**Department of Economics**

**MA Economics Programme**

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| DEPARTMENT OF ECONOMICSM.A. ECONOMICS |
| Semester | Type of Course | Course Code | Course Title | L | T | P | Credit |
| I | C | ECO 401 | Microeconomics I | 3 | 1 | 0 | 4 |
| C | ECO 402 | Macroeconomics I | 3 | 1 | 0 | 4 |
| C | ECO 403 | Mathematical Methods in Economics  | 3 | 1 | 0 | 4 |
| C | ECO 404 | Statistical Methods in Economics  | 3 | 1 | 0 | 4 |
| C | ECO 405 | Political Economy | 3 | 1 | 0 | 4 |
| DE | Elective |  | 3 | 1 | 0 | 4 |
|  | C | ECO512 | Community Service |  |  |  |  ½ |
|  | C | ECO513 | Fitness |  |  |  | ½ |
| Total Credits |  |  |  | **25** |
| II | C | ECO 411 | Microeconomics II. | 3 | 1 | 0 | 4 |
| C | ECO 412 | Macroeconomics II. | 3 | 1 | 0 | 4 |
| C | ECO 413 | Econometrics.  | 3 | 1 | 0 | 4 |
| C | ECO 414 | Public Economics | 3 | 1 | 0 | 4 |
| C | ECO 415 | Issues in Indian Economy | 3 | 1 | 0 | 4 |
| DE |  |  | 3 | 1 | 0 | 4 |
|  | C | ECO512 | Community Service |  |  |  | ½ |
|  | C | ECO513 | Fitness |  |  |  | ½ |
| Total Credits |  |  |  | **25** |
| Discipline Specific Internship or Project Based Learning During Vacation  | 2 |  |  | **2** |
| III | C | ECO 501 | Development Economics  | 3 | 1 | 0 | 4 |
| C | ECO 502 | International Macroeconomics and International Finance | 3 | 1 | 0 | 4 |
| C | ECO 503 | Economic Growth Theories | 3 | 1 | 0 | 4 |
| C | ECO 504 | Trade Theory and Policy | 3 | 1 | 0 | 4 |
| DE | Elective | Disc. Elective Course | 3 | 1 | 0 | 4 |
| GE | Elective | Generic Elective Course | 3 | 1 | 0 | 4 |
|  | C | ECO512 | Community Service |  |  |  | ½ |
|  | C | ECO513 | Fitness |  |  |  | ½ |
| Total Credits |  |  |  | **25** |
| IV | C | ECO 511 | Masters’ Thesis/Dissertation Or DE/GE for 8 credits |  |  |  | 8 |
| DE | Elective |  |  |  |  | 4 |
| DE/GE | Elective |  |  |  |  | 6 |
|  | C | ECO512 | Fitness  |  |  |  | ½ |
|  | C | ECO513 | Community Service Courses(2 credits each for all 4 semesters) |  |  |  | ½ |
| Total Credits |  |  |  | **19** |

**Syllabus**

**Course Code: ECO401**

**Course Name: Microeconomics I**

**Credit: 4**

**Course Objectives**

The Course examines how individuals and firms make decisions by weighing up preferences, costs and benefits, and how the interaction of their decisions leads to utility-maximization, market and social outcomes. The model of market supply and demand is employed to examine the effects of taxes, subsidies and other government interventions in market activity. The implications of different market structures, including perfect competition and monopolistic are examined.

**Learning outcomes**

1. Demonstrate an understanding of the concepts of utility functions, demand functions and preference structure to compare the choices of consumer
2. Demonstrate the ability to apply optimization techniques to decisions made by consumers and firms
3. Students will be able to demonstrate an understanding of producer choice, including cost and production function analysis
4. Demonstrate an understanding of how markets work to allocate resources and the optimal individual decision making that underlies market outcomes
5. Identify perfect competition, monopoly and monopolistic market structures and discuss their implications for resource allocation
6. Explain the advantages and potential shortcomings of markets, discuss the conditions under which markets do and do not work well

**Unit 1**

Theory of Consumer: Preference relations and their properties, Consumption Decision (Optimizing Behaviour of the consumer under alternative preference structures- Utility, Indifference curves and revealed preference). Comparative statics of the consumer’s decision, income and substitution effect –Hicks and Slutsky analysis Slutsky Equation, derivation of ordinary and compensated demand function, derivation of demand functions: Perfect Substitute, perfect compliments and quasi-linear utilities, Demand elasticity. Consumer’s surplus

**Unit 2:**

Theory of Production and Costs, The Production function- Assumptions, Variation in Scale, Variation in input proportions, the multi-product firm and production possibility set. Minimization of costs in the long and the short run, Derivation of cost functions from production functions; derived demand for factors of production, Cobb-Douglas, CES, and Trans-log production functions and their properties;

**Unit 3**

Perfect competition — short run and long run equilibrium of the firm and industry, supply curve;

Monopoly — short run and long run equilibrium, price discrimination, welfare aspects, monopoly control and regulation; Natural Monopoly

**Unit 4**

Monopolistic competition — general and Chamberlin approaches to equilibrium, equilibrium of the firm and the group with product differentiation and selling costs, excess capacity under monopolistic and imperfect competition,

**Basic Readings**

1. Gravelle, H and Ray Rees (2004), *Microeconomics*, 3rd edition, Prentice Hall Longman London.
2. Sen, A. (1999), *Microeconomics : Theory and Applications*, Oxford University Press, New

Delhi.

