ECONOMICS SYLLABUS

2023 ADMISSION BATCH

ATTENTATIONS

FOR General Instructions, Total Credit, Course Structure, Course Name, Model Regulations, Grading System, Mark Distribution, SGPA - Semester Grade Point Average, CGPA - Cumulative Grade Point Average, Repeat Examination, Hard Case Rule, Question Pattern, GE, AECC, SEC, SECC, Grade Sheet etc. details, please visit <u>SYLLABUS Arts</u> tab of the College website.

DISTRIBUTION OF PAPERS

(ECONOMICS CORE)	
SEMESTER -I Core -1 Introductory Microeconomics : 100 (80 + 20) Core - 2 Mathematical Methods for Economics-I: 100 (80 + 20)	**SEMESTER -II** Core - 3 Introductory Macroeconomics: 100 (80 + 20) Core - 4 Mathematical Methods for Economics-II: 100 (80 +20)
SEMESTER -III Core - 5 Microeconomics-I: 100 (80+20) Core - 6 Macroeconomics -II: 100 (80+20) Core - 7 Statistical Methods for Economics: 100 (80+20)	**SEMESTER -IV** Core - 8 Microeconomics-II: 100 (80 + 20) Core - 9 Macroeconomics-II: 100 (80 + 20) Core -10 Research Methodology: 100 (80 + 20)
SEMESTER -V Core -11 Indian Economy-I: 100 (80 + 20) Core -12 Development Economics-I: 100 (80 + 20) DSE- 1 Introductory Econometrics: 100 (80 + 20) DSE -2 Public Economics: 100 (80 + 20)	**SEMESTER -VI** Core -13 Indian Economy-II: 100 (80 + 20) Core -14 Development Economics-II: 100 (80 + 20) DSE - 3 : International Economics: 100 (80 + 20) DSE - 4 Dissertation / Research Project: 100

ECONOMICS GENERAL ELECTIVES (ARTS)	
SEMESTER-III GE-3-Indian Economy-I: 100(80+20)	**SEMESTER-IV** GE-3-Indian Economy-II: 100(80+20)

ECONOMICS GENERAL ELECTIVES (COMMERCE)	
SEMESTER- I GE-1- Microeconomics 100(80+20)	**SEMESTER-II** GE-2-Macro and Indian Economy 100(80+20)
SEMESTER-III GE-3- Business Statistics 100(80+20)	 *********

+3 FIRST YEAR FIRST SEMESTER
Core Paper - 1
INTRODUCTORY MICROECONOMICS

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

Unit I: Exploring the Subject Matter of Economics, Markets and Welfare
The Ten Principles of Economics: How people make decisions; Working of the economy as a whole; Thinking Like an Economist: The economist as Scientist - The scientific method: Observation, Theory and more observation; Role of Assumptions; Economic Models; Why economists disagree; Graphs in Economics. The Market Forces; Markets and Competition; The Demand and Supply curves - Market vs Individual curves, Shifts in Demand and Supply Curves; Market Equilibrium and changes there in; Price Elasticity of Demand - determinants and computation; Income and Cross Elasticity of Demand; The Price Elasticity of Supply determinants and computation; Consumer and Producer Surplus.

Unit II: Theory of Consumer Choice
The Budget Constraint; Preferences - representing preferences with indifference curves; Properties of Indifference Curves; Two extreme examples of indifference curves; Optimization
- Equilibrium; Change in equilibrium due to changes in income, changes in price; Income and Substitution Effect; Derivation of Demand Curve; Three applications - Demand for Giffen goods, Wages and Labour Supply, Interest rate and Household saving.

Unit III: The Firm and Market Structures
Cost concepts; Production and Costs; The various measures of cost - Fixed and Variable cost, Average and Marginal cost; Cost curves and their shapes; Costs in the short run and in the long run; Economies and diseconomies of scale. Firms in Competitive Markets - What is a competitive market; Profit maximization and the competitive firm's supply curve; The marginal cost curve and the firm's supply decision; Firm's short- run decision to shut down; Firm's long-run decision to exit or enter a market; The supply curve in a competitive market - short run and long run.

Unit IV: The Input Markets
The Demand for Labour - The production function and the marginal product of labour; Value of the marginal product of labour and demand for labour; Shifts in labour demand curve; The supply of labour - the trade-off between work and leisure; Shifts in the labour supply curve; Equilibrium in the Labour Market; Other factors of production: Land and Capital; Linkages among factors of production.

Text Book:
Principles of Economics, Gregory N Mankiw, 6e Cengage Learning India Private Limited, New Delhi.

Reference Book:

1) Karl E. Case and Ray C. Fair (2007): *Principles of Economics*, 8th Edition, Pearson Education Inc.
2) Pindyck, Robert and Daniel Rubinfeld (2018): Microeconomics, 9th Edition, Pearson Education Inc.

+3 FIRST YEAR FIRST SEMESTER
Core Paper - 2
MATHEMATICAL METHODS FOR ECONOMICS-I

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This is the first of a compulsory two-course sequence. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Unit I: Preliminaries and Functions of one Real Variable

Sets and set operations; Cartesian product; relations; functions and their properties; Number systems, Types of Functions- constant, polynomial, rational, exponential, logarithmic; Graphs and graphs of functions; Limit and Continuity of functions; Limit theorems

Unit II: Derivative of a Function

Rate of change and derivative; Derivative and slope of a curve; Continuity and differentiability of a function; Rules of differentiation for a function of one variable; Application- Relationship between total, average and marginal functions

Unit III: Functions of two or more Independent Variables

Partial differentiation techniques; Geometric interpretation of partial derivatives; Partial derivatives in Economics; Elasticity of a function - demand and cost elasticity, cross and partial elasticity

Unit IV: Matrices and Determinants

Matrices: concept, types, matrix algebra, transpose, inverse, rank; Determinants: concept, properties, solving problems using properties of determinants, solution to a system of equations - Crammer's rule and matrix inversion method.

Text Book:
A. C. Chiang and K. Wainwright (2005): *Fundamental Methods of Mathematical Economics*, McGraw Hill International Edition.

Reference Book:
K. Sydsaeter and P. J. Hammond (2002): *Mathematics for Economic Analysis*. Pearson Educational Asia.

+3 FIRST YEAR SECOND SEMESTER
Core Paper - 3
INTRODUCTORY MACROECONOMICS

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This course aims to introduce the students to the basic concepts of Macroeconomics. Macroeconomics deals with the aggregate economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.

