

## **Bachelor of Arts (Honours) Economics under CBCS**

**Programme Code:**

### **Programme Outcomes**

**At the completion of the programme, students will attain the ability to:**

- PO1:** Avail the opportunity to focus on policy issues in Economics.
- PO2:** Become an effective and skilled entrepreneur.
- PO3:** Broaden their perspectives and have an understanding of the basic economic concepts.
- PO4:** Understand the evolution of the economic theories and variables involved.
- PO5:** Provide valuable knowledge for decision making in investment and formulating policies.

### **Programme Specific Outcomes**

**Upon completion of the programme, the student will attain the ability to:**

- PSO1:** Comprehend and suggest various types of solutions to economic problems.
- PSO2:** Undertake research through the use of various econometrics models
- PSO3:** Examine the ongoing economic affairs around the globe.
- PSO4:** Formulate employment avenues and be self- reliant.
- PSO5:** Distinguish from a wide role of Economic specialization.
- PSO6:** Understand the concept of sustainability and Environmental Economics

## Course Structure

### Semester-I

Sl No.	Name of Course	Type of Course	L-T-P	Credit	Marks
1.	Introductory Microeconomics	CC-1	6-1-0	6	100
2.	Mathematical Methods in Economics 1	CC-2	6-1-0	6	100
3.	English Communication	AECC-1	2-1-0	2	100
4.	Generic Elective-1	GE-1	6-1-0	6	100
<b>Total Credit - 20</b>					

### Semester –II

Sl No.	Name of Course	Type of Course	L-T-P	Credit	Marks
1.	Introductory Macroeconomics	CC-3	6-1-0	6	100
2.	Mathematical Methods in Economics 2	CC-4	6-1-0	6	100
3.	Environmental Science	AECC-2	2-1-0	2	100
4.	Generic Elective-2	GE-2	6-1-0	6	100
<b>Total Credit - 20</b>					

### Semester –III

Sl No.	Name of Course	Type of Course	L-T-P	Credit	Marks
1.	Intermediate Microeconomics 1	CC-5	6-1-0	6	100
2.	Intermediate Macroeconomics 1	CC-6	6-1-0	6	100
3.	Statistical Methods for Economics	CC-7	6-1-0	6	100
4.	Skill Enhancement Course-1	SEC-1	2-1-0	2	100
5.	Generic Elective- 3	GE-3	6-1-0	6	100
<b>Total Credit - 26</b>					

**Semester –IV**

Sl No.	Name of Course	Type of Course	L-T-P	Credit	Marks
1.	Intermediate Microeconomics 2	CC-8	6-1-0	6	100
2.	Intermediate Macroeconomics 2	CC-9	6-1-0	6	100
3.	International Economics	CC-10	6-1-0	6	100
4.	Skill Enhancement Course- 2	SEC-2	2-1-0	2	100
5.	Generic Elective- 4	GE-4	6-1-0	6	100
<b>Total Credit - 26</b>					

**Semester –V**

Sl No.	Name of Course	Type of Course	L-T-P	Credit	Marks
1.	Indian Economy 1	CC-11	6-1-0	6	100
2.	Development Economics	CC-12	6-1-0	6	100
3.	Discipline Specific Elective-1	DSE-1	6-1-0	6	100
4.	Discipline Specific Elective-2	DSE-2	6-1-0	6	100
<b>Total Credit - 24</b>					

**Semester –VI**

Sl No.	Name of Course	Type of Course	L-T-P	Credit	Marks
1.	Indian Economy 2	CC-13	6-1-0	6	100
2.	Public Economics	CC-14	6-1-0	6	100
3.	Discipline Specific Elective-3	DSE-3	6-1-0	6	100
4.	Discipline Specific Elective-4 (Project/Dissertation)	DSE-4	0-0-6	6	100
<b>Total Credit - 24</b>					

**Total Credits – 140****\*L/T/P: number of classes per week**

**Discipline Specific Elective Course (DSE):**

Course name	L-T-P
1. Economics of Health and Education	6-1-0
2. Economic History of India(1857-1947)	6-1-0
3. Money and Financial Markets	6-1-0
4. Bihar Economy	6-1-0
5. Agricultural Economics	6-1-0
6. Comparative Economic Development(1850-1950)	6-1-0
7. Environmental Economics	6-1-0
8. Introductory Econometrics	

**Generic Elective (GE):**

For Economics Students		For Other Students	
Course name	L-T-P	Course name	L-T-P
		1. Introductory Microeconomics	6-1-0
		2. Introductory Macroeconomics	6-1-0
		3. Indian Economy II	6-1-0
		4. Money and Banking	6-1-0
		5. Environmental Economics	6-1-0
		6. Indian Economy II	6-1-0
		7. Economic History of India(1857-1947)	6-1-0
		8. Public Finance	6-1-0

**Skill Enhancement courses (SEC):**

1. Managerial Economics
2. Entrepreneurial Skill

## **SEMESTER – I**

### **CC1: Introductory Microeconomics**

#### **Course Outcomes**

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

- CO1:** Use microeconomic concepts such as saving and investment in their real life situations.
- CO2:** Understand the profit making techniques used by different businesses or firms
- CO3:** Grasp the basic concepts of Microeconomics such as Laws of Demand, Supply and Elasticity
- CO4:** Apply Indifference Curve Analysis in Deriving Demand curve Income and Substitution Curve

<b>CC1 : Introductory Microeconomics (Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Exploring the subject matter of Economics:</b> Definition of Economics, Need, Scope and Methods of Economics, Nature and subject matter of Economics, Problem of scarcity and choice, Central Problems of Economy.	5
2	<b>Supply and Demand:</b> (a) concept and types of demand, Determinants of individual demand/supply; demand and demand function, theory of demand and law of demand and supply, exceptions to law of demand, demand supply schedule and demand/supply curve; demand for complementary and substitute goods, market versus individual demand/supply; shifts in the demand/supply curve, demand and supply together, elasticity of demand and supply, determinants, measurement and application, static and dynamic demand, consumer surplus (b) The theory of consumer behaviour: Cardinal and Ordinal utility analysis,	15
3	<b>(a)The Firm and Market Structure:</b> Nature of firm, organizing economic activity in a firm, Objective of a firm: Profit maximization vs sales maximization, Introduction to basic idea of equilibrium of a firm, condition for producers' equilibrium in short run and long run for firm and industry: total and marginal approach. Basic idea of market, concept and types of cost and revenue, total, average and marginal concept, classification of market structure, time element in market, Characteristics of Different Market Structure along with relevant examples,	20
4	<b>The Markets for the Factors of Production:</b> Labour and land market: Basic concepts, derived demand, productivity of an input, marginal productivity of labour, marginal revenue product, demand for labour, backward bending supply curve of labour, tax policy and labour supply, labour force participation, determination of wage rate in a perfectly competitive labour market.	20
	<b>TOTAL</b>	60

#### **Suggested Readings :**

1. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8<sup>th</sup> Edition, 2007.
2. N. Gregory Mankiw, *Economics: Principles and Applications*, India edition by SouthWestern, a part of Cengage Learning, Cengage Learning India Private Limited, 4<sup>th</sup> edition, 2007.
3. Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4<sup>th</sup> Edition, 2007.

## CC2 : MATHEMATICAL METHODS IN ECONOMICS–I

### Course Outcomes

**After the completion of the course, the student will be able to:**

- CO1:** Apply methods of various mathematical techniques to economic theory in general.
- CO2:** Understand and have a clear vision, related to various economic theories by the use of different testable propositions or formulas.
- CO3:** Learn Set and Set Operations.
- CO4:** Use Differential and Integral Calculus and its economic application

CC2 : MATHEMATICAL METHODS IN ECONOMICS–I (Theory: 6 credits)		
Unit	Topics to be covered	No. of Lectures
1	<b>Preliminaries:</b> Logic and proof techniques; Sets and Set Operations, Ordered pairs and Cartesian Products Functions and their Properties Number System Basic idea of Permutation and Combination Progression: Arithmetic, Geometric and Harmonic Progression.	14
2	<b>Functions of One Variable</b> a. Graphs; Elementary types of Functions: Quadratic, Polynomial, Power, Exponential and Logarithmic Functions. b. Sequences and Series: Convergence and Divergence, Algebraic Properties and Applications. c. Continuous Functions: Characteristics and Properties of Continuous Functions, Convergence and Divergence. d. Limit of a Function: Method to Evaluate the Limit of Algebraic, Logarithmic and Exponential Functions.	16
3	<b>Rules of Differentiation:</b> Differentiable Functions; Derivatives of Sum, Difference, Product and Quotient Functions; Second and higher order derivatives; <b>Applications</b> of differentiation in Economics.	18
4	<b>Single-Variable Optimization:</b> Conditions for Maxima and Minima; simple applications of maxima and minima in economics – maximization of profit/ net revenue, cost minimization.	12
	<b>TOTAL</b>	60

### **Suggested Readings :**

K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002.

