

**Learning Outcome based Curriculum Framework (LOCF)**

**For**

**Choice Based Credit System (CBCS)**

**Syllabus**

**B.Sc. Honours in Economics**

**w.e.f. Academic Session 2020-21**



**Kazi Nazrul University**  
**Asansol, Paschim Bardhaman**  
**West Bengal 713340**

## PREAMBLE

The objective of any programme at a Higher Education Institution is to create for its students a sound foundation for their character development which directly contributes to the well-being of a nation. Kazi Nazrul University envisions all its programmes in the spirit of its “motto” which is to inspire the youth to show steadfastness and devotion in a fearless pursuit of truth. The LOCF aims at preparing young minds for constructive and productive character development by honing their creative and humanistic skills for their own betterment as well as for the greater good of the society. In order to provide an opportunity to students to discover a method of thinking which will help them realise their true potential, the University offers a Learning Outcome-based Curriculum Framework (LOCF) for all its Under Graduate programmes.

The LOCF approach is intended to provide focused, outcome-based syllabi at the undergraduate level with an agenda to structure the teaching-learning experiences in a more student-centric manner by making the courses flexible and by offering students more choices. The LOCF approach has been adopted to strengthen the teacher- learner interaction as students engage themselves in programmes of their choice and learn to realize their inner calling. As the Under- Graduate Programmes focus on ‘preparing minds’, they will create individuals who will have intellectual prowess, interactive competence, courage to lead the world and also compassion and empathy for fellow human beings. The LOCF thus aims at strengthening not merely students’ employability skills but also at imparting to them vital life-skills required to lead a happy personal and social life.

Each programme vividly elaborates its nature and promises the outcomes that are to be accomplished by studying the courses. The programmes also state the attributes that they offer to inculcate at the graduation level. The graduate attributes encompass values related to students’ well-being, emotional stability, critical thinking etc. intermingled with a sense of social justice and harmony. In short, each programme prepares students for employability, sustainability and life-long learning. The new curriculum will empower students to innovate and also inspire them to convert their innovations into real business models for the country’s economic and social prosperity. The proposed LOCF offers better understanding of the business world and aims at building students’ entrepreneurial skills by giving them hands-on training. The Kazi Nazrul University hopes the LOCF approach of the programme will motivate students to transition from being passive knowledge-seekers to becoming active and aware knowledge-creators.

## Semester- I

### *Course Name: Microeconomic Theory - I*

*Course Code: BSCHECOC101*

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

#### *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.

### *References/ Suggested Readings*

1. Hal R. Varian: Intermediate Microeconomics: A Modern Approach, 8th edition, W.W. Norton and Company/Affiliated East-West Press (India). **The workbook by Varian and Bergstrom may be used for problems.**
2. R. S. Pindyck and D. N. Rubinfeld : Microeconomics, 8th Edition, Pearson India.
3. C. Snyder and W. Nicholson, Microeconomic Theory: Basic Principles and Extensions, 12<sup>th</sup> Edition, Cengage Learning (India).
4. A Koutsoyaniss: Modern Microeconomics, 2<sup>nd</sup> Edition, Macmillan Press Ltd. Hound mills/ Palgrave Macmillan (India).
5. H.L Ahuja: Advance Economic Theory-Microeconomics Analysis, 21<sup>st</sup> Edition, S Chand & Co Ltd.
6. Satya R. Chakravarty: Microeconomics, 1<sup>ST</sup> Edition, Allied Publishers Ltd.

## ***Course Name: Macroeconomic Theory - I***

**Course Code: BSCHECOC102**

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

### ***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.*
- 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.
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#### ***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***

1. Soumyen Sikdar: Principles of Macroeconomics, OUP.
2. Dornbusch, Fischer and Startz: Macroeconomics, 12th Edition. McGraw Hill Education India.
3. N. Gregory Mankiw and Mark P. Taylor: Macroeconomics, 4<sup>th</sup> Edition, Cengage Learning (India).
4. Richard T. Froyen: Macroeconomics Theories and Policies, 12<sup>th</sup> Edition, Pearson Education India.
5. Abel, Bernanke and Croushore: Macroeconomics, 8th Edition, Pearson.
6. Olivier Blanchard: Macroeconomics, 7<sup>th</sup> Edition, Pearson Education India.
7. Sampat Mukherjee: Macroeconomics A Global Text, 1<sup>st</sup> Edition, New Central Book Agency (P) Ltd.
8. D.N Dwivedi: Macroeconomics Theory and Policy, 5<sup>th</sup> Edition, McGraw Hill India

## ***Course Name: Microeconomic Theory - I***

**Course Code: BSCHECOGE101**

<b>Course Type: GE(Theory)</b>	Course Details: GEC-1		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

### ***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. Acquire the concept of different types of costs and the relevance of costs of production in making pricing decision by a producing unit.***

### ***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 – concept of equilibrium.

#### ***Unit-2 Theory of Demand and Indifference Curve Approach***

- The Marshallian Approach: measurement of utility – derivation of demand curve.
- Indifference curve and its properties - price consumption curve and income consumption curve, - price effect, income effect and substitution effect, derivation of demand curve – Giffen’s paradox– market demand – concept of average revenue, marginal revenue.

- 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***

- Production function – relation between total, average and marginal productivities – law of variable proportions – the fixed coefficient Production function.
- Isoquant and its 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.

### ***Unit -4. Theory of Cost***

- Different concepts of costs, short run cost analysis and long run cost Analysis – total, average and Marginal cost curves – long run cost curves as envelope of short run cost curves.

### ***Unit -5. 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

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

1. R. S. Pindyck and D. N. Rubinfeld : Microeconomics, 8th Edition, Pearson India.
2. A Koutsoyaniss: Modern Microeconomics, 2<sup>nd</sup> Edition, Macmillan Press Ltd. Hound mills/ Palgrave Macmillan (India).
3. H.L Ahuja: Modern Microeconomics Theory and Applications, 19<sup>th</sup> Edition, S Chand & Co Ltd.



## ***Course Name: Indian Economics: Post Independence***

**Course Code: BSCHECOGE102**

<b>Course Type: GE (Theory)</b>	Course Details: GEC-1		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

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

*(After the completion of the course the students will be)*

- 1. Informed about the situation of the Indian economy in the post- independence regime.*
- 2. Acquainted with different policies, relating to agriculture, industry etc. undertaken after independence to build up a self-sufficient economy.*
- 3. Updated regarding growth experience of the Indian economy amidst huge population pressure and the ways to move the economy in the growth trajectory.*

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

#### ***Unit I: 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

#### ***Unit2. 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

***References/ Suggested Readings***

1. Misra D. and Puri K. :Indian Economy, 38<sup>th</sup> Edition, Himalaya Publishing House.
2. Datt and Sundharam (Revised by G.Datt and A. Mahajan) , Indian Economy, 72<sup>nd</sup> Edition, S. Chand company Pvt Ltd (New Delhi)

***Additional Reading***

1. Swapan Kumar Roy and Joydeb Sarkhel: Bharoter Arthaniti –Bengali Version, 4<sup>th</sup> Edition, Book Syndicate Private Ltd (Kolkata)
2. Debesh Mukerjee: Samakalin Bharatiya Arthaniti, 9<sup>th</sup> Edition, New Central Book Agency (Kolkata)

## Semester- II

### *Course Name: Microeconomic Theory - II*

*Course Code: BSCHECOC201*

Course Type: <b>Core (Theory)</b>	Course Details:CC-3		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

#### *Course Learning Outcomes:*

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

- 1. To understand, the decision-making process in different forms of market structure such as monopolistic competition, oligopoly and monopoly markets.*
- 2. To deal with the theoretical aspect and issues in the factor pricing theories.*
- 3. To understand the framework of General equilibrium and Pareto criteria of optimality.*

*Content/ Syllabus: Unit wise course content distribution*

#### *Unit -1. 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
- **Monopolistic competition:** short run and long run equilibrium, Chamberlin large group model. 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/ Suggested Readings***

1. A Koutsoyaniss: Modern Microeconomics, 2<sup>nd</sup> Edition, Macmillan Press Ltd. Hound mills/ Palgrave Macmillan (India).
2. R. S. Pindyck and D. N. Rubinfeld : Microeconomics, 8th Edition, Pearson India.
3. H.L Ahuja: Advance Economic Theory-Microeconomics Analysis, 21<sup>st</sup> Edition, S. Chand Publishing.
4. C. Snyder and W. Nicholson, Microeconomic Theory: Basic Principles and Extensions, 12<sup>th</sup> Edition, Cengage Learning (India).
5. D.N Dwivedi: Microeconomics II, 1<sup>st</sup> Edition, Pearson India.

