

REVISED SYLLABUS

FOR

M.A. IN ANALYTICAL AND APPLIED ECONOMICS

Admission Batch 2023-2024

(As approved by Board of Studies dated 20.10.2023)

CHOICE BASED CREDIT SYSTEM (CBCS)



**U.N. (AUTONOMOUS) COLLEGE OF SCIENCE AND TECHNOLOGY
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**Syllabus approved by Board of Studies,
Academic Council and Governing Body of
Udaya Nath (Autonomous) College of
Science and Technology,
Prachi Jnanapitha, Adaspur, Cuttack.**

COURSE STRUCTURE FOR M.A. IN ANALYTICAL AND APPLIED ECONOMICS

SEMESTER-I			
Nature of Paper	Paper Code	Nomenclature of the Paper	Credit
Hard Core	HCE 101	Microeconomic Analysis I	5
	HCE 102	Macroeconomic Analysis I	5
	HCE 103	Quantitative Methods I	5
	HCE 104	Public Economics	5
	HCE 105	Indian Economy	5
SEMESTER-II			
Hard Core	HCE 201	Microeconomic Analysis II	5
	HCE 202	Macroeconomic Analysis II	5
	HCE 203	Quantitative Methods II	5
	HCE 204	Economics of Growth and Development	5
Core Elective (Any one)	CEE 201	Managerial Economics	5
	CEE 202	History of Economic Thought	5
	CEE 203	Economics of Gender and Development	5
SEMESTER-III			
Hard Core	HCE 301	Basic Econometrics	5
Core Elective (Any one)	CEE 301	International Economics	5
	CEE 302	Industrial Economics	5
	CEE 303	Banking	5
Allied Elective (Any one)	AEE 301	Agricultural Economics	5
	AEE 302	Economics of Education	5
	AEE 303	Economics of Microfinance	5
Free Elective (Any two)	FEE 301	International Finance	5
	FEE 302	Computational Economics	5
	FEE 303	Financial Institutions and Market	5
	FEE 304	Entrepreneurship and Skill Development	5
	FEE 305	Labour Economics	5
SEMESTER-IV			
Core Elective (Any two)	CEE 401	Economics of Environment	5
	CEE 402	Dissertation/ Research Methodology	5
	CEE 403	Demography	5
	CEE 404	Rural Economics	5
	CEE 405	Economics of Infrastructure	5
Allied Elective (Any three)	AEE 401	Mathematical Economics	5
	AEE 402	Advanced Econometrics	5
	AEE 403	Health Economics	5
	AEE 404	Financial Inclusion and Economic Development	5
	AEE 405	Financial Economics	5
	AEE 406	Economics of Discrimination	5
	AEE 407	Monetary Economics	5
	AEE 408	Environmental Impact Assessment	5

TOTAL CREDIT 100

SEMESTER-I

Paper: HCE 101 Microeconomic Analysis I

FM=100, TE=70, MS=30

Module I:

Theory of Demand: Utility function and its properties; Ordinary and compensated demand functions: Definition, Derivation and Properties; Lexicographic ordering; Slutsky Theorem; Revealed Preference Theory (RPT): Assumptions, Derivation of demand function and indifference curve (diagrammatic approach), Axioms of revealed preference, Substitution effect.

Module II:

Consumer's Choice under Risk and Uncertainty: $N - M$ utility index and the axioms, Expected utility; Utility-expenditure duality; Indirect utility function; Inter-temporal consumption; Consumer's surplus: Marshallian approach, Hicksian rehabilitation of consumer's surplus.

Module III:

The Theory of the Firm: The concept of production function; Technology and production function; Short-run and long-run production functions; Non-homogeneous and homogeneous production functions and their properties, Elasticity of substitution, C-D and CES production functions and their properties, Multiproduct firm and its equilibrium.

Module IV:

Theories of Cost and Pricing: Various types of short-run and long-run cost; Envelope curve; Hall and Hitch full-cost pricing, Average-cost pricing and Marginal-cost pricing theories; Limit pricing theory of Bain.

Module V:

General Equilibrium Theory: The Walrasian system; Existence, stability and uniqueness of equilibrium; Two-factor-Two-commodity-Two-consumer ($2 \times 2 \times 2$) general equilibrium system: Assumptions and Static properties.

Basic Reading List:

1. Henderson, J. M. and Quandt, R.E. (1980), Microeconomic Theory– A Mathematical Approach, Mc Graw Hill Co.
2. Varian, H. R. (1992), Microeconomic Analysis, WW Norton & Co., New York.
3. Gravelle, H. and Rees, R. (1992), Microeconomics, Pearson Education, U.K.
4. Maddala, G.S. and Miller, E (2004), Microeconomics: Theory and Application, Tata Mc Graw Hill, New Delhi.
5. Koutsoyiannis, A. (1979), Modern Microeconomics, International Edition.
6. Snyder C. and W.Nicholson (2008), Fundamentals of Microeconomics, Cengage Learning, New Delhi.

Paper: HCE 102
Macroeconomic Analysis I

FM=100, TE=70, MS=30

Module I:

Circular flow of income in two, three and four-sector economy; National income and the related concepts; Different forms of national income accounts– Social accounting, Input-output accounting, Flow of funds accounting and Balance of payments accounting.

Module II:

Theory of income determination: Classical and Keynes' approaches; Consumption function; Keynes' psychological law of consumption- implications of the law; Short-run and long-run consumption functions; Empirical evidence on consumption function; Income-consumption relationship – absolute income, relative income, permanent income, life cycle income hypotheses.

Module III:

Investment behaviour, Marginal efficiency of capital and marginal efficiency of investment in long-run and short-run; Accelerator and investment behaviour, Impact of inflation on investment; Influence of policy measures on investment-some empirical evidence.

Module IV:

Financial intermediation: A mechanistic model of bank deposit determination; A behavioral model of money supply determination; A demand-determined money supply process; RBI approach to money supply; Money supply in an open economy; Control of money supply- quantitative and selective measures; Instruments of monetary policy- PLR, SLR, CRR and Repo Rates.

Module V:

Classical approach to demand for money: Quantity theory approach; Fisher's equation of exchange; Cambridge quantity theory; Keynes's liquidity preference approach; Derivation of LM curve; Post-Keynesian approaches to demand for money: Pigou-Patinkin Real Balance Effect; Approaches of Baumol and Tobin; Friedman and the modern quantity theory.

Basic Reading List:

1. Macroeconomics: An Introduction to Keynesian-neoclassical Controversies: R. Levacic and A. Rebmann.
2. Macroeconomics: Dornbusch and Fischer
3. Macroeconomics: Theory and Policies: Richard, T. Froyen
4. Macroeconomic Analysis: E. Shapiro
5. Macroeconomics: N.G. Mankiw

Paper: HCE 103
Quantitative Methods I

FM=100, TE=70, MS=30

Module I:

Functions: Types of functions; Limit, Continuity and Derivatives; Rules of differentiation; Functions in economic theory- demand, supply, revenue, and cost functions; Elasticities; Multivariable functions- Production function; Partial derivatives; Total differential and total derivative; Derivative of an implicit function, Jacobean and functional dependence.

Module II:

Matrix: Types of matrices, Algebra of matrices- Transposition, Inversion, Rank of a matrix; Determinants and their properties; Solution to a system of equations; Vector space and linear independence of vectors; Eigen values and Eigen vectors; Introductory static open input-output analysis.

Module III:

Quadratic forms; Optimisation, Hessian and constrained optimisation, Bordered Hessian, Economic applications- Unconstrained profit maximisation, Constrained utility maximisation, Constrained output maximisation, Constrained cost minimisation; Linear programming – Degenerate vs. Non-degenerate linear programming problems (only definitions), Graphical solution of non-degenerate linear programming problems.

Module IV:

Integration – Rules of integration; Definite integral and its properties; Measurement of consumer's surplus and producer's surplus; Growth rates; Difference equations: First and second order difference equations; Domar's capital expansion model; Dynamic equilibrium with lagged adjustment (Cobweb phenomenon); Differential equations – Solution to first order linear differential equations, Dynamics of market price; Non-linear differential equations of first order and first degree.

Module V:

Game Theory: Concept of game, Types of games, Two-person zero-sum game, Nash equilibrium, Maxmin-minmax principles, Saddle point solution, Dominant strategy, Mixed strategies, Non-cooperative game - prisoner's dilemma, Cooperative game- price leadership.

Basic Reading List:

1. Chiang, A. C. (1986): Fundamental Methods of Mathematical Economics, McGraw Hill.
2. Gupta, S. C. (1993): Fundamental Methods of Applied Statistics, S. Chand & Sons.
3. Speigel, M. R. (1992): Theory & Problems of Statistics, McGraw Hill Book Co
4. Yamane, Taro (1975): Mathematics for Economists, Prentice Hall of India, New Delhi.
5. Mukherji and Guha (2011): Mathematical Methods and Economic Theory, Oxford University Press

Paper: HCE 104
Public Economics

FM=100, TE=70, MS=30

Module I:

Role of Government: Role of government and fiscal functions- allocation, distribution and stabilization branch; Private goods, public goods and merit goods; Market failure and its causes- imperfections, decreasing cost, externalities, public goods; Private and public mechanism for allocating resources; Problems for allocating resources; Problems of preference revelation and aggregation of preferences, voting systems; Arrow's impossibility theorem; An economic theory of democracy; Rent seeking and directly unproductive profit seeking (DUP) activities; Theory of club goods; Tiebout model.

Module II:

Public Revenue: Sources and classification of public revenue- tax and non-tax revenue, direct and indirect taxes; Effects of tax on production, distribution and economic activities; Principles of tax equity- Benefit principle of taxation- Ability to pay principle; Theory of optimal taxation; Efficiency of taxation- excess burden and deadweight loss; Incidence of taxation- incidence under perfect competition, incidence under monopoly, incidence of personal income tax.

Module III:

Public Expenditure: Growth of public expenditure, Wagner's law of increasing state activities; Wiseman-Peacock hypothesis; Colin Clark's Critical Limit Hypothesis; Effects of public expenditure on production, distribution and economic activities; Public sector pricing policy-average cost pricing and marginal cost pricing; Criteria for public investment- social cost-benefit analysis.

