

M.A. Economics

Semester-I

Core/Opt	Paper Code	Paper Title	Credits
Core	ECO 401	Microeconomics	4
Core	ECO 402	Macroeconomics	4
Core	ECO 403	Statistical Methods of Economics	4
Core	ECO 404	Mathematical Economics	4
	ECO 441	Self-Study Report	2

Semester-II

Core	ECO 451	Econometrics – I	4
Core	ECO 452	Development Economics	4
Core	ECO 453	International Trade and Finance	4
Core	ECO 454	Development Experience of Indian Economy	4
	ECO 491	Self-Study Report	2

Semester-III

Optional	ECO 521	Econometrics II	4
Optional	ECO 522	Themes in Economic Growth and Development	4
Optional	ECO 523	Political Economy of Development in India	4
Optional	ECO 524	Comparative Economic System	4
Optional	ECO 525	Economics of Agriculture	4
Optional	ECO 526	Economics of Infrastructure	4
Optional	ECO 527	Public Economics	4
Optional	ECO 528	Monetary Economics	4
	ECO 541	Self-Study Report	2

Semester-IV

Optional	ECO 571	Institutional Economics	4
Optional	ECO 572	Gender Economics	4
Optional	ECO 573	Industrial Economics	4
Optional	ECO 574	Labour Economics	4
Optional	ECO 575	Health Economics	4
Optional	ECO 576	Database of Indian Economy	4
Optional	ECO 577	Environmental and Ecological Economics	4
Optional	ECO 578	Regional Economics	4
	ECO 591	Self-Study Report	2

ECO 401: MICROECONOMICS

Credits: 04

Objectives: The course is designed to impart theoretical and analytical knowledge to the students for understanding the economic behaviour of individuals, firms and markets. They will learn the various aspects of demand theory, theory of production, price and output determination and the choice under uncertainty and asymmetric information.

Unit-I Theory of Consumer Behaviour

Preference- and Choice-based Approaches to Consumer Behaviour: Assumptions about consumer preferences; From preferences to utility function; Utility maximization problem; Walrasian/Marshallian demand function and its properties; Indirect utility function and its properties; Expenditure minimization problem; Duality; Hicksian demand functions and expenditure function; Slutsky equation; Relationship between the Walrasian and Hicksian demand functions; Preferences and Choice; Choice and Revealed Preferences; Weak and strong axiom of revealed preference and the law of demand

Welfare Evaluation of Economic Change: Equivalent variation and compensating variation; Consumer's surplus.

Unit-II Producer Theory and Costs

Technology and Optimal Production: Production sets and technology; Production function and its properties: Cobb-Douglas, constant elasticity of substitution, and variable elasticity of substitution production function; Returns to scale, technical progress; Processes/activities, isoquants and its different forms; Conditions for optimal production.

Profit maximisation: Profit function; factor demand function; supply function; Hotelling's lemma; profits and producer surplus

Duality and theory of cost: Cost minimisation and cost functions; derivation of cost function from production function; Shepard's lemma; Returns to scale and cost functions; Short run and long run cost functions; conditional factor demand functions.

Unit-III Market Structure and Firm Behavior

Perfect competition: Market characteristics; Equilibrium conditions; Short- and long-run considerations; Efficiency and welfare.

Monopoly: Market characteristics; Reasons for existence of monopoly; Natural monopoly; Equilibrium conditions; price discrimination; Welfare considerations.

Monopolistic competition: Market characteristics; Chamberlin's Approach for equilibrium of the firm and the group; Excess capacity considerations

Oligopoly: Market characteristics; Non-Collusive Models: Cournot Nash equilibrium, Bertrand equilibrium, Stackelberg behaviour- quantity leadership and price leadership models, Kinked demand curve model; Collusive oligopoly models.

Unit-V: Economic Choice under Uncertainty and Asymmetric Information

Uncertainty: Expected value criterion; The St. Petersburg Paradox; Expected Utility Hypothesis and solution to the St. Petersburg Game; Expected utility function for risk aversion and risk loving; Certainty Equivalent

Asymmetric information: Market for lemons; Principal-agent problem; Adverse selection; Moral hazard.

Reading List

1. Andreu Mas-Colell, A., M. D. Whinston, and J. R. Green (1995), *Microeconomic Theory*, Oxford University Press.
2. Henderson, J.E. and R.E. Quandt (1988), *Microeconomic Theory - A Mathematical Approach*, McGraw Hill.
3. Koutsoyiannis, A. (1979), *Modern Micro Economics*, Macmillan Press, London.
4. Varian, H. (1992), *Micro Economic Analysis*, W. W. Norton & Company, Inc., New York.
5. Dominick Salvatoure: *Microeconomics Theory and Analysis*.

ECO 402: MACROECONOMICS

Credits: 04

Objectives: This course deals with economic behaviour at the aggregate level (GDP, inflation, unemployment, interest rates, deficits, trade balances, debt, financial crises, etc.). It is designed to equip the students with a framework that will be useful for understanding broad features of the behaviour of macroeconomic situation of an economy and related public policy issues for better decision making. It will enable the students to understand the macroeconomic environment of an economy.

Unit I National Income, theories of consumption and investment spending

Measuring National Income, Keynesian determination of equilibrium output, Keynesian consumption function, life cycle and permanent income hypotheses. Factors influencing consumption expenditure- Rate of interest, Price level and expectation, distribution of income and financial assets. Types of investment, Investment spending, the rate of interest and the role of finance. Influence of policy measures on investment.

Unit II Supply of and Demand for Money

Functions of Money, RBI approach to money supply; High powered money and money multiplier; Money supply and open economy; Instruments of money supply. Money demand, portfolio theories of money demand, Transactions theories of money demand, Friedman and the modern quantity theory.

Unit III Inflation and unemployment

Inflation and interest rates, Fisher Effects, social cost of inflation, Hyperinflation, Philips curve analysis (Short run and long run)-Natural rate of unemployment, expectation augmented Phillips curve-Non accelerating inflation rate of unemployment (NAIRU); Demand for labour and supply of labour, Wage-unemployment relationship, minimum wage laws, Adaptive expectations and rational expectations hypothesis. Policies to control inflation.

Unit IV Aggregate demand and Aggregate Supply and IS-LM approach

Aggregate demand and aggregate supply, goods and money markets, The IS-LM model; shift in ISLM; IS-LM model with government sector; Relative effectiveness of monetary and fiscal policies; Extension of IS-LM models with labour market and flexible prices- Keynes & Pigou effects; crowding out hypothesis.

Unit V Macroeconomics in an Open Economy

The international flows of capital and goods, saving and investment in a small open economy, nominal and real exchange rates, Mundell-Fleming model of fixed and flexible exchange rates

Reading List

1. Mankiw N. Gregory (2010), “Macroeconomics” 7th Edition, Worth Publishers
2. Rudiger Dornbusch and Stanley Fischer “Macroeconomics”, 2009, McGrawhill
3. Rosalind Levacic and Alexander Rebman “Macroeconomics”, 1982, McMillan
4. Brian Snowdon and Howard R.Vane, *A Macroeconomics Reader*. Routledge
5. David Romer “Advanced Macroeconomics”, 2006, McGrawhill
6. Brian Snowdon and Howard R.Vane. *Modern Macroeconomics Its Origins, Development*
7. *and Current State*. Edward Elgar Publishing, Inc.
8. Andrew Abel and Ben Bernanke “Macroeconomics”, 2003, Pearson, Indian Ed
9. Richard T. Froyen “Macroeconomics”, 2003, Pearson Indian Ed

ECO 403: STATISTICAL METHODS FOR ECONOMICS

Credits: 04

Objectives: This course tends to equip the students with the fundamental concepts of statistical tools and techniques. Further the course will be taught in exercise based manner. Therefore, it will enable the students to analyse quantitative and qualitative data.

