### Aims of Bachelors' Degree Program in Economics

The program equips students with the knowledge, skills and competence to the students for analyzing the economic growth, development and policies and also for providing proper solutions to the day-to-day life problems through rigorous brainstorming and projects. The program adopts a scientific approach towards understanding the basics of economics for applying and evaluating the contemporary economic theories to address the societal problems and also for inclusive and sustainable development.

### **Program Outcomes**

PO 1. Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PO 2. Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

PO 3. Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO 4. Effective Citizenship: Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO 5. Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO 6. Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

PO 7. Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.

### **Program Specific Outcomes**

PSO 1. Knowledge of Economic System: An ability to understand economic theories and functioning of basic microeconomic and macroeconomic systems.

PSO 2. Statistical and Mathematical Skills: Acquaint with collection, organization, tabulation and analysis of empirical data. Ability to use basic mathematical and statistical tools to solve real economic problems.

PSO 3. Econometric Applications: Acquaint with basic and applied econometric tools and methods used in economics. The aim of this course is to provide a foundation in applied econometric analysis and develop skills required for empirical research in economics. It also covers statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models.

PSO 4. Development Perspectives: Delineate the developmental policies designed for developed and developing economics. The course also acquaint with the measurement of development with the help of theories along with the conceptual issues of poverty and inequalities.

PSO 5. Environmental Strategy and Management: This course emphasises on environmental problems emerging from economic development. Economic principles are applied to valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments.

PSO 6. Perspectives on Indian Economy: Acquaint with basic issues of Indian economy and learn the basic concept of monetary analysis and financial marketing in Indian financial markets. This course reviews major trends in economic indicators and policy debates in India in the post-Independence period.

### Course Outcomes

### Semester- I

### Course Name: Microeconomic Theory - I Course Code: BSCHECOC101

Course Type: Core (Theory)	Cours	e Details:CC-	L-T-P	:5-1-0	
Credit: 6	Full Marks: 50	CA Practical	Marks Theoretical	ESE I Practical	Marks Theoretical
			10		40

#### **Course Learning Outcomes:**

#### (After the completion of the course the students will be able to)

1. Understand the concept of economics, the distinction between micro economics and macroeconomics, concept of demand and its relevance in a market economy.

2. Learn how the different decision-making units (consumers, firms), with limited resources at their disposal, will chose the best alternative among the available alternatives

3. Realize the operation of the markets, the distinction between real world market and the concept of market in economics. The ideas of perfect market, the nature and causes of market imperfection will help the students to judge the mechanisms of market economy and to take judicious decision.

#### Content/ Syllabus: Unit wise course content distribution

Unit -1: General Concept

Distinction between Microeconomics and Macroeconomics – concept of different Microeconomic units – commodity, consumer, firm, industry, market – concepts of equilibrium, - statics, dynamics, comparative statics and stability of equilibrium.

Unit-2: Theory of Demand

The Marshallian Approach: measurement of utility – derivation of demand curve – consumer's surplus.

Indifference curve approach: indifference curve and its properties, the pathological cases, the equilibrium of the consumer – price consumption curve and income consumption curve, - price effect, income effect and substitution effect, derivation of demand curve – Giffen's Paradox – market demand.

The Revealed Preferences approach – derivation of demand curve from Revealed Preferences approach.

Elasticities of demand – price, income and cross elasticities – relation between price elasticity of demand, price and marginal revenue – relation between price elasticity and total expenditure.

Unit -3: Theory of Production and Cost.

Production function: the neo-classical production function – relation between total, average and marginal productivities – law of variable proportions – the fixed coefficient production function.

Iso- quant and Iso-cost line, definition and properties, economic region of production, marginal rate of technical substitution, elasticity of substitution, equilibrium of the producer - constrained output maximization and constrained cost minimization, expansion path, returns to scale, homogeneous and homothetic production function, the Cobb Douglas production function.

Cost function: different concepts of costs, short run cost analysis and long run cost analysis – relation between the expansion path and cost function – total, average and marginal cost curves – long run cost curves as envelope of short run cost curves.

Unit -4: Theory of Perfect Competition

Perfect competition and pure competition—Short run and long run equilibrium of a competitive firm – Short run and long run supply curves—Long run equilibrium of the competitive industry – price determination in a competitive industry – existence, uniqueness and stability of equilibrium –long run supply curves of the industry- effects of external economies and diseconomies – effect of change in cost – effect of imposition of tax – effect of price control.

Unit -5: Theories of Imperfect Competition

Theory of monopoly: Characteristics- AR and MR curves under monopoly – Relation among AR, MR and Elasticity of demand – Equilibrium under monopoly – major features of monopoly- index of monopoly power – price discrimination – when possible? – when desirable? – Degree of price discrimination – equilibrium under price discrimination – Is price discrimination desirable? – Equilibrium under Multiple Plant monopoly – Monopsony - Equilibrium under bilateral monopoly

### **References/ Suggested Readings:**

Modern Microeconomics: A Koutsoyaniss, Macmillan Press Ltd. Hound mills. Intermediate Microeconomics: A Modern Approach. H.R. Varian, EWP, New Delhi Price Theory: Ryan and Pearce, Macmillan India Limited, New Delhi Microeconomic Theory: A Mathematical Approach, James M. Henderson and Richard E.Quandt, Tata McGraw-Hill Edition. Microeconomics: Pindyck, Rubinfeld and Mehta. Pearson (7th Edition) Microeconomic Theory: Gould and Lazer. A.I.T.B.S, Delhi.

# Semester- I Course Name: Macroeconomic Theory - I Course Code: BSCHECOC102

Course Type: Core (Theory)	Cour	se Details	:CC-2	L-T-P:5-1-	0	
			CA Marks		ESE Marks	
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

(After the completion of the course the students will be able to)

- 1. Be acquainted with the aggregative behavoiur of an economic system. The concept of national income, price level, level of employment will guide the learners to judge the situation of an economy in a better manner.
- 2. Understand the development of the macroeconomic thoughts from the last quarter of the eighteenth century to mid twentieth century, the Classical and the Keynesian theory of income and employment.
- 3. Know the impacts of great depression on the world economy and the development of different macro theories as a consequence of this event.

#### Content/ Syllabus: Unit wise course content distribution

Unit -1: Introduction

Scope and nature of Macro Economics with emphasis on macroeconomic problems and policies – Targets & Instruments of macroeconomic policy etc.

Unit-2: The National Income and Products Accounts

Definition, Concepts and Measurement of GNP, NNP, GDP, NDP, NI, DI – The flow of product method and the flow of expenditure method; Concept of GNP deflator.

Interrelation between measures of National Income in the absence and presence of

Governmental sector and International Transactions

The Accounting Identity of Saving and Investment

Problems of using National Income as a measure of Economic Welfare

Unit -3: The Simple Keynesian Model of Income Determination

Keynesian Consumption Function and its properties – Factors affecting Consumption Expenditure – Saving Function & its properties

Determination of National Income – nature of equilibrium – unemployment, full employment and inflation – stability of equilibrium

Comparative static analysis – the Multiplier analysis with and without government sector – Investment Multiplier, Government Expenditure Multiplier, Balanced Budget Multiplier; Limitations of the multiplier analysis. The Paradox of Thrift.

#### Unit -4: The Classical System

The Classical view of Macro Economics in respect of the determination of Employment, Output and Prices.

The classical quantity theory of money and its criticism; The Classical Theory of Rate of Interest - Loanable fund theory.

Say's Law and Walras' law - The Dichotomy between the real and monetary sectors Neutrality of money.

Unit -5: The Complete Keynesian Model

Commodity market equilibrium (IS) – Money market equilibrium (LM) – IS-LM equilibrium - the Aggregate Demand and Aggregate Supply.

Introduction of the Labour Market — the interaction between Commodity Market, Money Market and Labour Market – Determination of Equilibrium – Effects of changes in Money Supply and other factors – Comparison with the Classical system – Price Flexibility – Real Balance Effect and Full Employment.