1. Varian, H. (2005), *Intermediate Microeconomics: A Modern Approach* W.W. Norton, New York.
2. Roy Choudhary, K Microeconomics, Vol 1.
3. Varian, H. (2004), *Microeconomic Analysis*, W.W. Norton, New York.
4. Microeconomic Theory: Basic Principles and Extensions (Upper Level Economics Titles)Cengage; 11 edition (2014)

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**Course Code: ECO402**

**Course Name: Macroeconomics I**

**Credit: 4**

**Course Objectives**

This course Introduces students to the main classes of models in modern macroeconomics. The first half of the course will be aimed at providing students with astound knowledge of modern macroeconomic theories of income and employment determination while the second half will deal with the theories of consumption and investment along with measures to analyze unemployment and inflation including contrasting economic views on unemployment. Final part of the course will mainly focuses on integration of goods and money market and the use of fiscal and monetary police to achieve economic goals.

**Learning outcomes of the course**

On successful completion of this course students should be able to:

1. Demonstrate the problem of macroeconomic aggregations using partial and general equilibrium analysis
2. Examine how the economy behaves at the aggregate level and how national income is measured and determined both in closed and open economy context
3. Demonstrate various theories explaining the major factors determine consumption expenditure on final goods and services.
4. Define money and describe the theories on money demand and money supply including the process of money creation by the banking system and the role of the central bank.
5. Apply macroeconomic measures to analyze unemployment and inflation including contrasting economic views on unemployment.
6. Explain the components of aggregate economic activity, fluctuations and effects for the national economy and how fiscal policy is used to achieve economic goals.

**Unit - 1: Introduction to Macroeconomics**

Why and how to study macroeconomics; Scope of macroeconomics, Macroeconomic Variables- Stocks and Flows, Problem of Aggregation: Macroeconomic Equilibrium. National Income Accountings.

**Macroeconomic Debate (Introductory)**

Classical Macroeconomics: The Economy in the long run; Keynesian approach of Macroeconomics.

Models of Income and Employment Determination: An Overview. Walrasian interpretation of Keynesian unemployment; New Keynesian Interpretation, Post-Keynesian Interpretation.New classical economics.

**Unit - 2 Consumption Function and Investment Function**

Keynes consumption theory, Kuznet’s Puzzle, Life Cycle Hypothesis, Permanent Income Hypothesis, Random Walk Hypothesis, Keynesian Theory of Investment, Accelerator principles, Neo-Classical and New Classical Theories of Investment.

**Unit - 3 Money and Inflation**

Demand for Money- Friedman, Baumol, Tobin, Patinkin’s Real Balance Effect, Issues regarding endogenous and exogenous supply of money, R.B.I.’s Approach to Supply of Money Demand-Pull and Cost-Push Inflation, Phillips Curve Controversy, Natural Rate of Unemployment-Adaptive expectations and Rational expectations models of inflations.

The quantity theory of money.

**Unit – 4 Economy in the short-run**

Goods markets and the IS curve, Financial or money market and the LM curve, Goods market and money market together-The IS-LM model- closed economy case; Fiscal policy and monetary policy under alternative supply assumptions, Policy Mix. Aggregate demand and supply.

**Recommended Texts.**

1. Dornbusch Rudi, Fischer, Stanley and Startz Richard. *Macroeconomics*, Tata McGraw-Hill Publishing Co. Ltd.
2. Mankiw Gregory N. *Macroeconomics*, Worth publishers
3. Blanchard Olivier. *Macroeconomics*, Prentice Hall

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**Course Code: ECO403**

**Course Name: Mathematical Methods in Economics**

**Credit: 4**

**Course Objectives:** The course covers a wide range of mathematical methods in applied economics. Specifically, it aims to provide the basics of mathematical methods and the range of mathematical techniques that are used to explain various applied economics problems. Also the course attempt to provide the insight of some advance level mathematical tools in understanding and formulating various economic theories.

**Learning Outcomes:**After successfully completion of the course students are expected to learn thefollowing.

1. The students are expected to be familiar with a wide range of mathematical tools that are usedto explain various economic theories.
2. The students can successfully demonstrate the economic meaning of mathematical models.
3. They can learn to optimize the resources and thus understand how the economic policy
makers make decision.
4. They can able to demonstrate most of the theories in economics precisely and strategically.
5. They can able to understand the economic dynamics.

**Unit 1**

Concept of a function; Limits, continuity and differentiability of a real valued function; Convex and concave functions, Differentiation- Partial and total; Interpretation of partial derivatives.Optimization with single and multivariable functions- Unconstrained and constrained optimization in simple economic problems.

Integration-simple and Definite, Applications to Economic variables

**Unit 2**

Concept of a vector - its properties; Concept of matrix - their types, Simple operations on matrices, matrix inversion. Determinants and their basic properties; Solution of simultaneous equations through Cramer‘s rule; Jacobians and Hessians: Input-output Analysis.

Difference equations - Solution of first order and second order difference equations; DifferentialEquations

**Unit 3**

Linear programming — Basic concept; Formulation of a linear programming problem — Its structure and variables; Nature of feasible, basic and optimal solution; Solution of simple linear programming problems through graphical and simplex method; Concept of duality and statement of duality theorems; Formulation of the Dual and its interpretation.

**Unit 4**

Game Theory: an introduction. Dominated and Dominant Strategies: The Prisoner‘s Dilemma, mixed strategy Nash Equilibrium; Saddle point solution; Simple applications to economics.

**Recommended Texts**

1. Chiang, Alpha, C. and Kevin Wainwright. Fundamental methods of Mathematical
2. Economics, latest edition, McGraw Hill.
3. Knut Sydsaeter and Peter J Hammond. Mathematics for Economic Analysis, Pearson
4. Education India.
5. Carl P Simon and Lawrence Blume. Mathematics for Economists, W. W. Norton &
6. Company.
7. Mike Rosser. Basic Mathematics for Economists, Routledge
8. Eric Rasmusen. Games and Informations, Basil Blackwell.
9. Martin, J Osborne. An Introduction to Game Theory, Oxford University Press.