Unit I Review of Basic Statistical Tools

Review of descriptive statistics, Fundamentals of Probability: Random variables and their probability distributions (Binomial, Poission, Normal) Mathematical Expectation and its Properties, Joint distributions, conditional distributions and independence, Probability Density Function, Central Limit Theorem

Unit II Sampling Theory

Distributions of sample mean and sample variance. Estimation: parameter and statistic, estimates and estimators, point estimators and its properties (small sample and asymptotic properties), confidence intervals for population parameters

Unit III Hypothesis Testing

Defining statistical hypotheses; null v/s alternative hypotheses, Type I and Type II errors; power of a test; the concept of degrees of freedom; Test of statistical hypotheses: Z, t, and F-tests, Chi-square test, Non-parametric

Unit IV Indices, Correlation and Regression

Time series components, Introduction to Index Numbers, Construction of Indices, Types of Indices, Simple correlation and regression

Reading List

1. Gupta, S. C., (2012), Fundamentals of Statistics, Himalaya Publishing House.
1. Black, Ken (2012), Business Statistics for Contemporary Decision Making, Willy India
2. John E. Freund's Mathematical Statistics with Applications (7th Edition), Irwin
2. Miller (Author), Marylees Miller (Author), Prentice Hall (2003)
3. Kenny and Keeping : Mathematical Statistics, Part 1 &Part II
4. R.G.Hogg and A.T.Craig : Introduction to Mathematical Statistics, Pearson
5. Education (Indian Edition)
6. V. K. Rohatgi and A. K. M. E. Saleh, An Introduction to Probability and Statistics,
7. 2nd Edition, Wiley (2000).

ECO 404: MATHEMATICAL ECONOMICS

Credits: 04

Objectives: It is designed to familiarize and train students with the basic mathematical concepts, tools and techniques that are commonly used in the exposition and analysis of economic problems. These mathematical methods would help students in their understanding of advance and core courses in economics.

Unit-I: Review of Basic Concepts

Basic Concepts: Equations: linear and non-linear, simultaneous equations; Theory of sets; Relations and functions; Types of functions: linear and non-linear functions, quadratic, cubic, exponential and logarithmic functions, exponential functions; concept of Matrix; Types of

matrices, matrix operations – addition, subtraction and multiplications, matrix inversion, solution of simultaneous equations by Cramer's rule, vectors, partitioned matrix, rank of a matrix, inverse and trace of a matrix. The evaluation and properties of determinants.

Unit-II: Limits, Continuity & Differentiation

Concept of limit of a variable; Left limit and right limit of a function; Definition of limit of a function; Definition of continuity of functions; Continuity and discontinuity; Concept and basic rules of differentiation for function of one variable; Rules of differentiation involving more than one function of the same variable: Rules of differentiation involving functions of different variables; Second and higher order derivatives.

Applications in Economics: Behavior of average cost with production for linear cost functions; Derivation of marginal functions (marginal cost, marginal revenue; marginal utility), etc.

Unit-III: Partial and total differentiation

Rules of partial and total differentiations, derivative of implicit functions.

Applications in Economics: Problems relating to indifference curve, isoquant, production function and Euler's theorem, determination of partial elasticity of demand, etc.

Unit-IV: Unconstrained and Equality Constrained optimization

Unconstrained maxima and minima with single explanatory variable: Sign and magnitude of first and second order derivative: concavity and convexity, point of inflexion; maxima and minima of the function with necessary and sufficient conditions; unconstrained maxima and minima with more than one explanatory variable; Equality constrained optimization with a single constraint – Lagrange's multiplier method, Lagrangian function

Applications in Economics: Cost minimization, revenue maximization, profit maximization and equilibrium of a firm; Consumer's utility maximization, discriminating monopoly, etc; Application of equality constrained optimization to consumer's equilibrium in commodity market and producer's equilibrium in factor market.

Unit-V: Integral calculus

Indefinite integration: the indefinite integral as an anti-derivative, basic rules; Definite integral: the definite integral as an area under a curve, main properties.

Applications in Economics: Derivation of total function from marginal function (total cost, revenue or profit); Estimation of consumer's surplus and producer's surplus.

Reading List

1. Chiang, A.C. and K. Wainwright (2005), *Fundamental Methods of Mathematical Economics*, McGraw-Hill Higher Education.
2. College.
3. Dadkhan, K.M. (2011), *Foundation of Mathematical and Computational Economics*, South western
4. Dowling, E. T. (2011), *Introduction to Mathematical Economics*, McGraw Hill Ltd.
5. Hoy, M., J. Livernois, C. McKenna, R. Rees and T. Stengos (2011), *Mathematics for Economics*, MIT Press.

ECO 451: ECONOMETRICS-I

Credits: 04

Objectives: To endowing students with the theoretical knowledge of basic econometrics tools which they can use for formulating and developing econometric model for applications on real economic situations.

UNIT-I: Introduction to Econometrics

Definition and Scope of Econometrics; Classical Methodology of Econometrics: Theoretical Statement, Mathematical and Statistical Formulations, Data, Estimation, Testing of Hypothesis, Prediction and Policy Application; Concept of Population Regression, Sample Regression, Error term

UNIT-II: The Classical Linear Regression Model

Assumptions; Estimation- Ordinary Least Square Method; Properties of OLS estimator: Gauss-Markov Theorem (BLUE); Hypothesis Testing: t-test for individual regression coefficient; Goodness of Fit; Prediction: Mean and Individual Prediction; Maximum Likelihood Estimation.

UNIT-III: Extension to Multivariate Linear Regression Model

Assumptions; Estimation and Estimator Properties; Analysis of Variance, R-squared; Hypothesis Testing: Individual and Overall Model Significance, t and F test.

UNIT-IV: Relaxing Assumptions of Classical Regression

Heteroscedasticity: Meaning and Consequences for OLS estimator, Tests for heteroscedasticity, Remedial Measures; Multicollinearity: Meaning and Consequences for OLS estimator, Tests for multicollinearity, Remedial Measures; Autocorrelation: Meaning and Consequences for OLS estimator, Tests for autocorrelation, Remedial Measures; Specification errors: Wrong Functional Form, Measurement Errors, Overfitting and Underfitting of the model; Non-normality

UNIT-V: Dummy Variable Regression Models

Concept of dummy variable; Dummy independent variable: intercept and slope dummy; dummy dependent variable: LPM, Logit, Probit, and Tobit models

Reading List

1. Gujarati, D., D. Porter and S. Gunasekar (2011), Basic Econometrics, McGraw Hill Education (India) Private Limited
2. Johnston, J. and J. DiNardo, *Econometric Methods*, Fourth Edition, McGraw-Hill, latest edition.
3. Maddala, G.S. and K. Lahiri (2009), Introduction to Econometrics, John Wiley & Sons.
4. Stewart, J. and L. Gill, *Econometrics*, Second Edition, Prentice Hall, 1998
5. Wooldridge, J.M., (2000), Introductory Econometrics: A Modern Approach, Southwestern College Publ.

ECO 452: DEVELOPMENT ECONOMICS

Credits: 04

Objectives: Development Economics as a discipline encompasses different approaches to the problems of unemployment, poverty, income generation, industrialization from different perspectives. The present course enables the student with different tools of analysis while simultaneously equips the student to appreciate alternative perspectives in development theory and policy.

Unit-I Growth and Development

Basic Needs Capability Approach, Inclusive Growth Model and Sustainable Development

UNIT- II Conceptual Issues and Measurement of development

Functional Issues (Kuznet's inverted U-hypothesis), Inequality as constraint to growth (Kalecki, Galore-Zeira).

UNIT-II Theories of Development and Underdevelopment

Balanced Growth (Rodan), Unbalanced Growth (Hirschman-Singer), Stage Theory (Rostow-GershenKron), Dualism (Lewis - Ranis - Fei), (Only Lewis Model would be taken up for detailed study)

UNIT-IV Critical Issues in Development

Poverty – Measurement & Identification issue, poverty and under-nutrition, Functional Effects
Unemployment – Measurement, Types, alternative theories, linkage between unemployment and poverty.