### **References/ Suggested Readings:**

Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010 N. Gregory Mankiw. Macroeconomics, Worth Publishers, 7th edition, 2010. Macroeconomic Theory and Policy: William H. Branson, UBS Macroeconomics: Abel, Bernake and Croushore. Pearson (8th Edition) Macroeconomics: Theories and Policies.Richard T. Froyen Pearson (10th Edition) Macroeconomic Theory: Gardner Ackley,Macmillan.

# Semester II Course Name: Microeconomic Theory - II Course Code: BSCHECOC201

Course Type: Core (Theory)	Course Details:CC-3				L-T-P:5-1-	0
			CA Marks		ESE Marks	
Credit: 6	Full	Marks:	Practical	Theoretical	Practical	Theoretical

50	10	40

#### **Course Learning Outcomes:**

#### (After the completion of the course the students will be able to)

- 1. Demonstrate marginal productivity theory of distribution, theory of wages, identify different types of rent, illustrate different theories of interest and profits. CO2.
- 2. Understand how factor market works, identify the various determinants of firm's demand for factor services, bilateral monopoly, demonstrate monopsony in factor market and factor market equilibrium.
- 3. Understand how factor market works, illustrate basic tools in welfare economics, and illustrate the concept of social welfare functions and compensation principles.

#### Content/ Syllabus: Unit wise course content distribution

Unit 1: Imperfect Competition

Monopolistic competition: Short run and long run equilibrium – excess capacity.

Theory of Oligopoly :

Characteristics of oligopoly - non-collusive oligopoly models of Cournot and Stackelberg – collusive oligopoly – price leadership – market sharing model – price rigidity under oligopoly.

Unit 2: Theory of Factor Pricing

Demand for factors of production – Determinants of price elasticity of demand for a factor – marginal productivity theory and its limitations

Theory of wage - Choice between work and leisure – derivation of individual labour supply curve – total labour supply curve – demand for labour – determination of equilibrium in a competitive labour market- collective bargaining and wage rate.

Theory of rent - Transfer earning and economic rent - quasi rent - Rent and price

Theory of Interest- Real and Money Interest- Loanable Fund Theory and Liquidity Preference Theory of Interest

Theory of profit - Gross and net profit- elements of profit- risk and uncertainty theory, Innovation theory of profit.

### Unit 3: General Equilibrium and Economic Welfare

Partial and general equilibrium – a formal statement of general equilibrium approach - the concept of Pareto optimum – Pareto optimality in consumption – Pareto optimality in production – General Pareto optimality condition.

#### **References:**

Robert S. Pindyck, Daniel L. Rubinfeld, PremL.Mehta: Microeconomics, 7thEdn. Pearson								
Samuelson and Nordhaus	: Economics							
Koutsoyiannis	: Microeconomic Theory							
Ferguson and Gould	:Microeconomic Theory							
H. Varian	: Intermediate microeconomics							
Henderson and Quandt	: Microeconomic Theory							

# Semester II Course Name: Mathematical Economics I Course Code: BSCHECOC202

Course Type: Core (Theory)	Course Details:CC-4				L-T-P:5-1-	0
			CA Marks		ESE Marks	
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
	50			10		40

#### **Course Learning Outcomes:**

(After the completion of the course the students will be able to)

- 1. Demonstrate the role of quantitative techniques in the field of business/industry, illustrate different types of equations, solve equations and system of equations, understand the concept of sets, illustrate and apply basic set operations.
- 2. Explain the rules for calculating derivatives, uses and application in calculating interrelationship among total, marginal and average cost and revenue, calculate maxima, minima, elasticity, decide the optimal level of production for a firm.
- 3. Demonstrate the rules for calculating integration, describe the importance and application of integration in consumers' and producers' surpluses, total revenue and cost.
- 4. Understand the use of difference and differential equations to solve economic problems.

### Content/ Syllabus: Unit wise course content distribution

Unit 1: Some Basic Mathematical Concepts with Economic Illustrations

Role of Mathematics in Economics Analysis. Concepts of Variables, Constants and Parameters. The real-number system, A.P. and G.P.

Types of function – Straight Line, rectangular hyperbola, parabolic, circular, exponential and logarithmic and their geometrical representations, Slope of the Line, Inverse function, Homogeneous function, Homothetic function, Equations and identities, inequalities, Systems of Equations.

Unit 2: Calculus and its Applications in Economics

Differential Calculus: Concepts of first and second order derivatives, rules of derivativesaddition, subtraction, product and division, and derivatives of functions; Concepts of partial derivatives. Applications - Elasticities, utility-production-cost-revenue-profitfunctions.

Maxima and Minima: unconstrained optimization, necessary and sufficient conditions for local optima, notions of concavity and convexity of functions, points of inflexion. Constrained optimization total, marginal and average costs and revenues.

Integral Calculus: Rules of Integration, Methods of Integration, Integration by parts and Definite integrals - area under curves. Economic examples measures of consumer surplus, present discounted values calculation and elements of investment analysis.

Difference and Differential Equations: Nature, Solution of First Order Equations homogeneous and non-homogeneous. Economic examples – Cobweb and other simple Dynamic Models.

#### **Suggested Readings:**

Knut Sydsaeter and Peter J. Hammond: Mathematics for Economic Analysis

Carl Simon and Lawrence Blume: Mathematics for Economics, Norton (edition)

G. Archibald and R. Lipsey: An Introduction to Mathematical Treatment of Economics. AITBS

A. Henderson and R. Quandt – Microeconomic Theory, McGraw Hill, International Edition. Hal R. Varian- Intermediate Microeconomics: A Modern Approach, fourth edition, W. Norton.

W. H. Branson – Macro-economic Theory and Policy. AITBS.

Taro Yamane: Mathematics for Economists, Prentice Hall of India, New Delhi (1975).

BadalMukherji and V. Pandit – Mathematical Methods for Economic Analysis, Allied Publishers, Second edition.

# Semester III Course Name: Statistical Methods I Course Code: BSCHECOC301

Course Type: Core (Theory)	Course Details:CC-5				L-T-P:5-1-	0
		CA Marks		ESE Marks	5	
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
				10		40

#### **Course Learning Outcomes:**

#### (After the completion of the course the students will be able to)

1. Understand methods of data cpllection and classification of data.

- 2. To be able to represent data diagrammatically.
- 3. To understand and apply measures of central tendency, dispersion, moments and kurtosis to find descriptive statistics for different types of data.
- 4. Understand measures of inequality and examine the use of Lorenz Curve.
- 5. Understand Index numbers and their applications.
- 6. Explain concept of correlation, analyze and interpret covariance and correlation coefficient, illustrate ordinary least squares and use it to estimate regression coefficient.

#### Content/ Syllabus: Unit wise course content distribution

Unit 1: Tabular and Diagrammatic Presentation of Data

Statistical Data – classification and presentation – methods of collection of data – difference between variable and attributes – frequency distribution and its diagrammatic presentation – choice of class interval – diagrammatic representation of frequency distribution – frequency curve – cumulative frequency distribution (more than and less than) Ogive - (simple numerical exercise).

Unit 2: Measures of Central Tendency

Arithmetic mean, median and mode (for both grouped and ungrouped data) – comparison of mean, median and mode – geometric mean and harmonic mean (for both grouped and ungrouped data) – composite mean (average from combined data) – properties for all these measures-(simple numerical exercise).

Unit 3: Measures of Dispersion.

Absolute measures - Range, mean deviation and Standard deviation and Quartile

Deviation – Relative measures – curve of concentration - (simple numerical exercise)

Measurement of economic inequality: nature of distribution of income and wealth graduating from income distribution – Lorenz Curve representation of income distribution – Gini Coefficient and Lorenz Curve-(simple numerical exercise)

Moments and measures of skewness and Kurtosis: moments, skewness and kurtosis – definition – relationship between central and non-central moment – Sheppard's correction - (simple numerical exercise).

Unit 4: Correlation and Regression Analysis: Bivariate, Multiple and Partial

Scatter diagram – simple correlation coefficient and its properties, its calculation from grouped and ungrouped data, limitations of correlation coefficient. Simple regression analysis – properties of regression line – relationship between correlation coefficient and regression coefficient. Spearman's rank correlation coefficient (without tie) – Kendall's rank correlation coefficient- (simple numerical exercise).

