

# Syllabus

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## SEMESTER -1

### Core Course-01-- EC1CRT01- Perspectives and Methodology of Economics

#### Course Objective

The course intends to familiarize the students with the broad contours of Social Sciences, specifically Economics and its methodologies, tools and analysis procedures. The course also aims to create an enthusiasm among students about different schools of Economic thought and various aspects of social science research, methodology, concepts, tools and various issues.

#### MODULE I:Methodology of Social Science Science-

Different branches of science-Evolution of a scientific approach Social science Disciplines - Need for interdisciplinary approach - Objectivity and subjectivity in social Science - Limits to objectivity in social science. (25hrs)

#### MODULE II:Methodology, Concepts and tools of Economics

Economics as a social science –Subject matter and scope of Economics, Importance of the study of economics with other social sciences like history, political science, psychology, law and Sociology. Positive and Normative Economics, Economic theory and Economic laws, Micro and Macro Economics, Role of assumptions in Economics, Method and Methodology - Deductive and inductive methodology, Economic Models Various Concepts: Function, Variable, Equilibrium-Partial and General, Static, Comparative static and Dynamic ; Marginal and Total; Nominal and Real; Value; (30 hrs)

#### MODULE III: Major Schools of Economic Thoughts

Mercantilism(Thomas Mun, William Petty) and Physiocracy (Francis Quesnay and Turgot), Basic postulates of Classical and Neo-Classical economic thought (Adam Smith, Ricardo, J.B.Say, Malthus, J.S.Mill, Jeremy Bentham, Alfred Marshall, A.C.Pigou and Walras,)Socialist and Marxist Economic Thought(Saint Simon, Sismondi and Karl Marx, Keynesianism(keynes as a critique of classical Economics and Monetarism(Milton Friedman).Contribution of Indian Economicists-Kautilya, Dadabhai Naoroji, Amartya Sen and J.N..Bhagwathi). (27hrs)

#### MODULE IV:Research Methodology

Meaning and objectives of research – Types of research - Steps in research Data - Primary and secondary . Undertaking a research study - Conceptualization of research issues, reviewing the literature, Hypothesis, analysis and presentation of data, writing a research report. (30hrs)

Complementary Course --HY1CMT02 - SOCIAL FORMATIONS IN PRE- MODERN INDIA

Module 1 - Ancient Society

- (A) Harappan Civilization Technology, crafts, Westerly trade and Urbanism
- (B) Vedic Age Social stratification - Second Urbanization Heterodox religions Mauryan State and society
- (C) The Tamil South idea of the Sangam Age

Module 2 - Emergence of Feudal Order

- (A) Expansion of agriculture land grants- changing production relations- graded land-rights and peasantry - decline of trade, urban settlements and currency. Emergence of Closed Economy Features of Indian Feudalism.
- (B) Opening up of the river valleys- Temple society and economy - The Tamil Bhakti Movement New states and state order

Module 3 - The Political Economy of the Delhi Sultanate

- (A) Technological innovations- Changes in production and exchange Urban centres craft production Sultanate economy
- (B) The Vijayanagara society and power structure Warlordism .

Module 4 - The Mughal Social Formation

- (A) Agricultural Expansion Trade, money and Banking Urban centres and their character
- (B) The Mansab, Jagir and revenue The Bhakti movement and its social bas

SEMESTER -2

Core Course-02-- EC2CRT02- Micro Economic Analysis I

Learning Objectives

This is an introductory course that teaches the fundamentals of microeconomics. It gives the foundation for economic analysis and problem solving. This course provides an

introduction to supply and demand and the basic forces that determine equilibrium in a market economy. It introduces a framework for learning about consumer behaviour and analyzing consumer decisions. The course also attends to firms and their decisions about optimal production. By the end of the course, we will be able to understand introductory microeconomic theory, solve basic microeconomic problems, and use these techniques to think about a number of policy questions related to the operation of the real economy.