Social Network as an institution- Social Capital, Globalisation and Climate Change

UNIT-V Informal Sector

Determinants of its size, linkage with rest of economy, Urbanisation and Rural – Urban migration – theories and empirical evidence, Rural – Urban linkages.

Reading List

1. David Harvey (2007), A Brief History of Neoliberalism Publisher: OUP, Oxford
2. Keshab Das (2004), Uneven Development and Regionalism: A Critique of Received Theories Published in Economic and Political Weekly Vol XXXIX No. 45, November 06, 2004
3. *Walter Eltis* (2000): Classical Theories of Economic Growth Publisher: Palgrave Macmillan
4. A K Sen (1970): Growth Economics: Publisher Penguin 1977
5. Halin Mathews : Theories of Economic Growth. (Surveys in Economic Theory, Vol. 2, AEA
6. *Todara and Smith(2011)*: Economic Development (11th Edition or latest) Publisher: Prentice Hall; 11 edition (March 26, 2011)
7. Todara (1977) : Economic Development in the Third World Publisher: Longman, 1977
10. Gautam Mathur (1975): Planning for Steady Growth Publisher: Oxford University Press; New edition edition (9 January 1975)
11. Chakravarthy (1983): Development Planning: The Indian experience. Publisher: OUP India (1 April 1998)

- i. Oxford University Press, 1969

Credits: 04

trade and finance.

Absolute advantage and comparative advantage approaches to international trade; The specific factors model; Heckscher-Ohlin model; Factor price equalization theorem; Rybczynski theorem; Leontief Paradox.

Emergence of Intra industry trade: Grubel-Lloyd Index; Monopolistic competition and international trade: The Krugman's Model; Increasing returns in H-O model; External increasing returns and trade

Trade policies: concept and types; Tariff and non-tariff barriers (quota, VERs; Government procurement, safety, health, environmental and technical barriers), export subsidies; Theory of tariffs: types, welfare effects, effective protection; Theory of import quotas: welfare effects; The Strategic trade theory: Brander-Spencer Analysis; Arguments for free trade and protection

Free trade agreement (FTA); Common market; Economic union; Trade creating and trade diverting customs union; Customs union and conditions for increasing welfare; Regional Trading blocks in practice; WTO.

Definition of exchange rate and foreign exchange markets; Function of foreign exchange markets: Hedging, speculation, interest arbitrage; Determinants of exchange rates; Spot and forward exchange rate; Purchasing-power parity theory; The Monetary approach to exchange

rate; Interest and exchange rates relationship: Covered and uncovered interest parities; The overshooting model; Portfolio-Balance Approach

UNIT-V: Balance of Payments

The Current Account; The Capital Account; BOP disequilibrium and adjustment mechanism: Automatic mechanism (Price and income adjustments under fixed and flexible exchange rate system); Policy measures (Devaluation, Revaluation), Elasticity approach-J curve effect; Absorption approach-monetary approach and devaluation

Reading List

1. Feenstra, R. C. and A. M. Taylor (2010), *Essentials of International Economics*, Worth Publishers.
2. Krugman, P., M. Obstfeld, and M. Melitz (2011), *International Economics: Theory and Policy*, Addison-Wesley.
3. Rivera-Batiz, L. A., M. Oliva (2004), *International Trade: Theory, Strategies, and Evidence*, Oxford University Press.
4. Salvatore, D. (2011), *International Economics*, Wiley.

ECO 454: DEVELOPMENT EXPERIENCE OF INDIAN ECONOMY

Credits: 04

Objectives: The aim of the paper is to teach the students about Indian Economy in historical perspective. It will enable them to understand the current economic scenario and their routes in history and global perspective.

Unit 1- Experiences of Indian Planning

Indian Economy during pre-independence Period, Experiences of Indian Planning, Liberalization and economic reforms- Pre and Post Economic Reforms; Gandhian Model, Nehru Mahalnobis Model, LPG Model.

Unit 2- Agriculture Industry & Service Sector

Agriculture sector, Commercialization of Indian agriculture, Land Reforms, Issues in utilization of land resource: major constraints in Indian agriculture pattern, Effects of urbanization on

agricultural land use, Green Revolution, Agricultural Policy. Crisis and Performance of Indian agriculture.

Industrial sector, Growth and Performance, Industrial Policy (Pre Reform and Post Reform Period), Small Scale Industries and their Issues and Policy (MSME), Informal Sector.

Service Sector; Trends, Growth and Performance, Structural Change Debate with reference to Service Sector

Unit 3- Social Sector

Poverty Inequality and Unemployment, Human Development Estimates, Evaluation of Government's Poverty and Unemployment Alleviation Programs, India's Human Development Report in global perspective, Health and Education Policy.

Unit 4- Money, banking, Trade and Finance

Composition, direction and Organization of trade, Balance of Payments- Tariff policy and Exchange rate, India and WTO. Monetary policy in India, Fiscal policy in India, Inflation- Trends, Estimates, Consequences and Remedies. Black money and parallel economy in India, Consequences and Remedies.

Reading List

1. Ahluwalia, I.J. and I.M.D. Little (Eds.) (1999), Indian's Economic Reforms and Development (Essays in Honour of Manmohan Singh), Oxford University Press, New Delhi.
2. Banik Nilanjan (2015), The Indian economy-A Macro-Economic Perspective, Sage India
3. Bhagwati J (1993), India in Transition :Freeing the economy, Oxford, Clarendon Press.
4. Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (2001), Development Experience in the Indian Economy: Inter-State Perspectives, Bookwell, Delhi.
5. Dutt R and KPM Sundaram (2014), Indian Economy.
6. Economic Survey (Current Year).
7. Sachs, J. D., Varshney, A, & Bajpai, N. (1999). Introduction India in the Era of Economic Reforms, Oxford University Press, New Delhi.
8. Uma Kapila (2015), Indian Economy: Performance and Policy, Academic Foundation.
9. Krishna Bharadwaj (1982), Regional Differentiation in India-A Note, Vol - XVII No. 14-15-16.

ECO 521 - ECONOMETRICS II

Credits: 04

Objectives: It is to complements the theoretical knowledge on econometric tools that students have learned in the Econometrics I course. It further introduces additional econometrics tools that are often used in the analysis of socio-economic phenomenon. Students shall learn about use of dummy variable in regression analysis, the role of time or lag in economic relationship, simultaneous equations, principal component analysis, etc.

Prerequisites: Student opting for this paper should have completed Econometrics I course

UNIT-I: Classical Linear Regression Model in Matrix Form

CLRM in Matrix Formulation; OLS Estimation and Properties; ANOVA Analysis

UNIT-II: Dynamic Econometric Models

Distributed-Lag Models: concept and estimations; Autoregressive Models: concept and estimations; Granger causality test

UNIT-III: Simultaneous-Equation Models

Simultaneous-Equation Models: Simultaneous-Equation Bias, Identification and Estimation Problem

UNIT IV: Other Topics:

Generalized Least Squares and Weighted Least Squares Estimators; Feasible generalized least squares; Principal Component Analysis;

UNIT V: Nonlinear Regression Functions

Intrinsically Nonlinear Regression Functions; Estimation of Nonlinear Regression

Reading List

1. Gujarati, D., D. Porter and S. Gunasekar (2011), Basic Econometrics, McGraw Hill Education (India) Private Limited
2. Johnston, J. and J. DiNardo, *Econometric Methods*, Fourth Edition, McGraw-Hill, latest edition.
3. Kutner, M., C. Nachtsheim, J. Neter and W. Li (2004), Applied Linear Statistical Models, McGraw-Hill/Irwin
4. Maddala, G.S. and K. Lahiri (2009), Introduction to Econometrics, John Wiley & Sons.

5. Stewart, J. and L. Gill, *Econometrics*, Second Edition, Prentice Hall, 1998
6. Wooldridge, J.M., (2000), *Introductory Econometrics: A Modern Approach*, Southwestern College Publ.