Unit I: Basic Concepts in Macroeconomics
Macro vs. Micro Economics; Limitations of Macroeconomics; Stock and Flow variables, Equilibrium and Disequilibrium, Partial and General Equilibrium Statics - Comparative Statics and Dynamics; National Income Concepts - GDP, GNP, NDP and NNP at market price, factor cost, real and nominal; Disposable personal Income;

Unit II: Measurement of Macroeconomic Variables
Output, Income and Expenditure Approaches; Difficulties of Estimating National Income; National Income Identities in a simple 2-sector economy and with government and foreign trade sectors; Circular Flows of Income in 2, 3 and 4-sector economies; National Income and Economic Welfare; Green Accounting.

Unit III: Money and Changes in its Value
Evolution and Functions of Money, Quantity Theory of Money - Cash Transactions, Cash Balances and Keynesian Approaches, Value of Money and Index Number of Prices, Inflation - Meaning, Causes, and Anti-Inflationary Measures; Classical, Keynesian, Monetarist and Modern Theories of Inflation, Inflationary Gap, Deflation- Meaning, Causes, and Anti-Deflationary Measurers, Depression and Stagflation; Inflation vs. Deflation

Unit IV: Determination of National Income
The Classical Approach - Say's Law, Theory of Determination of Income and Employment with and without saving and Investment; Basics of Aggregate Demand and Aggregate Supply and Consumption- Saving - Investment Functions, Basics ideals about aggregate demand, aggregate supply. The Keynesian Approach - Basics of Aggregate Demand and Aggregate Supply and Consumption, Saving, Investment Functions; The Principle of Effective Demand; Income Determination in a Simple 2-Sector Model; Changes in Aggregate Demand and Income- The Simple Investment Multiplier.

Text Book:
N. Gregory Mankiw (2010): *Macroeconomics*, 7th edition, Cengage Learning India Private Limited, New Delhi.

Reference Book:

Richard T. Froyen (2005): *Macroeconomics*, 2nd Edition, Pearson Education Asia, New Delhi.

+3 FIRST YEAR SECOND SEMESTER
Core Paper - 4
MATHEMATICAL METHODS FOR ECONOMICS II

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This course is the second part of a compulsory two-course sequence. This part is to be taught in Semester II following the first part in Semester I. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this Syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Unit I: Linear models:
Input- Output Model: Basic concepts and structure of Leontief's open and static Input-Output model; Solution for equilibrium output in a three-industry model; The closed model

Unit II: Second and Higher Order Derivatives and Integration:
Technique of higher order differentiation; Interpretation of second derivative; Second order derivative and curvature of a function; Concavity and convexity of functions; Points of inflection, Derivative of Implicit Function; Higher Order Partial Derivative Indefinite Integrals; Rules of Integration; Techniques of Integration: Substitution Rule, Integration by parts, and Partial Fractions; Definite Integral - Area Interpretation

Unit III: Single and Multivariable Optimization:
Optimum values and extreme values; Relative maximum and minimum; Necessary versus sufficient conditions- First and Second derivative tests (using Hessian Determinants); Economic applications thereof, First and second order condition for extrema of multivariable functions; Convex functions and convex sets

Unit IV: Optimization with Equality Constraints:
Effects of a constraint; Finding stationary value - Lagrange-Multiplier method (Two variable single constraint case only): First and second order condition; The Bordered Hessian determinant

Text Book:
A. C. Chiang and K. Wainwright (2005): *Fundamental Methods of Mathematical Economics*, McGraw Hill International Edition.

Reference Book:
K. Sydsaeter and P. J. Hammond (2002): *Mathematics for Economic Analysis*. Pearson Educational Asia.

+3 SECOND YEAR THIRD SEMESTER
Core Paper - 5
MICROECONOMICS I

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

The course is designed to provide a sound training in microeconomic theory to formally analyze the behavior of individual agents. Since students are already familiar with the quantitative techniques in the previous semesters, mathematical tools are used to facilitate understanding of the basic concepts; this course looks at the behavior of the consumer and the producer and also covers the behavior of a competitive firm.

Unit I: Consumer Theory I
Preferences and Utility, Axioms of Rational Choice, Utility, Trades and Substitutions, Indifference curves; Mathematics of Indifference curves, Utility functions for specific preferences, the many good case; Utility Maximization and choice: the 2-good case (graphical analysis), the n-good case, Indirect utility function, the Lump sum principle, Expenditure minimization, properties of expenditure function

Unit II: Consumer Theory II
The Income and Substitution Effects: Demand function, changes in income, changes in a goods price- Direct and Indirect Approaches (Slutsky), the Individual's Demand Curve, compensated (Hicksian) demand curves and functions, demand elasticity, Consumer Surplus, Demand relationships among goods, the 2-good case, substitutes and complements, Net (Hicksian) substitutes, and Complements, Substitutability with many goods

Unit III: Production Theory and Costs
Production Functions: Marginal productivity, Production with One Variable Input (labour) and with Two- Variable Inputs, Isoquant Maps and the Rate of Technical Substitution, Returns to Scale, Elasticity of Substitution, Some Simple Production Functions: Linear, Fixed Proportions, Cobb-Douglas; Technical Progress Definition of Cost and its properties, Cost minimizing input choices (Optimization principles, Expansion Path), Cost Functions and Shift in Cost Curves, Long-Run versus Short-Run Cost Curves

Unit IV: Profit Maximization
The Nature and Behavior of Firms, Marginal Revenue - Relationship between Average and marginal revenue, Short-Run Supply by a Price-Taking Firm, Profit Functions and its Properties, Profit maximization - General conditions, Input demands

Text Book:
C. Snyder and W. Nicholson (2012): Microeconomic Theory: Basic Principles and Extensions, 11th Edition, Cengage Learning, Delhi, India.

Reference Books:
1) H. R. Varian (2010): Intermediate Microeconomics: A Modern Approach, 8th Edition,
2) W.W. Norton and Company/Affiliated East-West Press (India). The workbook by Varian and Bergstrom may be used for problems.

+3 SECOND YEAR THIRD SEMESTER
Core Paper - 6
MACROECONOMICS I

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This course introduces the students to formal modeling of a macro-economy in terms of analytical tools. It discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. It also introduces the students to various theoretical issues related to an open economy.

Unit I: Consumption and Investment

Consumption - Income Relationship, Propensities to Consume and the Fundamental Psychological Law of Consumption; Implications of Keynesian Consumption Function; Factors Influencing Consumption Function; Measures to Raise Consumption Function; Absolute, Relative, Permanent and Life - Cycle Hypotheses Autonomous and Induced Investment, Residential and Inventory Investment, Determinants of Business Fixed Investment, Decision to Invest and MEC, Accelerator and MEI, Theories of Investment.