#### Module I -

Introduction to Microeconomics Definitions of Economics-Problem of scarcity and choice – Central problems of Economy-production possibility frontier - microeconomic policy goals – efficiency and equity.– functions of an economic system -short run and long run analysis, partial and general equilibrium analysis (concepts only) – Marginal concept in micro Economics – (15 Hrs)

#### Module II –

Demand and Supply Analysis Concepts of demand- Factors affecting demand- Law of demand- exceptions-demand for normal, inferior, substitute and complementary goods- Shifts of demand versus movements along a demand curve – elasticity of demand – Degrees- price elasticity of demand – determinants- methods of estimation – Total outlay, Point, and arc method – income elasticity of demand and cross elasticity of demand – Concepts of supply- Factors affecting supply-Law of supply- shifts of supply versus movements along a supply curve - elasticity of supply – uses of elasticity – market equilibrium and impact of changes in demand and supply – dynamic demand and supply model: cobweb model – demand forecasting – objectives and methods of demand forecasting - seller's view. (23Hrs)

#### Module III –

Theory of Consumer Behaviour Concepts of Total and Marginal utility- Consumer preferences and choice-consumer's equilibrium – cardinal utility and ordinal utility – law of diminishing marginal utility – consumer equilibrium under cardinal utility – derivation of demand curve - law of equimarginal utility – water-diamond paradox – criticisms of cardinal utility approach - indifference curve analysis – characteristics – MRS - budget line – consumer's equilibrium – income effect and Engel curve – price effect, income effect and substitution effect- derivation of demand curve – splitting price effect into income effect and substitution effect: Hicksian and Slutsky's approaches - criticisms of ordinal utility approach – revealed preference theorem – derivation of demand curve – distinction between weak and strong ordering – consumer's surplus – Marshallian and Hicksian approaches. New approaches to consumer theory - Pragmatic approach & Linear Expenditure System (LES) (Concepts only). (35Hrs)

#### Module IV –

Theories of Production and Cost Production function – total, average & Marginal product-time element in production function – law of variable proportions (modern approach)– isoquants – properties – MRTS - ridgelines and economic regions of production– Isocost lines – optimal input combination – producer's equilibrium – expansion path – elasticity of factor substitution - laws of returns to scale – economies and diseconomies of scale – empirical production function: Cobb-Douglas production function – properties – cost functions - cost concepts - explicit and implicit costs, economic and accounting costs,

sunk cost, opportunity cost ,real cost, social cost- traditional theory of costs - short run and long run analysis of costs – envelope curve – modern theory of cost – short run and long run- L-shaped and saucer-shaped cost curves. (35 Hrs)

## Complementary Course

### HY2CMT03 - TRANSITION TO THE CONTEMPORARY WORLD

This course explains the trials and turbulences and transition that the world had experienced over the years and analyses the problems of the present day world developments.

#### Module-1

Implications of French Revolution - Continental impact and reactions - Metternich and Congress of Vienna - German & Italian Unification

#### Module-2

Imperialism-Theories of Imperialism, Inter- Imperialist Rivalry and the two World Wars.Rise of Fascism and Nazism in Europe. Russian Revolution of 1917-Lenin and Stalin - Spread of Communist Ideology - New Economic Policy . The Soviet Union an its fortunes. The spread of Communism in East Europe. The Chinese Revolution of 1948- Interpretation, Impact and Consequences.

#### Module-3

The Great Depression in 1929-33. Post-depression economic political order Globalization and its instruments - Development vs. Sustainable Development debate.

#### Module-4

Emergence of Anti-Colonial Movements in Asia and Africa .World Bodies-League of Nations UNO - NAM and other Regional Groupings. Growth of Mass Media and Information Technology - TerrSCIENCE

## SEMESTER-3

### Core Course-03-- EC3CRT03-Micro Economic Analysis II

#### Learning Objectives

This course helps the students to develop skills enabling them to understand economic concepts and use those concepts to analyze specific questions. By the end of this course, students should be able to understand consumer and firms' behaviour and to analyze different types of market structures. It also analyzes the behaviour of firms in a monopoly or oligopoly, and calculates the resulting changes in producer or consumer surplus. It helps students to use economic tools to analyze economic policies.

#### Module I –

Market Structure: Meaning of market- Market structure- Perfect Competition – characteristics - short run and long run equilibrium of a firm and industry – role of time element in the determination of value -derivation of supply curve – shut down point – producer's surplus – imperfect markets – Monopoly – sources - features – short run and long run equilibrium - discriminating monopoly- price and output determination under discriminating monopoly - degrees and types of price discrimination – dumping – Monopsony- Bilateral monopoly -- social costs of monopoly power – regulation of monopoly. (17 Hrs)

#### Module II –

Monopolistic Competition and Oligopoly Monopolistic competition – characteristics - non-price competition and selling costs - short run and long run (group) equilibrium - ideal output and excess capacity – limitations of monopolistic competition - oligopoly – characteristics – Price stickiness - Kinked demand curve – Sweezy model - Non-Collusive oligopoly – Duopoly (concept only) – competition Vs collusion - collusive oligopoly – cartels and price leadership – low-cost, dominant and barometric price leadership models – concept of limit pricing and cost plus pricing. (20 Hrs)

