



**SIDHO-KANHO-BIRSHA UNIVERSITY**

Purulia, West Bengal, India

## **CURRICULUM**

Under Choice Based Credit System (w.e.f session 2017-2018)

**BACHELOR OF ARTS (BA) AND BACHELOR OF  
SCIENCE(BSC)  
HONOURS  
IN  
ECONOMICS**

# **Title: Introductory Microeconomics**

(Paper: CC1)

<b>Topic</b>	<b>No of Class</b>
<b>1. Exploring the subject matter of Economics</b>	<b>10</b>
Why study economics? Scope and method of economics; The economic themes: scarcity and efficiency; Thinking like an economist: the question of what to produce, how to produce and how to distribute output; Marginal benefits and marginal costs; Opportunity cost (private and social); The basic competitive model; prices, Property rights, the role of property rights in markets and profits; Incentives and information; Rationing; opportunity sets; Economic systems; Reading and working with graphs.	
<b>2. Supply and Demand: How Markets Work, Markets and Welfare</b>	<b>15</b>
1. Elementary theory of demand Determinants of household demand, Market demand, and shifts in the market demand curve 2. Elementary theory of supply Factors influencing supply, Derivation of the supply curve, and shifts in the supply curve 3. The elementary theory of market price Determination of equilibrium price in a competitive market; The effect of shifts in demand and supply; The excess demand function: Existence, uniqueness, and stability of equilibrium; Consumer surplus, Producer surplus and efficiency of competitive markets (graphical approach); The idea of market failure; Elasticities and their applications. 4. Government intervention and their impact on market equilibrium and efficiency controls on prices (Price ceilings and price floors); Indirect taxation.	
<b>3. The Households</b>	<b>25</b>
The consumption decision - budget constraint, Consumption and income and price changes, Demand for all other goods and price changes; Description of preferences- most preferred bundle and its properties; Consumer's optimum choice; Income and substitution effects; Marshallian and compensated demand curves; Price consumption curve, Income consumption curve, and Engel curve; Homothetic tastes; Labour supply and savings decision - choice between leisure and consumption	
<b>4. The Firm and Perfect Market Structure</b>	<b>23</b>
Defining a firm- firm's legal forms; Profit maximization hypothesis; Contractual theories and organizational theories of firms (concepts only); Behaviour of profit maximizing firms and the production process; Short run costs and output decisions; Costs and output in the long run.	
<b>5. Imperfect Market Structure</b>	<b>22</b>
Monopoly and anti-trust policy; Measuring monopoly power; Government policies towards competition; Various types of imperfect competition.	
<b>6. Input Markets</b>	<b>25</b>

Theory of rent-Ricardo, Marshall, and Modern theory of rent; Labour and land markets - basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); Demand for labour; Input demand curves; Shifts in input demand curves, Competitive labour markets; Labour market and public policy.

**Reading References:**

- Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8th Edition, 2007.
- N. Gregory Mankiw, Economics: Principles and Applications, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
- Joseph E. Stiglitz and Carl E. Walsh, Economics, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.
- Samuelson and Nordhaus, Economics, Mc GrawHill
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**Title:** Mathematical methods in Economics-I  
(Paper: CC2)

**SYLLABUS**

**No of Class**

**1. Preliminaries**

**20**

Logic and proof techniques; Sets and set operations; relations; Functions and their properties; Number systems. Convex sets; Geometric properties of functions: convex functions, their characterizations, properties and applications; Further geometric properties of functions: quasi-convex functions, their characterizations, properties and applications; Limit and continuity.

**2. Functions of one real Variable**

**25**

Continuous functions of different types and their graphs- quadratic, polynomial, power, exponential, and logarithmic; Derivatives of first and second order and their properties; Convex, concave and linear function. Application in economics- concept of marginal.

**3. optimization**

**Single**

**variable**

**18**

Local and global optima; Geometric characterizations; Characterizations using calculus; Applications in Economics- profit maximization and cost minimization.

#### 4. Integration of functions

18

Integration of different types of functions; Methods of Substitution and by parts; Applications in economics- obtaining total from the marginal.

#### 5. Difference Equations 17

Finite difference; Equations of first and 2nd orders and their solutions; Application in Economics- Cobweb model.

#### 6. Elementary Probability Theory 22

Sample space and events; Probability axioms and properties; Counting techniques; Conditional probability; Bayes' rule and independence of events; Random variable and probability distributions- Discrete and continuous. Expectation of a random variable.

#### Reading References:

- K. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002.
- A. Mukherji and S. Guha: Mathematical Methods and Economic Theory, Oxford University Press, 2011
- Apostol T.M. Calculus, Volume 1, One-variable calculus, with an introduction to linear algebra, (1967) Wiley, ISBN 0-536-00005-0, ISBN 978-0-471-00005-1
- K. G. Binmore, Mathematical analysis, Cambridge University Press, 1991.
- R.V. Hogg and A.T. Craig , An Introduction to Mathematical Statistics, Third Edition, Amerind, New York, London
- Kenny and Keeping, Mathematics of Statistics, Van Nostrand.