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**Course Code: ECO404**

**Course Name: Statistical Methods in Economics**

**Credit: 4**

**Course Objective:** The Course deals with simple tools and techniques, which will help a student in data collection, presentation, analysis and drawing inferences about various statistical hypotheses. The students are expected to formulate problems in economic theory and learn simple solutions with one or two variables.

**Learning Outcomes:**

* Compare and contrast various types of data.
* Select and estimate measures of central tendency and dispersion based on specific economic problems.
* Apply various sampling methods based on the context and need of the study.
* Apply the rules of probability theory and able to identify which approach is used in a given scenario.
* Understand the concept of Bayes theorem with its economic applications.
* Use correlation analysis on different types of data sets to find the degree of association.
* Estimate cause and effect relationship through regression analysis
* Able to select a good estimator in the process of estimation.
* Perform hypothesis testing using z test t-test, chi-square and f-tests and interpret the results.

**Unit 1**

Typical data sets arising in economics, Qualitative, Quantitative, Income, Expenditure, Time Seriesand Panel data. Major sources of data sets: Census, Government agencies, e-resources,Graphical representations, Measures of Central tendency, Measures of dispersion.Sampling methods: Census, simple random sample with and without replacement, stratified sampling methods.

**Unit 2**

Probability theory: Laws of addition and multiplication; Independence of events, Conditional probability and concept of independence; Bayes theorem with applications; Random variable; Discrete and Continuous random variables; Probability density functions; Binomial, Poisson and Normal distributions, their mean and variance, graphs of normal density functions.

**Unit 3**

Correlation: Pearson‘s product moment and Spearman‘s rank correlation-their properties; Partial and multiple correlations, linear and nonlinear regression. Estimation: Concept of an estimator and its sampling distribution: Desirable properties of a good estimator; Point and Interval estimation.

**Unit 4**

Testing of statistical hypotheses – Formulation of the problem; Null and alternative hypothesis; Type 1 and Type 2 errors, Goodness of fit; Confidence intervals and level of significance; Hypothesis testing for means, variance, regression coefficients based on standard normal, t, Chi-square and F tests.

Basic Readings:

* Lee, C. F., Lee, J. C. and Lee, A. C. Statistics for Business and Financial Economics. (2000), World Scientific, Singapore.
* Black, Ken. Business Statistics. (2004), John Wiley & Sons.
* Taylor, S. Business Statistics. (2001), Palgrave.
* Bluman, A. G. Elementary Statistics. (2009), McGraw-Hill
* Newbold, P., Carlson, W. L. & Thorne B. M. Statistics for Business and Economics, Pearson

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**Course Code: ECO405**

**Course Name: Political Economy**

**Credit: 4**

**Course Description:**

This course explores the relationship between political institutions and economic development, covering key theoretical issues as well as recent empirical evidences. Topics include corruption, democracy, dictatorship, and war. Discusses not just what we know on these topics, but how we know it, covering how to craft a good empirical study or field experiment and how to discriminate between reliable and unreliable evidence.

**Scope and Objective of the Course:**

In this course, we will study some of key theoretical ideas for why and how politics affects economic development. We will also look at a variety of empirical examples drawn from throughout the developing world. There are three basic goals for this course and these are as follows:

* Building a foundation for thinking about the role of political economy in understanding economic development.
* Understanding some core theoretical concepts in political economy, with illustrations from developing countries whenever possible.
* Understanding empirical evidence in economics. What makes a good empirical study? How do we learn about the world empirically? What are some of the techniques we can use to better understand the world?

**Unit 1:**

Introduction: Why study political economy and development? Motivation and course overview; Different traditions in political economy – classical political economy, marxist political economy, new political economy

**Unit 2:**

Does Political Economy Matter for Economic Development? Some Facts and Empirical Techniques.The Role of Leaders and Democratic Institutions; The Deep Determinants of Economic Development: Macro Evidence; The Deep Determinants of Economic Development: Micro Evidence; inequality and economic growth; political economy and social/human development

**Unit 3:**

Voting: The Median Voter Theorem; Voting in Practice: Citizen-Candidate Models, Politician Identity and the Failure of the Median Voter Theorem; Voting in Practice: Agency Models; Voting in Practice: Vote buying and voter intimidation; Sometimes It Gets Complicated: Condorcet's Paradox and Arrow's Impossibility Theorem. Good vs. Bad Dictatorships; Commitment problems in Dictatorship

**Unit 4:**

Collective Actions: The Logic of Collective Action; Ethnic Heterogeneity and Contributions to Public Goods; Monitoring and Collective Action Problems; Recovery from Civil War; Why Do Wars Happen; Civil War. Corruption: Is Corruption Inefficient; The Corrupt Official's Decision Problem: Balancing Risks, Rents, and Incentives; The Industrial Organization of Corruption; Politicians and Firms

**Recommended Text:**

* Bardhan (1999), Political Economy of Reforms in India, New Delhi: NCAER.
* Bardhan, P. (1998), *Political Economy of Development in India*, Oxford: Oxford University Press.
* Chandrasekhar, C.P. and JayatiGhosh, (2002), Market that failed: Decade of neoliberal reforms in India, New Delhi: Left Word Books.
* [Charles Sackrey](https://www.amazon.com/s/ref%3Ddp_byline_sr_book_1?ie=UTF8&field-author=Charles+Sackrey&text=Charles+Sackrey&sort=relevancerank&search-alias=books), [Geoffrey Schneider](https://www.amazon.com/Geoffrey-Schneider/e/B08TYXJ241/ref%3Ddp_byline_cont_book_2)  and [Janet Knoedler](https://www.amazon.com/s/ref%3Ddp_byline_sr_book_3?ie=UTF8&field-author=Janet+Knoedler&text=Janet+Knoedler&sort=relevancerank&search-alias=books) (2013), *Introduction to Political Economy*, 7th/8th edition, Dollars and Sense.
* Fine, Ben and Milonakis, Dimitris (2008), *From Political Economy to Economics: Method, the Social and the Historical in the Evolution of Economic Theory*. Routledge.
* Frankel, F. (2005), India’s Political Economy: a gradual revolution, 1947-2004, Oxford University Press.
* Jevon, W. Stanley. The Theory of Political Economy
* Ricardo, David. (1817). *Principles of Political economy and Taxation*, the Sraffa edition.
* Roland, G. (2000) *Politics, Market and Firm*s, The MIT Press: Cambridge, Mass.
* Roncaglia, Alessandro. (2005). *The Wealth of Ideas*. Cambridge University Press, Cambridge
* Simon, David (2005). *Fifty Key Thinkers on Development*, Routledge.
* Smith, Adam. (1776). *An inquiry into the nature and causes of the wealth of nations,* The Glasgowedition.
* Sweezy, Paul (1970). *The Theory of Capitalist development: Principles of Marxian Political economy*. Modern Reader Paperbacks, New York