#### Module III -

Income Distribution and Factor Pricing Functional versus personal distribution - concepts of total physical product (TPP), average physical product (APP) and marginal physical product (MPP) - Marginal productivity theory of distribution – factor price determination under perfect competition and imperfect competition – Ricardian and modern theories of rent - quasi-rent – money and real wages - wage differentials - effect of labour unions on wages – theories of interest – classical, neo-classical and Keynesian theories of interest – theories of profit- dynamic theory, risk- bearing theory – innovation theory of profit (20 Hrs)

#### Module IV -

Welfare Economics Welfare economics – nature, concepts and scope- problems of measuring social welfare - Edgeworth box diagram – contract curve - criteria of social welfare – role of value judgement- growth of GNP criterion – Bentham's criterion – Cardinalist criterion - Pareto optimality criterion.

### Core Course-04-- EC3CRT04 - Economics Of Growth & Development

#### Learning Objectives

This course enables the student to acquaint with the basic concepts and issues of growth and development from Adam Smith. It makes a student more insightful about the modern approaches to development presented by D Goulet and Amartya Sen.

#### Module I:

Introduction to Economics of Growth and Development Growth and Development –

meaning – features – distinction – determinants and indicators – features of underdevelopment – measurement of development - income and non- income indices – GDP, PCI, PQLI, HDI, HPI, GEM – (GDI, GNH) – Development redefined – Development as a total social process – Development as freedom – Development as Liberation – Sen’s capability approach – poverty as capability and Entitlement failure – multidimensional poverty index – Quality of life – Education – Health and Nutrition – poverty – absolute and relative – inequality of income and wealth – Gini coefficient – Kuznet’s inverted ‘U’-Hypothesis – Development gap (22hrs)

#### Module II:

Approaches to Development Approaches to Economic Development: Structuralist – dependency - market- friendly approaches (concepts only) – vicious circle of poverty – Stage theories Rostow – low level equilibrium trap – Critical minimum effort thesis – Big push – Lewis model – balanced vs unbalanced growth strategy – Dualistic theories. (23hrs)

#### Module III:

Theories and Factors in the Development Process Classical – Marxian – Schumpeterian. Economic Development – role of agriculture – capital – technology – choice of technique - Trade and economic development – process of cumulative causation. (20 hrs)

#### Module IV:

Human Resource and Development Human Resource and Development – man power planning – concept of intellectual capital and its size – role of education and health in economic development – Education and health as joint investment for development – Gender and development – women in the labour force – missing women population and economic growth – optimum theory of population – theory of demographic transition– ageing and younging of population. (25hrs)

#### Complementary Course --

#### AN INTRODUCTION TO POLITICAL SCIENCE

The course follows a basic historical-analytical framework of the discipline. It stresses upon a critical understanding of constitutional design and institutional framework of government. Integral to the course is the understanding that ideas of democracy and freedom and corresponding social relations and political and institutional practices took shape the discipline in a more meaningfully. The course aims therefore to develop among students the ability to comprehend contemporary politics as a relationship between institutional structures and historically constituted political processes.

#### Module I

- i. Political Science: Definition, Nature & Scope of the Discipline.
- ii. Approaches to the study of Political Science: Traditional, Behavioural, Post- Behavioural and Marxian approaches (20 Hours)

## Module II: Essential Concept in Political Science.

- i. State-Concept-Origin of State-Evolutionary Theory.
- ii. State in a Globalised Era.
- iii. Key Concepts in Political Science: Liberty - Positive and Negative, Equality – Formal and Political, Law - Rule of Law, Justice-Distributive Justice. (30 Hours)

## Module III: Major Political Ideologies.

- i. Liberalism.
- ii. Gandhism.
- iii. Marxism.
- iv. Fascism. (20 Hours)

## Module IV: Democracy and Classification of Government.

- i. Democracy: Liberal, Deliberative and Representative.
- ii. Forms of Government: Parliamentary & Presidential, Federal & Unitary. (20 Hours)

## SEMESTER -4

### Core Course-05-- EC4CRT05- Macro Economics I

#### Module I:

Introduction to Macroeconomics 5 90 Micro and Macroeconomics-Main issues in Macroeconomics- Macro statics and macro dynamics-circular flow of economic activity in atwo sector economy- National Income- concepts and their interrelationships- methods of measurement of national income- value added, income and expenditure methods- social accounting method-estimation of national income in India-Environmental concerns in national accounts- green accounting- Net Economic Welfare (20 Hrs)