Unit 5: Index Numbers

Purpose and uses of index number, problems of construction, different formulae for price and quantity index numbers, tests for index numbers, chain index, and cost of living index-(simple numerical exercise)

#### **References:**

Goon, Gupta and Dasgupta – Fundamental of Statistics, Vol. I & II Goon, Gupta and Dasgupta – Basic Statistics N. G. Das – Statistical Method (Part I & II) Yule and Kendall – An Introduction to the Theory of Statistics Gupta and Kapoor – Fundamental of Mathematical Statistics.

# Semester III

### Course Name: Macroeconomic Theory - II Course Code: BSCHECOC302

Course Type: Core (Theory)	Cour	se Details	:CC-6	L-T-P:5-1-	0	
			CA Marks		ESE Marks	5
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

1. Understand the Consumption Theories and empirical findings of different economists.

2. Examine the different motives for holding money and different concepts of Muney Supply. Understand the inventory theoretic approach.

3. Understand the Keynesian Theory of Investment.

4. Illustrate the meaning of inflation, deflation, stagflation and reflation, identify different kinds of inflation, causes and effects of inflation on different sectors of the economy, describe different measures to control inflation.

### Content/ Syllabus: Unit wise course content distribution

Unit 1: Consumption Function

Empirical findings regarding Consumption Function – Alternative Theories regarding its behaviour – Keynes, Smithies, Duesenberry, Friedman, Ando-Modigliani.

Unit 2: Money Market

Three motives of holding money – Transanction, Precautionary and Speculative demand for money

Keynsian liquidity preference theory – indeterminancy of rate of interest in the liquidity preference theory – the liquidity trap

The inventory theoretic approach to transanction demand for money –Baumol and Tobin

Supply of money – credit creation by commercial banks – money multiplier – interest sensitivity of money supply

Unit 3: The Investment Function

The Keynesian analysis of Investment – The Marginal Efficiency of Investment, and its relation with the amount of Investment – Shortcomings of Keynesian analysis  $\Box$  Net Present Value criterion and Marginal Efficiency criterion of Investment  $\Box$  The Fixed Accelerator Principle of Investment – its Implications and Limitations.

The Flexible Accelerator Principle of Investment – its Implications and Limitations, (Multiplier accelerator theory).

Unit 4: Theories of Inflation

The Quantity Theory approach to Inflation

Demand Pull Inflation and Inflationary Gap analysis; Its shortcomings

Concepts of Cost Push & Mark Up inflation

The Philips Curve and the trade-off between Inflation and Unemployment – short-run and long-run Philips Curve

Consequences of inflation – Measures to control Inflation.

#### References

Rowan, D.C – Output, Inflation & Growth Mankiew – Macroeconomics

Sikdar, S – Principles of Macroeconomics, OUP D'souza, Erol – Macroeconomics Andrew B. Abel, Ben S. Bernanke, Bean Croushore – Macroeconomics, 8thEdn. Pearson. Ackley (2nd ed.) – Macroeconomic Theory and Policy Branson – Macroeconomic Theory and Policy Dornbusch and Fisher: Macroeconomics Froyen - Macroeconomics Levacic – Macro Economics

### Semester III

### Course Name: Development Economics

Course Type: Core (Theory)	Cour	se Details	:CC-7	L-T-P:5-1-(	0	
			CA Marks		ESE Marks	
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
	50			10		40

### Course Code: BSCHECOC303

#### **Course Learning Outcomes:**

#### (After the completion of the course the students will be able to)

1. Discuss competing theories of economic development;

2. Demonstrate a deep analytical understanding of contemporary economic development issues;

3. Access and analyse economic growth and development data which are pertinent to contemporary economic development debates internationally;

4. Engage in critical thinking through the comparative assessment of competing economic development models and policy frameworks;

#### Content/ Syllabus: Unit wise course content distribution

Unit 1: Economic Development

Meaning of Development, different concepts of development –Sustainable development, Participatory development, Inclusive development, Human development, Growth andDevelopment – Broad Indicators of Economic Development – Per capita Income – PQLI– Basic needs approach – Human Development Index – Gender Development Index –Gender Empowerment Measure - Human Poverty Index.

Unit 2: Underdevelopment

Characteristics of underdevelopment - Obstacles to underdevelopment

Trap Models – Critical minimum effort thesis – Low level equilibrium trap – Process of cumulative causation

Unit 3: Theories of Economic Growth

Rostow's Stage Theory – Vicious circle of poverty and Balanced growth (Nurkse) – Unbalanced growth (Hirschman)

Unit 4: Labour Surplus Economy and Development Strategy

Concept of surplus labour – Surplus labour as potential saving – Economic development with unlimited supplies of labour (Lewis Model).

Capital intensive Vs Labour intensive technique – Choice of technique in a labour surplus economy.

#### **References:**

Thirlwall:	Growth and Development
Debraj Roy:	Development Economics
Meier (ed):	Leading Issues in Economic Development
K. Basu:	A Critique of Less Developed Economy
Debesh Bhattacharya:	Political Economy of Development
Pearce and Turner:	Economics of Natural Resources and the Environment

### Semester III

### Course Name: Data Analysis Course Code: BSCHECOSEC301

Course Type: SEC	Cour	se Details	: SEC-I	L-T-P:2-0-	0	
			CA Marks		ESE Marks	5
Credit: 2	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Apply correctly a variety of statistical techniques mainly descriptive statistics.
- 2. Understanding the presentation of data using different statistical methods.
- 3. Interpret computer output and use it to solve problems.
- 4. Understanding analysis of different types of data.

### Content/ Syllabus: Unit wise course content distribution

Unit 1: Presentation of Data

Introduction, methods of presentation of data, textual presentation of data, tabular presentation of data, diagrammatic representation of data.

Unit 2: Data Processing

Introduction to Data Processing – Steps of Data Processing – Problems associated with Data Processing

Unit 3: Analysis of Data

Various Types of Data Analysis (quantitative, qualitative; cross section, time series) – Introduction of Statistical Tools used in Data Analysis

#### References

Gary Koop – Analysis of Economic Data, John Wiley & Sons Ltd.
C R Kothari – Research Methodology: Methods and Techniques, New Age International.
B C Tandon – Research Methodology in Social Sciences, Chaitanya Publishing House. 4. D.
Bhattacharya and S. Roychowdhury – Statistics Theory and practice

# Semester IV Course Name: Statistical Method – II Course Code: BSCHECOC401

Course Type: Core (Theory)	Cour	se Details	: CC -8	L-T-P:5-1-	0	
			CA Marks		ESE Marks	5
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
				10		40

#### **Course Learning Outcomes:**

#### (After the completion of the course the students will be able to)

- 1. Describe the components of time series, apply time series analysis in business scenarios, illustrate the different types of index numbers, and calculate index numbers.
- 2. Demonstrate the basic concept of probability, theoretical distribution, probability theorems; solve probability problems by applying probability concept.
- 3. Demonstrate and apply the sampling techniques.
- 4. Understand the theory of Estimation and the use in research.
- 5. Understanding and applying the testing of Hypothesis.

#### Content/ Syllabus: Unit wise course content distribution

Unit 1: Time Series

Nature and decomposition of time series – analysis of trend—polynomial trend – exponential trend – non-linear growth curves – moving average method – seasonal component-(simple numerical exercise)

Unit 2: Probability Theory

Random Experiments – Mutually Exclusive, Equally Likely and Collectively Exhaustive Events – Probability: Classical and Axiomatic Definition – Complementary Event – Theorem of Total Probability – Conditional Probability – Theorem of Compound Probability – Independent Events, Bayes' Theorem.

Unit 3: Random Variables and Mathematical Expectation

Definition of random variables – probability function and distribution function– mass and density function – expectation and variance of random variables.

Unit 4: Univariate Probability Distributions

Binomial, Poisson, Normal Distributions – Mean, Variance. Moment Generating

Functions.