Unit II: Demand for and Supply of Money

Demand for Money - Classical, Neoclassical and Keynesian Approaches, The Keynesian Liquidity Trap and its Implications, Supply of Money, The Theory of Money Supply Determination and Money Multiplier, Measures of Money Supply in India

Unit III: Aggregate Demand and Aggregate Supply

Derivation of Aggregate Demand and Aggregate Supply Curves in the IS-LM Framework; Nature and Shape of IS and LM curves; Interaction of IS and LM curves and Determination of Employment, Output, Prices and Investment; Changes in IS and LM curves and their Implications for Equilibrium

Unit IV: Inflation, Unemployment and Expectations, and Trade Cycles

Inflation - Unemployment Trade off and the Phillips Curve - Short run and Long run Analysis; Adaptive and Rational Expectations; The Policy Ineffectiveness Debate; Meaning and Characteristics of Trade Cycles; Hawtrey's Monetary Theory, Hayek's Over-investment Theory and Keynes' views on Trade Cycles

Text Book:

N. Gregory Mankiw (2010): *Macroeconomics*, 7th edition, Cengage Learning India Private Limited, New Delhi

Reference Book:

Richard T. Froyen (2005): *Macroeconomics*, 2nd Edition, Pearson Education Asia, New Delhi.

+3 SECOND YEAR THIRD SEMESTER
Core Paper - 7
STATISTICAL METHODS FOR ECONOMICS

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This is a course on statistical methods for economics. It begins with some basic concepts and terminology that are fundamental to statistical analysis and inference. It is followed by a study and measure of relationship between variables, which are the core of economic analysis. This is followed by a basic discussion on index numbers and time series. The paper finally develops the notion of probability, followed by probability distributions of discrete and continuous random variables and introduces the most frequently used theoretical distribution, the Normal distribution.

Unit I: Data Collection and Measures of Central Tendency and Dispersion
Basic concepts: population and sample, parameter and statistic; Data Collection: primary and secondary data, methods of collection of primary data; Presentation of Data: frequency distribution; cumulative frequency; graphic and diagrammatic representation of data; Measures of Central Tendency: mean, median, mode, geometric mean, harmonic mean, their relative merits and demerits; Measures of Dispersion: absolute and relative - range, mean deviation, standard deviation, coefficient of variation, quartile deviation, their merits and demerits; Measures of skewness and kurtosis.

Unit II: Correlation and Regression Analysis
Correlation: scatter diagram, sample correlation coefficient - Karl Pearson's correlation coefficient and its properties, probable error of correlation coefficient, Spearman's rank correlation coefficient. Two variable linear regression analysis - estimation of regression lines (Least square method) and regression coefficients - their interpretation and properties, standard error of estimate.

Unit III: Time Series and Index Number
Time Series: definition and components, measurement of trend- free hand method, methods of semi-average, moving average and method of least squares (equations of first and second degree only), measurement of seasonal component; Index Numbers: Concept, price relative, quantity relative and value relative; Laspeyer's and Fisher's index, family budget method, problems in construction and limitations of index numbers, test for ideal index number.

Unit IV: Probability Theory and Sampling
Probability: Basic concepts, addition and multiplication rules, conditional probability; Meaning of Sampling, Types of Sampling: Probability Sampling verses Non-Probability Sampling; Simple Random Sampling and its selection, Systematic Sampling, Multi-stage Sampling, Quota Sampling; Error: Sampling and Non-sampling

Text books:
S. C. Gupta (2017): *Fundamentals of Statistics*, Himalaya Publishing House, Delhi

Reference Book:
Murray R. Speigel (2017): *Theory & Problems of Statistics*, Schaum's publishing Series.

+3 SECOND YEAR FOURTH SEMESTER
Core Paper - 8
MICROECONOMICS II

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This course is a sequel to Microeconomics I. The emphasis will be on giving conceptual clarity to the student coupled with the use of mathematical tools and reasoning. It covers Market, general equilibrium and welfare, imperfect markets and topics under information economics.

Unit I: Firm Supply and Equilibrium
Market Environments; Pure competition; Supply decision of a competitive firm and Exceptions; Inverse Supply Function; Profits and Producer's Surplus; Long Run Supply Curve of a Firm; Long Run Average Costs; Short Run and Long Run Industry Supply; Industry Equilibrium in Short and Long Run; Meaning of Zero Profits; Economic Rent.

Unit II: General Equilibrium, Efficiency and Welfare
The Edge worth Box; Trade; Pareto Efficient Allocations; Existence of equilibrium and efficiency; The Welfare Theorems and their implications; The Firm; Production and the Welfare Theorems; Production possibilities, comparative advantage and Pareto efficiency.

Unit III: Market Imperfections: Monopoly and Oligopoly
Barriers to Entry, Profit Maximization and Output Choice, Monopoly and resource Allocation, Monopoly, Product Quality and Durability, Price Discrimination, Second Degree Price Discrimination through Price Schedules, Regulation of Monopoly, Dynamic Views of Monopoly, Monopolistic competition; price output determination; excess capacity under monopolistic competition.

Unit IV: Game Theory
The Payoff Matrix of a Game; Nash Equilibrium; Mixed Strategies ;The Prisoner's Dilemma;
Repeated Games; Enforcing a cartel; Sequential Games; A Game of entry deterrence.
Oligopoly - Choosing a strategy; Quantity and price leadership; Simultaneous Quantity Setting;
Example of Cournot Equilibrium; Simultaneous Price Setting; Collusion

Text Book:
1) H. R. Varian (2010): Intermediate Microeconomics: A Modern Approach, 8th Edition
2) W.W. Norton and Company/Affiliated East-West Press (India). The workbook by Varian and Bergstrom may be used for problems.

Reference Book:
1) C. Snyder and W. Nicholson (2012): Microeconomic Theory: Basic Principles and Extensions, 11th Edition Cengage Learning, Delhi, India.
2) Pindyck, Robert and Daniel Rubinfeld (2018): Microeconomics, 9th Edition, Pearson Education Inc.

+3 SECOND YEAR FOURTH SEMESTER
Core Paper - 9
MACROECONOMICS II

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This course is a sequel to Macroeconomics I. In this course, the students are introduced to the long run dynamic issues like growth and technical progress. It also provides the micro-foundations to the various aggregative concepts used in the previous course.