Module IV:

Public Debt and Budget: Sources of public borrowing, effects of public debt, burden of public debt- classical, Ricardian approaches, shifting of debt burden, intergenerational shifting, methods of debt redemption; Principles of debt management; Budget: basic concepts, balanced vs. unbalanced budget, budgetary deficits and their limitations, budget as an instrument of economic policy

Module V:

Fiscal Federalism: Principles of multi-unit finance; Fiscal federalism in India- Vertical and horizontal fiscal imbalances, Corrective measures; Constitutional provisions; Finance Commission, Devolution of resources and grants; Resource transfer from Union to States – Criteria for transfer of resources; Theory of Grants- matching versus non-matching grants, general versus earmarked grants; Transfer of resources from Union and States to local bodies- an overview.

Basic Reading List:

1. Cullis, J. & Jones, P. (2009): Public Finance and Public Choice. Oxford University Press.
2. Musgrave, R. A. and Musgrave, P. B. (2004): Public Finance in Theory and Practice. Fifth edition, TATA McGraw-Hill
3. Herber, B. P. (1967): Modern Public Finance. Richard D. Irwin, Homewood.
4. Stiglitz, J. E. (2000) Economics of the Public Sector. W W Norton.
5. Rangarajan, C. and D. K. Srivastava (2011) 'Federalism and Fiscal Transfers in India'. Oxford University Press, New Delhi.
6. James M Buchanan (1958). Public Principles of Public Debt: A. Defense and Restatement, R.D.Irwin.
7. Anthony Downs (1957), An Economic Theory of Democracy, Pearson.

Paper: HCE 105
Indian Economy

FM=100, TE=70, MS=30

Module I:

Growth and Economic Reforms I: Phase I (1951–65)- Takeoff under a liberal regime: Era of liberal trade and foreign investment policies, A restrictive industrial policy regime, Agriculture, Phase II (1965–81)- Socialism strikes with a vengeance: The political context, The crisis and failed liberalization episode, Strangulation of industry, Foreign trade, Factor market regulation- land and labour, Nationalization of banks, Agriculture, Insurance, Savings and Investment.

Module II:

Growth and Economic Reforms I: Phase III (1981–88) - Liberalization by stealth: Political context, Deregulation of Industry, Trade liberalization, and other Reforms. Phase III (1988 onwards) - Triumph of liberalization: Political context, Shifting of consensus, Growth and BOP crisis, New industrial policy, Trade liberalization.

Module III:

Major Economic Problems: Poverty- estimation – old and new methods, phase I and II – good intention but poor performance, phase III and IV – liberalising reforms and significant decline in poverty, expenditure growth - the NAS and NSS, farmers suicide; Inequality: forms, inequality at national level, regional inequality, urban – rural inequality; Unemployment: measurement, trends of employment, rural and urban, gender aspect of unemployment, jobless growth, green jobs and growth; Inflation: trend and pattern, inflation and growth debate, sources of inflationary pressure, food price inflation.

Module IV:

Sectoral Growth in India: Agricultural sector: performance, food security, input market, public investment in agriculture, agriculture and environment; Secondary Sector: output and employment pattern, productivity, privatization, regional aspects; Tertiary Sector: causes of the rapid growth of service sector and the problem and prospect of its sustainability, Education – infrastructure and outcome, Health – infrastructure and outcome.

Module V:

Fiscal and Monetary Policies in India: Fiscal Policy of India: fiscal consolidation in India, tax reforms, FRBM Act 2003; Monetary Policy: role of financial sector in economic growth, financial sector reforms, money and banking in pre- and post-1991 period, capital market.

Basic Reading List:

1. Panagariya, Arvind (2008): India: The Emerging Giant, Oxford University Press, New York
2. Acharya, S. and Mohan, R. (Eds.) (2010): India's Economy: Performance and Challenges, Oxford University Press, New Delhi.
3. Ahluwalia, I. J. and Little, I. M. D. (Eds.) (1998): India's Economic Reforms and Development: Essays for Manmohan Singh, Oxford University Press, New Delhi.
4. Rakshit, M. (2009): Macroeconomics of Post-reform India, Oxford University Press, New Delhi

SEMESTER-II

Paper: HCE 201 Microeconomic Analysis II

FM=100, TE=70, MS=30

Module I:

Price and output determination under monopoly; Price discrimination and dumping aspects; Bilateral monopoly; Monopolistic competition – product differentiation, selling cost and excess capacity; Critique of monopolistic competition; Effects of free entry and price competition.

Module II:

Non-collusive oligopoly models: Cournot, Bertrand, Stackelberg, Sweezy, Chamberlin; Collusive oligopoly models: Cartels, Price leadership and Basing Point Price Systems.

Module III:

Managerial and Behavioural Theories of the Firm: Baumol's sales revenue maximization model - a single product static model without and with advertisement; Marris' model of managerial enterprise; Williamson's model of managerial discretion; Behavioural model of Cyert and March.

Module IV:

Neo-classical Approach to Factor Pricing: Marginal productivity theory of distribution; Euler's approach to product exhaustion; Distribution theories in imperfect product and imperfect factor markets.

Module V:

Criteria of Social Welfare: Pareto-optimality criteria; Bergson-Samuelson Social Welfare Function; Kaldor-Hicks compensation criterion; Welfare maximization and perfect competition; Optimum welfare under market imperfections and externality.

Basic Reading List:

1. Henderson, J. M. and Quandt, R.E. (1980): Micro Economic Theory: A. Mathematical Approach, McGraw Hill Co.
2. Mankiw, (2006): Principles of Microeconomics, Cengage Learning India, New Delhi
3. Landsburg, S. E. (2008), Pricing, Cengage Learning India, New Delhi
4. Baumol, W. J. (1977): Economic Theory and Operations Analysis, Prentice – Hall of India, New Delhi.
5. Bilas, R, A. (1985), Microeconomic Theory, McGraw Hill.
6. Koutsoyiannis, A. (1979), Modern Microeconomics, International Edition.

Paper: HCE 202
Macroeconomic Analysis II

FM=100, TE=70, MS=30

Module I:

Keynesian views on interest; The IS-LM model; Shift in general equilibrium due to change in (i). investment and (ii). money supply; Extension of IS-LM model with government sector (government spending, taxation); Relative effectiveness of monetary and fiscal policies; Extension of IS-LM model with flexible wage (labour market) and flexible prices (goods market); Underemployment equilibrium- wage rigidity, inconsistency between saving and investment; Wage-price flexibility with Keynes effect and Pigou effect.

Module II:

Trade cycle and its different phases; Theories of trade cycle: Schumpeter, Kaldor, Samuelson, Hicks, Goodwin's model of trade cycle; Control of business cycle.

Module III:

Classical, Keynesian and Monetarist approaches to inflation; Structuralist theory of inflation; Philips curve analysis – short run and long run Philips curves; Samuelson and Solow on the natural rate of unemployment hypothesis; Tobin's modified Philips curve.

Module IV:

The New Classical Macroeconomics: Genesis, The new classical critique of micro foundations, The new classical approach to macroeconomics- The theory of real business cycles, Rational expectations and policy ineffectiveness, The Lucas critique.

Module V:

The Open Economy Macroeconomics: International monetary system- Exchange rate and market for foreign exchange; Current exchange rate system; Experience with floating exchange rates, Monetary and Fiscal Policy in the context of small open economy - The Mundell-Fleming model; Monetary and fiscal policy under imperfect and perfect capital mobility under fixed and floating exchange rates.

Basic Reading List:

1. Macroeconomics - An Introduction to Keynesian-Neo-Classical Controversies: R. Levacic and A Rebmann.
2. Macroeconomics: Dornbusch, Fisher
3. Macroeconomics: Theory and Policies: Richard, T. Froyen
4. Macroeconomics Analysis: E. Shapiro
5. Macroeconomics: N.G. Mankiw

Paper: HCE 203
Quantitative Methods II

FM=100, TE=70, MS=30

Module I:

Deterministic and non-deterministic experiments; Sample space; Addition rule and complementation rule, Conditional probability, Multiplication rule, Independence of events; Bayes' theorem on inverse probability and problems; Random variable and its probability distribution, probability mass function and probability density function, expectation and variance of a random variable, laws of expectation and variance.

Module II:

Theoretical probability distributions: Binomial, Poisson and Normal probability distributions and their properties; Poisson and normal distributions each as an approximation of binomial distribution, Joint, marginal and conditional probability distributions, independence of random variables, covariance, results on expectation and variance.

Module III:

Basic concepts of sampling, random and non-random sampling; simple random sampling, stratified random sampling and p.p.s. sampling; estimators and estimates, sampling distribution of an estimator; Small sample properties and asymptotic properties of a point estimator.

Module IV:

Interval estimation; Statistical hypothesis- null and alternative; Type I and Type II errors; power of a test; confidence intervals and hypothesis testing based on Z, t, Chi-square, F-distributions.

Module V:

Correlation and regression analysis; correlation coefficient and its properties, rank correlation co-efficient, concept of least-squares and the lines of regression; standard error of estimates; partial and multiple correlation and regression (applications only), methods of estimation of non-linear equations: parabolic, exponential, modified exponential, Gompertz and logistic relationships.

Basic Reading List:

1. Chiang, A. C. (1986): Fundamental Methods of Mathematical Economics, McGraw Hill.
2. Gupta, S. C. (1993): Fundamental Methods of Applied Statistics, S. Chand and Sons.
3. Spiegel, M.R. (1992): Theory and Problems of Statistics, McGraw Hill Book
4. Yamane, Taro (1975): Mathematics for Economists, Prentice Hall of India, New Delhi.
5. Mukherji and Guha (2011): Mathematical Methods and Economic Theory, Oxford University Press.

Paper: HCE 204
Economics of Growth and Development

FM=100, TE=70, MS=30

Module I:

Theories of Economic Growth: Neo-classical growth models of Solow and Meade; Joan Robinson's growth model; Cambridge criticism of neo-classical analysis of growth; Controversy on the measurement of capital.

Module II:

Growth Models of Kaldor and Pasinetti; Technological progress– embodied and disembodied; Optimal economic growth; Hicks-Harrod neutrality approach.

Module III:

Production function approach to economic growth; Total factor productivity; Growth accounting; Transitional dynamics; Convergence hypothesis; Golden rule of capital accumulation. .