## **SEMESTER- II**

### **CC3 : INTRODUCTORY MACROECONOMICS**

#### **Course Outcomes**

**After the completion of the course, the student will be able to:**

- CO1:** Develop a proper and in- depth understanding of variables dealing with the aggregate economy.
- CO2:** Analyse the basics of National Income Accounting, which will help them to describe and analyze the economy in quantitative terms.
- CO3:** Understand the major issues and concerns of the economy such as unemployment, inflation, poverty economic growth.
- CO4:** Describe Functions of Money and Determination of Money Supply and Demand

<b>CC3 : INTRODUCTORY MACROECONOMICS</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Introduction to Macroeconomics and National Income Accounting</b> The origin and roots of Macroeconomics, Need and relevance of macroeconomics, scope of the subject, macroeconomic concerns and issues ,the role of government in macro economy ,the components of macro economy ,the methodology to macroeconomics, ,circular flow of Income, Concepts of National income: GDP,GNP,NNP,NNP(FC),Personal income ,private income and personal disposable income, approaches to calculating GDP, Nominal and real GDP, Green GDP, concept of social accounting, limitations of GDP as a measure of social welfare, difficulties in measuring national income in developing economies ,GDP and black economy ,concept of base year and GDP index	20
2	<b>Money and Banking</b> Functions of money; quantity theory of money; fundamental equations; Keynesian theory of money and prices, determination of money supply and demand; credit creation; tools of monetary policy. Concept and history of commercial bank, functions, distribution of asset and credit creation., Central banking: history, objective, function, relevance, performance	20
3	<b>The Closed Economy in the Short Run</b> Classical and Keynesian systems; simple classical system of output and employment, Keynesian model of income determination , Aggregate supply and demand , fiscal and monetary multipliers, limitation and relevance of Keynesian economics to developing economy	20
	<b>TOTAL</b>	60

**Suggested Readings:**

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11<sup>th</sup> edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7<sup>th</sup> edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5<sup>th</sup> edition, 2009.
4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2<sup>nd</sup> edition, 2005.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7<sup>th</sup> edition, 2011.

**CC4: MATHEMATICAL METHODS IN ECONOMICS - II****Course Outcomes**

**After the completion of the course, the student will be able to:**

- CO1:** Develop analytical and organizational skills.
- CO2:** Use mathematical techniques to analyze the economic problems and their effects.
- CO3:** Use Differential and Different Equations in Economics.
- CO4:** Use multi-Variable Optimization.

<b>CC4 : MATHEMATICAL METHODS IN ECONOMICS - II</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Differential and Difference Equations:</b> <ol style="list-style-type: none"> <li>a. Types, Order and Degree of Differential Equations, Solution of Differential Equations of First Order and First Degree.</li> <li>b. First and Second Order Difference Equations.</li> </ol>	5
2	<b>Linear Algebra:</b> <ol style="list-style-type: none"> <li>a. Basic Concepts of Vector, Types of Vector, Addition of Vectors, Scalar Product of Two Vectors.</li> <li>b. Matrix and Determinants: Types of Matrices, Addition and Subtraction of Matrices, Multiplication of two Matrices, Transpose and Inverse of a Matrix, Solution of Simultaneous Equation Models.</li> <li>c. Determinant and its Properties.</li> </ol>	15
3	<b>Functions of Several real Variables:</b> <ol style="list-style-type: none"> <li>a. Technique of Partial Differentiation; Second Order Partial Derivatives; Cross Partial Derivatives; Applications of Partial Derivatives in Demand, Utility and Production Analysis.</li> <li>b. Technique of Total Differentials; Second order Total Differentials; Derivatives of Implicit Functions</li> <li>c. Homogeneous and Homothetic Functions: Properties and Applications.</li> </ol>	20
4	<b>Multi-Variable Optimization:</b> <ol style="list-style-type: none"> <li>a. Maxima and Minima of a Function of two or more than two Variables – Hessian Determinants</li> <li>b. Unconstrained Optimization and Constrained Optimization with Equality Constraints – Use of Lagrange Multiplier.</li> <li>c. Applications of Unconstrained and Constrained Optimization in Economics – Equilibrium of Firm under Pure Competition, Multi Product Monopolist, Multi</li> </ol>	20



	Plant Monopolist, Discriminating Monopolist, Constrained Utility Maximization and Constrained Profit Maximization.	
	<b>TOTAL</b>	60

**Suggested Readings:**

1. K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002.
2. Monga, G.S. (1972), *Mathematics and Statistics for Economists*, Vikas Publishing House, New Delhi.
3. Chiang, A.C. (1988), *Fundamental Methods of Mathematical Economics*, Mac Graw Hill, New York.
4. Allen, R.G.D. (1974), *Mathematical Analysis for Economists*, Mac Millian Press and ELBS, London.
5. Dowling, E.T. (1992), *Mathematical Economics 2nd Edition*, Mac Graw Hill, New York.
6. Yamune, Taro (1975) *Mathematics for Economists*, Prentice Hall of India, New Delhi.

### **SEMESTER – III**

#### **CC5 : INTERMEDIATE MICROECONOMICS – I**

##### **Course Outcomes**

**After the completion of the course, the student will be able to:**

- CO1:** Frame their budget according to their income and price constraint.  
**CO2:** Develop knowledge about how the prices are determined in different forms of market..  
**CO3:** Apply Demand and Supply Analysis to responses to Market.  
**CO4:** Deal with the concept of Consumer Behavior.

<b>CC5 : INTERMEDIATE MICROECONOMICS – I</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Consumer Theory</b>  Preference; utility; budget constraint; choice; demand; income effect, substitution effect and price effect for normal and inferior goods, Slutsky equation and Hicksian Substitution effect; buying and selling; choice under risk and intertemporal choice; revealed preference theory, weak and strong ordering, deriving demand theorem from the revealed	20

	preference hypothesis and critical appraisal of revealed preference hypothesis.	
2	<b>Production, Costs and Revenue concepts</b>  Production with one and more variable inputs; law of variable proportion, returns to scale, optimum factor combination, elasticity of substitution,  cost analysis: types of cost, short run and long run costs; theory of cost: total and marginal approach, cost curves in the short run and long run , Revenue concepts: TR, MR, AR under different market conditions ,cost revenue and output relationship in short and long run, different economic decisions. Internal and external economies and diseconomies of scale,  Concept and assumptions of Production function with examples: characteristics and estimation of linear and Cob Douglas production function, production function and technological change	20
3	<b>Perfect Competition and Monopoly</b>  Review of perfect competition: features, price and output determination in perfect competition in short and long run, total and marginal approach.; existence and stability of equilibrium under perfect competition, Monopoly: features, conditions for existence of monopoly, price and output determination in monopoly, measurement of the degree of monopoly power, pricing with market power; price discrimination; government policies towards monopoly and competition	20
	<b>TOTAL</b>	60

**Suggested Readings :**

1. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8<sup>th</sup> edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
2. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.
3. B. Douglas Bernheim and Michael D. Whinston, *Microeconomics*, Tata McGraw- Hill (India), 2009.

## CC6 : INTERMEDIATE MACROECONOMICS – I

### Course Outcomes

**After the completion of the course, the student will be able to:**

- CO1:** Develop a proper and in-depth understanding of variables dealing with the aggregate economy.
- CO2:** Understand the basics of National Income Accounting and analyze the economy in quantitative terms.
- CO3:** Facilitate the major issues and concerns of the economy such as unemployment, inflation, poverty economic growth etc.
- CO4:** Understand the concept and function of Money and Determination of Money supply and demand.