Unit I: Modeling Economic Growth
Accumulation of Capital in the basic Solow Model; supply and demand for goods, growth in the capital stock and the steady state, Golden rule level of capital: Comparing steady states, transition to the golden rule steady state with too much and too little capital, Population Growth, Technological Progress- Solow version, Beyond Solow Model and Endogenous Growth

Unit II: Open Economy and Macroeconomic Policy
Balance of payments- concept; meaning of equilibrium and disequilibrium in balance of payments; Determination of foreign exchange rate- the balance of payments theory; Fixed versus flexible exchange rates; Short-run open economy model- the basic Mundell-Fleming model; Macroeconomic Policies - Fiscal policy, Crowding -out and Crowding - in; Monetary policy and instruments, the Transmission Mechanism; Effectiveness of macroeconomic policies in open and closed economies

Unit III: Classical and Keynesian Macroeconomics Thoughts
Keynes verses classics: Classical macroeconomics, Employment and output determination, Say's law, the quantity theory of money, Keynes's General theory: Keynes's main propositions; analysis of the labour market, Keynes's critique of Say's law and Quantity theory of money, the orthodox Keynesian school, underemployment equilibrium in the Keynesian model, the Phillips curve and orthodox Keynesian school

Unit IV: Monetarist and New Classical Macroeconomic Thoughts
The orthodox monetarist school, the Quantity Theory of Money approach, the expectations augmented Phillips curve analysis, the orthodox monetarist school and stabilization policy New Classical Economics: The influence of Robert e Lucas Jr, the structure of new classical models: the Rational Expectations hypothesis; and policy implications

Text Book:
N. Gregory Mankiw (2010): *Macroeconomics*, 7th edition, Cengage Learning India Private Limited, New Delhi

Reference Book:
Brian Snowdon and Howard R Vane (2005): Modern Macroeconomics: Its Origins, Development and Current State, Edward Elgar.

+3 SECOND YEAR FOURTH SEMESTER
Core Paper - 10
Research Methodology

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

The course is to develop a research orientation among the students and to acquaint them with fundamentals of research methods. Specifically, the course aims at introducing them to the basic concepts used in research and to scientific social research methods and their approach. It includes discussions on sampling techniques, research designs and techniques of analysis.

Unit I: Basics of Research

Introduction to Research: Meaning, Objectives, Motivation, Types, Approaches, Significance, Research Process, Criteria of Good Research; Qualities of a Good Researcher, Research as a Career

Unit II: Research Problem

Defining the Research Problem: What is a Research Problem? Selecting the Problem, Necessity of Defining the Problem, Technique Involved in Defining a Problem; Research Design: Meaning, Need, Features of a Good Design, Important Concepts Relating to Research Design, Different Research Designs, Basic Principles of Experimental Designs

Unit III: Issues in Research

Measurement in Research, Measurement Scales, Sources of Error in Measurement, Tests of Sound Measurement, Techniques of Measurement Tools, Scaling and Important Scaling Technique, Research Ethics: codes and ethics, permissions to research, responsibilities, confidentiality, feedback, participatory research; Research Proposal and literature review: research proposal, review of literature, levels of analysis, using the library and internet, abstracting, word processing, plagiarism, Concept of IPR

Unit IV: Actions in Research

English in report writing: words, sentences, paragraph, writing style; The Report: improving quality, sections, drawing conclusions, evaluation checklists, persistence; Common Citation Styles

Text Book:

Kothari, C. R. (2004): Research Methodology: Methods and Techniques, New Age International Private Limited Publishers, New Delhi.

Reference Books:

1) Guthrie, G. (2010): Basic Research Methods, Sage Publications India Private Limited, New Delhi.
2) Anderson Durston, Poole - Assignment and Thesis writing (Wiley Easter Limiting)

Core Paper - 11
INDIAN ECONOMY I

Time: **3** Hrs.   End Semester Theory: **80** Marks

Credit: **06**   Mid Semester Theory: **20** Marks

Using appropriate analytical frameworks, this course reviews major trends in economic indicators and policy debates in India in the post-Independence period, with particular emphasis on paradigm shifts and turning points. Given the rapid changes taking place in India, the reading list will have to be updated annually.

Unit I: Basic Characteristics of Indian Economy as a Developing Economy
Indian Economy in the Pre-British Period; The Structure and Organization of Villages and Towns; Industries and Handicrafts in Pre-British India; Colonialism; Economic Consequences of British Rule; Decline of Handicrafts and Progressive Ruralization; The Land System and Commercialization of Agriculture; Industrial Transition; Colonial Exploitation and Impacts -Underdevelopment; Colonization and Modernization; State Policies and Economic Underdevelopment; The Current State of Indian Economy

Unit II: Population and Human Development
Population Growth and Economic Development - size, growth and future of population; Causes of rapid population growth; Population and economic development; Population policy; Demographic issues - Sex and Age Composition of population; Demographic Dividend; Urbanization and Migration; Human Resource Development - Indicators and importance of Human Resource Development; Education policy; Health and nutrition.

Unit III: National Income in India - The Growth Story and Current Challenges
Trends in national and per capita income; Changes in sectoral composition of national income; Regional disparities in Growth and Income; Savings and Investment and Economic Growth - The Linkage; Poverty - Estimation and Trends, Poverty Alleviation Programs - MGNREGA, NRLM, SJSRY; Inequality - Measures and trends in India; Unemployment - Nature, Estimates, Trends, Causes and Employment Policy

Unit IV: Economic Planning in India
Rationale, Features, Objectives, Strategies, Achievements and Assessment of Planning in India; Eleventh Five Year Plan - Objectives, Targets and Achievements; Twelfth Five Year Plan - Vision and Strategy; From Planning to NITI - Transforming India's Development Agenda.

Text Book:
Misra, S. K. and Puri V. K. Indian Economy — Its Development Experience. Himalaya Publishing House, Mumbai
Reference Books:
1) Dutt R. and Sundharam K. P. M. *Indian Economy* -S. Chand & Company Ltd., New Delhi.
2) Dutt and Sundharam, Gaurav Datt and Ashwani Mahajan, *Indian Economy*- S Chand Publications, 7ᵗh Revised Edition
3) Indian Economy Since Independence, ed by Uma Kapila, Academic Foundation, Revised Nineteenth Edition 2008-09
4) Government of India (Current Year): Economic Survey, Ministry of Finance, New Delhi

+3 THIRD YEAR FIFTH SEMESTER
Core Paper - 12
DEVELOPMENT ECONOMICS I

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This is the first part of a two-part course on economic development. The course begins with a discussion of alternative conceptions of development and their justification. It then proceeds to aggregate models of growth and cross-national comparisons of the growth experience that can help evaluate these models. The axiomatic basis for inequality measurement is used to develop measures of inequality and connections between growth and inequality are explored. The course ends by linking political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance.