## Semester- II

### *Course Name: Mathematical Economics - I*

*Course Code: BSCHECOC202*

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

#### *Course Learning Outcomes:*

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

- 1. To understand basic concepts, procedures and techniques of mathematical economics.*
- 2. To discuss how these tools can be applied in economics.*
- 3. To develop analytical ability to express economic ideas using mathematics techniques.*

#### *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 derivatives: addition, subtraction, product and division, and derivatives of functions; Concepts of partial derivatives. Applications - Elasticities, utility-production-cost-revenue-profit functions.

- **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 measure 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.

### *References/ Suggested Readings*

1. Sydsaeter and Hammond: Mathematics for Economic Analysis, 1<sup>st</sup> Edition, Pearson India.
2. Hoy, Livernois, McKenna, Rees and Stengos: Mathematics for Economics, 3<sup>rd</sup> Edition, MIT Press Ltd./ Prentice Hall India Learning Private Limited.
3. Simon and Blume: Mathematics for Economists, Viva-Norton Student Edition, Viva Books.
4. Chiang, A.C. & Wainwright, K: Fundamental Methods of Mathematical Economics, 4th Edition, McGraw Hill Education (India) Private Limited.
5. Dowling, E.T: Introduction to Mathematical Economics, Schaum's Outline Series, 1<sup>st</sup> Edition, McGraw Hill.
6. James M. Henderson and Richard E.Quandt: Microeconomic Theory A Mathematical Approach, 3<sup>rd</sup> Edition, Tata McGraw-Hill Edition.

## ***Course Name: Money and Banking***

**Course Code: BSCHECOGE 201**

<b>Course Type: GE (Theory)</b>	Course Details: GEC-2		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

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

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

- 1. To understand some basic ideas relating to monetary analysis and financial markets with reference to Indian financial markets.***
- 2. To gain knowledge about the theories of demand for money and supply of money, measures of money supply in India.***
- 3. To develop knowledge of working of banking- commercial banks, central bank, rural banking, non-banking financial intermediaries.***

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

#### ***Unit I: Money***

- Definition, Functions, and Different Types of Money (M1, M2 etc.).
- Quantity Theory of Money: Fisher's Version and Cambridge Version

#### ***Unit2. Banking***

- Definition and Functions of Commercial Banks, Credit Creation of Commercial Banks.
- Functions of Central Banks, Credit Control Methods of Central Bank.

#### ***Unit -3 Non-bank Financial Intermediaries in India (NBFIs)***

- Definition of NBFIs, Distinction between Commercial Banks and NBFIs

- Different NBFIs working in India.

***References/ Suggested Readings***

1. S.B Gupta: Monetary Economics: Institutions, Theory and Policy, 4<sup>th</sup> Edition, S. Chand Publishing.
2. Cauvery, Kruparani, Sudha and Manimekalai: Monetary Economics, 1<sup>st</sup> Edition Revised, S. Chand Publishing.
3. Pathak Bharti: Indian Financial System, 5<sup>th</sup> Edition, Pearson Education India.
4. Siddhartha Sankar Saha: Indian Financial System: Financial Markets, Institutions and Services, 2<sup>nd</sup> Edition, McGraw Hill.

***Additional Reading***

5. Sujatra Bhattacharyya: Indian Financial System, 1<sup>st</sup> Edition, Oxford University Press



## ***Course Name: Microeconomic Theory-II***

**Course Code: BSCHECOGE 202**

<b>Course Type: GE (Theory)</b>	Course Details: GEC-2		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

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

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

- 1. To understand, the decision-making process in different forms of market structure such as monopolistic competition, oligopoly and monopoly markets.*
- 2. To acquire knowledge about the factor pricing theories.*

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

#### ***Unit I: Imperfect Competition***

- Monopoly: Short run and long run equilibrium, Price Discrimination.
- Monopolistic competition: short run and long run equilibrium – excess capacity.
- Oligopoly: Characteristics of oligopoly and duopoly (Collusive and non-collusive: definition only), Cournot Model.

#### ***Unit2. 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.

***References/ Suggested Readings***

1. A Koutsoyaniss: Modern Microeconomics, 2<sup>nd</sup> Edition, Macmillan Press Ltd. Hound mills/ Palgrave Macmillan (India).
2. R. S. Pindyck and D. N. Rubinfeld : Microeconomics, 8th Edition, Pearson India.
3. H.L Ahuja: Advance Economic Theory-Microeconomics Analysis, 21<sup>st</sup> Edition, S Chand & Co Ltd.
4. D.N Dwivedi: Microeconomics II, 1<sup>st</sup> Edition, Pearson India.

## Semester- III

### *Course Name: Statistical Methods-I*

*Course Code: BSCHECOC301*

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

#### *Course Learning Outcomes:*

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

1. *To understand basic knowledge of data presentation, measures of central tendency, dispersion, skewness and kurtosis.*
2. *To grasp knowledge of correlation, simple regression analysis and Index numbers.*
3. *To develop skills in the field of economic analysis and reasoning.*

#### **Unit -1. Tabular and Diagrammatic Presentation of Data**

Meaning of statistics. 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/ Suggested Readings***

1. Gun, Gupta and Dasgupta: Fundamental of Statistics: – Vol. I, 8<sup>th</sup> Edition & Vol. II 9<sup>th</sup> Edition, The World Press Private Limited.
2. S.P Gupta: Statistical Methods, 43<sup>rd</sup> Edition, S. Chand & Sons Private Limited.
3. S.C Gupta and V. K. Kapoor: Fundamentals of Mathematical Statistics, 12<sup>TH</sup> Edition, S. Chand & Sons Private Limited.
4. N. G. Das: Statistical Method (Volume I & II), 1<sup>st</sup> Edition, Tata McGraw Hill Education India.
5. Irwin Miller and Marylees Miller: John E. Freund's Mathematical Statistics with Applications, 8th Edition, Pearson.

**Semester- III**

**Course Name: Macroeconomic Theory-II**

**Course Code: BSCHECOC302**

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

**Course Learning Outcomes:**

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

- 1. To grasp knowledge of theories of consumption, investment and the importance of these theories in analyzing aggregate behaviour.*
- 2. To understand theoretical aspects of demand for and supply of money.*
- 3. To understand the concepts of and impact of inflation in an economy.*

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

**Unit -1. Consumption Function**

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

**Unit-2. 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
- Net Present Value criterion and Marginal Efficiency criterion of Investment
- The Fixed Accelerator Principle of Investment – its Implications and Limitations.
- The Flexible Accelerator Principle of Investment – its Implications and Limitations, (Multiplier accelerator theory).