**Course Code: ECO411**

**Course Name: Microeconomics II**

**Credit: 4**

**Course Outline/Objectives**

The Course will selectively cover recent developments in macroeconomics of fluctuations, open economy, policy, and micro-foundations. The focus will be on substantive issues and applications of basic principles. The workhorses of macroeconomic issues will be applied to analyse economy-wide topics of current interest. Familiarity with the material covered in texts as mention in Macroeconomics-I is assumed.

**Learning Outcomes**: This course would aim to provide an advanced knowledge of modern Macroeconomics. After successfully learning this course the student may achieve in the followings.

1. The student can develop the intellectual ability of explaining some core economic issues.
2. They can able to demonstrate how the economy works at different situations both in short-run as well as long-run.
3. They can apply the economic theories the contemporary economic and social issues.
4. They can develop skills of synthesising the argument found in academic research and also in media.
5. They can develop skill of logical economic arguments.
6. The student can understand how the fiscal policy makers and the monetary policy makers interact and also they can able to analyse the policy decision.
7. They can improve to make economic policy debate.

**Unit 1: Oligopoly & Game Theory**

Non-collusive (Cournot, Bertrand, Edgeworth, Chamberlin, kinked demand curve and Stackelberg’s solution) and collusive (Cartels and mergers, price leadership) models; Price and output determination under monopsony and bilateral monopoly; Game Theory: Nash Equilibrium, Prisoners’ Dilemma, Dominant Strategies, Repeated Games, Zero-Sum Game, Mixed Strategies

**Unit 2: Theory of Distribution**

Neo-classical approach — Marginal productivity theory; Product exhaustion theorem; Elasticity of technical substitution, technical progress and factor shares; Theory of distribution in imperfect product and factor markets;

**Unit 3: General Equilibrium**

Core of Exchange economy; Market exchange; General equilibrium models of exchange and production; Existence of competitive equilibria; Uniqueness and Stability of Competitive equilibrium;

**Unit 4: Welfare Economics**

First and Second Fundamental Theorems of Welfare Economics. Pareto Criterion; Kaldor Criterion; Scitovsky Criterion; Social welfare function; Compensation principle; Theory of Second Best — Arrow’s impossibility theorem; Rawl’s theory of justice,

Market Failure: Market failure; Sources of market failure and their implications - Externalities; Public Good; Asymmetric Information.

Recommended Readings:

1. Varian, Hal R., Intermediate Microeconomics, 1990, 5th Edition, W.W. Norton and Company (Varian -5).
2. Varian, Hal R., Microeconomic Analysis, 1992, 3rd Edition, W.W. Norton and Company (Varian - 3).
3. Henderson &Quandt, 1988, Microeconomic Theory - A Mathematical Approach, McGraw Hill. (Henderson).
4. Layard, P.R.G and Walters, A.A., 1978, Microeconomic Theory, McGraw Hill (Layard).
5. Mascolell, A., et. al., 1995, Microeconomic Theory, Harvard University Press (Mascolell)
6. Russell, R.R. and M. Wilkinson, 1979, Microeconomics: A Synthesis of Modern and Neo- Classical Theory, John Wiley, New York. (Russell)
7. McKenna, C.J., 1986, The Economics of Uncertainty, Wheat Sheaf Book (Mckenna) Harry Townsend (ed.), 1965, Price Theory, Penguin Education (Townsend
8. Gravelle, H and Ray Rees (2004), *Microeconomics*, 3rd edition, Prentice Hall Longman London.
9. Sen, A. (1999), *Microeconomics : Theory and Applications*, Oxford University Press, New
10. Microeconomic Theory: Basic Principles and Extensions (Upper Level Economics Titles)Cengage; 11 edition (2014)
11. Mas-Collel, Whinston and Green, Micro-economic Theory, OUP, 1995
12. Modern Microeconomics 2e,Koutsoyiannis 2nd Revised edition Edition 2nd Publisher: Macmillan,
13. Nicholson, W., Microeconomic Theory: Basic Principles and Extensions, eighth edition, South Western Thomson Learning, 2002

**Course Code: ECO412**

**Course Name: Macroeconomics II**

**Credit: 4**

**Course Outline/Objectives**

The Course will selectively cover recent developments in macroeconomics of fluctuations, open economy, policy, and micro-foundations. The focus will be on substantive issues and applications of basic principles. The workhorses of macroeconomic issues will be applied to analyze economy-wide topics of current interest. Familiarity with the material covered in texts as mention in Macroeconomics-I is assumed.

**Learning Outcomes**: This course would aim to provide an advanced knowledge of modern Macroeconomics. After successfully learning this course the student may achieve in the followings.

 The student can develop the intellectual ability of explaining some core economic issues.

1. They can able to demonstrate how the economy works at different situations both in short-run as well as long-run.
2. They can apply the economic theories the contemporary economic and social issues.
3. They can develop skills of synthesizing the argument found in academic research and also in media.
4. They can develop skill of logical economic arguments.
5. The student can understand how the fiscal policy makers and the monetary policy makers interact and also they can able to analyze the policy decision.
6. They can improve to make economic policy debate.

