

ORDINANCES FOR M.A. ECONOMICS

(Credit Based Semester Programme)

OBJECTIVES OF THE PROGRAMME:

1. Prepare Students with knowledge of basic economic theories, methods of economic theories and methods of economic analysis.
2. Training students in conventional economics and new developments in theories and economic policies.
3. Enabling students to understand analyze economic issues, ideas and problems correctly.
4. Covering the syllabus of important competitive examination to prepare students for competition.
5. Keeping pace with latest developments, approaches and policies in the field of economics.

PROGRAMME SPECIFIC OUTCOME (PSO):

After the successful completion of the programme, the students

1. Would be able to prepare various competitive examinations such as—NET, JRF, UPSC, PCS, IES etc.
2. Would be able to find out respectable and rewarding job both in public and private sector.
3. Would be able to start its own business, career in academics, computer related services, consultation services etc.
4. Would be able to take admissions in quality institutions for research activities.
5. Would have better understanding and skill in policy formation, economic analysis and entrepreneurship.

Admission

- University offers full time M.A. Economics programme of 4 semesters.
- Admission to MA 1st year in Semester I will be made as per the rules prescribed by the University from time to time.
- The reservation policy as prescribed by the Central and the State Government or its directions regarding admission from time to time shall be adhered in the admission.
- If, at any time after admission, it is found that a candidate has not fulfilled all the requirements stipulated in the offer of admission or has committed some

fraudulent act at any stage then the university reserves the right to revoke the admission of the candidate.

Eligibility For Admission

- A candidate shall be eligible for admission if he/she possess Bachelor's Degree under 3years pattern of education with Economics/Statistics/Mathematics as a subject in the third year of graduation and a minimum 40% marks in aggregate in graduation.
- The exact eligibility criteria for admission M.A. Economics programmes shall be as prescribed by the University from time to time and university has the power to repeal and modify the eligibility criteria for admission in future.

PROGRAMME DURATION

- The duration of the M.A. programme for the candidates admitted in semester I will be of two academic years (4 semesters).
- The duration of each semester will generally be 90 working days. There are two regular semesters in a year. The semester that begins in July (*July to December*) is known as *Odd Semester* and the semester that begins in Jan (Jan to June) is known as Even Semester.

EXAMINATION AND ASSESSMENT

- Each course in each of the 4 semesters will be of 100 marks in which 70 marks are devoted to semester end exam and 30 marks for internal evaluation. Internal evaluation of each paper shall consists of— (i) Seminar- 10 marks, (ii) One sessional test-10 marks; and (iii) attendance and overall performance.
- In assessing the performance of student in exams, awarded marks obtained by students will be converted into letter grades and grade points as per the procedure recommended by the UGC to compute the Semester Grade Point Average (**SGPA**) and Common Grade Point Average (**CGPA**).

STRUCTURE

MA Economics (Choice Based Credit Semester System) will be a 100 credit course. Overall total 20 courses are well spread over 4 semesters. These courses are divided in to three categories- Core Courses (5 credit each), Sub Elective Courses (5 credit each) and Open Elective Courses (5 credit each).

Number of Courses and Credits

S.N.	Types of course	Numbers of credit per course	Total Number of course Type	Total credit for the particular type
1	Core	5	12	60
2	Sub Elective	5	4	20
3	Open Elective	5	4	20
			Total Credit	100

Semester wise Break-up of courses

S.N.	Types of course	Semester I	Semester II	Semester III	Semester IV	Total
1	Core	3(15)	3(15)	3(15)	3(15)	12(60)
2	Sub Elective	1(5)	1(5)	1(5)	1(5)	4(20)
3	Open Elective	1(5)	1(5)	1(5)	1(5)	4(20)
Total		5(25)	5(25)	5(25)	5(25)	20(100)

Note: Figures in brackets are credits.

Core Courses: These courses will be compulsory for all students. There will be 12 (Twelve) core courses in all Out of these, 3 (three) courses would be taught in each Semester.

Elective Courses: These courses are divided in to two categories - Sub Elective Courses (5 credits each) and Open Elective Courses (5 credits each). Students would be required to elect any 1 (one) course from the list of sub elective and any 1 (one) course from the list of open elective in each Semester. Students from other discipline can elect any 1 (one) course from the list of open elective.

For each course of 5 credits, there will be 6 sessions in every week. Each session will be of 50 minutes duration. Out of 6 sessions per week, 4 sessions will be devoted to lectures and 2 sessions for tutorials for intensive teacher- taught interaction, exercise, project work and seminar in both core and elective courses.

Credit Structure of M.A. Economics

First Year: Semester I

Core Courses

Course No.	Course code	Course Name	L	T	Credit	Max. Marks	SE	IE
I	ECC-101	Microeconomic Analysis	60	30	5	100	70	30
II	ECC-102	Public Finance	60	30	5	100	70	30
III	ECC-103	Problems of Indian Economy: Basic Issues	60	30	5	100	70	30

Elective Courses

Sub Elective(Any One Course to be offered)								
IV	ESE-104	Statistical Methods	60	30	5	100	70	30
V	ESE-105	Theory of Agricultural Economics	60	30	5	100	70	30
Open Elective(Any One Course to be offered)								
VI	EOE-106	Industrial Economics	60	30	5	100	70	30
VII	EOE-107	Indian Public Finance	60	30	5	100	70	30

Total 5 Courses (3 + 1+1)

Credit = 25

First Year: Semester II

Core Courses

Course No.	Course code	Course Name	L	T	Credit	Max. Marks	SE	IE
I	ECC-201	Advanced Economic Theory	60	30	5	100	70	30
II	ECC-202	Fiscal Economics & Federal Finance	60	30	5	100	70	30
III	ECC-203	Indian Economy Industrial & External Sector	60	30	5	100	70	30

Elective Courses

Sub Elective(Any One Course to be offered)								
IV	ESE-204	Probability Theory and Statistical Inference	60	30	5	100	70	30
V	ESE-205	Agricultural Reforms and Marketing	60	30	5	100	70	30
Open Elective(Any One Course to be offered)								
VI	EOE-206	Project Appraisal	60	30	5	100	70	30
VII	EOE-207	Economics of Social Sector	60	30	5	100	70	30

Total 5 Courses (3 + 1+1)

Credit = 25

Second Year: Semester III

Core Courses

Course No.	Course code	Course Name	L	T	Credit	Max. Marks	SE	IE
I	ECC-301	Monetary Economics	60	30	5	100	70	30
II	ECC-302	International Trade	60	30	5	100	70	30
III	ECC-303	Environmental Economics	60	30	5	100	70	30

Elective Courses

Sub Elective(Any One Course to be offered)								
IV	ESE-304	Demography	60	30	5	100	70	30
V	ESE-305	Econometric Methods	60	30	5	100	70	30
Open Elective(Any One Course to be offered)								
VI	EOE-306	History of Economic Doctrines	60	30	5	100	70	30
VII	EOE-307	Economic Growth	60	30	5	100	70	30

Total 5 Courses (3 +1+1)

Credit = 25

Second Year : Semester IV

Core Courses

Course No.	Course code	Course Name	L	T	Credit	Max. Marks	SE	IE
I	ECC-401	Monetary Institutions and Policy	60	30	5	100	70	30
II	ECC-402	International Macroeconomics	60	30	5	100	70	30
III	ECC-403	Economic Approach to Environmental Issues	60	30	5	100	70	30

Elective Courses

Sub Elective(Any One Course to be offered)								
IV	ESE-404	Population Problems	60	30	5	100	70	30
V	ESE-405	Econometric Theory	60	30	5	100	70	30
Open Elective(Any One Course to be offered)								
VI	EOE-406	History of Economic Thought: Keynes & Indian	60	30	5	100	70	30
VII	EOE-407	Modern Growth Theory	60	30	5	100	70	30

Total (3 +1 + 1)

Credit = 25

Abbreviation: L = Lectures, T = Tutorials, SE = Semester Exam, IE = Internal Evaluation

Semester wise Syllabi (MA Economics)

Semester I

Course code	Course Name	Type of Course
ECC-101	Microeconomic Analysis	Core
ECC-102	Public Finance	Core
ECC-103	Problems of Indian Economy: Basic Issues	Core
ESE-104	Statistical Methods	Sub Elective
ESE-105	Theory of Agricultural Economics	Sub Elective
EOE-106	Industrial Economics	Open Elective
EOE-107	Indian Public Finance	Open Elective

ECC-101: Microeconomic Analysis

Unit I	Types of Equilibrium, Stability of Equilibrium, Cobweb Theorem, Demand Function, Elasticity of Demand, Theory of Consumer behaviour: Marginal Utility Theory, Indifference Curve Technique, Revealed Preference Theory, General Equilibrium: Walras	12 Lectures
Unit II	Recent Development in Demand : Economics of Risk and Uncertainty , Neumann-Morgenstern measure of Utility, Consumer Behaviour in Gamble, Insurance, Choice between Gamble & Insurance, Friedman Savage hypothesis, Constant Elasticity demand Function, Indirect Utility Functions, Expenditure Function, Lancaster's Theory, Bandwagon, Snob & Veblen Effects	12 Lectures
Unit III	Production Function: Cobb-Douglas, CES and VES function, Production Laws: Short run and long run, Least cost factor combination, Cost Functions from production function, Technical change and production function.	09 Lectures
Unit IV	Theory of Pricing: Basic features and equilibrium of firm in short and long run in perfect competition, monopoly and monopolistic competition, Price discrimination, Economic Surplus, Dead weight loss, Excess capacity of Chamberlin, Bilateral monopoly, Models of Collusive and Non Collusive oligopoly, Non Price Competition.	15 Lectures
Unit V	Theory of Games: Two person zero sum game, Games under pure & mixed strategies , Non cooperative games, Prisoners' Dilemma , Implications for Imperfect markets.	12 Lectures

Books Recommended:

- Henderson J, and R.E. Quandt: Microeconomic Theory: A Mathematical Approach , Mc Grow Hill, New Delhi
- Koutsoyiannis A: Modern Microeconomics: ELBS, Macmillan, Tokyo
- Varian, H.R.: Intermediate microeconomics: A Modern Approach, East West Press, New Delhi
- Hirshleifer, J and A Glazer: Price Theory and Applications, Prentice Hall of India, New Delhi
- Browning & Browning: Microeconomic Theory and Application, Kalyani Publications.
- Rubin field & Pindyck: Micro economics , Maxwell Macmillan.
- H.L. Ahuja: Advanced Economic Theory (Hindi & English)
- Mishra & Puri: Advanced Microeconomics, Himalaya Publishing House.
- M.L. Jhingan: Advanced Economic Theory, Vrinda Publications, Delhi
- P.K. Gupta & D.S. Hira: Operation Research, S. Chand & Company.