**Title:** Introductory Macroeconomics  
(Paper: CC3)

#### SYLLABUS

#### No of Class

#### 1. National Income Accounting, unemployment, and open economy issues 40

Macroeconomic data National Income accounting and cost of living; Concept of Growth Role of savings, investment, and financial intermediation; Open Economy, Balance of Payments, exchange rates, and capital flow; Concept of unemployment- Types and their characteristics; Growth accounting Solow residual

#### 2. Money and Inflation 40

Monetary system Definitions of money Determinants of money supply  
 Money multiplier Central bank's role in controlling money supply;  
 Quantity theory of money;  
 Inflation and its costs.

**3. The Closed Economy in the Short Run 40**

Theory of aggregate demand- components and their interrelations Crowding out- Factors causing shift in the function; Theory of aggregate supply- determinants of supply and shift factors; Interaction of aggregate demand and supply

**Reading References:**

- Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
- N. Gregory Mankiw. Principles of Macroeconomics, Indian Imprint of South Western by Cengage India, 6th edition, 2015.
- Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005.
- Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.
- J.R.Hicks. The Social Framework: An Introduction to Economics, Clarendon Press, 3rd edition, 1960 ► Sikdar Soumyen, Principles of Macroeconomics, Oxford University Press

**Title: Mathematical methods in Economics-II  
 (Paper: CC4)**

**SYLLABUS of Class No**

**1. Matrix Algebra 30**

Matrix: its elementary operations; different types of matrix; Rank of a matrix; Determinants and inverse of a square matrix; solution of system of linear equations; Eigen values and Eigen vectors. System of nonlinear equations- Jacobian determinant and existence of solution

**2. Function of several variables 30**

Continuous and differentiable functions: partial derivatives and Hessian matrix. Homogeneous and homothetic functions. Euler's theorem, Implicit function theorem and its application to comparative statics problems. Economic applications- theories of consumer behaviour and theory of production.

**3. Multi-variable optimization 30**

Optimization of nonlinear functions: Convex, concave, and quasi-concave functions; Unconstrained optimization; Constrained optimization with equality constraints- Lagrangian

multiplier method; role of Hessian determinant; Inequality constraints and Kuhn-Tucker Conditions; Value function and Envelope theorem; Economic applications – consumer behaviour and theory of production. Optimization of linear function: Linear programming; concept of slack and surplus variables (graphical solution only) concept of convex set.

**4. Differential Equations**

**30**

Solution of Differential equations of first order and second order; Economic application-price dynamics in a single market- multimarket supply demand model with two independent markets. Qualitative graphic solution to 2x2 linear simultaneous differential equation system- phase diagram, fixed point and stability.

**Reading References:**

- K. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002.
- Lawrence Blume and Carl Simon. Mathematics for Economists, W. W. Norton and Company, 1994.
- Alpha Chiang and Kevin Wainwright, Fundamental Methods of Mathematical Economics, Fourth Edition, McGraw-Hill, 2005.

**Title: Intermediate Microeconomics-I  
(Paper: CC5)**

**SYLLABUS**

**No of Class**

**1. Consumer**

**Theory** **30**  
 Cardinal utility; Preference: ordering and properties of ordinal utility; existence of utility functions, different utility functions and their properties, compensating and equivalent variation, Slutsky equation; consumption-leisure choice and labour supply; choice under uncertainty (expected utility and risk aversion), inter- temporal choice and savings decision; revealed preference approach

**2. Production and Costs** **30**

Technology- returns to factor and diminishing rate of substitution – some examples of technology (fixed proportion, perfect substitute, Cobb–Douglas Production Function, CES Production Function), General concept of homogenous and homothetic production function and their properties; production with one and more variable inputs; isocost line and firms equilibrium and expansion paths;

short run and long run costs;  
 cost curves in the short run and long run;  
 relation between short run and long run costs.

**3. Equilibrium and long run equilibrium; 30**

Short run and long run equilibrium; determination of the supply curve of the firm and the industry: with reference to external economies and diseconomies of scale.

**4. Input market in perfect competition 30**

Derived demand for input, marginal product and marginal revenue product, input demand for competitive firm and competitive industry, returns to scale and product exhaustion

**Reading References:**

- Hal R. Varian, Intermediate Microeconomics, a Modern Approach, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
- C. Snyder and W. Nicholson, Fundamentals of Microeconomics, Cengage Learning (India), 2010.
- B. Douglas Bernheim and Michael D. Whinston, Microeconomics, Tata McGraw- Hill (India), 2009.
- Hugh Gravelle and Ray Rees. Microeconomics, Prentice Hall (UK); 3rd edition, 2004.
- Anindya Sen , Microeconomics: Theory and Applications, Oxford University Press
- Pindyck, Rubinfeld and Mehta, Microeconomics, Pearson

**Title: Intermediate Macroeconomics-I  
 (Paper: CC6)**

**SYLLABUS**

**No of Class**

**(A) Income Determination in the short-run 40**

**1. Simple Keynesian System:**

Multipliers; equilibrium in both closed and open economy and stability; autonomous expenditure, balanced budget, and net exports; paradox of thrift.