Unit 5: Sampling Theory and Sampling Distributions

Population and Sample - Parameter and Statistic - Random Sampling - Practical

Methods of Drawing Random samples - Random sampling Numbers - Sampling

Distribution – Standard Error

Sampling Distributions associated with Normal Population, Expectation and Standard Error of Sample Mean.

Unit 6: Estimation and Testing of Hypothesis

Desirable Properties of estimators – Unbiasedness, Minimum Variance, Efficiency, Consistency – Simple Methods of Point Estimation – Maximum Likelihood Estimators and their properties.

Null hypothesis & Alternative Hypothesis – Confidence Intervals – Testing of Hypothesis – p-value – Type-I and Type-II Errors – Simple applications of tests for the Mean and Variance of a Univariate Normal Population.

### **References:**

Nagar and Das – Basic Statistics Mathai &Rathie – Probability and Statistics Goon, Gupta and Dasgupta – Fundamentals of Statistics, Vol. I & Vol. II R Spiegel and L.J. Stephen. Statistics, Schaum Series Sheldon Ross: A First Course in Probability, 9thEdn. Pearson E. Rukmangadachari: Probability and Statistics-Pearson

# Semester IV Course Name: Indian Economics I Course Code: BSCHECOC402

Course Type: Core (Theory)	Course Details: CC -9				L-T-P:5-1-0	
	CA Marks			ESE Marks		
Credit: 6	Full 50	Full Marks: Practical Theoretical 50		Practical	Theoretical	
				10		40

#### **Course Learning Outcomes:**

#### (After the completion of the course the students will be able to)

- 1. Develop ideas of the basic characteristics of Indian economy, its potential on natural resources.
- 2. Understand agriculture as the foundation of economic growth and development, analyse the progress and changing nature of agricultural sector and its contribution to the economy as a whole.
- 3. Understand the Industrial Policies undertaken by the government.
- 4. Understand the importance, causes and impact of population growth and its distribution, translate and relate them with economic development.
- 5. Understand the problems of Poverty and Unemployment and steps taken by the government to tackle these economic problems.
- 6. Understand the concept and impact to black money in India.

#### Content/ Syllabus: Unit wise course content distribution

Unit 1: Structural Changes in Indian Economy

Trends in national income, per capita income - Changes in occupational pattern

Sectoral distribution of national income during the post independence period.

Unit 2: Agricultural Sector

Land reforms

Farm size and Productivity

Green revolution-causes and impacts.

Agricultural marketing, concepts of food security and public distribution system in India.

Unit 3: Industrial Sector

Industrial policy resolution (1948, 1956) - licensing policy;New industrial policy, 1991; the EXIT policy; present problems of SSIs and large scale industries in India and its remedies.

Unit 4: Population

Trend of Population Growth in India in recent years-Problems associated with population growth-National population policy - Demographic dividend

Unit 5: Poverty and Unemployment

Poverty-Concept and measurement issues

Nature and types of unemployment in India - Problem of measurement of unemployment

Unorganized labour market-Participation of female and child labour

Unit 6: The Parallel Economy in India

Concept of black money - estimates - Sources - impacts - measures to tackle black money

#### References

Dutta and Sundharam:	Indian Economy
Mishra and Puri:	Indian Economy
A.N.Agarwal	Indian Economy
Dhingra, I.C:	Indian Economy
Bhagwati and Chakraborty:	Contributions to Indian Economic Analysis
Jalan:	Indian Economic Crisis
Uma Kapila:	Indian Economy
Debesh Mukherjee:	SamakalinBharatiyaArthaniti

# Semester IV

# Course Name: Mathematical Economics II Course Code: BSCHECOC403

Course Type: Core (Theory)	Course Details: CC -10				L-T-P:5-1-0	
		CA Marks			ESE Marks	5
Credit: 6	Full Marks: 50		Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Illustrate matrix operation, minors, cofactors, use cofactor method to find inverse of a matrix, use Cramer's rule to solve systems of equations.
- 2. Demonstrate knowledge of basic concept of linear programming, duality, capacity to solve linear programming problems', familiar with the basic techniques most commonly used in economic problems.
- 3. Illustrate the basic framework and application of Input-Output Models.
- 4. Understand the concept of Game Theory, Nash equilibrium etc.

### Content/ Syllabus: Unit wise course content distribution

Unit 1: Determinants and Matrices:

Concepts of Scalar, Vector and Matrices — Some specific Matrices : Diagonal, Triangular, Identity, Null, Symmetric, Idempotent – Matrix operations ; Addition, Subtraction and Multiplication of Matrices – Transpose and Inverse of Matrices- Determinants-Minor and Cofactor- Properties of Determinants- Bordered Hessian Determinant – Technique of solving Simultaneous Equations by Cramer's Rule.

Unit 2: Linear Programming:

Linear Programming Technique as a Tool of optimization – General Formulation of the LP Problem – Applications in Economics – Graphical solution of some standard problems

(Maximization and Minimization) – Concepts of Slack Variable, Basic Feasible Solution – Solution of some simple problems by Simplex Method (Maximization case only)- The Dual problem – Economic Interpretation of Duality.

Unit 3: Input – Output Analysis:

Basic Concept of Input-Output Analysis – Assumptions and structure of the Leontief Static Open Model ( $2 \times 2$  Case) – Solution in such a Model – Hawkins – Simon condition and its Economic Interpretation – Price System in LSOM ( $2 \times 2$  Case) with Economic Implications.

Unit 4: Basic Game Theory:

Basic Concepts and Assumptions of Game Theory – Two Person – Zero – Sum Game with and without Saddle Point – Concept of Dominance – Elements of Non – Zero – Sum Game – Prisoner's Dilemma – Concept of Dominant Strategy equilibrium and Nash Equilibrium – Sub-game Perfect Nash Equilibrium- Applications.

### **Suggested Readings:**

1. W. J .Baumol : Economic Theory and Operation Analysis, Prentice Hall.

Drofman, Samuelson and Solow : Linear Programming and Game Theory : An Economic Analysis

N. D. Vora : Quantitative Techniques in Management, Tata McGraw Hill.

Sharma : Operation Research, Theory and Applications, Macmillan India Ltd.

Taro Yamane : Mathematics for Economist- An Elementary Survey.

### Semester IV

# Course Name: Rural Development Course Code: BSCHECOSEC401

Course Type: SEC	Course Details:SEC-II				L-T-P:2-0-0	
			CA Marks		ESE Marks	
Credit: 2	Full Marks:		Practical	Theoretical	Practical	Theoretical
	00			10		40

#### **Course Learning Outcomes:**

#### (After the completion of the course the students will be able to)

1. Develop a proper understanding of the rural situation and the need for rural

2. Remember the basic concepts related to rural development.

3. Analyse the approaches to rural development adopted so far in India and evaluate development in India.

4. Gain knowledge on major problems in the rural social sector as well as their relevance to the current situation in rural areas and understand rural credit and marketing set up.

#### Content/ Syllabus: Unit wise course content distribution

Unit 1: Rural Development - Background & Concept:

Understanding Rural Communities: Structure, Culture and Polity. Development Theories. Lewis model of development, Gandhian model of development; Sustainable Development. Basic concept and issues; Decentralized Governance.Decentralised Planning and Participatory Approach to Rural Development and Role of NGOs

Unit 2: Policies and Programmes for Rural Development:

Rural Development Programmes since independence: IRDP RLEGP, NREP; Rural Development Programmes for Sustainable Development and Poverty Alleviation.: MGNREGA, SGSY, IAY, PMGSY; Vulnerable Groups and Rural Development. Issue of empowerment of Ruralwomen:

Role of Govt and NGOs

Unit 3: Resources and Livelihoods:

Livelihoods: State of Agriculture as a source of livelihood and need for diversified employment

Resources. and Environment: forestry, fishery, watershed development and peoples' livelihood Non-Farm Livelihoods: Importance of development of non-farm sector; rural industrialization programme

Unit 4: Stakeholders in Rural Development:

Rural development and its Stakeholders; Cooperatives and other Formal and Informal

Organizations; Credit and Micro-finance

### **Reference books**

Singh Kartar: Rural Development: Principles, Policies and Management. Sage Publications.
Misra& Sharma: Problems and Prospects of Rural Development
Venkata Reddy K: Rural Development In India Poverty and Development
Yasant Desai: A Study of Rural Economy
Nanavati&Anjalia: The Indian Rural Problems
Bhattacharya S.N.: Rural Industrialization in India
Vasant Desai: Problems and Prospects of Small Scale Industries in India N.I.R.D. Rural
Development in India - Some Facets Wilbert E. Moore Social Change

# Semester V Course Name: Public Finance Course Code: BSCHECOC501

Course Type: Core (Theory)	Course Details: CC-11				L-T-P:5-1-0	
	Full Marks: 50		CA Marks		ESE Marks	
Credit: 6			Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

(After the completion of the course the students will be able to)

- 1. Understand the sources of finance both public and private, demonstrate the role of government to correct market failures and possible advantage of public financing.
- 2. Attain the advantages and knowledge of public investments and other government expenditures. Understand the causes of growing public expenditures for various programmes and policies within and outside the country.
- 3. Understand the possible burden, benefits and distribution of various types of taxes among various classes of people, know the general trend and impact on general welfare and arouse them to suggest good and bad tax system.

