

**DEPARTMENT OF ECONOMICS
UNIVERSITY OF ALLAHABAD
PRAYAGRAJ-211002**

Syllabus

**M.A. (Semester I and II)
&
M.A. (Semester III & IV)**

Session: 2023-24



M. A. Economics
Ordinances and Regulations for M.A. Economics Degree Programme
Preamble

The present course in Economics has been designed to reflect the changes in the economic environment of India and the Global economy. It is an effort in the direction of making the Department of Economics as a world class academic and research institution. The Department plans to encourage research studies and, undertake consultancy project on contemporary Indian and global Issues. The Department wishes to play an important role in economic decision making, policy formulation and implementation of the programmes & schemes of both Centre & State Governments.

Ordinances

1. The Degree of Master of Arts in Economics

The University of Allahabad may confer the Degree of Master of Arts on such candidates who, being eligible for admission to the M.A. Degree Programme, have received regular instruction in the prescribed courses of study, passed successfully relevant examinations and being otherwise suitable by virtue of their character, have fulfilled such other conditions as may be laid down from time to time by the appropriate authorities.

2. The Curriculum and Duration of Studies

A. (i) The Curriculum of study for the M.A. Degree shall comprise of the courses set out in Annexure B.

(ii) The Departmental Committee shall prescribe the detailed content of various courses of study, if required before the beginning of each session. The Departmental Committee can make changes in the optional papers/subjects, subjects to the availability of teaching facility/faculty.

B. the Curriculum of study for the M.A. Degree shall be spread over Four Semesters.

3. Requirement for Admission

A. Registration:

(i) Candidates for M.A. Degree shall first be admitted to the First Semester upon the reopening of the University after summer vacation every year.

(ii) **Subsequent Registration:** A candidate, who fails to prosecute a regular course of study during any of the Second, Third and Fourth Semesters may be registered in the appropriate Term of any subsequent Year to the Semester concerned but within such time as enables him, to complete the study of all Semesters comprising M.A. Degree Programme within a maximum period of four years from the date of his/her registration for the First Semester.

B. Minimum Qualification for Admission

(i) Admission to the M.A. Degree Programme of study shall be open to those candidates who have passed the Three Year Graduate Degree Examination of this University or such Examination of any other University or Institution after Graduation under 10+2+3 pattern as recognised by the University.

(ii) Special Eligibility Clause for admission in M.A. Economics Programme

Admission in M.A. Economics is also open to Special Category of Non Subject students:

- A. The students who pass Bachelors Degree with Mathematics or Statistics as one of the subjects up to B.A. III are also eligible for admission in M.A. Economics Programme.
- B. Students who opt. Economics up to B.A. II are also eligible for admission in M.A. Economics Programme.
- (iii) The University of Allahabad shall conduct combined Entrance Test (CET) for each academic session. Admission shall be made according to merit in the M.A. (Economics) Admission Test subject to the fulfillment of eligibility requirement as determined by the University and availability of seats in M.A.(Economics) Programme.

C. Conditions of Admission:

- (i) No application for registration to the First Semester shall be entertained unless it is accompanied by:
 - (a) A duly certified transcript of scholastic record of the candidate, commencing from the High School or equivalent Examinations.
 - (b) Original Transfer Certificate of a candidate who has been a regular student in any Institution at any time prior to making application for registration in the Faculty of Commerce and,
 - (c) Original Migration Certificate if the candidate is not enrolled in this University or, if enrolled, his enrollment has been cancelled. Provided that if a candidate is unable to produce any of the documents other than the marks-sheet of the Graduate Examination, at the time of seeking admission in the Faculty of Commerce before Admission Committee, he shall undertake to submit them within one month or within such further period as the University authorities may prescribe; and the admission, if any, of such candidate shall, until the submission of the aforesaid documents, be deemed to be provisional.
 - (ii) Candidate shall give also a written undertaking to the effect that:
 - (a) He/She shall exclusively devote his/her time to the study of courses prescribed for M.A. Degree and in particular he/she shall not offer any other course leading to a degree of any description whatsoever, nor shall he/she undertake any remunerative work, though with the prior permission of the Faculty, he/she may join certificate or Diploma course in any foreign language.
 - (b) He/She shall abide by the provisions of the University of Allahabad Act, Statutes, Ordinances, Regulations and Rules that are framed or may be framed there under and the orders of the Officers and Authorities of the University and the Faculty of Commerce from time to time.
4. The Course of study, scheme of examination, result and promotion are covered in the Regulations, and are given below.

M. A. ECONOMICS

(Based on CBSS)

PAPER CODE

ECO-501-Core- 4 Credits
ECO-502-Core- 4 Credits
ECO-503-Core- 4 Credits
ECO-504-Core- 4 Credits
ECO-505-Core- 4 Credits

Semester-I

Micro Economics - I
Macro Economics - I
Statistical Methods & Sampling
Monetary Economics
International Economics

PAPER CODE

ECO-506-Core- 4 Credits
ECO-507-Core- 4 Credits
ECO-508-Core- 4 Credits
ECO-509-Core- 4 Credits
ECO-510-Core- 4 Credits

Semester-II

Micro Economics - II
Macro Economics - II
Public Finance
Elements of Mathematical Economics & Econometrics
Project Work & Viva-Voce

PAPER CODE

ECO-511-Core- 4 Credits
ECO-512-Core- 4 Credits
ECO-513-Core- 4 Credits
ECO-
ECO-

Semester-III

India's Economic Policy-I
Growth Economics
Financial Institutions & Markets
Elective Group-I
Elective Group-II

PAPER CODE

ECO-514-Core- 4 Credits
ECO-515-Core- 4 Credits
ECO-
ECO-
ECO-516-Core- 4 Credits

Semester -IV

India's Economic Policy-II
Development Economics
Elective Group-I
Elective Group-II
Project Work & Viva-Voce

ELECTIVE GROUPS

GROUP-I : ECO-550 (INTERNATIONAL TRADE ISSUES & FINANCIAL INSTITUTIONS)

Eco-551-Core	(4 Credits)	International Trade & Institutions
Eco-552-Core	(4 Credits)	International Financial Issues
Eco-553-Core	(4 Credits)	Regional Economic Cooperation (Semester-III)
Eco-554-Core	(4 Credits)	India's Foreign Trade (Semester-IV)
Eco-555-Core	(4 Credits)	International Trade Laws

GROUP-II : ECO-560 (AGRICULTURAL & INDUSTRIAL ECONOMICS)

Eco-561-Core	(4 Credits)	Economics of Agriculture (Semester-III)
Eco-562-Core	(4 Credits)	Indian Agriculture: Institutions and Issues
Eco-563-Core	(4 Credits)	Rural Development
Eco-564-Core	(4 Credits)	Economics of Industry & Industrial Organization
Eco-565-Core	(4 Credits)	Industry & Development (Semester-IV)
Eco-566-Core	(4 Credits)	Economics of Infrastructure & Transport

GROUP-III : ECO-570 (DEVELOPMENT ECONOMICS)

Eco-571-Core	(4 Credits)	Population Studies (Semester-III)
Eco-572-Core	(4 Credits)	Demography (Semester-IV)
Eco-573-Core	(4 Credits)	Economics of Education and Health/Economics of Human Resources
Eco-574-Core	(4 Credits)	Social Sector and Development Issues
Eco-575-Core	(4 Credits)	Gender Economics

GROUP-IV : ECO-580 (PUBLIC POLICY)

Eco-581-Core	(4 Credits)	Public Economics (Semester-IV)
Eco-582-Core	(4 Credits)	Resource & Energy Economics
Eco-583-Core	(4 Credits)	Environmental Economics (Semester-III)
Eco-584-Core	(4 Credits)	Environmental Issues & Institutions
Eco-585-Core	(4 Credits)	Economics and Law

GROUP- V : ECO-590 (QUANTITATIVE ECONOMICS)

Eco-591-Core	(4 Credits)	Advanced Econometrics (Semester-III)
Eco-592-Core	(4 Credits)	Time Series Analysis & Computer Application (Semester-IV)
Eco-593-Core	(4 Credits)	Financial Econometrics
Eco-594-Core	(4 Credits)	Linear Economics
Eco-595-Core	(4 Credits)	Applied Econometrics
Eco-596-Core	(4 Credits)	Operations Research

(Note : The papers highlighted in bold letters are currently available in the Elective Groups in Semester-III and Semester-IV.)

Program Outcomes (POs)

1. Advanced knowledge about a specialized field of enquiry with a critical understanding of the emerging developments and issues relating to one or more fields of learning.
2. Specialized cognitive and technical skills relating to a body of knowledge and practice to analyze and synthesize complex information and problems.
3. Apply the acquired advanced theoretical and/or technical knowledge about a specialized field of enquiry or professional practice and a range of cognitive and practical skills to identify and analyze problems and issues, including real-life problems, associated with the chosen fields of learning
4. Evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyze and synthesize data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.
5. The ability to use appropriate statistical and other analytical tools and techniques for the analysis of data collected for research and evaluation studies
6. Participate in actions to address environmental protection and sustainable development issues.
7. Adapting to the future of work and responding to the demands of the fast pace of technological developments and innovations that drive the shift in employers' demands for skills, particularly with respect to the transition towards more technology-assisted work involving the creation of new forms of work and rapidly changing work and production processes

Program Specific Outcomes (PSOs)

1. Economic Theory Mastery – Foundation in micro, macro, monetary, and international economics.
2. Quantitative and Analytical Competence – Skills in statistics, econometrics, and mathematics.
3. Policy and Institutional Analysis – Understanding Indian policies and global interlinkages.
4. Research and Problem-Solving – Capacity to design research and address socio-economic challenges.
5. Professional Readiness and Ethics – Career preparedness with inclusivity and ethical responsibility.

Semester - I

ECO-501 Micro Economics -I (Core Course: 4 Credits)

Course Objectives (COs):

- CO1. To develop a comprehensive understanding of consumer behavior under certainty and uncertainty.
- CO2. To enable students to analyze the production and cost structures of firms.
- CO3. To provide insights into welfare economics and social choice.
- CO4. To equip students with the ability to understand and apply equilibrium analysis – both partial and general.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Analyze consumer choices under risk and uncertainty and apply concepts.
- CLO2. Evaluate production processes using functions.
- CLO3. Critically assess welfare economics frameworks, interpret the Arrow Impossibility Theorem, and explain perspectives.
- CLO4. Apply equilibrium theories, including Walrasian general equilibrium and input-output analysis, to explain existence, uniqueness, and stability of markets.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	2	3	3	3	3	2

Course Content

Unit: 1

12 Lectures

Uses of Indifference Curve - Empirical Theory of Demand. Demand for Consumer Durables; Linear Expenditure Systems- Analysis of Uncertainty in Consumer Behavior, Some application of Individual choice under risk and uncertainty. Newman Morgenstern.