**Unit -3. Money Market**

- Three motives of holding money – Transaction, Precautionary and Speculative demand for money. the liquidity trap analysis.
- Keynesian liquidity preference theory.
- The inventory theoretic approach to transaction demand for money –Baumol and Tobin
- Supply of money – credit creation by commercial banks – money multiplier – interest sensitivity of money supply
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#### ***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/ Suggested Readings***

1. Soumyen Sikdar: Principles of Macroeconomics, OUP.
2. Dornbusch, Fischer and Startz: Macroeconomics, 12th Edition. McGraw Hill Education India.
3. N. Gregory Mankiw and Mark P. Taylor: Macroeconomics, 4<sup>th</sup> Edition, Cengage Learning (India).
4. Richard T. Froyen: Macroeconomics Theories and Policies, 12<sup>th</sup> Edition, Pearson Education India.
5. Abel, Bernanke and Croushore: Macroeconomics, 8th Edition, Pearson.
6. Olivier Blanchard: Macroeconomics, 7<sup>th</sup> Edition, Pearson Education India.
7. Sampat Mukherjee: Macroeconomics A Global Text, 1<sup>st</sup> Edition, New Central Book Agency (P) Ltd.
8. D.N Dwivedi: Macroeconomics Theory and Policy, 5<sup>th</sup> Edition, McGraw Hill India.

### Semester- III

## *Course Name: Development Economics*

*Course Code: BSCHECOC303*

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

#### *Course Learning Outcomes:*

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

- 1. To understand the concept of development, distinction between economic growth and economic development and also the concepts sustainable development, inclusive development, human development etc.*
- 2. To understand the reasons behind difference in growth rate between countries and pinpoint the factors responsible for poor economic status of the developing countries.*
- 3. To gain knowledge regarding development strategies needed for a labour surplus economy and also the choice of technique in such an economy.*

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

##### **Unit -1. Concept of Economic Development**

Meaning of Development, different concepts of development –Sustainable development, Participatory development, Inclusive development, Human development, Growth and Development – Broad Indicators of Economic Development – Per capita Income – PQLI– Basic needs approach – Human Development Index – Gender Development Index –Gender Empowerment Measure - Human Poverty Index- Global Hunger 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/ Suggested Readings***

1. Michael P. Todaro and Stephen C. Smith: Economic Development, 12<sup>th</sup> Edition, Pearson Education India.
2. Kausik Basu: Analytic Development Economics: The Less Developed economy Revisited, 1<sup>st</sup> Edition, Oxford University Press.
3. ML Jhingan and BK Jhingan: The Economics of Development and Planning, 42<sup>nd</sup> Edition, Vrinda Publications (P) Limited.
4. Felix Raj, Sampat Mukherjee, Mallinath Mukherjee, Amitava Ghose, Rajendra N. Nag: The Contemporary Development Economics (Adam Smith to Amartya Sen), 3<sup>rd</sup> Edition, New Central Book Agency.
5. A.P Thirlwall: Economic of Development, 9<sup>th</sup> Edition, Palgrave Macmillan
6. H.L Ahuja: Development Economics, 1<sup>st</sup> Edition, S. Chand & Sons Private Limited.
7. Sudhir Anand: Recasting Human Development Measures, UNDP Discussion paper March, 2018.  
[http://hdr.undp.org/sites/default/files/anand\\_recasting\\_human\\_development\\_measures.pdf](http://hdr.undp.org/sites/default/files/anand_recasting_human_development_measures.pdf)



### Semester- III

## ***Course Name: Introductory Macroeconomics***

***Course Code: BSCHECOGE301***

Course Type: <b>Core (Theory)</b>	Course Details: GEC-3		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

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

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

- 1. Realize 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.***
- 2. Understand the development of the two popular macroeconomic thoughts; the Classical and the Keynesian theory of income and employment.***

#### ***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. National Income Accounting***

- Circular flow of income – two sector model – Definition of national income - Concepts and Measurement of GNP, NNP, GDP, NDP
- Method of calculating national income- product method, income method and expenditure method.

##### ***Unit -3 The Simple Keynesian Model***

- Aggregate demand, aggregate supply – Keynesian Consumption Function and its properties – Factors affecting Consumption Expenditure– MPC, APC – Saving function – income and output determination in two sector model–the multiplier.

### ***Unit -4. The Classical System***

Classical theory of employment – full employment – equilibrium in classical system – Say’s law of market - criticism of classical model.

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

1. Dornbusch, Fischer and Startz: Macroeconomics, 12th Edition. McGraw Hill Education India.
2. N. Gregory Mankiw and Mark P. Taylor: Macroeconomics, 4<sup>th</sup> Edition, Cengage Learning (India).
3. Richard T. Froyen: Macroeconomics Theories and Policies, 12<sup>th</sup> Edition, Pearson Education India.
4. D.N Dwivedi: Macroeconomics Theory and Policy, 5<sup>th</sup> Edition, McGraw Hill India.
5. Sampat Mukherjee: Macroeconomics A Global Text, 1<sup>st</sup> Edition, New Central Book Agency (P) Ltd.

### Semester- III

## ***Course Name: Contemporary Issues of Indian Economy***

***Course Code: BSCHECOGE302***

Course Type: <b>Core (Theory)</b>	Course Details: GEC-3		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

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

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

- 1. To understand the situation of the Indian economy in the post- independence regime.***
- 2. To gain understanding regarding planning process in India and its implication for the overall development of the economy.***
- 3. To learn regarding problems related to foreign trade and tax structure.***

#### ***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 NitiAayog. Functions of Niti Aayog.

##### ***Unit-2. Public Sector in India***

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

##### ***Unit -3. India's Foreign Trade***

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

### ***Unit -4 Indian Tax System***

Direct and Indirect Taxes – Taxes on income and Wealth – Indian Tax Reform since 1991, GST in India.

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

1. Misra D. and Puri K.: Indian Economy, 38<sup>th</sup> Edition, Himalaya Publishing House.
2. Datt and Sundharam (Revised by G.Datt and A. Mahajan), Indian Economy, 72<sup>nd</sup> Edition, S. Chand company Pvt Ltd (New Delhi)
3. Uma Kapila: Indian Economy Since Independence, 31<sup>st</sup> Edition, Academic Foundation.
4. Ramesh Singh: Indian Economy, 13<sup>th</sup> Edition, McGraw Hill.

#### ***Additional Reading***

1. Swapan Kumar Roy and Joydeb Sarkhel: Bharoter Arthaniti –Bengali Version, 4<sup>th</sup> Edition, Book Syndicate Private Ltd (Kolkata)
2. Debesh Mukerjee: Samakalin Bharatiya Arthaniti, 9<sup>th</sup> Edition, New Central Book Agency (Kolkata)

**Semester- III**

**Course Name: Data Analysis**

**Course Code: BSCHECOSE301**

Course Type: <b>Core (Practical)</b>	Course Details: SEC-1		L-T-P:0-0-8		
Credit: 4	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		30			<b>20</b>

**Course Learning Outcomes:**

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

- 1. To understand methods of presentation of data in textual, tabular and diagrammatic form.**
- 2. To understand steps and problems associated with data processing and the analysis of various forms of data (quantitative, qualitative; cross section, time series).**
- 3. To do Project based on techniques taught in this paper which will be helpful to them in further research.**

**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/ Suggested Readings***

1. R.S.N Pillai Bagavathi: Sttistics Theory and Practice, 8<sup>th</sup> Edition, S. Chand & Sons Private Limited.
2. Gary Koop: Analysis of Economic Data, 4<sup>th</sup> Edition, John Wiley & Sons Ltd.
3. C R Kothari and Gaurav Garg: Research Methodology: Methods and Techniques,4<sup>th</sup> Edition, New Age International.
4. D. Bhattacharya and S. Roychowdhury : Statistics Theory and practice, 3<sup>rd</sup> Edition, U.N Dhur & Son Pvt. Ltd.
5. Santosh Gupta: Research Methodology and Statistical Techniques, Deep and Deep Publication Pvt. Limited.