Course Specific Outcome:

1. Enables the student to understand the various behaviours of various economic units such as consumer, producer and firm.
2. Enables the student to understand the decision making process of various economic units such as consumer, producer and firm.
3. Enables the student to understand the price determination process of firm under different market conditions.

ECC-102 : Public Finance

Unit I	Role of Government in Organized Society. Concepts of Public Goods, Private Goods and Merit Goods; Causes of Market Failure -- Imperfections, Decreasing costs, Externalities and nature of public goods.	10 Lectures
Unit II	Theory of Social Goods, Musgrave's Budget Model, Political Process of Voting and the Provision of Public Goods.	15 Lectures
Unit III	Public Expenditure: Structure and Growth of Public Expenditure - Wagner's Law of Increasing State Activities, Wiseman- Peacock hypothesis. Public Expenditure in Relation to Economic Activity, Employment and Income Distribution.	13 Lectures
Unit IV	Public Revenue: Principles of taxation -- Benefit Theory of Taxation, Ability to Pay Theory of Taxation.	10 Lectures
Unit V	Theories of incidence; Excess burden, Effects of taxation, Double taxation, Taxation and Incentives, Theory of Tax Structure, changes during economic development. Goods and Service Tax (GST).	12 Lectures

Books Recommended:

- Musgrave, R.A. and P.B. Musgrave, Public Finance in Theory and Practice, McGraw Hill, Kogakusha, Tokyo.
- Herber, B.P., Modern Public Finance, Richard D. Irwin, Homewood.
- Musgrave, R.A., The Theory of Public Finance: A Study in Public Economy, Tokyo, McGraw Hill Book Co. and Kogakusha Co., (International student Edition)
- Musgrave, R.A., Fiscal Systems.
- Houghton, R.W., Public Finance
- Cutt, James., Taxation and Economic Development in India, Frederick A Praegar Publishers, New York.
- Gandhi, V.P., Some Aspects of India's Tax Struture, Vora and Company, Bombay.

Course Specific Outcome:

- Enables the student to understand the concepts of social, private and merit goods importance of government in the allocation of resources in social good.
- Enables the student to understand the various aspects of public expenditure as well as the theory of public expenditure.
- Enables the student to understand the various aspects of taxation as well as theories of taxation.

ECC-103 : Problems of Indian Economy: Basic Issues

Unit I	National Income: Concept, Trends, Composition and Structural change, Sectoral growth, Income Distribution and Income Inequality, Regional Disparities.	12 Lectures
Unit II	Poverty in India: Absolute and Relative, Poverty indices- Poverty Ratio; Poverty Gap Index and Squared Poverty Index; Multi-dimensional Poverty index; Analysis of Poverty in India, Inclusive Growth, Unemployment- Unemployment Rates; Elasticity; Structure and Jobless Growth; Social Welfare Schemes; Interrelation between Population, Development and Environment. Labour Force and Occupational Distribution of Population, Population Growth, Population Problem, Latest Census, Population Policy.	18 Lectures
Unit III	Planning in India: Objectives and Strategy of Planning; Achievements of Plans, Plan Models in India.	8 Lectures
Unit IV	Resource Base and Infrastructure: Energy-Hydro,Thermal, Nuclear, Transport and Communication,Social infrastructure -- Education, Health and Environment, Sustainable Development	7 Lectures
Unit V	Agriculture Sector: Role of Agriculture, Interrelationship between Agriculture and Industry, Growth of Indian agriculture. Institutional aspects -- Land reforms, Green Revolution, Technological Change in Agriculture, Agriculture Price Policy of India, Agricultural Finance, Agricultural Marketing, Food Security.	15 Lectures

Books Recommended:-

- Datt, R. and K.P.M. Sundharam, Indian Economy, S. Chand & Company Ltd., New Delhi.
- Misra, S.K. and V.K. Puri, Indian Economy -- Its Development Experience, Himalaya Publishing House, Mumbai.
- Kapila, Uma., Indian Economy : Since Independence
- Agrawal, A.N., Indian Economy, New Edge International Pvt Limited, New Delhi.
- Government of India, Economic Survey (Annual), Economic Division, Ministry of Finance, New Delhi.

- Ahluwalia, I.J. and I.M.D. Little (Eds), India's Economic Reforms and Development (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
- Jalan, B, India's Economic Policy -- Preparing for the Twenty-first Century, Viking, New Delhi.
- Parikh, K.S., India Development Report -- 1999-2000, Oxford University Press, New Delhi.
- Datt, R. (Ed.), Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.
- Wadhawa, Charan, D., Some Aspects of Indian Economy
- Lucas and Papanek, The Indian Economy-Recent Development and Futre Prospects
- Uppal, J.S., India's Economic Problems
- Agrawal, A.N and S.P.Singh., The Economics of Under Development
- Myrdal, Gunnar, Asian Drama (Vols. I and II)
- Sen, A.K. Choice of Techniques
- Hicks, Mukherjee and Ghosh, The Economic Framework of the Indian Economy
- Ahluwalia, Isher, J. Industrial Growth in India
- Bhagwati, J.W. and Desai, Padma., India: Planning for Industrialisation
- Bagchi, A., The Political Economy of Under Development in India
- Dandekar, V.M. and N. Rath, Poverty of India

Course Specific Outcome:

- Enables the student to understand the facts and various aspects of basic issues of Indian economy such as national income, poverty, unemployment, population, labour force etc.
- Enables the student to understand the planning process and resources base such as natural resources, physical infrastructure and social infrastructure of Indian economy.
- Enables the student to understand the situation, problems and prospects of agriculture sector of Indian economy.

ESE-104 : Statistical Methods

Unit I	Measures of Central Tendencies: Mean, Median, Mode, Quartiles and Percentiles. Measures of Dispersion: Mean and Standard Deviation, Skewness and Kurtosis, Moments upto fourth order.	12 Lectures
Unit II	Correlation Analysis: Assumptions and Concept of Correlation, Karl Pearson's and Spearman's Rank Correlation Coefficients and their Properties, Partial and Multiple Correlation. Association of Attributes, Independence of Attributes, Coefficients of Association.	14 Lectures
Unit III	Regression Analysis: Dependent and Independent Variables, Curve Fitting by Method of Least Squares (First and Second Degree Curves), Lines of Regression, Coefficients of Regression.	12 Lectures
Unit IV	Index Number: Concept of Index Number, Chain Base and Fixed Base Index Number, Laspeyre, Paasche and Fisher Index Number, Tests for an Ideal Index Number.	10 Lectures
Unit V	Interpolation and Extrapolation: Concept, Assumptions and Uses of Interpolation and Extrapolation. Methods of Interpolation and Extrapolation -- Binomial Expansion and Newton's Formula.	12 Lectures

Books Recommended:

- Mood, A.M. and P.A. Graybill: *Introduction to the Theory of Statistics*.
- Yule, G.U. and M.G. Kendall: *An Introduction to the theory of Statistics*.
- Gupta, S.C. and V.K. Kapoor: *Fundamentals of Mathematical Statistics* (eighth edition), S. Chand & Sons Publications, New Delhi.
- Gupta, S.C. and V.K. Kapoor: *Fundamentals of Applied Statistics* (third edition), S. Chand & Sons Publications, New Delhi.
- Gupta, S.C. and V.K. Kapoor: *Elements of Mathematical Statistics* (fourth edition), S. Chand & Sons Publications, New Delhi.
- Elhance, D.N.: *Fundamentals of Statistics* (Hindi Ed.)
- Agarwal, D.R.: *Statistics for Economists*, Vrinda Publications, New Delhi.
- Gupta, B.N.: *Statistics* (fourth edition), Sahitya Bhawan Publication, Agra (UP).
- Shukla S.M. and Sahay S.P.: *Statistical Analysis* (Hindi Ed.), Sahitya Bhawan Publication, Agra (UP).
- भुक्ला, एस०एम० एवं एस०पी० सहाय: *सांख्यिकी वि लेशण*, साहित्य भवन पब्लिके ान, आगरा, उ०प्र० ।

Course Specific Outcome:

- 1- Enables the student to understand the various methods of statistical analysis such as measure of central tendency, measure of dispersion. Correlation analysis and regression analysis.
- 2- Enables the student to understand the concept, method of construction, types and application of Index Number.
- 3- Enables the student to understand the technique of interpolation and xtrapolation.