Unit: 2

12 Lectures

Production Function- Homogeneous Production Function: Cobb-Douglas Production Function; C.E.S. and V.B.S. Production Functions -derivation of cost function from the production function-Modern approach to the theory of costs-technical progress and techniques of production. Investment decisions and present value rule, some application of present value rule.

Unit: 3

12 Lectures

Welfare Economics: Pareto Optimum Conditions- Social Welfare Functions-compensation Principles- Arrow Impossibility Theorem, Amartya Sen on Arrow's Impossibility Theorem, Rawls, Concepts of Social Justice and Welfare Criterion -other obstacles of welfare maximization.

Unit: 4

12 Lectures

Partial and General Equilibrium; Existence, Uniqueness and Stability of Equilibrium- Concept of Excess Demand and Excess Price, Equilibrium in Lagged Market Model - Walrasian General Equilibrium, An Introduction to Input-Output Analysis

Reading List:

1. Andrey Mas-Colell, Micro economic theory, Oxford University Press, USA
2. Blaug M., Economic Theory in Retrospect
3. Edwin Mansfield, Micro Economics, Gary Wynn Yohe.
4. Ferguson C.B. , Micro Economic Theory
5. Geoffrey A. JcWe, Philip J. Reny, Advanced Micro Economic Theory
6. Hall and Varian, Micro Economics
7. Henderson J.M. and Quandt R.E., Micro Economic Theory
8. Koutsoyiannis A., Modern Micro Economics, Macmillan
9. Townsend(ed) H. Readings in Price Theory

ECO-502 Macro Economics -I (Core Course: 4 Credits)

Course Objectives (COs):

CO1. To introduce students to the fundamental macroeconomic variables and accounting systems, enabling them to measure and interpret economic performance indicators like growth, inflation, and unemployment

CO2. To build understanding of the microeconomic foundations of macroeconomic relationships, including consumption, savings, investment, and money demand-supply mechanisms.

CO3. To develop analytical skills to examine national income determination models in the short and long run, focusing on IS–LM and AS–AD frameworks, fiscal-monetary policies, and price dynamics.

CO4. To familiarize students with open economy macroeconomics, including trade multipliers, internal-external balances, and models like SWAN and IS–LM–BOP for policy evaluation in a globalized setting

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

CLO1. Explain and measure key macroeconomic indicators such as growth rates, inflation, unemployment, output gap, and twin deficits.

CLO2. Analyze consumption and savings behavior using theories.

CLO3. Apply macroeconomic models to understand short-run and long-run income determination, policy multipliers, and interactions between monetary and fiscal policy.

CLO4. Evaluate open economy frameworks by using models like the Foreign Trade Multiplier, SWAN model etc.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	2	3	3	3	3	2

Course Content

Unit-I

12 Lectures

Macroeconomic Variables, National Income Identities and National Income Accounting Growth Rates, Inflation, Deflator, Price Indices, Unemployment, Output Gap, Twin Deficits, Brief Review of System of National Accounts, Flow of Funds Accounts, Social Accounting Matrices.

Unit II: Micro Foundations of Macroeconomic Relationships

12 Lectures

Consumption Analysis, Permanent Income and Life Cycle Hypotheses, Consumption under Uncertainty, Savings in inter-temporal models, Investment Theories: Neo-Classical and Keynesian, Money Demand, and Money Supply Function, Money Multiplier.

Unit III: National Income Determination Models in Short Run and Long Run and Price Level

12 Lectures

IS-LM Analysis, Fiscal and Monetary Policy Multipliers, Phillips Curve, AS-AD Model, Neo-Classical Synthesis, Three Sector Model, Monetary and Fiscal Interaction.

Unit IV: Open Economy Macroeconomics

12 Lectures

Foreign Trade Multiplier, Open Economy Model; Internal & External Balances. Economic Policies Model, SWAN Model, IS-LM-BOP Model.

Reading List:

1. Ackley, G. 1978), Macroeconomics: Theory and Policy, Macmillan, New York.
2. C. Rangrajan and Dholakia: Principles of Macroeconomics.
3. Dipankar Dasgupta: The Macroeconomy: A Textbook View (1997) OUP.
4. Dornbusch, R. and F. Stanley (1997), Macroeconomics, McGraw Hill, Inc., New York.
5. G. Mankiw, Macroeconomics, McGraw Hill
6. Lipsey Crystal: Macroeconomics
7. Shapiro, E. (1996), Macroeconomic Analysis, Galgotia Publications, New Delhi

ECO-503 Statistical Methods & Sampling (Core Course: 4 Credits)

Course Objectives (COs):

CO1. To familiarize students with the basic concepts of correlation, regression, and attributes analysis, and their applications in economics.

CO2. To develop understanding of probability theory and probability distributions for modeling uncertainty in economic data.

CO3. To equip students with knowledge of sampling theory and hypothesis testing, including large-sample techniques and chi-square tests.

CO4. To train students in estimation and small-sample testing methods, enabling critical evaluation of statistical results in economic research.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

CLO1. Apply correlation and regression techniques (simple, multiple, and partial).

CLO2. Use probability theorems and random variable concepts to model uncertainty, and explain applications.

CLO3. Design appropriate sampling methods for economic surveys, formulate and test hypotheses.

CLO4. Estimate parameters and evaluate statistical significance through point and interval estimation

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	2	3	3	3	3	2

Course Content

Unit- I

12 Lectures

Correlation and Regression Analysis, Multiple and Partial Correlation & Regression, Theory of Attributes

Unit- II

12 Lectures

Elementary Probability Theory, Addition & Multiplication Theorems, Bayes Theorem, Concept of Random Variables, Mathematical Expectation. Theoretical Probability Distributions- Binomial, Poisson, Normal Distributions(Without Proofs) and their Goodness of Fit.

Unit- III

12 Lectures

Sampling Theory: Population and Sample, Parameter and Statistic, Objectives of Sampling, Types of Sampling. Testing of Significance-Null & Alternative Hypotheses, Level of Significance, Confidence Level, Critical Region.

Sampling Distribution- Large Sample Tests, Distribution of Sample Mean and Sample Proportion, Chi-square Test.

Unit- IV

12 Lectures

Estimation-Point and Interval Estimates of Mean, Characteristics of Good Estimator, Standard Error of Estimates.

Type I and Type II Errors, Interpretation of P-Value, One-tailed and Two-tailed Tests.

Small Sample Tests, Testing of Hypothesis of Mean, Variance, Correlation Coefficient, Regression Coefficient etc. based on Z, t, Chi-square & F-tests.

Readings List:

1. Chou Y., Statistical Analysis.
2. Gupta S. C. and Kapoor V. K. : Fundamentals of Mathematical Statistics.
3. Gupta S. P.; Statistical Methods.
4. Hogg R. V. and Graig A. T. : Introduction to Mathematical Statistics.
5. M. R. Spiegel; Theory and Problems of Statistics.
6. Nagar and Das; Basic Statistics.
7. WonneCoH and WonneCoH : Introductory Statistics for Business and Economics

ECO-504 Monetary Economics (Core Course: 4 Credits)

Course Objectives (COs):

- CO1. To build a conceptual understanding of money, its functions, and the theory of money supply.
- CO2. To critically examine theories of money demand, and their relevance to developed and developing economies.
- CO3. To introduce students to modern approaches in the theory of demand for money.
- CO4. To develop analytical insights into inflation theories and monetary policy.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Explain the concepts of money supply and apply theories.
- CLO2. Compare and contrast Keynesian, Monetarist, and Post-Keynesian approaches to the demand for money.
- CLO3. Apply modern theories of money demand and assess the impact of technological development on monetary systems.
- CLO4. Analyze the dynamics of inflation and monetary policy

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	2	3	3	3	3	2

Course Content

Unit -I **12 Lectures**

Money Supply

Money: Concept and Functions, Money Supply: Concepts and Monetary Aggregates Theory of Money Supply; High Powered Money and Money Multiplier; Budget Deficits and Money Supply Determinants of Supply of Money; RBI Approach, Indian Financial System

Unit –II **12 Lectures**

Post-Keynesian Demand for Money:

Demand for Money; Overview of Keynes's Liquidity Preference Approach, Concept of Neutrality of Money and Money Illusion, Pigou Effect and Patinkin's Real Balance Effect

Crisis in Keynesian Economics and the Revival of Monetarism- Theory of

Demand - M. Friedman Comparison of Keynesian and Monetarist Approach

Demand for Money in Underdeveloped Countries

Unit –III **12 Lectures**

Development in the Theory of Demand for Money

Approaches of Baumol and Tobin, Turvey Approach., Liquidity Approach - Reddick Committee Report and Gurley-Shaw Thesis, Role of Technology in Monetary Development- Pesic and Siwek Approach

Unit –IV **12 Lectures**

Theory of Inflation and Monetary Policy

Philips Curve and its Modifications: Tobin, Samuelson and Solow., The Natural Rate of Unemployment and Stagflation, Adaptive Expectations and Rational Expectations - Expectation Augmented Approach: Friedman-Phelps and Lucas.

Reading List :-

1. Ahuja, H. L. Macroeconomics (New)
2. Chakravarty, S.C. (1985), Report of the Committee to Review the Working of the Monetary System, Reserve Bank of India, Bombay.
3. D'souza Errol, Macroeconomics: Person Publication, New Delhi.
4. Friedman, M. (1957), the Theory of Consumption Function, Princeton University Press, Princeton.
5. Gupta, Suraj B, Monetary Planning for India, Oxford University Press, Delhi.
6. Gurley, J. and E.S. Shaw (1960), Money in a Theory of Finance, Brookings Institution, Washington.
7. Gordon, R. and S. G. Harris (1998), Macroeconomics, Addison Wesley, Massachusetts.
8. India - A Central Banker's Perspective, UBSPD, New Delhi.
9. Jha, R. (1999), Contemporary Macroeconomic Theory and Policy, New Age International (P)

Ltd., New Delhi.