[https://www.google.co.in/books/edition/Research\\_Methodology\\_And\\_Statistical\\_Tec/2Xdi9ScCN\\_IC?hl=en&gbpv=1](https://www.google.co.in/books/edition/Research_Methodology_And_Statistical_Tec/2Xdi9ScCN_IC?hl=en&gbpv=1)

### Semester- III

## ***Course Name: Basic Computer Applications***

***Course Code: BSCHECOSE302***

Course Type: <b>Core (Practical)</b>	Course Details: SEC-1		L-T-P:0-0-8		
Credit: 4	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		30			20

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

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

- 1. To acquire basic knowledge regarding use of Excel for sorting and filtering data to prepare various chart.***
- 2. To understand how to carry out statistical analysis using Excel.***
- 3. To do Project based on techniques taught in this paper which will be helpful to them in further research.***

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

##### ***Unit -1. Introduction to Excel***

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

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

- **Pivot Tables**: To extract the significance from a large, detailed data set.
- **Tables**: Create tables to analyze data in Excel
- **Solver**: 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/ Suggested Readings***

1. Levine, Stephan, Krehbiel, Berenson: Statistics for Managers Using Microsoft Excel, 8<sup>th</sup> Edition, Pearson India.
2. Gary Koop: Analysis of Economic Data, 4<sup>th</sup> Edition, John Wiley & Sons Ltd.
3. C R Kothari and Gaurav Garg: Research Methodology: Methods and Techniques, 4<sup>th</sup> Edition, New Age International.



## Semester- IV

### *Course Name: Statistical Methods-II*

*Course Code: BSCHECOC401*

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

#### *Course Learning Outcomes:*

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

- 1. To work on time series data to extract meaningful statistics and other characteristics of the data.*
- 2. To understand the concept of random variables and also some commonly used discrete and continuous distributions of random variables. Students will learn how to estimate population parameters based on random samples and test hypotheses about these parameters.*
- 3. To gather knowledge of descriptive and inferential statistical concepts for the analysis of economic data.*

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

##### **Unit -1. Time Series Analysis**

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/ Suggested Readings***

1. Gun, Gupta and Dasgupta: Fundamental of Statistics: – Vol. I, 8<sup>th</sup> Edition & Vol. II 9<sup>th</sup> Edition, The World Press Private Limited.
2. S.P Gupta: Statistical Methods, 43<sup>rd</sup> Edition, S. Chand & Sons Private Limited.
3. S.C Gupta and V. K. Kapoor: Fundamentals of Mathematical Statistics, 12<sup>TH</sup> Edition, S. Chand & Sons Private Limited.
4. Sheldon Ross: A First Course in Probability, 9<sup>th</sup> Edition, Pearson Education India.
6. N. G. Das: Statistical Method (Volume I & II), 1<sup>st</sup> Edition, Tata McGraw Hill Education India.
7. Irwin Miller and Marylees Miller: John E. Freund's Mathematical Statistics with Applications, 8th Edition, Pearson.

## ***Course Name: Indian Economics-I***

***Course Code: BSCHECOC402***

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

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

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

- 1. understand the situation of the Indian economy in the post- independence regime.***
- 2. be acquainted with different policies, relating to agriculture, industry etc. undertaken after independence to build up a self-reliant economy.***
- 3. be updated regarding growth experience of the Indian economy amidst huge population pressure and the ways to move the economy in the growth trajectory.***
- 4. understand the issues of poverty, unemployment and black economy.***

### ***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/ Suggested Readings***

1. Misra D. and Puri K.: Indian Economy, 38<sup>th</sup> Edition, Himalaya Publishing House.
2. Datt and Sundharam (Revised by G.Datt and A. Mahajan), Indian Economy, 72<sup>nd</sup> Edition, S. Chand company Pvt Ltd (New Delhi)
3. Arun Kumar: Indian Economy since Independence: Persisting Colonial Disruption, 1<sup>st</sup> Edition, Vision Books
4. Arun Kumar: The Black Economy in India, Revised and updated Edition 2017, Penguin Random House India.
5. Uma Kapila: Indian Economy Since Independence, 31<sup>st</sup> Edition, Academic Foundation.

### ***Additional Reading***

1. Swapan Kumar Roy and Joydeb Sarkhel: Bharoter Arthaniti –Bengali Version, 4<sup>th</sup> Edition, Book Syndicate Private Ltd (Kolkata)
2. Debesh Mukerjee: Samakalin Bharatiya Arthaniti, 9<sup>th</sup> Edition, New Central Book Agency (Kolkata)

## ***Course Name: Mathematical Economics-II***

***Course Code: BSCHECOC403***

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

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

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

- 1. To acquire knowledge of matrices and determinants and their applications in economics.***
- 2. To tackle the issues of optimization where the optimizer faces inequality constraints. Students will learn the technique of optimization where the objective functions as well as constraint inequalities are all linear.***
- 3. To understand basics of game theory as a tool in arriving decisions in markets where the sellers have mutual interdependence.***

### ***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. 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 -3. 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 -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.

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

1. Sydsaeter and Hammond: Mathematics for Economic Analysis, 1<sup>st</sup> Edition, Pearson India.
2. Chiang, A.C. & Wainwright, K: Fundamental Methods of Mathematical Economics, 4th Edition, McGraw Hill Education (India) Private Limited.
3. W. J. Baumol: Economic Theory and Operation Analysis, 4<sup>th</sup> Edition, Pearson Education India.
4. Drofman, Samuelson and Solow: Linear Programming and Economic Analysis, Dover Publications Inc.
5. N. D. Vora: Quantitative Techniques in Management, 5<sup>th</sup> Edition, Tata McGraw Hill.
6. J.K Sharma: Operation Research-Theory and Applications, 6<sup>th</sup> Edition, Macmillan India Ltd.
7. Suranjan Saha and Sampat Mukherjee: Quantitative Methods, 5<sup>th</sup> Edition, New Central Book Agency (P) Ltd.
8. J.G. Chakraborty & P. R. Ghosh: Linear Programming & Game Theory, 14<sup>th</sup> Edition, Moulik Library.
9. R. S. Pindyck and D. N. Rubinfeld : Microeconomics, 8th Edition, Chapter-13 Game theory and Competitive Strategy, Pearson India.

## ***Course Name: Public Economics***

***Course Code: BSCHCOGE401***

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

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

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

- 1. To understand the problems of resource allocation in the presence of public goods and externalities.***
- 2. To get an insight regarding the issues of public debt and its implication on the economic system.***
- 3. To understand the centre-state financial relations and their implications in a federal structure.***

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

#### ***Unit -1. Introduction***

The nature, scope and significance of public economics – Concept of Public goods and private goods – characteristics of public goods

Externality – Types of externality-positive and negative externality (concept only) – Market failure (concept only)

#### ***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 Finance***

Features of India's Federal finance - Center-state financial relations

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

1. Richard Musgrave and Peggy Musgrave: Public Finance in Theory and Practice, 5<sup>th</sup> Edition, McGraw Hill.
2. Sampat, Amitava and Ranjanendra: Analytical Public Finance (Ricardo to Musgrave), New Central Book Agency
3. Subrata Ganguly: Public Finance A Normative Approach, 10<sup>th</sup> Edition, The World Press Pvt. Ltd.
4. S.K Singh: Public Finance in Theory & Practice, 2<sup>nd</sup> Edition, S. Chand Publishing.
5. H.L Bhatia: Public Finance, 30<sup>th</sup> Edition, Vikas Publishing House.
6. R.K. Lekhi and Joginder Singh, Public Finance, 11<sup>th</sup> Edition, Kalyani Publishers.