- 4. Understand the needs of public borrowing from all possible sources to meet necessary public investment/expenditures. Also be alerted to find sources for repayment.
- 5. Deliver effectively the preparation of budget and how they are passed in the house. Understand the changes in size and flexibility of state and central budget along with the role played by Finance Commission.

### Content/ Syllabus: Unit wise course content distribution

Unit 1: Introduction to Public Finance

- Definition and scope of public finance Types of fiscal functions – allocation function, distribution function and stabilization function – fiscal functions in a developing economy
- Concept of Public goods and private goods characteristics of public goods
- Externality Types of externality-positive and negative externality Market failure

Unit 2: Principles of Taxation

• Ability and benefit approaches – cannons of taxation – direct and indirect tax - income versus expenditure tax – Proportional, progressive and regressive taxation - impact, shifting and incidence of taxes- effects of taxation.

Unit 3: Public Debt

• Definition – internal and external public debt – burden of public debt

Unit 4: Indian Public Finances

• Fiscal federalism in India – Center-State Financial relations

### **References:**

1.R.A. Musgrave and P.B. Musgrave, Public Finance in Theory & Practice, McGraw Hill Publications, 5<sup>th</sup> edition, 1989.

- 2. J. Hindriks, G. Myles: Intermediate Public Economics, MIT Press, 2006.
- 3. H. Rosen, T. Gayer: Public Finance, 9<sup>th</sup> ed., McGraw-Hill/Irwin, 2009.
- 4. H. L Bhatia Public Finance
- 5. S. K. Singh Public Finance in Theory and Practice

### Semester V

# Course Name: International Economics Course Code: BSCHECOC502

Course Type: Core (Theory)	Course Details: CC-12				L-T-P:5-1-0	
	Full Marks:		CA Marks		ESE Marks	
Credit: 6			Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Identify the basic difference between inter-regional and international trade, understand how international trade has helped countries to acquire goods at cheaper cost and explain it through the various international trade theories.
- 2. Show the benefits of international trade in a way how nations with strong international trade have become prosperous and have the power to control world economy and how global trade can be one of the major contributors of reducing poverty.
- 3. Explain how restrictions to international trade would limit a nation in the services and goods produced within its territories and at the same time explain that a rise in international trade is essential for the growth of globalization.
- 4. Show the importance of maintaining equilibrium in the balance of payments and suggests suitable measures to correct disequilibrium as well.
- 5. Be aware of the changes in the composition as well as direction of foreign trade after international trade and know the causes and effects of deficits in the balance of payments, measures adopted to correct the deficits and identify the need for having trade reforms.

#### Content/ Syllabus: Unit wise course content distribution

Unit 1: Introduction Basis of Trade – gains from trade

#### Unit 2: Theory of Trade

The Ricardian theory – generalization of Ricardian model- the H-O Model,comparison of Comparative Advantage in the two (HO and Ricardo) – Commodity and Factor pricesunder trade- factor price equalization (Stolper-Samuelson Theorem), factor intensity reversal and factor Prices-Leontief paradox, gains from trade and income distribution. Offer Curve, Rybczynscki theorem, Metzler Paradox.

#### Unit 3: Trade Intervention

Theory of Tariff and income distribution – tariffs terms of trade and domestic prices, tariffs and national income, the optimum tariff, other effects of tariffs – quotas and quantitative trade restrictions -effects of quotasand quantitative trade restrictions and balance of payments- trading state, the infant industry argument.

• Problems of international reserves and liquidity and of development finance.

Unit 4: Balance of Payments and Problems of Adjustment

• The mechanism of adjustment under fixed exch. Rates – automatic adjustment under Gold Standard- expenditure reducing and Expenditure switching policies –devaluation, the elasticity and absorption approaches – direct controls- mechanism of adjustment under flexible exchange rate and uncertainty, speculation and the stability of exchange rate and inflation- costs and benefits of flexible exchange rates.

### **References:**

- 1. Soderstein, Bo: International Economics, 2<sup>nd</sup>Edition
- 2. Kennen, P: International Economics
- 3. Caves, Frankel and Jones: World Trade and Payments 4.Krugman and Obstfeld: International Economics

### Semester V

# Course Name: Classical Political Economy Course Code: BSCHECODSE501

Course Type: DSE	Course Details: DSE-1				L-T-P:5-1-0	
		CA Marks		ESE Marks	5	
Credit: 6	Full Marks: 50		Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Understanding Classical economic system and understand its main features.
- 2. Know the stages of economic growth and understand the factors that causes transition from one stage to another.
- 3. Understand the marxian theory of value and related paradigms.
- 4. Understand the different forms of crisis associated with the Capitalist economic system.

### Content/ Syllabus: Unit wise course content distribution

Unit 1: Classical Background (20 Lectures)

• Chief features of classical system, Adam Smith Labour Theory of Value, the Ricardian one sector model, Classical political economy and Marx.

Unit 2: Stages of Development

• Marxian theory of stages of growth, Rostow's theory of stages of growth.

Unit 3: Marx's Theory of Value

• Qualitative and quantitative aspects of value, commodity fetishism, constant and variable capital, circuits of capital, surplus value, organic composition of capital.

Unit 4: The Reproduction Schemes & Accumulation of Capital □ Industrial reserve army, accumulation and technological change.

Unit 5: Origin of Surplus Value and Profits

• The law of falling rate of profit - Theories of Crisis: Under consumption, realization crisis, disproportionality crisis.

### **References:**

- 1. Ben Fine- Marx's capital
- 2. Sweezy- Theory of Capitalist Development.
- 3. M. Desai- Marxian Economics.
- 4. Marc Blaug, Economic Theory in Retrospect, 3<sup>rd</sup>Edn.
- 5. Felix Raj Contemporary Development Economics From Adam Smith to Amartya Sen

### Semester V

# Course Name: Money and Financial Market of India Course Code: BSCHECODSE503

Course Type: DSE	Course Details: DSE-2				L-T-P:5-1-	0
		CA Marks		ESE Marks		
Credit: 6	Full Marks: 50		Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Explain the broad features of Indian financial institutions with its apex banks' objectives and purview. Also understand the instruments to control credit in the country.
- 2. Effectively narrate the kinds and components of money with its regulatory system, be aware of the functions, objectives and limitations of commercial banks.
- **3.** Identify the existence and development of non-banking financial institutions, know the important role of Mutual funds, LIC, investment companies etc., utilize and effectively participate in the development process.
- 4. Understand the conditions of financial markets and its impact in the economy.

5. Demonstrate the role and significance of foreign exchange rate and its markets with its impact on various sectors in the economy.