ECO 522 THEMES IN ECONOMIC GROWTH AND DEVELOPMENT

Credits: 04

Objectives of the Course: The course is about fundamental models used to analyze theoretical and empirical issues in economic growth and development. It will enable to students to comprehend theoretical and empirical development across countries and region for policy purposes.

Unit I Development Issues

Growth and Development, Changing Notions of Development: Traditional Economic Measures, The New Economic View of Development, Amartya Sen's "Capability" Approach, Development and Happiness, Three Core Values of Development, The Central Role of Women, The Three Objectives of Development; Comparative Economic Development: Basic Indicators of Development: Real Income, Health, and Education, Holistic Measures of Living Levels and Capabilities, Characteristics of the Developing World: Diversity within Commonality, How Low-Income Countries Today Differ from Developed Countries in Their Earlier Stages,

Unit II Contemporary Models of Development

Underdevelopment as a Coordination Failure, Multiple Equilibria: A Diagrammatic Approach, The Big Push Theory, Michael Kremer's O-Ring Theory of Economic Development, The O-Ring Model, Implications of the O-Ring Theory, Economic Development as Self-Discovery. Hausmann-Rodrik-Velasco Growth Diagnostics Framework, Human Capital: Education and Health in Economic Development, The Central Roles of Education and Health, Education and Health as Joint Investments for Development, Improving Health and Education: Why Increasing Income Is Not Sufficient

Unit III Economic Growth-I

Standard Primal Growth Accounting, Growth Accounting vs Sources of Growth, Factors affecting economic growth-capital, labour, technology; Technological progress – embodied and disembodied technical progress, Growth models- Harrod-Domar; Neo-classical growthmodels- Solow and Meade; Joan Robinson's growth model;

Unit IV Economic Growth-II

Cambridge criticism of neo-classical analysis of growth, the capital controversy, Growth models of Kaldor and Pasinetti, Golden Rule of Capital Accumulation, Theoretical dissatisfaction with Neoclassical Theory, Models with Endogenous Growth: One sector growth models- The AK model, learning by doing and knowledge spillover.

Reading list:

1. Robert Barro and Xavier Sala-i-Martin (2003), *Economic Growth*, PHI, New Delhi
2. Todaro, Michael P. and Stephen C. Smith (2012) *Economic Development*, 11th Edition, Pearson India
3. Behrman, S. and T.N. Srinivasan (1995), *Handbook of Development Economics* vol.3, Elsevier, Amsterdam.
4. Thirwall, A.P. *Growth and Development*, Palgrave Macmillan.
5. Ghatak, S. *An Introduction to Development Economics*, Allen and Unwin
6. Kindleberger, C.P. *Economic Development*, McGraw Hill,
7. Agrawal, A N and Singh S P (1982): *Economics of Underdevelopment*, Oxford University Press, 1958, London

ECO 523: POLITICAL ECONOMY OF DEVELOPMENT IN INDIA

Credits: 04

Objective: The objective of the paper is to analyse the parameters of political economy and the development of political thinking by leading economists. It will also focus on planning and policies in the contemporary economic scenario.

Unit I: Fundamentals of Political Economy

Introduction: Meaning and definition of Political Economy, Methods of Political Economy.

Laissez faire and free market: Adam Smith

Government Intervention & Welfare: Keynes, Pigou, Piero Sraffa, Commodities and Capabilities: Amartya Sen

Unit II: Growth and Redistribution

Marx: Surplus and Labour, Michal Kalecki; Growth as Redistribution,

Fiscal Policy: Taxation & Revenue Generation, Distribution of revenue between the centre and states

Unit III: Planning & Policies

Pre- Reform India: Mixed Economy; Bombay Plan, Gandhian Model, Nehru Mahalanobis Model, Heavy Industrialisation in India.

Post-Reform India: Neo-Liberal Economic Reforms, Liberalisation Privatisation Globalisation (LPG) Model.

National Institution For Transforming India (NITI) Aayog, Make in India, Labour Policy and Social Security

Parallel Economy, Black Money in India.

Unit IV: Grants and Aid

Grants and Aid: IMF and World Bank, Civil Society and NGO's

Reading list

1. Bhaduri Amit, 2015, A Model Of Development By Dispossession, Fourth Foundation Day Lecture, CDS, <http://cds.edu/wp-content/uploads/2015/12/4FoundationLecture.pdf>
2. Bardhan Pranab, 1998, The Political Economy of Development in India, Delhi, OUP
3. Byres Terence J. (ed.), 1998, The State, Development Planning and Liberalisation 'in India, Delhi, OUP
4. Frankel Francine R., 2004, India's Political Economy, Delhi. OUP
5. Jenkins Rob, 2000, Economic Reform in India, Cambridge, CUP
6. Joshi Vijaya and L.M.D. Little, 1998. India's Economic Reform 1991-2001, Delhi, OUP.
7. Mukherjee, Rahul (ed.), 2007, India's Economic Transition: The Politics of Reforms. New Delhi, OUP. Colbridge
8. Stuart and John Harris, 2000, Reinventing India, Cambridge Polity
9. Terry.J. Byres, 1999, 'The Indian Economy: Major Debates since Independence', Oxford University Press. (1999)

ECO 524: Comparative Economic System

Credits: 04

Course Objectives: The underlying purpose of this course is to help you improve your ability to make sense of political-economic systems and processes. This course investigates selected issues in comparative historical perspective over the 19th century and 20th century. Comparing economic systems is useful in still another way. It helps us understand our own political economy. A survey of various types of economic institutions and decision-making systems. Emphasis will be given to theoretical capitalism, socialism, mixed economy and the various types of capitalism in the world.

Unit I

Introduction and Perspectives on Comparative Economic System, Economic Growth and Performance, Status and Market Economy and Economics Systems; Markets and Government, What Makes Economies Grow? Economic System: Concept and Features; Mode of production and evolution of economic systems; Classification of social formations/economic system; Pre-capitalist economies/societies, Capitalism and Socialism.

Unit II

Capitalism and its Alternatives Main feature of Capitalism, theory of market capitalism, economic man, ownership of capital in different economy, Varieties of Capitalism, Capitalism: Essence of Consumer's sovereignty; Private enterprise system and planning in Capitalism; Commodity Production, surplus value and capital (ist) accumulation; Capitalism and Imperialism, The Developing World Economy, East Asian Capitalism: Japan, Singapore. South Korea and Taiwan

Unit III

The Socialist Experiment Socialism: Dialectical and Historical materialism; Contradictions of Capitalism and its breakdown; Basic pre-conditions for Socialism, its transition period, its main features; Transformation of production relations, ideas and institutions. The Soviet Union and Eastern Europe, Reform and Transition after the Collapse, China's Development Experience.

Unit IV

Planning and Market Mechanism: Role in a Capitalist, Socialist and a Mixed Economy; Development priorities, resource allocation, employment, income distribution and inequality/poverty; Nature of a Third World economy and its Class-diversion.

Reading List:

1. Heilbroner, R.L., & W. Milberg (2007), The Making of Economic Society, 12th edition (Prentice Hall, paperback).
2. Helpman, E. (2004), The Mystery of Economic Growth. Belknap Press, paperback, required.
3. Baumol, W.J., R.E. Litan & C.J. Schramm (2009), Good Capitalism, Bad Capitalism, and the Economics of Growth and Prosperity. Yale University Press, paperback, recommended.
4. Maddison, A. (2006), The World Economy (OECD Development Centre Studies, PDF). Volume A Millennial Perspective. Volume 2: Historical Statistics. Available for free online, and through the University Library
5. Jan S. Prybyla, Comparative Economic Systems, New York, ACC.
6. Halm, George, N. (1961) : Economic System: A Comparative Analysis, Better World Books, USA.

7. Dalton, G. (1974): Economic Systems and Society, Capitalism, Communism and the Third World, Penguin Books
8. Willczynski, J. (1973): Economics of Socialism, Aldine Publishing Co.
9. Kozolv, G.A. (1977): Political Economy of Socialism, Progress; 1st. Revised English edition

EC 525: Economics of Agriculture

Credits: 04

Objective: The objective is to impart a breadth of knowledge and analytical skills to the students in the field of agricultural economics. The subject will enhance their understanding on policy matters that are relevant to Indian agricultural economy, and enable them to comprehend contemporary issues like food security and sustainable agriculture practices in a complex and changing scenario.