10. Johnson, H. G. and Nobay A. R., Issues in Monetary Economics, Oxford University Press, Delhi.
11. Keynes, J.M. (1936), the General Theory of Employment, Interest and Money, Macmillan, London.
12. Mankiw, N.G. and D. Romer (Eds.), New Keynesian Economics, (2 Vols.), MIT Press, Cambridge.
13. Mithani, D. M., Money Banking and International Trade.
14. Paul, R. R., Monetary Economics.
15. Patinkin, D. (1965), Money, Interest and Prices, Harper and Row, New York.
16. Reddy, Y. V. (2000), A Review of Monetary and Financial Sector Reforms in
17. Shapiro, E. , Macroeconomic Analysis, Galgotia Publications, New Delhi.
18. Sheffrin, S. M. (1996), Rational Expectations, Cambridge University Press, Cambridge.

ECO-505 International Economics (Core Course: 4 Credits)

Course Objectives (COs):

CO1. To provide a comprehensive understanding of classical, neo-classical, and modern trade theories.

CO2. To introduce students to intra-industry trade models and strategic trade theories.

CO3. To analyze the role of protection, tariffs, and non-tariff barriers, and assess their impact on welfare, trade distortions, and international market structures.

CO4. To equip students with analytical tools for understanding exchange rate dynamics and risk management.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to

CLO1. Explain and critically evaluate trade theories.

CLO2. Apply and compare intra-industry trade models.

CLO3. Assess the effects of protectionist measures.

CLO4. Analyze the Balance of Payments and foreign exchange markets, interpret adjustment mechanisms through elasticity, absorption, and monetary approaches.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	2	3	3	3	3	2

Course Content

Unit-I

12 Lectures

Critical Overview of Classical Trade Theories, Neo-Classical Theory of Trade., Modern Theory of Trade: Heckscher-Ohlin Theorem, Factor Price,Equalization Theorem, Stolper-Samuelson and Rybczynski Theorem. New Theories of International Trade: Kravis Theory of Availability, Linder's Theory of Volume of Trade, and Posner's Imitation Gap Theory.

Unit-II

12 Lectures

Intra-Industry Trade: The Neo-Heckscher-Ohlin Model, Neo-Chamberlin Model, Neo-Hotelling Model, and The Brander-Krugman Model. Measurement of Intra-Industry Trade (Grubel-Lloyd Index, Bela Balassa Index, etc), Strategic Trade Theory. Michael Porter's Theory of International Trade.

Unit-III

12 Lectures

Protection: Tariff and Non Tariff Barriers. Effective Rate of Protection. Trade Taxes and Welfare. Effects of Tariffs and Non-Tariff Barriers: Dumping, Subsidies, International Cartels, Technical Barriers, VERs, QERs, Standards, Health and Other Regulations. The Metzler Paradox. Currency and Commodity Swaps.

Unit-IV

12 Lectures

Overview of the Balance of Payments, Monetary Approach to Balance of Payments, Adjustment and Equilibrium in Balance of Payments, The Elasticity Approach, The Absorption Approach, International Capital Movements, Short term Flows, Private Capital Flows, Direct and Portfolio Investments. Foreign Exchange Markets and Exchange Rate, Spot and Forward Rates, Future and Options. Exchange Risks, Hedging and Speculation, Interest Arbitrage and Efficiency of Foreign Exchange Markets.

Reading List-

1. Bo Sodersten & Geoffrey Reed, International Economics, MacMillan Press Limited, Hampshire & London.
2. D. Salvatore, International Economics, New York, John Wiley.
3. Francis Cherunil, International Economics, Tata McGraw Hill Publishing Company Ltd., New Delhi.
4. H. G. Mannur, International Economics, Vikash Publishing House, New Delhi.
5. M. C. Vaish & Sudama Singh, International Economics, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
6. M. L. Jhingan, International Economics, Vrinda Publication, New Delhi.
7. Paul R. Krugman & Maurice Obstfeld, International Economics (Theory & Policy), Addison Wesley Longman, Pearson Education, Indian Branch, New Delhi.
8. Parthapratiim Pal, International Trade and India, Oxford University Press, New Delhi.
9. P. Kenen, International Economics, Cambridge Publication, New Delhi.
10. Rana & Verma, International Economics, Vishal Publishing Co., Jalandhar, India.
11. S. Kindleberger, International Economics, Traveller Book Sell, New Delhi.
12. T. N. Srinivasan, Growth, Sustainability, and India's Economic Reforms, Oxford University Press, New Delhi.

Semester - II

ECO-506 Micro Economics-II (Core Course: 4 Credits)

Course Objectives (COs):

CO1. To introduce students to alternatives to profit maximization and managerial/behavioral theories of the firm.

CO2. To provide insights into factor pricing and theories of interest and profit under imperfect competition and labor market conditions.

CO3. To analyze the role of information asymmetry and intertemporal choice in economic decision-making.

CO4. To develop a rigorous understanding of game theory and strategic behavior.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

CLO1. Explain and evaluate alternative firm objectives beyond profit maximization.

CLO2. Analyze factor pricing and income distribution.

CLO3. Assess markets with asymmetric information.

CLO4. Apply game theory concepts to understand strategic moves, entry deterrence, and oligopoly behavior.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	2	3	3	3	3	2

Course Content

Unit: I

12 Lectures

Alternative to Profit Maximization, Managerial Theory-Baumol, Marris, Williamson's model, Limit Price Theory-Bains, Labini, Modgiliani, Behavioristic Theory -Cyert, Moses Average Cost Pricing Principle- Shadow Prices and Their Uses.

Unit: II

12 Lectures

Factor Pricing: in Imperfect Competition: Collective Bargaining. Imperfections in Labour Market and Wage -Review of Keynesian and Loanable Fund Theory of Interest, Hicks Hansen Co-ordination. Theory of Profit:Shackle Approach, Mehta Approach.

Unit : III

12 Lectures

Intertemporal Choice and Markets with Asymmetric Information, the Information Problem. Asymmetric Information and the Market Failure, Measures to Solve the problem of Adverse Selection, Moral Hazard and Allocative Inefficiency, Principal Agent Problem, Bounded Rationality.

Unit: IV

12 Lectures

Theory of Games and Strategic Behavior. Cooperative and Non-cooperative Games,. The Prisoners Dilemma Oligopoly Theory. The Nash Equilibrium, Deuman-Morgenstern's Game Theory, Mixed Strategy, Strategic Moves, Entry Deterrence Interated Elimination of Dominated Series, Two Persons Zero Sum Game.

Reading List :-

1. Andrey Mas-Colell, Microeconomic Theory Oxford University Press, USA.
2. Blaug M, Economic Theoryin Retrospect
3. Edwin Mansfield, Micro Economics by Gary wynn yohe.
4. Ferguson C.E., Micro Economic Theory
5. Geoffrey A. Jchle , Philip J. Reny, Advanced Micro economic theory
6. Hall and Varian, Micro Economics
7. Henderson J.M. and quandt R.E. Micro Economic Theory
8. Koutsoyiannis A. Modem Micro Economics, Macmillan
9. Townsend(ed) H. Readings in Price Theory

ECO-507 Macro Economics-II (Core Course: 4 Credits)

Course Objectives (COs):

- CO1. To develop an understanding of trade cycles.
- CO2. To introduce students to New Classical Macroeconomics and real business cycle theories.
- CO3. To familiarize students with New Keynesian theories of business cycles and unemployment.
- CO4. To examine the evolution of macroeconomic policies.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Explain the nature and phases of business cycles, apply models.
- CLO2. Analyze New Classical approaches to understand real business cycle dynamics.
- CLO3. Evaluate New Keynesian frameworks and apply them to explain unemployment and business cycles in closed and open economies.
- CLO4. Assess macroeconomic policy debates, distinguishing between fiscal and monetary policy approaches.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	2	3	3	3	3	2

Course Content

Unit I: Trade Cycles and Long Run Stable Equilibrium

12 Lectures

Linkage of Time Series Analysis to Business Cycles, Types and Phases of Business Cycles Period and Amplitude of Cycles. Schumpeter Model, Theory of Multiplier-Accelerator Interaction, Short and Long Run Adjustments and Stabilization.

Unit II: New Classical Macroeconomics and Real Business Cycles

12 Lectures

Rational Expectation Equilibrium Models, Lucas Critique, Incomplete Information Models, Persistence of Output Fluctuations.

Unit III: New Keynesian Theories of Business Cycles and Unemployment

12 Lectures

Incomplete Nominal Adjustments, Real vs. Nominal Rigidities, Real Non-Walrasian Theories, Coordination Failures, The Efficiency Wage Model, Insider-Outsider Model, Hysteresis, Search and Matching Models, Applications to Open Economy

Unit IV: Macroeconomic Policy Issues

12 Lectures

Historical Development of Macro Economic Policies: Objectives, Targets, Indicators & Instruments of Macro Economic Policies.

(a) Fiscal Policy

(b) Monetary Policy

Activist Policy, Gradualism vs Shock Therapy, Rules vs Discretion, Dynamic Inconsistency Problem, Inflation Targeting, Seignorage, Barro-Ricardo and Blinder-Solow Hypothesis Lagged related Issues of Fiscal & Monetary Policy.

Reading List :-

1. David Romer, Advanced Macroeconomics, 2e McGraw Hill, 2001
2. Oliver J Blanchard and Stanley Fischer, Lectures on macroeconomics, Prentice Hall, New Delhi
3. Mankiw, N. G. and D. Romer (Eds.) (1991), New Keynesian Economics, (2 Vols.), MIT Press, Cambridge.

ECO-508 Public Finance (Core Course: 4 Credits)

Course Objectives (COs):

CO1. To provide an understanding of the role of government in an economy.

CO2. To examine the principles of taxation, equity, and taxable capacity, along with models of optimal allocation between social and private wants.

CO3. To analyze the objectives and instruments of fiscal policy.

CO4. To develop insights into the theory and management of public debt.

Course Learning Outcomes (CLOs):

After completing this course, students will be able to:

CLO1. Explain the allocation, distribution, and stabilization functions of government.

CLO2. Assess the principles of taxation and equity, apply models.

CLO3. Apply fiscal policy tools such as built-in stabilizers, compensatory finance, and the budget multiplier, and critically analyze the functional finance approach.