### Content/ Syllabus: Unit wise course content distribution

#### Unit 1: Money

• Concept, functions, measurements, theories of money supply determination

Unit 2: Financial Institutions, markets, Instruments and financial innovations

- Role of financial markets and institutions, problem of asymmetric information adverse selection and moral hazard; financial crisis
- Money and capital markets; organization, structure and reforms in India; role of financial derivatives and other innovations

Unit 3: Banking system

• Indian banking system; changing role and structure; banking sector reforms

Unit 4: Central Bank and Monetary policy

• RBI and its functions, instruments of monetary control, current monetary policy of India

### References

- 1. Rakesh Mohan: Growth with Financial stability central banking in an emerging market
- 2. L M Bhole and J MahukudFinancila institutions and market
- 3. M Y Khan Indian financial system

# Semester VI Course Name: Basic Econometrics Course Code: BSCHECOC601

Course Type: Core (Theory)	Course Details: CC-13				L-T-P:5-1-0		
	Full Marks: Practic		CA Marks	CA Marks		ESE Marks	
Credit: 6			Practical	Theoretical	Practical	Theoretical	
				10		40	

### **Course Learning Outcomes:**

(After the completion of the course the students will be able to)

- 1. Acquaint with basic and applied econometric tools and methods used in economics.
- 2. The aim of this course is to provide a foundation in applied econometric analysis and develop skills required for empirical research in economics.
- 3. It also covers statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models.

### Content/ Syllabus: Unit wise course content distribution

Unit 1: Introduction

Concept - Types – theoretical and applied econometrics- importance and role of Econometrics in economics- Classical Methodology of Econometrics.

Unit 2: The Classical Linear Regression Model (Two variable case)

The Classical Ordinary Least Square Method (CLSM) – Assumptions – estimation of parameters in two variable case – Properties of least-square estimators – testing of regression coefficients – BLUE – Goodness of Fit - the Coefficient of determination R<sup>2</sup> – Numerical Problems.

Unit 3: The Classical Linear Regression Model (Three variable case)

The Classical Ordinary Least Square Method (CLSM) – estimation of parameters with Two independent variables.

Unit 4: Violations of Classical Assumptions

• Definition, Detection, Consequences, Remedies of Multicillinearity, Heteroscedasticity, Autocorrelation.

### **References:**

- 1. Dominick Salvatore (2001): Schaum's Outline of Statistics and Econometrics, McGraw-Hill.
- 2. Maddala: Introduction to Econometrics
- 3. Gujrati, N Damodar (2011): Basic Econometrics.
- 4. Peter Kennedy (2004): A Guide to Econometrics, Blackwell Publishers.
- Pindyck, Robert S., and Daniel L. Rubinfeld (1998): Econometric Methods and Economic Forecasts, 4<sup>th</sup>Edn. McGraw-Hill.
- 6. Koutsoynnis: An Introduction to Econometrics

### Semester VI

# Course Name: Indian Economics - II Course Code: BSCHECOC602

Course Type: Core (Theory)	Course Details: CC-14				L-T-P:5-1-0	
			CA Marks		ESE Marks	
Credit: 6	Full Marks: 50		Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Students will be able to acquaint themselves with the five year planning process in India.
- 2. Understand the tax structure during the plan period
- 3. Illustrate the state of Public sector in India and acknowledge its importance.
- 4. Understand Indian Foreign Trade Policy and the concept of Special Economic Zones.

### Content/ Syllabus: Unit wise course content distribution

Unit 1: Economic Planning

- Planning in a mixed economy The Indian experience Pre 1991 and Post 1991 plans Overall success and failures
- Critical Evaluation of functioning pattern of Planning Commission
- Objectives behind formation of NitiAyog

Unit 2: Indian Tax Structure during Plan Period

- Composition of Govt. revenue and expenditure
- Trends, problems, reforms in tax structure
- Centre State financial relation

Unit 3: Public Sector in India

- Role of public sector in India during the plan period
- Problems and policies with special emphasis on disinvestment policy

Unit 4: India's Foreign Trade

- Foreign trade policy 2009-2014
- Position of India's trade balance
- Special economic zones Arguments in favour of and against them □Foreign investment inflows since 1991.

### References

- 1. Dutta and Sundharam: Indian Economy
- 2. Mishra and Puri: Indian Economy

3. Agarwal:

Indian Economy

4. B A Prakash: The Indian Economy: Economic Reforms and Performance since 1991 (2<sup>nd</sup>Eed.), Pearson.

# Semester VI

# Course Name: Economics of Growth Course Code: BSCHECODSE601

Course Type: DSE	Course Details: DSE-3				L-T-P:5-1-0	
			CA Marks		ESE Marks	
Credit: 6	Full Marks: 50		Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Know the theoretical background of different theories of Economic Growth.
- 2. Understand Exogeneous and endogeneous growth and make distinction between the two.
- 3. Understand how International Trade contributes to Economic Development.

### Content/ Syllabus: Unit wise course content distribution

Unit 1: Introductory Growth Models

• Harrod Model of Growth – Domar Model of Growth – Comparison of Harrod and Domar Growth Models – Harrod-Domar Growth Model.

Unit 2: Exogenous Growth Model

• Solow Model – Absolute and Conditional Convergence – Steady State – Golden Rule of Capital Accumulation – Transition of the Golden Rule Steady State.

Unit 3: Endogenous Growth Model

• Basic AK Model

Unit 4: Trade and Development

• Trade as an engine of growth – Terms of trade and economic development (Prebisch – Singer Thesis) – Imports substitution Vs export promotion.

### **References:**

- 1. Barro, Robert and Xavier Sala-i-Martin: Economic Growth. (MIT Press)
- 2. David N Weil:
- 3. Todaro and Smith:
- 4. Thirwall A.P:

- Economic Growth (Prentice Hall) Economic Development (Pearson Education): Growth and Development (Palgrave McMillan): Contemporary Development Economics: From
- 5. Felix Raj: Adam Smith to Amartya Sen

# Semester VI Course Name: Entrepreneurial Economics Course Code: BSCHECODSE603

Course Type: DSE	Course Details: DSE-4				L-T-P:5-1-0	
	Full Marks: 50		CA Marks		ESE Marks	
Credit: 6			Practical	Theoretical	Practical	Theoretical
				10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Illustrate the basic characteristics required for being an entrepreneur.
- 2. Understand to prepare a Project Report and know it's important features.
- 3. Know the sources of Finance foe Entrepreneurship.
- 4. Understand the expansion strategies for entrepreneurs.

### Content/ Syllabus: Unit wise course content distribution

### Unit 1: Entrepreneurship

- Concepts and basic characteristics of entrepreneurship
- Function and types of entrepreneurs
- Role of entrepreneurship in economic development
- Rural entrepreneurship meaning, need and problems

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### Program Outcome, Course Outcome and Program Specific Outcome

Unit 2: Project Identification and Selection

• Meaning of project- project report - planning commission's guidelines for formulating a project report

Unit 3: Theories of Entrepreneurship

- Motivation theories
- Maslow's need hierarchy theory
- Mclleand's acquired needs theory
- Motivating Factors

Unit 4: Financial Resources for New Ventures

 Sources of finance - capital structure - institutional support to enterprises—national small industries board – state small industries development corporation--- district industries center - industrial estates

Unit 5: Expansion Strategies

- Growth strategies in small business
- Support infrastructure and operational environment for successful entrepreneurship.

### **References:**

- 1. Khanka, S.S. Entrepreneurial Development, S. Chand and Company
- 2. Bolton, Bill and John Thompson, Entrepreneur: Talent, Temperament and Technique, Butterworth and Heinenmann
- 3. Szirmai, Adam, Dynamics of Socio-economic Development, CUP
- 4. Dreze, J. and A. Sen, India: Economic Development and Social Opportunity, OUP
- 5. Karmakar, K.G., Rural Credit and Self-Help Groups, Sage Publications
- 6. Sau, S. Rural Industrialization Development Trajectory in India, Farma KLM

### Semester I Course Name: Microeconomic Theory-I Course Code: BSCPECOC101

Course Type: Core	Cour	se Details	:CC-1	L-T-P:5-1-0		
			CA Marks		ESE Marks	
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
	50			10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

1. Understand the concept of economics, the distinction between micro economics and macroeconomics, concept of demand and its relevance in a market economy.