#### Module II:

Classical Macroeconomics Main postulates of classical macroeconomics- Say's Law of Markets –Classical theory of employment and output determination – wage price flexibility and full employment equilibrium-classical theory of interest- quantity theory of money- Cash transactions and Cash balances approaches - -Classical dichotomy and neutrality –Pigou effect- Keynes criticism of classical theory. (25 Hrs)

#### Module III:

Keynesian Macroeconomics Keynesian Revolution –Main postulates of the general theory- Consumption function- Psychological law of consumption- Savings function- graphical, algebraic and numerical illustrations of APC, MPC, APS, MPS-factors determining consumption-investment demand Function-determinants of investment- MEC and MEI and the role of expectations- principle of effective demand (20 Hrs)

#### Module IV:

Orthodox Keynesian Models Two sector Keynesian cross model of income determination - Algebraic derivation- Under employment equilibrium-The effects of changes in autonomous investment on income- multiplier analysis-static and dynamic multiplier- three sector Keynesian Cross model-The effects of changes in taxes and public expenditure on income-Balanced budget multiplier- Four sector Keynesian Cross model- foreign trade multiplier(concept only).Two sector IS- LM model of income determination (model only). (25 Hrs)

### Core Course-06---EC4CRT06- Public Economics

#### Learning Objectives

Public finance analyzes the impact of public policy on the allocation of resources and the distribution of income in the economy. In modern times, the activities of State have considerably increased and the theoretical understanding of different State activities through the budgetary mechanism is essential. The objective of the course is for students to learn about the working of the public finance system and to gain knowledge about the working of the Indian public finance.

#### Module I-

Introduction to Public Finance Meaning and subject matter of Public Finance – Public and Private Finance – Fiscal Functions-Allocation, distribution and stabilization- Principles of Maximum Social Advantage: Dalton, Musgrave – Public Goods: Pure and Impure Public Goods, Free rider problem. Private Goods, Mixed Goods and Merit Goods, -Market failure and role of government. (14 Hrs)

#### Module II-

Public Revenue Sources of public revenue -Classification of Taxes - Canons of Taxation, Principles of Taxation-Ability, Benefit and cost of service- Impact, Incidence and shifting of Tax Burden – – Effects of Taxation – Measurement of Deadweight loss -Taxable Capacity- Laffer curve- Major Taxes in India and its impact- Value Added Tax in India – Goods and Service Tax (GST-brief history, legislation and impact)- Budget and its role– Classification of budget Concepts :Revenue Account, Capital Account, Fiscal Deficit, Revenue Deficit, Primary Deficit,– Zero Base Budgeting-Budgetary Procedure in India (introduce the recent Central Budget to the students)- Gender Budgeting-Fiscal Policy – Deficit financing (22 Hrs)

#### Module III-

Public Expenditure Meaning-- Canon's of Public Expenditure-Plan and Non-plan Expenditure-Developmental and Non-developmental expenditure- Wagner's Hypothesis, Peacock - Wiseman Hypothesis, critical limit hypothesis– Effects of Public Expenditure- Public expenditure in India: Its pattern and growth -Public Debt- Types- debt redemption – burden of public debt – public debt in India

#### Module IV-

Federal Finance Meaning – Principles of Federal Finance- vertical and horizontal equity in fiscal federalism - fiscal federalism in India – Finance commission – Current Finance Commission- Theory of grants – resource transfer from union to states – criteria for transfer of resources – State Finance Commission and Panchayati Raj institutions.

## Complementary Course - INDIAN CONSTITUTION: SOCIAL ISSUES IN INDIA

### Course Rationale:

This course acquaints students with the constitutional design of state structures and institutions, and their actual working overtime. The Indian Constitution accommodates conflicting impulses (of liberty and justice, territorial decentralization and a strong union, for instance) within itself. The course traces the embodiment of some of these conflicts in constitutional provisions, and shows how these have played out in political practice. It further encourages a study of state institutions in their mutual interaction, and in interaction with the larger extraconstitutional environment.

### Module I

- i. Constituent Assembly.
- ii. Salient Features of the Indian Constitution.
- iii. The Preamble.
- iv. Fundamental Rights.
- v. Fundamental Duties.
- vi. Directive Principles of State Policy.

### Module II

- I. Indian Federalism – Structure and Features.
- II. Decentralisation – Panchayat Raj Institutions.

### Module III

- I. Union Government: Indian Parliament – Rajya Sabha and Lok Sabha.
- II. Executive – President and Prime Minister.
- III. Judiciary – The Supreme Court-Judicial review.
- IV. Public Interest Litigation and Judicial Activism-Lok Pal.

### Module IV

- I. Challenges to the Indian Political System: Caste, Communalism, Terrorism, Regionalism and Naxalism.