Unit I: Study of Economic Development
Development Economics as a subject; economic growth and economic development; Characteristics of underdeveloped countries - vicious cycle of poverty and cumulative causation; obstacles to economic development; measures of economic development - national and per capita income, basic needs approach, capabilities approach, three core values of development, PQLI, HDI, HPI, MDPI, GDI; capital formation and economic development.

Unit II: Theories of Economic Growth and Development
Classical theory, Marxian theory; Schumpeterian theory; Rostow's stages of economic growth; Solow model and convergence with population growth and technical progress, Harrod Domar Model.

Unit III: Poverty, Inequality, Agriculture, Industry and Development:
Measuring poverty: Head Count Ratio, Poverty Gap Ratio, Squared Poverty Ratio, FGT Ratio; Measuring Inequality - Lorenz curve and Kuznets' inverted U hypothesis; Growth, poverty and inequality; Policy options- some basic considerations Agriculture, Industry and Economic Development: Role of agriculture; Transforming traditional agriculture; Barriers to agricultural development; Role of industrialization; Interdependence between agriculture and industries - A model of complementarities between agriculture and industry; terms of trade between agriculture and industry; functioning of markets in agrarian societies; interlinked agrarian markets.

Unit IV: Institutions and Economic Development:
Role of institutions in economic development; Characteristics of good institutions and quality of institutions; The pre-requisites of a sound institutional structure; Different measures of institutions- aggregate governance index, property rights and risk of expropriation; The role of democracy in economic development; Role of markets and market failure; Institutional and cultural requirements for operation of effective private markets; Market facilitating conditions; Limitations of markets in LDCs; Corruption and economic development - tackling the problem of corruption.

Text book: Todaro, Michael P and Stephen C Smith (2006): *Economic Development*, 8th Edition,Pearson

Reference Books:
1) Debraj Ray (2009): *Development Economics,* Oxford University Press.
2) Thirlwall, A P (2011): *Economics of Development*, 9th Edition, Palgrave Macmillan.

+3 THIRD YEAR SIXTH SEMESTER
Core Paper - 13
INDIAN ECONOMY II

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This course examines sector-specific polices and their impact in shaping trends in key economic indicators in India. It highlights major policy debates and evaluates the Indian empirical evidence. Given the rapid changes taking place in the country, the reading list will have to be updated annually.

Unit I: Agricultural Development in India
Indian Agriculture: nature, importance, trends in agricultural production and productivity, factors determining production, land reforms, new agricultural strategies and green revolution, rural credit; Agricultural marketing and warehousing.
Unit II: Industrial Development in India
Trends in industrial output and productivities; Industrial Policies of 1948, 1956, 1977 and 1991; Industrial Licensing Policies - MRTP Act, FERA and FEMA; Growth and problems of SSIs, Industrial sickness; Industrial finance; Industrial labour.
Unit III: Tertiary Sector, HRD and the External Sector
Tertiary Sector: growth and contribution of service sector to GDP of India, share of services in employment; Human development - concept, evolution, measurement; HRD: indication, importance, education in India, Indian educational policy; Health and Nutrition. Foreign Trade: role, composition and direction of India's foreign trade, trends of export and import in India, export promotion verses import substitution; Balance of Payments of India; India's Trade Policies; Foreign Capital - FDI, Aid and MNCs.
Unit IV: Indian Economy and Environment
Environmental Policies in India: The Environment (Protection) Act 1986, The Environment (Protection) Rules 1986, The National Forest Policy 1988, Policy statement for Abatement of Pollution 1992, National Conservation Strategy and Policy Statement on Environment and Development 1992, The National Environment Appellate Authority Act 1997, National Environmental Policy 2006; Global deal with Climate Change: Introduction, Intergovernmental Panel for Climate Change (IPCC), Impact of Climate Change on India, Global Response on Climate Change, Possible Role of India.

Text Book:
Misra, S. K. and Puri V. K. Indian Economy — Its Development Experience. Himalaya Publishing House, Mumbai.
Reference Books:
1) Dutt R. and Sundharam K. P. M. *Indian Economy*, S. Chand & Company Ltd., New Delhi.
2) Dutt and Sundharam, Gaurav Datt and Ashwani Mahajan, *Indian Economy*, S Chand Publications, 7ᵗh Revised Edition
3) Indian Economy Since Independence, ed by Uma Kapila, Academic Foundation, Revised Nineteenth Edition 2008-09
4) Government of India (Current Year): Economic Survey, Ministry of Finance, New Delhi.

+3 THIRD YEAR SIXTH SEMESTER
Core Paper - 14
DEVELOPMENT ECONOMICS II

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This is the second unit of the economic development sequence. It begins with basic demographic concepts and their evolution during the process of development. The structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. The governance of communities and organizations is studied and this is then linked to questions of sustainable growth. The course ends with reflections on the role of globalization and increased international dependence on the process of development.

Unit I: Population and Development
Demographic concepts: birth and death rates, age structure, fertility and its determinants, the Malthusian population trap and the microeconomic household theory of fertility; costs and benefits of population growth and the model of low-level equilibrium trap; rural-urban migration - the Harris Todaro migration model and policy implications

Unit II: Dualism and Economic Development
Dualism - geographic, social and technological; the theory of cumulative causation (Myrdal); the regional inequalities in the context of economic development; the inverted U relationship; international inequality and the centre periphery thesis; dependency, exploitation and unequal exchange; the dualistic development thesis and its implications

Unit III: Environment and Development
Basic issues of environment and development - Development and environment inter-linkage; Poverty, environmental degradation and externalities; common property resources, renewable and non-renewable resources; concept of sustainable development; basics of climate change

Unit IV: International Trade and Economic Development and Financing Economic Development
Trade and economic development; export led growth; terms of trade and economic growth - the Prebisch- Singer Hypothesis; trade strategies for development - import substitution vs. export promotion; international commodity agreements; trade vs aid. Saving, capital formation and economic development; financial sector and economic development; taxation, public borrowing and economic development; inflation, foreign finance, investment and foreign aid - controversies and opportunities

Text Book:
Todaro, Michael P and Stephen C Smith (2006): *Economic Development*, 8th Edition, Pearson

Reference Book:
Thirlwall, A P (2011): *Economics of Development*, 9th Edition, Palgrave Macmillan.

INTRODUCTORY ECONOMETRICS

Time: **3** Hrs.   End Semester Theory: **80** Marks
Credit: **06**   Mid Semester Theory: **20** Marks

This course provides a comprehensive introduction to basic econometric concepts and techniques. It covers statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models. The course also covers the consequences of and tests for misspecification of regression models.