2. Learn how the different decision-making units (consumers, firms), with limited resources at their disposal, will chose the best alternative among the available alternatives

### Content/ Syllabus: Unit wise course content distribution

### 1. Consumer'sBehaviour

- Utility: Total and Marginal Utility-Law of Diminishing Marginal Utility-Law of Demand. Relation between Law of Demand and Law of Diminishing Marginal Utility.
- Indifference Curve: Definition and Characteristics Consumer's Equilibrium-Income Effect and Substitution Effect and Price Effect.
- Elasticity of Demand: Price Elasticity and Income Elasticity of Demand Measurement of Price Elasticity (Revenue Method and Point Method).

### 2. Producer'sBehaviour

• Production Function: AP, MP and their Derivation from TP Curve-Return to Factor.

- Cost of Production: Real Cost and Opportunity Cost-Fixed and Variable Cost-Shape of Cost Curves (short-run and long-run), Relation between Average Cost and Marginal Cost.
- Total Revenue, Marginal Revenue and Average Revenue: Relation between Total Revenue, Average Revenue and Marginal Revenue Curves-Relation between Average Revenue, Marginal Revenue and Price Elasticity of Demand.

### References

- 1. Samuelson, P.A. and William, D. Nordhaus, Economics, McGraw Hill Book Co. Singapore.
- 2. Elementary economic analysis SampatMukherjee (Revised edition)
- 3. 5. H L Ahuja: Principles of Microeconomics, 20<sup>th</sup> revised edition S. Chand
- 4. Haridas Acharya : AdhunikArthaniti
- 5. JaydebSarkhel: ArthanaitikTatta

### Semester II

### Course Name: Macroeconomic Theory Course Code: BSCPECOC201

Course Type: Core	Cour	se Details	:CC-1	L-T-P:5-1-	0	
			CA Marks		ESE Marks	
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
	20			10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

1. Be acquainted with the aggregative behaviour of an economic system. The concept of national income, price level, level of employment will guide the learners to judge the situation of an economy in a better manner.

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### Program Outcome, Course Outcome and Program Specific Outcome

- 2. Understand the development of the macroeconomic thoughts from the last quarter of the eighteenth century to mid twentieth century, the Classical and the Keynesian theory of income and employment.
- 3. Know the impacts of great depression on the world economy and the development of different macro theories as a consequence of this event.

### Content/ Syllabus: Unit wise course content distribution

### **1. National Income**

• Distinction between-Gross and Net National Income Different Methods of Measuring National Income.

### 2. Money

• Function of Money-Value of Money-Different Concepts of money (M<sub>1</sub>, M<sub>2</sub> etc.).

### 3. Quantity Theory of Money

• Fisher's Version and Cambridge Version – concept of Classical Theory of Employment and output – Say's Law of markets.

### 4. The Classical System

- The Classical view of Macro Economics in respect of the determination of Employment, Output and Prices.
- The classical quantity theory of money and its criticism; The Classical Theory of Rate ofInterest Loanable fund theory as a synthesis between Classical Theory and KeynesianLiquidity Preference Theory of Interest the Complete Classical Model.
- Say's Law and Walras' law The Dichotomy between the real and monetary sectors Neutrality of money.

### References

- 1. Elementary Economic Analysis Sampat Mukherjee (Revised edition)
- 2. Gupta S.B.: Monetary Economics, S. Chand and Co. New Delhi
- 3. Haridas Acharya : AdhunikArthaniti
- 4. JaydebSarkhel: ArthanaitikTatta
- 5. Macroeconomic theory and Policy: H L Ahuja 20<sup>th</sup> edition

## Semester III Course Name: Microeconomic Theory-II Course Code: BSCPECOC301

Course Type: Core	Course	e Details	:CC-1	L-T-P:5-1-0		
			CA Marks		ESE Marks	
Credit: 6	Full I 50	Marks:	Practical	Theoretical	Practical	Theoretical
	20		10		40	

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

1.Understanding market morphology and determination of equilibrium output and price level

2. Understand how distribution of factor shares is made through economic principles.

### Content/ Syllabus: Unit wise course content distribution

### **1. Market Morphology:**

- Introduction
- Perfect Competition, Monopolistic Competition, Oligopoly, duopoly and Monopoly (Concepts only)

### 2. Price-Output Determination

- Short-run and Long-run Equilibrium under perfect Competition at thefirm as well as industry level-idea of price discrimination.
- Price and Output Determination under monopoly.

### **3. Theory of Distribution:**

- Marginal Productivity Theory of Distribution-Factor Price Determination.
- Rent: Ricardian Theory

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# Program Outcome, Course Outcome and Program Specific Outcome

- Wage: Distinction between Money Wage and Real Wage-FactorsDetermining Real Wage-Role of Trade Unions in WageDetermination under competitive set up.
- Interest: Real and Money Interest Loanable fund and liquiditypreference theory of interest.
- Profit: Alternative theories of profit Schumpeter, Knight, Hawley

### **References:**

- 1. Samuelson, P.A. and William, D. Nordhaus, Economics, McGraw Hill Book Co. Singapore.
- 2. Elementary economic analysis SampatMukherjee (Revised edition)
- 3. H L Ahuja: Principles of Microeconomics, 20th revised edition S. Chand
- 4. Haridas Acharya : AdhunikArthaniti
- 5. JaydebSarkhel: ArthanaitikTatta

### Semester III

# Course Name: Data Collection and Data Processing Course Code: BSCPECOSEC301

Course Type: SEC	Cours	se Details	:SEC-1	L-T-P:2-0-0		
			CA Marks		ESE Marks	
Credit: 2	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
	50			10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. To understand data collection processes.
- 2. To know the data analysis processes.

### Content/ Syllabus: Unit wise course content distribution

### 1. Data Collection

 Population Census vs sample survey, random sampling (concept only) -Collection of Primary Data – Various Methods –Collection of Secondary Data – Criterion of Secondary Data Collection.

### 2. Data Processing

• Introduction to Data Processing – Steps of Data Processing – Problems associated with Data Processing

### References

- 1. C R Kothari Research Methodology: Methods and Techniques, New Age International.
- 2. B C Tandon Research Methodology in Social Sciences, Chaitanya Publishing House.
- 3. B N Ghosh Scientific Methods of Social Research, Sterling Publishers Pvt. Ltd.,
- 4. C R Kothari Quantitative Techniques, Vikas Publishing House Pvt. Ltd.

### Semester IV

### Course Name: Indian Economics Course Code: BSCPECOC401

Course Type: Core (Theory)	Cour	se Details	:CC-1	L-T-P:5-1-0		
			CA Marks		ESE Marks	
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
	50			10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Develop ideas of the basic characteristics of Indian economy, its potential on natural resources.
- 2. Understand agriculture as the foundation of economic growth and development, analyse the progress and changing nature of agricultural sector and its contribution to the economy as a whole.

3. Understand the Industrial Policies undertaken by the government.

### Content/ Syllabus: Unit wise course content distribution

### 1. Indian Economy – An Overview

 The structure of Indian Economy – its sectoral composition, rural-urbandimension – Trends of India's per capita income – Demography-the trends and pattern of population growth –age distribution &Demographic dividend. Objectives, achievements and failures of India's Five-year Plans (broadoutline)

### 2. Indian Agriculture

• Characteristics of Indian Agriculture: Causes of Low Productivity- Land Reforms- New technology and Green Revolution and its effects. Effects of Economic Reforms on Indian Agriculture.

### **3. Indian Industry**

• Structure of Indian industry -Role of Cottage, Small-scale and LargescaleIndustries in India's development.Problems and strategies of industrial development.

### 4. Indian Public Finance

 Central and state budgets – revenue account and capital account -Sources of Revenue of Union and State Governments –direct and indirecttax – major heads of expenditures – plan vs. non-plan expenditures- Union-State Financial Relation – Role of Finance Commission ofIndia.

