puzzle – value premium puzzle.

Unit 5: Behavioural corporate finance – agency problem – performance of investment managers – IPOs – corporate social responsibility.

Books for Reference:

1. Lucy Ackert and Richard Deaves: Behavioral Finance: Psychology, Decision Making, and Markets, Cengage Learning, USA.
2. William Forbes: Behavioural Finance, Wiley, London.

Eco E 210	International Economics	3	Faculty
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Unit 1: Theories of international trade – Adam Smith – David Ricardo – Heckscher Ohlin – factor accumulation – Rybczynski theorem – technical progress and international trade.

Unit 2: International trade policy – partial equilibrium analysis – general equilibrium analysis – distortions in domestic markets – imperfect competition.

Unit 3: Protection – types – agreements – theory of customs – import substitutions vs export promotion.

Unit 4: BOP – market for foreign exchange – foreign trade and national income – capital movement.

Unit 5: Exchange rate – determination of floating exchange rate – macro economics policy and exchange rate – exchange rate and policy coordination.

Books for Reference:

1. Carbaugh: International Economics, Thompson South – Western, New Delhi.
2. Paul Krugman and Maurice Obstfeld: International Economics: Theory and Policy, Pearson-Addison Wesley.
3. Bo Sodersten and Reed Geoffrey: International Economics, Macmillan Press Ltd.

Eco E 211	Indian Economic Issue	3	Faculty
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Unit 1: Economic and human development issues – non-economic factors in economic development – natural resource allocation issues – human and gender empowerment issues – education and health issues – environment and climate change issues – setting standards.

Unit 2 : Basic issues in agriculture sector – agricultural costs and pricing – land holding and productivity issues – irrigation, fertilizer, price, power subsidy issues – WTO and Indian agriculture – agricultural growth concerns – conditions and problems of agricultural laborers – measures for improvement.

Department of Econometrics

Unit 3: Issues in industrial sector – industrial production and productivity issues – problems of industrial development – performance issues – sick industries – industrial policies – industrial finance – MNCs and FDI issues – global standards and impacts – subsidies and taxation issues.

Unit 4: Issues in service sector – growth and contribution of service sector in India – service sector employment growth – ICT development in India – IT and ITES industry – sustainability of service led growth in India.

Unit 5: Poverty and income distribution in India – concept of poverty line – incidence of poverty and multi-dimensional poverty – poverty alleviation programmes and strategies adopted in India – patterns of income distribution in India – causes of income inequalities – government policy measures to bridge gap – issues in employment programmes.

Books for Reference:

1. R. Dutt and K.P.M. Sundharm: Indian Economy, S. Chand & Co.
2. S.K.Misra and V.K.Puri: Indian Economy, Himalaya Publication House.
3. S.K.Misra and V.K.Puri: Economics of Development and Planning, Himalaya.
4. Debraj Ray: Development Economics.
5. Government of India: Economic Surveys.

Eco E 212	Industrial Organisation	3	Faculty
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Unit 1: Imperfect competition and market distortions – pricing – rent seeking – costs – strategies of firms – product quality – asymmetric information – discrimination – advertisement.

Unit 2: Monopoly and regulation – barriers – Oligopoly models – Cournot, Bertrand, Hotelling, Stackelberg, Spencer-Dixit models – collusion – price wars – quality competition – price rigidity.

Unit 3: Vertical control – product differentiation – spatial competition – dynamic price competition – tacit collusion – cartel – entry costs – accommodation – merger – acquisition – exit – reputation – limit pricing – Milgrom-Roberts model – predation.

Unit 4: Contestable markets – R&D – innovation – patent networks – networks and standards – joint ventures.

Unit 5: Concentration and market power – structure, conduct and performance theory – persistence of long run profits.

Books for Reference:

1. Jean Tirole: The Theory of Industrial Organisation, Prentice Hall.
2. Luis Cabral: Introduction to Industrial Organisation, MIT Press.
3. Dennis W.Carlton and Jeffrey M. Perloff: Modern Industrial Organisation, Cambridge University Press.

UOM S***	Soft Skill	2	University
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