Unit I: Introduction

Definition, Nature and scope of econometrics; Theoretical Probability Distributions: Binomial, Poisson and Normal distributions: their properties Theory of Estimation: Estimation of parameters; properties of estimators - small sample and asymptotic properties; point and interval estimation

Unit II: Hypothesis Testing

Testing of hypotheses: defining statistical hypotheses; Simple and composite hypotheses; Null and alternative hypothesis; Type I and Type II errors, Critical region; Neyman-Pearson lemma; Power of a test; Test statistics: z, chi square, t and F

Unit III: Linear Regression Analysis

Two variable linear regression model - Assumptions; Least square estimates, Variance and co-variance between Least square estimates; BLUE properties; Standard errors of estimates; Co-efficient of determination; Inference in a two variable linear regression model; ANOVA; Forecasting. Introduction to multiple regression models.

Unit IV: Violation of Classical Assumptions

Heteroscedasticity, Multicollinearity and Auto-correlation: Meaning, consequences, tests and remedies.

Text Book:
Gujarati, D & Sangeetha (2007); "Basic Econometrics", McGraw Hill Book Co.

Time: **3** Hrs.   End Semester Theory: **80** Marks

Credit: **06**   Mid Semester Theory: **20** Marks

Public economics is the study of government policy from the points of view of economic efficiency and equity. The paper deals with the nature of government intervention and its implications for allocation, distribution and stabilization. Inherently, this study involves a formal analysis of government taxation and expenditures. The subject encompasses a host of topics including public goods, market failures and externalities.

Unit I: Introduction to Public Finance and Public Budgets

Public Finance: meaning and scope, distinction between public and private finance; public good verses private good; Principle of maximum social advantage; Market failure and role of government; Public Budget: kinds of budget, economic and functional classification of the budget; Balanced and unbalanced budget; Balanced budget multiplier; Budget as an instrument of economic policy

Unit II: Public Expenditure

Meaning, classification, principles, cannons and effects, causes of growth of public expenditure, Wagner's law of increasing state activities, Peacock-Wiseman hypotheses

Unit III: Public Revenue

Sources of Public Revenue; Taxation - meaning, cannons and classification of taxes, impact and incidence of taxes, division of tax burden, the benefit and ability to pay approaches, taxable capacity, effects of taxation, characteristics of a good tax system, major trends in tax revenue of central and state governments in India

Unit IV: Public Debt

Sources, effects, debt burden - Classical/ Ricardian views, Keynesian and post-Keynesian views; shifting - intergenerational equity, methods of debt redemption, debt management, tax verses debt.

Text Books:

J. Hindriks and G. Myles (2006): *Intermediate Public Economics*, MIT Press.

Reference Book:

1) Bhatia H L (2018): *Public Finance.* Vikas Publishing House
2) R. A. Musgrave and P. B. Musgave(1989): *Public Finance in Theory and Practices.* McGraw Hill

+3 THIRD YEAR SIXTH SEMESTER
DSE - 3
INTERNATIONAL ECONOMICS

Time: **3** Hrs.   End Semester Theory: **80** Marks

Credit: **06**   Mid Semester Theory: **20** Marks

This course introduces the students to international trade and finance to understand the theories of international trade and develop insights into trade policy and balance of payments. The course also develops insight into international financial system and the trade policy of India.

UNIT I: Importance of Trade and Trade Theories

Importance of the study of International Economics; Inter-regional and international trade; Theories of Trade- absolute advantage (Adam Smith), comparative advantage (David Ricardo) and opportunity cost (Haberler); Heckscher-Ohlin theory of trade — its main features, assumptions and limitations (Leontief Paradox) Factor Price Equalization theorem.

UNIT II: Trade Policy and International Economic Institutions

Concepts of terms of trade and their importance; Doctrine of reciprocal demand - Offer curve technique; Gains from trade ;Trade as an Engine of Growth and Concept of immiserizing growth, Tariffs and quotas - their impact in partial equilibrium analysis; General Equilibrium analysis of tariff and the concept of optimum tariff, Functions of IMF (Conditional Clause), Role of IMF in international liquidity, Reforms for the emergence of international monetary system; World Bank and WTO; Their achievements and failures; Their Role from the point of view of India.

UNIT III: Exchange Rate

Concept and Types of Exchange Rate (bilateral vs. trade-weighted exchange rate, cross exchange rate, spot, forward, futures), Demand for and Supply of foreign exchange, Exchange Rate Determination: Mint Parity Theory, Purchasing-Power Parity Theory, Fixed versus Flexible exchange rate.

UNIT IV: Balance of Trade and Payments

Concepts and components of balance of trade and balance of payments; Disequilibrium in balance of payments; Various measures to correct deficit in BOPs (Expenditure switching and expenditure reducing policies, Direct control), Depreciation Vs. Devaluation; Elasticity approach to devaluation, Foreign trade multiplier- Concept and implications.

Text Book:

Mannur H. G (Recent Edition) *International Economics*, Vikash Publishing

Reference Books:

1) Salvatore Dominick, *International Economics*, Wile India.
2) Sodersten Bo and Reed J, *International Economics*, McMillan Publisher

DSE - 4
DISSERTATION / RESEARCH PROJECT

Time: **3** Hrs.   End Semester Theory: **80** Marks

Credit :**06**   Mid Semester Theory: **20** Marks

The project is intended to establish the connection between Economics as confined to the text books and class rooms and Economics at play in the ground. It is expected to give an empirical content to the subject. Economics is defined as the study of mankind in the ordinary business of life. It studies individual as well as group behavior.

Project work at the undergraduate level is an in-depth study on a topic chosen by the student. The objective of the project work for the students at undergraduate level is to expose students to the social and real-world contexts in which the subjects taught in the classroom have applications. Therefore, the topic must be related to the field of study the student is enrolled. It is undertaken with the guidance of a faculty supervisor, and involves a prolonged period of investigation and writing. The supervisor is supposed to help the student and mentor him/her throughout, from selection of the topic to submission of the project report.

The project output will be a project report written on the topic, chosen by the student and approved by the guide, in about 10000 words.

The process of project preparation typically comprises of an investigation of a particular topic, based on the application of philosophical and theoretical knowledge available in the already existing scientific literature and other published sources of information. The student may use already available data (texts, documents, artworks or existing data sets) or she may go for collection of data from the field. The final report should ideally have the following sections.

(1) Abstract (in about 500 words) containing a summary of the entire report.

(2) Introduction of the topic, arguments for choosing such a topic and the key investigation propositions.