## SEMESTER -5

### Core Course-07--EC5CRT07 - Quantitative Techniques

### Learning Outcome:

This is the first of the compulsory two-course sequence of Quantitative Techniques. Mathematical skills have become an essential tool for higher education. The objective of the first sequence is to introduce the body of mathematics to enable the study of economic theory including micro economic theory, macro economic theory, statistics and econometrics at the undergraduate level.

#### Module I

Basic Mathematics for Economic Analysis – Basic concepts: variables, constants, parameters, equations, exponents and logarithms, sequences and progressions - arithmetic and geometric. Applications of progressions in economics: problems relating to simple interest, compound interest, depreciation of assets and Net Present value. The real number system: properties of real numbers and types of numbers –limitations. (28hrs)

#### Module II

Calculus- Limits & Continuity, Derivatives: Meaning and significance - Rules of differentiation – First order and second order derivatives – Maxima and Minima of functions. Applications in economics. (20hrs)

#### Module III

Set theory - types of sets -set operations – Venn diagrams. Relations and functions: ordered pairs and Cartesian product. Functions: Types - Important economic functions. Linear and Quadratic-Solution to system of equations up to three unknowns- Matrices- Types, Matrix manipulations and their rules, Order of Matrix, Transpose of Matrix- Determinants up to order 3x3- Properties and Value of determinant, Minor and Cofactor, Inverse and Cramer's Rule. (30hrs)

#### Module IV

Theory of Probability - Scope of probability in Economics- the case of uncertainty - Concepts – Rules of probability (addition and multiplication theorem – statement only) – Different approaches – Important terms related to probability (Random experiments, sample space, events) – Simple economic problems based on probability theorems – Probability distributions – binomial and normal – estimation of probabilities using binomial theorem standard normal table - their properties and uses and applications in Economics.(30hrs)

#### Core Course-08--EC5CRT08 -Macro Economics II

##### Module I-Theories of Consumption and Investment

Kuznets's consumption puzzle-Conflict between short-run and long run consumption functions- relative income hypothesis– permanent income hypothesis- life-cycle hypothesis Theory of capital and theory of investment- Present Value Criterion- Accelerator theory of Investment- Tobin's q theory (25 Hrs)

## Module II-

Money, Inflation and Unemployment Money-classical approach –Keynesian liquidity preference theory and interest rate determination-liquidity trap-Keynes effect-supply of money-sources- high-powered money- money multiplier- measures of money supply in India. Inflation: types – Demand-pull and cost-push inflation – inflationary and deflationary gap-causes and effects of inflation – control of inflation-types of unemployment- Oakun’s law-inflation and unemployment- the Phillips curve-Stagflation-long run Phillips curve-Natural rate of unemployment (38 Hrs)

## Module III-

Fluctuations , Monetary and Fiscal Policies Trade cycles- Types and phases- Stabilization policies-Active or passive; monetary policy objectives and targets; Fiscal and Monetary policy in the IS-LM context(closed economy only)-Financial Crises & Regulatory response. (20 Hrs)

## Module IV-

Post Keynesian Schools of Macroeconomic Thoughts Monetarism- Monetarist propositions and the Quantity Theory Restatement New Classical Economics- Rational Expectations(concept)- Lucas’Critique(Policy ineffectiveness proposition) Supply Side Economics- Tax cut policy and the Laffer Curve Analysis New Keynesian School – Nominal Wage Rigidity model (Overview)

## Core Course-09-- EC5CRT09- Environmental Economics

### Learning objectives :

The importance of environmental science and environmental studies cannot be disputed. The need for sustainable development is a key to the future of mankind. Continuing problems of pollution, loss of forest, solid waste disposal, degradation of environment, issues like economic productivity and national security, Global warming, the depletion of ozone layer and loss of biodiversity have made everyone aware of environmental issues. The United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 and world Summit on Sustainable Development at Johannesburg in 2002 have drawn the attention of people around the globe to the deteriorating condition of our environment. It is clear that no citizen of the earth can afford to be ignorant of environment issues. Environmental management has captured the attention of health care managers. Managing environmental hazards has become very important. Human beings have been interested in ecology since the beginning of civilization. Even our ancient scriptures have emphasized about practices and values of environmental conservation. It is now even more critical than ever before for mankind as a whole to have a clear understanding of environmental concerns and to follow sustainable development practices. India is rich in biodiversity which provides various resources for people. It is also basis for biotechnology. Only about 1.7 million living organisms have been described and named globally. Still many more remain to be identified and described. Attempts are made to conserve them in ex-situ and in-situ situations. Intellectual property rights (IPRs) have become important in a biodiversity-rich country like India to protect microbes, plants and animals that have useful genetic properties. Destruction of habitats, over-use of energy resource and environmental pollution have been found to be