CC6 : INTERMEDIATE MACROECONOMICS – I (Theory: 6 credits)		
Unit	Topics to be covered	No. of Lectures
1	<b>The Closed Economy in the Short Run</b>  Classical Macroeconomics: Money ,prices and interest, Keynesian system: money, interest and income ,IS LM model ,policy effects ,Analysis of Business cycle: phases of business cycle, theories of business cycle: hawtrey, Keynes ,Samuelson, and hicks model	20
2	<b>Inflation, Unemployment and Expectations</b>  Inflation its types and causes; cost of inflation, the fisher effect, unemployment: concept ,types and measurement	20
3	<b>Open Economy Models</b>  Short-run open economy models; Mundell-Fleming model; exchange rate determination; purchasing power parity; asset market approach; Dornbusch's overshooting model; monetary approach to balance of payments; international financial markets	20
	<b>TOTAL</b>	60

### **Suggested Readings:**

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11<sup>th</sup> edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7<sup>th</sup> edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5<sup>th</sup> edition, 2009.
4. Steven M. Sheffrin, *Rational Expectations*, Cambridge University Press, 2<sup>nd</sup> edition, 1996.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7<sup>th</sup> edition, 2011.
6. Errol D'Souza, *Macroeconomics*, Pearson Education, 2009
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9<sup>th</sup> edition, 2012.

## CC7 : Statistical Methods for Economics

### Course Outcomes

**After the completion of the course, the student will be able to:**

- CO1:** Learn the Basic Concept of statistics and its application
- CO2:** Understand Bay's Theorem, Normal Distribution, Poisson Distribution and Credential
- CO3:** Understand Elementary Probability Theory including Probability Distribution
- CO4:** Apply the methods of calculating covariance and also the concept of correlation coefficient and regression analyses

CC7 : Statistical Methods for Economics (Theory: 6 credits)		
Unit	Topics to be covered	No. of Lectures
1	<b>Module 1: Basic Statistics</b> Measures of Central Tendency: Mean, Median Mode, Geometric Mean, Harmonic Mean; Measures of Dispersion: Mean Deviation, Standard Deviation; Moments, Skewness, Kurtosis; Bivariate Frequency Distribution: Simple Correlation and Linear Regression Analysis	25
2	<b>Module 2: Index Number</b> Concept of Index Number, Laspeyer's, Paasche's and Fisher's Ideal Index Number, Tests for Ideal Index Number, Problems in Construction of Index Number, Splicing, Applications: Cost of living index, deflation	10
3	<b>Module 3: Probability Theory and Jointly Distributed Random Variable</b> Sample spaces and events; probability axioms and properties; Concept of random variable, Probability Distributions: Binomial, Poisson and Normal Distribution-properties, mean and variance; Density function of Bivariate normal distribution and obtaining means, variances, and correlation coefficients	15
4	<b>Module 5: Sampling and Estimation</b> Concept of Sampling, Methods of Sampling, Principal steps in a sample survey, Concept of Estimation, Properties of estimators, Point and Interval Estimators	10
	<b>TOTAL</b>	60

### **Suggested Readings :**

1. Jay L. Devore, Probability and Statistics for Engineers, Cengage Learning, 2010.
2. John E. Freund, Mathematical Statistics, Prentice Hall, 1992.
3. Gupta S.P, Statistical Methods, S.Chand & Sons, New Delhi.
4. Richard J. Larsen and Morris L. Marx, An Introduction to Mathematical Statistics 11 and its Applications, Prentice Hall, 2011.
5. William G. Cochran, Sampling Techniques, John Wiley, 2007

## **SEMESTER – IV**

### **CC8 : INTERMEDIATE MICROECONOMICS – II**

#### **Course Outcomes**

**After the completion of the course, the student will be able to:**

- CO1:** Differentiate between Partial and General Equilibrium
- CO2:** Analyse the behavior patterns of different economic agents and market situations
- CO3:** Understand Imperfect Competition and Game Theory
- CO4:** Learn about Externalities and Market Failure

<b>CC8 : INTERMEDIATE MICROECONOMICS – II</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Imperfect Markets</b>  Imperfect markets:common features,price and output determination in monopolistic competition,concept of excess capacity,non price competition:selling cost and advertising, cost plus(mark up )pricing theory,oligopoly:,various approaches to price and output determination, ,classical models of oligopoly: duopoly cornout model,collusive oligopoly: cartel and price leadership, basic idea of kinked demand curve	20
2	<b>General Equilibrium, Efficiency and Welfare</b>  Equilibrium and efficiency under pure exchange and production; overall efficiency and welfare economics,perfect market as efficient market	10
3	<b>Market Failure</b>  Concept and causes of market failure,correction of market failure, concept and conditions of pareto optimality,perfect competition and pareto optimality,market failure and market imperfections,market failure vs government failure,Externalities in production and consumption,coase theorem, public goods, semi public goods, private goods, merit and demerit goods , markets with asymmetric information.	15
4	<b>Distribution theory( Pricing of Factors)</b>  Concepts of factor productivity, Marginal Revenue Product (MRP) and Value of Marginal Product (VMP), pricing of factors in perfect and imperfect market,Marginal productivity theory of distribution, Eulers theorem and product exhaustion problem,wicksteed'solution,technological progress and factor shares in income,some major theories of distribution: ricardian theory of rent,modern concept of rent,quasi rent,classical and Keynesian theory of interest, innovation theory of profit,knight's theory of profit,monopoly theory of profit.	15
	<b>TOTAL</b>	60

**Suggested Readings :**

1. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8<sup>th</sup> edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
2. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.
3. B. Douglas Bernheim and Michael D. Whinston, *Microeconomics*, Tata McGraw- Hill (India), 2009.

**CC9 : INTERMEDIATE MACROECONOMICS – II****Course Outcomes**

**After the completion of the course, the student will have to:**

**CO1:** Analyze the long-run dynamic issues like growth and technical progress

**CO2:** Describe micro-foundations of the various aggregates

**CO3:** Explain and compare Monetary and Fiscal Policies

**CO4:** Learn about Classical , Neo- Classical and Keynesian School of Macro Economic Thought

<b>CC9 : INTERMEDIATE MACROECONOMICS – II</b> (Theory: 6 credits)		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Economic Growth</b> Basic concept of Economic growth and its measurement, classification of growth models,	10
2	<b>Microeconomic Foundations of Macroeconomics</b>  a. Consumption: the concept of consumption function, Keynesian theory of consumption, Keynesian consumption function; kuznet's consumption function, relative income theory of consumption.  b. Investment: Keynes theory of investment, determinants of business fixed investment; residential investment and inventory investment, autonomous and induced determinants of investment, marginal efficiency of capital, investment demand curve, concept of accelerator in investment	20
3	<b>Government and macroeconomy: Policy Options</b> Concept, objectives, and tools of fiscal and monetary policy, Their role in economic growth for developing economies, Discretionary and non discretionary fiscal policy, working of monetary policy, types of credit control: qualitative and quantitative government budget constraint, budget deficit , financing of budget deficit and government expenditure , fiscal deficit and economic growth	20
4	<b>Schools of Macroeconomic Thoughts</b>	10

	Some common tenets of Classical; Keynesian; New-Classical, New-Keynesian and Monetarist Schools of Macroeconomic Thoughts	
	<b>TOTAL</b>	60

**Suggested Readings :**

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11<sup>th</sup> edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7<sup>th</sup> edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5<sup>th</sup> edition, 2009.
4. Charles I. Jones, *Introduction to Economic Growth*, W.W. Norton & Company, 2<sup>nd</sup> edition, 2002.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7<sup>th</sup> edition, 2011.

## CC10 : INTERNATIONAL ECONOMICS

### Course Outcomes

**After the completion of the course, the student will be able to:**

- CO1:** Analyze the issues related to BoP, exchange rates and direction of trade.  
**CO2:** Describe micro-foundations of the various aggregates of International Economics  
**CO3:** Explain different International trade theories  
**CO4:** Learn about different International Institutions and their relevance for Indian Economy.

CC10 : INTERNATIONAL ECONOMICS (Theory: 6 credits)		
Unit	Topics to be covered	No. of Lectures
1	<b>Introduction</b>  Nature and scope of International Economics, trade surpluses and deficits, the economic basis of trade, terms of trade, Instruments of trade policy and their impact on international trade, trade barriers (quantitative and qualitative): tariffs, subsidies and quotas, free trade vs protection: case for free trade, case for protection.	15
2	<b>Theories of International Trade</b>  Absolute and Comparative advantage, opportunity cost theory, Ricardian, Specific- factors and Heckscher online models, Leontief's paradox, immiserising growth and the transfer problem.	10
3	<b>International Macroeconomic Policy</b>  Theories of Exchange rate determination, fixed vs flexible exchange rate, factors affecting exchange rate, impact of exchange rate on economy, market for foreign exchange, Review of National income and Balance of payment (BoP) accounting, components of BoP: current and capital account, Disequilibrium of BoP : causes and methods of correction ,Adjustment mechanisms, Internal and external balance	20

4	<b>International Institutions and issues:</b> WTO : objectives, principles and functions, preferential trading agreements, trade issues, trade policy and welfare with reference to developing economies, IMF ,Major trading blocs, World Bank, ADB	15
	<b>TOTAL</b>	60

**Suggested Readings :**

1. Paul Krugman, Maurice Obstfeld, and Marc Melitz, *International Economics: Theory and Policy*, Addison-Wesley (Pearson Education Indian Edition), 9<sup>th</sup> edition, 2012.
2. Dominick Salvatore, *International Economics: Trade and Finance*, John Wiley International Student Edition, 10<sup>th</sup> edition, 2011.