CLO4. Analyze the objectives and theories of public.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	2	3	3	3	3	2

Course Content

Unit-I

14 Lectures

Role of Government in an Economy: The Allocation, Distribution and the Stabilization Functions; Private Goods, Public Goods, and Merit Goods; Market Failure Imperfections, Decreasing Costs, Externalities. Theory of Public Choice: Problems of Preference Revelation and Aggregation - Voting System, Political Economic Interactions, Pressure Groups & Interest Groups, Bureaucracy, Rent Seeking and Directly Unproductive Profit

Seeking (DUP) Activities, Nordhaus-the Political Business Cycle.

Public Expenditure: Meaning and Scope, Theories of Public Expenditure- Pigou's Ability to Pay Theory, Benefit Principle, Samuelson Theory, Adolph Wagner Hypothesis and Peacock Wiseman Hypothesis, Colin Clark.

Unit-II

10 Lectures

Taxation: Introduction, Concept of Equity in Taxation, Benefit Principle of

Taxation; 1- Bowen Model & Lindahl Model, Samuelson's Optimal Allocation of Social and Private Wants.

Taxable Capacity: Conceptual Framework, Absolute and Relative Taxable Capacity, Factors Determining Taxable Capacity, Taxable Capacity &

Ability to Pay.

Unit-III

10 Lectures

Fiscal Policy: Objectives and Instruments of Fiscal Policy, Built in Stabilizers, Compensatory Fiscal Policy, Functional Finance Approach, Budget Multiplier Fiscal Policy and Developing Countries.

Unit-IV

14 Lectures

Public Debt: Objectives & Importance of Public Debt, Classical Theory of Public Debt, Pay-as-you use & Pay-as-you go finance, Inter-generational Equity, Debt Burden & Future Generation, Shifting of Burden, Redemption of Public Debt, Debt Management and Monetary Policy.

Reading List :-

1. Atkinson A and J Stiglitz, Lectures in Public Economics, MC Graw Hill 1980.
2. Bailey, S.J Public Sector Economics, Macmillan (2004).
3. Boadway R and Bruce (1984). Welfare Economics-Basil Black well Oxford
4. Duff L. (1997), Government and Market, Orient Longman, New Delhi.
5. D.C Muller, (1979), Public Choice. Cambridge University Press.
6. Friedman A. (1986). Welfare Economics and Social Choice Theory Martins Nighoff, Boston.
7. Harper and Row (1957). A Downs An Economic Theory of Democracy.
8. J. E. Stiglitz, Economics of Public Sector, Norton (1986).
9. Jha R, Modern Public Economics, Routledge, London (1999).
10. Lekhi, R K., Public Finance, Kalyani Publishers, Ludhiana, Latest Edition.
11. Lal S. N., Problem of Public Borrowing in India, Bombay. McGraw Hill Book Company, New York.
12. Meier .G.M and Rauch, Leading Issues in economic development, UP (2000).
13. Mishan E.J Introduction to Normative Economics, OUP (1986).

14. Pogu T F and L.G Sgontz, Government and Economic Choice, an Introduction to Public Finance, Hengton Mul. Boston.
15. Quick. J and R. Sapanick, Introduction to General Equilibrium theory and Welfare Economics, Mc Graw Hill, New York (1968).
16. Richard A. Musgrave (1989), Public Finance in Theory and Practice
17. R Goode Govt., Finance in Developing Countries, Tata McGraw Hill (1986).
18. R Comes and T. Sandler, The Theory of Externalities Public Goods and Club Goods, Cambridge University Press-1986.
19. Rosan S Harve, Public Finance, Irwin Publications in Economics, USA.
20. Richard A. Musgrave Public Finance in Theory and Practice, McGraw Hill Book Company, New York(1989).
21. Singh S K, Public Finance in Developed and Developing Countries, S. Chand and Company Ltd, New Delhi(1986).

ECO-509 Elements of Mathematical Economics & Econometrics

Course Objectives (COs):

CO1. To develop a foundation in matrix algebra, linear programming, and input-output analysis and their applications in economics.

CO2. To build analytical skills in differentiation and partial differentiation, with applications.

CO3. To introduce students to integral calculus and differential equations.

CO4. To provide an elementary introduction to difference equations and econometrics.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

CLO1. Apply matrix operations, determinants, and Cramer's rule to solve economic equations.

CLO2. Use derivatives and partial derivatives to solve economic optimization problems.

CLO3. Apply integration techniques to derive total functions from marginal functions.

CLO4. Analyze dynamic models using difference equations, explain the scope and methodology of econometrics.

CO-PO-PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	2	3	3	3	3	2

Course Content

Unit- I

12 Lectures

Mathematical Operations on Matrices, Determinants, Minors, Cofactors and Inverse of Matrices, Solution of Simultaneous Equations using Inverse and Cramer's Rule; Matrices and their Applications in Economics.

Input -Output Analysis.

Graphical Approach to Linear Programming: Description of Simple Linear Programming Problems.

Unit- II

12 Lectures

Derivatives and its Application in Economics, Taxation Problems.

Partial Differentiation First Problems and Second order Derivatives, Total Differentiation.

Economic Applications of Partial Differentiation-Use of Lagrange Multiplier.

Homogenous Function. Euler's Theorem and its Application in Economics, Cobb-Douglas Production Function & its Properties, Leontief and CES Production Function. Elasticity of Substitution.

Unit- III

12 Lectures

Integral Calculus - Rules of Integration, Indefinite and Definite Integrals, Application of Integration in Finding Total Functions of Economic Variables from Marginal Functions - Consumer's and Producer's Surplus.

Simple Differential Equations & Its Application.

Unit-IV

12 Lectures

Elementary Treatment of Difference Equations & its Application in Economics.

Econometrics: Nature and its Relation to Statistics and Mathematical Economics. Importance and Uses of Econometrics; Methodology of Econometric Research; Simple Linear OLS Regression Model: Assumptions and Estimation of Simple Linear OLS.

Reading List :-

1. Allen, R.G.D: Mathematical Analysis For Economists.
2. Archibald, G. and Lipsey, R.G., Introduction to Mathematical Treatment of Economics.
3. Ailchison, J. and Brown, J.A.C.: The Log-normal Distribution.
4. Baumol, W.J., Economic Theory and Operations Analysis.
5. Beckerman, W., An Introduction to National Income Analysis.
6. Chiang, A.C., Fundamental Methods of Mathematical Economics.
7. Dorfman, R, Samuelson, P.A. and Solow, R, Linear Programming and Economic Analysis.
8. Edey and Peacock, National Income and Social Accounting.
9. Gujarati, D. N. (1995), Basic Econometrics (IIInd Edition), New Delhi, McGraw-Hill.
10. Henderson, J.M. and Quandt, RE., Microeconomic Theory: A Mathematical Approach.
11. Koutsoyiannis, A. (1997), Theory of Econometrics (IIInd Edition), London, the Macmillan Press.
12. Krishna, K. L., (1997), Econometric Applications in India, New Delhi, Oxford University Press.
13. Kamanta, J. (1997), Elements of Econometrics, New York, University of Michigan Press.

14. Lange, Oscar, Introduction to Econometrics.
15. Mehta B. C. And Madnani G.M. K., Econometrics, Latest Edition.
16. Mehta, B.c., Mathematical Economics: Microeconomic Models.
17. Maddala, G.S. (Ed.) (1993), Econometrics Method and Applications, (2 vols.)
U. K.; Alders Hot.
18. Sen, A., On Inequality.
19. Sen, A., Poverty: An Ordinal Approach to Measurement, Econometrica.
20. Stone, R and Murray, c., Social Accounting and Economic Models.
21. Yamane, T., Mathematics for Economists.

SEMESTER-III
ECO-511 India's Economic Policy-I (Core Course: 4 Credits)

Course Objectives (COs):

- CO1. To provide students with a theoretical foundation in economic policy.
- CO2. To examine the evolution of agricultural policies in India.
- CO3. To analyze the industrial policies of India.
- CO4. To understand the formulation and development of environmental and energy policies in India.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Explain the theory of economic policy and analyze the role of the state in policy formulation.
- CLO2. Assess India's agricultural policy framework and their implications for rural development.
- CLO3. Analyze India's industrial policies and their role in industrial development.
- CLO4. Evaluate India's environmental and energy policies.

CO-PO-PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	2	3	1	3	1	2	3	3	1	2	2

Course Content

UNIT 1: Theory of Economic Policy

12 Lectures

Pareto-Optimality

Market Failures: Causes of Market Failures

Role of State Economic Policy- Instruments, Targets- Fixed and Flexible, Conflicts Government Failures.

UNIT 2: Agricultural Policy in India

12 Lectures

An Overview of Agricultural Policy in India

New Agricultural Policy

Agricultural Price Policy of India

Public Distribution System in India

Food Security in India

UNIT 3: Industrial Policy of India

12 Lectures

An Overview of Industrial Policy in India New, Industrial Policy

Public Sector in India Micro, Small and Medium Enterprises in India

Cottage Industry in India

UNIT 4: Environmental and Energy

12 Lectures

Environmental Issues in India

Development of Environmental Policy in India

Development of Energy Policy in India

Reading list

1. Acocella, Nicola, Economic Policy in the Age of Globalisation
2. Acharya, S.S. and Chaudhari, D.P., Indian Agricultural Policy at the Crossroads: Priorities and Agenda
3. Ahuja, Astha, Agricultural and Rural Development in India
4. Beder, Sharon, Environmental Principles and Policies: An Interdisciplinary Introduction
5. Chand, Ramesh, India's Agricultural Challenges: Reflection son Policy, Technology and Other Issues
6. Ghosh, Amitabh, The Great Derangement: Climate Change and the Unthinkable
7. Guha, Ramchandra, Environmentalism: Global History
8. Habib, Irfan, Man and Environment.
9. Hashim, H.R., Chalpati Rao, K.S., Ranganathan KV. Kand Murthy, M.R., (eds), India's Industrial Development and Globalisation.
10. Majumdar, N.A. and Kapila, Uma, Indian Agriculture in the New Millennium
11. Rangarajan, Mahesh, Environmental Issues in India
12. Rosencranz, Armin, Shyam, Divan, Noble and Martha, L., Environmental Law and Policy in Inpia
13. Satyanarayana, J., The New Industrial PolicyAnd Its Impact on India's Industrial Economy
14. Sen, A.K, On Ethics and Economics.
15. Swaminathan, M.S. , Sustainable Agriculture: Towards Food Security
16. Swaminathan, M.S. , An Evergreen Revolution
17. Tinbergen, J., Economic Policy, Principles and Design
18. Tinbergen, J., On the Theory of Economic Policy

ECO-512 Growth Economics (Core Course: 4 Credits)

Course Objectives (COs):

- CO1. To provide a foundation in the theory of economic growth.
- CO2. To examine Neo-Keynesian growth models and Indian plan models.
- CO3. To introduce students to technical progress and endogenous growth models.
- CO4. To equip students with knowledge of modern growth models.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Explain key problems of economic growth and evaluate classical, structural, institutional, and dependency approaches to growth.
- CLO2. Apply Neo-Keynesian models along with evaluating Indian plan models.
- CLO3. Analyze the role of technical progress and evaluate endogenous growth models.
- CLO4. Apply modern macro growth models to understand real-world growth dynamics.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	1	2	2	2	3	2	3	3	1	2	1

Course Content

Unit-I : **12 Lectures**

Economic Growth: Problem, General Solution, Growth Equilibrium: Existence, Uniqueness and Stability.