**2. IS-LM Model -**

equilibrium, stability and comparative statics; effects of fiscal and monetary policies,

real balance effects;	
IS-LM in the open economy under fixed and flexible exchange rate with perfect and imperfect capital mobility (Mundell-Fleming model).	
<b>Aggregate Demand and Aggregate Supply</b>	<b>40</b>
Derivation of aggregate demand assuming price flexibility;	
Derivation of aggregate supply curves both in the presence and absence of wage rigidity; equilibrium, stability, and comparative statics-effects of monetary and fiscal policies; Unemployment and its causes- possible solutions, including real balance effect and wage cut policy.	
<b>Inflation, Unemployment and Expectations</b>	<b>40</b>
Inflation and unemployment trade-off	
Short run and long-run Phillips curve under adaptive expectations outcome under rational expectations (non-rigorous).	
<b>Total</b>	<b>120</b>

**Reading References:**

- Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
- N. Gregory Mankiw. Macroeconomics, Worth Publishers, 7th edition, 2010.
- Steven M. Sheffrin, Rational Expectations, Cambridge University Press, 2nd edition, 1996.
- Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.
- Richard T. Froyen, Macroeconomics, Pearson Education Asia, 10th edition, 2016.
- William Branson. Macroeconomic Theory and Policy, Indian reprint, East West Press, 3rd edition, 2014. ► Sikdar Soumyen, Principles of Macroeconomics, Oxford University Press ► Acharyya Rajat, International Economics, OUP
- Krugman and Obstfeld, International Economics, Pearson

**Title: Statistical Methods for Economics  
(Paper: CC7)**

**Syllabus:**

<b>SYLLABUS</b>	<b>No of Class</b>
<b>Descriptive Statistics</b>	<b>20</b>
Presentation of Data;	
Frequency Distribution;	
Measures of central tendency,	
Dispersion, Moments, Skewness and Kurtosis;	
Bivariate Frequency Distribution- correlation and regression.	
<b>Univariate Probability Distribution</b>	<b>20</b>
Discrete distribution-Binomial, Poisson;	
Continuous Distributions-Uniform, Normal, Exponential (Properties of each distribution; mean	



and	variance).
<b>Jointly Distributed Random Variables</b>	<b>20</b>
Density function of Bivariate normal distribution and obtaining means, variances, and correlation coefficients.	
<b>Sampling</b>	<b>20</b>
Concept of sampling and random sampling. Principal steps in a sample survey; methods of sampling;-SRSWR, SRSWOR, Stratified sampling. Sampling vs non-sampling error	
<b>Index Number</b>	<b>20</b>
Price and quantity index number; Different formula; Tests for an ideal index application Cost of living index; Real GDP	
<b>Estimation</b>	<b>20</b>
Parameters and statistics; Point estimation-Properties of a good estimator; Maximum Likelihood Method and the method of moments; Estimation of population parameters using SRSWR and SRSWOR; Interval estimation.	
<b>TOTAL</b>	<b>120</b>

**Reading References:**

- Jay L. Devore, Probability and Statistics for Engineers, Cengage Learning, 2010.
- John E. Freund, Mathematical Statistics, Prentice Hall, 1992.
- Richard J. Larsen and Morris L. Marx, an Introduction to Mathematical Statistics and its Applications, Prentice Hall, 2011.
- William G. Cochran, Sampling Techniques, John Wiley, 2007.
- R.V. Hogg. and A.T. Craig , An Introduction to Mathematical Statistics, Third Edition, Amerind, New York, London
- Mood, A.M., F.A. Greybill and D.C. Boes: Introduction to the theory of statistics, McGraw Hill, 1974

**Title: Intermediate Microeconomics-II  
(Paper: CC8)**

**Syllabus:**

**SYLLABUS** **No of Class**

**General Equilibrium, Efficiency, and Welfare** **40**

1. Exchange Economy, Consumption Allocation and Pareto Optimality; Edgeworth box and contract curve; Equilibrium and efficiency under pure exchange. 2. Pareto efficiency with production: concepts of PPF, SIC, and resource allocation; 3. Perfect competition, Pareto efficiency and market failure (externalities and public good); Property right and Coase Theorem

**Market Structure and Game Theory** **40**

1. Monopoly; Pricing with market power; Degree of monopoly; Price discrimination-different degrees; Multiplant monopoly; Peak-load pricing; Two-part tariff; Monopolistic competition. 2. Oligopoly and game theory (Cooperative and Non-cooperative static games;

Simultaneous move and sequential move games; Non-cooperative games of perfect information; The Prisoner's dilemma, Nash equilibrium in pure and mixed strategies; Backward induction solutions and SPNE); Applications of game theory in oligopolistic markets (Cournot Equilibrium, Bertrand Equilibrium, Stackelberg Equilibrium) ; Concept of collusion and cartels; Solution by backward induction.

**Input Market under Imperfect Competition 40**

Monopsony, Bilateral monopoly in labour market; Externalities; Public goods and markets with asymmetric information.