**Unit 1: Macroeconomics in the Short Run**

Fluctuations of Macroeconomic variables, The Stylized facts.

Open Economy Issues: Open economy IS-LM and IS-MP, the Mundell-Flemming Model, Macroeconomic Policy and Exchange Rate Regimes. Asset Price Volatility, Interest rate and Exchange rates, Crisis models and Strategic interactions.

**Unit 2: Micro-foundations of Real and Nominal Rigidities**

Determination of Aggregate supply curve, Wage-Price rigidities. Imperfect Information, Imperfect Competition and Asymmetric Information, Solving for Rational Expectation Equilibrium, Coordination Failure

**Unit 3: Macroeconomics in the Medium Run**

Ricardian Equivalence, the Open economy consumption smoothing, and foreign capital, the firm; Tobin‘s q theory of investment, Business Cycle Dynamics-nominal and real.

**Unit 4: Macro Policy**

Coordination of Fiscal and Monetary Policy, Rules versus Discretion, Credibility, Commitment devices, Monetary Transmission Mechanism and Targeting, Policy debates.

**Recommended Texts-**

1. Blanchard Olivier & Fischer Stanley. *Lectures on Macroeconomics*. Cambridge: MIT Press,
2. Blanchard Olivier. *Macroeconomics*, Prentice Hall
3. Heijdra B., van der Ploeg F. *Foundations of Modern Macroeconomics*, Oxford University Press
4. Romer D. *Advanced Macroeconomics*. McGraw Hill Book Company: London,

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**Course Code: ECO413**

**Course Name: Econometrics**

**Credit: 4**

**Course Outline:**

The course is quantitatively rigorous and requires advanced knowledge of mathematics and
statistics. An important objective of the course is to introduce regression analysis to students so that they are able to understand its applications in different fields in economics. Attention is also given to the violations of CLRM model, aspects of discrete choice models, and simultaneous equations models. Specifically, by the end of the course, students will be able to specify assumptions, formulate and estimate appropriate models, interpret the results and test their statistical significance. Students are required to conduct research in teams where they apply the techniques learnt during the course and present their results.

**Learning Outcomes**

1. After successfully completion of the course students are expected to learn to estimate the regression model, derive the parameter estimators and learn to interpret.
2. They can able to learn the consequences of the violations of CLRM assumptions, how to detect the problems of autocorrelation and heteroscedasticity and also able to learn to learn the remedial measures.
3. They can understand and would learn to quantify the qualitative variables and the interpretations. They would learn to use the dummy variables both as explanatory as well as dependent variable.
4. They would learn the important simultaneous equation models and the simultaneous equation bias.
5. The student can use these techniques of econometrics in their MA dissertations.

**Unit-1:**

Classical Linear Regression Model- two and three variables- assumptions, estimation,
testing and forecasting, BLUE properties of OLS estimators (derivation and proof); Variance of
disturbance term; Matrix method of linear regression models; Introduction to multiple linear regression model and tests of linear restrictions; Simple regression coefficients versus partial regression coefficients.

**Unit-2 :**

Multicollinearity, Auto-correlation, and Heteroscedasticity: Nature, Causes, Consequences, Detection and Remedial measures.

**Unit-3:**

Dummy variables; Models for Binary Choice-Linear Probability Model; The logit and the Probit Model. Distributed lag models.

**Unit-4:**

Simultaneous Equation Models (Structural form and Reduced form) and Simultaneous Equation Bias; Identification (Under-identified, Exactly identified and Over-identified model); Various Methods of Simultaneous Equation Model Estimation.

**Recommended Text Book**

1. Damodar N. Gujarati, ***Basic Econometrics****;* 4th Edition, McGraw Hill, 2008.
2. Jaffery Wooldridge, **Introductory Econometrics: A Modern Approach, CengageLearnig**
3. Koutsyannis, **Theory of Econometrics**, Palgrave
4. G. S. Madalla, **Introduction to Econometrics**, McMillan Publishing Company
5. DimitriosAsterious and Stephen G. Hall, **Applied Econometrics,** Palgrave
6. Christopher Daugherty: Introduction to Econometrics
7. Crish Brooks, Introductory Econometrics for Finance

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**Course Code: ECO414**

**Course Name: Public Economics**

**Credit: 4**

**Course Outline/Objective**

The main goal of the course is to provide students with the necessary skills to formulate public policies with an understanding of their economic implications. Topics covered include welfare economics, market failures, fiscal tools (budget, taxes, expenditure, public debt, and fiscal federalism), regulations, and political economy. This goal will be achieved by equipping students to: (1) understand justifications for public policy changes, (2) understand how government policies can change the production and distribution of resources in the hope of addressing social problems, (3) understand instruments used to finance public policy choices, and (4) assess desirability of particular public policies and expenditures. This course shall be presented through a variety of multimedia enriched e-content, activities and assessments so that the students be able to understand various topics very well.

**Learning Outcomes**

On successful completion of this course students will be able to:

1. Learn the basic tools, concepts and models necessary for competence in key topics in Public Economics.
2. Understand the role that prices play in a market economy, both as a method of allocating resources in the private sector, and as a guide for public policy.
3. Understand the twin objectives of efficiency and equity, and explain why there is often a trade-off between these two objectives.
4. Understand the connection between relative prices and notions of efficiency.
5. Discuss the use of taxes, public expenditures, public debt, and federal finances for promoting socially efficient resource allocation and a desirable income distribution. Also, go through rigorous theories related to these fiscal tools.
6. Learn to analyze policy challenges facing governments around the world and learn about potential solutions to these challenges as well as obstacles in implementing them.
7. Learn a set of perspectives into the economic activities of the government sector that will help them become enlightened participants - engaged citizens, voters, politicians, and/or civil servants - in society.
8. Discuss critically key issues in public economics, informed by recent research.
9. Present a coherent argument orally and in writing on topics in public economics.