Approaches to Growth: Classical and New Classical Approaches, Structural and Institutional Approaches, Marxist/New Marxist Approaches

Dependency Theories: Historical Perspective/Experience of Development, Structural Change (Chenry).

Unit-II: **12 Lectures**

Neo-Keynesian Models of Growth: N. Kaldor, L. Pasinetti and Mrs. Joan Robinson; Concept of Golden Age and Golden Rule of Accumulation.

Indian Plan Models- Mahalanobis, Tendulkar and Macroeconomic Consistency Model.

Unit-III: **12 Lectures**

Technical Progress in Macro Production Function, Endogenous Growth Models: AK Model, Lucas Model of Human Capital, Romer Model of Endogenous Innovation, Theory of Convergence and Divergence: The Classical approach to Convergence Analysis, Introduction of Stochastic Model.

Unit-IV: **12 Lectures**

Solow-Swan Model, Introduction of Infinite Horizon Model, Basics of Overlapping-Generations (Diamond) Model, Mundell-Fleming Open Economy Model.

Reading List-

1. Adelman, I., Theories of Economic Growth and Development, Stanford University Press
2. Blanchard, O. and Fischer, S., Lectures on Macroeconomics, (1989)
3. Barro, Robert J. and Xavier Sala-i-Martin: Economic Growth, McGraw-Hill
4. H.G. Jones, An Introduction to Modern Theories of Economic Growth
5. Hahn F.H., Readings in Theory of Growth, Macmillan McGraw-Hill Book Company
6. J. K. Mehta, Economics of Growth, Asia Publishing House
7. Jones C.I., Introduction to Economic Growth, W.W. Norton & Company, New York
8. K.N. Kabra, Development Planning in India, Sage Publications, New Delhi
9. Lucas, Robert, On the Mechanics of Economic Development, JPE (July 1988)
10. Meier and Rauch, Leading Issues in Economic Development, OUP
11. Romer, David, Advanced Macroeconomics, New York: McGraw-Hill,
12. Ray, D., Development Economics, OUP.
13. Romer, Paul, Endogenous Technological Change, Journal of Political Economy (Oct. 1990)
14. Stiglitz J.E. & Uzawa H, Readings in Modern theory of Economic Growth, The M.I.T. Press
15. Sen, A.K, Growth Economics, Penguin Books.
16. Thirlwall, A.P., Growth and Development, ELBS

ECO-513 Financial Institutions & Markets (Core Course: 4 Credits)

Course Objectives (COs):

- CO1. To provide an understanding of the structure and role of the financial system.
- CO2. To examine the growth, structure, and performance of banking in India.
- CO3. To introduce the functioning of financial markets and non-banking institutions.
- CO4. To familiarize students with financial regulation and globalization.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Explain the role of financial intermediaries and assess the relationship between financial intermediation and economic development in India.
- CLO2. Analyze the structure and functioning of banking in India and assess recent innovations in banking and international practices.
- CLO3. Examine the functioning of financial markets.
- CLO4. Evaluate the role of financial regulation and assess its impact of on India's financial markets and economic development.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	2	1	2	3	1	1	3	1	2	3	1

Course Content

UNIT-I

12 Lectures

Financial Intermediation and Financial Intermediaries

The Structure and Functions of the Financial System

Indicators of Financial Development, Criteria to Evaluate Assets: Risk and Financial Assets, Types of Risk, Risk Return Trade Off.

Trend in Saving and Investment in India -Role of Financial Intermediaries.

Financial System and Economic Development

UNIT –II

12 Lectures

Banking in India

Growth and Structure of Commercial Banks in India, Critical Evaluation of Performance, Reforms and Challenges. Credit Creation and its Control.

Co-operative Banks: Performance and Policy.

Development Banks - Role and Development

Interest Rates in India -Status and Issues; Inflation in India - Status and Issues;

RBI - Objectives, Functions and Monetary Policy. Recent Monetary policy and Prospects for Investment in India.

Banking Development and Current Technological Innovations.

International Practices and Banking System in India.

Role & Working of IFCI, ICICI, IDBI, EXIM Bank SIDBI, SFC's.

UNIT –III

12 Lectures

Financial Markets and Non-Banking Institutions

Role and Structure of Money Market Call Money Market. Treasury Bill Market, Commercial Bill Market, Government Securities Market.

Capital Market- Primary and Secondary Market in India (Introduction of its Structure and Functions).

Markets for Derivatives: Futures and Options, and Other Derivatives: Types, Uses and Pricing of Derivatives, Concept of Hedgers, Speculators, Arbitrageurs.

Non-Banking Financial Institutions: Nature, Significance, Types and Performance, Regulations in India. Functions of General & Life Insurance Company, Mutual Funds.

UNIT-IV

12 Lectures

Market Regulation

SEBI: Functions, Roles (it's Impact on the Working of Capital Market in India)and Challenges

Financial Instruments- Concepts and Development. Securities (Bond, Debenture, Equities) and Share Price Indices.

Globalisation and Financial Market- Role of FDI and FPI

Role of Financial Market in Indian Economic Development

Reading List :-

1. Bhole, L.M. (1999), Financial Institutions and Markets, Tata McGraw Hill Company Ltd., New Delhi.
2. Bharati Pathak (2009), The Indian Financial System: Pearson Education Publication New Delhi
3. Bhole, L.M. (2000), Indian Financial System, Chugh Publications, Allahabad.
4. Chandra, P. (1997), Financial Markets, (4th Edition), Tata McGraw Hill, New Delhi.
5. Gupta, S.B. (1983), Monetary Economics, S. Chand & Company, New Delhi.
6. Gupta, L.c. (Ed.) (1999), India's Financial Markets and Institutions, Society for Capital Research and Development, Delhi.
7. Hanson, J.A. and S. Kathuria (Eds.) (1999), India: A Financial Sector for the Twenty-first Century, Oxford University Press, New Delhi.
8. Harker, P.T. and S.A. Zenios (2000) (Ed.), Performance of Financial Institutions, Cambridge University Press, Cambridge.
9. Johnson, H.J. (1993), Financial Institutions and Markets, McGraw Hill, New York
10. Khan, M.Y. (1996), Indian Financial System, Tata McGraw Hill, New Delhi.
11. Machiraju, M.R. (1999), Indian Financial Systems, Vikas Publishing House, New Delhi.
12. Ohlson, J.A. (1987), The Theory of Financial Markets and Institution, North Holland, Amsterdam.
13. Rangaranjan, C. (1999), Indian Economics: Essays on Money and Finance, UBS Publication, New Delhi.
14. R.B.I. (1985), Report of The Committee to Review the Working of the Monetary system (Chakravarty Committee), Bombay.

SEMESTER-IV
ECO-514 India's Economic Policy-II (Core Course: 4 Credits)

Course Objectives (COs):

- CO1. To provide an understanding of monetary policy in India.
- CO2. To examine India's commercial policy.
- CO3. To analyze the demographic structure and population policy of India.
- CO4. To develop insights into the problems of poverty, inequality and unemployment, and evaluate policy approaches to address them.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Explain the objectives and instruments of monetary policy and evaluate its role in controlling inflation and stabilizing growth in recent years.
- CLO2. Assess India's commercial and foreign trade policies and analyze the role of foreign capital.
- CLO3. Analyze the demographic and occupational structure of India's population.
- CLO4. Evaluate the inter-linkages between poverty, inequality, and unemployment, and assess policy strategies for inclusive and sustainable development in India.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	1	3	2	3	2	2	3	2	1	2	3

Course Content

UNIT I: Monetary Policy **12 Lectures**

Role and Objectives in Developing Countries Instruments of Monetary Policy
Monetary Policy of India during Plans Post-1991
Monetary Policy and Inflation in India
Conduction of Monetary Policy in Recent years

UNIT 2: Commercial Policy **12 Lectures**

India's Balance of Payments during Plans
India's Foreign Trade Policy
Foreign Capital and India
Foreign Policy of India- FERA, FEMA

UNIT 3: India's Population Policy **12 Lectures**

Demographic Structure of India
Occupational Structure of India's Population
India's Population Policy
Census in India- Main Features of 2011 Census

UNIT 4: Poverty and Unemployment **12 Lectures**

Poverty, Inequality and Unemployment.

Reading List:-

1. Amartya Sen, Development As Freedom, Oxford University Press
2. A K Sen, Growth Economics, Penguin Books
3. Amartya Sen, Collective Choice and Social Welfare on Economic Inequality, Oxford University Press
4. Amartya Sen, Employment, Technology and Development, Oxford University Press.
5. Amartya Sen: Poverty and Famine: An Essay on Entitlement and Deprivation, Oxford University Press
6. Amartya Sen and Jean Dreze: India: Economic Development and Social Opportunity, Oxford University Press
7. Amartya Sen, Resources, Values and Development Oxford University Press
8. A.P. Thirlwall, Growth and Development, ELBS
9. Benjamin Higgins, Economic Development, University Book Stall, New Delhi
10. C.P. Kindleberger, Economic Development, Mc Graw Hill, New York
11. UNDP, Human Development Report
12. D Ray, Development Economics, Oxford University Press.
13. Hollis Chenery & T.M. Srinivasan, Handbook of Development Economics, North Holland
14. Meier and Rauch, Leading Issues in Economic Development, Oxford University Press
15. M.P. Todaro and S.C. Smith, Economic Development, Pearson.
16. Majumdar, Basu and Mitra (ed), Capital, Investment and Development,
17. Essays in Memory of Sukhamoy Chakravarty, Oxford University Press
18. N. Gimmel, Surveys in Development Economics, Blackwell Oxford.
19. P. Dasgupta, In Inquiry into Well Being and Destitution, Oxford University Press
20. S. Ghatak, Introduction to Development Economics, Routledge.
21. Y Hayami and Y Godo, Development Economics, From the Poverty to the Wealth of Nations (3rd Edition), Oxford University Press.