ESE-105 : Theory of Agricultural Economics

Unit I	Nature and Scope of Agricultural economics; Difference between agricultural economics and industrial economics; Problems of agriculture in developing countries.	10 Lectures
Unit II	Role of agriculture in economic development; Economic growth with traditional agriculture; Economic theories of agriculture development: Lewis, Fei-Ranis and Mellor Thoery.	15 Lectures
Unit III	Agriculture production functions: Concept and Types of Agricultural Production Function. Returns to scale in agriculture, Production Decesions: Factor-Product Relationship, Factor-Factor Relationship, Product-Product Relationship,	18 Lectures
Unit IV	Economics of Farm size, Agriculture productivity in developing Countries.	7 Lectures
Unit V	Problems of Unemployment and under employment in agriculture; Saving and capital formation in agriculture.	7 Lectures

Books Recommended:

- The Indian Society of agricultural Economics. Readings in Agriculture Economics. Comparative Experience of Agricultural development in Developing Countries.
- Khusro, A.M., Reading in Agricultural Development
- Eicher and Witt, Agricultural and Economics Development

- Sowth W. and Jhonston, Agricultural Development and Economics Growth
- Mellor, J.W., The Economics of Agricultural Development
- Scultz, T.W., Economics Growth and Agricultural.
- Heady, E.O., Economics of Agricultural Production and Resuorces Use.
- Shukla, Tara, Economics and Under-development Agriculture.
- Shukla, Tara, Capital Formation in Agriculture.
- Shephered, G.S., Agricultural Price Analysis
- Singh, Baljit, Whether Agriculture in India
- Sen, S.R., The Straegy for Agricultural Development
- Jain, S.C., Agriculture Policy in India
- Dwivedi, R.C., New Strategy of Agricultral Development in India
- N.C.A.E.R., A Strategy for Agriculture Planning.
- Planning Commission, Five Year Plans

Course Specific Outcome:

- 1- Enables the student to understand the Nature and Scope of Agricultural economics, Problems of agriculture in developing countries and Agriculture productivity in developing Countries.
- 2- Enables the student to understand the Concept and Types of Agricultural Production Function, Factor-Product Relationship, Factor-Factor Relationship, Product-Product Relationship.
- 3- Enables the student to understand the Problems of Unemployment and under employment in agriculture sector; Saving and capital formation in agriculture.

EOE-106 : Industrial Economics

Unit I	Meaning and Scope of Industrial Economics, Basic Concepts of Industrial Economics -- Concept and Types of Firm, Concepts of Industry, Market, Market Structure, Market Power, Market Conduct and Market Performance. Profit maximizing Goals and Alternative Goals of a Firm.	15 Lectures
Unit II	Expansion and Growth of Firm: Concept, Types and Motives of Diversification, Vertical Integration, Merger. Growth of Firm: Need for Growth of a firm, Theories of Growth of Firm – Downie, Penrose and Maris Model.	15 Lectures
Unit III	Market Innovation: Concept of Innovation Process -- Innovation, Invention and Imitation, Measurement of Innovation Activities, Determinants of Innovation Activities. Advertisement activity of Firm.	12 Lectures
Unit IV	Concept of Industrial Efficiency – Technical Efficiency, Factor Price Efficiency and Productive Efficiency. Factors Determining Industrial Efficiency, Concept and Measurement of Industrial Productivity.	12 Lectures
Unit V	Industrial Concentration – Concept, Types and Measurement of Industrial Concentration, Industrial Concentration in India.	6 Lectures

Books Recommended :

- Divine, P.J. and R.M. Jones et. al.: *An Introduction to Industrial Economics*, George Allen and Unwin Ltd., London.
- Hay, D. and D.J. Morris.: *Industrial Economics -- Theory and Evidence*, Oxford University Press, London.
- Bains, J.S.: *Industrial Organisation*, Cheltenham, U.K.
- Barthwal, R.R.: *Industrial Economics* (second edition), New Age International Pvt. Ltd., New Delhi.
- Martin, Stephen: *Industrial Economics – Economic Analysis and Public Policy*, Macmillan Publishing Company, London.
- Singh, A and Sadhu, A.N.: *Industrial Economics*, Himalaya Publishing House, New Delhi.
- के० आर० त्रिपाठी: *औद्योगिक अर्थ शास्त्र*, यूनिवर्सिटी पब्लिके टान, नई दिल्ली ।

Course Specific Outcome:

- 1- Enables the student to understand the various terms used in industrial economics such as firm, industry, market, market structure etc. It also enables the student to understand the various forms of firm that exist in an industrial society.
- 2- Enables the student to understand the various conducts such as product differentiation, product diversification, vertical integration, merger, acquisition, takeover, innovation etc. performed by a firm to achieve its goal.
- 3- Enables the student to understand the various problems such as industrial concentration, industrial inefficiency that may exist in an industrial society.

EOE-107 : Indian Public Finance

Unit I	Theory of Federal Finance; Fiscal Federalism -- Principles and Problems, other aspects of Union-State relationship.	12 Lectures
Unit II	India's Fiscal Policy: Long-term fiscal policy; Demand Management; Resource Mobilisation for Financing of Five Year Plans; Domestic and Foreign Finance; Fiscal sector and Fiscal Sector Reforms in India.	12 Lectures
Unit III	Public Debt in India, Trends in Plan and Non-Plan Expenditure; Control of Public Expenditure.	9 Lectures
Unit IV	India's Tax Structure; Tax Policy -- Objectives and Instruments; Taxation of Income; Corporate Taxation; State Taxes and Expenditure. Agriculture taxation; Taxation of production and sale; Value Added Tax. A survey of Tax Reforms in India.	15 Lectures
Unit V	Structure and Classification of Budgets -- Functional and Economic; Performance budgeting; Zero base budget. Local Finance: Urban and Rural -- A detailed Study of Central, State and Local Finance.	12 Lectures

Books Recommended:

- Kaldor, N., Indian Tax Reform
- James Cutt, Taxation of Economic Development of India
- Bhargava, R.N., A Manual of Economic and Functional Classification of Government Transaction
- U.N., A Manual for Programme and Performance Budgeting
- N.C.A.E.R., Economic Functional Classification of Central and State Government Budget 1957-58
- Govt. of India, Annual Budgets

Course Specific Outcome:

- 1-** Enables the student to understand the theory of Federal Finance as well as idea, Principles and Problems of Fiscal Federalism.
- 2-** Enables the student to understand the India's long – term Fiscal Policy and Fiscal Sector Reforms in India.
- 3-** Enables the student to understand the Tax Structure, Tax Policy and Budget formation process in India.

Semester II

Course Code	Name of Course	Type of Course
ECC-201	Advanced Economic Theory	Core
ECC-202	Fiscal Economics & Federal Finance	Core
ECC-203	Indian Economy Industrial & External Sector	Core
ESE-204	Probability Theory and Statistical Inference	Sub Elective
ESE-205	Agricultural Reforms and Marketing	Sub Elective
EOE-206	Project Appraisal	Open Elective
EOE-207	Economics of Social Sector	Open Elective

ECC- 201: Advanced Economic Theory

Unit I	Alternative Theory of Firm: managerial Theories of firm: Baumol's sales Revenue Maximisation, Mariss's Maximisation of Balanced Rate of Growth & Williamson's Managerial Discretion, Bain's Limit price Theory, Behavioural Theory of Cyret & March, Pricing Strategies.	15 Lectures
Unit II	Input-Output Analysis: I-O Table, Transaction matrix, Coefficient Matrix, Leontief Matrix, Static Model, Utility of I-O Analysis, Hawkins-Simon Condition, Linear Programming: Graphical Solution & Simplex Method, Uses of LP.	12 Lectures
Unit III	Theory of Distribution: Theory of Factor Pricing, Classical and Modern theories of Rent, Theory of Profit- knight & Shackles, Modern Theories of Interest, Product Exhaustion Theorem.	9 Lectures
Unit IV	Welfare Economics: Economic Welfare Criterion, Pareto Oprimality Conditions, Social Welfare Function, Compensation Principles, Social Choice Theory of Arrow, Rawl's Theory of Justice.	11 Lectures
Unit V	Theories of Search: Models of Stigler, Nelson Salop, Rothschild, Nelson Varian, Economics of Information: Asymmetric Information: Problem of adverse selection of Akerlof, Moral Hazard, Market Signalling (Spence).	13 Lectures

Books Recommended:

- Henderson J, and R.E. Quandt: Microeconomic Theory: A Mathematical Approach , Mc Grow Hill, New Delhi
- Koutsoyiannis A: Modern Microeconomics: ELBS, Macmillan, Tokyo
- Varian, H.R.: Intermediate microeconomics: A Modern Approach, East West Press, New Delhi
- Hirshleifer, J and A Glazer: Price Theory and Applications, Prentice Hall of India, New Delhi
- Browning & Browning: Microeconomic Theory and Application, Kalyani Publications.
- Rubin field & Pindyck: Micro economics , Maxwell Macmillan.
- H.L. Ahuja: Advanced Economic Theory (Hindi & English)
- Mishra & Puri: Advanced Microeconomics, Himalaya Publishing House.
- M.L. Jhingan: Advanced Economic Theory, Vrinda Publications, Delhi
- P.K. Gupta & D.S. Hira: Operation Research, S. Chand & Company.