**SEMESTER – V**

**CC11 : Indian Economy – 1**

**Course Outcomes**

**After the completion of the course, the student will be able to:**

**CC1 :** Demonstrate the Paradigm shift in policy and economic indicators in the post independent India

**CC2:** Analyse the rapid changes taking place in India in terms of plan period, human development, Education and Health

**CC3:** Grasp the Concept of poverty and unemployment in Indian perspective

**CC4:** Analyse the composition volume and direction of foreign trade

<b>CC11 : Indian Economy – 1</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Dimensions of Economic Development</b> (a) Major features of the economy at independence. (b) The experience of growth & development during different plan periods. (c) Growth distribution and structural change with respect to gender and regional contrast (d) Sustainable development (e) Capital formation and technological development	20
2	<b>Issues in Indian Economic Policy:</b> (a) human resource development: education; health and malnutrition. (b) Population growth and Economic development, Demographic trends and issues; (c) Unemployment , Poverty and inequality. (d) Macro economic stabilization: Trade, Fiscal and Monetary policy issues. (e) Public finance in India: major issues (f) Infrastructure development in India	25
3	<b>India's foreign trade:</b> Volume, composition, direction, trend and EXIM policy assessment, india's balance of payment, globalisation and its impact on indian economy, WTO and India,	15
	<b>TOTAL</b>	60



### Suggested Readings :

1. Jean Dreze and Amartya Sen, 2013. *An Uncertain Glory: India and its Contradictions*, Princeton University Press.
2. Pulapre Balakrishnan, 2007, The Recovery of India: Economic Growth in the Nehru Era, *Economic and Political Weekly*, November.
3. Rakesh Mohan, 2008, -Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment, *Economic and Political Weekly*, May.
4. 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*.
5. Himanshu, 2010, -Towards New Poverty Lines for India, *Economic and Political Weekly*, January.
6. Jean Dreze and Angus Deaton, 2009, -Food and Nutrition in India: Facts and Interpretations, *Economic and Political Weekly*, February.
7. Himanshu. 2011, -Employment Trends in India: A Re-examination, *Economic and Political Weekly*, September.
8. Rama Baru et al, 2010, -Inequities in Access to Health Services in India: Caste, Class and Region, *Economic and Political Weekly*, September.
9. Geeta G. Kingdon, 2007, -The Progress of School Education in India, *Oxford Review of Economic Policy*.
10. J.B.G. Tilak, 2007, -Post Elementary Education, Poverty and Development in India, *International Journal of Educational Development*.
11. T. Dyson, 2008, -India's Demographic Transition and its Consequences for Development in Uma Kapila, editor, *Indian Economy Since Independence*, 19<sup>th</sup> edition, Academic Foundation.
12. 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.
13. Reetika Khera, 2011, -India's Public Distribution System: Utilisation and Impact *Journal of Development Studies*.
14. Aniruddha Krishna and Devendra Bajpai, 2011, -Lineal Spread and Radial Dissipation: Experiencing Growth in Rural India, 1992-2005, *Economic and Political Weekly*, September.
15. Kaushik Basu and A. Maertens, eds, 2013, *Oxford Companion to Economics*, Oxford University Press.

## CC12 : Development Economics

### Course Outcomes

**After the completion of the course, the student will be able to:**

- CO1:** Understand the different concepts of development and evaluate the gross national growth experience.
- CO2:** Analyze the connection between growth and inequality and identify the role of state in economic development
- CO3:** Learn about the concept of poverty and its measurement and the connection between inequality and poverty
- CO4:** Understand development in global perspective.

CC12 : Development Economics (Theory: 6 credits)		
Unit	Topics to be covered	No. of Lectures
1	<b>Growth and Development:</b> Concept of Economic Growth, Economic Development, Economic Progress and Economic Welfare Historical experience of development (Stages of Growth; late industrialization; structural analysis) Poverty and inequality (conceptual issues and measurement; capabilities and entitlements, policies for poverty reduction) State and the market (market failure; government failure; conflict versus complementarity)	20
2	<b>Resources</b> Capital and technical progress (role of capital, capital output ratio; resource allocation; level and pattern of capital formation; pattern of technical progress; technology and unemployment; obsolescence, choice of techniques) Labour and employment issue (population growth; demographic transition; human resource development, surplus labour, open and disguised unemployment, informal sector; rural-urban migration). The Environment and Sustainable development; Non-Renewable resources	15
3	<b>Globlisation and Development:</b> Trade policy debate (export promotion and import substitution, WTO- structure and functions; WTO and LDCs) Foreign Capital (role and limitations; MNCs; Third World debt crisis; private foreign investment, IMF and World Bank)	20
4	<b>Inclusive Growth-</b> financial Inclusion	5
	<b>TOTAL</b>	60

### **Suggested Readings :**

1. Michael P. Todaro, Economic Development, International Student (Sixth) Edition, Addition -Wesley
2. Debraj Ray, Development Economics, OUP
3. Gerald M. Meir, Leading Issues in Economic Development, Sixth Edition, OUP
4. A.P. Thirlwall, Economics of Development, Palgrave Macmillan, 9<sup>th</sup> Edition.
5. M.L.Taneja& R.M. Myer, Economics of Development &Planning, Vishal Publishing Co. Jalandhar-Delhi.

## **SEMESTER – VI**

### **CC13 : Indian Economy – 2**

#### **Course Outcomes**

**After the completion of the course, the student will be able to:**

**CO1:** Examine sector-specific policies and their impact in shaping trends in key economic indicators in India.

**CO2:** Evaluate the Indian Empirical evidence

**CO3:** Analyze the rapid Economic changes taking place in the economy

**CO4:** Learn about the role of agriculture and industry in Economic development and their performance in Indian perspective.

<b>CC13 : Indian Economy – 2</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Indian Agriculture:</b> Importance of Agriculture in Indian economy, Problems in Indian Agriculture and their possible solutions, Efforts by Government for upliftment of Indian Agriculture, Trends in Agricultural growth and Productivity; Land Reforms; Green and Rainbow Revolution; Agricultural Marketing; Agricultural Price Policy; Food Security in India, status , prospect and problem of food processing in India	25
2	<b>Indian Industry and Services</b> (a) Importance of small scale industries in India, problems, remedies, industrial sickness in India, some issues related to private sector different industrial policies, labour relations and social security, (b) Service, growth and present state of IT, hospitality and finance sector in India,	15
3	<b>Bihar Economy:</b> Agricultural performance: major challenges and causes of backwardness in Agriculture; Globalisation and Bihar's Agriculture; Industrial backwardness- Policies; Service sector; Sources of Growth; Trade, Transport, ; Tourism, Information Technology, Migration- Dimension & Impact; Human Resource Development- Emerging Issues, Policies for unemployment.	20
	<b>TOTAL</b>	60

#### **Suggested Readings :**

1. 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.
2. 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.
3. Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, -Agricultural Growth in India Since 1991, *RBI DEAP Study no. 27*.
4. Kunal Sen, 2010, -Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, *The Rise of Asia*, Routledge.

5. 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.
6. Dipak Mazumdar and Sandeep Sarkar, 2009, -The Employment Problem in India and the Phenomenon of the \_Missing Middle, *Indian Journal of Labour Economics*.
7. J. Dennis Rajakumar, 2011, -Size and Growth of Private Corporate Sector in Indian Manufacturing, *Economic and Political Weekly*, April.