**TOTAL 120**

**Reading References:**

- Hal Varian. Microeconomic Analysis, Third Edition, Selected chapters, W. W. Norton and Company, 2013.
- W. W. Norton and Company/Affiliated East-West Press (India), 2010. The workbook by Varian and Bergstrom could be used for problems.
- C. Snyder and W. Nicholson, Fundamentals of Microeconomics, Cengage Learning (India), 2010
- Jean Tirole. Theory of Industrial Organization, MIT Press, 1988
- Robert Gibbons. A Primer in Game Theory, Princeton University Press, 1992.
- Erik Rasmusen. Games and Information: An Introduction to Game Theory, Basil Blackwell, 1999.
- K. Binmore. Fun and Games: A Text on Game Theory, OUP, 1991
- Anindya Sen, Microeconomics: Theory and Applications, OUP, 1999
- Pindyck and Rubinfeld, Microeconomics, Prentice Hall
- Mascollel and Green, Microeconomic Theory, OUP

**Title: Intermediate Macroeconomics-II  
(Paper: CC9)**

**Syllabus:**

**SYLLABUS**

**No of Class**

**Schools of Macroeconomic Thoughts 30**

Classical System Say's law and quantity theory; Friedman's restatement; Classical dichotomy and neutrality of money; Keynesian vs classical system; Basic tenets of New Classical and New Keynesian System.

**Macroeconomic Foundations 30**

Consumption

Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle and permanent income hypotheses; Dusenberry's relative income hypothesis; Rational expectations and random-walk of consumption expenditure. Investment MEC and MEI Jorgenson's neo-classical theory Acceleration principle- fixed and variable.

Demand for money Regressive expectations Tobin's portfolio choice models; Baumol's inventory theoretic money demand.

**Monetary Policy** **30**

Government debt and Ricardian equivalence; High-powered money; Money multiplier analysis; Monetary policy – OMO, Bank rate, variable reserve ratio, Repo and reverse repo

**Economic Growth** **30**

Harrod- Domar model and Solow one sector growth models; Golden rule; Dynamic efficiency, Technological progress and elements of endogenous growth theory.

**TOTAL** **120**

**Reading References:**

- Snowdon and Vane (ed), A Macroeconomics Reader, Routledge, Taylor and Francis Group.
- R. Barro. Macroeconomics, 5th edition, The MIT Press, 1989
- W.H. Branson. Macroeconomics, Haper and Row, 3rd edition, 1989
- A.K. Sen (ed). Growth Economics, Penguin, 1970
- Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011
- J.B Hall and R.E. Taylor. Macroeconomics, W.W. Nortan and Company, 5th revised edition, 1997
- Errol D'Souza. Macroeconomics, Pearson Education (New Delhi), 2009
- Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010

**Title: Introductory Econometrics  
(Paper: CC10)**

**Syllabus:**

**SYLLABUS**

**No of Class**

**Nature and Scope of Econometrics** **15**

Definition and Scope of Econometrics; Importance of Error Term

**Statistical Concepts** **20**

Sampling Distributions- chi-square, t- and F-distributions and their application in testing of hypothesis; Defining hypothesis; Distribution of test-statistics; Testing hypotheses related to population parameters; Type I and Type II errors; Power of a test.

**Classical Linear Regression Model: Two Variable Case** **30**

The model and the role of disturbance term ; Estimation of model by method of ordinary least squares (OLS); Gauss-Markov theorem, Reverse Regression, Properties of estimators; Goodness of fit; Testing of hypotheses and confidence intervals; Scaling and units of measurement; Prediction and forecasting, Problems in OLS Method

<b>Multiple Classical Linear Regression Model</b>	<b>25</b>
Motivation for multiple regression, Estimation by OLS method; Properties of OLS estimators; Testing hypotheses – Individual and joint; Partial correlation and regression coefficients; Goodness of fit –role of R <sup>2</sup> and adjusted R <sup>2</sup> ; Use of qualitative (dummy) independent variables.	
<b>Violations of Classical Assumptions: Consequences, Detection and Remedies</b>	<b>20</b>
Problems of Multi-collinearity, Heteroscedasticity, and Auto correlation; Consequences of applying OLS under Heteroscedasticity and Autocorrelation and their detection Durbin-Watson Test, Glesjer Test, Goldfeld-Quandt Test.	
<b>Specification Problem</b>	<b>10</b>
Omission of a relevant variable; Inclusion of an irrelevant variable; Tests of specification errors	
<b>TOTAL</b>	<b>120</b>

**Reading References:**

- Jay L. Devore, Probability and Statistics for Engineers, Cengage Learning, 2010.
- John E. Freund, Mathematical Statistics, Prentice Hall, 1992.
- Richard J. Larsen and Morris L. Marx, An Introduction to Mathematical Statistics and its Applications, Prentice Hall, 2011.
- D. N. Gujarati and D.C. Porter, Essentials of Econometrics, McGraw Hill, 4th edition, International Edition, 2009.
- Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 3rd edition, Indian edition, 2007
- Jan Kmenta, Elements of Econometrics, Indian Reprint, Khosla Publishing House, 2nd edition, 2008
- Stock and Watson
- Maddala- Introduction to Econometrics, Wiley

**Title: International Economics  
(Paper: CC11)**

**Syllabus:**

**SYLLABUS**

**No of Class**

<b>Basics of trade theory</b>	<b>24</b>
Arbitrage as basis and direction of trade; Fundamental sources of cross-country price differences and arbitrage; Concept of comparative advantage; Externalities, regulation and perverse comparative advantage; International equilibrium; offer curves, ToT and stability; Gains from Trade (GFT) Theorem; Concepts of Production possibility Frontier and Community Indifference curves; Illustration of GFT; Decomposition of GFT; Substitution possibilities and magnitude of GFT.	
<b>Technology and Trade (Ricardian Model)</b>	<b>24</b>
Comparative versus Absolute Advantage, One-factor economy, production possibility frontier,	

Relative demand and relative supply, Terms of trade; Trade in Ricardian world, Determination of intermediate ToT, Complete specialization & GFT

**Factor Endowment & Trade (Heckscher-Ohlin-Samuelson Model) 24**

H-O theorem and physical vs. price definitions of factor abundance; Properties of the HO model Factor intensity ranking, One-to-one correspondence between commodity price ratio & factor price ratio (Stolper-Samuelson theorem), One to one correspondence between endowment ratio and production proportion (Rybczysky's theorem); Proof of HO theorem; Taste bias and invalidation of HO theorem; Empirical studies- Leontief Paradox; Effects of trade on factor price and income distribution, factor price equalization, factor intensity reversal & factor price equalization.