Unit – I: Agriculture and Economic Development

Nature and scope of agricultural and rural economics; Traditional agriculture and its modernization; Interdependence between agriculture and industry. Models of Agriculture Development- Jorgenson's Model of development of Dual economy, Mellor's Model of Agriculture Development, and Boserup Model of Agriculture development

Unit – II: Sustainable Agriculture and Food Security

Development issues - poverty, inequality, unemployment and environmental degradation; Green Revolution- History & recent development; Recycling – Methods and Issues; emerging issues in Organic farming and issues in GM crops; Population and food supply, Food security and public distribution system in India.

Unit – III: Agricultural Marketing

Recent trends in agricultural growth in India; Inter-regional variations in growth of output and productivity; Types of Marketing - Group, Global, Corporate & Forward; Agricultural marketing and price system in India; Challenges of Agricultural marketing in India

Unit – IV: Agriculture and Institutions

WTO and Agreement on Agriculture (AOA); Impact of World Trade Organization on Indian agriculture.

Reading List:

1. Bhaduri, A. (1984) *The Economic Structure of Backward Agriculture*, Macmillan, Delhi.
2. Rudra, A (1982), *Indian Agricultural Economics, Myths and Reality*, Allied Publishers, New Delhi.
3. Bilgrami, S.A.R. (1996), *Agricultural Economics*, Himalaya Publishing House, Delhi.
4. Chadha, G.K. and A.N. Sharma (1997). *Growth, Employment and Poverty: Change and Continuity in Rural India*, Vikas Publishing House, New Delhi.
5. Bhalla, G.S. (1994). *Economic Liberalisation and Indian Agriculture*, Institute for Studies in Industrial Development, New Delhi.
6. Alagh, Y. K. (2013). *The future of Indian agriculture. National Book Trust, New Delhi, India.*

ECO 526: ECONOMICS OF INFRASTRUCTURE**Credit: 04**

Objective: The main objective of this course is to familiarize the students with role of infrastructure in economic development and growth and key issues in financing, governance and inter-regional disparities. This paper also aims to exposit main categories of infrastructure, including physical and social with special reference to the Indian situation.

UNIT – I: Role of Infrastructure in Economic Development

Infrastructure-Development Linkages; Infrastructure as Public Good – Issues in non-excludability and non rivalrous consumption; Physical and Social Infrastructure; Nature of Public Utilities; The Peak-Load, Off-Load Problem; Issues in Privatisation of Infrastructure.

UNIT – II: Governance and Regulation of Infrastructure

Infrastructure Policy and Regulation; Infrastructure Finance; Public-Private Partnership (PPP); Models and Examples in PPP; Regional Performance of Infrastructure; Question of Land

UNIT – III: Physical Infrastructure

Transportation: Railways, Roadways, Airways and Waterways: Progress, Pricing; Technological Advancement and Challenges. New policies/programmes related to each mode of transportation

Communication: Tele-density, Mobile and Internet, Social Media; Growth of IT-ITES.

UNIT – IV: Economic Infrastructure

Energy, Electricity and Special Economic/Investment Zones: Power Generation, Distribution and Pricing; Privatisation of Electricity; Coverage; Alternative (Renewable and Unconventional) Sources of Energy, including Nuclear, Solar and Wind Energy; Energy Conservation; Problems and Potential of SEZs, Export Processing Zones (EPZs) and Special Investment Region (SIR).

Banking and Financial Services: Spread and Performance of Banking Services; Technology Interface of Financial Services; Financial Inclusion Initiatives.

UNIT – V: Social Infrastructure

Health Services: Medical Facilities; State and Provision of Health; Drinking Water and Sanitation; Centrally Sponsored Schemes in Health, Drinking Water and Sanitation; Issues in Privatisation of Health Services.

Education: Concept and Scope of Human Resource Development; Education and Economic Growth: Progress on Universalisation of Primary Education; Performance of Secondary, Technical, Professional and Higher Education; Right to Education and Discrimination.

UNIT – VI: Special Initiatives/Programmes in Rural and Urban Infrastructure

Provision of Urban Amenities in Rural Areas (PURA); PMGSY; Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY); Reviving Water Harvesting Systems and Watershed; Swachh Bharat Mission (Rural and Urban); Smart City: Key Components, Performance and Challenges.

Reading List

1. Crew, M. A. and P. R. Kleindorfer (1979), *Public Utility Economics*, Macmillan, London.
2. Das, K. (2010), 'Lopsided Infrastructure', in Alternative Survey Group (Ed.), *Alternative Economic Survey, India: Two Decades of Neoliberalism*, Daanish Books, Delhi, pp. 195-209.
3. Goel, M.M. (2011), *Economics of Human Resource Management in India*, VK Global Publications, New Delhi.
4. Government of India (1997), *The India Infrastructure Report, Vols. I, II and III*, NCAER and Government of India, New Delhi. (Chairman: Rakesh Mohan).

5. Morris, S. (2007), 'Infrastructure', in Kaushik Basu (Ed.), *The Oxford Companion to Economics in India*, Oxford University Press, New Delhi.
6. Panchamukh, P.R. (1980), *Economics of Health: A Trend Report in ICSSR, A Survey of Research in Economics, Vol. VI, Infrastructure*, Allied, Delhi.
7. Raghuram, G., R. Jain, S. Morris, P. Pangotra and S. Sinha (Eds.) (1999), *Infrastructure Development and Financing: Public Private Partnership*, Macmillan India Ltd, New Delhi.
8. Tilak, J.B.G. (1994), *Education for Development in Asia*, Sage Publications, New Delhi.

ECO 527: PUBLIC ECONOMICS

Credit: 04

Objective of the Study

Public finance touches our everyday life - not just the taxes, but the social welfare expenditure schemes, the growth and economic development. Every year, when government presents its annual accounts we witness a lot of excitement, media coverage, discussions and debates. But public finance is much more than glancing at the annual budgets and reacting to that.

UNIT-I

The Basics: Introduction, importance of government intervention, need and role of government intervention. Theories relating to public or social goods. Issues in assessing the public choice and mechanism Public expenditure issues, Public expenditure evaluation through cost-benefit analysis. Public expenditure, growth and structure, The aggregate government expenditure patterns? The government expenditure forms, component of aggregate expenditure of an economy and national income expenditure identity. The trends and patterns of total government expenditure.

UNIT-II

Measuring the impact of public expenditure: The aggregate causality relation between the national income and government expenditure is a process of inter-linkages between different sectors of the economy. The Input-output analysis method. Federal fiscal issues: Indian federal fiscal sharing – a case study of India,

UNIT-III

Public revenues -Direct Taxes ;Principles of taxation; Issues in individual income taxation ; Issues in corporate income taxation; Issues in income tax integration Issues in international

taxation; Public revenues – issues of indirect taxation Indirect taxation – principles and structures, VAT and GST– principles and issues

UNIT- IV

Macro-fiscal economics and economics of public debt: Public Debt is an instrument to raise revenues has been the government borrowing. The structure and role of the public debt. There are different types of government borrowing with varied implications on the macro economy.

Reading list

1. Atkinson, A. B., & Stiglitz, J. E. (1980). Lectures in Public Economics. McGraw-Hill, Economics Handbook Series.
2. Auerback, A. J., & Feldstein, M. J. (1985). Hand Book of Public Economics (Vol. 1 & 2). New York/ Amsterdam: North-Holland.
3. Backhaus, J. G. (2002). Old or New Public Finance? A Plea for the Tried. Public Finance Review, 30, 612-30.
4. Buchanan, J. M. (2003). Public choice: Origins and development of a research program. Fairfax, Virginia: Centre for Study of Public Choice, George Mason University.
5. Jha, R. (2009). Modern public economics - second edition. Routledge.
6. Myles, G. (2006). Intermediate Public Economics. MIT Press.
7. Vithal, B. P., & Sarma, J. V. (2002, August 24). Twelfth Finance Commission: Framing its Terms of Reference. Economic and Political Weekly.