## CC14 : PUBLIC ECONOMICS

### Course Outcomes

**After the completion of the course, the student will be able to:**

**CC1 :** Understand the importance of Public finance

**CC2:** To understand the implications of fiscal policy

**CC3:** To analyse the trends and composition of public expenditure in India

**CC4:** To understand the importance of Externalities.

<b>CC14 : PUBLIC ECONOMICS</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>1. Public Economic Theory</b> <ol style="list-style-type: none"> <li>a. Nature and Scope of Public Finance</li> <li>b. Fiscal Functions: an Overview, Principle of Maximum Social Advantage</li> <li>c. Public Goods: Meaning, Characteristics, Distinction between Pure Public Good and Private Good, Merit goods, problem of public good: The free rider problem and its solution.</li> <li>d. Externalities: the problem and its solutions, taxes versus regulation, property rights, the Coase theorem, Market failure: causes and remedies, Pareto efficiency</li> <li>e. Taxation: its economic effects, dead weight loss and distortion, tax incidence, optimal taxation, efficiency and equity considerations</li> </ol>	30
2	<b>2. Indian Public Finances</b> <ol style="list-style-type: none"> <li>a. The Indian Tax System: structure and reforms</li> <li>b. Public Expenditure: meaning, its classification, Pattern and growth of Public Expenditure in India.</li> <li>c. Concept Types and components of Budget, various types of Deficits and its trend in India, Public Debt and subsidies in Indian Economy</li> <li>d. Objective and importance of fiscal policy, Fiscal Federalism in India</li> </ol>	30
	<b>TOTAL</b>	60

### **Suggested Readings :**

1. J. Hindriks, G. Myles: *Intermediate Public Economics*, MIT Press, 2006.
2. H. Rosen, T. Gayer: *Public Finance*, 9<sup>th</sup> edition, McGraw-Hill/Irwin, 2009.

3. Joseph E. Stiglitz, *Economics of the Public Sector*, W.W. Norton & Company, 3<sup>rd</sup> edition, 2000
4. R.A. Musgrave and P.B. Musgrave, *Public Finance in Theory & Practice*, McGraw Hill Publications, 5<sup>th</sup> edition, 1989
5. Harvey Rosen, *Public Finance*, McGraw Hill Publications, 7<sup>th</sup> edition, 2005.
6. A. Ghosh and C. Ghosh: *Public Finance*, PHI Learning, 2014.
7. Shankar Acharya, 2005 – Thirty Years of Tax Reform in India, *Economic and Political Weekly*, May 14-20.
8. Report of the 14<sup>th</sup> Finance Commission, 2015-20.
9. *Economic Survey*, Government of India (Latest).
10. *State Finances: A Study of Budgets*, Reserve Bank of India (Latest).

## **GE1: Introductory Microeconomics**

### **Course Outcomes**

**After the completion of the course, the student will be able to:**

- CO1:** Understand the basic concepts of microeconomics  
**CO2:** Understand how markets work  
**CO3:** Understand the basic tools of analyzing microeconomic phenomenon  
**CO4:** Understand the various market structures.

<b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>1. Exploring the subject matter of Economics</b> Why study economics? Scope and method of economics; the economic problem: scarcity and choice; the question of what to produce, how to produce and how to distribute output; science of economics; the basic competitive model; prices, property rights and profits; incentives and information; rationing; opportunity sets; economic systems; reading and working with graphs.	10
2	<b>Supply and Demand: How Markets Work, Markets and Welfare</b> Markets and competition; determinants of individual demand/supply; demand/supply schedule and demand/supply curve; market versus individual demand/supply; shifts in the demand/supply curve, demand and supply together; how prices allocate resources; elasticity and its application; controls on prices; taxes and the costs of taxation; consumer surplus; producer surplus and the efficiency of the markets.	10
3	<b>The Households</b> The consumption decision - budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences (representing preferences with indifference curves); properties of indifference curves; consumer's optimum choice; income and substitution effects; labour supply and savings decision - choice between leisure and consumption.	10
4	<b>The Firm and Perfect Market Structure</b>	10

	Behaviour of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run.	
5	<b>Imperfect Market Structure</b> Monopoly and anti-trust policy; government policies towards competition; imperfect competition.	10
6.	<b>Input Markets</b> <b>Labour and land markets</b> - 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; and labour markets and public policy	10
	<b>TOTAL</b>	60

#### Suggested Readings :

1. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8<sup>th</sup> Edition, 2007.
2. N. Gregory Mankiw, *Economics: Principles and Applications*, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4<sup>th</sup> edition, 2007.
3. Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4<sup>th</sup> Edition, 2007.

## GE2 : Introductory Macroeconomics

### Course Outcomes

After the completion of the course, the student will be able to:

**CO1:** Differentiate between various concepts of GDP accounting

**CO2:** Understand the various concepts of Money

**CO3:** Analyse the impacts of inflation

**CO4:** learn the working of closed economy in short run.

GE2 : Introductory Macroeconomics (Theory: 6 credits)		
Unit	Topics to be covered	No. of Lectures
1	<b>Introduction to Macroeconomics and National Income Accounting</b> Basic issues studied in macroeconomics; measurement of gross domestic product; income, expenditure and the circular flow; real versus nominal GDP; price indices; national income accounting for an open economy; balance of payments: current and capital accounts.	15
2	<b>Money</b> Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy.	15
3	<b>Inflation</b> Inflation and its social costs; hyperinflation.	15

4	<b>The Closed Economy in the Short Run</b> Classical and Keynesian systems; simple Keynesian model of income determination; IS-LM model; fiscal and monetary multipliers.	15
	<b>TOTAL</b>	60

**Suggested Readings :**

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11<sup>th</sup> edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7<sup>th</sup> edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5<sup>th</sup> edition, 2009.
4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2<sup>nd</sup> edition, 2005.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7<sup>th</sup> edition, 2011.
6. Errol D'Souza, *Macroeconomics*, Pearson Education, 2009.
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9<sup>th</sup> edition, 2012.

## **GE3 : Indian Economy-I**

### **Course Outcomes**

**After the completion of the course, the student will be able to:**

**CO1 :** Demonstrate the Paradigm shift in policy and economic indicators in the post independent India

**CO2:** Analyse the rapid changes taking place in India in terms of plan period, human development, Education and Health

**CO3:** Grasp the Concept of poverty and unemployment in Indian perspective

**CO4:** Analyse the composition volume and direction of foreign trade

<b>GE3 : Indian Economy-I</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Economic Development since Independence</b> Major features of the economy at independence; growth and development under different policy regimes—goals, constraints, institutions and policy framework; an assessment of performance—sustainability and regional contrasts; structural change, savings and investment.	15
2	<b>Population and Human Development</b> Demographic trends and issues; education; health and malnutrition.	15
3	<b>Growth and Distribution</b> Trends and policies in poverty; inequality and unemployment.	15
4	<b>International comparison:</b> Britain, USA, Germany, Japan, USSR, China	15
	<b>TOTAL</b>	60

***Suggested Readings :***

1. Jean Dreze and Amartya Sen, 2013. *An Uncertain Glory: India and its Contradictions*, Princeton University Press.
2. Pulapre Balakrishnan, 2007, *The Recovery of India: Economic Growth in the Nehru Era*, Economic and Political Weekly, November.
3. Rakesh Mohan, 2008, *–Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment*, Economic and Political Weekly, May.
4. 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*.
5. Himanshu, 2010, *–Towards New Poverty Lines for India*, Economic and Political Weekly, January.
6. Jean Dreze and Angus Deaton, 2009, *–Food and Nutrition in India: Facts and Interpretations*, Economic and Political Weekly, February.
7. Himanshu, 2011, *–Employment Trends in India: A Re-examination*, Economic and Political Weekly, September.
8. Rama Baru et al, 2010, *–Inequities in Access to Health Services in India: Caste, Class and Region*, Economic and Political Weekly, September.
9. Geeta G. Kingdon, 2007, *–The Progress of School Education in India*, Oxford Review of Economic Policy.
10. J.B.G. Tilak, 2007, *–Post Elementary Education, Poverty and Development in India*, International Journal of Educational Development.
11. T. Dyson, 2008, *–India’s Demographic Transition and its Consequences for Development* in Uma Kapila, editor, *Indian Economy Since Independence*, 19<sup>th</sup> edition, Academic Foundation.
12. Kaushik Basu, 2009, *–China and India: Idiosyncratic Paths to High Growth*, Economic and Political Weekly, September.
13. K. James, 2008, *–Glorifying Malthus: Current Debate on Demographic Dividend in India*, Economic and Political Weekly, June.
14. Reetika Khera, 2011, *–India’s Public Distribution System: Utilisation and Impact* Journal of Development Studies.
15. Aniruddha Krishna and Devendra Bajpai, 2011, *–Lineal Spread and Radial Dissipation: Experiencing Growth in Rural India, 1992-2005*, Economic and Political Weekly, September.
16. Kaushik Basu and A. Maertens, eds, 2013, *Oxford Companion to Economics*, Oxford University Press.