responsible for the loss of a large number of life-forms. It is feared that a large proportion of life on earth may get wiped out in the near future. In spite of the deteriorating status of the environment, study of environment has so far not received adequate attention in our academic programmes. Recognizing this, the Hon'ble Supreme Court directed the UGC to introduce a basic course on environment at every level in college education. Accordingly, the matter was considered by UGC and it was decided that a six months compulsory core module course in environmental studies may be prepared and compulsorily implemented in all the University/Colleges of India. The experts committee appointed by the UGC has looked into all the pertinent questions, issues and other relevant matters. This was followed by framing of the core module syllabus for environmental studies for undergraduate courses of all branches of Higher Education. We are deeply conscious that there are bound to be gaps between the ideal and real. Genuine endeavour is required to minimize the gaps by intellectual and material inputs. The success of this course will depend on the initiative and drive of the teachers and the receptive students.

### Module I -Unit 1 : Multidisciplinary nature of environmental studies

Definition, scope and importance Need for public awareness.(2 hrs)

### Unit 2 : Natural Resources :

Renewable and non-renewable resources : Natural resources and associated problems.

- a) Forest resources : Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people.
- b) Water resources : Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
- c) Mineral resources : Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
- d) Food resources : World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.
- e) Energy resources: Growing energy needs, renewable and non renewable energy sources, use of alternate energy sources, Case studies.
- f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification
  - Role of individual in conservation of natural resources.
  - Equitable use of resources for sustainable lifestyles.

### Unit 3: Ecosystems

- Concept of an ecosystem
- Structure and function of an ecosystem • Producers, consumers and decomposers • Energy flow in the ecosystem
- Ecological succession
- Food chains, food webs and ecological pyramids.

- Introduction, types, characteristic features, structure and function of the given ecosystem:- a. Forest ecosystem

## Module II

### Unit 1: Biodiversity and its conservation

- Introduction
- Biogeographical classification of India ( 6 hrs)
- Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values.
- India as a mega-diversity nation
- Hot-spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts • Endangered and endemic species of India

### Unit 2: Environmental Pollution

Definition Causes, effects and control measures of: -

Air pollution

Water pollution

Soil pollution Marine pollution

Noise pollution

Thermal pollution

Nuclear hazards ( 8 hrs)

- Solid waste Management: Causes, effects and control measures of urban and industrial wastes.
- Role of an individual in prevention of pollution
- Pollution case studies
- Disaster management: floods, earthquake, cyclone and landslides.

### Unit 3: Social Issues and the Environment

- Urban problems related to energy
- Water conservation, rain water harvesting, watershed management (8 hrs)
- Resettlement and rehabilitation of people: its problems and concerns, Case studies
- Environmental ethics: Issues and possible solutions
- Climate change, global warming, acid rain, ozone layer depletion , nuclear accidents and holocaust, Case studies
- Consumerism and waste products • Environment Protection Act
- Air ( Prevention and Control of Pollution) Act
- Water (Prevention and control of Pollution) Act
- Wildlife Protection Act
- Forest Conservation Act
- Issues involved in enforcement of environmental legislation
- Public awareness

## Module – III Unit I: Economics and Environment (10 hrs)

Environmental Economics – Definition – Scope – Meaning – importance – Environment-Economy interaction (linkages) – material balance model – ecosystem – structure and functions – relation between environment and development – Environment as a necessity and luxury-environmental issues and global concern-Stockholm Conference – Helsinki Convention – Montreal Protocol – Kyoto Protocol – Rio Summit – Paris Convention. Population growth and Environment – market failure – tragedy of commons-sustainable development-policy approach to sustainable development(An overview only). (16hrs)

## Module IV Unit 1: Framework and Criteria for Environmental Analysis

Evaluation of environmental benefits – Contingent Valuation Method – Hedonic approach – travel cost method – preventive expenditure method - surrogate market approach – property value approach and wage differential approach - cost benefit analysis – UNIDO analysis – Little- Mirrlees approach - Environmental Impact Analysis. Pollution control – socially optimum level of pollution – environmental policies and legislations in India. (18hrs)

## Module – V Unit 1- Human Rights–

An Introduction to Human Rights, Meaning, concept and development, Three Generations of Human Rights (Civil and Political Rights; Economic, Social and Cultural Rights).