Module IV:

Endogenous growth - the concept and assumptions, Intellectual capital, Role of learning, education and research, Optimal savings and Ramsay model, Two-sector growth model of Ujawa.

Module V:

Need for investment criteria in developing countries; Alternative investment criteria; Cost–Benefit analysis; Shadow prices; Project evaluation and UNIDO guidelines.

Basic Reading List:

1. Todaro, M. P. (1994): Economic Development, Longman Publishing, New York.
2. Acemoglu, D. (1995): Introduction to Modern Economic Growth, Princeton University Press.
3. Jones, C. I. (2001): Introduction to Economic Growth, W. W. Norton & Company, New York.
4. Thirlwal, A.P. (2003): Growth and Development: With special reference to Developing Economies, Palgrave MacMillan, New York.
5. Jones, H. G. (1984): Economic Growth, V. N. Reinhold Company, Ltd. England.
6. Barro, R. J. and Sala – I – Martin, X. (2004): Economic Growth, PHI, New Delhi.
7. Vanden – Burg, H. (2001): Economic Growth and Development, Mc Graw Hill, New York.

Paper: CEE 201
Managerial Economics

FM=100, TE=70, MS=30

Module I:

Nature and Scope of Managerial Economics: Definition; Managerial economics and economic theory; Managerial economics and decision science; Organisation of business firms: Types of business organisations- proprietorship, partnership, joint stock company, cooperatives; Case study method- Analysing a case, Usefulness of case study.

Module II:

Organisations and Objectives of Firm: Objectives of a business firm; Model of profit maximisation; Baumol's sales revenue maximisation model without and with advertisement, its dynamic version; Williamson's model; Marris model; Simon's satisficing model; Cyert and March's model; Measuring efficiency of a firm- profitability ratios, financial ratios, solvency ratio.

Module III:

Demand Estimation and Forecasting: Identification problem; Marketing research approaches- Regression analysis and its problems; Demand estimation; Demand forecasting- time-series analysis, smoothening techniques, barometric methods, econometric models (input-output forecasting).

Module IV:

Pricing Practices and Profit Analysis: Pricing practices- cost-oriented pricing, cost-plus pricing, peak-load pricing, pricing over the life-cycle of the product, penetration pricing; pricing of multiple products; price discrimination; dumping; transfer pricing; Profit analysis- nature and functions of profit, business versus economic profit, theories of profit- residual claimant theory, wage fund theory, dynamic surplus theory, innovation theory; profit policy; break-even analysis and profit measurement, profit forecasting.

Module V:

Capital Budgeting, Regulation and Risk Analysis: Capital budgeting- meaning and importance, capital budgeting process, capital budgeting decisions, factors influencing investment decision, determining the size of capital budget, methods used for investment decisions- cost-benefit analysis, capital project evaluation and techniques for investment appraisal, sources of fund for long-term financing, measurement of cost; Regulation and risk analysis- role of the government, risk and uncertainty in managerial decision-making, long-run investment decisions.

Basic Reading List:

1. Paul G Keat and Philip K.Y. Young (2006): Managerial Economics- Economic Tools for Today's Decision Makers, Prentice Hall.
2. P.L.Mehta (2013): Managerial Economics: Analysis, Problems and Cases, Sultan Chand and Sons, New Delhi.
3. Craig H Petersen and W. Cris Lewis (1994): Managerial Economics, Maxwell Macmillan International Editions.
4. William F Samuelson and Stephen G. Marks (2015): Managerial Economics, John Wiley and Sons, Inc., New Jersey.
5. S.Shankaran (2012): Managerial Economics, Margham Publications, Madras.
6. Christopher R Thomas and S. Charles Maurice (2012): Managerial Economics, McGraw-Hill Irwin, Boston.

Paper: CEE 202
History of Economic Thought

FM=100, TE=70, MS=30

Module I:

Mercantilism and Physiocracy: Mercantilism- historical background, mercantilism doctrine and devices, economic ideas of Thomas Mun; Physiocracy- natural order, primacy of agriculture, social classes, circulation of wealth- the Tableau Economique.

Module II:

The Classical and the Classical Tradition: The Classical School: Adam Smith- division of labour, theory of value and distribution, economic growth and international trade, David Ricardo- theory of value and distribution, foreign trade, economic development, theory of rent; Thomas Malthus- theory of population, theory of glut; The Classical Tradition: J.B.Say- law of markets, Nassau Senior- economic ideas, J.S.Mill- laissez-faire and protection.

Module III:

German Historical School, the Rise of Socialist Thought and the Austrian School: German Historical School: Friedrich List and his economic ideas; Rise of Socialist Thought: Sismondi and his economic ideas, Karl Marx- dialectical materialism, theory of value and surplus value, theory of capitalist competition, assessment of Marxism; Austrian School- Jevons, Menger, Wieser and Baum-Bawerk- theory of capital and distribution.

Module IV:

Neo-classical School, Mathematical School and Keynes and Keynesians: Neo-classical School: Marshall- consumer surplus, diminishing returns, equilibrium price and normal price, increasing and decreasing cost industries; Mathematical School: Leon Walras and the general equilibrium model, Marshall-Walras divide; Keynes: theory of effective demand, marginal efficiency of capital and investment, role of fiscal policy, multiplier and business cycle; Keynesians: Joan Robinson and Hicks.

Module V:

Indian Economic Thought: Kautilya Arthashastra- basic tenets; Naroji- poverty, public debt, drain theory, taxation; Ranade- economic development, poverty; Gokhale- public expenditure, financial reforms; Mohandas Karamchand Gandhi- decentralisation, gram swaraj, trusteeship, prohibition, sarvodaya.

Basic Reading List:

1. Bhabatosh Datta (1978): Indian Economic Thought, Tata McGraw-Hill, New Delhi.
2. R. Shamasastri (1967): Kautilya's Arthashastra, Mysore Printing and Publishing House, Mysore. Eric Roll (1938): A History of Economic Thought, Rupa and Co, New Delhi.
3. H.W. Spiegel (1952): Development of Economic Thought, John Wiley and Sons.
4. Lewis H. Haney (1949): History of Economic Thought, Macmillan.
5. Mark Blaug (1968): Economic Theory in Retrospect, Cambridge University Press.
6. J.A. Schumpeter (1954): History of Economic Analysis, Allen and Unwin.
7. Alexander Gray (1931): The Development of Economic Doctrine, Longmans, Green and Co.
8. Gide and Rist (1952): A History of Economic Doctrines, Heath.

Paper: CEE 203
Economics of Gender and Development

FM=100, TE=70, MS=30

Module I:

Gender and development: Concepts, Patriarchy, Caste, Kinship and implications on gender, Gender in mainstream economics- WID, WAD and GAD approach in development- Basic Needs and Capability Approach. HDI, GDI and GEM, Empowerment of women: concept and implications.

Module II:

Demography and female population: Age structure and sex ratio, Mortality and fertility rates and declining sex ratio with special reference to India. Gender in ownership and access to resources, intra household distribution and decision-making; Property rights and land rights for women and implications, Historical trends, land reforms and current provisions; Women and environment: WED and Eco feminism, Climate change, women and sustainable development

Module III:

Women and work: Concepts and valuation, visible and invisible, productive and unproductive, paid and unpaid work; Economic participation of women in pre-industrial and industrial societies. Women in labour market-supply and demand for female labour, female work participation developing countries with special reference to India, agricultural and non-agricultural activities. Women in formal and informal sector; Gender wage differential- Theories of wage discrimination and differentials and use of time- use survey

Module IV:

Gender Issues in Poverty: Women and poverty, feminization of poverty, Inclusive growth and development, Gender inequalities: Access to education, health and other public services; Social security and insurance, entitlements and social justice; Women and access to finance: Micro finance and self help groups; Women empowerment – concept and indicators; Development, Migration and women, Technology and women: ownership, access and implications on gender inequality.

Module V:

Globalization and Gender in Neo Liberal economics, Smart Economics and Women in Development Institution framework - engendering development, Women and macroeconomic policies, Decentralization of governance and empowerment of women in India; Gender budgeting with special reference to India

Basic Reading List:

1. Boserup, E (1970): Women's Role in Economic Development, George Allen and Unwin, London
2. Seth, M. (2000): Women and Development: the Indian Experience, Sage Publications, New Delhi.
3. Venkateswaran, S. (1995): Environment, Development and Gender Gap, Sage Publications, New Delhi.
4. Nussbaum, M. (2000): Capability Approach and Human Development, Cambridge University Press.
5. Sen, A. K. (1990): Gender and Cooperative Conflicts, in Tinker (Ed) 'Persistent Inequalities: Women and World Development', Oxford University Press, New York.
6. Schultz, T. P. (1988): Education Investments and Returns, in Chenery, H. B. and T. N. Srinivasan, Handbook of Development Economies North Holland, New York.

SEMESTER-III

Paper: HCE 301 Basic Econometrics

FM=100, TE=70, MS=30

Module I:

Meaning and scope of econometrics; Two-variable linear regression model- its assumptions, estimation of parameters and properties of estimators; Gauss-Markov theorem, Coefficient of determination; Analysis of variance in two-variable LRM.

Module II:

k-variable LRM: Estimation of parameters, Properties of estimators, Gauss-Markov theorem; Adjusted coefficient of determination; Testing the significance of a single coefficient, and subset of coefficients; ANOVA.

Module III:

Prediction in two-variable and k-variable LRMs; Multicollinearity- nature, detection, consequences and remedy; Specification errors: sources, consequences and estimation; Measurement errors: sources, consequences and estimation.

Module IV:

Heteroscedasticity: meaning, consequences, detection and remedy; The methods of estimation- Generalized least-squares (GLS) and Weighted least-squares (WLS); Auto-correlation- meaning, detection, consequences and remedy.

Module V:

Dummy independent variable models: estimation, testing the structural stability of regression models, interaction effects, seasonal analysis, Piece-wise Linear Regression Model and its estimation.

Basic Reading List:

1. Johnston J. (1991): Econometric Methods, Mc Graw Hill Book Co
2. Koutsoyiarnis, A. (1992): Introduction to Econometrics, OUP
3. Dougherty, C. (1992): Introduction to Econometrics, OUP.
4. Kmenta, Jan (1997): Elements of Econometrics, University of Michigan Press.
5. Gujarati, D. and Sangeetha (2007): Basic Econometrics, McGraw Hill Book Co.