**Trade Policy 24**

Partial Equilibrium Analysis Tariff - cost-benefit, Quota, Quota- Tariff equivalence & non-equivalence, Effects of tariff, quota, subsidy and voluntary export restraint; General Equilibrium Analysis Distinction between large and small economy, Welfare effects of a tariff on small country and large country, Offer curve and ToT, Tariff ridden offer curve, Tariff war, Optimum tariff for large economy, Metzler's Paradox.

**Balance of Payments & Exchange Rate: 24**

Balance of Payment accounts in an open economy; Determination of National Income, Transfer problem, Introduction of foreign Country & repercussion effect Open economy multiplier with & without repercussion effect; Fixed & Flexible Exchange Rate: Adjustment of demand and supply of Foreign Exchange, Effect of devaluation, Effects of exchange rate on domestic prices and ToT, Marshall-Lerner Condition, J-Curve effect.

**TOTAL 120**

**Reading References:**

- P. Krugman and M. Obstfeld- International Economics (8th Edition) ; Pearson Education
- R. Caves, J. Frankel and R.W. Jones – World Trades & Payments (9th Ed); Pearson Education.
- Rajat Acharyya- International Economics; Oxford University Press
- Giancarlo Gandolfo, International Trade Theory and Policy, Springer, 2014

**Title: Public Economics  
(Paper: CC12)**

**Syllabus:**

**SYLLABUS**

**No of Class**

**Nature and Scope of Public Economics** **30**

Definition and Scope of Public Economics; Externalities, Market Failure and Government Intervention; Coase Theorem; Public Expenditure to finance Development.

**Theory of Public Good** **30**

Overview of Public Good; Characteristics of Pure Public Good; Distinction between Pure Public Good and Private Good; Market Failure in case of Pure Public Good; Optimal provision of Public Goods; Private Provision and Public Provision of Public Goods; Lindahl Equilibrium, Voting Equilibrium.

**Taxation:** **30**

Classification of Taxes; Canons of Taxation; Benefit Principle; Equal Sacrifice Principle; Ability to Pay Principle; Incidence and Burden of Taxes; Effects of taxation on income distribution, Work efforts, and on savings; The Laffer curve; Optimal Taxation

**Public Expenditure and Public Debt** **30**

Meaning and Classification of Public Expenditure; Government budget and its types; Government expenditure and tax multipliers, Balanced budget multiplier; Fiscal Federalism in India; Meaning of Public Debt; Sources of Public Borrowings: internal and external borrowing; Effects of Public Debt.

**TOTAL**

**120**

**Reading References:**

- A. B. Atkinson and J. E. Stiglitz, Lectures on Public Economics, McGraw-Hill Inc.,US, 1980.
- C. V. Brown and P. M. Jackson. Public Sector Economics, Wiley-Blackwell; 4th Edition, 1991.
- J. F. Due and A. F. Friedlander. Government Finance-Economics of Public Sector, AITBS Publishers and Distributors, 1994
- J. Hindriks and G. D. Myles. Intermediate Public Economics, The MIT Press; Annotated Edition, 2006.
- R.A. Musgrave and P.B. Musgrave, Public Finance in Theory & Practice, McGraw Hill Publications, 5th edition, 1989.
- Amaresh Bagchi (ed), Readings in Public Finance, OUP
- J. E. Stiglitz. Economics of Public Sector, W. W Norton and Company, 3rd Edition, 2000.
- R.J. Chelliah (ed), Towards Sustainable Growth, OUP, 2009
- A Ghosh and C. Ghosh, Public Finance, Prentice Hall India Learning Private Limited; 2nd Revised edition (2014)

**Title: Indian Economy  
(Paper: CC13)**

<b>• SYLLABUS</b>	<b>No of Class</b>
<b>Economic Development since Independence</b>	<b>30</b>
Major features of the economy at independence; Planning Evolution of India's development goals and strategies Structural constraints and Indian development strategy Debates between Growth and distribution, Public sector vs. Private sector, Consumer goods vs. Capital goods, Import substitution vs. Export promotion ; Growth and development under different policy regimes—goals, constraints, institutions and policy framework; An assessment of performance Sustainability and regional contrasts; Structural changes, Savings and investment including the saving-investment paradox.	
<b>Population and Human Development</b>	<b>30</b>
Demographic trends and issues; Education; Health and malnutrition	
<b>Growth and Distribution</b>	<b>30</b>
Trends and policies in poverty including Sen's Entitlement Analysis; Inequality and unemployment.	
<b>Economic Reforms in India</b>	<b>30</b>
Monetary, Fiscal, and Trade Policy Reforms	
<b>TOTAL</b>	<b>120</b>