Unit-2 Human Rights and United Nations – contributions, main human rights related organs - UNESCO, UNICEF, WHO, ILO, Declarations for women and children, Universal Declaration of Human Rights. Human Rights in India – Fundamental rights and Indian Constitution, Rights for children and women, Scheduled Castes, Scheduled Tribes, Other Backward Castes and Minorities

## Unit-3 Human Rights and environmental rights -

Right to Clean Environment and Public Safety: Issues of Industrial Pollution, Prevention, Rehabilitation and Safety Aspect of New Technologies such as Chemical and Nuclear Technologies, Issues of Waste Disposal, Protection of Environment Conservation of natural resources and human rights: Reports, Case studies and policy formulation. Conservation issues of western ghats- mention Gadgil committee report, Kasthuriengan report. Over exploitation of ground water resources, marine fisheries, sand mining etc. (12Hrs)

## Core Course-10-- EC5CRT10 -Introductory Econometrics

### Module One--Classical Liner Regression Model

Meaning and methodology—Modern interpretation of econometrics—Population regression function (PRF) –The concept of linearity in econometrics—stochastic regression – interpretation and its significance – Sample regression function (SRF) (20hrs)

#### Module Two:

Estimation of PRF—The method of OLS—Advantages of OLS—Numerical Properties of OLS estimators— Statistical properties of OLS— Gauss - Markov Theorem and the assumptions of Classical Linear Regression Model (15hrs)

#### Module Three:

Evaluation of SRF—Goodness of the Fit—R Square—Reliability and Precision of OLS estimators—Standard Error of the OLS Estimator and the Estimate (15hrs)

#### Module Four:

Hypothesis testing and estimation—Hypothesis testing of OLS estimators—t test—Point and interval estimation (Basics)—Introduction to Multiple Regression (15hrs)

#### Module Five:

Relaxing the assumptions of Classical Linear Regression Model Heteroscedasticity— nature, estimation in its presence—detection and remedial measures— Autocorrelation— nature and estimation in its presence—detection and remedial measures— Multicollinearity—nature, estimation in its presence—detection and remedial measures (25hrs)

#### Open course-01

#### EC5OPT01 Fundamentals of Economics

#### Learning Objectives:

This course is designed to make the undergraduate students of other disciplines aware of the basic ideas and concepts in Economics.

#### Module 1:

Basic Concepts Economics – micro and macro – deduction and induction – basic economic problems- production possibility curve. Utility - total and marginal. Law of Demand – elasticity of demand - price elasticity - types. Law of supply. National income – meaning - components of national income (12 Hrs)

#### Module 2:

Public Economics State vs Market - public revenue - public expenditure – tax and non-tax revenue – direct and indirect taxes – goods and service tax in India - budget – types - fiscal deficit - revenue deficit - public debt – trade cycle and its phases - fiscal and monetary policies as tools for combating inflation and deflation. (16 Hrs)

#### Module 3:

Financial System and International Trade Negotiable and non-negotiable instruments – cheques – drafts - bills of exchange – promissory notes-letter of credit - certificate of deposits – commercial papers - banking and non-banking institutions - commercial banks

-- Core Banking, Internet Banking, Mobile Banking, ATM/Debit & Credit Cards, IFSC, NEFT, RTGS--NPA in Indian banking sector RBI – functions - money and capital market – major financial instruments – shares, debentures and bonds – Insurance: meaning, nature and types - stock exchange – BSE, NSE – stock market indices – SEBI - mutual funds. Terms of trade - balance of trade - balance of payments - foreign exchange - exchange rate – spot – forward – fixed – floating - IMF, World Bank – WTO. (24 Hrs)

#### Module 4:

Indian Economic Development An overview of Planning in India - Planning Commission – NITI Aayog- Finance Commission – Green revolution – changing pattern of India's industrialisation - Liberalization - Privatization - Globalization (LPG) – Major features of population in India and Kerala - Kerala model of development (20 Hrs)

### SEMESTER -6

#### Core Course-11--EC6CRT11- Quantitative Methods

#### Learning objectives:

Students of Economics need a variety of statistical skills to collect, analyse and interpret empirical data. This course intends to provide an introduction to statistical methods and tools that are essential for the study of economics at the undergraduate level.