ECO-515 Development Economics (Core Course: 4 Credits)

Course Objectives (COs):

CO1. To introduce students to the concept and measurement of economic development, including traditional and modern approaches.

CO2. To examine the relationship between resources and development.

CO3. To analyze the role of domestic financial resources and fiscal policy in promoting economic development.

CO4. To explore the importance of external finance, trade, technology and institutions in shaping development outcomes in developing countries.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

CLO1. Explain traditional and new views of development.

CLO2. Analyze the role of resources in development.

CLO3. Evaluate the role of internal finance in development.

CLO4. Assess the contribution of external finance in shaping development processes.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	2	2	3	1	2	2	3	1	2	3	2

Course Content

- Unit1:** **12 Lectures**
The Concept of Development: Traditional views to the New Economic View of Development, Underdevelopment as Coordination Failure (O-Ring Theory), Measuring Economic Development: Measures of Development Including HDI and Sen's Capabilities and Entitlement.
- Unit 2:** **12 Lectures**
Resources and Development: Population, Education, Health, Gender, Poverty, Inequality, Unemployment, Urbanization, Rural- Urban Linkages (Agriculture-Industry relationship) & Migration - Theories and Empirical Evidence (Harris-Todaro Model), Environment.
- Unit 3:** **12 Lectures**
Role of Internal Finance in Development: Domestic Financial Resources for Development, Microfinance - Theory, Issues & Empirical Evidence, Fiscal Policy and Economic Development.
- Unit 4:** **12 Lectures**
Role of External Finance in Development: External Aid, FDI and MNCs Activity, Role of Trade and Technology in Development.
Institutions and Economic Development: Social Network as an Institution, Elementary Idea of Political Economy of Development.

Reading List :-

1. A.P. Thirlwall, Growth and Development, ELBS
2. Amartya Sen, Development As Freedom, Oxford University Press
3. A K Sen: Growth Economics, Penguin Books
4. Amartya Sen, Collective Choice and Social Welfare on Economic Inequality, Oxford University Press
5. Amartya Sen, Employment, Technology and Development, Oxford University Press
Amartya Sen: Poverty and Famine: An Essay on Entitlement and Deprivation, Oxford University Press
6. Amartya Sen and Jean Dreze, India: Economic Development and Social Opportunity, Oxford University Press
7. Amartya Sen, Resources, Values and Development, Oxford University Press
8. Benjamin Higgins, Economic Development, University Book stall, New Delhi
9. C.P. Kindleberger, Economic Development, Mc Graw Hill, New York
10. D Ray, Development Economics, Oxford University Press.
11. Hollis Chenery & T.M. Srinivasan, Handbook of Development Economics, North Holland
12. Meier and Rauch, Leading Issues in Economic Development, Oxford University Press
13. M.P. Todaro and S.C. Smith, Economic Development, Pearson.
14. Majumdar Basu and Mitra (ed), Capital, Investment and Development, Essays in memory of Sukhamoy Chakravarty, Oxford University Press
15. N. Gimmel, Surveys in Development Economics, Blackwell Oxford.
16. P. Dasgupta, In Inquiry into Well Being and Destitution, Oxford University Press
17. S. Ghatak, Introduction to Development Economics, Routledge.
18. UNDP, Human Development Report
19. Y. Hayami and Y. Godo, Development Economics, From the Poverty to the Wealth of Nations (3rd Edition), Oxford University Press

ELECTIVE COURSES

GROUP-I (International Trade Issues & Financial Institutions)

ECO-553- Regional Economic Cooperation (Elective - 4 Credits)

Course Objectives (COs):

CO1. To introduce the concept, importance, and scope of regional economic cooperation, with theoretical foundations.

CO2. To provide an understanding of preferential trade agreements (FTAs), including their scope, relevance.

CO3. To analyze theories of customs unions and economic integration.

CO4. To familiarize students with India's role in regional and global economic cooperation.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

CLO1. Explain the importance and types of regional economic cooperation, and apply models.

CLO2. Define and evaluate Free Trade Agreements (FTAs) and assess their role in global and regional trade.

CLO3. Apply theories of customs unions (Viner, Vanek, Lipsey models) using partial and general equilibrium.

CLO4. Assess India's role in regional and global economic negotiations

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	3	3	3	3	3	2

Course Content

Unit-I

12 Lectures

Regional Economic Cooperation: Importance & Scope, Types: Economic, Monetary, Trade, etc. Bilateral Trade Agreement, Zipf's Law and Gravity Equation, Revealed Comparative Advantage Model.

Unit-II

12 Lectures

Preferential Trading: Free Trade Agreements: Definition, Scope and Importance, SAFTA, NAFTA, ASEAN.

Unit-III

12 Lectures

Preferential Trading, Economic Integration and Regional Groupings. Theories of Customs Union: Partial Equilibrium Approach, The General Equilibrium Approach, The Viner Model, The Vanek Model and The Lipsey Model.

European Union, India and European Union.

Unit-IV

12 Lectures

India and Future of Regional Economic Cooperation: APEC. Pressure Group

Combination and International Negotiations: G-20 and G-33. New International

Economic Order, North-South Debate, Non-Aligned Movement.

Reading List-

1. Bo Sodersten & Geoffrey Reed, International Economics, MacMillan Press Limited, Hampshire & London.
2. D. Salvatore, International Economics, New York, John Wiley.
3. H. G. Mannur, International Economics, Vikash Publishing House, New Delhi.
4. Kushwaha G. S., Regional Economic Cooperation in South East Asia.
5. M. C. Vaish & Sudama Singh, International Economics, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
6. Marrewijk, C. V., International Economics-Theory, Applications, and Policy, Oxford University Press, New Delhi.
7. Nayyar, D., Trade and Globalization, Oxford Collected Essays, Oxford University Press, New Delhi.
8. Nayyar, D. (ed.), Trade and Industrialization, Oxford University Press, New Delhi.
9. Rana & Verma, International Economics, Vishal Publishing Co., Jalandhar, India.
10. Rizvi Syed, SAARC-Challenges Ahead, Kilsa Books, New Delhi.
11. S. Kindleberger, International Economics, Traveller Book Sell, New Delhi

GROUP-I (International Trade Issues & Financial Institutions)

ECO-554-India's Foreign Trade (Elective-4 Credits)

Course Objectives (COs):

- CO1. To introduce students to the changing perspectives on trade through trade theories.
- CO2. To examine India's balance of payments (BoP) and foreign trade trends, focusing on composition, direction, and sources of trade data since the planning era.
- CO3. To provide insights into India's foreign trade policy, export promotion measures, and the role of institutions.
- CO4. To analyze exchange rate management in India, including the evolution from FERA to FEMA.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Explain key trade theories in a changing world, critically evaluates views of trade theories.
- CLO2. Analyze India's BoP and foreign trade performance during different plan periods.
- CLO3. Evaluate India's foreign trade policy during planning eras, explain institutional support mechanisms (EXIM Bank, ECGC, STC, ITPO)
- CLO4. Assess India's exchange rate management understands the shift from FERA to FEMA.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	3	3	3	3	3	2

Course Content

Unit-I

12 Lectures

Trading in changing world: Views of Hicks, G. Haberler, Prebisch Singer, Caimcross, Gunnar Myrdal. Thinkers of Dependency Theory: Samir Amin, Emanuel. Agrhari, Paul Baran

Unit-II

12 Lectures

India's Balance of Payments: Trends and Magnitude During the Plans (1951 to 1990 and 1991 Onwards). India's Foreign Trade: Composition and Direction during Plans Period. Sources and Nature of Trade Data in India. ITC (HS).

Unit-III

12 Lectures

India's Foreign Trade Policy during Plans (1951 to 1990 and 1991 Onwards)- Institutional infrastructure for Export Promotion, EXIM Bank, ECGC, Export Promotion Council and Boards. STC, ITPO, FTZs, SEZs, EOUs, Deemed Exports.

Unit-IV

12 Lectures

Exchange Rate Management in India: FERA, FEMA, Issues of Full Convertibility, Use of Derivatives in Forex Management.

Reading List-

1. Dutt & Sundharam, Indian Economy, S. Chand & Company Pvt. Ltd., Ramnagar, New Delhi.
2. Economic Survey, Department of Economic Affairs, Ministry of Finance, GoI, Various Issues, General Manager, Government of India Press, Minto Road, New Delhi.
3. Kapila, U., India's Economic Reform, Academic Foundation, New Delhi.
4. Meier Gerald, M., Leading Issues in Economic Development (Third Edition), Oxford University Press, New York, 1976.
5. Ministry of Commerce-Govt. of India, Foreign Trade Policies Yearly, Vol. I and Vol. II.
6. Misra & Puri, Indian Economy, Himalaya Publishing House, New Delhi.
7. Nair, Deepak, India's Export Potential.
8. Nayyar, D., Trade and Globalization, Oxford Collected Essays, Oxford University Press, New Delhi.
9. Stiglitz, J. E. & Charlton, A., Fair Trade for All-How Trade can Promote Development, Oxford University Press, New Delhi.

Group-II (Agricultural & Industrial Economics)
ECO-561- Economics of Agriculture (Elective -4 Credits)

Course Objectives (COs):

CO1. To introduce the nature, scope, and role of agriculture in economic development, with reference to theories of agricultural transformation.

CO2. To develop analytical skills for understanding agricultural production and productivity.

CO3. To examine the competitiveness and marketing of agricultural products.

CO4. To assess the external sector dimensions of agriculture, including international trade, WTO impact, and globalization challenges for Indian agriculture.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

CLO1. Explain the role of agriculture in a developing economy, differentiate between traditional and modern agriculture.

CLO2. Analyze agricultural production and productivity through production function analysis, factor substitution, farm size–productivity relationships.

CLO3. Evaluate the efficiency and competitiveness of agricultural products, understand the working of agricultural and commodity markets in India,

CLO4. Assess agriculture's link with the external sector.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	3	3	3	3	3	2

Course Content

Unit I: Agriculture and Economic Development

12 Lectures

Nature and Scope of Agricultural Economics.

Role of Agriculture in a Developing Economy.

Traditional Agriculture and its Modernization.