**Unit-1: Introduction: Public Goods and externalities**

Market Failure and the rationale for Government Intervention. Alternative Classifications of Public Goods, Optimal Provision of Public Goods, Private Provision of Public Goods, Nash-Cournot Solution, Preference Revelation, Samuelson and Lindahl Equilibrium, Club Goods Model. Externalities: Positive and Negative, Externalities and Social Costs. Pigouvian Tax, Coase Theorem.

**Unit 2: Public Finance**

Fiscal Policies and instruments: Taxation: Efficiency, Equity, Cost of Collection and Compliance; Tradeoff between Efficiency and equity; Effect of Taxes on labor supply and Savings-Income, commodity and wealth tax. Laffer‘s Curve, Direct and indirect taxes. Tax Reforms in India.Non-Tax Fiscal Instruments**:** Profit and Dividends, Rents and Royalties, Non-revenue Effects of Non-Tax Instruments

**Unit-3**

Public Debt**:** Public Debt and External Debt, Theories of Public Debt, Ricardian Equivalence, Debt Management Techniques

Budget and Fiscal Policy**:** Capital and Revenue Accounts, Dynamic Nexus between Two Accounts, Budget Deficits, Theories of Deficits, Indian Budget Deficits: Union and States.

**Unit-4**

Public Expenditure**:** Theories of Public expenditure**.** Leviathan Hypothesis, Niskanen Model, Efficiency and Equity Tradeoff, Transfers and Subsidies, Financing of Social Programs.

Fiscal Federalism**:** Principles Determining Federal Division of Revenue and expenditure, Vertical and Horizontal Imbalances, Transfer Mechanism in India, Role of Finance & Planning Commissions, Sharing of Taxes, Non-tax Revenues and Grants.

**Recommended Texts**

1. Jonathan Gruber. *Public Finance and Public Policy*, Worth Publishers
2. John Leach. *A course in Public Economics* , Cambridge University Press
3. Jean Hindriks and Gareth D. Myles, *Intermediate Public Economics*, MIT Press
4. Musgrave R.A. and P.B. Musgrave. *Theory and Practice of Public Finance*, Tata McGraw Hills
5. Gupta Janak Raj. *Public Economics in India: Theory and Practice*, Atlantic Publisher
6. BagchiAmaresh. *Readings in Public Finance*, Oxford University Press

**Course Code: ECO415**

**Course Name: Issues in Indian Economy**

**Credit: 4**

**Course Outline/Objectives**

The course introduces the students to the various dimensions of the Indian Economy and the contemporary Problems of Indian Economy. This course is also aims to provide the basic information regarding the developmental strategies and structural adjustment reform measures that countries across the world adopt to eradicate the poverty and unemployment, to reduce inequalities and regional imbalances. The course also focuses on the changing role of state, markets and civil society institutions with respect to economic development.

**Learning Outcomes**

1. Understand the Indian economy better and will get some idea about the problems faced by the Indian economy
2. Demonstrate the development process in India after independence
3. Develop a perspective on the external sector reforms and industrial sector reforms undertaken in global economies including in India for last three decades
4. Demonstrate various structural adjustment programs and reform measure that the government of India has been initiated to eradicate poverty and unemployment, to reduce inequalities and regional imbalances since Independence
5. Understand what the primary measures of inflation in India are and be able to assess the impact of inflation on inflow and outflow of foreign capital India.

**Unit 1**

Post 1991 development in global economies; Trade and exchange rate liberalization, market oriented reforms, Capital flows from World Bank and IMF. Structural adjustment programmes and conditionalities. Exchange rate and trade policy changes, Industrial policy and setting up of regulatory structures like SEBI, TRAI, IRDA, etc.

**Unit 2**

Infrastructure sectors.Investment requirements of roads, power, ports and other infrastructure sectors private-public partnership mode SMEs and Informal sector Labour market reforms - Exit policy and liberalization of labour markets.

Rural Livelihood: Livelihoods and Employment: Structure of rural poverty, Food security and the Public Distribution System; Employment Security- NREGA

**Unit 3**

Economic development and institutions – Role of state, markets and civil society institutions.. Characteristics of Indian markets and need for state interventions. Growth of Indian economy since independence – Sectoral growth rates and changing structure.Poverty trends.Inequalities and regional imbalances.

**Unit 4**

Growth of domestic savings and investment.Role of foreign capital - borrowing, equity and direct investment.Technology inflows. Monetary policy issues: Price level and inflationary trends – Composition of wholesale price index. Retail prices.

**Basic Reading**

1. Ray, Debraj; Development Economics, Oxford University Press, 2002.
2. To be supplemented by scholarly readings from Economic and Political Weekly, Indian Economic journal and Indian Economic Review
3. Uma Kapila, Indian Economy: Issues in Development & Planning and Sectoral Aspects

**Course Code: ECO501**

**Course Name: Development Economics**

**Credit: 4**

**Course Objective:** This course familiarizes the students with emergence of the field of development economics in the context of international events. It aims to focus on various development theories and approaches in dealing with underdevelopment and pressing issues of poverty and inequality, with the concepts and measurement.

**Learning Outcomes:**

* Analyze the shift of focus from economic growth as a single dimensional concept to economic development which is a multi-dimensional concept.
* Demonstrate familiarity with some central themes and issues of economic development.
* Demonstrate the understanding of the difference between growth and development, major development and growth theories, the measurement of inequality, significance of agriculture in developing countries, poverty and population issues facing the world, international trade, and importance of foreign aid.
* Examine the factors responsible for perpetuation of the conditions of underdevelopment in same economies.
* Differentiate different measures of poverty and inequality and pros and cons of different measurement.
* Review the policy implications of these key development economic theories
* Critically analyze how the theory of development economics impacts upon practical implementation macro development policies in varying local and global contexts

**Unit 1**

Concept of Development – From GDP per capita to holistic indicators.PPP and international differences.International poverty line and estimates of poor.Factors of development.Colonialism and dependency theories. Schumpeter –Innovation, enterprise and process of ‘creative destruction’. Rejection of trade as the ‘engine of growth’.Nurkse and Prebisch arguments. Structural changes: Kuznets analysis of structural change.