## **GE4 : Money and Banking**

### **Course Outcomes**

**After the completion of the course, the student will be able to:**

- CO1:** Analyse the different concepts of Money
- CO2:** understand the working of financial markets
- CO3:** differentiate between capital and money market
- CO4:** Explain the working of banking system

<b>GE4 : Money and Banking (Theory: credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Money</b> Concept, functions, measurement; theories of money supply determination	5
2	<b>Financial Institutions, Markets, Instruments and Financial Innovations</b> Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises. a. Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations.	10
3	<b>Interest Rates</b> Determination; sources of interest rate differentials; theories of term structure of interest rates; interest rates in India	12
4	<b>Banking System</b> a. Objectives and Functions. b. Indian banking system: Changing role and structure; banking sector reforms.	13
5.	<b>Central Banking and Monetary Policy</b> Functions, Objectives, targets, indicators and instruments of monetary control; monetary management in an open economy; current monetary policy of India.	20
	<b>TOTAL</b>	60

### ***Suggested Readings :***

1. F. S. Mishkin and S. G. Eakins, Financial Markets and Institutions, Pearson Education, 6<sup>th</sup> edition, 2009.
2. F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, Foundations of Financial Markets and Institutions, Pearson Education, 3<sup>rd</sup> edition, 2009.
3. L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5<sup>th</sup> edition, 2011.
4. M. Y. Khan, Indian Financial System, Tata McGraw Hill, 7<sup>th</sup> edition, 2011.
5. Various latest issues of R.B.I. Bulletins, Annual Reports, Reports on Currency and Finance and Reports of the Working Group, IMF Staff Papers.

## GE5 : Environmental Economics

### Course Outcomes

After the completion of the course, the student will be able to:

**C01:** Analyse key environmental issues and problems

**C02:** Understand the design and implementation of environmental policy

**C03:** Understand the basic concept of sustainable development

**C04:** Differentiate between the various environmental valuation method

<b>GE5 : Environmental Economics (Theory: credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Introduction</b> Key environmental issues and problems, economic way of thinking about these problems, basic concepts from economics; Pareto optimality and market failure in the presence of externalities; property rights and other approaches.	15
2	<b>The Design and Implementation of Environmental Policy</b> Overview, Pigouvian taxes and effluent fees, tradable permits, implementation of environmental policies in India and international experience; transboundary environmental problems; economics of climate change.	15
3	<b>Environmental Valuation Methods and Applications</b> Valuation of non-market goods and services--theory and practice; measurement methods; cost-benefit analysis of environmental policies and regulations.	15
4	<b>Sustainable Development</b> Concepts; measurement; perspectives from Indian experience	15
	<b>TOTAL</b>	60

### **Suggested Readings :**

- 1 Roger Perman, Yue Ma, Michael Common, David Maddison and James McGilvray, "Natural Resource and Environmental Economics", Pearson Education/Addison Wesley, 4<sup>th</sup> edition, 2011.
2. Charles Kolstad, "Intermediate Environmental Economics", Oxford University Press, 2<sup>nd</sup> edition, 2010.
3. Robert N. Stavins (ed.), "Economics of the Environment: Selected Readings", W.W. Norton, 6<sup>th</sup> edition, 2012.
4. Robert Solow, "An Almost Practical Step toward Sustainability," Resources for the Future 40th anniversary lecture, 1992.
5. Kenneth Arrow et al., "Are We Consuming Too Much?" Journal of Economic Perspectives, 18(3): 147-172, 2004.
6. IPCC (Intergovernmental Panel on Climate Change), Fifth Assessment Report (forthcoming 2014).

## GE6 : Indian Economy-II

### Course Outcomes

After the completion of the course, the student will be able to:

**CO1:** Examine sector-specific policies and their impact in shaping trends in key economic indicators in India.

**CO2:** Evaluate the Indian Empirical evidence

**CO3:** Analyze the rapid Economic changes taking place in the economy

**CO4:** Learn about the role of agriculture and industry in Economic development and their performance in Indian perspective.

<b>GE6 : Indian Economy-II</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Macroeconomic Policies and Their Impact</b> Fiscal Policy; trade and investment policy; financial and monetary policies; labour regulation	15
2	<b>Policies and Performance in Agriculture</b> Growth; productivity; agrarian structure and technology; capital formation; trade; pricing and procurement.	15
3	<b>Policies and Performance in Industry</b> Growth; productivity; diversification; small scale industries; public sector; competition policy; foreign investment.	15
4.	<b>Trends and performances in Service Sector</b>	15
	<b>TOTAL</b>	60

### **Suggested Readings :**

1. 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.
2. 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.
3. Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, -Agricultural Growth in India Since 1991, RBI DEAP Study no. 27.
4. Kunal Sen, 2010, -Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, The Rise of Asia, Routledge.
5. 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.
6. Dipak Mazumdar and Sandeep Sarkar, 2009, -The Employment Problem in India and the Phenomenon of the Missing Middle, Indian Journal of Labour Economics.

## GE7 : Economic History of India (1857-1947)

### Course Outcomes

After the completion of the course, the student will be able to:

- C01:** Understand the Background of Colonial India
- C02:** Gauge the macro trends of various economic parameters
- C03:** Understand the Agrarian structure of Indian Economy
- C04:** Learn about the infrastructure of Indian economy

GE7 : Economic History of India (1857-1947) (Theory: 6 credits)		
Unit	Topics to be covered	No. of Lectures
1	<b>Introduction: Colonial India: Background and Introduction</b> Overview of colonial economy.	5
2	<b>Macro Trends</b> National Income; population; occupational structure.	10
3	<b>Agriculture</b> Agrarian structure and land relations; agricultural markets and institutions – credit, commerce and technology; trends in performance and productivity; famines.	15
4.	<b>Railways and Industry</b> Railways; the de-industrialisation debate; evolution of entrepreneurial and industrial structure; nature of industrialisation in the interwar period; constraints to industrial breakthrough; labor relations	15
5.	<b>Economy and State in the Imperial Context</b> The imperial priorities and the Indian economy; drain of wealth; international trade, capital flows and the colonial economy – changes and continuities; government and fiscal policy.	15
	<b>TOTAL</b>	60

### Suggested Readings :

1. Lakshmi Subramanian, “History of India 1707-1857”, Orient Blackswan, 2010, Chapter 4.
2. Sumit Guha, 1991, ‘Mortality decline in early 20<sup>th</sup> century India’, Indian Economic and Social History Review (IESHR), pp 371-74 and 385-87.
3. Tirthankar Roy, The Economic History of India 1857-1947, Oxford University Press, 3rd edition, 2011.
4. J. Krishnamurty, Occupational Structure, Dharma Kumar (editor), The Cambridge Economic History of India, Vol. II, (henceforth referred to as CEHI), 2005, Chapter 6.
5. Irfan Habib, Indian Economy 1858-1914, A People’s History of India, Vol. 28, Tulika, 2006.
6. Ira Klein, 1984, ‘When Rains Fail: Famine relief and mortality in British India’, IESHR 21.
7. Jean Dreze, Famine Prevention in India in Dreze and Sen (eds.) Political Economy of Hunger,

- WIDER Studies in Development Economics, 1990, pp.13- 35.
8. John Hurd, Railways, CEHI, Chapter 8, pp.737-761.
  9. Rajat Ray (ed.), Entrepreneurship and Industry in India, 1994.
  10. AK Bagchi, -Deindustrialization in India in the nineteenth century: Some theoretical implications, Journal of Development Studies, 1976.
  11. MD Morris, Emergence of an Industrial Labour Force in India, OUP1965, Chapter 11, Summary and Conclusions.
  12. K.N. Chaudhuri, Foreign Trade and Balance of Payments, CEHI, Chapter 10.
  13. B.R. Tomlison, 1975, India and the British Empire 1880-1935, IESHR, Vol.XII.
  14. Dharma Kumar, The Fiscal System, CEHI, Chapter 12.
  15. Basudev Chatterjee, Trade, Tariffs and Empire, OUP 1992, Epilogue.

## **GE8 : Public Finance**

### **Course Outcomes**

**After the completion of the course, the student will be able to:**

- CC1 :** Learn the concept of Public finance  
**CC2:** Understand the implications of fiscal policy  
**CC3:** Analyse the trends and composition of public expenditure in India  
**CC4:** Visualize the importance of Externalities.