**• Reading References:**

**Title: Development Economics  
(Paper: CC14)**

<b>SYLLABUS</b>	<b>No of Class</b>
<b>Meaning of Economic Development</b>	<b>30</b>
Income Approach and Capability Approach, Construction and interpretation of HDI; International variations in development measures; Comparing development trajectories across nations and within them. Dependency school of development.	
<b>Economic Growth</b>	<b>30</b>
An overview and policy implications of one sector growth models Harrod- Domar, and Solow; Sources of economic growth, International comparisons.	
<b>Poverty and Inequality</b>	<b>30</b>
Inequality	axioms;

A comparison of commonly used inequality measures; Gender Inequality, Connections between inequality and development; Poverty measurement, HPI; Poverty traps and path dependence of growth processes.

### **Political Institutions and the State**

**30**

Definition of institutions, Evolution of Political and Economic Institutions; The determinants of democracy; Alternative institutional trajectories and their relationship with economic performance; Within-country differences in the functioning of state institutions; State ownership and regulation; Government failures and corruption.

**TOTAL**

**120**

### **Reading References:**

- Jean Dreze and Amartya Sen, 2013. *An Uncertain Glory: India and its Contradictions*, Princeton University Press.
- Jean Dreze and Amartya Sen: *Economic Development and social opportunity*, OUP
- Sukhomoy Chakraborty: *Development Planning: The Indian Experience*, OUP
- Uma Kapila: *Indian Economy since independence*, Academic Foundation
- Ahluwalia and Little (ed): *India's Economic Reforms and Development*, OUP
- Joshi and Little: *India's Economic Reforms*, OUP
- Pulapre Balakrishnan, 2007, *the Recovery of India: Economic Growth in the Nehru Era*, *Economic and Political Weekly*, November.
- Rakesh Mohan, 2008, —*Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment*, *Economic and Political Weekly*, May.
- S.L. Shetty, 2007, —*India's Savings Performance since the Advent of Planning*, in
- K.L. Krishna and A. Vaidyanathan, editors, *Institutions and Markets in India's Development*.
- Himanshu, 2010, *Towards New Poverty Lines for India*, *Economic and Political Weekly*, January.
- Jean Dreze and Angus Deaton, 2009, *Food and Nutrition in India: Facts and Interpretations*, *Economic and Political Weekly*, February.
- Himanshu, 2011, —*Employment Trends in India: A Re-examination*, *Economic and Political Weekly*, September.
- Rama Baru et al, 2010, —*Inequities in Access to Health Services in India: Caste, Class and Region*, *Economic and Political Weekly*, September.
- Geeta G. Kingdon, 2007, —*The Progress of School Education in India*, *Oxford Review of Economic Policy*
- J.B.G. Tilak, 2007, —*Post Elementary Education, Poverty and Development in India*, *International Journal of Educational Development*.
- T. Dyson, 2008, —*India's Demographic Transition and its Consequences for Development* in Uma Kapila, editor, *Indian Economy Since Independence*, 19th edition, Academic Foundation.
- Kaushik Basu, 2009, —*China and India: Idiosyncratic Paths to High Growth*, *Economic and Political Weekly*, September.
- K. James, 2008, —*Glorifying Malthus: Current Debate on Demographic Dividend in India* *Economic and Political Weekly*, June.
- Reetika Khera, 2011, —*India's Public Distribution System: Utilisation and Impact*
- *Journal of Development Studies*.



- Aniruddha Krishna and Devendra Bajpai, 2011, —Lineal Spread and Radial Dissipation: Experiencing Growth in Rural India, 1992-2005, Economic and Political Weekly, September.
- Kaushik Basu and A. Maertens, Eds, 2013, The New Oxford Companion to Economics, Oxford University Press.

**Title: Issues in Indian Economy  
(Paper: DSE 1)**

**Syllabus:**

WTO and India Different rounds of trade negotiations Macroeconomic Policies and Their Impact Fiscal Policy; trade and investment policy; financial and monetary policies; inflation and measures to control inflation, labour laws and regulation, SEZ Policies and Performance in Agriculture Growth; productivity; agrarian structure and technology; capital formation; trade; food security and food policy, pricing and procurement; globalization and Indian agriculture. Policies and Performance in Industry Growth; productivity; diversification; small scale industries; public sector; competition policy; foreign investment, globalization and Indian industry. Trends and Performance in Services Formal and Informal Sectors, banking and insurance; trade in services.