ECO 528: MONETARY ECONOMICS

Credit: 04

Objective of the Paper: The course provides an introduction to monetary theory, to the effects of monetary variables on the macroeconomic system, the role of the Central Bank and the conduct of monetary policy. This course will enable to students of economics to understand theory, practice and analyse the interconnection between the monetary forces and real forces, their developmental role and limitations in shaping and influencing the monetary and related policies both at the national and international levels.

UNIT 1: INTRODUCTION TO MONEY AND INSTITUTIONS

The nature of Money and Payment System, Credit and Financial system, Financial Markets, RBI, Commercial Banks: Classification of Commercial Banks-Private and Public, Regional Rural banks, Liabilities and assets of banks, Evaluation of Cash Credit System, A new simplified Credit System, Performance of Private and Public banks, Basel Norms-I, II, III, Cooperative Banks, Development Banks, Non-Bank Financial Intermediaries, Global Financial Institutions, Unregulated Credit Markets.

UNIT II: THEORY DEMAND FOR MONEY

Demand for Money: Nominal vs Real Cash Balances, Neoclassical Theory, Keynes' Theory, Transaction Demand for Money, Friedman's Theory, Empirical Evidence; Money and Prices: Fishers' Transaction Approaches to Quantity Theory of Money (QTM), Quantity Equation in Income Form, Cambridge Cash Balance Approach, Quantity of Money as a Theory of Money, Income, Quantity of Money as a Theory of prices, Modern Quantity of Theory of Money, Money, Interest and Income: Keynes Monetary Theory, Keynes' Theory of Rate of interest, Rate of Interest and Investment, Inflation: Demand Pull Inflation, QTM, Excess Demand and inflation, Cost Push Inflation, Income Share Inflation, Demand Shift Theory of Inflation, Phillips Curve, Structural Inflation Developing countries, Money and Inflation:

UNIT III: THEORY OF SUPPLY OF MONEY

Theory of Money Supply: High Power (H) Theory of Money Supply, Money Multiplier Process, Determinants of the Money Multiplier, Factors affecting H, Adjusted H, H an autonomous Policy Determined Variable, Reserve Bank Analysis of Money; Supply of Credit and its Allocation: Theory banks Credits and Bank Deposits, Allocation of institutional Credits as an Institutional Process, Financial Factors in allocation Institutional Credits, Non-financial Factors in allocation of Institutional Credit; Interest Rates: Loanable Fund Theory, Heterogeneity of Interest Rate Determination, Interest Rate Differentials, Equalising and Non-equalising Differences in Interest Rates and Deficiency in Prevailing System of Administered Interest Rate.

UNIT IV: MONETARY POLICY AND CENTRAL BANKING

Goals, Targets and Indicators, Instruments: open market operation, Variations in Reserve Requirements, Changes in the Cost and Availability of Reserve Bank Credit to Banks, Changes in the Cost and Availability of Reserve Bank Credit to Development Banks, Statutory Liquidity Ratios, Moral Suasion, Selective Credit Control and Credit Monetary Arrangements, Monetary Credit Policy of RBI, Recent Developments on Financial Inclusion, Jan DhanYojana

Reading List

1. Gupta, Suraj B. (2016): Monetary Economics: Institutions, Theory and Policy, S. Chand and Company Private Limited, New Delhi.
2. JagdishHanda, (2009): Monetary Economics, 2nd Edition, Routledge, London
3. Walsh, Carl E (2010): Monetary Theory and Policy, Third Edition, The MIT Press Cambridge Massachusetts
4. Nachene, Dilip and BhalchandraMungekar (2003): Indian Economy in the New Millennium, Himalaya Publication, Mumbai. Journal of Monetary Economics www.rbi.org.in

ECO 571: INSTITUTIONAL ECONOMICS

Credit: 04

Course Objective: The course aims at introducing the students to basic concepts of New Institutional Economics (NEI) and sensitizes them to various problems relating to information asymmetry, property rights and transaction costs by bringing in cases from the real world.

Unit I: Basic Introduction to Institutional Economics

Institutional Economics as a departure from Neo-Classical and Marxian Economics, Historic development of Institutional Economics, Old and New Institutional Economics, Core issues in New Institutional Economics

Unit II: Problems of Information Asymmetry

Prisoner's dilemma and Nash equilibrium, Assurance problem, Principal-Agent Problem, Problem of Adverse Selection, Problem of Moral Hazard

Unit III: Property Rights Issues

Concepts of Property and defining Property Rights, Problems of Ill-defined Property rights, Externalities-Market failure and property rights, Issues relating to ill-defined property rights, Social vis-à-vis Individual Choices, Neo-classical Maximisation vis-à-vis Methodological Individualism, Game theory & Prisoner's Dilemma, Hardin's Tragedy of Commons, Collective Action, and Assurance Problem, water issues, Rural credit.

Unit IV: Transaction Costs and Bounded Rationality

Issues relating to transaction costs, Social cost vis-à-vis individual costs, Identification and measurements of transaction costs, Coase Theorem, Bounded Rationality, Applications of NIE in the Indian Market In Public Policy, Insurance Sector, Market for lemons, Social issues, Ecological and Environmental Issues, land acquisition, Singur Issues,

Reading List

1. Furburton & Richter, 'Institutions and Economic Theory', Dryden Press.
2. Pindyck, Robert S., Rubinfeld, Daniell L., & Mehta, Prem L., "Microeconomics", 7th Edition, (2009), Pearson.
3. Frank, Robert H., "Micro Economics and Behaviour", McGraw Hill International Editions, (1991).

4. Eggertson, Thrainn, “Economic Behaviour and Institutions”, Cambridge University Press, (1999).
5. North, Douglas C., “Institutional Change and Economic Performance”, Cambridge University Press, (2004).
6. Olson Mancur (1965), The Logic of Collective Action, Harvard University Press, Cambridge.
7. Shaw, M E. (1971). Group Dynamics: The Psychology of Small Group Behaviour, McGraw Hill, New York.
8. Ahuja H. L., “Advanced Economic Theory – Microeconomic Analysis”, S. Chand & Company Ltd.

ECO 572: GENDER ECONOMICS

Credit: 04

Aims of the course: This course is motivated to familiarize students with the key theoretical concepts, approaches and views related to the role of women in the achievement of development.

Unit-I: Concepts and Theoretical Approaches In Gender Economics

Difference between Gender and Sex; Concept of gender economics; Gender issues in economic theory; Gender division of work; Invisibility of women’s work; Gender budget; Gender Audit. Approaches: Women in development (WID); Women and development (WAD), Gender and development (GAD); Neoliberal approaches.

Unit-II: Gender and Development

Conceptualizing and measuring women’s contribution to national income and growth; Gender Inequality in human development; Gender related development indices; Measuring gender empowerment; Women in agriculture; Women in industry; Women in services; Gender dimensions of International trade.

Unit-III: Gender and Social Sector

Application of theories of capability and human capital for studying gender and education; Significance of Women’s education; Gender gaps in educational achievements; Policies and Programmes for promoting women’s education.

Life cycle approach to gender specific health needs; Reproductive Rights; Gender dimension of national health policies and programmes; National Rural Health Mission; Reproductive and Child Health Programme.

Unit-IV: Women, Poverty and Environment

Women's Rights; Deprivation and marginalization of women; Feminization of poverty: extent, causes and consequences; Welfare-oriented Programmes to empowerment-oriented programmes; Need for gender concerns in designing social security policy; Women and environment.