Theories of Agricultural Development (Lewis, Ranis and Fie, Jorgensons, Hayyami and Ruttan and Others)

Unit II : Agricultural Production and Productivity

12 Lectures

Agricultural Production: Resource Use and Efficiency, Production Function Analysis in Agriculture, Factor Combination and Resource Substitution, Farm Size and Productivity Relationship Laws of Returns - Supply

Response of Individual Crops. Technical Change and Labour Absorption in Agriculture.

Unit III: Competitiveness of agriculture products and marketing

12 Lectures

Measurement of Efficiency and Competitiveness of Agricultural Products in International Markets;

Efficiency of Agricultural Markets in India; Form and Impact of Government Intervention in the Markets and Its Effects on Efficiency; Commodity Markets: Operation and Likely Impacts. Strategies for Surviving in a Globalizing World.

Unit IV: Agriculture and the External Sector

12 Lectures

International Trade in Agricultural commodities.

Commodity Agreements. Globalization of Indian Economy and Problems and Prospects of Indian Agriculture.

Impact of World Trade Organization on Indian Agriculture.

Elective Groups

GROUP-II (Agricultural & Industrial Economics)

ECO-565- Industry and Development (Elective -4 Credits)

Course Objectives (COs):

- CO1. Understand historical perspectives of industrial development.
- CO2. Analyze industrialization and globalization linkages.
- CO3. Evaluate India's industrial policies, finance, and labour issues.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Discuss theoretical approaches to industrial development.
- CLO2. Apply industrial models to India and global experience.
- CLO3. Analyze industrial policy debates and challenges.
- CLO4. Evaluate industrial relations and disputes.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	3	3	3	3	3	2

Course Content

Unit 1: Historical Development of Industry:

12 Lectures

Theoretical Perspectives of Role of Industry in Economic Development, Evolution of Industrialization, Industrial Development during the World War Era, Contribution of Industrial Development for Growth and Development Problems.

Unit 2: Globalization and Industrial Development

12 Lectures

Modern History of Industrial Development, Technological Change Innovation and Industrial Development of Selected Nations, USA, Germany.

Japan, Korea, China and Other Emerging Regions, Contribution of Industrialization in the MDGs, Industry and Environment. WTO and Industrial Development, Inter-Linkages between Agriculture, Industry and Service Sectors.

Unit 3: Indian Industrialization: Issues and Policies

12 Lectures

Various Models of Industrial Development in the Indian Economy Since Independence, Debate between Public and Private Sector Economy, Alternatives for Industrial Development, Changing Approach of Industrial Policies, Industrial Finance and Credit Mechanism, Problems and Challenges of India's Industrial Development, Regional and Sectoral Development of Indian Industries.

Unit 4. Industrial Relations, Industrial Disputes and Labour Problems

12 Lectures

Competition Commission of India and Regulation of Indian Industries, Industrial Disputes, Reasons and Remedies, Labour Unions and Labour Related Issues for Indian Industries, Social Security Measures for Industrial labour, Industrial sickness, Exit Policy, Legal Provisions and Government Policies.

Elective Groups
GROUP-III (Development Economics)
ECO-571- Population Studies (Elective - 4 Credits)

Course Objectives (COs):

- CO1. Understand population theories and demographic transition.
- CO2. Analyze Indian population structure, fertility, mortality, and migration.
- CO3. Critically evaluate population policy and urbanization.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Explain classical and modern population theories.
- CLO2. Apply demographic measures.
- CLO3. Analyze migration and urbanization theories.
- CLO4. Evaluate Indian population policies comparatively.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	3	3	3	3	3	2

Course Content

UNIT -I: Theories of Populations- I

12 Lectures

An Overview of Pre- Malthusian and Malthusian Theory of Population..

Theory of Optimum Population

Biological Theories of Population: Thomas Doubleday's Diet Theory, Joe De Castro's Protein Consumption Theory, Michael Thomas Sadler's Destiny Theory, Pearl and Reed's Logistic Curve Theory and Corrado Ginniss Biological Population Theory.

UNIT -II: Theories of Population - II

14 Lectures

Social and Economic Theories of Population: Dumont's Theory of Social Capillarity, Karl Marx's Theory of Surplus Population, Leibenstein's Motivational Theory of Population Growth.

Demographic Transition Theory: Notestein, Blacker, Karl Sax, Landry, Cowgill, Coale and Hoover

Population and Economic Development: Enke's View, Meadows View,

Julien Simmon View, Leibenstein Crittical Minimum Effort Theory.

Population and Environment

UNIT -III: Indian Population Analysis

10 Lectures

Indian Population: Composition, Structure, Pattern etc.

Determinants and Pattern of Fertility in India.

Determinants of Pattern of Mortality and Morbidity in India.

Age at Marriage in India

Population Policy in India with a Comparative Analysis of Some Developing Countries.

UNIT-IV: Migration And Urbanization

12 Lectures

Migration: Concepts, Measurement and Selectivity.

Theories of Migration : Everett Lee's Theory of Migration, Duncan's Theory, Standing's Theory of Materialism.

Models of Migration :, Lewis Model of Rural-Urban Migration, The Fei-Renis Model of Rural-Urban Migration, Harris- Todaro Model of Rural-Urban Migration.

Urbanization in India.

Urbanization and Civic Amenities.

Elective Groups
GROUP-III (Development Economics)
ECO-572-Demography (Elective- 4 Credits)

Course Objectives (COs):

- CO1. Understand demographic concepts, rates, and measurements.
- CO2. Analyze fertility, mortality, morbidity, and life tables.
- CO3. Evaluate nuptiality, projections, and stabilization models.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Use demographic rates and ratios.
- CLO2. Construct and interpret life tables.
- CLO3. Assess projections and population stabilization.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2

Course Content

UNIT-I: Demography I

12 Lectures

Demography: Definitions, Concepts, Rates, Ratio & Proportions etc.

Fertility and Fecundity and its various Measurements:

CBR, ASFR, GFR, TFR, GRR, NRR, Cohort Rates and Coale Indices.

UNIT-II: Demography II

14 Lectures

Mortality and Morbidity and its various Measurements: CDR, IMR, NMR, MMR etc. Measures of Morbidity.

Life Table: Simple and Abridged Life Table and Construction of Life Table, Model Life-Table: U.N. Model Life Table and Coale – Demeny Model Life Tables.

UNIT-III: Nuptiality Analysis and Stabilization Model

12 Lectures

Nuptiality Analysis: Concepts and Measurement.

Population Projections.

Age-Pyramid: Views of Thompson and Lewis.

Demographic Models: Stable and Stationary Population Model.

UNIT-IV: Demographic Data

10 Lectures

Sources of Demographic Data: Census, Sampling, Vital Registration

Methods, NFHS/SRS and DHS.

Food and Nutrition Position in India.

Quality of Data: Whipple's Index, Myers and Blended Index.

Trends of World Population: with special focus on SAARC & BRICS Nations.

Reading List:

1. Becker, G. (1960) ,An Economic Analysis of Fertility in Demographic Change and Economic Change in Developed Countries (edited by National Bureau of Economic Research), Princeton University Press, Princeton.
2. Boserup, E. (1981) , Population and Technological Change. A Study of Long Term Trends Chicago, University of Chicago Press.
3. Chandna, R. C. (2008), A Geography of Population Concepts, Determinants and Patterns.
4. Bouge, D. J. (1971), Principles of Demography, John Wiley, New York.
5. Coale, A. and E. Hoover (1958), Population Growth and Economic Development in LowIncome Countries, A Case Study of India's Prospects, Princeton University Press, Princeton.
6. Cox, Peter R. (1979), Demography, Vikas Publishing House, New Delhi.
7. John R. Weeks (2002), Population: An Introduction to Concepts and Issues (7thEdition), Wadsworth Publishing Company, New York.
8. Shryock, n. S. et. al. (1976), The Methods and Materials of Demography, Academic Press, New York.
9. Srinivasan, K. (1998), Basic Demographic Techniques and Applications, Sage Publications, New Delhi.
10. Schultz, Theodore W. (1978), Investing in People; The Economics of Population Quality, Hindustan Publishing Corporation, India, Delhi.
11. Thompson, W. S. and Lewis, D.T. (1976), Population Problems, Tata McGraw Hills Publishing Co., New Delhi.

Elective Groups
GROUP-IV (Public Policy)
ECO-581- Public Economics (Elective - 4 Credits)

Course Objectives (COs):

- CO1. Understand role of government, taxation, and expenditure.
- CO2. Analyze fiscal policy, public choice, and debt issues.
- CO3. Evaluate equity, efficiency, and intergenerational impacts.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Describe the nature and scope of public economics.
- CLO2. Apply theories of taxation and expenditure.
- CLO3. Analyze fiscal federalism.
- CLO4. Evaluate intergenerational equity and sustainability.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	3	3	3	3	3	2

Course Content

UNIT-I

12 Lectures

Introduction

Public Economics - Concepts

Evolutions of Fiscal Policy for Economic Development, Growth and Stabilization

Counter Cyclical Expenditure

Compensatory Finance

Fiscal Dynamics and Growth

UNIT -II

12 Lectures

Tax & Expenditure

Tax and Expenditure - Structure & Pattern

Direct and Indirect Taxes

Taxes of Union, State and Local Bodies

Tax Reforms

Expenditure Reforms

Tax Administration Reforms

UNIT -III

12 Lectures

Budget System

Process of Budget Formulation & Enactment

Components of Budget

Types of Deficits & Effects of Deficits

FRBM Act

Fiscal Consolidation

UNIT -IV

12 Lectures

Federal Finance

Fiscal Federalism

Co-operative Federation

Centre -State Financial Relations

Finance Commissions

State Finance Commissions

Financial System of Local Bodies

Reading List:

1. Atkinson A. B., and Stiglitz J. E. (1980), Lectures on Public Economics, Tata McGraw Hill, New York.
2. Buchanan, J.M. (1970), The Public Finances, Richard D. Irwin, Homewood.
3. Chelliah Raja J. (1971), Fiscal Policy in Underdeveloped Countries, George Allen and Unwin, London.
4. Dalton, Hume (1971), Principles of Public Finance, Routledge and Kegan Paul Ltd., London.
5. Jha, R. (1998), Modern Public Economics, Routledge, London.
6. Lakdawala, D. T. (1967), Union-State Financial Relations, Lalvani Publishing House, Bombay.
7. Lekhi, R. K., Public Finance, Kalyani Publishers, Ludhiana.
8. Musgrave R. V. and Musgrave P.B. (2001), Public Finance in Theory and Practice, McGraw Hill Book Company, New Delhi.
9. Singh, S. K., Public Finance in Theory and Practice, S. Chand and Co. Ltd., New Delhi

Elective Groups

GROUP-IV (Public Policy)

ECO-583- Environmental Economics (Elective - 4 Credits)

Course Objectives (COs):

- CO1. Understand environment–economy linkages.
- CO2. Analyze valuation of resources and environmental policy instruments.
- CO3. Evaluate India’s environmental policy and sustainability goals.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Explain key concepts of environmental economics.
- CLO2. Apply resource valuation methods.
- CLO3. Analyze policy instruments for environment.
- CLO4. Evaluate sustainability and policy goals.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	2	1	1	3	2	2	2	1
CLO2	3	2	3	2	2	1	2	3	3	2	2	2
CLO3	2	3	3	3	2	2	2	3	3	3	2	2
CLO4	3	3	3	3	3	2	3	3	3	3	3	2

Course Content

UNIT-I

10 Lectures

Introduction

Environmental Economics - Concept and Dimensions
Links between Natural Environment and Human Economy
Neo-classical Perspective: Circular Flow Model
Ecological Perspective: Material Balance Model

UNIT -II

14 Lectures

Fundamentals of Environmental Resources and Environmental Problems

The Economic Process and the Assimilative Capacity of the Natural Environment
The Optimal Level of Pollution
Environmental Damage
Public Goods
Common Property Resources
Externalities: Types of Externalities, Basics of Externality Theory.