## ***Course Name: Development Economics***

***Course Code: BSCHECOGE402***

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

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

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

- 1. To understand the concept of development, distinction between economic growth and economic development and also the concepts of sustainable development, inclusive development, human development etc.***
- 2. To understand the reasons behind difference in growth rate between countries and pinpoint the factors responsible for poor economic status of the developing countries.***
- 3. To grasp knowledge of various models to understand process of economic development and the issue of labour surplus economy with respect to choosing appropriate development strategy.***

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

#### ***Unit -1. Concept of Economic Development***

Meaning of Development, different concepts of development –Sustainable development, Participatory development, Inclusive development, Human development, Growth and Development – 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

### ***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).

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

1. Michael P. Todaro and Stephen C. Smith: Economic Development, 12<sup>th</sup> Edition, Pearson Education India.
2. ML Jhingan and BK Jhingan: The Economics of Development and Planning, 42<sup>nd</sup> Edition, Vrinda Publications (P) Limited.
3. Sampat Mukherjee: The Contemporary Development Economics (Adam Smith to Amartya Sen), 3<sup>rd</sup> Edition, New Central Book Agency.
4. H.L Ahuja: Development Economics, 1<sup>st</sup> Edition, S. Chand & Sons Private Limited.

## ***Course Name: Project on Rural Development***

***Course Code: BSCHECOSE401***

Course Type: <b>Core (Practical)</b>	Course Details: SEC-2		L-T-P:0-0-8		
Credit: 4	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		30			<b>20</b>

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

*This course is meant to encourage students to search on different aspects of rural development. Students are encouraged to examine the issues that may hinder the process of development in rural areas.*

### **Project Topics**

#### **(Broad indicative topics)**

<b><i>Rural industrialization</i></b>	<b><i>Decentralized planning in rural areas</i></b>
<b><i>Rural Infrastructure</i></b>	<b><i>Resource and Environment</i></b>
<b><i>Rural Electrification</i></b>	<b><i>Sustainable agriculture</i></b>
<b><i>Development of Irrigation facilities</i></b>	<b><i>Anti-poverty of measures</i></b>
<b><i>Economic status of the rural people</i></b>	<b><i>Progress of commercialization in rural areas</i></b>
<b><i>Consumer expenditure survey of rural household</i></b>	<b><i>Agricultural marketing</i></b>
<b><i>Development of education in rural areas</i></b>	<b><i>Migration and rural development</i></b>
<b><i>NGO and its role in rural development</i></b>	<b><i>Reverse migration</i></b>
<b><i>SHGs in rural areas</i></b>	<b><i>Intergenerational mobility in rural areas</i></b>
<b><i>Banking Sector development in rural areas</i></b>	<b><i>Unemployment problem in rural areas</i></b>
<b><i>MGNREGA and its usefulness in rural development</i></b>	<b><i>Women empowerment in rural areas: Recent trends</i></b>
<b><i>Agricultural development</i></b>	<b><i>Use of technology in rural development</i></b>
<b><i>Non-Farm sector in rural areas</i></b>	<b><i>Problems of informal sector</i></b>

<i>Drinking water and sanitization issues in rural areas</i>	<i>Digital literacy in rural areas</i>
<i>Role of women in rural development</i>	<i>Impact of Covid-19 in rural development</i>
<i>Social overhead capital in rural areas</i>	<i>Problems of rural credit</i>
<i>Health issues in rural areas</i>	

*The students may opt for field survey or may prepare his/her project on the basis of secondary data.*

*The Project work (may) contain the following sections*

Abstract (between 100-200 words) with 5 to 7 key words.

Introduction (objectives and need/importance of the study)

Review of Literature and identification of research gap

Statement of the Problem

Research Methodology

Findings/Results & Discussion

Policy recommendations/Suggestions

Conclusions

Limitations of study

Scope for Further Research

#### **Indicative Guidelines**

Students should be encouraged to use reference from ResearchGate, academia.edu, google scholar and government reports to prepare project report.

Manuscript Title: The title of the paper should be in bold letters, centered and fully capitalized.

Student's name, session, College name, address, mobile no, and email address should be given underneath the title.

Manuscript: Manuscript must be in British English prepared/typed on a Standard A4 Size Portrait Setting Paper with Times New Roman font with size 12 with 1.5 line spacing.

Headings: All the headings must be bold-faced, aligned left and fully capitalized. Leave a blank line before each heading.

Sub-Headings: All the sub-headings must be bold-faced, aligned left and fully capitalized.

The manuscript should preferably be in 2000 to 5000 WORDS, but the limits can vary depending on the nature of the manuscript.

Figures & Tables: These should be simple, crystal clear, centered, separately numbered & self-explained, and the titles must be above the table/figure. Sources of data should be mentioned below the table/figure. It should be ensured that the tables/figures are referred to in the main text.

Reference should be in APA Style.

## ***Course Name: Computer Applications in Economics***

***Course Code: BSCHECOSE402***

Course Type: <b>Core (Practical)</b>	Course Details: SEC-2		L-T-P:0-0-8		
Credit: 4	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		30			<b>20</b>

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

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

- 1. To understand different types of data and their presentation using spreadsheet/Excel.***
- 2. To understand how to carry out statistical analysis using Excel.***
- 3. To do Project based on techniques taught in this paper which will be helpful to them in further research.***

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

#### ***Unit -1. The Nature and Sources of Data for Economic Analysis***

Types of Data – Time Series, Cross Section – Basic Data Presentation; Introduction to Excel/Spreadsheet, Excel Basic, Formulas and Functions, Sort and Filter.

#### ***Unit-2. Graphical Representation of Data Sets***

Pie Chart, Bar Chart, Histogram frequency Polygon, Ogive, Bivariate Scatter Diagram.

#### ***Unit-3. Using Spreadsheet / Excel for Statistical Analysis Estimation of Descriptive Statistics***

Mean, Median, Mode, Standard Deviation, Simple Correlation, Regression.

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

1. Dhanasekaran, K: Computer Application in Economics, Brinda Publication..

2. R.S.N Pillai Bagavathi: Ststistics Theory and Practice, 8<sup>th</sup> Edition, S. Chand & Sons Private Limited.
3. C R Kothari and Gaurav Garg: Research Methodology: Methods and Techniques,4<sup>th</sup> Edition, New Age International.
4. Levine, Stephan, Krehbiel, Berenson: Statistics for Managers Using Microsoft Excel, 8<sup>th</sup> Edition, Pearson India.