<b>GE8 : Public Finance (Theory: credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Theory</b> <ol style="list-style-type: none"> <li>1. Overview of Fiscal Functions, Tools of Normative Analysis, Pareto Efficiency, Equity and the Social Welfare.</li> <li>2. Market Failure, Public Good and Externalities.</li> <li>3. Elementary Theories of Product and Factor Taxation (Excess Burden and Incidence).</li> </ol>	30
2	<b>Issues from Indian Public Finance</b> <ol style="list-style-type: none"> <li>1. Working of Monetary and Fiscal Policies.</li> <li>2. Current Issues of India's Tax System.</li> <li>3. Analysis of Budget and Deficits</li> <li>4. Fiscal Federalism in India</li> <li>5. State and Local Finances.</li> </ol>	30
	<b>TOTAL</b>	60

### **Suggested Readings :**

1. Musgrave, R.A. and P.B. Musgrave, Public Finance in Theory and Practice, Mc-Graw, Hill, 1989.
2. Mahesh Purohit , "Value Added Tax: Experience of India and Other Countries", Gayatri Publications, 2007.

3. Kaushik Basu, and A. Maertens (ed.), The Oxford Companion to Economics in India, Oxford University Press, 2007.
4. M.M Sury, Government Budgeting in India, Commonwealth Publishers,.
5. Shankar Acharya, "Thirty years of tax reform" in India, Economic and Political Weekly, May 2005.
6. Government of India, Report of the 13<sup>th</sup> Finance Commission.
7. Economic Survey, Government of India (latest).
8. State Finances: A Study of Budgets, Reserve Bank of India (latest).
9. Irfan Habib, Indian Economy 1858-1914, A People's History of India, Vol.28, Tulika, 2006.
10. Ira Klein, 1984, -When Rains Fail: Famine relief and mortality in British India, IESHR 21.
11. Jean Dreze, Famine Prevention in India in Dreze and Sen (eds.) Political Economy of Hunger, WIDER Studies in Development Economics, 1990, pp.13- 35.
12. John Hurd, Railways, CEHI, Chapter 8, pp.737-761.
13. Rajat Ray (ed.), Entrepreneurship and Industry in India, 1994.
14. AK Bagchi, -Deindustrialization in India in the nineteenth century: Some theoretical implications, Journal of Development Studies, 1976.
15. MD Morris, Emergence of an Industrial Labour Force in India, OUP 1965, Chapter 11, Summary and Conclusions.
16. K.N. Chaudhuri, Foreign Trade and Balance of Payments, CEHI, Chapter 10.
17. B.R. Tomlison, 1975, India and the British Empire 1880-1935, IESHR, Vol.XII.
18. Dharma Kumar, The Fiscal System, CEHI, Chapter 12.
19. Basudev Chatterjee, Trade, Tariffs and Empire, OUP 1992, Epilogue.

## **DSE1 : ECONOMICS OF HEALTH AND EDUCATION**

### **Course Outcomes**

**After the completion of the course, the student will be able to:**

- C01:** Understand the relevance of health and education in human development
- C02:** Analyse the microeconomic foundations of health and educational economics
- C03:** Evaluate the progress of health sector in the country
- C04:** Assess the problem of gender and caste based discrimination in India.

<b>DSE1 : ECONOMICS OF HEALTH AND EDUCATION</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Role of Health and Education in Human Development</b> Importance in poverty alleviation; health and education outcomes and their relationship with macroeconomic performance.	10
2	<b>Microeconomic Foundations of Health Economics</b> Demand for health; uncertainty and health insurance market; alternative insurance mechanisms; market failure and rationale for public intervention; equity and inequality.	10

3	<b>Evaluation of Health Programs</b> Costing, cost effectiveness and cost-benefit analysis; burden of disease.	10
4	<b>Health Sector in India: An Overview</b> Health outcomes; health systems; health financing.	10
5	<b>Education: Investment in Human Capital</b> Rate of return to education: private and social; quality of education; signaling or humancapital; theories of discrimination; gender and caste discrimination in India.	10
6	<b>Education Sector in India: An Overview</b> Literacy rates, school participation, school quality measures.	10
	<b>TOTAL</b>	60

**Suggested Readings :**

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

## **DSE2 : Economic History of India (1857-1947)**

### **Course Outcomes**

**After the completion of the course, the student will be able to:**

- C01:** Understand the Background of Colonial India  
**C02:** Gauge the macro trends of various economic parameters  
**C03:** Understand the Agrarian structure of Indian Economy  
**C04:** Learn about the infrastructure of Indian economy

<b>DSE2 : Economic History of India (1857-1947)</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of Lectures</b>
1	<b>Introduction: Colonial India: Background and Introduction</b> Overview of colonial economy.	10
2	<b>Macro Trends</b> National Income; population; occupational structure.	15
3	<b>Agriculture</b> Agrarian structure and land relations; agricultural	15

	markets and institutions – credit, commerce and technology; trends in performance and productivity; famines.	
4	<b>Railways and Industry</b> Railways; the de-industrialisation debate; evolution of entrepreneurial and industrial structure; nature of industrialisation in the interwar period; constraints to industrial breakthrough; labor relations.	10
5	<b>Economy and State in the Imperial Context</b> The imperial priorities and the Indian economy; drain of wealth; international trade, capital flows and the colonial economy – changes and continuities; government and fiscal policy.	10
	<b>TOTAL</b>	60

### Suggested Readings :

1. Lakshmi Subramanian, “*History of India 1707-1857*”, Orient Blackswan, 2010, Chapter 4.
2. Sumit Guha, 1991, Mortality decline in early 20<sup>th</sup> century India, *Indian Economic and Social History Review (IESHR)*, pp 371-74 and 385-87.
3. Tirthankar Roy, *The Economic History of India 1857-1947*, Oxford University Press, 3rd edition, 2011.
4. J. Krishnamurty, *Occupational Structure*, Dharma Kumar (editor), The Cambridge Economic History of India, Vol. II, (henceforth referred to as CEHI), 2005, Chapter 6.
5. Irfan Habib, *Indian Economy 1858-1914*, A People's History of India, Vol. 28, Tulika, 2006.

## DSE3 : Money And Financial Markets

### Course Outcomes

After the completion of the course, the student will be able to:

- C01:** Understand the basic concepts of money
- C02:** learn about the various components of financial system
- C03:** Know how the banks operate in the economy
- C04:** differentiate between money and capital market.

<b>DSE3 : Money And Financial Markets</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of hours</b>
1	<b>Money</b> Concept, functions, measurement; theories of money supply determination.	10
2	<b>Financial Institutions, Markets, Instruments and Financial Innovations</b> <ol style="list-style-type: none"> <li>a. Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises.</li> <li>b. Money and capital markets: organization, structure and</li> </ol>	15



	reforms in India; role of financial derivatives and other innovations.	
3	<b>Interest Rates</b> Determination; sources of interest rate differentials; theories of term structure of interest rates; interest rates in India.	10
4	<b>Banking System</b> a. Objective and functions. b. Indian banking system: Changing role and structure; banking sector reforms.	10
5	<b>Central Banking and Monetary Policy</b> Functions, objective; goals, targets, indicators and instruments of monetary control; monetary management in an open economy; current monetary policy of India.	15
	<b>TOTAL</b>	60

### Suggested Readings :

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

## DSE4 : Bihar Economy

### Course Outcomes

After the completion of the course, the student will be able to:

- CO1:** Understand the Background of underdevelopment of the state  
**CO2:** Analyze the various reasons behind the backwardness of the state in various sectors.  
**CO3:** Examine the trends of various economic parameters of the state.  
**CO4:** Suggest suitable measures for the overall development of Bihar

DSE4 : Bihar Economy (Theory: 6 credits)		
Unit	Topics to be covered	No. of hours
1	<b>Theoretical Perspectives</b> Political Economy of Bihar's underdevelopment, Development Strategy,	5

2	<b>Agriculture in Bihar</b> Agriculture Performance, Major Challenges in Agriculture; Recent Initiatives for Agricultural Development, Sources of Rural Credit. Irrigation, Flood Control and Water Resources Management. Land Reforms and Agrarian Unrest.	10
3	<b>Industry in Bihar:</b> Industrial Development; Industrial Backwardness; Industrial Sickness, Recent Industrial Policy Credit Deposit (C-D) Ratio in Bihar	10
4	<b>Service Sector and Infrastructural Development in Bihar</b> Importance of Services Sector in Bihar, Performance of some Major services in Bihar, Tourism in Bihar; Growth of Infrastructure in the State; Problems in Infrastructure development	5
5	<b>Human Resources Development</b> - Emerging Issues	3
6	<b>Poverty and Unemployment in Bihar</b> Nature, Cause and Eradication Programmes; Migration: Dimension and Impact Economic Reforms and Poverty alleviation Programmes.	15
7	<b>Public Finances</b> Revenues and Expenditure of the State Government; Public Debt; Financial Management ; GST	10
8	<b>Environmental Degradation:</b> Recent Initiatives to protect environment	2
	<b>TOTAL</b>	60

#### Suggested Readings :

1. Economic Survey, Government of Bihar
2. Bihar Statistical Handbook, Directorate of Statistics and Evaluation, Government of Bihar, Patna.
3. Bihar Through Figures, Directorate of Statistics and Evaluation, Government of Bihar, Patna.
4. Season and Crop Report, Directorate of Statistics and Evaluation, Government of Bihar, Patna.
5. Selected Plan Statistics, Planning Board, Government of Bihar, Patna.
6. C.M.I.E. Reports on Bihar.
7. Bihar Development Report, Institute for Human Development, New Delhi and Planning Commission.
8. Bihar State Finance: Issues and Perspectives – Final Report of the Bihar State Finance Commission (Chairman - S.C. Jha), Government of Bihar, Patna, 2002.
9. Industrial Development Imperative for Bihar & Jharkhand – A Report, Report of Bihar Industries Commission (Chairman - J.J. Irani), 2000-2001.
10. Five-Year Plans of Bihar, Planning Board, Government of Bihar.
11. Prasad, Pradhan H., The Tragedy of Bihar, Manak Publications Pvt. Ltd., New Delhi.
12. Verma, P.C., Bihar Ki Arthavyavastha, TUPP, Patna, 2004.