**Unit 2**

Concept and Measures of Poverty-, Pareto Distribution, Head- Count Ratio, Income Gap Ratio, FGT Index. Concept and Measures of Inequality – Lorenz Curve and Gini coefficient, Issues in composite Indices, Problems of Aggregation. Inequality and Growth- the inverted U curve hypothesis, Inequality and growth –Interrelationships.

**Unit 3**

Role of capital formation – vicious circle arguments, Rostow’s stages of development, Kuznet’s economic history analysis of characteristics of development. Capital formation and allocation of investment- Balanced and unbalanced growth theories. Rosenstein –Rodan and Hirschman.Denison’s growth accounting – Contribution of labour, capital and Technology.

**Unit 4**

Role of agriculture. Dual economies and surplus labour argument, Ranis-Fei Model, Unemployment- efficiency wage theory as an explanation for wage rigidity and involuntary unemployment, Collusive theory of unemployment. Population growth and critical Minimum Effort.Demographic transition.Demographic dividend.

**Readings:**

1. A.P. Thirlwall: *Growth and Development*, ELBS.
2. D Ray: *Development Economics*, OUP.
3. S. Ghatak: *Introduction to Development Economics*, Rutledge.
4. KaushikBasu: *Analytical Development Economics The Less Developed Economy Revisited*, OUP.
5. D Lal; *The Poverty of Development Economics*, OUP.
6. G. Meier: *Leading issue in Economic Development* (4th Edition),OUP.
7. Meier and Rauch: *Leading Issues in Economic Development* (8th Edition),OUP

**Course Code: ECO502**

**Course Name: International Macroeconomics and International Finance**

**Credit: 4**

**Course Outline and Objective**

This course links the fields of macro-economics and finance in open economy. It provides coverage of economic principles that underlie the operation of macroeconomics tools and other financial institutions. The roles of balance of payment adjustment mechanism in monetary, portfolio, extended portfolio, with fixed and flexible exchange rate system are examined. The course aims at providing students with the means to analyse monetary questions and institutions. It is not a course designed to further technical expertise in the instruments used in financial markets but covering the theories of uncovered interest arbitrage, swapping, hedging and speculations. It’s also targeting the applications of forward, future, open, and spot market operations. Theories related to internal and external equilibrium of the economy will be discussed. The course has aim to target the understanding of international monetary markets and its fluctuations with macroeconomic policy decisions such as coordination of fiscal and monetary policy, optimum currency area, fixed and flexible exchange rate system, domestic pricing, central and commercial bank actions, aggregate demand and supply, interest rate and expectations.

**Learning Outcomes**

1. Develop the understanding of macroeconomic policy decisions and its impact on open economy and balance of payment adjustments.
2. Develop the Understanding of aggregate demand and supply application with fixed and flexible exchange rate system to discover the open market fluctuations.
3. Demonstrate the ability to adjust internal and external disequilibrium with fiscal and monetary policy coordination
4. Develop the understanding of financial market of swap, hedging, future, forward, open, and speculations
5. To understand how foreign trade multiplier works and creates repercussion effects in open economy
6. To understand the international financial institution, dollarization and reserve currency issues and their impact on domestic and open economy.
7. Understanding of portfolio and asset market with fixed and flexible exchange rate system
8. Ability to use balance of payment adjustment mechanism in absorption, devaluation and monetary decisions of a country
9. To understand the quantitative applications and derivations of theories in practice

**Unit-1**

International Macroeconomics- Prices and Output in an open economy.Long-run adjustment mechanisms.Automatic adjustment – foreign trade multipliers.Fiscal and monetary policy under flexible exchanges.Interdependence and Multi-lateral co-ordination.

Balance of payments.Current account and fiscal deficit.Capitalaccount.Disequilibrium and adjustment. Elasticity conditions for adjustment in trade account. Currency markets transactions. Currency standards, convertibility and reserve currencies.Exchange Rates.

**Unit-2**

Purchasing power parity.Interest rate parity.Nominal, real and effective exchange rates.Fixed and flexible exchange rates. Exchange controls. Short-run and long run capital movements.Hedging, speculation and hot money transfers under capital account convertibility. Implication of capital flows—Mundell-Fleming Model, currency crisis and contagion.

**Unit-3**

Money and the role of banks.EU and monetary integration.Dollarization.Optimum currency areas, Monetary, banking and foreign exchange regulations.

The International Monetary Fund.Reforming the international institutional architecture.China and reserve currency issues.

**Basic Readings**

1. Bhagwati, J. N., A. Panagariya and T.N.Srinivasan(1998), *Lectures on International Trade,* OUP, New Delhi, Second Edition.
2. Krugman, P.A. and M Obstfeld (2003), International Economics: *Theory and Policy, Sixth Ed.*
3. Dominick Salvatore, *International Economics*: Trade and Finance, John Wiley International Student Edition, 10th edition, 2011.

**Course Code: ECO503**

**Course Name: Economic Growth Theories**

**Credit: 4**

**Course Outline/Objective**

This course offers an introduction to the theories and models of economic growth. It will use these models to shed light both on the process of economic growth at the world level and on sources of income and growth differences across countries. Topics covered include income distribution and economic growth, where Kaldor and Pasinetti’s work will be mentioned, and the standard economic growth model of Solow. Macroeconomic questions addressed include: Why are some countries rich and some poor? What differences among countries can explain economic success and failures? This course is aimed at Economics students on the Mathematical Pathway and homework questions will typically involve solving problems etc. Course also employs the knowledge of endogenous growth models of AK, Lucas and Romer and its interpretation within theoretical model.