## Semester-V

### *Course Name: Public finance*

*Course Code: BSCHECOC501*

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

#### *Course Learning Outcomes:*

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

- 1. To understand the problems of resource allocation in the presence of public goods and externalities.*
- 2. To get an insight regarding the issues of public debt and its implication on the economic system.*
- 3. To understand the centre-state financial relations and their implications in a federal structure.*

#### *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/ Suggested Readings***

1. Richard Musgrave and Peggy Musgrave: Public Finance in Theory and Practice, 5<sup>th</sup> Edition, McGraw Hill.
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. Sampat, Amitava and Ranjanendra: Analytical Public Finance (Ricardo to Musgrave), New Central Book Agency
5. Subrata Ganguly: Public Finance A Normative Approach, 10<sup>th</sup> Edition, The World Press Pvt. Ltd.
6. S.K Singh: Public Finance In Theory & Practice, 2<sup>nd</sup> Edition, S. Chand Publishing.
7. H.L Bhatia: Public Finance, 30<sup>th</sup> Edition, Vikas Publishing House.
8. R.K. Lekhi and Joginder Singh, Public Finance, 11<sup>th</sup> Edition, Kalyani Publishers

**Semester-V**  
**Course Name: International Economics**

**Course Code: BSCHECOC502**

Course Type: <b>Core (Theory)</b>	Course Details:CC-12		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

**Course Learning Outcomes:**

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

- 1. To develop a strong foundation in the principles of international economics which will help them to know the trade policies at the national and international levels and the impact of the globalization on income, employment and distribution of income.**
- 2. To understand classical and modern theories of international trade. It familiarizes students on trade policies on the one hand and on the other hand introduces open economy macroeconomics dealing with exchange rate determination in presence of 'expectation' and different policies to maintain stability in the external front.**
- 3. To understand and analyse the real-world trade related issues.**

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

**Unit -1 Introduction**

Basis of Trade – gains from trade

**Unit-2 Theory of Trade**

Adam Smith -Absolute Cost Advantage theory, The Ricardian theory – generalization of Ricardian model- the H-O Model- Physical and Price definition explanation of factor abundance, comparison of Comparative Advantage in the two (HO and Ricardo). Commodity and Factor prices under trade- factor price equalization theorem, Stolper-Samuelson Theorem-gains from trade and income distribution in free trade, factor intensity reversal and factor Prices-Leontief paradox, Rybczynski theorem, Demand Reversal, Offer Curve, 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 quotas and 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/ Suggested Readings***

1. Krugman, Obstfeld and Melitz: International Economics: Theory and Policy, 10<sup>th</sup> Edition, Pearson.
2. Salvatore: International Economics: Trade and Finance, 11<sup>th</sup> Edition, Wiley India Pvt. Ltd.
3. D.M Mithani: International Economics, 8<sup>th</sup> Edition, Himalaya Publishing House.
4. Soderstein and Reed: International Economics, 3<sup>rd</sup> Edition, Palgrave Macmillan.
5. M.L Jhingan: International Economics, 7<sup>th</sup> Edition, Vrinda Publications Pvt. Ltd

## ***Course Name: Classical Political Economy***

***Course Code: BSCHECODSE501***

Course Type: <b>Core (Theory)</b>	Course Details: DSE (DSE 1&2)		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

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

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

- 1. To gain insight regarding the development of economic thoughts starting from English Classical School.***
- 2. To understand the stage theories of development of Rostow and Marx.***
- 3. To understand the workings of capitalist economy in Marxian view.***

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

#### ***Unit -1 Classical Background***

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/ Suggested Readings***

1. Oskar Lange: Political Economy, vol. 1, Chapters 1 and 2, 1963, Elsevier Science.  
[https://www.google.co.in/books/edition/General\\_Problems/wtxsBQAAQBAJ?hl=en&gbpv=0](https://www.google.co.in/books/edition/General_Problems/wtxsBQAAQBAJ?hl=en&gbpv=0)
2. Paul M. Sweezy: The Theory of Capitalist Development: Principles of Marxist Political Economy, Aakar Books.
3. Hunt and Lautzenheiser: History of Economic Thought: A Critical Perspective, 3<sup>rd</sup> Edition, Taylor & Francis.
4. Habib, I. (1995). Capitalism in History. Social Scientist, 23(7/9), 15–31.  
<https://doi.org/10.2307/3517858>
5. Felix Raj, Sampat Mukherjee, Mallinath Mukherjee, Amitava Ghose, Rajendra N. Nag: The Contemporary Development Economics (Adam Smith to Amartya Sen), 2<sup>nd</sup> Edition, Chapter-4, The Stages of Growth (also its technical appendices) and chapter-23, The Genesis of Capitalism, New Central Book Agency.
6. H.L. Ahuja: Development Economics, 1<sup>st</sup> Edition, Chapter-20 Marx's Theory of Capitalist Development, S. Chand & Sons Private Limited.

## ***Course Name: Indian Economic History***

***Course Code: BSCHECODSE502***

Course Type: <b>Core (Theory)</b>	Course Details: DSE (DSE 1&2)		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

### **Course Learning Outcomes:**

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

- 1. To analyze key aspects of Indian economic development during the second half of British colonial rule.**
- 2. To investigate the situation of Indian economy with respect to agriculture, industry, infrastructural development during colonial regime.**

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

#### ***Unit -1 India: Its Colonial Structure***

Indian economy under colonial regime.

#### ***Unit-2 Macro Trends***

National Income; population; occupational structure.

#### ***Unit -3. Agriculture***

Agrarian structure and land relations; agricultural markets and institutions – credit, commerce and technology; trends in performance and productivity; famines.

#### ***Unit -4. Railways and Industry***

Railways; the de-industrialization debate; evolution of entrepreneurial and industrial structure; nature of industrialization in the interwar period; constraints to industrial breakthrough; labor relations.

#### ***Unit -5. Economy and State in the Imperial Context***

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.

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

1. Lakshmi Subramanian: History of India 1707-1857, 1<sup>st</sup> Edition, Chapter-4, Orient Blackswan.
2. Tirthankar Roy: The Economic History of India 1857-1947, Oxford University Press, 3rd edition.
3. J. Krishnamurty: Occupational Structure, Chapter-6, Dharma Kumar and Tapan Raychaudhuri (General editor), The Cambridge Economic History of India, Vol. 2: 1757-1970.
4. Irfan Habib: Indian Economy 1858-1914, A People 's History of India, Vol.28, Tulika.
5. Klein, I. (1984): When the rains failed: famine, relief, and mortality in British India. *The Indian Economic & Social History Review*, 21(2), 185–214.  
<https://doi.org/10.1177/001946468402100203>
6. Drèze, Jean (1991): "1. Famine Prevention in India." The Political Economy of Hunger: Volume 2: Famine Prevention. : Oxford University Press, 01.  
<https://oxford.universitypressscholarship.com/view/10.1093/acprof:oso/9780198286363.001.0001/acprof-9780198286363-chapter-2>
7. John Hurd: Railways, Chapter 8, pages.737-761, The Cambridge Economic History of India.
8. Rajat Ray (ed.): Entrepreneurship and Industry in India, 1994.
9. AK Bagchi: “Deindustrialization in India in the Nineteenth century: Some Theoretical Implications”- 1976, Journal of Development Studies.
10. MD Morris: Emergence of an Industrial Labour Force in India, Chapter 11, Summary and Conclusions, Oxford University Press, 1965.
11. K.N. Chaudhuri: Foreign Trade and Balance of Payments, Chapter 10, The Cambridge Economic History of India.
12. B.R. Tomlison: India and the British Empire 1880-1935, IESHR 1975, Vol.XII.
13. Dharma Kumar: The Fiscal System, Chapter 12, The Cambridge Economic History of India.
14. Basudev Chatterjee: Trade, Tariffs and Empire, Oxford University Press, 1992, Epilogue.
15. L. Visaria and P. Visaria: Population, Chapter 5, The Cambridge Economic History of India.