Course Specific Outcome:

- 1-** Enables the student to understand the Alternative Theory of Firms, Input-Output Analysis and Linear Programming as well as Utility of Input-Output Analysis Linear Programming Technique in economic analysis.
- 2-** Enables the student to understand the Theory of Factor Pricing, Economic Welfare Criterion, Pareto Optimality Conditions, Social Welfare Function.
- 3-** Enables the student to understand the Theories of Search, Economics of Information, Asymmetric Information.

ECC-202 : Fiscal Economics and Federal Finance

Unit I	Public Debt: Nature and Management, Burden of Public debt, Methods of Redemption.	10 Lectures
Unit II	The Budget, Budget Making and the Budgetary Process, Theory of Optimum Budget. Zero-base Budgeting system; Performance based budgeting system. Alternative concepts of deficits and their implications	18 Lectures
Unit III	Fiscal Policy: Objectives and Instruments, Compensatory Finance, Functional Finance, Interdependence of fiscal and monetary policies, Fiscal policy for developing economies.	13 Lectures
Unit IV	Fiscal Federalism: Fiscal federalism in India, Vertical and Horizontal fiscal imbalance, Fiscal Federalism: Principles & Problems, Union- /State Financial Relations in India.	12 Lectures
Unit V	Reports of Finance Commission in India; Problems of states' resources and indebtedness, Problems of Local Finance.	7 Lectures

Books Recommended:

- Musgrave, R.A. and P.B. Musgrave, Public Finance in Theory and Practice, McGraw Hill, Kogakusha, Tokyo.
- Herber, B.P., Modern Public Finance, Richard D. Irwin, Homewood.
- Musgrave, R.A., The Theory of Public Finance: A Study in Public Economy, Tokyo, McGraw Hill Book Co. and Kogakusha Co. (International student Edition)
- Musgrave, R.A., Fiscal Systems.
- Houghton, R.W., Public Finance
- Cutt, James., Taxation and Economic Development in India, Frederick A Praegar Publishers, New York.
- Gandhi, V.P., Some Aspects of India's Tax Structure, Vora and Company, Bombay.

Course Specific Outcome:

- 1- Enables the student to understand the Nature and Management Public Debt, Budget Making and the Budgetary Process and various types of budgeting system such as Zero-base Budgeting, Performance based budgeting etc.
- 2- Enables the student to understand the Nature and functioning of Fiscal Policy, Interdependence of fiscal and monetary policies.
- 3- Enables the student to understand the Principles & Problems of Fiscal Federalism, Union- /State Financial Relations in India and Reports of Finance Commission in India.

ECC-203 : Indian Economy: Industrial and External Sector

Unit I	Industrial Sector: Growth and Structure of Indian industries; Industrial productivity - measurement, partial and total trends; Industrial policy of India; Policies towards public sector enterprises -- Privatisation and Disinvestment Policy.	15 Lectures
Unit II	Policy towards cottage and small-scale industries; Industrial sickness and problem of underutilisation of capacity.	5 Lectures
Unit III	Industrial labour and industrial relation, issues in labour market reforms, Exit policy.	10 Lectures
Unit IV	External Sector: Composition and direction of foreign trade of India; Balance of payments situation; Trade and exchange rate policies, FEMA; Inflow and outflow of foreign capital and MNCs in India.	15 Lectures
Unit V	Economic Reforms: Fiscal sector reforms, Financial sector reform; Globalisation of Indian economy, WTO and its impact on Indian economy; Issues in competition and safety nets in Indian economy.	15 Lectures

Books Recommended:-

- Datt, R. and K.P.M. Sundharam, Indian Economy, S. Chand & Company Ltd., New Delhi.
- Misra, S.K. and V.K. Puri, Indian Economy -- Its Development Experience, Himalaya Publishing House, Mumbai.
- Kapila, Uma., Indian Economy : Since Independence
- Agrawal, A.N., Indian Economy, New Edge International Pvt Limited, New Delhi.
- Government of India, Economic Survey (Annual), Economic Division, Ministry of Finance, New Delhi.
- Ahluwalia, I.J. and I.M.D. Little (Eds), India's Economic Reforms and Development (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
- Jalan, B, India's Economic Policy -- Preparing for the Twenty-first Century, Viking, New Delhi.
- Parikh, K.S., India Development Report -- 1999-2000, Oxford University Press, New Delhi.
- Datt, R. (Ed.), Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.

Course Specific Outcome:

- 1- Enables the student to understand the Different aspects and problems as well as policies of industrial sector of Indian economy.
- 2- Enables the student to understand the Different aspects and problems as well as policies of external sector of Indian economy.
- 3- Enables the student to understand the Process of Economic Reforms in India, llobalisation of Indian economy, Issues in competition and safety nets in Indian conomy.

ESE-204 : Probability Theory and Statistical Inference

Unit I	Probability Theory: Trial and Event, Exhaustive Events, Favourable Events, Mutually Exclusive Events, Equally Likely Events, Independent Events. Definition of Probability, Additive and Multiplicative Theorem of Probability. Concept of Random Variable, Elementary idea about Mathematical Expectation.	14 Lectures
Unit II	Sampling Theory: Sample and Population, Sampling Distribution, Standard Error, Concept of Hypothesis, Error Sampling -- Type I and Type II Error, Critical Region and Level of Significance, One-tail and Two-tal tests. Sampling Methods -- Simple Random Sample, Cluster Sampling, Multi-stage Sampling.	14 Lectures
Unit III	Theoretical Statistical Distribution: Binomial Distribution, Poisson Distribution and Normal Distribution -- Properties and Uses.	10 Lectures
Unit IV	Test of Significance: Large and Small Sample Tests, Sample tests based on Normal Distribution.	10 Lectures
Unit V	Chi square test and goodness of fit, Contingency table and goodness of fit. Basic idea of test of significance based on t, Z and F distributions.	12 Lectures

Books Recommended:

- Mood, A.M. and P.A. Graybill: *Introduction to the Theory of Statistics*.

- Yule, G.U. and M.G. Kendall: *An Introduction to the theory of Statistics*.
- Gupta, S.C. and V.K. Kapoor: *Fundamentals of Mathematical Statistics* (eighth edition), S. Chand & Sons Publications, New Delhi.
- Gupta, S.C. and V.K. Kapoor: *Fundamentals of Applied Statistics* (third edition), S. Chand & Sons Publications, New Delhi.
- Gupta, S.C. and V.K. Kapoor: *Elements of Mathematical Statistics* (fourth edition), S. Chand & Sons Publications, New Delhi.
- Elhance, D.N.: *Fundamentals of Statistics* (Hindi Ed.)
- Agarwal, D.R.: *Statistics for Economists*, Vrinda Publications, New Delhi.
- Gupta, B.N.: *Statistics* (fourth edition), Sahitya Bhawan Publication, Agra (UP).
- भुक्ला, एस०एम० एवं एस०पी० सहाय: *सांख्यिकी वि लेशण*, साहित्य भवन पब्लिके ान, आगरा, २०१० ।

Course Specific Outcome:

- 1- Enables the student to understand the Different concepts of Probability and use of probability theory in statistical analysis, Sampling Theory and various methods of sampling.
- 2- Enables the student to understand the Various types of Theoretical Statistical Distribution such as Binomial Distribution, Poisson Distribution, Normal Distribution etc.
- 3- Enables the student to understand the Statistical testing procedure.

ESE-205 : Agricultural Reforms and Marketing

Unit I	Economics of land reforms; Land reforms and economic development; Co-operative and Collective Farming; Technological reforms; Green Revolution, Farm Mechanisation, Irrigation System in India.	15 Lectures
Unit II	Agricultural Marketing; Types, structure, and functions and problems, cost analysis, Cost-Price structure in agriculture.	10 Lectures
Unit III	Pricing of agriculture products; Price fluctuation of agricultural products, Price stabilization measures; Agricultural price policy in India.	15 Lectures
Unit IV	Indian Agriculture: Agricultural finance, Land Utilization; New agricultural strategy Cropping Pattern and Crop Insurance.	10 Lectures
Unit V	Agricultural growth in India: Food Security, Food policy; Public distribution system Agricultural Trade, State Trading in food grains. WTO and Indian agriculture	10 Lectures

Books Recommended:

- The Indian Society of agricultural Economics. Readings in Agriculture Economics. Comparative Experience of Agricultural development in Developing Countries.
- Khusro, A.M., Reading in Agricultural Development
- Eicher and Witt, Agricultural and Economics Development
- Mellor, J.W., The Economics of Agricultural Development
- Heady, E.O., Economics of Agricultural Production and Resources Use.
- Shukla, Tara, Economics and Under-development Agriculture.
- Shukla, Tara, Capital Formation in Agriculture.
- Shepherd, G.S., Agricultural Price Analysis
- Singh, Baljit, Whether Agriculture in India

- Sen, S.R., The Strategy for Agricultural Development
- Jain, S.C., Agriculture Policy in India
- Dwivedi, R.C., New Strategy of Agricultural Development in India
- N.C.A.E.R., A Strategy for Agriculture Planning.
- Planning Commission, Five Year Plans
- Planning Commission, Reports of the Committee of the Panel on Land Reforms U.N.O., Land Reforms Reports.