**Learning Outcomes**

1. Demonstrate a deep analytical understanding of exogenous and endogenous growth models
2. Understand the main insights into the economic growth process that economists have gleaned over the past half century.
3. Solve and manipulate a variety of simple models in economic growth.
4. Identify applications and limitations of the models learned.
5. To develop an understanding of the evolution of growth models;
6. To display a good grasp of those factors that contribute to or inhibit economic growth (population, capital, technology, human capital, and institutions;
7. To develop the understanding of Solow growth model and its applications in real life
8. To understand the conditional and unconditional convergence in growth models
9. Develop the understanding of role of money, wealth, saving, physical capital, income distribution, and role of initial per capita, in economic growth.

**Unit-1**

Problem of Economic Growth- Problem of Economic Growth and the General Solution; Growth Equilibrium; Harrod –Domar Model of Economic Growth

**Unit-2**

Neo-Classical Models of Growth: Growth model of R.M. Solow, Instability & Convergence debate, Ms. Joan Robinson and Concept of Golden Age and Golden Rule of Accumulation; Models of Optimum Economic Growth- Keynes-Ramsey Rule, Cass-Koopmans Model

**Unit-3**

Neo-Keynesian Models of Growth & Distribution- Kaldor and L. Pasinetti

Technology and Growth- Hicks, Harrod and Solow- Neutrality of Technical Change, Embodied and Dis-embodied Technical Change, Growth Accounting.

Money and Growth- James Tobin and H.G. Johnson;

**Unit-4**

Endogenous Growth Models- AK Models, Lucas Model of Human Capital, Romer Model of Endogenous Innovation.

**Recommended Texts**

1. Barro, Robert J. and Xavier Sala-i-Martin, Economic Growth, McGraw-Hill,
2. H.G. Jones, “An Introduction to Modern Theories of Economic Growth” McGraw-Hill Book Company
3. Jones C.I., “Introduction to Economic Growth” W.W. Norton & Company, New York
4. Romer, David, Advanced Macroeconomics, New York: McGraw-Hill Co.,
5. Sen, A.K.,ed.(1970) Growth Economics, Penguin Books.
6. Blanchard, O. and Fischer, S. 1989. Lectures on Macroeconomics.

**Course Code: ECO504**

**Course Name: Trade Theory and Policies**

**Credit: 4**

**Course Outline/Objectives**

The course examines the gains from trade, the determinants of patterns of international trade and the effects of trade on income distribution, the relationship between trade, and economic growth. The course relies predominantly on a standard collection international trade models to understand the motivations behind modern trade policies. Course employs the understanding of classical, neo-classical and modern trade theories and its implications for economic welfare and gain. Course develops the understanding of analysing the partial and general equilibrium effect of trade policies and theory of custom union. This course is also discussing about the recent issues of WTO and regional trade agreements.

**Learning Outcomes**

1. Compare at the level of formal analysis, the major models of international trade and be able to distinguish between them in terms of their assumptions and economic implications.
2. Develop the basic understanding of trade theories and its interpretation and implication on world economy
3. An ability to analyze the partial and general equilibrium effect of trade policies, a) trade policy instruments such as tariffs, quotas, export subsidies, (b) retaliatory measures such as anti-dumping duties and countervailing duties and (c) the creation of regional trading arrangements such as free trade areas, customs unions and common market.
4. Distinguish and critically analyze the main arguments for protection and conversely be able to critically evaluate the relevance and realism of arguments for free trade, taking into account the costs and benefits of trade policy measures on different sections of the community and the implications for the formulation of trade policy.
5. Analyzing the partial and general equilibrium effect of theory of custom union
6. Analyzing the effects of Immiserizing growth and intra-industry trade
7. Identify major recent developments in the world trading system, and be able to critically analyse the WTO negotiations and regional trading arrangements.
8. Able to analyze the country’s gain in free, restricted and no trade situations
9. An ability to measure the economic welfare and gain of participating international trade
10. An ability to measure the trade gain through offer curves, trade indifference curve and production possibility curves

**Unit 1**

Classical trade theories on comparative advantage, gains from trade, Opportunity cost. Incomplete specialization.Heckscher Ohlin factor endowment model. Factor price equalization Theorem.Stolper-Samuelson theorem. Specific Factor Model, terms of trade and offer curve analysis, empirical approaches and paradox

**Unit 2**

Factor intensity reversals and pattern of trade, Intra-industry and intra-firm trade.

Imperfect Competition: Imperfect competition, homogeneity: Krugman, Trade and growth; Rybczynski theorem, Immiserizing growth; endogenous growth with homogeneity and heterogeneity

New Trade Theories: Vernon, Posner

**Unit 3**

General and partial equilibrium effects of tariffs on welfare. Arguments for protection, Political economy of trade agreements and upcoming issues of protections, Effective rate of protection

Non tariff barriers: Quota, Voluntary Export Restraints, Countervailing duties and export subsidies, dumping. Effects of tariffs on factor prices.

**Unit 4**

Theory of customs union – ‘second best’ argument – trade creation and trade diversion, Stages of integration Regional trade groupings, GATT and WTO

**References**

1. Pugel, T.A.( 2008), *International Economics*, 13th Edition, Tata Mcgraw hill publishing Co, New Delhi.
2. Bhagwati, J. N., A. Panagariya and T.N.Srinivasan(1998), *Lectures on International Trade*, OUP,NewDelhi, Second Edition.
3. Krugman, P.A. and M Obstfeld (2003)*, International Economics: Theory and Policy,Sixth Ed.*
4. Dominick Salvatore, *International Economics: Trade and Finance*, John Wiley International Student Edition, 10th edition, 2011.