Paper: CEE 301
International Economics

FM=100, TE=70, MS=30

Module I:

Pure Theories of International Trade: Introduction to the international economics, Trade based on absolute advantage, comparative advantage and opportunity cost, Modern trade theories: Heckscher-Ohlin theory of trade, Factor price equalization theory, Stolper-Samuelson Theory, The Rybczynski theorem, The Leontief paradox, The gains from trade.

Module II:

New Theories of International Trade: The specific factors model, economies of scale and trade, Imperfect competition and international trade, Intra-Industry trade, Effect of changes in tastes, per capita income and technology on trade, Terms of trade: concept, types and secular deterioration hypothesis, Trade based on technological changes: Technological gap theory, Posner's imitation gap theory, Vernon's product life cycle theory.

Module III:

Economic Growth and International Trade: Growth of factors of production. Effects of growth on trade, Economic growth and trade in small country and in large country case, Technical progress and international trade, The immiserising growth, Foreign trade multiplier with and without foreign repercussions.

Module IV:

The Theory of Interventions: Tariffs- Partial and general equilibrium analysis, Effective rate of protection and optimum tariff, Non-tariff trade barriers: Import quotas, Voluntary export restraints, International cartels, Dumping, Export subsidies; Economic integration: The Customs Union.

Module V:

Balance of Payments and its Adjustments: The Balance of Payments: Definition and its components, Equilibrium and disequilibrium in the balance of payments, Balance of payments adjustments: Automatic process, expenditure-reducing, expenditure-switching policies and direct controls, Elasticity estimates and the J-curve, Exchange rate determination: Purchasing power parity theory, Monetary model and Portfolio model of exchange rate determination, Fixed and flexible exchange rates, Policies for achieving internal and external equilibrium.

Basic Reading List:

1. Chacholiades, M. (1990), The Pure Theory of International Trade, McGraw Hill.
2. Bhagwati, J (ed) (1981), International Trade: Selected Readings, Cambridge University Press.
3. Haberler, G (1937), The Theory of International Trade, Macmillan.
4. Salvator, D. (1997), International Economics, Prentice-Hall.
5. Sodersten, BO, (1991), International Economics, The Macmillan Press.
6. Kenen P.B. (1989), The International Economy, Prentice Hall of India.
7. Kindleberger C.P. ((1977), International Economics, D.B. Taraporevala Sons and Co.

Paper: CEE 302
Industrial Economics

FM=100, TE=70, MS=30

Module I:

Industry and Economic Development: Role of industrialisation in economic development; Factors promoting industrialisation; Strategies of industrialisation in developing countries; Scope of industrial economics; Concept and organisation of firm- cost theory and optimum size of a firm, economies of scale, control and objectives of the firm, passive and active behaviour of the firm.

Module II:

Industrial Organisation: Meaning; Forms of industrial organisation; Conduct- marginal cost and full-cost pricing; Performance paradigm; Monopoly and concentration- concept, reason, concern and resolve; Contestable market; Fixed cost, sunk cost and contestability; Measures of concentration; Concentration ratio and its implications; Hirschman-Herfindahl Index.

Module III:

Industrial Location and Regional Development: Factors affecting industrial location; Advantages and drawbacks of industrial location; Theories of industrial location- Alfred Weber, Sargeant Florence, August Losch, Walter Isard, Melvin Greenhut; Dispersal of industries- advantages, measures for dispersal.

Module IV:

Firm Structure and Investment Decision: Determinants of firm structure; Mergers- horizontal and vertical; Conglomerate integration; Investment decisions- time preparation, profile of project, project evaluation and appraisal, cost-benefit analysis, rates of returns methods, pay-back method, accounting rate of return method, net present value method, internal rate of return method, break-even analysis, balancing private and social returns.

Module V:

Industrial Economy of India: A historical sketch of industrialisation programme in India; Trends in industrial growth and diversification; Latest industrial policy; MNCs and industrialisation programme; Transfer of technology and the issues related with TRIMS; Industrial employment and labour laws in India; Exit policy; Competition Act 2002.

Basic Reading List:

1. Jean Tirole (2007): The Theory of Industrial Organization, Prentice Hall, India.
2. I.J. Ahluwalia (1985): Industrial Growth in India- Stagnation since Mid 60s, Oxford University Press, Delhi.
3. R.R. Barthwal (1985): Industrial Economics, Wiley Eastern Ltd., New Delhi.
4. F. Cherunilam (1994): Industrial Economics- Indian Perspective, Himalaya Publishing House.
5. B. Desai (1999): Industrial Economy in India, Himalaya Publishing House.
6. S.C. Kuchhal (1980): Industrial Economy of India, Chaitanya Publishing House, Allahabad.
7. A. Singh and A.N. Sadhu (1988): Industrial Economics, Himalaya Publishing House.

Paper: CEE 303
Banking

FM=100, TE=70, MS=30

Module I:

Commercial Banking: Evolution of modern banking system; Structure of commercial banking system; Role of commercial banks in economic development; Functions of commercial banks- process of credit creation; Changing theories of commercial banking; Modern representation of banking theories of Tobin and Shaw; Non-performing assets- problems and solution; Non-bank financial intermediaries- their growth and implications for monetary policy targets; Development banking in India.

Module II:

Central Banking: Changing concepts of central banking; Role of central banks in developing countries- regulatory and promotional; Real bills doctrine; Quantitative and qualitative credit controls; The view point of Radcliffe committee; Reserve Bank of India- role, functions and working, policy in regard to priority sector lending, interest rate policy, credit authorisation scheme, credit planning.

Module III:

Supply of Credit and Term Structure of Interest Rates: Theory of bank credit and bank deposits; Allocation of institutional credit; Factors influencing institutional credit; Credit supply curve; Term structure and risk structure of interest rates; Theories of term structure of interest rates- expectations theory, market segmentation theory, preferred habitat theory.

Module IV:

Monetary Policy: Goals and targets; Tools of monetary policy- SLR, PLR, CRR, Repo rates, inflation targeting; Channels of monetary policy transmission- interest rate and credit channels; Dynamics of monetary policy; Lags in monetary policy; Rules versus discretion; Payment mechanism; Counter cyclical monetary policy; Built-in stabilisers; Fiscal deficit and the monetary base.

Module V:

Banking Sector of India: Monetary reforms- Chakravarty and Narsimham (I and II) Committee Reports; Universal Banking- Khan Committee Report; Prudential regulation of banks and Basel I, II, III norms; Restructuring the banking sector of India; RBI's New banking license norms.

Basic Reading List:

1. Niti Bhasin (2007): Banking and Financial Markets in India (1947 to 2007), New Century Publications, New Delhi.
2. L.M. Bhole (2009): Financial Institutions and Markets, Tata McGraw Hill Company, New Delhi.
3. D.N. Ghosh (1979): Banking Policy in India – An Evaluation, Allied Publishers.
4. H.J. Johnson (1993): Financial Institutions and Markets, McGraw Hill, New Delhi.
5. M.Y. Khan (1996): Indian Financial System, Tata McGraw Hill, New Delhi.
6. S.K. Singh S.K. (2009): Bank Regulation, Discovery Publishing House, New Delhi.
7. Reserve Bank of India (Latest edition): Trends and Progress of Banking in India, Mumbai.
8. Reserve Bank of India (Latest edition): Report on Currency and Finance, Mumbai.
9. Reserve Bank of India (Latest edition): RBI Bulletin, Mumbai.

Paper: AEE 301
Agricultural Economics

FM=100, TE=70, MS=30

Module I:

General Models of Agricultural Development (I): Frontier model, Conservation model, Urban-industrial impact model, Diffusion model, High payoff input model.

Module II:

General Models of Agricultural Development (II): Schultz model of agricultural development, Mellor theory of agricultural development, Boserup model of agricultural development, Lewis and Ranis-Fei model, Types of farming and farm organization.

Module III:

Agricultural Production and Productivity: Measures of farm efficiency, Production function analysis, Factor use and resource substitution, Farm size and productivity: Theoretical and empirical issues, Tenancy and share cropping, Efficiency and equity issues.

Module IV:

Labour supply in agriculture and inter-locking of factor markets, Agricultural wage: determinants and implications, Marginalization of rural labour, Role of technology in agriculture – technical efficiency and labour absorption, Agriculture and environment – Sustainability issues.

Module V:

Agriculture price policy: Objectives, product price and factor price, Issue of subsidies in agriculture, Terms of trade between agriculture and industry: Implications and Indian experience; Agricultural marketing and measures to improve efficiency in agricultural marketing in India; Instability in agriculture - Price instability and cobweb model, Agricultural credit; Risk and uncertainty in farming; Crop insurance – Indian experience,

Basic Reading List:

1. Bhaduri, A. (1984): The Economic Structure of Backward Agriculture, Macmillan, Delhi.
2. Gulati. A. and T. Kelly (1999): Trade Liberalization and Indian Agriculture, Oxford University Press, New Delhi.
3. Rao. C. H. Hanumanatha (1975): Agricultural Growth, Rural Poverty and Environmental Degradation in India, Oxford University Press, New Delhi.

Paper: AEE 302
Economics of Education

FM=100, TE=70, MS=30

Module I:

Economics of Education and Demand for Education: Economics of education- definition, methods, evidence and policy; Classical economists and education. The demand for education: Education as a creation of minimal capabilities; Education as investment in human capital; The role of individual talent; imperfect financial markets and the indivisibility of human capital investment.

Module II:

Supply of Education: Human capital formation, Class formation and peer effects, Integration or segregation, Class size, Resource effectiveness, Resource efficiency, Efficiency versus equity.

Module III:

Educational Financing: Demand for education when agents differ in abilities and family incomes; Collective choice over public or private schooling; Growth and inequality under public and private schooling; Education financing and school stratification, School voucher as a solution, Subsidizing or lending; Financing education in India.

Module IV:

Production of Education: Education production function- concept, estimation, role in policy analysis; Cost of education- direct and indirect; Wastage and stagnation; Benefits of education- types, measurement; Returns to education: Productivity of human capital, Effort-enhancing preferences, Education as a signal or as a screening device, On-the-job training, Measuring the return on education, Estimating the return on education.