Course Specific Outcome:

- 1- Enables the student to understand the Agricultural reforms in India such as land reforms, Co-operative and Collective Farming, Technological reforms, Green Revolution etc.
- 2- Enables the student to understand the Various aspects of Agricultural Marketing Cost-Price structure in agriculture.
- 3- Enables the student to understand the Pricing techniques of agriculture products and Agricultural price policy in India.

EOE-206 : Project Appraisal

Unit I	Project Appraisal: Cash - Flow Analysis of a Project, Break - even - Point, Pay - back Period, Margin of Safety, Contribution, Profit - Volume Ratio.	10 Lectures
Unit II	Methods of Project Appraisal: Pay -back Period Method, Return on Capital Method, Cost-Benefit Analysis -- Net Present Value Method, Internal Rate of Return Method, Appraisal of Public Projects--Social Cost-Benefit Analysis.	16 Lectures
Unit III	Industrial Location analysis: Determinants of Industrial Location, Theories of Industrial Location -- Weber Theory, Sargent Florence Theory.	14 Lectures
Unit IV	Industrial Finance: Need for Industrial Finance -- Short-term, Medium-term and Long- term Finance, Sources of Industrial Finance -- Internal and External Sources. Debt and Equity Capital, Types of Shares -- Ordinary and Preferential Shares, Types of Debentures.	12 Lectures
Unit V	Sources of Industrial Finance in Indian Market, Development of Financial Institutions and Capital Market in India.	8 Lectures

Books Recommended :

- Smith, D.M.: *Industrial Location -- An Economic and Geographic Analysis*, John Wiley, New York.
- Barthwal, R.R.: *Industrial Economics* (second edition), New Age International Pvt. Ltd., New Delhi.
- Prasanna and Chandra: *Project Appraisal and Investment Planning*.
- Singh, A and Sadhu, A.N.: *Industrial Economics*, Himalaya Publishing House, New Delhi.
- के० आर० त्रिपाठी: *औद्योगिक अर्थ शास्त्र*, यूनिवर्सिटी पब्लिके ान, नई दिल्ली ।

Course Specific Outcome:

- 1- Enables the student to understand the Various aspects of Project Appraisal and different methods of Project Appraisal.

- 2- Enables the student to understand the Process of determination of Industrial Location and theories of Industrial Location.
- 3- Enables the student to understand the Various aspects of Industrial Finance, different options of industrial finance available to an investor and various sources of Industrial Finance in Indian Financial Market.

EOE-207: Economics of Social Sector

Unit I	Education and Eco Development: Concepts, Significance, Economic Value of Education, Human Capital and Human Resource, Demand and Supply of Education, Determinants of demand for education, Cost & Benefits of Education.	12 Lectures
Unit II	Educational Planning and Economic Growth: Manpower Requirements and Techniques of Manpower forecasting, Educational Financing: Sources of Educational Finance, Expenditure on Education, Private Sector Investment.	12 Lectures
Unit III	Health and Economic Development, Demand and Supply of Medical Care, Health Insurance, Public-Private participation Issue in Health Services, Role of Government & Private Sector in Health Services.	12 Lectures
Unit IV	Determinants of Health Status: Nutrition and Health, Development and Health, Poverty and Malnutrition, Social determinants of Health, Financing of Health Care: Principles and Constraints, Health care expenditures & Assistance.	12 Lectures
Unit V	Inequality and Development: Rotation, Inverted U Hypothesis, Empirical Evidences, Measurement of Inequality, Inequality and Poverty: Income and Marginalised groups, Poverty and Nutrition, Poverty & Social Conflict.	12 Lectures

Books Recommended:

- Mark Blaug (1960): Economics of Education.
- T. Shultz (1960): Investment in Human Capital, American Economic Review, vol. 60
- N.V. Varghese (2006): Reforming Education Financing, www.indiaseminar.com.
- Manpower Profile India Year Book, Institute of Applied Manpower Research, New Delhi.
- Feldstein, P.J. (1979): Health care Economics: John Wiley & Sons, New York.

- Follard, Goodman & Stano (1997): The Economics of Health & Health Care, Prentice Hall, New Jersey.
- C. Gopalan (1992): Under Nutrition: Measurement and Implications in Nutrition and Poverty ed. Osmani S.R., C'larendon Press Oxford.
- Todaro, Michael and Stephen Smith (2005): Economic Development, Pearson Education, London
- Human Development Reports of UNDP
- Anthony J. Cuyler & Joseph P. (ed) (2000): Handbook of Health Economics: New House, North-Holland, Elsevier Science.
- Reports and Publications of WHO

Course Specific Outcome:

- 1-** Enables the student to understand the Various aspects of Education, relation between Education and Economic Development and Educational Planning in India.
- 2-** Enables the student to understand the Various aspects of Health, relation between Health and Economic Development.
- 3-** Enables the student to understand the Relation between Inequality and Development.

Semester III

Course Code	Name of Course	Type of Course
ECC-301	Monetary Economics	Core
ECC-302	International Trade	Core
ECC-303	Environmental Economics	Core
ESE-304	Demography	Sub Elective
ESE-305	Econometric Methods	Sub Elective
EOE-306	History of Economic Doctrines	Open Elective
EOE-307	Economic Growth	Open Elective

ECC-301 : Monetary Economics

Unit I	Definition of Monetary Economics; Nature and scope of Monetary Economics; significance of Monetary economics; Concept and significance of money and liquidity; Neutrality and non - neutrality of money; Money in closed and open economy; Paper currency standard and principles of Note issue; Circular flow of Money.	12 Lectures
Unit II	Meaning of demand for money; Classical approach to demand for money; Keynes' approach to demand for money; Post Keynesian approach to demand for money (Friedman, Buamol, Tobin); Keynesianism and Monetarism;	12 Lectures
Unit III	Inflation-causes, types, effects and control Classical, Keynesian and Monetarist approach to inflation; Structural theory of inflation; Open and suppressed Inflation, demand pull and cost push inflation; wicksell's theory of Price fluctuations; Philips curve analysis; Samuelson and Solow's contribution- the natural rate of unemployment hypothesis; Tobin's modified Philips curve; Adaptive expectations and rational expectations; Deflation-causes ;types and control; Stagflation and Policies to control stagflation.	18 Lectures
Unit IV	Quantity Theory of Money, Liquidity Theory of Money, Patinkin's Real Balance Effect.	9 Lectures
Unit V	Measurement of value of money, Monetary Theories of Business cycle, Theories of Interest rate determination.	9 Lectures

Books Recommended:

- Keynes, J.M., Treatise on Money.

- Keynes, J.M., The General Theory of Employment Interest and Money
- Halm, G.N., Monetary Theory,
- Kurihara, K., Monetary Theory and Public Policy,
- Hansen, B., A Study in the Theory of Inflation,
- Dillard, D.H., The Economics of J.M. Keynes

Course Specific Outcome:

- 1- Enables the student to understand the Nature, scope and significance of Monetary Economics, Neutrality and Non - neutrality of money and role of Money in closed as well as in open economy.
- 2- Enables the student to understand the Various theories of demand for money and Types and causes of inflation in any economy.
- 3- Enables the student to understand the Various methods of Measurement of value of money.

ECC-302 : International Trade

Unit I	Classical Theories of International Trade: Absolute Advantage and Comparative Advantage Theory, Theory of Reciprocal Demand, Evaluation of the Classical Theory. Neo-classical theories of Trade: Opportunity Cost Theory, Trade Equilibrium through Production Possibility Curve and Community Indifference Curve, Gains from Trade, Economic Growth and International Trade, Immizerising Growth.	13 Lectures
Unit II	Offer Curve Analysis, Trade Indifference Curve, Derivation of Offer Curve using Trade Indifference Curve, General Equilibrium in Trade. Terms of Trade – Concepts and Measurements, International Trade and Economic Development.	12 Lectures
Unit III	Specific Factor Model of Trade, Factor Proportion Theory of Trade (H-O Theorem), Factor Price Equalisation, Leontief Paradox, Stolper - Samuelson Theorem, Rybczynski Theorem, Effect of Change in Demand on Trade. Intra-industry Trade and Trade under Imperfect Competition. International Capital Movement – FDI and FPI.	13 Lectures
Unit IV	Commercial Policy: Free Trade vs Protection, Arguments for and against the Policy of Protection, Theory of Tariff and Quota, Dumping and Most Favoured Nation Clause, Other Tools of Commercial Policy. International Trading Environment – GATT and WTO.	12 Lectures
Unit V	Economic Integration: Different Forms of Economic Integration, Theory of Customs Union, Effects of Custom Unions -- Static and Dynamic Framework, Lipsey Model, Vanek Model, Some Examples of Economic Integration – EU, NAFTA and LAFTA.	10 Lectures

Books Recommended:

- Sodersten, Bo and Reed, G.: *International Economics* (third edition), Macmillan, London.
- Krugman, P., Obstfeld, M and Melitz, M.J.: *International Economics – Theory and Policy* (ninth edition), Pearson Education Ltd, England.