Reading List

1. Anupama (2007), 'Gender discrimination in quality of employment and wages in unorganised manufacturing sector of India', *Indian Journal of Labour Economics*, 50(4), pp.1007-1119.
2. Arputhamurthy, S. (1990), *Women Work and Discrimination*, New Delhi: Ashish Publishing House.
3. Bosarup Ester, (1970) *Women's Role in Economic Development*, George Allen and Unwin, London.
4. Devasia Leelamma (1994) *Empowering Women for Sustainable Development*, Ashish Publishing House, New Delhi.
5. Eswaran, M. (2014), *Why Gender Matters in Economics*, Princeton University Press.
6. Jacobsen, J. (2007), *The Economics of Gender*, Wiley-Blackwell.
7. Jose, S. (2008), 'Paid employment and female autonomy in India: issues and evidence', *Indian Journal of Labour Economics*, 51(3), pp.397-408.
8. Mazumdar, I. and N. Neetha (2011), 'Gender dimensions: employment trends in India 1993-94 to 2009-10', *Economic and Political Weekly*, 46(43), pp.118-126.
9. Neetha, N (2006), 'Invisibility continues? Social security and unpaid women workers' *Economic and Political Weekly*, 41(32), pp. 3497-3498.
10. Nirmala, V and, K. S. Bhat (1999), 'Female work participation in the emerging labour market in India', *Indian Journal of Labour Economics*. 42(4), pp.613-639.
11. Pal, M., P. Bharati, B. Ghosh, and T.S. Vasulu (eds.) (2011), *Gender and Discrimination Health, Nutritional Status, and Role of Women in India*, New Delhi: Oxford University Press.
12. Pellisery, S. and S. K. Jalan (2011), 'Towards transformative social protection: a gendered analysis of the Employment Guarantee Act of India (MGNREGA)', *Gender and Development*, 19(2), pp. 283-294.
13. Sen, A. and J. Drèze (1995), *India: Economic Development and Social Opportunity*, Oxford University Press.

ECO 573: Industrial Economics

Credit: 04

Aims of the course: The objective of this course is to provide basic knowledge to the students on key theoretical concepts and issues related to market structure, firms' motivations and conducts, productivity, and efficiency. It also provide a detailed understanding of policy debates involved in industrial development in India.

Unit I: Basic Problems in Industrial Economics

Definition and scope of industrial economics; Concept and importance of industry; Concept and organization of a firm; Classification of firms based on ownership, sector (industries, formal vs. Informal), size and use-based classification; Separation of ownership and control; Objectives of firms; Structure-conduct-performance paradigm; New empirical industrial organization approach.

Unit II: Market Structure and Firm Conduct

Strategies in oligopolistic markets: models of quantity vs. price competition, non-price competition: product differentiation, advertising, research and development, mergers and acquisitions, vertical restraints; Theories of industrial location.

Review of empirical studies on determinants of market structure and concentration, size distribution of firms, firms' R&D, M&As and industrial location in India.

Unit III: Market and Firm Performance

Industrial profitability and productivity; Growth of the firm (sales growth) and enterprise profit margin; Impact of market concentration and trade liberalization on firms' performance; Factors affecting industrial sickness.

Review of empirical studies on firm growth, industry price-cost margin, productivity, and enterprise sickness in India.

Unit IV: Policies and Industrial Growth in India

Evolution of industrial policy and industrial development in India; Competition policy of India; Manufacturing and Make in India Initiatives.

Reading list

1. Ahluwalia, I. J. (1985), *Industrial Growth in India: Stagnation in the Mid-Sixties*, Delhi: Oxford University Press.
2. Aiginger, K., D. C. Mueller and C. Weiss (1998), 'Objectives, topics and methods in industrial organization during the nineties: Results from a survey', *International Journal of Industrial Organization*, 16(6), pp. 799–830.
3. Armstrong, M. and R. Porter (eds.) (2007), *Handbook of Industrial Organization*, Vol.3. North Holland.
4. Bhat, T.P. (2013), 'Growth and Structural Changes in Indian Industries', *ISID Working Paper*, No. 2103/02, New Delhi: Institute for Studies in Industrial Development.
5. Ferguson, P. and G. Ferguson (2003), *Industrial Economics Issues and Perspectives*, Palgrave Macmillan.
6. Hay, D. A. and D. J. Morris (1991), *Industrial Economics and Organization: Theory and Evidence*, Oxford University Press.
7. Krishna, K.L. (2011), 'Industrial growth and Diversification' in Uma Kapila (Ed.), *Indian Economy Since Independence*, 19th edition, 2010–11, New Delhi: Academic Foundation.
8. Nagjar, R. (2003), 'Industrial Policy and Performance since 1980: Which Way Now?', *Economic & Political Weekly*, 38(35), pp. 3707–3715.
9. Schmalensee, R. L. (1988) 'Industrial Economics: An Overview', Working Paper No. 1997-88, Sloan School of Management, Cambridge: Massachusetts Institute of Technology.
10. Shy, O. (1996), *Industrial Organization: Theory and Applications*, MIT Press.
11. Tirole, J. (1998), *The Theory of Industrial Organization*, MIT Press.

ECO 574: Labour Economics

Credit: 04

Course Objectives: Issues pertaining to the labour market, wage theories, employment policies trade unions and collective bargaining in the globalized economy have become vitally important for developing countries. In a country like India where the bulk of the labour force is in the unorganized sector and the organized sector is witnessing “jobless” growth, the importance of issues such as employment and unemployment as well as livelihood and social security for the growing millions continues to assume significance. This paper exposes students to theoretical as well as empirical issues relating to the labour market with special reference to India.

Unit I

Nature and characteristics of labour Problems, Characteristics of Industrial Labour and casual labour in India and Labour market in India

Unit II

Classical and Modern Theory of Wage Determination. Labour Welfare in India. – Theories of Labour Welfare The policy, Theory. The Religious Theory, Philanthropic theory, The trusteeships theory. The placating theory, The Public Relation theory and The function theory, Rigidity and Flexibility in the labour market.

Unit III

Demand for Labour and Supply of Labour Demand for labour in relations to size and pattern of investment, Supply of Labour in relation to growth of Labour Force. Labour Market policies, Mobility of labour, employment service organization in India. Employment and unemployment in developing countries, Employment policy in Five Year Plans and its evaluation. Rural and Agricultural labour in India

Unit IV

Concepts of minimum wage, living wage and fair wage. Social Security I India – Need of Social Security, social insurance and social assistance, workmen Compensation Act. Maternity Benefit act and Employees state Insurance Scheme, Women and Child Labour.

Reading List:

1. Gupta P.K. (2012) Labour Economics, New Delhi Virnda Publication (p) Ltd.
2. Hajela P.D. Labour Restructuring in India: A Critique of the New Economic Policies, Commonwealth Publishers, New Delhi.
3. Lester, R.A. (1964) Economics of Labour (2nd Ed.), Macmillan, New York.
4. Pepola, Ghosh and A.N.Sharma (1993) Labour Employment and Industrial Relations in India B.R. Publishing House, New Delhi
5. Datt, G. (1996), Bargaining Power Wages and Employment: An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
6. Bhagoliwal T.N. (2002), Economics of Labour and Industrial Relations: SahityaBhavan Agra.
7. P.S. Florence :Labour Economics
8. Lester :Labour Economics
9. R.R. Singh (1971): Labour Economics, Agra, Sri Ram Mehra
10. V.V. Giri (1972) : Labour Problem in India Industry, Asia Publishing House.

ECO 575: HEALTH ECONOMICS

Credit: 04

Objective: This paper aims to equip student of an understanding that health is unlike any other good and train them in tools of health economics to analyze health outcomes, processes and policies.

Unit I: Fundamentals of Health Economics

Understanding Health: Defining Health; Biomedical Model-Germ Theory, Cartesian Dualism, Behavioral and Social Models of Health.

Human Life Course and Health Care: Childbirth, Childhood, Family & Individual Wellbeing, Older Age, Third Age (Death and Dying).

Basic Concepts: Prevention, Cure, Healing, Disease, Illness, Sickness.