Module V:

Educational Planning: Need for educational planning, Cost-benefit analysis; Production function models; Education and economic growth: dimensions, sources, contributions. Manpower requirement approach programming and input-output models. Educational planning in developing countries with specific reference to India.

Basic Reading List:

1. Mark Blaug: (1970): An Introduction to the Economics of Education, Allen Lane.
2. Checchi, D. (2005): The Economics of Education, Cambridge University Press, New York.
3. Psacharopoulos, G. (1987): Economics of Education: Research and Studies, Pergamon Books Ltd, Oxford
4. Lovenheim, M. and Turner, S. (2018): Economics of Education, Worth Publishers, New York

Paper: AEE 303
Economics of Microfinance

FM=100, TE=70, MS=30

Module I:

Microfinance: Meaning; Sustainable Community Banking; Empowerment of poor and marginalised sections especially women; Problems faced by intervening agencies; Participation of members, Apex group.

Module II:

Self-Help Groups and Self-Help Promotion: Concepts; Structure of SHGs; Precautions to be taken while forming the SHGs; Saving operations of SHGs; Credit operations of SHGs; Role of NGOs.

Module III:

Monitoring and Evaluation: Impact assessment of saving and credit programmes; Saving and credit as the instruments of self-help promotion among rural women; Experiences of GRAMEEN and SEWA; Role of Rashtriya Mahila Khosh.

Module IV:

Inclusive Growth: Meaning; Social exclusion and inclusive growth; Gender exclusion and inclusive growth; Policies for sustainable development of the Government of India.

Module V:

Women Empowerment: Concept and importance of women empowerment; Issues of gender equity in rural areas; Practical and strategic needs of women. Latest policies for women empowerment of the governments and their efficacy.

Basic Reading List:

1. K.G. Karmakar (1998): Rural Credit and Self-Help Groups, Sage Publications, New Delhi.
2. R. Shahindur and Khandker, (1998): Fighting Poverty with Micro Credit Experience in Bangladesh, Oxford University Press.
3. B.Jayaramall (2001): Micro - Finance Retrospect and Prospects, NABARD
4. K.Basu and K Jindal (2000): Microfinance: Emerging Challenges (ed), Tata McGraw Hill Publishing Company, New Delhi
5. Central Statistical Office (2003); Statistical Abstract India, CSO, New Delhi.
6. World Bank (2004): Microfinance in India: Issues, Challenges and Policy Options, World Bank, Washington, DC.
7. Indian Institute of Banking and Finance (2014): Micro-Finance: Perspectives and Operations, Macmillan Publishers India Ltd.

Paper: FEE 301
International Finance

FM=100, TE=70, MS=30

Module I:

The International Finance: International business and its modes, Nature, scope and importance of international finance; International financial markets and instruments, Exchange rate mechanism, Exchange rate quotations, Nominal, real and effective exchange rates, Factors influencing exchange rates, Exchange rate determination in spot and forward markets.

Module II:

Market for Foreign Exchange and Derivatives: Spot and forward market, Forward Market: features, arbitrage, hedging and speculation, Futures Market: features, hedging and speculation, Options Market: features, hedging and speculation, Currency swap and interest swap.

Module III:

Exchange Rate Determination: Mint parity theory, Purchasing power parity theory, Monetary models of exchange rate determination, Portfolio balance model, International investment decision, FDI: theories, cost and benefits and strategy, Capital budgeting: evaluation criteria and computation of the cash flow, Political risk: meaning and forms, Evaluation and management of political risk, International portfolio investment- benefits, problems and modes.

Module IV:

Foreign Exchange Exposure and its Management: Exchange rate forecasting- need and techniques, Foreign exchange exposure- the concept, transaction exposure, real operating exposure, translation exposure, Management of foreign exchange exposure- need, hedging of transaction exposure, hedging of real operating exposure, Managing translation exposure.

Module V:

Management of Short-term Funds: Working capital policy, Managing cash and near cash assets, Management of receivables, Management of inventory. Financing foreign trade- foreign trade documentation, modes of payment in international trade, methods of trade financing, AXIM Bank of India- main functions and performance.

Basic Reading List:

1. Vyuptakesh Sharan, (2022), International Financial Management, PHI Learning, Delhi.
2. Apte, P.G. (1995): International Finance Management, Tata McGraw-Hill Publishing. Co. Ltd, New Delhi.
3. Levi, M.D. (1990): International Finance, McGraw-Hill Publishing Company.
4. Levi, M.D. (1996): International Finance, McGraw-Hill, Inc, New Delhi.
5. Kevin, S. (2009): Fundamentals of International Financial Management” PHI, Learning Pvt. Ltd, New Delhi.

Paper: FEE 302
Computational Economics

FM=100, TE=70, MS=30

Module I:

Fundamentals of Research and Academic Ethics: Writing a research proposal, Key elements; Review of literature- meaning, objectives, types, sources, stages and precautions; Exercise on writing a review of literature, Academic writing, the APA style sheet; Ethical Guidelines for Social Sciences Research in Health adopted by the Government of India; Plagiarism: meaning and types; Why do people plagiarise? How to avoid it?

Module II:

Data Analysis through SPSS: Basics of SPSS, Descriptive Statistics in SPSS, Graphs and Charts in SPSS, Regression Analysis using SPSS.

Module III:

Data Analysis through STATA; Basics of STATA, Descriptive Statistics in STATA, Graphs and Charts in STATA, Regression Analysis using STATA.

Module IV:

Data Analysis through Ms Excel: Basics of Ms Excel, Descriptive Statistics in Ms Excel, Graphs and Charts in Ms Excel, Regression Analysis using Ms Excel

Module V:

Open Source Software for Data analysis (R-Statistics or GRETL); Basics of R-Statistics/GRETL, Descriptive Statistics in R- Statistics/GRETL, Graphs and Charts in R Statistics/GRETL, Regression Analysis using R Statistics/GRETL

Basic Reading List:

1. Numerical Methods in Economics by Kenneth L Judd, The MIT Press, 2023
2. Applied Computational Economics and Finance by Mario J Miranda and Paul L Fackler, The MIT Press, 2004.

Paper: FEE 303
Financial Institutions and Market

FM=100, TE=70, MS=30

Module I:

The structure of the financial system, Functions of the financial sector, Indicators of financial development, Equilibrium in financial markets, Financial system and economic development, The concepts of risk and return, and its type, Risk and financial assets, Risk and return on assets, Risk-return trade-off, Valuation of securities.

Module II:

Theories of interest rate determination, Level of interest rates in long period and short period, Term structure of interest rates: administered interest rates, appropriate interest rate policy, Development banks- role and functions, Merchant banking, Financial sector reforms in India- compulsion and the major recommendations of the Narasimham Committee.

Module III:

Functions of Central Bank, The aims and objectives of the monetary policy in developing countries, Instruments and effectiveness of monetary policy, Proliferation of banking, Credit creation and its control, Balance sheet analysis, Profitability and efficiency of banks, Role of commercial banks in money market.

Module IV:

Role and structure of money market and capital market, Primary and secondary market for securities, Depository system, SEBI- its role on the working of capital market in India; Non-banking financial institutions- definition and functions, their role on the effectiveness of monetary policy, Measures taken to control their operations with special reference to India.

Module V:

Non-Banking Financial Companies: The concept of leasing, History and development, Problems and prospects, Regulation and functions of leasing, Hire Purchase and Housing Finance Companies, Venture Capital Companies- origin, and importance, Insurance Sector: objectives, functions, changing role, IRDA and its role and functions in financial markets.

Basic Reading List:

1. Khan, M. Y.: Indian Financial System, Tata McGraw Hill, New Delhi.
2. Bhole, L. M.: Financial Institutions and Market, Tata McGraw Hill, New Delhi.
3. Gorden and Natrajan: Financial Market and Institutions, Himalaya Publishing house.
4. Gupta, S. B.: Monetary Economics.
5. Mishkin, F. S. and Eakins S. G : Financial Market and institutions, PE, New Delhi.

Paper: FEE 304
Entrepreneurship and Skill Development

FM=100, TE=70, MS=30

Module I:

Theoretical Background: Definition of an entrepreneur; Functions and types of entrepreneurs; Motivation and competency; Meaning of entrepreneurship; Linking entrepreneurship to economic growth- theoretical approach, empirical approach, conceptual frameworks; Fostering entrepreneurship; Entrepreneurship and small businesses; Women entrepreneurship.

Module II:

Organisations for Entrepreneurship Development in India: Programmes for the development of entrepreneurship; National and state level organisations- Entrepreneurship Development Institute of India (EDII), National Institute for Entrepreneurship and Small Business Development (NIESBUD), National Science and Technology Entrepreneurship Development Board (NSTEDB), National Institute of Small Industry Extension and Training (NISIET).

Module III:

Identification and Preparation of Project Report: Identification of project; Objectives of project; Methods of preparation and contents of project report; Formulation and appraisal of project report.

Module IV:

Development of Skills: Need for the development of skills; Communication skills; Verbal and non-verbal communication; Barriers to communication; Basic interaction skills; Leadership skills; Working individually and as a team; Personality development; Intra and inter-personal communication skills.

Module V:

Organisations for Skill Development in India: National Skill Development Mission; Prime Minister's National Council on Skill Development; National Skill Development Coordination Board; National Skill Development Corporation; National Skills Foundation of India; Skill Development Initiative; Kaushal Vikas Yojana; Skill development endeavour in Odisha and its outcomes.

Basic Reading List:

1. UN Conference on Trade and Development (2005): Entrepreneurship and Economic Development- The Empretec Showcase, Geneva, May.
2. M.U. Deshpande (1982): Entrepreneurship of Small Scale Industries, Deep and Deep Publications, New Delhi.
3. D.L. Narayana (1972): Entrepreneurship and Economic Development, Madurai University Press, Madurai.
4. S.Ashok Kumar (1990): Entrepreneurship in Small Industry, Discovery Publishing House, New Delhi.
5. Thaduri Balaraju (2004): Entrepreneurship Development- An Analytical Study, Akansha Publishing House, New Delhi.
6. Paramjeet Karur Dhillon (2003): Women Entrepreneurship Problems and Prospects, Blaze Publishers, New Delhi.