- Salvatore, D: *International Economics* (seventh edition), John Wiley & Sons, New York.
- Kindleberger, C.P.: *International Economics* (eighth edition), Richard. D. Irwin Inc, Homewood.
- Kenan, P.B.: *The International Economy* (fourth edition), Cambridge University Press, UK.
- Mannuar, H.G.: *International Economics* (second edition), Vikas Publication House Pvt. Ltd., Noida (UP).
- Mithani, D.M.: *International Economics* (sixth edition), Himalaya Publication, New Delhi.
- Ohlin, B.: *Interregional and International Economics*, Oxford University Press, London.
- Ellsworth, P.T. and Leith, J.C.: *The International Economy* (sixth edition), Macmillan Publication, New York.
- Haberler, G.V.: *The Theory of International Trade*, W. Hodge & Company, London.
- Ellis, I I. S. and Metzler (ed.): *Readings in the Theory of International Economics*.
- एम०सी० वै य एवं सुदामा सिंह: *अन्तर्राष्ट्रीय अर्थ शास्त्र*, ऑक्सफोर्ड एण्ड आई०बी०एच० पब्लिशिंग कं०प्रा० लिमिटेड, नई दिल्ली।

Course Specific Outcome:

- 1- Enables the student to understand the Various theories of international trade such as classical, neo-classical and H-O theories of international trade.
- 2- Enables the student to understand the Different tools and effects various Commercial Policy such as Tariff, Quota and Dumping, International Trading Environment – GATT and WTO.
- 3- Enables the student to understand the Theories of Economic Integration and different forms of Economic Integration and some specific economic blocks – EU, NAFTA and LAFTA.

ECC-303 : Environmental Economics

Unit I	Environmental Economics: Meaning and Scope, Environment and Economy: Neo-classical and Ecological Perspectives, Interlinkages, Material Balance Model, Environment and Development Trade-off.	12 Lectures
Unit II	Deviation from economic efficiency, Pollution and Externality, Environmental Quality as Public Good, Case of Market failure, optimal level of pollution and Changes.	12 Lectures
Unit III	Economics of Environmental Regulations: Liability Laws, Allocation of Property Rights, Emission Standards, Pollution Tax and Transferable Pollution Permit.	14 Lectures
Unit IV	Limits to Growth: Malthusian, Neo-classical and Ecological Economics Perspectives. Sustainable Development: Concept, Rules, Approaches to sustainability and indicators, Sustainable Agriculture, Sustainable Industrialisation	12 Lectures
Unit V	Common Property Resources: Problem and Management, CPR: Indian Context	10 Lectures

Books Recommended:

- Ehrlich, P., A. Ehrlich and J. Hilden, Economics, Population, Resources, Environment, W.H. Freeman, San Francisco.
- Hemple, Lamont C., Environmental Economics: The Global Challenge, First East West Press, Edinburgh.
- Ahmad.M.Hussen: Principle of Enviromental Economics. Pouledge & Taylor & Francis Group.
- R.N. Bhattacharya: Environmental Economics, Air India Perspective, oxford university Press.
- माया माहेश्वरी: पर्यावरणीय अर्थशास्त्र– एक भारतीय परिप्रेक्ष्य, हर आनन्द पब्लिकेशन्स, नई दिल्ली।
- Thomas & Callan : Enviromental Economics.
- Nick Hanley, F. Shogran & J. Whitel : Enviromental Economics Theory & Practice, Oxford University Press
- K.V. Pavitran : A Text Book of Enviromental Economics, New Age India Publications.
- U. Sarkar : Enviromental Economics (edited).
- Erach Bharucha : Enviromental Studies, Orient Lorgman.
- Karpagam. M. A Text book of Enviromental Economics, Sterling Publisher Home.
- Nahoral Enviroment Policy 2006, CSO, India.

Course Specific Outcome:

- 1- Enables the student to understand the Meaning and Scope Environmental Economics, Relation between Environment and Economy.
- 2- Enables the student to understand the Environmental Quality as Public Good, Economics of Environmental Regulations, Limits to Growth and Sustainable Development.
- 3- Enables the student to understand the Concept of Common Property Resources (CPR), Problem and Management CPR in Indian Context.

ESE-304 : Demography

Unit I	Demographic Analysis: Concept, Scope, Subject Matter, Importance and Tools,	8 Lectures
Unit II	Population Theories: Malthus, Optimum Theory, Herbert Spencer Logistic Curve Theory, Harvey Liebenstein, Demographic Transition.	15 Lectures
Unit III	Demographic Measurements: - Meaning, Difference between Fertility and Fecundity, Determinants and Measurements- Fertility Rates: CBR, GFR, SFR, TFR, and Reproduction Rates: GRR, NRR.	15 Lectures
Unit IV	Mortality and Morbidity; Concepts Causes of Death, Importance and Measurement-CDR, ASDR, IDR, SDR, Correction Factor	10 Lectures
Unit V	Life Table: Construction, Types, Importance, Uses in Demography.	12 Lectures

Books recommended :

- Thompson, S.W. and T Lewis: Population Problems
- Smith, Kenneth: The Malthusian Controversy
- Malthus, T.R.: An Essay on Population
- Cox, P.R.: Demography

- Bose, Ashish: Pattern of Population Change in India
- Joseph. J. Spengler and Dudley Ducan, Population theory and Policy
- Kanitkar Tara, Bhende Asha
- Rawat, Ishwar Modi: Ageing and Human Development-- Global Perspective.

Course Specific Outcome:

- 1- Enables the student to understand the Concept, Scope, Subject Matter and Important Tools of Demographic Analysis as well as Demographic Measurements.
- 2- Enables the student to understand the Population Theories and Concept and Causes of Demographic Transition.
- 3- Enables the student to understand the Construction, Types, Importance and Uses of Life Table in Demographic Analysis.

ESE-305 : Econometric Methods

Unit I	Methodology of Econometrics, Economics and Econometrics, Method of Ordinary Least Squares, Two-Variable Linear Regression Model, Best Linear Unbiased Estimator, Significance Tests of Parameters, Maximum Likelihood Estimators -- MOM and GMM Estimators.	13 Lectures
Unit II	General Linear Regression Model -- Estimation and Properties of Estimators, Test of Overall Significance of the Regression.	13 Lectures
Unit III	Problem of Misspecification and Multicollinearity, Restricted Least Squares.	12 Lectures
Unit IV	Heteroscedastic Disturbance, Problem of Autocorrelation, Generalized Least Squares: Aitken's Procedure, Properties of GLS Estimators.	12 Lectures
Unit V	Instrumental Variables, Errors in Variables, Dummy Variables, Ridge Regression.	10 Lectures

Books Recommended:

- Gujarati, D.N.: *Basic Econometrics* (fourth edition), McGraw Hill.
- Johnston, J.: *Econometric Methods*, McGraw Hill.
- Madala, G.S.: *Econometrics* (third edition), McGraw Hill.
- Klein, L.R.: *Text Book of Econometrics*
- Theil, H.: *Principles of Econometrics*
- Kmenta, J.: *Elements of Econometrics*
- Imtriligator, M.D.: *Econometric Models -- Techniques and Applications*.
- Malinvaud, E.: *Statistical Methods in Econometrics*.

Course Specific Outcome:

- 1- Enables the student to understand the Methodology of Econometrics, Economic Model Building Process and various methods of estimation of econometric model.

- 2- Enables the student to understand the Various Problems in econometric estimation such as Misspecification, Multicollinearity, Heteroscedasticity and Autocorrelation.
- 3- Enables the student to understand the Solution to the problematic model-- General Linear Regression Model, Instrumental Variables Methods, Ridge Regression and Mixed Regression.

EOE-306 : History of Economic Doctrines

Unit I	Pre Classical Period: Mercantism and Physiocrats, Classical Thoughts: Adam Smith, J. Benham, T.R. Malthus, J.S. Mill & D. Ricardo.	12 Lectures
Unit II	Subjectivism and Marginalism: Mathematical Schools- H.H. Gossen, W.S. Jevens, Leon Walras, The Australian School: Karl Menger, Von Wieser, Bohm-Bawerk.	12 Lectures
Unit III	Neo Classicals: A. Marshall and The Cambridge School, Wicksell and The Stockholm School, Socialist Thinking: State Socialism, Karl Marx.	14 Lectures
Unit IV	Institutionalism: Veblen, Commons and Mitchell, Economic Thought Development in America: J.B. Clark, I. Fisher, F.W. Taussing, H.J. Devenport, A. Hansen.	12 Lectures
Unit V	Welfare Economics: Pigou, Parato, New Trends in Welfare Economics, Kalder-Hicks, Arrow & Rawls, The Keynesian Economics: Theories on Money and other macroeconomic issues.	10 Lectures

Books Recommended:

- Eric Roll: A History of Economic Thought , Faber & Faber.
- Charles Guide & Charles Rist: A History of Economic doctrines, George G. Harrap & Co.
- Lewis H. Haney: History of Economic Thought, Macmillan & Co.
- T.W. Hutchison: A Review of Economic Doctrine.
- Bell John Fred: A History of Economic Thought, The Ronald Press.
- Mark Blaug: Economic Theory in Retrospect.

- T.N. Hajela: History of Economic Thought, Ane's Student Edition, Ane Books Pvt. Ltd, New Delhi.
- H. L. Bhatia: History of Economic Thought, Vikas Publishing House Pvt. Ltd, New Delhi.
- चतुर्वेदी महेश चन्द्र: आर्थिक चिन्तन का इतिहास, चतुर्वेदी मिथिलेश: साहित्य भवन पब्लिकेशन्स ए आगरा

Course Specific Outcome:

- 1- Enables the student to understand the Economic Thoughts in Pre Classical Period, Idea of Subjectivism and Marginalism.
- 2- Enables the student to understand the Economic Thoughts in Neo Classical Period, Idea of Institutionalism.
- 3- Enables the student to understand the Economic Thoughts on Welfare Economics.