Unit II: Theories & Measurement of Health

Methods of Evaluation in Health Care: Valuing Health and health damage: Human capital approach: measurement of mortality: value of statistical life, years of life lost; morbidity valuation: cost of illness, Burden of disease: Meaning and significance, DALY: Framework, measure of burden, Components and postulates, DALY and QALY; The GBD assessment, BD and DALY: A critical appreciation.

Unit III: Financing of Health Care

Financing of Health Care: Public Health Care, Market based care, Insurance, Targeted Intervention Plan (PPP Public Private Participation)

Unit IV: Pharmaceuticals and Health Care

Market for Pharmaceuticals: Issues, Development of a New Drug, Innovation as an Investment, Role of Patent Protection, Price Competition in Pharmaceuticals Market.

Reading list

1. Anthony J. Cuyler and Joseph P.(ed) (2000), *Handbook of Health Economics*, Newhouse, North-Holland, Elsevier Science.
2. Clewar, Ann, and David Perkins. 1998. *Economics for Health Care Management*. London: Prentice Hall.
3. Folland, Sherman, Allen Goodman, and MironStano. 2001. *The Economics of Health and Health Care*. New York: Macmillan, Third Edition.

4. Rice, Thomas. 1998. *The Economics of Health Reconsidered*. Chicago: Health Administration Press.
5. ShermanFolland, Allen C. Goodman, and MironStano, (2004.), *The Economics of Health and Health Care, 4th Edition*, Prentice Hall.
6. Santerre and Neun, (2004) *Health Economics: Theories, Insights, and Industry Studies*, Thomson/South Western.

ECO 576: DATABASE OF THE INDIAN ECONOMY

Credit: 04

Objective: The main objective of this course is to familiarize the students with the available official statistics on various aspects of the Indian economy. Special attention would be placed on macro databases and limitations therein.

UNIT – I: Significance of Data in Economic Analysis

Importance of Data in Economic Analysis, Planning and Policy Making; Brief Introduction to the History and Emergence of Large/National Data Systems in India; A Brief Introduction to Archival System; Systems of Data Collection, Aggregation and Statistical Analysis at Multiple Levels of Administration

UNIT – II: Nature and Forms of Official Statistics Data in Economic Analysis

Sample, Census, Primary, Secondary, Micro, Aggregative etc.;Major Sources/Publications of Macro Level Data.Economic Census; Population Census, National Accounts Statistics; Money Supply and Banking Statistics; Public Finance; Foreign Trade; Consumer Expenditure; and Labour, Employment and Wages.

UNIT – III: Major Sectoral Statistics

Data on Industry and Mining; Agriculture and Costs of Production; Electricity and Other Forms of Energy; Health, Family Welfareand Basic Amenities; Educational Statistics – Primary, Secondary, Professional and Higher Education (Type of Data; Periodicity; Conceptual and Analytical Limitations).

UNIT – IV: Unconventional Sources of Data

Grey Material; Private Data Sources; Parliamentary Debates; All India Reporter; Mimeographed Publications; Historical, Institutional and Literary Sources; Online Sources.

Reading List

1. Nagaraj, R. (1999), 'How Good Are India's Industrial Statistics? An Exploratory Note', *Economic and Political Weekly*, 34 (6).
2. Nagaraj, R. (2002), 'How to Improve India's Industrial Statistics', *Economic and Political Weekly*, 37 (10).
3. Rao, C. R. (Ed.) (1972), *Data Base of Indian Economy, Vols. I and II*, Statistical Publishing Society, Calcutta.
4. Raza, M., S. Naqvi and J. Dhar (1978), *Sources of Economic and Social Statistics of India*, Eureka Publications, New Delhi.

ECO 577 ENVIRONMENTAL AND ECOLOGICAL ECONOMICS

Credit: 04

The objective of the Environmental Economics is to provide students with the necessary training for the application of economic theory and analysis to natural resource and environmental management issues. The subject will impart understanding on the environmental regulatory approaches for correcting market failures, and making use of economic evaluation techniques to assess environmental issues and policies.

Unit – I

Introduction to Environmental and Ecological Economics: Definition concept and Scope; Economy – ecology and environment inter – linkages; Property rights and externalities, Market failures and environmental problems, Ecological footprint – global and regional trends; ethics and ecology – intergenerational issues; green economic policy.

Unit – II

Economic incentives for environmental protection: Price rationing and quantity rationing; Liability rules; Pollution taxes for efficient control of pollution; Coase Theorem; Theory of Commons; Basic theory and issues in tradable pollution permits.

Unit – III

International Environmental issues: Transboundary pollution problems, International environmental treaties and Institutions; Climate Change and policies; Environmental Regulation and Assessment in the Indian Context.

Unit – IV

Sustainable Development: current issues in Sustainable Development; Goals and Indicators; Green Economy; Green Manufacturing, Green Finance and Green Tourism; Investing in natural capital, Agriculture, Fisheries, Water, Forests, Renewable Energy.

Reading List

1. Baumol, William J. and Wallace E. Oates: The Theory of Environmental Policy, Cambridge University Press, 1988
2. Fisher, A.C.: Resource and Environmental Economics, Cambridge University Press, 1981
3. Hanley, Nick and Shogren, Jason F.: Ben White Environmental Economics, Oxford University Press, New York, 1997
4. Kolstad, Charles D.: Environmental Economics,, Oxford University Press, New York, 2000
5. Tietenberg, Tom and Lewis, Lynne: Environmental & Natural Resource Economics, 2009, Prentice Hall.

ECO 578 REGIONAL ECONOMICS

Course Objectives

To acquaint the student with the problems of regional economies and methods of analyzing them. The roles of natural resources, demographic base, location of industries, and factors determining regional growth and development will be considered.

Unit I

Introduction: What is a Regional Economy? Theory of Location and interdependence, Concept of Regional Planning -Different types of regions - complementary region, Causes for Regional Imbalances- Measures to reduce regional Imbalances- Regional Development and regional planning- Sectoral and Functional approaches -Macro and Micro level planning of regional economics. Importance of Regional analysis in developed and backward economics, Regional Economic Problems- Perspectives on Economic Growth and Development

Unit II

The System of Regions, Regional Income and Social Accounting: Equity Vs Efficiency; Regional Growth, Conceptual and Theoretical Foundations; Application of theories; Status of Development in relation to Regional economic development; Export Base Theory – Sectoral Theory Vs Regional Theory of Development; Growth Pole theory-Central place theory – Diffusion Theory-integration: Development Differentials.

Unit III

Urban and Regional Economics Land - Use Organization within a Region, Identification of Backward regions: Determinants of Regional Development: Natural Endowments Human Resources-Capital-Technology-Economic and Social infrastructure; Factor and commodity mobility and Regional development; Convergence Theory.

Unit IV

Models and Problems of Regional Economic Growth, National and regional Planning goals And objective, historical perspectives of Indian development, regional development models, metropolitan model-Bombay, Delhi, Calcutta, tribal development, drought prone area, mineral based, regions, the role of migrants in regional economics, Regional Planning Policy in India and Gujarat

Reading List

1. John B. Parr, "Regional Economic Development: An Export Stages Framework," LandEconomics, Feb. 1999, pp. 94-114.
2. Ron Martin and Peter Sunley, "Paul Krugman's Geographical Economics and Its Implications for Regional Development Theory: A Critical Assessment," EconomicGeography, June 1996, pp. 259-292.
3. Amitabh Kundu et al.: input-Output frame-work and Economic Analysis B. Sarah, C.O.A.R. & J.B. Cuillingworth: Regional and Urban Studies, 7. Mark Wright: industrial Location & Regional Analysis.
4. Chand, M. and U.K. Puri : Regional Planning in India, Allied Publishers, New Delhi.
5. Dholakia, R.H : Regional Disparity in Economic Growth in India, Himalaya Publishing House, Bombay.
6. Glasson, J : An Introduction to Regional Planning, Concepts, Theory and Practice, Hutchiuson, London.
7. HanumanthaRao, CH : Regional Disparities and Development in India, Ashish Publishing House, New Delhi.
8. Harry N Richardson (1969): regional Economics, Weidenfield and Nicolson, Prager, New York London