Paper: FEE 305
Labour Economics

FM=100, TE=70, MS=30

Module I:

Labour Market: Nature and characteristics of labour markets in developing countries like India; Paradigms of labour market analysis- classical, neo- classical and dualistic models; Analysis of demand for labour- demand for labour relating to size and pattern of investment; Choice of technology and government labour policies; Supply of labour in relation to growth of labour force; Mobility and productivity of labour; Rationalisation of labour policies; Methods of recruitment and placement; Labour employment-theoretical perspectives; Employment service organisation in India.

Module II:

Employment: Employment and development relationship; Poverty and unemployment in developing countries; Unemployment concept, types and measurement in Indian context; Broad issues relating to labour unemployment in India; Impact of nationalisation, technological change and modernisation on employment in organised private industries, public sector industries and agricultural sector; Rural unemployment and educated unemployment in India; Employment policies under the five-year plans and their evaluation.

Module III:

Wage Determination: Classical, neo-classical and bargaining theories of wage determination; Concepts of minimum wage, living wage and fair wage in theory and practice; Problems of implementation of minimum wage; Discrimination in labour markets; Wage determination in urban, rural, organised, unorganised and informal sectors; Non-wage component of labour remuneration; Wage and productivity relationship; Wage and inflation relationship; Analysis of rigidity in labour markets; Asymmetric information and efficiency of labour markets in wage determination; National wage policy in India, Wages and wage boards in India; Bonus system and profit sharing.

Module IV:

Industrial Relations: Theories of labour movement-growth, pattern and structure of labour unions in India; Achievements of labour unions; Causes of industrial disputes; Methods of settling industrial disputes- collective bargaining, conciliation, arbitration, adjudication and prevention mechanism; Role of tripartism; Current trends in collective bargaining; Role of judicial activism; Labour legislations in India and practices; Labour participation in management.

Module V:

State and labour with special reference to India: Concept of social security and its evolution; Social assistance and social insurance; Review and appraisal of states policies with respect to social security and labour welfare in India; Special problems of labour- child labour, female labour, discrimination and gender bias in treatment of labour; Receding state and its effect on working of labour markets; Labour market reforms in India- exit policy, need for safety nets, measures imparting flexibility in labour markets; National commissions on labour; Globalisation and labour markets.

Basic Reading List:

1. J.R.Hicks (1932), The Theory of Wages, Clarendon Press, Oxford.
2. R.A. Lester (1964), Economics of Labour, Macmillan.
3. C.R. McConnell and S.L. Brue (1986), Contemporary Labour Economics, McGraw Hill.
4. Jwitesh Kumar Singh (1998): Labour Economics, Deep and Deep Publishers, Delhi.

SEMESTER-IV

Paper: CEE 401 Economics of Environment

FM=100, TE=70, MS=30

Module I:

Pareto optimality and competitive equilibrium, Fundamental theorems on welfare economics, Externalities and market inefficiency- externalities as missing markets, property rights and externalities, Non-convexities and externalities, Environment as public good, Environmental externalities, Pigouvian taxes and subsidies, marketable pollution permits and mixed instruments (the charges and standards approach), Coase's bargaining solution and collective action.

Module II:

Global environmental externalities and climatic change- Tradable pollution permits and international carbon tax, Trade and environment in WTO regime, Informal regulation and the new model of pollution control, Monitoring and enforcement of environmental regulation, Environmental institutions and grass root movements, Tragedy of the commons, Reversing the tragedy, Cooperative solution to common property resources.

Module III:

Use values, Option values and Non-use values, Valuation methods- methods based on observed market behavior, Hedonic property values and household production models (travel cost method and household health production function), Methods based on response to hypothetical markets, Contingent valuation methods.

Module IV:

Theories of optimal use of exhaustible and renewable resources, Environmental Kuznets Curve and its critique, The concept of sustainable development, Strong and weak sustainability, Integrated environmental and economic accounting and the measurement of environmentally corrected GDP, Macroeconomic policies and environment.

Module V:

Mechanism for environmental regulation in India, Environmental laws and their implementation, Policy instruments for controlling water and air pollution and forestry policy, People's participation in the management of common and forest lands, The institutions of joint forest management and the joint protected area management, Social-forestry- rationale and benefits.

Basic Reading List:

1. Economics of Natural Resources and the Environment, David W Pearce and R. Kerry Turner.
2. Kolstad, C. D. (2010): Environmental Economics. OUP.
3. Bhattacharya, R. (2001): Environmental Economics: An Indian Perspective. OUP
4. Baumol, W. J. and Oates, W. E. (1988). The Theory of Environmental Policy, Second Edition, Cambridge University Press, Cambridge.
5. Coase, R. H. (1960): The Problem of Social Cost, *Journal of Law and Economics*, 3: 1-44.
6. Ostrom, E. (1997): Governing the Commons: The Evolution of Institutions for Collective Action, Cambridge University, Cambridge.
7. The Tragedy of the Commons, Garrett Hardin, Science New Series, Vol.182, No. 3859, December 1968.

**Paper: CEE 402
Dissertation**

FM=100

Presentation: 50 Marks and Dissertation/Thesis Examination: 50 Marks.

OR

**Paper: CEE 402
Research Methodology**

FM=100, TE=70, MS=30

Module I:

Research Methodology: Meaning, objectives and motivation in research; Types of research; Research methods versus methodology; Research and scientific method; Research process; Criteria of good research; Defining the research problem, Concept of social research.

Module II:

Research Problem and Research Design: Selecting the research problem; Meaning and need for research design; Features of a good research design; Different research designs; Experimental designs- principles and types; Overview of historical research design.

Module III:

Sampling and Scaling Techniques: Sampling- census versus sample survey, criteria for selecting a sampling procedure, characteristics of a good sample design, probability sampling versus non-probability sampling, simple versus complex random sampling designs; Scaling Techniques- important scaling techniques, scale construction techniques.

Module IV:

Data Collection and Analysis: Data Collection- methods of collection of primary and secondary data, questionnaire and schedule, case study versus comparative study methods; Data Analysis- statistical methods of data analysis like measures of central tendency and dispersion, correlation and regression, association of attributes, scatter diagram (problems not to be set), Need for hypothesis testing and general procedure of hypothesis testing.

Module V:

Interpretation and Report Writing: Technique of interpretation; Precaution in interpretation; Steps in writing report; Layout of the research report; Types of reports; Rules or mechanics of writing research report; Precautions for writing research report.

Basic Reading List:

1. C.R.Kothari (1985): Research Methodology: Methods and Techniques, Wiley Eastern Limited.
2. Pauline V Young (1988): Scientific Social Surveys and Research, Prentice-Hall of India.
3. C.R.Kothari (1984): Quantitative Techniques, Vikash Publishing House.
4. Anol Bhattacharjee (2012): Social Science Research: Principles, Methods and Practices, Creative Commons Attribution.
5. Prabhat Pandey and Meenu Mishra Pandey (2015): Research Methodology: Tools and Techniques, Bridge Center, Romania.
6. P.Ramchandran (1971): Training in Research Methodology in Social Sciences in India, ICSSR, New Delhi.
7. Assignment and Thesis Writing by Anderson, Dustan and Poole, Wiley Eastern Limited.

Paper: CEE 403
Demography

FM=100, TE=70, MS=30

Module I:

Population and Development: Meaning and scope of demography; Components of population growth and their inter-dependence; Measures of population change, structure, distribution and sources of population data; Theories of population: Malthus, Optimum theory of population; Theory of demographic transition, Views of Meadows, Enke and Simon; Population and development- demographic dividend.

Module II:

Structure of Population: Population trends in the twentieth century; Population explosion- its dynamics; International aspects of population growth and distribution; Pattern of age and sex structure in more developed and less developed countries; Determinants of age and sex structure; Demographic effects of sex and age structure and their economic and social implications; Age pyramids projections.

Module III:

Fertility, Nuptiality and Mortality: Fertility- emerging issues in fertility control, fertility analysis, social structure and fertility change; Nuptiality- concept and analysis of marital status, single mean age at marriage, synthetic cohort methods, trends in age at marriage; Mortality- death rates, crude and age-specific death rates, mortality at birth and infant mortality rate, sex and age pattern of mortality, factors for decline in mortality in recent past, levels and trends of mortality rate in developed and less developed countries; Life Table- construction and uses; Concepts of stable population; Methods of population projection.

Module IV:

Migration and Urbanisation: Internal and international migration flows- the case of India and Bangladesh; Internal migration- its effects on population growth and pattern; Factors affecting migration; Theories of migration related to internal migration; Process shaping international migration flows; Dynamics of the international migration process; Urbanization- growth and distribution of rural-urban population in developed and developing countries; Population growth, employment and housing in mega cities in developing countries; Mega city transformations; Gravity Model.

Module V:

Indian Demography: Population, economy and environmental linkage; Growth and structure of India's population; Population Policies of India; The shift in policy from population control to family welfare to women empowerment; Strategies to control family size and their outcomes; Reproductive health, Maternal nutrition and child health policies; New Population Policy; Latest population census of India- basic results; Migration and urbanisation in India- issues and challenges.

Basic Reading List:

1. S.N. Agarwala (1972): India's Population Problem, Tata McGraw-Hill.
2. A. Bose (1996): India's Basic Demographic Statistics, B.R. Publishing Corporation, New Delhi.
3. D.J. Bogue (1971): Principles of Demography, John Wiley, New York.
4. A.J. Coale and E.M. Hoover (1958): Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects, Princeton University Press, Princeton.
5. S.C. Gulati (1988): Fertility in India- An Econometric Study of a Metropolis, Sage, New Delhi.

Paper: CEE 404
Rural Economics

FM=100, TE=70, MS=30

Module I:

Concepts and Rural Economy of India: Concepts of rural development; Basic elements of rural development; Need for rural development; Dilemmas in rural development; Size and structure of rural economy of India; Characteristics of rural sector of India; Role of agricultural and non-agricultural sub-sectors in rural economy of India; Challenges and opportunities.

Module II:

Paradigms and Determinants of Rural Development: Paradigms of rural development- Modernisation theory, Dependency theory, Myrdal's thesis of 'spread and backwash' effects Human capital model of development, Gandhian model of rural development; Determinants of rural development- output, natural resources, human resources, capital, technology.