EOE-307 : Economic Growth

Unit I	Problem of Economic Growth and General Solution, Growth equilibrium -- Existence, Uniqueness and Stability (local and global), Steady State Growth Equilibrium.	10 Lectures
Unit II	Classical growth model: Constant Returns, Stationary State, Growth with technical progress.	10 Lectures
Unit III	Post Keynesian Growth Models: Harrod and Domar, the Problem of Inherent instability.	10 Lectures
Unit IV	Neo Classical growth Models: Solow, Swan, Phelps - Golden Rule of Accumulation, Uzawa's two-sector growth model.	15 Lectures
Unit V	Neo-Keynesian Growth Models: Kaldor, Pasinetti, Joan Robinson, Concept of Golden Age.	15 Lectures

Books Recommended:

- Sen, A.K., Growth Economics
- H. Wan, Jr., Economic Growth
- Finetein, Socialism Capitalism and Economic Development

- Jones, An Introduction to Modern theories of Economic Growth
- Hahn, F II., Readings in the theory of growth.
- Hicks, J.R., Capital and Growth
- Solow, R.M., Growth Theory -- An Exposition
- Hamberg, D., Models of Economic Growth
- Nell, E.J.(ed.), Growth-Profits and Productivity
- Jones, Charles, Economec growth
- Barro R.E. Salaw- Martin; Euromic Growth
- Romer; Advanced Macrocuroemics

Course Specific Outcome:

- 1- Enables the student to understand the Concept and determinants of economic growth and Problem of Economic Growth.
- 2- Enables the student to understand the Role of capital formation in growth process of any society.
- 3- Enables the student to understand the Condition of optimal situation in growth process of a society.

Semester IV

Course Code	Name of Course	Type of Course
ECC-401	Monetary Institutions and Policy	Core
ECC-402	International Macroeconomics	Core
ECC-403	Economic Approach to Environmental Issues	Core
ESE-404	Population Problems	Sub Elective
ESE-405	Econometric Theory	Sub Elective
EOE-406	History of Economic Thought: Keynes & Indian	Open Elective
EOE-407	Modern Growth Theory	Open Elective

ECC-401 : Monetary Institutions and Policy

Unit I	Monetary Institutions - Objectives of central banking; Function of Central Bank; The Reserve Bank of India; Function of Commercial Banks; Role of commercial bank in the economy; Different types of Commercial Banking Systems; policies and principles of commercial banking; process of credit creation of commercial banks; role of Non- banking companies in an Economy.	15 Lectures
Unit II	Money Supply :- Exogenous and endogenous Money supply; theoretical and empirical concepts of money supply; different money stocks in India (M0,M1,M2,M3, M4);The Reserve Bank of India approach to measure money supply; High-powered money and money multiplier theory; Budget deficit and money supply; Money supply in open economy ; commercial banks and money supply	12 Lectures
Unit III	Monetary Policy: Meaning of monetary policy; Objectives of monetary policy; Types and tools of monetary policy; monetary policy and economic stabilization; Monetary policy and economic growth; Effectiveness of monetary policy and fiscal policy; Review of monetary policy of the Reserve Bank of India;	15 Lectures
Unit IV	Reforms: Banking and financial sector reforms; recent trends in banking sector	9 Lectures

Unit V	International Monetary Institutions: Problem of International Liquidity; International Monetary Fund ;Role of SDRs and Euro; Exchange rate and money market.	9 Lectures
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Books Recommended:

Keynes, J.M., Treatise on Money.

Keynes, J.M., The General Theory of Employment Interest and Money.,

Halm, G.N., Monetary Theory ,

Kurihara, K., Monetary Theory and Public Policy,De Cock, M.N., Central Banking

Basu, S.K., A Review of Current Banking Theory and Practice.,

Course Specific Outcome:

- 1- Enables the student to understand the Objectives and Functioning of Monetary Institutions such as Central Bank, The Reserve Bank of India, Commercial Banks, Non- banking companies in an Economy.
- 2- Enables the student to understand the Sources of Money Supply, Various concepts of money supply in India (M0,M1,M2,M3, M4), and Money supply in open economy.
- 3- Enables the student to understand the Meaning, Objectives and Tools of monetary policy, Effectiveness of monetary policy and fiscal policy, Monetary policy of the Reserve Bank of India and Banking sector reform in India, International Monetary Institutions.

ECC-402 : International Macroeconomics

Unit I	The Balance of Payments Accounts: Current Account and Capital Account, Current Account Balance, Capital Account Balance and other concepts of Balance in BoP. Autonomous and Accommodating Transactions, Concept of Disequilibrium in BoP, Causes of Disequilibrium in the Balance of Payment. National Income in an Open Economy, Foreign Trade Multiplier, Foreign Repercussion.	10 Lectures
Unit II	Foreign Exchange: Meaning of Foreign Exchange Rate, Spot Rate and Forward Rate, Currency Swaps, Arbitrage, Hedging and Speculation in Foreign Exchange Market. Exchange Rate Determination – Exchange Rate Determination under Gold Standard, Purchasing Power Parity Theory of Exchange Rate Determination, Balance of Payments Theory of Exchange Rate Determination, Fixed and Flexible Exchange Rate System, Monetary Approach and Asset Approach to Balance of Payments and Exchange Rate Determination. Exchange Control and Exchange Management.	15 Lectures
Unit III	Balance of Payments Accounts Adjustment: BoP Settlement and Adjustment, Automatic Adjustment Process of BoP Disequilibrium, Alternative Mechanism of Adjustments in BoP Disequilibrium -- Devaluation and Absorption Approach.	10 Lectures
Unit IV	Macroeconomics Adjustment Policy in Open Economy: BoP Equilibrium in IS-LM Framework (BB Schedule), Capital Mobility and BP Schedule, Simultaneous Equilibrium in Goods Market, Money Market and Balance of Payment, Effect of Fiscal and Monetary Policy on BoP, Meaning of Internal and External Balance, Fiscal and Monetary Policy for Internal and External Balance, Assignment Problem – Mundell Model, Swan Model. Prices and Output in an Open Economy – Aggregate Demand Aggregate Supply.	15 Lectures
Unit V	International Monetary Systems: Breton Woods System, Collapse of Breton Woods Systems, Emerging International Monetary Systems, Optimum Currency Area, Problems of International Liquidity, Euro-currency Market.	10 Lectures

Books Recommended:

- Sodersten, Bo and Reed, G.: *International Economics* (third edition), Macmillan, London.

- Krugman, P., Obstfeld, M and Melitz, M.J.: *International Economics – Theory and Policy* (ninth edition), Pearson Education Ltd, England.
- Salvatore, D: *International Economics* (seventh edition), John Wiley & Sons, New York.
- Kindleberger, C.P.: *International Economics* (eighth edition), Richard. D. Irwin Inc, Homewood.
- Kenan, P.B.: *The International Economy* (fourth edition), Cambridge University Press, UK.
- Mannuar, H.G.: *International Economics* (second edition), Vikas Publication House Pvt. Ltd., Noida (UP).
- Mithani, D.M.: *International Economics* (sixth edition), Himalaya Publication, New Delhi.
- Ohlin, B.: *Interregional and International Economics*, Oxford University Press, London.
- Ellsworth, P.T. and Leith, J.C.: *The International Economy* (sixth edition), Macmillan Publication, New York.
- Haberler, G.V.: *The Theory of International Trade*, W. Hodge & Company, London.
- Ellis, I I. S. and Metzler (ed.): *Readings in the Theory of International Economics*.

Course Specific Outcome:

- 1- Enables the student to understand the Various aspects of Balance of Payments Accounts as well as Foreign Exchange Market, Nature and causes of BoP Problems and Process of Determination of Exchange Rate.
- 2- Enables the student to understand the Balance of Payments Accounts Adjustment Process such as Automatic Adjustment Process, Devaluation Method etc.
- 3- Enables the student to understand the Macroeconomics Adjustment Policy in Open Economy, Effect of Fiscal and Monetary Policy on BoP, Use of Fiscal and Monetary Policy for Internal and External Balance.

ECC-403 : Economic Approach to Environmental Issues

Unit I	Global Environmental Problems and International Policy: Conventions and Treaties, Economics of Climate Change, Economics of Biodiversity and Ecosystem Services.	10 Lectures
Unit II	Assessment of Worthiness of Environmental Projects: Social Cost-Benefit Analysis and Environment Impact Assessment, Tourism and Environment: Responsible Tourism.	10 Lectures
Unit III	Issues of Trade and Environment, Environmental Accounting, Population, Poverty and Environmental Degradation in Developing Countries.	12 Lectures
Unit IV	Economic Valuation of Environment: Market Price Approach, Replacement Cost Approach, Hedonic Price Method, Defensive Expenditure method, Travel Cost Method and Contingent Valuation Method.	15 Lectures
Unit V	Economics of Resources Use: Resource Scarcity, Conservation Methods, Models of optimum use of renewable (fisheries) and non-renewable resources.	13 Lectures

Books Recommended:

- Ehrlich, P., A. Ehrlich and J. Hilden, Economics, Population, Resources, Environment, W.H. Freeman, San Francisco.
- Hemple, Lamont C., Environmental Economics: The Global Challenge, First East West Press, Edinburgh.
- Lopez, R.E., Where Development Can Go Or Can Not Go, The Role of Poverty-Environment Linkages, Annual World Bank Conference on Development Economics, World Bank, Washington D.C.
- Maler, K.G., Environment, Poverty in Economic Growth, Annual World Bank Conference on Development Economics, World Bank, Washington D.C.
- Mehrotra, S. and J. Richard, Development With a Human Face, Oxford University Press, New Delhi.
- Ahmad.M.Hussen: Principle of Environmental Economics 3rd edition, Poulledge & Taylor & Francis Group.
- R.N. Bhattacharya: Environmental Economics, Air India Perspective, oxford university Press.
- माया माहेश्वरी: पर्यावरणीय अर्थशास्त्र— एक भारतीय परिप्रेक्ष्य, हर आनन्द पब्लिकेशन्स, नई दिल्ली।
- Thomas & Callan : Enviromental Economics.
- Nick Hanley, F. Shogran & J. Whitel : Enviromental Economics Theory & Practice, Oxford University Press
- K.V. Pavitran : A Text Book of Enviromental Economics, New Age India Publications.
- U. Sarkar : Enviromental Economics (edited).
- Erach Bharucha : Enviromental Studies, Orient Lorgman.