(3) A review of the existing knowledge on the topic

(4) Information on the data and data treatment tools used in the study

(5) An analysis of data and findings

(6) Conclusions

(7) References

A good research project requires sincere efforts and honest dedication from students. Moreover, it requires an engagement of the student with an issue under probe for a fairly long period of time compared to their preparations of subjects for the examination.

A successful completion of the project report has several positive learning outcomes for the student. It empowers the student with the life skill of patience and persistence. It also helps the student to locate her theoretical understandings in the context of socio-economic and political realities.

+3 SECOND YEAR THIRD SEMESTER
GE – 3 (Arts)
INDIAN ECONOMY I

Time: **3** Hrs.   End Semester Theory: **80** Marks

Credit: **06**   Mid Semester Theory: **20** Marks

This paper introduces the students to the essentials of Indian economy with an intention of understanding the basic feature of the Indian economy and its planning process. It also aids in developing an insight into the agricultural and industrial development of India. The students will understand the problems and policies relating to the agricultural and industrial sectors of India and current challenges of Indian economy.

Unit I: Introduction to Indian Economy and Current Challenges

Colonialism & British Rule: Exploitation and under-development in India; Basic features of India Economy; Indian Economy as a developing economy; Demographic trends in India - Size and growth of population, Occupational structure, Sex composition, Age structure and demographic dividend; Causes of population growth and population policy; The problem of unemployment and recent policies for employment generation; The problem of inequality in income distribution and its causes, Policies to address inequality.

Unit II: Indian Agriculture
Role of Agriculture in Indian Economy; Causes of low productivity, Green Revolution and Land Reforms, Agricultural Finance-Sources and Problems; Agricultural Marketing in India

Unit III: Industrial Development in India
Role of Industrialization in Indian Economy; Small Scale & Cottage Industries: Meaning, Role, Problems and Remedies; Industrial Policies of 1948, 1956, 1977 and1991; Problems of Industrial Development in India; Industrial Sickness.

Unit IV: Service Sector in India
Growth & Contribution to GDP; Composition and relative importance of service sector; Factors determining growth of the sector; ICT and IT - Spread and Policy; Sustainability of services led growth.

Text Book:

Misra, S. K. and Puri V. K. Indian Economy — Its Development Experience. Himalaya Publishing House, Mumbai

Reference Book

Dutt R. and Sundharam K. P. M. *Indian Economy.* S. Chand & Company Ltd., New Delhi.

+3 SECOND YEAR FOURTH SEMESTER
GE – 4(Arts)
INDIAN ECONOMY-II

Time: **3** Hrs.   End Semester Theory: **80** Marks

Credit: **06**   Mid Semester Theory: **20** Marks

This paper is the part II of Indian economy deals with the external sector, financial markets in India, Indian Public Finances and Economic Reforms. This paper also throws some light on current challenges of Indian Economy.

Unit I: External Sector in India

Trends, Composition & Direction in exports from and imports of India; Problems of Balance of Payment: Causes of deficit in BOP & measures to correct it; Trade Policy- Export Promotion Vs Import Substitution; Foreign Trade Policy of India; WTO and India

Unit II: Financial Markets in India

Commercial Banking in India- Nationalization of Banks; Lead bank scheme and branch expansion; RBI - Functions, Monetary Policy; Development Banking- IFCI,IDBI, SIDBI and NABARD

Unit III: Indian Public Finance

Public Expenditure-Growth and Composition, Causes of Growth of Public Expenditure in India: Tax Revenue of Central and State Governments; Concept of VAT; Deficit Financing in India-Revenue, Budget, Fiscal and Primary Deficits; Purpose and Effects of Deficit Financing; India's Fiscal Policy-Objectives

Unit IV: Current Challenges Facing Indian Economy

Inflation - Causes, Consequences and Anti-inflationary Policy; Poverty - Poverty line and Estimates, Major Poverty Alleviation Programmes; Environmental Degradation - Growth and Environment; Population Growth and Environment; Environment Policy; Economic Reforms-Globalization, Macroeconomic Stabilization, Structural Reforms, and their impact on the Indian Economy; Foreign capital and MNCs-Role and consequences

Text Book:

Misra, S. K. and Puri V. K. Indian Economy — Its Development Experience. Himalaya Publishing House, Mumbai

Reference Book

1) Dutt R. and Sundharam K. P. M. *Indian Economy*. S. Chand & Company Ltd., New Delhi.
2) Basu, Kaushik (2016): An Economist in the Real World: The Art of Policy Making in India, Penguin.

+3 FIRST YEAR FIRST SEMESTER
GE - 1 (Commerce)
MICRO ECONOMICS

Time: **3** Hrs   End Semester Theory: **80** Marks

Credit: **06**   Mid-Semester Theory: **20** Marks

Objective:

Objective of the course is to acquaint the students with the concepts of micro-economics dealing with consumer behavior. The course also makes the student understand the supply side of the market through the production and cost behavior of firms.

Unit - I : Demand and Consumer Behavior

Concept of demand: demand function, law of demand, derivation of individual and market demand curves, shifting of the demand curve, elasticity of demand, Consumer behavior, Marshallian utility approach and Indifference Curve approach; utility maximization conditions. Income- Consumption Curve (ICC) and Price-Consumption Curve (PCC).

Unit - II: Production and Cost

Production function: Short-run and Long-run; Total Product, Average Product and Marginal Product, Law of returns to a variable factor, Law of Returns to Scale; Concepts of Iso-quant and iso-cost line; Cost: Accounting and Economic Costs; Social and Private Costs; Short-run and Long-run Costs; Relation between Average and Marginal.

Unit - III: Perfect Competition

Concept of Perfectly Competitive market: Assumptions, Profit maximization conditions; Related concepts of Total Revenue, Average Revenue and Marginal Revenue, Short-run and Long- run equilibrium of a firm; determination of short-run supply curve of a firm, measuring producer surplus under perfect competition.

Unit - IV: Imperfect Competition Monopoly

Concept of Monopoly: Sources of monopoly power; Short-run and Long-run equilibrium of a monopoly firm; Price discrimination; Social Cost of Monopoly (concept only).

Monopolistic Competition

Concept of Imperfectly Competitive market; Monopolistic Competition: Features and examples; Oligopoly: Non-Collusive Oligopoly: Sweezy's Kinked demand Curve Model, Collusive Oligopoly: Cartel (concept with example).

Learning Outcomes:

The students would be able to apply tools of consumer behaviour and firm theory to business situations.