Module III:

Rural Development Policies: Freedom, control and public policy; Need for and goals of rural development policy; Hierarchy of policy goals; Globalisation and rural development; Sustainable development strategy for rural development; Policy instruments of rural development.

Module IV:

Rural Development Programmes: Equity-oriented programmes; Growth-oriented programmes; Poverty and unemployment eradication programmes; Social welfare-oriented programmes, Infrastructure development programmes. (Emphasis to be given on Indian context.)

Module V:

Planning and Organising for Rural Development: Planning for rural development- functions of planning, decentralisation of planning, micro-level planning, block- and district-level planning; Organising for rural development- government organisations, Panchayati Raj Institutions, cooperatives, voluntary organisations/NGOs, corporations; World Bank and rural development; Financing rural development- sources, issues, challenges.

Basic Reading List:

1. Katar Singh (1994): Rural Development Principles, Policies and Management, Sage Publication, India, New Delhi.
2. Guy Hunter, A.H. Bunting and Anthony Bottrall (1978): Policy and Practice in Rural Development, English Language Book Society, London.
3. Vasant Desai (1986): Rural Development Issues and Problems, Himalaya Publishing House, Bombay.
4. Vasant Desai (1986): Rural Development Programmes and Strategies, Himalaya Publishing House, Bombay.
5. Vasant Desai (1988): Rural Development Experiments in Rural Development, Himalaya Publishing House, Bombay.
6. Vasant Desai (1988): Rural Development Rural Development through the Plans, Himalaya Publishing House, Bombay.
7. Robert Chambers (1985): Rural Development: Putting the Last First, Longman, London.

Paper: CEE 405
Economics of Infrastructure

FM=100, TE=70, MS=30

Module I:

Infrastructure and Economic Development: Infrastructure as a public good; Social and physical infrastructure; Special characteristics of public utilities; The peak-load and off-load problems; Dual principle controversy; Economies of scale of joint supply; Marginal cost pricing versus other methods of pricing in public utilities; Cross-subsidisation- free prices, equity and efficiency arguments.

Module II:

Economics of Transport and Communication: Economics of transport- the structure of transport costs and location of economic activities, demand for transport, model of freight and passenger demand, model choice, cost functions in the transport sector, principle of pricing, special problems of individual modes of transport and inter-modal coordination in the Indian context; Economics of communication- rate making in telephone utilities, principle of decreasing costs in telephone industry, criteria for fixation of postal rates, measurement of standards of service in telephone and postal utilities, reforms in the telecom sector of India, Telephone Regulatory Authority of India (TRAI).

Module III:

Energy Economics: Primacy of energy in the process of economic development; Factors determining demand for energy; Effect of energy shortages; Energy conservation; Renewable and non-renewable sources of energy; Non-conventional sources of energy; Energy modeling; Trends in the production and consumption of commercial energy in India; Measures to strengthen the energy sector of India; Energy policy in the Indian context.

Module IV:

Electricity, Gas and Water Supply: Bulk supply and pricing of electricity; Relative economies of thermal, hydro and nuclear power plants; National power grid; Uses of natural gas; Exploitation of natural gas; Pricing problem and the relevance of marginal cost pricing; Growth, problems and reforms in oil and natural gas sector of India; Water utilities and the issue of municipal ownership; Financing water utilities; Urban and rural water supply; Latest government policy in India in regard to water supply.

Module V:

Social Infrastructure: Concept of social infrastructure; Issues in the organisation and financing the supply of social services; Private versus public sector financing; Pricing of social services and the recent debate; Development of social services in the successive five-year plans in India; Financing the social services sector by the Government of India since 1991.

Basic Reading List:

1. M.A. Crow and R.D. Kleindorfer (1979): Public Utility Economics, Macmillan.
2. R.K. Pachauri (1989): Energy Policy for India (ed), Macmillan.
3. R. Turvey and D. Anderson (1977): Electricity Economics, John Hopkins, Baltimore.
4. Indian Council of Social Sciences Research (1976): Economics of Infrastructure, Vol.VI, New Delhi.
- 5 National Council of Applied Economic Research (1996): India Infrastructure Report.
6. Centre for Monitoring Indian Economy (1996): India: Energy Sector, CMIE, Mumbai.

Paper: AEE 401
Mathematical Economics

FM=100, TE=70, MS=30

Module I:

Utility Function- Direct and Indirect, Roy's identity, N-M utility function, Concept of elasticities, Separable and additive utility functions, Homogeneous and homothetic utility functions, Linear Expenditure System, Index number.

Module II:

CES production function, VES and Translog production functions, Shephard's lemma, Input demand function, Adding-up theorem, Technical progress through production function, Empirical uses of production function analysis.

Module III:

Single Market Equilibrium: Marshallian and Walrasian equilibrium conditions, Lagged market equilibrium, Multimarket equilibrium, General equilibrium system of Walras and Debreu, Stability of the conditions of equilibrium.

Module IV:

Linear Programming- Primal and dual problems, Duality theorems, Simplex method and revised simplex method, Parametric linear programming, Linear fractional programming, Non-linear programming and Kuhn-Tucker conditions (KTC).

Module V:

Game Theory: Dominance property, Arithmetic method for $(n \times n)$ games, General solution of $(m \times n)$ rectangular games, Cooperative and non-cooperative games.

Basic Reading List:

1. Silberberg, E and Suen, W (2001): The Structure of Economics- A Mathematical Approach, McGraw Hill Co, New York.
2. Chiang, A.C. and Wainwright, K. (2005): Fundamental Methods of Mathematical Economics, McGraw Hill Co, New York.
3. Sydsaeter, K and Hammond P.J. (1995): Mathematics for Economic Analysis, Pearson Education.
4. Gass S.I. (1958): Linear Programming: Methods and Applications, McGraw Hill.
5. Baldani, Bradfield, Turner (2009): An Introduction to Mathematical Economics, Cengage Learning, New Delhi.
6. Renshaw, G. (2009): Mathematics for Economics, Oxford University Press, New Delhi.

Paper: AEE 402
Advanced Econometrics

FM=100, TE=70, MS=30

Module I:

Dummy Dependent Variable Models: Estimation using LPM, Logit, Probit and Tobit models; Multivariate normal probability distribution – its properties; Hotelling T distribution.

Module II:

Autoregressive and Distributed Lag Models – Koyck's model, Partial adjustment model, Adaptive expectation model; Instrumental variables; Almon's approach to distributed lag models; Causality test – Granger test, Sim test.

Module III:

Simultaneous-equation Models – Introduction and examples; The simultaneous equation bias and inconsistency of OLS estimators; Identification problem- Order and rank conditions; Methods of estimation of simultaneous equation models – Recursive method, ILS, 2SLS, LIML (LVR); System methods of estimation of simultaneous equation models – 3SLS, FIML

Module IV:

Multivariate Methods and Panel Data Models: Discriminant Analysis, Principal Component Analysis, Factor Analysis, Cluster Analysis. Panel data techniques – Fixed effect model, Random effect model, Random Coefficient model.

Module V:

Time Series Econometrics – Stationarity, Tests of stationarity, Unit root, Spurious regression and cointegration, Dickey-Fuller test and Augmented Dickey-Fuller test, Engle-Granger test, Random walk model; Forecasting with ARIMA model, Box-Jenkins methodology, Vector auto regression, Problems with VAR modeling–Applications.

Basic Reading List:

1. Johnston (1991): Econometric Methods, Mc Graw Hill Book Co
2. Koutsoyiannis, A, (1992): Introduction to Econometrics, OUP
3. Dougherty, C. (1992): Introduction to Econometrics, OUP.
4. Kmenta, J (1997): Elements of Econometrics, University of Michigan Press
5. Gujarati, D. and Sangeetha (2007): Basic Econometrics, McGraw Hill Book Co.

**Paper: AEE 403
Health Economics**

FM=100, TE=70, MS=30

Module I:

Introduction to Health Economics: Health Economics: Definition and relevance; Health and healthcare; Healthcare as an economic good; Wants, demands and needs; Economic methods and health economics; Does Economics apply to health and healthcare? Why health economics?

Module II:

The Demand for and Supply of Health and Healthcare: Demand for health and healthcare: concept, a theoretical and empirical investigation, determinants; Socioeconomic disparities in health; Demand for insurance and moral hazards; Supply of health and health care: concept, determinants

Module III:

Health Production and Development: Health production: concept and estimation; Health and development: Theory and evidence.

Module IV:

Measurement of Health and Health Status: Introduction; Patient reported; Patient centeredness; Health outcomes; Health summary measures; Health technology assessment.

Module V:

Overview of India's Health Sector: Features of Indian Health Sector; Health Care System in India: history, structure, programs, infrastructure, health information system; Public Health in India; Financing Healthcare in India; Health Sector Reform in India

Basic Reading List:

1. Jay Bhattacharya, J., Hyde, T., Tu, P. (2014): *Health Economics*, Palgrave Macmillan, UK
2. Krabbe, P. F. M. (2017): *The Measurement of Health and Health Status*, Elsevier Inc, London
3. Sherman Folland, Allen C Goodman and Miron Stano (2004): *The Economics of Health and Health Care*, Pearson, Prentice Hall.
4. Charles E Phelps (2003): *Health Economics*, Addison Wesley.

Paper: AEE 404
Financial Inclusion and Economic Development

FM=100, TE=70, MS=30

Module I:

Inclusive Growth: Concept, relevance and its salient features, Inclusive growth in India, Financial inclusion: concept, rationale, Financial inclusion in India, Relationship between financial inclusion and development indicators.

Module II:

Banking and Financial Inclusion: Role of banking system in financial inclusion, Financial inclusion and social banking, Regional Rural Banks, Cooperative credit institutions, Technology applications in banking sector.

Module III:

Rural Banking: Rural credit, Demand and supply side analysis, Institutional mechanism in India, Government policies for promoting rural credit, Microfinance: institutions and mechanisms, Credit to SHGs, Growth, prospects and challenges, Policy measures, Farm and non-farm credit.

Module IV:

Finance and Employment: Effects of financial development on labour market equilibrium, Microenterprise models, Finance and employment, Microenterprise in India and Odisha, Credit for MSME, Sector-wise growth trends.

Module V:

Insurance: Moral hazard and adverse selection, Problem in insurance market, Benefits and costs of insurance, The moral foundations of universal health insurance, Evolution of insurance market in India, Reforms in Indian insurance market.