UNIT-III

14 Lectures

Solution to Environmental Problems
Command-and-Control Approach: Liability Law, Emission Standard, Property Rights.
Market approach: Pollution Tax, Pollution Subsidy, Deposit/Refund System, Pollution Permit Trading System.
The Economic Approach to Environmental Valuation
Direct and Indirect Methods: Market Pricing Approach, Replacement Cost Approach, Hedonic Pricing Approach, Household Production Function Approach, and Contingent Valuation Approach.
Benefit -Cost Analysis.

UNIT –IV

10 Lectures

Environment and Development
Environmental Kuznets Curve
Sustainable Development -Conceptual Framework
Indicators of Sustainable Development
Environmental Accounting

Reading List :-

1. Baumol, W.J. & Wallace, E.O. :The Theory of Environmental Policy, Prentice Hall, New Jersey
2. Bhattacharya, Rabindra N (ed.) : Environmental Economics -An Indian Perspective, Oxford University Press, New Delhi
3. Eugene, T , Environmental Economics, Vrinda Publishers, New Delhi
4. Hanley, Nick; Shorgen, Jason F. & White, Ben: Environmental Economics- In Theory & Policy, Macmillan, New Delhi
5. Hussien, Ahmad M , Principles of Environmental Economics, Routledge, London
6. Jhingan, M L. & Sharma, C.K., Environmental Economics -Theory, Management & Policy, Vrinda Publishers, New Delhi
7. Karpagam, M, Environmental Economics, Sterling Publishers, New Delhi
8. Kolstad, Charles D., Environmental Economics, Oxford University Press, New Delhi
9. Mohanty, S. K , Environmental and Pollution Laws, Universal Law Publishers Co., New Delhi
10. Rangarajan, Mahesh, Environmental Issues in India, Pearson Longman, New Delhi
11. Sankar, Ulagnathan, Environmental Economics, Oxford University Press, New Delhi
12. Sengupta, Ramprasad, Ecology & Economics, Oxford University Press, New Delhi
13. Singh, Katar & Shishodia, Anil, Environmental Economics -Theory and Application, Sage Publication, New Delhi
14. Speth, J. G. & Haas, P.H , Global Environmental Governance, Pearson
15. Longman, New Delhi
16. Thomas & Callan, Environmental Economics, Thomson South-Western, New Delhi
17. Tietenberg, Tom, Environmental and Natural Resource Economics, Pearson Education, New Delhi.

Elective Groups

GROUP- V (Quantitative Economics)

ECO-591- Advanced Econometrics (Elective - 4 Credits)

Course Objectives (COs):

- CO1. Understand econometric methods beyond classical regression.
- CO2. Analyze panel data, simultaneous equations, and limited dependent variables.
- CO3. Apply advanced econometric techniques to policy issues.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Discuss econometric theory and limitations.
- CLO2. Apply panel data and advanced models.
- CLO3. Critically assess estimation issues.
- CLO4. Use econometric techniques for policy research.

CO–PO–PSO Matrix (Numeric Scale):

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	3	2	2	3	3	2	3	2
CLO2	3	2	3	2	3	2	2	3	3	3	3	2
CLO3	2	3	3	3	3	2	2	3	3	3	3	2
CLO4	3	3	3	3	3	2	3	3	3	3	3	3

Course Content

Unit-I

12 Lectures

Theory of Estimation: Different Methods of Estimation, Characteristics of Estimators in Both Small and Large Sampling; Gauss Markov Theorem, Confidence Interval and Confidence Limits of Parameter Estimates of OLS and Generalized OLS Linear Regression Model, Explanation of R^2 and Adjusted R^2 .

Unit-II

14 Lectures

Econometric Problems in Regression Analysis

- A. Autocorrelation: Nature, Identification, Consequences and Remedial Steps for Autocorrelation Problems.
- B. Heteroscedasticity: Nature, Identification, Consequences and Remedial Steps for Heteroscedasticity Problems.
- C. Multicollinearity: Nature, Identification, Consequences and Remedial Steps.
- D. Micronumerosity: Identification and Multicollinearity.

Unit-III

12 Lectures

- A. Specification of Errors; Errors of Measurement; Dummy Variables and Regressions using Dummy Variables.
- B. Lag in Economic Relationship: Estimation of Single Regression Equation with Lags & Distributed Lag Models.

Unit-IV

10 Lectures

Probit Models, Logit Models, Tobit Models & ARCH Models.

Reading List :-

1. Baltagi, R. H., Econometrics.
2. Chow, G.C., Econometrics.
3. Dhrymes, P.J., Econometrics Statistical Foundations and Applications.
4. Dongherty, C., Introduction to Econometrics.
5. Goldberger, A.S., Introductory Econometrics.
6. Gujarati, D. N. (1995), Basic Econometrics (IInd Edition), New Delhi, McGraw-Hill.
7. Greene W.H., Econometric Analysis, 4th edition, Pearson Education (2000)
8. Hamonda, O.F. and J.C.R. Roley: Time Series Model, Causality and Exogeneity
9. Intrilligator, M.D., Econometric Methods, Techniques and Applications.
10. Intrilligator, M.D., Econometric Methods, Techniques and Applications.
11. J. Johnston, Econometric Methods, 3rd Edition, McGraw-Hill/Irwin; 4th edition (1996)
12. Klein, L.R., Introduction to Econometrics. Mehta P. C. And Madnani G.M.K., Econometrics, Latest Edition.
13. Koutsoyiannis, A. (1997), Theory of Econometrics (IInd Edition), London, the Macmillan Press.
14. Krishna, K. L., (1997), Econometric Applications in India, New Delhi, Oxford University Press.
15. Kamanta, J. (1997), Elements of Econometrics, New York, University of Michigan Press.

Elective Groups

GROUP- V (Quantitative Economics)

ECO-592- Time Series Analysis & Computer Applications (Elective - 4 Credits)

Course Objectives (COs):

- CO1. Understand fundamentals of time series models.
- CO2. Apply ARIMA, ARCH-GARCH, and forecasting techniques.
- CO3. Use econometric software for applied research.

Course Learning Outcomes (CLOs):

After completion of the course the students will be able to:

- CLO1. Explain concepts of time series analysis.
- CLO2. Apply ARIMA models for forecasting.
- CLO3. Analyze ARCH-GARCH processes.
- CLO4. Use econometric software for practical research.

CO–PO–PSO Matrix (Numeric Scale)

CLOs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5
CLO1	3	3	2	2	3	2	2	3	3	2	3	2
CLO2	3	2	3	2	3	2	2	3	3	3	3	2
CLO3	2	3	3	3	3	2	2	3	3	3	3	2
CLO4	3	3	3	3	3	2	3	3	3	3	3	3

Course Content

Unit-I

12 Lectures

Time Series Econometrics: Pooling of Time Series and Cross Sectional Data: Panel Data, Difference Between Time Series Analysis and Time Series Econometrics. Tests of Stationarity of Time Series, Unit Root Test, Tests of Causality; Transforming Non-Stationary Time Series Cointegration; Regression of a Unit Root Time Series on Another Unit Root Time Series; Some Economic Application.

Unit-II

14 Lectures

Simultaneous Equation Model: Problems of Estimation of Parameters of Simultaneous Equation Model. Identification Problems: Rank and Order Condition for Identification, Indirect Least Squares Method of Estimation.

Instrumental Variables, Two Stage Least Squares Methods of Estimation, Three Stage Least Squares Methods of Estimation.

Maximum Likelihood Estimation Method: Full Information Method, Partial Information Method.

Unit-III

10 Lectures

Basic of Computer and Languages, MS-Excel, SPSS, e-views.

Unit-IV

12 Lectures

Methods for Estimation of Demand, Supply, Production, Consumption and Cost Functions based on Computer Application.

References:

1. Computer language and operating systems.
2. Enders, Time series Econometrics
3. Gujarati, D. N. (1995), Basic Econometrics (IInd Edition), New Delhi, McGraw Hill.
4. Henderson, J.M. and Quandt, R.E., Microeconomic Theory: A Mathematical Approach.
5. Intriligator, M.D., Econometric Methods, Techniques and Applications.
6. Intriligator, M.D., Econometric Methods, Techniques and Applications.
7. Johnston, J., Econometric Methods.
8. Johnston and Dinardo, Econometrics
9. Koutsoyiannis, A. (1997), Theory of Econometrics (IInd Edition), London, the Macmillan Press.
10. Krishna, K. L., (1997), Econometric Applications in India, New Delhi, Oxford University Press.
11. Kamanta, J. (1997), Elements of Econometrics, New York, University of Michigan Press.
12. Klein, L.R., Introduction to Econometrics.
13. Lange, Oscar, Introduction to Econometrics.
14. Maddala, a.s. (Ed.) (1993), Econometrics Method and Applications, (2 vols.) U. K.; Alders Hot.
15. Mehta, B.C., Mathematical Economics: Microeconomic Models.
16. Manual book on SPSS for computer applications.
17. Manual book on MS-Excel.
18. Manual book of e-views.