### **References:**

- 1. Dutta, R. & K.P.M. Sundaram: Indian Economy, S. Chand & Co. NewDelhi.
- 2. Misra, S.K. & V.K. Puri: Indian Economy, Himalayas Publishing Co.Mumbai
- 3. Agarwal, A.N: Indian Economy, Vikash Publishing Co. Delhi.
- 4. West Bengal Human Development Report, 2004, Oxford University Press
- 5. Debesh Mukherjee: SamakalinBharatiyoArthaniti
- 6. Sawpan Kr. Roy and J. Sarkhel: BharatiyoArthaniti
- 7. Basak and Chakraborty: BharaterArthaniti

# . Semester IV Course Name: Basic Knowledge in Computer Course Code: BSCPECOSEC401

Course Type: SEC	Cour	se Details	SEC-2	L-T-P:2-0-	0	
			CA Marks		ESE Marks	
Credit: 2	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
				30		20

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Understand the basic excel operations.
- 2. Use MS-excel foe data analysis.
- 3. Use analysis techniques in real life.

### Content/ Syllabus: Unit wise course content distribution

### **1. Introduction to Excel**

- <u>Sort</u>: Sorting data on one column or multiple columns, in ascending or descending order
- <u>Filter</u>: Filter data to display records that meet certain criteria.
- <u>Conditional Formatting</u>: Highlight cells with a certain colour, depending on the cell's value.
- <u>Charts</u>: Line charts, column charts, pie charts, area charts and surface charts

### 2. Excel Basics needed for Statistical Analysis of the Data

- <u>Pivot Tables</u>: To extract the significance from a large, detailed data set.
- <u>Tables</u>: Create tables to analyze data in Excel
- <u>Solver</u>: Use Excel tool called solver to use techniques from the operations research to find optimal solutions for all kind of decision problems.
- Creating a top-ten list with values or percentages
- Setting up subtotals
- Counting the number of unique items in a list
- Using SUMIF and COUNTIF functions

### **References:**

- Levine, Stephan, Krehbiel, Berenson: Statistics for Managers Using Microsoft Excel, 5<sup>th</sup> ed.PHI Learning.
- 2. David Kuncicky and Ronald W Larsen: Introduction to Excel. 5<sup>th</sup>ed, Pearson Publishers.

# Semester V Course Name: Rural Development Code: BSCPECOSEC501

Course Type: SEC	Cour	se Details	:SEC-3	L-T-P:2-0-0		
			CA Marks		ESE Marks	
Credit: 2	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
	50			10		40

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

1. Develop a proper understanding of the rural situation and the need for rural

2. Remember the basic concepts related to rural development.

3. Analyse the approaches to rural development adopted so far in India and evaluate development in India.

4. Gain knowledge on major problems in the rural social sector as well as their relevance to the current situation in rural areas and understand rural credit and marketing set up.

### Content/ Syllabus: Unit wise course content distribution

### 1. Rural Development versus Agricultural Development

- Decentralised Planning and Participatory Approach to Rural Development and Role of NGOs
- Non-Agrarian activities and integrated rural development
- Rural industrialisation

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### Program Outcome, Course Outcome and Program Specific Outcome

### 2. Credit and Self-help Groups

- Credit needs for rural non-farm sector
- Constraints of micro enterprises in rural areas
- Need for SHG formation
- Concept of micro credit
- Self-help groups in India

#### References

- 1. Karmakar, K.G.: Rural Credit and Self-Help Groups, Sage Publications
- 2. Sau, S.: Rural Industrialization Development Trajectory in India, Farma KLM

# Semester V Course Name: Development Economics Code: BSCPECODSE501

Course Type: DSE	Cour	se Details	:DSE-1	L-T-P:5-1-0		
		CA Marks		S	ESE Marks	
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
			10		40	

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

1. Discuss competing theories of economic development;

2. Demonstrate a deep analytical understanding of contemporary economic development issues;

3. Access and analyse economic growth and development data which are pertinent to contemporary economic development debates internationally;

4. Engage in critical thinking through the comparative assessment of competing economic development models and policy frameworks;

### Content/ Syllabus: Unit wise course content distribution

- 1. Distinction between Economic Growth and Economic Development:Net National Income and Per Capita Income as Growth Indicators –Concept of HDI.
- 2. Development Planning and its necessity balanced vs. unbalanced growth. Complementary Roles of Agriculture and Industry Role of Technology in Agriculture and Industry.
- 3. Population and Economic Development: The Two Way Relation.
- 4. Domestic Capital Formation in an Underdeveloped Country: The Problems Incentives for Savings and Investment.
- 5. Foreign Investment: Different forms. Their roles in Economic Development.
- 6. Role of IMF and World Bank in economic development of the LDCs.

### **References:**

- 1.Todaro, M.P: Economic Development in the Third World, Longman, New York.
- 2.Salvatore, D and E. Dowling: Development Economics, Schaum'sOutline Series in Economics, McGrawhill, New York.
- 3. Agarwala, A.N. and S.P. Singh (eds.): Economics of Underdevelopment, Oxford University Press, London.
- 4. Meier, G.M. (ed.): Leading Issues in Economic Development, Oxford University Press, New York.
- 5. United Nations Development Programme. Human Development Report (Recent Years).

### Semester VI

### Course Name: Dissertation / Project Code: BSCPECOSEC601

Course Type: SEC	Cour	se Details	:SEC-4	L-T-P:0-0-4		
			CA Marks		ESE Marks	
Credit: 2	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
	50			30		20

### **Course Learning Outcomes:**

### (After the completion of the course the students will be able to)

- 1. Know research Processes.
- 2. Understand to work together.
- 3. Understand the applicability of research in sicio-economic contexts.

### Content/ Syllabus: Unit wise course content distribution

**1.** Introduction – Motivations – Literature Review – Objectives – Methodology – Estimator – Policy Suggestion – Bibliography

### 2. Project may be on any of the following topics

- Socio-economic characteristics
- Price index
- Comparison across states w.r.t economic indicators (e.g. SDP, NSDP, SGDP etc.)
- Inequality

Note: Project may be based on field survey or from secondary data source

### **References:**

- Data Analysis Using Microsoft Excel Ash Narayan Sah. Excel Books India
- Excel 2010 For Dummies Colin Banfield, John Walkenbach
- Gray Koop (2009), Analysis of Economic Data, 3rd Edition (University of Strathclyde, UK)

### Semester V

# Course Nam: Public Finance Code: BSCPECODSE602

Course Type: DSE	Cour	se Details	:DSE-1	L-T-P:5-1-0		
			CA Marks		ESE Marks	
Credit: 6	Full 50	Marks:	Practical	Theoretical	Practical	Theoretical
	50			10		40

### **Course Learning Outcomes:**

(After the completion of the course the students will be able to)

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## Program Outcome, Course Outcome and Program Specific Outcome

- 1. Understand the sources of finance both public and private, demonstrate the role of government to correct market failures and possible advantage of public financing.
- 2. Attain the advantages and knowledge of public investments and other government expenditures. Understand the causes of growing public expenditures for various programmes and policies within and outside the country.
- 3. Understand the possible burden, benefits and distribution of various types of taxes among various classes of people, know the general trend and impact on general welfare and arouse them to suggest good and bad tax system.
- 4. Understand the needs of public borrowing from all possible sources to meet necessary public investment/expenditures. Also be alerted to find sources for repayment.
- 5. Deliver effectively the preparation of budget and how they are passed in the house. Understand the changes in size and flexibility of state and central budget along with the role played by Finance Commission.

### Content/ Syllabus: Unit wise course content distribution

### **1. Nature and Scope of Public Finance**

- Meaning and scope of Public Finance
- Distinction between Private and Public Finance
- Public goods vs. Private goods
- Economic Role of the Govt.: Allocation, Distribution and Stabilization

### 2. Issues from Indian Public Finance

- Working of Monetary and Fiscal Policies.
- Current Issues of India's Tax System.
- Analysis of Budget and Deficits
- Fiscal Federalism in India
- State and Local Finances

### Reference

1. Musgrave, R.A. and P.B. Musgrave, Public Finance in Theory and Practice, Mc-GrawHill, 1989.

2. Mahesh Purohit , "Value Added Tax: Experience of India and Other Countries", GayatriPublications, 2007.

3. KaushikBasu, 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, 1990.

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. S. K. Singh: Public Finance in Theory and Practice (Revised edition, S. Chand)