Text Books Recommended

- Ahuja, H. L, Micro Economics, S.Chand
- Dash, M. K C.Micro Economics- - Himalaya Publishing House

Suggested Readings:

- Browining, E.K. and J.M. Browning; Microeconomic Theory and Applications, Kalyani Publishers
- Das & Sengupta; Microeconomics I and Statistics, Oxford University Press
- Dwivedi, D.N. Micro Economics, Vikash Publication
- Mehta P.K, Singh M. – Micro Economics – Taxmann Publication
- Maddala G.S.and E.Miller; Microeconomics: Theory and Applications, MCGraw-Hill International
- N. Gregory mankiw, Principles of Micro Economics, Cengage Learning
- Pindyck, R.S., D. L. Rubinfeld and P. L. Mehta; Microeconomics, Pearson Education
- T.R. Jain, B.D. Majhi, Micro Economics- V.K. Global

+3 FIRST YEAR SECOND SEMESTER
GE - 2 (Commerce)
MACRO & INDIAN ECONOMY

Time: **3** Hrs.   End Semester Theory**: 80** Marks

Credit**: 06**   Mid-Semester Theory**: 20** Marks

Objectives:

The course aims at providing the student with knowledge of basic concepts of the macroeconomics. The modern tools of macro-economic analysis are discussed and the policy framework is elaborated, including the open economy.

Unit - I - Introduction to Macro Economics

Introduction: Meaning and definition of Microeconomics and macroeconomics, Difference between Microeconomics and macroeconomics, macro-economic goals, components of Macroeconomics,Economic Systems: Mixed economy, Socialism economy, Capitalism economy and Islamic economy(only meaning and characteristics)

Unit - II: National Income Accounting

Definition of National Income, Concepts of National Income,GDP and GNP, Methods of Measuring National Income, Uses of National Income, Difficulties in calculating National Income, Real Income,Per Capita Income and Growth Rate

Unit - III: National Income Equilibrium

I Concepts of Equilibrium, Consumptions & Savings, Investment Theory, Government Sector,Foreign Sector, Determination of Equilibrium, Multiplier Concept, Inflationary Gap and Deflationary Gap, Summary of Two, Three and Four-sector Economies

Unit - IV: Role of Government

Economic functions of Government, Types of Budgets, Government Revenue, Government Expenditure, Public Debt, and Government Policy, Macroeconomic Problems-Introduction, Business cycle, Unemployment, Inflation, Deflation, Depression, RBI and monetarypolicy.

Learning Outcomes:

Students would be able to apply the modern tools of macro-economic analysis so as to minimize the adverse impact of macro-economic factors on business.

Text Books Recommended

- Ahuja H.L. – Macro Economics – S.Chand
- M. Treheran, T Treheran- Macro & Indian Economy, , V.K. Global publishing Pvt. Ltd., New Delhi

Suggested Readings

- Bhattacharyya- Macroeconomics & Indian Economy, Oxford University Press.
- Dornbusch, Rudiger., Stanley. Fischer and Richard Startz, Macroeconomics. Irwin/McGraw-Hill
- P.K. Dhar, Kalyani Publishers Macro and Indian economy
- Mankiw, N. Gregory. Principles Macroeconomics-Cengage Learning
- V K Puri- Macro and Indian Economy- Himalaya Publishing House
- Vaish,M.C. – Macro Economics – Vikash Publication

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+3 SECOND YEAR THIRD SEMESTER
GE - 3 (Commerce)
BUSINESS STATISTICS

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Time**: 3** Hrs.   End Semester Theory**: 80** Marks

Credit**: 06**   Mid-Semester Theory**: 20** Marks

Objective:

The objective of this course is to familiarize students with the basic statistical tools used for managerial decision-making.

Unit - I: Statistical Data and Descriptive Statistics (With the use of Excel and other statistical software)

Nature and Classification of data: Univariate, Bivariate and multivariate data; time-series and cross-sectional data: Measures of Central Tendency- a) Mathematical averages including arithmetic mean, geometric mean and harmonic mean. Properties and applications, b) Positional Averages Mode and Median and other partition values including quartiles, deciles, and percentiles.

Unit - II: Measures of Variation (With the use of Excel and other statistical software)

Absolute and relative, Range, quartile deviation, mean deviation, standard deviation, and their coefficients, Properties of standard deviation/variance Skewness: Meaning, Measurement using Karl Pearson and Bowley's measures; Concept of Kurtosis.

Unit - III: Simple Correlation and Regression Analysis (With the use of Excel and other latest software)

Correlation Analysis: Meaning of Correlation: simple, multiple and partial; linear and non-linear, Correlation and Causation, Scatter diagram, Pearson's co-efficient of correlation; calculation and properties (proofs not required). Correlation and Probable error; Rank Correlation Regression Analysis: Principle of least squares and regression lines, Regression equations and estimation; Properties of regression coefficients; Relationship between Correlation and Regression coefficients; Standard Error of Estimate.

Unit - IV : Index Numbers (With the use of Excel and other latest software)

Meaning and uses of index numbers: Construction of index numbers: fixed and chain base: univariate and composite. Aggregative and average of relatives – simple and weighted Tests of adequacy of index numbers, Base shifting, splicing and deflating. Problems in the construction of index numbers Construction of consumer price indices, important share price indices.

Time Series Analysis (With the use of Excel and other latest software)

Components of time series, Additive and multiplicative models Trend analysis, Fitting of trend line using principle of least squares – linear, second-degree parabola and exponential, Conversion of annual linear trend equation to quarterly/monthly basis and vice-versa; Moving averages Seasonal variations- Calculation of Seasonal Indices using Simple averages, Ratio-to-trend, and Ratio-to-moving averages methods. Uses of Seasonal Indices.

Learning Outcomes:
Students would be armed with the knowledge of using different statistical tools very much required in the decision-making process in any business as well as business research.

Text Books Recommended
- Gupta, S.P., and Archana Gupta. Statistical Methods. Sultan Chand and Sons, New Delhi
- Levine and Viswanathan. Business Statistics, Pearson Publication

Suggested Readings:
- Agarwal, S.C. Business statistics, , V.K. Global Pub. Pvt. Ltd, New Delhi.
- Das & Sengupta, Microeconomics I and Statistics: Oxford University Press
- Gupta, S.C. Fundamentals of Statistics. Himalaya Publishing House
- Keller G, and Arora H, B STAT, Cengage Learning
- Patri and Patri, Business statistics, Kalyani Publishers New Delhi
- Sharma J K, Fundamentals of Business Statistics – Vikash Publication
- S K Sahoo, P K Prusty, Business Statistics–Vrinda Publications (P) Ltd
- Vohra N. D., Business Statistics, McGraw Hill

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