- Karpagam. M. A Text book of Enviromental Economics, Sterling Publisher Home.
- Nahoral Enviroment Policy 2006, CSO, India.

Course Specific Outcome:

- 1- Enables the student to understand the Global Environmental Problems and International Policy.
- 2- Enables the student to understand the Assessment of Worthiness of Environmental Projects: Social Cost-Benefit Analysis and Environment Impact Assessment.
- 3- Enables the student to understand the Economic Valuation Process of Environment, Economics of Resources Use.

ESE-404: Population Problems

Unit I	Demographic Data: Sources, Importance, Census, Trends of birth and death in India, composition of Population.	12 Lectures
Unit II	Occupational and regional distribution, Measurement of population growth, Population Projection.	12 Lectures
Unit III	Fertility Patterns in India, Population Policy of India.	10 Lectures
Unit IV	Migration: Meaning, Theories and Models, Classification, Industrialisation and Migration, Measurement, Urbanisation, Cycle of and Urban isation, Urbanisation in India, Population, Economy and Environment, Human Resources Development and Economic Development	14 Lectures
Unit V	Demographic Trends in selected countries: USA, Japan and China, World Population Trends.	12 Lectures

Books recommended :

- Thompson, S.W. and T. Lewis, Population Problems (Fifth ed.)
 - Smith, Kenneth, The Malthusian Controversy
 - Malthus, T.R., An Essay on Population
 - Cox, P.R., Demography
 - Bose, Ashish, Pattern of Population Change in India
 - Joseph. J. Spengler and Dudley Ducan, Population theory and Policy
 - Cox P.R., Andendum to Demography
 - Barclay, George, Techniques of Population Analysis
 - Coal,A.J. and E.M.Hoover, Population Growth and Economic Development in Low Income Countries
 - Agrawal, S.N., Some Problems of India's Population
 - Davis, Kingsley, Population of India and Pakistan
 - U.N.O., Determinants and Consequences of Population Trends
 - Coontz, S.I I., Population Theories and Their Economic Interpretations
- World Bank, Workd DevelopmentReport.

Course Specific Outcome:

- 1- Enables the student to understand the Sources and Importance Demographic Data, Census.
- 2- Enables the student to understand the Methods of Measurement of population growth and Population Projection.

3- Enables the student to understand the Fertility Patterns in India, Population Policy of India, Meaning and Theories and Models of Migration. Demographic Trends in selected countries.

ESE-405 : Econometric Theory

Unit I	Grouping of Observations and Equations, Mixed Estimation, Random Coefficient Method of Estimation.	12 Lectures
Unit II	Distributed Lags Model, Koyack Reduction, Partial Adjustment and Adaptive Expectation, Almon's Approach.	13 Lectures
Unit III	Simultaneous Equation Method of Estimation: Identification Problem – Rank and Order Condition, Identification Problem with Restrictions on Variances and Co-variances.	10 Lectures
Unit IV	Indirect Least Squares, Two-stage and Three-stage Least Square Methods, K-class Estimators, Full Information and Limited Information Methods of Estimation.	13 Lectures
Unit V	Time series Econometrics, Vectors, Auto Regressor, Unit Roots and Co Integration. Pooling of the cross-section and time series Data; Specification and Estimation of Demand Function and Production Function.	12 Lectures

Books Recommended:

- Gujarati, D.N.: *Basic Econometrics* (fourth edition), McGraw Hill.
- Johnston, J.: *Econometric Methods*, McGraw Hill.
- Madala, G.S.: *Econometrics* (third edition), McGraw Hill.
- Klein, L.R.: *Text Book of Econometrics*
- Theil, H.: *Principles of Econometrics*
- Kmenta, J.: *Elements of Econometrics*
- Imtriligator, M.D.: *Econometric Models -- Techniques and Applications.*
- Malinvaud, E.: *Statistical Methods in Econometrics.*
- Walter Ender.: *Applied Econometric -- True Series.*

Course Specific Outcome:

- 1- Enables the student to understand the Idea of Simultaneous Model and Method of Simultaneous Equation Estimation, Identification Problem.
- 2- Enables the student to understand the Concepts and Application of Distributed Lags Model, Koyack Reduction, Partial Adjustment and Adaptive Expectation, Almon's Approach.
- 3- Enables the student to understand the Specification and Estimation of Demand Function and Production Function, and Forecasting of Demand Function and Production Function.

EOE-406 : History of Economic Thought: Keynes & Indian

Unit I	Economics Thoughts of J. Robinson, J. R, Hicks, Robbins, Schumpeter, The Stockholm (Swedish) School: Ideas of Wicksell, B. Ohlin, G. Myrdal, Friedman, Leontief & Nurkse.	13 Lectures
Unit II	Indian Economic Thought: Ancient and Medieval Economic Thought: Idea of Kautilya, Vallavar, Somdev Suri.	10 Lectures
Unit III	Indian Economic Thought: Indian Nationalist Economists: Nauroji, Ranade, Wchu, Dutt & Gokhale, Visveshwaraya, Sarvodaya Arthshastra.	10 Lectures
Unit IV	Modern Economic Thoughts in India: Economic ideas f M.K. Gandhi, Kole, Brij Naraain, Shah, Mukherjee and J.K. Mehta.	12 Lectures
Unit V	Modern Economic Thoughts in India: C.H. Vakil, D.R. Gadgil, V.K.R.V. Rao, Economic Planning Logic, Democratic Socialism , New Economic Thinking (Economic Policy in Liberalised setup) , New Setup of Indian Economy.	15 Lectures

Books Recommended:

- Eric Roll: A History of Economic Thought , Faber & Faber.
- Charles Guide & Charles Rist: A History of Economic doctrines, George G. Harrap & Co.
- Lewis H. Haney: History of Economic Thought, Macmillan & Co.
- T.W. Hutchison: A Review of Economic Doctrine.
- Bell John Fred: A History of Economic Thought, The Ronald Press.

- Mark Blaug: Economic Theory in Retrospect.
- T.N. Hajela: History of Economic Thought, Ane's Student Edition, Ane Books Pvt. Ltd, New Delhi.
- H. L. Bhatia: History of Economic Thought, Vikas Publishing House Pvt. Ltd, New Delhi.
- चतुर्वेदी महेश चन्द्र: आर्थिक चिन्तन का इतिहास
- चतुर्वेदी मिथिलेश: साहित्य भवन पब्लिकेशन्सए आगरा
- B.G. Gokhle: Indian Thoughts Through The Ages, New York.
- B.N. Ganguli: Dadabhai Naoroji and the Drains Theory, Asia Publishing House.
- M.G.Ranade: Essays on Indian Economics, Thacker and Co. Ltd.

Course Specific Outcome:

- 1- Enables the student to understand the Keynesian and Post- Keynesian Economics Thoughts.
- 2- Enables the student to understand the Indian Economic Thought: Ancient, Medieval Economic.
- 3- Enables the student to understand the Modern Economic Thoughts in India.

EOE-407: Modern Growth Theory

Unit I	Technology and Growth: Neutral technical change, Kaldor's technical progress function; Kennedy and Weizsacke's Invention Possibility Frontier, Arrow's learning by doing.	15 Lectures
Unit II	Convergence Analysis: The Classical Approach, Danny Quah's 'Twin-peaks' model.	8 Lectures
Unit III	Endogenous Growth Models: AK Model, Lucas Model of Human Capital, Romar's model of endogenous innovation.	10 Lectures
Unit IV	Models of Optimum Growth: General formulation and its solution, Keynes-Ramsey-Rule.	15 Lectures
Unit V	Money and Growth: Tobin, Johnson model.	12 Lectures

Books Recommended:

- Sen, A.K., Growth Economics
- H. Wan, Jr., Economic Growth
- Finetein, Socialism Capitalism and Economic Development
- Jones, An Introduction to Modern theories of Economic Growth
- Hahn, F II., Readings in the theory of growth.
- Hicks, J.R., Capital and Growth
- Solow, R.M., Growth Theory -- An Exposition
- Hamberg, D., Models of Economic Growth
- Nell, E.J.(ed.), Growth-Profits and Productivity
- Jones, Charles, Economec growth
- Barro R.E. Salaw- Martin; Euromic Growth
- Romer; Advanced Macrocuroemics

Course Specific Outcome:

- 1- Enables the student to understand the Concepts Technique and Technological Progress, Types of Technical Progress, Implications of Technical Progress for Growth Theory.
- 2- Enables the student to understand the Role of Technology and Human Capital in Growth Process through Endogenous Growth Theory.
- 3- Enables the student to understand the Models of Optimum Growth, Role of Money in Growth Process.