## ***Course Name: Money and Financial Market of India***

***Course Code: BSCHECODSE503***

Course Type: <b>Core (Theory)</b>	Course Details: DSE (DSE 1&2)		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

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

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

- 1. To understand the role of financial markets and financial institutions in the overall development of an economy.***
- 2. To understand about the structure and functions of money markets and capital markets in India.***
- 3. To understand the workings of the banking system of the country and the key roles played by RBI in effective supervision and control of the monetary system in India.***

### ***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/ Suggested Readings***

1. S.B Gupta: Monetary Economics: Institutions, Theory and Policy, 4<sup>th</sup> Edition, S. Chand Publishing.
2. L.M Bhole and Jitendra Mahakud: Financial Institutions and Markets - Structure, Growth & Innovations, 6<sup>th</sup> Edition, McGraw Hill.
3. M.Y Khan: Indian Financial System, 10<sup>th</sup> Edition, McGraw Hill.
4. Miskin and Eakins: Financial Markets and Institutions, 6<sup>th</sup> Edition, Pearson.
5. Cauvery, Kruparani, Sudha and Manimekalai: Monetary Economics, 1<sup>st</sup> Edition Revised, S. Chand Publishing.
6. Pathak Bharti: Indian Financial System, 5<sup>th</sup> Edition, Pearson Education India.
7. Siddhartha Sankar Saha: Indian Financial System: Financial Markets, Institutions and Services, 2<sup>nd</sup> Edition, McGraw Hill.
8. Jaydev Sarkhel & Seikh Salim: Bharter Arthik Byabostha(Indian Financial System), 2020, Mc Graw Hill

**Course Name: Environmental Economics**  
**Course Code: BSCHECODSE504**

Course Type: <b>Core (Theory)</b>	Course Details: DSE (DSE 1&2)		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

**Course Learning Outcomes:**

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

- 1. To understand the linkage between economy and the environment.**
- 2. To use economic techniques to analyze environmental problems and to assess environmental policies.**
- 3. To understand the issues of Climate change and policies of sustainable development.**

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

**Unit -1 Introduction**

Concept of Environment: Atmosphere, biosphere and geosphere, Environment – economy interlink age, Material balance model.

**Unit-2 Externality and property right issues**

Market failure and externality, concept of property right, public property, private property and common property resources, the Coase theorem

**Unit -3. The design and implementation of environmental policy:**

Pigouvian taxes and effluent fees, tradable pollution permit, basic idea of cost benefit analysis

**Unit -4. Resources and pricing:**

Distinction between exhaustible and renewable resources, concept of user cost and optimal depletion rules



### ***Unit 5- International environmental problem***

Trans-boundary environmental problem and climate change issues, basic aspects of Kyoto protocol, Trade and environment.

### ***Unit 6- Sustainable development***

Basic concept, measures and policies of sustainable development.

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

1. Charles Kolstad: Intermediate Environmental Economics, 2<sup>nd</sup> Edition, Oxford University Press.
2. Roger Perman, Yue Ma, James Michael Common, David Maddison and McGilvray: Natural Resource and Environmental Economics, 4<sup>th</sup> Edition, Pearson Education/Addison Wesley.
3. Jhingal and Sharma: Environmental Economics: Theory, Management and Policy, 2<sup>nd</sup> Edition, Vrinda Publications.
4. Karpagam M: Environmental Economics, 3<sup>rd</sup> Edition, Sterling Publishers Pvt. Ltd;
5. Muthukrishnan Subhashini: Economics of Environment, 2<sup>nd</sup> Edition, PHI Learning Pvt. Ltd.

## Semester-VI

**Course Name: Basic Econometrics**

**Course Code: BSCHECOC601**

Course Type: <b>Core (Theory)</b>	Course Details:CC-13		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

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

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

- 1. To understand the concept of econometrics.***
- 2. To handle economic data that are not generated as the result of a controlled experiment.***
- 3. To form and solve a model based on economic theories and using the results for forecasting or prediction.***

### ***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  $R^2$  – 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 Multicollinearity, Heteroscedasticity, Autocorrelation

### *References/ Suggested Readings*

1. N Damodar N Gujrati, Dawn C Porter and Manoranjan Pal: Basic Econometrics, 6<sup>th</sup> Edition, McGraw Hill.
2. Christopher Dougherty: Introduction to Econometrics, Oxford University Press

## **Semester-VI**

### **Course Name: Indian Economics-II**

**Course Code: BSCHECOC602**

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

### *Course Learning Outcomes:*

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

- 1. To understand about the history of planning process in India and the role of planning in the overall development of the economy and also the role of new institutions in furthering this progress.**
- 2. To be acquainted with the problems and policies with regard to public sector, tax structure in India, reforms in tax structure.**
- 3. To gain insights regarding India's foreign trade, the problems there off and the policies to be undertaken to mitigate trade deficit.**

### *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 Niti Aayog

***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 SEZs. Foreign investment flows since 1991.

***References/ Suggested Readings***

1. Misra D. and Puri K.: Indian Economy, 38<sup>th</sup> Edition, Himalaya Publishing House.
2. Datt and Sundharam (Revised by G.Datt and A. Mahajan), Indian Economy, 72<sup>nd</sup> Edition, S. Chand company Pvt Ltd (New Delhi)
3. Uma Kapila: Indian Economy Since Independence, 31<sup>st</sup> Edition, Academic Foundation.
4. Arun Kumar: Indian Economy since Independence: Persisting Colonial Disruption, 1<sup>st</sup> Edition, Vision Books
5. Ramesh Singh: Indian Economy, 13<sup>th</sup> Edition, McGraw Hill

**Course Name: Economics of Growth**  
**Course Code: BSCHECODSE601**

Course Type: <b>Core (Theory)</b>	Course Details: DSE (DSE 3&4)		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

**Course Learning Outcomes:**

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

- 1. To gain knowledge regarding Keynesian model of economic growth such as Harrod-Domar model and neoclassical growth model such as Solow model. Students will also learn basic endogenous growth theory (AK model).**
- 2. To understand the relevance of Trade as an engine of growth and development and the probable benefits and disadvantages of import substitution and export promotion policies.**

**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/ Suggested Readings***

1. Barro, Robert and Xavier Sala-i-Martin: Economic Growth, 2<sup>nd</sup> Edition, MIT Press.
2. Charles I. Jones: Introduction to Economic Growth, 2<sup>nd</sup> Edition, Viva-Norton Student Edition, Viva Books
3. H.L Ahuja: Development Economics, 1<sup>st</sup> Edition, Chapters-13, 14, 17, 37, 38, S. Chand & Sons Private Limited
4. N. Gregory Mankiw: Macroeconomics, 7<sup>th</sup> Edition, Chapter-7, Economic Growth I: Capital Accumulation and Population Growth and Chapter-8, Economic Growth II: Technology, Empirics, and Policy, Pages 191-254, Worth Publishers.
5. Sampat Mukherjee: Macroeconomics: A Global Text, 1<sup>st</sup> Edition, Chapters 42, 43 & 44, New Central Book Agency (P) Ltd.
6. Felix Raj, Sampat Mukherjee, Mallinath Mukherjee, Amitava Ghose, Rajendra N. Nag: The Contemporary Development Economics (Adam Smith to Amartya Sen), 2<sup>nd</sup> Edition, Trade and Development, Chapter-18, New Central Book Agency.