**Reading References:**

- Shankar Acharya, 2010, —Macroeconomic Performance and Policies 2000-8, in Shankar Acharya and Rakesh Mohan, editors, India's Economy: Performances and Challenges: Development and Participation, Oxford University Press.
  - ▶ Rakesh Mohan, 2010, —India's Financial Sector and Monetary Policy Reforms in Shankar Acharya and Rakesh Mohan, editors, India's Economy: Performances and Challenges: Development and Participation, Oxford University Press.
  - ▶ Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, —Agricultural Growth in India Since 1991, RBI DEAP Study no. 27.
  - ▶ B.N. Goldar and S.C. Aggarwal, 2005, —Trade Liberalisation and Price-Cost Margin in Indian Industries, The Developing Economics, September.
  - ▶ P. Goldberg, A. Khandelwal, N. Pavcnik and P. Topalova, 2009, —Trade Liberalisation and New Imported Inputs, American Economic Review, Papers and Proceedings, May.
  - ▶ Kunal Sen, 2010, —Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, The Rise of Asia, Routledge.
  - ▶ A. Ahsan, C. Pages and T. Roy, 2008, —Legislation, Enforcement and Adjudication in Indian Labour Markets: Origins, Consequences and the Way Forward, in D. Mazumdar and S. Sarkar, editors, Globalization, Labour Markets and Inequality in India, Routledge
  - ▶ Dipak Mazumdar and Sandeep Sarkar, 2009, —The Employment Problem in India and the Phenomenon of the Missing Middle, Indian Journal of Labour Economics.
  - ▶ J. Dennis Rajakumar, 2011, —Size and Growth of Private Corporate Sector in Indian Manufacturing, Economic and Political Weekly, April.
  - ▶ Ramesh Chand, 2010, —Understanding the Nature and Causes of Food Inflation, Economic and Political Weekly, February.
  - ▶ Bishwanath Goldar, 2011, —Organised Manufacturing Employment: Continuing

- the Debate, Economic and Political Weekly, April.
- ▶ Kaushik Basu and A. Maertens, eds, 2013, The New Oxford Companion to Economics in India, Oxford University Press
  - ▶ A. Raychaudhury and P De, International Trade in Services in India: Implications for Growth and Inequality in a Globalizing World, OUP, 2012
  - ▶ India Development Reports, IGIDR

**Title: Economics of Health & Education**  
**(Paper: DSE 2)**

**Syllabus:**

**(A) Health:**

Role of Health and Education in Human Development Importance in poverty alleviation; health and education outcomes and their relationship with macroeconomic performance. Microeconomic Foundations of Health Economics Demand for health; uncertainty and health insurance market; alternative insurance mechanisms; market failure and rationale for public intervention; equity and inequality. Evaluation of Health Programs Costing, cost effectiveness and cost-benefit analysis; burden of disease. Health Sector in India: An Overview Health outcomes; health systems; health financing.

**(B) Education:**

Investment in Human Capital Rate of return to education: private and social; quality of education; signaling or human capital; theories of discrimination; gender and caste discrimination in India. Education Sector in India: An Overview Literacy rates, school participation, school quality measures.

**Reading References:**

- William, Jack, Principles of Health Economics for Developing Countries, World Bank Institute Development Studies, 1999.
- World Development Report, Investing in Health, The World Bank, 1993.
- Ronald G., Ehrenberg and Robert S., Smith, Modern Labor Economics: Theory and Public Policy, Addison Wesley, 2005.

**Title: Applied Econometrics**  
**(Paper: DSE3)**

**Syllabus:**

- Stages in Empirical Econometric Research Linear Diophantine equation, prime counting function, statement of prime number theorem, Goldbach conjecture, linear congruences, complete set of residues, Chinese Remainder theorem, Fermat's Little theorem, Wilson's theorem. Regression Diagnostics and Specification Misspecification; functional forms; model selection. Advanced Topics in Regression

Analysis Selected Topics: Dynamic Econometric Models: distributed lag models; autoregressive models; instrumental variable estimation; simultaneous equation models. Panel Data Models Methods of estimation; fixed effects model; random effects model. Introduction to Econometric Software Package  
GRETLM; E-VIEWS; STATA (any one).

### **Reading References:**

Jeffrey M. Wooldridge, *Econometrics*, CENGAGE learning, India Edition, 2009.

► Dimitrios Asteriou and Stephen Hall, *Applied Econometrics: A Modern Approach*, Palgrave Macmillan, 2007.

► Damodar Gujarati, *Econometrics by Example*, Palgrave Macmillan, 2011.

## **Title: Environmental Economics (Paper: DSE 4)**

### **Syllabus:**

- **Introduction**

What is environmental economics; review of microeconomics and welfare economics. The Theory of Externalities  
Pareto optimality and market failure in the presence of externalities; property rights and the Coase theorem. The Design and Implementation of Environmental Policy  
Overview; Pigouvian taxes and effluent fees; tradable permits; choice between taxes and quotas under uncertainty; implementation of environmental policy. International Environmental Problems  
Trans-boundary environmental problems; economics of climate change; trade and environment. Measuring the Benefits of Environmental Improvements  
Non-Market values and measurement methods; risk assessment and perception. Sustainable Development  
Concepts; measurement.

### **Reading References:**

Charles Kolstad, *Intermediate Environmental Economics*, Oxford University Press, 2nd edition, 2010.

► Robert N. Stavins (ed.), *Economics of the Environment: Selected Readings*, W.W. Norton, 5th edition, 2005.

► Roger Perman, Yue Ma, James McGilvray and Michael Common, *Natural Resource and Environmental Economics*, Pearson Education/Addison Wesley, 3rd edition, 2003.