## DSE5 : Agricultural Economics

### Course Outcomes

After the completion of the course, the student will be able to:

- CO1:** Understand the scope and relevance of Agricultural Economics
- CO2:** Comprehend various concepts of Agricultural Economics
- CO3:** Assess the current situation of Agricultural Economy in India
- CO4:** Learn various tools and techniques of Agricultural Economic analysis

<b>DSE5 : Agricultural Economics</b> <b>(Theory: 6 credits)</b>		
<b>Unit</b>	<b>Topics to be covered</b>	<b>No. of hours</b>
1	Definition, Nature & scope of Agricultural and Rural Economics, Role of Agriculture in Economic Development, Agricultural Growth in India, Interdependence of Agriculture and Industry, Problems of Indian Agriculture, Initiatives and strategies for Agricultural Development, Issue of Food Security in India, Diversification of Agriculture, Principles of Sustainable farming, Green Revolution, Rainbow Revolution, Secondary Agriculture.	10
2	Farm Organisation: Forms and Types of Farming; subsistence farming, commercial farming, joint farming, collective farming, cooperative farming, Mixed Farming, Multiple Cropping, Organic Farming, Agro forestry	10
3	Agriculture price policy in India, Food Procurement System in India	7
4	Agricultural Marketing in India: Structure, Institutions, problems, possible remedies and Efforts undertaken.	5
5	Economics of Agricultural Production- Law of Diminishing Marginal returns, Returns to scale, Economic Decisions in Farm Management.	10
6	Land Reforms: Background, Objectives, Need, And Implementation.	8
7	Rural Credit in India: Need & Sources, Problems and prospects, co-operative credit societies, Cooperative banks, commercial banks, regional rural banks, NABARD, Microfinance and SHG, Kisan Credit Card.	10
	<b>TOTAL</b>	<b>60</b>

### **Suggested Readings :**

1. Henry Charles Taylor
2. S Subba Reddy
3. T .V. Neelkanta Sastry
4. I. Bhavani Devi
- 5.. R.K Lekhi and Joginder Singh
6. R.G Desai
7. John B Penson, Jr
8. Oral Capps, Jr
9. C Parr Rosson
10. Richard T. Woodward

## DSE6 : Comparative Economic Development (1850-1950)

### Course Outcomes

After the completion of the course, the student will be able to:

**CO1:** Learn the Perspectives of comparative economic development

**CO2:** Compare the economies of major nations.

**CO3:** Analyse the relevance of industrial and agricultural sectors in various economies

**CO4:** Understand the development strategies employed in different countries.

DSE6 : Comparative Economic Development (1850-1950) (Theory: 6 credits)		
Unit	Topics to be covered	No. of hours
1	<b>Introduction and Perspectives on Comparative Economic Development</b>	10
2	<b>An Overview of Economic Development of the countries selected for case studies</b>	10
3	<b>Agriculture</b> Agrarian surplus and the role of the peasantry in economic development.	10
4	<b>Industry</b> The industrial revolution in Britain; Industrialization in late industrializes.	10
5	<b>The Factory System and Making of the Industrial Working Class</b> Division of labour, structure of industrial authority, organisation of work and industrial production, relationship between workers and managers.	10
6	<b>The Role of the State in Industrial and Developmental Transition</b>	10
	<b>TOTAL</b>	60

### **Suggested Readings :**

1. E.J. Hobsbawm, *World of Labour: Further studies in the history of labour*, London Weidenfeld & Nicholson, 1984.
2. E.J. Hobsbawm, *Industry and Empire: An Economic History of Britain since 1750*, Weidenfeld & Nicholson, 1968.
3. Peter Mathias, *The First Industrial Nation, An Economic History of Britain, 1700-1914*. 2<sup>nd</sup> edition Methuen, 1983.
4. T. Nakamura, *Economic Growth in Pre-War Japan*, Tr. by Robert A Feldman, Yale University Press, 1983.
5. Okochi, Karsh and Levine, *Workers and Employees in Japan, The Japanese Employment Relations System*, University of Tokyo, 1965.

## DSE7 : ENVIRONMENTAL ECONOMICS

### Course Outcomes

After the completion of the course, the student will be able to:

**C01:** Analyse key environmental issues and problems

**C02:** Understand the design and implementation of environmental policy

**C03:** Understand the basic concept of sustainable development

**C04:** Differentiate between the various environmental valuation method

DSE7 : ENVIRONMENTAL ECONOMICS (Theory: 6 credits)		
Unit	Topics to be covered	No. of hours
1	<b>Introduction</b> What is environmental economics; review of microeconomics and welfare economics.	10
2	<b>The Theory of Externalities</b> Pareto optimality and market failure in the presence of externalities; property rights and the Coase theorem.	10
3	<b>The Design and Implementation of Environmental Policy</b> Overview; Pigouvian taxes and effluent fees; tradable permits; choice between taxes and quotas under uncertainty; implementation of environmental policy.	10
4	<b>International Environmental Problems</b> Trans-boundary environmental problems; economics of climate change; trade and environment.	10
5	<b>Measuring the Benefits of Environmental Improvements</b> Non-Market values and measurement methods; risk assessment and perception.	10
6	<b>Sustainable Development</b> Concept; principles, measurement, issues	10
	<b>TOTAL</b>	60

### Suggested Readings :

1. Charles Kolstad, *Intermediate Environmental Economics*, Oxford University Press, 2<sup>nd</sup> edition, 2010.
2. Robert N. Stavins (ed.), *Economics of the Environment: Selected Readings*, W.W. Norton, 5<sup>th</sup> edition, 2005.
3. Roger Perman, Yue Ma, James McGilvray and Michael Common, *Natural Resource and Environmental Economics*, Pearson Education/Addison Wesley, 3<sup>rd</sup> edition, 2003.
4. Maureen L. Cropper and Wallace E. Oates, 1992, "Environmental Economics: A Survey," *Journal of Economic Literature*, Volume 30:675-740

## DSE8 : INTRODUCTORY ECONOMETRICS

### Course Outcomes

After the completion of the course, the student will be able to:

**C01:** understand nature and scope of econometrics

**C02:** learn the methodology of econometrics

**C03:** learn the tools and techniques of econometric analysis

**C04:** prepare for advanced econometric analysis and forecasting

DSE8 : INTRODUCTORY ECONOMETRICS (Theory: 6 credits)		
Unit	Topics to be covered	No. of hours
1	<b>Nature Scope and methodology of Econometrics</b>	20
2	<b>Statistical Concepts</b> a. Binomial distribution, Poisson distribution and Normal distribution b. Chi-square distribution, t- and F-distributions; Estimation of Parameters; c. Properties of Estimators; Testing of Hypotheses: Procedure of Hypothesis Testing; Type I and Type II Errors; Power of a Test	15
3	<b>Simple Linear Regression Model: Two Variables Case:</b> Sources of Random Disturbances, Assumptions of Linear Regression Model, Estimation of Simple Linear Regression Model by the Method of Ordinary Least Squares Properties of Ordinary Least Squares and Goodness of Fit.	20
4	<b>Violations of Classical Assumptions: Consequences, Detection and Remedies</b> a. Multicollinearity b. Heteroscedasticity c. Serial Correlation/ Auto Correlation.	20
	<b>TOTAL</b>	60

### **Suggested Readings :**

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