Basic Reading List:

1. Karmakar K.G. G.D.Banerjee and N.P.Mohapatra (2011): Towards Financial Inclusion in India, Sage Publication.
2. Desai Vasant (2005): Rural Development in India, Himalaya Publishing House.
3. Patnaik U.C. and R.N.Mishra (1999): Rural Banking in India, Anmol Publications.
4. Sohani A.K. (2009): Financial Inclusion: Perspectives and Country Experiences, ICFAI.
5. Sundaram I.S. (2015): Rural Development Himalaya Publishing House

Paper: AEE 405
Financial Economics

FM=100, TE=70, MS=30

Module I:

Investment Theory: Introduction to financial economics, Time value of money: Future value, Present value, Future value of an annuity, Present value of annuity, Present rate of perpetuity, Investment criteria: Net present value, Benefit-cost ratio, Internal rate of return, Modified internal rate of return, Pay-back period.

Module II:

Valuation of Securities: Fundamentals of valuation of securities: Valuation of bonds and stocks, Bond yield, Yield to maturity, Equity valuation: Dividend discount model, The PIE ratio approach, Irrelevance of dividend: Modigliani and Miller hypothesis, Relevance of dividend: Walter's model, Gordon's model.

Module III:

Risk and Return: Risk and return: Historical return and risk, Computing historical return, Average annual return, Variance of return, Types of risk, Measurement of risk and return of an asset, Measurement of risk and return of a portfolio, Determinants of beta, Risk-return trade-off, Analysis of financial statement: Ratio analysis, Different kinds of financial ratios, Calculation and its importance in financial analysis.

Module IV:

Derivative Markets: An introduction to financial derivatives, Types and uses of derivatives, Forward contracts: Basic concepts, Determination of forward prices, Futures contract: Basic concepts, Theories of future prices: The cost of carry model, The expectation model, Capital asset pricing model, Relation between spot and future prices, Forward vs. future contract, Hedging in futures.

Module V:

Options and Swaps: Options: Types, Value of an option, The pay-offs from buying and selling of options, The put call parity theorem, Binomial option pricing model (BOPM), Black-Scholes option pricing model, Swaps: Types, Advantages, Disadvantages.

Basic Reading List:

1. David G. Luenberger, Investment Science, Oxford university Press, USA, 1997.
2. Hull, John C, Options, Futures and other Derivatives, Pearson Education, 6th Edition, 2005.
3. Thomas E, Copeland, J Fred Weston and Kuldeep Shastri, Financial Theory and Corporate Policy, Prentice Hall, 4th Edition, 2003.
4. Richard A, Brealey and Stewart C Myers, Principles of Corporate Finance, McGraw-Hill, 7th Edition, 2002.
5. Stephen A Ross, Randolph W Westerfield and Bradford D Jordan, Fundamentals of Corporate Finance, McGraw-Hill, 7th Edition, 2005.
6. Burton G Malkiel, A Random Walk Down Wall Street, W.W.Norton and Company, 2003.
7. William Sharpe, Gordon Alexander and Jeffery Bailey, Investments, Prentice Hall of India, 6th Edition, 2003.

Paper: AEE 406
Economics of Discrimination

FM=100, TE=70, MS=3

Module I :

Social identity shaping economic outcomes: Models of statistical and taste based discrimination; Caste-code-based economy and its implications; Simplistic applications of the statistical and taste based discrimination along gender lines.

Module II :

A short introduction to the caste system: A brief overview of origin of caste in India - the varna and jati systems, the official treatment of caste groups, stigmatized ethnic identity of SCs from an academician's perspective.

Module III:

Identity and Economic outcomes: techniques of estimating discrimination:

(a) Decomposition analyses - OLS regression and Quantile regression technique, application of the technique in the Indian scenario, variation in results across time, professions, markets and sectors.

(b) Experimental methods to investigate labour market discrimination audits and correspondence methods as tools of investigation, application across contexts, relative merits and demerits of the alternative experimental methods, advantages over econometric evaluations.

(c) Beyond the labour market - the Duncan index, ethnic segregation in residential spaces, social identity and student performance and confidence, ethnicity and professions.

Module IV:

Remedies for inter group disparity: affirmative action and compensation issues: Affirmative action as a remedy to discrimination, standard criticisms of affirmative action programs, some studies on evaluating criticisms of affirmative action in India.

Module V:

Gender discrimination and the gender caste overlap Feminization of labour force and allied issues, overlapping of caste and gender and the Gender-Caste Development Index – an Indian perspective, improving status of women

Basic Reading List:

1. Becker, Gary: "The economics of-discrimination":
2. Akerlof, George A. and Rachel Kranton (2010): Identity Economics: How Our Identities Shape our Work, Wages and Well-being", Princeton University Press, Chs.1-4
3. Deshpande, Ashwini (2011): "The Grammar of Caste: Economic Discrimination in Contemporary India", Oxford University Press, New Delhi.
4. Banerjee, Biswajit and Knight, J.B. (1985): "Caste Discrimination in the Indian Urban Labour Market", Journal of Development Economics, Vol 17, pp 277-307.
5. Cotton, J (1988): On the Decomposition of Wage Differentials, Review of Economics and Statistics, Vol.70, No.2.
6. Deshpande, Ashwini and Smriti Sharma (2014): Is Self-Employment the Answer to Caste Discrimination? Decomposing the Earnings Gap in Indian Household Nonfarm
7. Business, Centre for Development Economics, Working Paper No. 236, February 2014.
8. Galanter, Marc (1997), Pursuing Equality: An Assessment of India's Policy of Compensatory Discrimination for Disadvantaged Groups in Sudipta Kaviraj (ed.) Politics in India Delhi: Oxford University Press, pp. 187-199.
9. Eswaran, Mukesh (2014): Why Gender Matters in Economics, Princeton University Press, Chs. 4 and 11

Paper: AEE 407
Monetary Economics

FM=100, TE=70, MS=30

Module I:

Supply of Money: Approaches to definition of money; Determinants of money supply; RBI approach to money supply; High powered money and money multiplier; Liquidity Approach- Concept and definition of liquidity, Radcliffe-Sayers thesis, Gurley-Shaw thesis.

Module II:

Demand for Money: Cash Transaction and Cash Balance approaches to demand for money; Keynesian version of the Quantity Theory of Money; Post-Keynesian theories of demand for money- Tobin's Portfolio Analysis, Baumol's Inventory Approach, Friedman's Reformulation of Quantity Theory of Money.

Module III:

Supply of Credit and Term Structure of Interest Rates: Theory of bank credit and bank deposits; Allocation of institutional credit; Factors influencing institutional credit; Credit supply curve; Term structure and risk structure of interest rates; Theories of term structure of interest rates- Expectations theory, Market segmentation theory, Preferred habitat theory.

Module IV:

Monetary Policy: Goals and targets; Tools of monetary policy- Bank Rate, CRR, SLR, Open Market Operations, Repo Rates, PLR; Inflation targeting; Channels of monetary policy transmission- interest rate and credit channels; Dynamics of monetary policy; Lags in monetary policy; Rules versus discretion; Payment mechanism; Counter cyclical monetary policy; Built-in stabilisers; Fiscal deficit and the monetary base.

Module V:

Banking Sector of India: Monetary reforms- Chakravarty and Narsimham (I and II) Committee Reports; Universal Banking- Khan Committee Report; Prudential regulation of banks and Basel norms; Restructuring the banking sector of India; RBI's New banking license norms.

Basic Reading List:

1. F.Mishkin (2003): The Economics of Money, Banking and Financial Markets, Addison Wesley
2. F.Mishkin (2007): Monetary Policy Strategy, Prentice Hall of India, New Delhi.
3. S.B.Gupta (2001): Monetary Economics, S. Chand and Co., New Delhi.
4. M.K.Lewis and P. D. Mizen (2000): Monetary Economics, Oxford University Press.
5. G.Ackley (1978): Macroeconomics: Theory and Policy, Macmillan, New York.
6. Y.V.Reddy (2000): A Review of Monetary and Financial Sector Reforms in India – A Central Banker's Perspective, UBSPD, New Delhi.
7. D.E.W. Laidler (1977): Demand for Money: Theory and Evidence, Dum-Don Valley.

Paper: AEE 408
Environmental Impact Assessment

FM=100, TE=70, MS=30

Module I:

Environmental Impact Assessment: Concepts of the environment and environmental degradation; Definition of EIA, Aims and benefits of EIA; EIA process and procedures; EIA and project cycle; Project screening- need for screening and methods of screening; Project screening in India.

Module II:

EIA Scoping and Terms of Reference: Meaning and aim of scoping; Methods of scoping; Terms of reference- need for ToR, format for ToR; Baseline data collection: Need for baseline data collection; Methods of baseline data collection- physical environment, biological environment, socio-economic and cultural environment.

Module III:

Identification of Environmental Impacts: Types of impacts- biological and physical-chemical impacts, social impact, cultural impact, health impact, economic impact; Categorisation of impacts; Methods for impact identification- checklists, interaction matrix method, overlay mapping, networks, geographic information systems.

Module IV:

Environmental Impact Prediction and Mitigation Measures: Methods of impact prediction- mathematical models, statistical models, geographic information system, field and laboratory experimental methods, expert judgment; Mitigation measures- types of mitigation measures, preventive measures, compensatory measures, corrective measures.

Module V:

Environmental Monitoring and Auditing: Principles and types of environmental monitoring; Environmental auditing- meaning and types, environmental auditing plan; Need and relevance of public consultation and participation for EIA; Strategic Environmental Assessment- the concept and methodology.

Basic Reading List:

1. Ram B Khadka et al (2013): Environmental Impact Assessment: Processes, Methods and Practices of South Asia, School of Environmental Science and Management and Asian Environmental Solution, Nepal.
2. L.W. Canter (1996): Environmental Impact Assessment, McGraw Hill.
3. J.Glasson, T.Riki and C.Andrew (1994): Introduction to Environmental Impact Assessment, University College of London.
4. R.Therivel et. al. (1992): Strategic Environmental Assessment, Earthscan.
5. World Bank / Environment Department (1991): Environmental Assessment Source Book (Vols. 1-2), World Bank.