► Maureen L. Cropper and Wallace E. Oates, 1992, —Environmental Economics: A Survey *Journal of Economic Literature*, Volume 30:675-740

**Title: Money and Financial Markets  
(Paper: DSE 5)**

**Syllabus:**

Introduction to money and Banking Money  
Concept, functions, measurement; theories of money supply determination. Financial  
Institutions, Markets, Instruments and Financial Innovations  
1. Role of financial markets and institutions; problem of asymmetric information –  
adverse selection and moral hazard; financial crises.  
2. Money and capital markets: organization, structure and reforms in India; role of  
financial derivatives and other innovations. Financial Markets and Interest Rates  
Behaviour  
Determination; sources of interest rate differentials; theories of term structure of interest  
rates; interest rates in India. Banking System  
1. Balance sheet and portfolio management; Multiple Deposit Creation, Determinants  
of the Money Supply.  
2. Indian banking system: Changing role and structure; banking sector reforms. Central  
Banking and Monetary Policy  
Functions, balance sheet; goals, targets, indicators and instruments of monetary control;  
monetary management in an open economy; current monetary policy of India.

**Reading References:**

- F. S. Mishkin and S. G. Eakins, Financial Markets and Institutions, Pearson Education, 6th edition, 2009.
- ▶ F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, Foundations of Financial Markets and Institutions, Pearson Education, 3rd edition, 2009.
  - ▶ M. R. Baye and D. W. Jansen, Money, Banking and Financial Markets, AITBS, 1996.
  - ▶ Rakesh Mohan, Growth with Financial Stability- Central Banking in an Emerging Market, Oxford University Press, 2011.
  - ▶ L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5th edition, 2011.
  - ▶ M. Y. Khan, Indian Financial System, Tata McGraw Hill, 7th edition, 2011.
  - ▶ N. Jadhav, Monetary Policy, Financial Stability and Central Banking in India, Macmillan, 2006.
  - ▶ R.B.I. – Report of the Working Group: Money Supply Analytics and Methodology of Compilation, 1998.
  - ▶ R.B.I. Bulletin, Annual Report and Report on Currency and Finance (latest)

**Title: Political Economy-II  
(Paper: DSE 6)**

**Syllabus:**

Analysing Social Change in Historical Perspective  
The method of historical materialism; the transition from feudalism to capitalism; capitalism as a historical process – alternative perspectives; Emergence of socialism: social mode of extraction of surplus and socialist planning. Capitalism as an Evolving Economic System  
Basic features; Functioning of the Capitalist System- a) Classical Political Approach of Smith, Ricardo and Marx and b) (b) Neoclassical Economics and Capitalism accumulation and crisis; the modern corporation; monopoly capitalism— alternative perspectives. The State in Capitalism

The state and the economy – contestation and mutual interdependence; the state as an arena of conflict; imperialism – the basic foundations.

**Reading References:**

- J. Gurley, "The Materialist Conception of History", Ch.2.1 in R. Edwards, M. Reich and T. Weisskop (ed.), *The Capitalist System*, 2nd edition, 1978.
- ▶ O. Lange, *Political Economy*, vol. 1, 1963, Chapters 1 and 2.
  - ▶ E.K. Hunt, *History of Economic Thought*, M.E. Sharpe, Indian edn, Shilpi Publications, 2004.
  - ▶ IrfanHabib, 1995, "Capitalism in History", *Social Scientist*, Vol. 23: 15-31.
  - ▶ R.L. Heilbroner, "Capitalism", in the *New Palgrave Dictionary of Modern Economics*, Macmillan, 1987. Also reprinted as Chapter 2 in *Behind the Veil of Economics* by R.L. Heilbroner, W.W. Norton, 1988.
  - ▶ P. Sweezy, *The Theory of Capitalist Development*, Monthly Review Press, 1942, chapters 2, 4, 5, 6, 8 and 10.
  - ▶ Anwar Shaikh, Entries on "Economic Crises" and "Falling Rate of Profit" in T. Bottomore et al (eds.), *The Dictionary of Marxist Thought*, OUP, Indian edition, Maya Blackwell, 2000.
  - ▶ VamsiVakulabharanam, 2009, —The Recent Crisis in Global Capitalism: Towards a Marxian Understanding, *Economic and Political Weekly*, March 28, Vol. 44: 144-150.
  - ▶ J. Schumpeter, *Capitalism, Socialism and Democracy*, George Allen and Unwin 1976, Chapters 6, 7 and 8.
  - ▶ P. Baran (1957), *The Political Economy of Growth*, Chapter 3, Pelican edition, 1973.
  - ▶ R. Heilbroner, —The Role of the State, Ch.4 in *The Nature and Logic of Capitalism*, 1985.
  - ▶ M. Kalecki, —Political Aspects of Full Employment, in E.K. Hunt and J.G. Schwarz (eds.), *A Critique of Economic Theory*, Penguin Books, 1972.
  - ▶ AmitBhaduri, —Nationalism and Economic Policy in the Era of Globalization, Ch. 2 in Deepak Nayyar (ed), *Governing Globalization: Issues and Institutions*, OUP, 2002 [also WIDER Working Paper no.188, WIDER website (2000)].
  - ▶ PrabhatPatnaik, —“Lenin’s Theory of Imperialism Today”, in K.S. Jomo (ed.) *The Long Twentieth Century: The Great Divergence: Hegemony, Uneven Development and Global Inequality*, OUP.
  - ▶ James O'Connor, "The Meaning of Economic Imperialism," in Robert Rhodes, ed., *Imperialism and Underdevelopment*, New York: Monthly Review Press, 1970, pages 101 to 111