## ***Course Name: Agricultural Economics***

***Course Code: BSCHECODSE602***

Course Type: <b>Core (Theory)</b>	Course Details: DSE (DSE 3&4)		L-T-P:5-1-0		
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

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

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

- 1. To gain idea regarding Agricultural Economics. They also may be interested in agriculture, the backbone of Indian economy***
- 3. To develop ideas about various concepts like production, farm organization, agricultural marketing and finance, agricultural policy and so on***
- 4. To learn about the vast unharnessed potentials in Indian agriculture***

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

#### **Unit 1: Introduction**

- Definition, Nature, Scope of Agricultural Economics - Role of agriculture in the process of economic development, interdependence and complementarity between agriculture and industry
- Basic concepts- subsistence farming, sustainable agriculture, cropping pattern and cropping intensity, livestock, small and marginal farmers, agricultural labourers, precision agriculture, food subsidies, food safety net, food quality, fair price shops

#### **Unit 2: Production and Farm Organization:**

- Schultz's theory on traditional agricultural- Use of Technology in agricultural production -Mellor's theory of agricultural development
- Types of farm organization- measurement of efficiency in agricultural production - Yield gap analysis

#### **Unit 3: Agricultural Marketing and Finance**

- Meaning and characteristics of Agricultural Marketing - Marketable & Marketed surplus - Problems in Agricultural Marketing - Need for market regulation. Minimum support price and remunerative price.
- Contract farming and supply chain management- warehouse and other government agencies

- Agricultural Finance – role and importance-credit widening and credit deepening – Types of financial institutions – Cooperatives, NABARD, Commercial Banks, RRBs- agricultural sector lending under District Credit Plan- MFI's
- Risks and uncertainty in agriculture - insurance programmes

#### **Unit 4: Agricultural Policy, Agricultural Pricing and Globalization**

- Problems of agricultural development in LDCs- Significance of agricultural policies in India-National Agricultural Policy
- CACP – Minimum Support Price – Agricultural Price Policy
- Agriculture and WTO – Effects of Globalization

#### **References**

1. Bhaduri, A. (1984), *The Economic Structure of Backward Agriculture*, Macmillan, Delhi.
2. Chakaravathi RM, 1986, *Under Development and Choices in Agriculture*. Heritage Publ., New Delhi.
3. Dantwala, M.L. et.al (1991), *Indian Agricultural Development since Independence*, Oxford & IBH, New Delhi.
4. Gardner BL & Rauser GC. 2001. *Handbook of Agricultural Economics*. Vol. I. Agricultural Production. Elsevier.
5. Hakkim, V. M. Abdul, Joseph E. Abhilash, Gokul A. J. Ajay and Mufeedha, K. Precision Farming: The Future of Indian Agriculture. *Journal of Applied Biology & Biotechnology*. 2016; 4 (06): 068-072.
6. Heady EO. *Economics of Agricultural Production and Resource Use*, Prentice-Hall.
7. Lekhi R.K. & Singh J, 2015, *Agricultural Economics: An Indian Perspective*, Kalyani Publishers
8. Penson John B., Capps Oral, Rosson C. Parr Woodward Richard.T , 2019, *Introduction to Agricultural Economics*, Sixth Edition, Pearson Education
9. Purecell WD & Koontz, SR. 1999. *Agricultural Futures and Options: Principles and Strategies*. 2<sup>nd</sup> Ed. Prentice-Hall.
10. Reddy SS, Raghu Ram P, Neelakanta Sastry T V, Devi Bhavani, I, 2019 *Agricultural Economics Second Edition*, Oxford.
11. Sadhu AN, Singh Amarjit and Singh Jasbir, *Fundamentals of Agricultural Economics*, Himalaya Publishing House, Delhi
12. Sankayan PL. 1983. *Introduction to Farm Management*. Tata Mc Graw Hill.
13. Singh G, Jain TR, Trehan M, 2019, *Agricultural Economics*, V K Global Publications Pvt. Ltd.
14. Soni R.N. & Malhotra S., 2015, *Leading issues in agricultural economics*, Vishal Publishing Co.



## **Course Name: Entrepreneurial Economics**

**Course Code: BSCHECODSE603**

Course Type: <b>Core (Theory)</b>	Course Details: DSE (DSE 3&4)	L-T-P:5-1-0			
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
			<b>10</b>		<b>40</b>

### **Course Learning Outcomes:**

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

**1. To understand the role of the entrepreneur and their interaction with the wider economy.**

**2. To gain knowledge about; the concepts and basic characteristics of entrepreneurship, role of entrepreneurship in economic development, rural entrepreneurship, project identification and selection, theories of entrepreneurship, sources of finance for new ventures and expansion strategies.**

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

#### **Unit -1 Concept and types of Entrepreneurships**

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

#### **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
- Mclelland'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/ Suggested Readings***

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

**Course Name: Project on Socio Economic Aspects**

**Course Code: BSCHECODSE604**

Course Type: <b>Core (Practical)</b>	Course Details: DSE (DSE 3&4)	L-T-P:0-0-12			
Credit: 6	Full Marks: 50	CA Marks		ESE Marks	
		Practical	Theoretical	Practical	Theoretical
		30		20	

**Course Learning Outcomes:**

*This course is meant to encourage students to conduct theoretical or empirical survey on different socio-economic aspects and to give them some exposure to research works.*

**Project Topics**

**(Broad Indicative Topics)**

<b><i>Project on Agriculture</i></b>	<b><i>Project on poverty and employment</i></b>
<b><i>Project on Industry</i></b>	<b><i>Project on economic policies</i></b>
<b><i>Project on Banking and Finance</i></b>	<b><i>Project on West Bengal Economy</i></b>
<b><i>Project on Household Economic Status</i></b>	<b><i>Project on gender issues</i></b>
<b><i>Project on Household Consumption expenditure</i></b>	<b><i>Project on HDI comparison across states</i></b>
<b><i>Project on primary and higher education</i></b>	<b><i>Project on GDP comparison across states</i></b>
<b><i>Project on Environment</i></b>	<b><i>Project on public expenditure</i></b>
<b><i>Project on Health issues</i></b>	<b><i>Project on black economy</i></b>
<b><i>Project on service sector</i></b>	<b><i>Project on infrastructural development</i></b>
<b><i>Project on organized and unorganized sector</i></b>	<b><i>Impact of COVID-19 on Indian Economy</i></b>

**The students may opt for field survey or may prepare his/her project on the basis of secondary data.**

***The Project work (may) contain the following sections***

Abstract (between 100-200 words) with 5 to 7 key words.

Introduction (objectives and need/importance of the study)

Review of Literature and identification of research gap

Statement of the Problem

Research Methodology

Findings/Results & Discussion

Policy recommendations/Suggestions

Conclusions

Limitations of study

Scope for Further Research

***Indicative Guidelines***

Students should be encouraged to use reference from ResearchGate, academia.edu, google scholar and government reports to prepare project report.

Manuscript Title: The title of the paper should be in bold letters, centered and fully capitalized.

Student's name, session, College name, address, mobile no, and email address should be given underneath the title.

Manuscript: Manuscript must be in British English prepared/typed on a Standard A4 Size Portrait Setting Paper with Times New Roman font with size 12 with 1.5 line spacing.

Headings: All the headings must be bold-faced, aligned left and fully capitalized. Leave a blank line before each heading.

Sub-Headings: All the sub-headings must be bold-faced, aligned left and fully capitalized.

The manuscript should preferably be in 2000 to 5000 WORDS, but the limits can vary depending on the nature of the manuscript.

Figures & Tables: These should be simple, crystal clear, centered, separately numbered & self-explained, and the titles must be above the table/figure. Sources of data should be mentioned below the table/figure. It should be ensured that the tables/figures are referred to in the main text.

Reference should be in APA Style.