#### Module I

Role of Statistics in Economics – Functions–limitations. Methods of primary data collection- census and sampling methods - Preparation of schedules and questionnaires, sample designs – random sampling and non-random sampling (SRS, systematic, stratified, cluster and multistage sampling). Classification and Tabulation of Statistical data: Characteristics and types of classification- types of tables-difference between classification and tabulation. Presentation of data using charts and diagrams. (Histogram, Polygon, frequency curve, Bar chart, Pie diagram, Ogives) (28hrs)

#### Module II Central tendency:

Various Measures - Properties, merits & demerits of Arithmetic mean, median, mode, geometric mean and harmonic mean – applications in economics. Dispersion: Various Measures, absolute and relative measures – Range, quartile deviation, mean deviation, standard deviation – Lorenz curve and its economic applications. (25hrs)

#### Module III Correlation and Regression Analysis:

Correlation- significance and types– measurement: scatter diagram, Karl Pearson's correlation coefficient, (for ungrouped data only) and Rank correlation. Cause and effect relationships: Regression- meaning and significance-regression equations/regression lines-the line of best fit – prediction based on regression equations. Relation between

correlation and regression. (25hrs)

#### Module IV

Index Numbers – Different types – Importance and limitations, Problems in construction – Weighted and Unweighted price index numbers – Different methods of constructing price indices– Simple aggregative, simple average of price relatives, Weighted aggregative: Laspeyre's, Paasche's, Fisher's and Marshall Edgeworth's indices, weighted average of price relatives methods. Cost of living index numbers: significance, uses and methods of construction – aggregate expenditure method and family budget methods- WPI. Tests of index numbers Time series: meaning, definition, uses, components – additive and multiplicative models, measurement of trend- free hand method, semi average, moving average and least square methods. (30hrs)

#### Core Course-12--EC6CRT12- International Economics

##### Learning Objectives

This course provides the students a thorough understanding and deep knowledge about the basic principles that tend to govern the flow of trade in goods and services at the global level. The contents of the Paper, spread over various modules, lay stress both on theory and applied nature of the subject.

##### MODULE I-

Introduction to International Economics and Trade Theories Nature and scope of international economics-differences between internal and international trade -Inter industry trade and intra-industry trade -Terms of trade –types, and factors affecting terms of trade – community indifference curve - Classical theory -Theory of absolute cost advantage, Theory of Comparative cost advantage, reciprocal demand theorem - offer curves - Opportunity cost theorem, Heckscher - Ohlin theory, Leontief's paradox, Factor price equalization theorem, Gains from Trade, static and dynamic gain from trade- (25 Hrs)

##### MODULE II-

Balance of Payments Meaning and structure of balance of payments – equilibrium and disequilibrium - measures to correct disequilibrium- monetary and non-monetary measures- Devaluation, depreciation and Balance of payments- Elasticity approach- Marshall- Learner condition – Jcurve effect (20 Hrs)

##### MODULE III–

Foreign Exchange Market Functions of foreign exchange markets - Forex Market participants.-Demand and supply of foreign exchange, Determination of equilibrium exchange rates - Factors influencing exchange rates. Theories of exchange rate determination- The Mint Parity Theory, Purchasing Power Parity theory, balance of payment theory. – Fixed and floating exchange Rate, spot and forward rates, hedging, speculation, arbitrage, futures, options and currency swaps. Exchange rate system in India-managed floating – partial and full convertibility on current and capital accounts.

(25 Hrs)

#### MODULE IV-

International Monetary and Trade System Commercial Policy – free trade and protection – tariffs and quotas and their effects – other non-tariff barriers – Economic Integration- meaning, forms and benefits, BRICS – Gold standard – The Bretton Woods System, International Monetary Fund - World Bank. GATT - Uruguay round, WTO. (20 Hrs)

#### Core Course-13-- EC6CRT13 -- Money & Financial Markets

##### Learning Objectives :

Financial Market provides the life blood to the real economy. Financial market institutions, regulators and instruments gives developmental and stabilizing services for the entire economy. Developments related to the working of the financial market are very essential to understand the way of economic functioning especially in the modern context. This Core Course tries to provide preliminary idea about the working of various financial market segments as well as the functioning of major regulators. Learners are advised to go through the basic concepts along with the course.

##### Module-1

Financial System Structure of Indian Financial System–Banks and NBFIs –Insurance Companies, Pension funds, Mutual Funds,Asset Management Companies. (13 Hrs)

##### Module 2-

Money and Central Banking Static and Dynamic Functions of money, near money, inside money and outside money – monetary aggregates –M1,M2,M3, M4-High powered money and money multiplier. RBI- functions- Instruments of Monetary policy –Repo and Reverse Repo –Base rate.(25 Hrs)

##### Module 3-

Banking Commercial banking in India –Structure-Functions of commercial banks – conflict between profitability and liquidity, credit creation and credit multiplier – Non-Performing Assets- Digital Payment System in India – RTGS,NEFT,Prepaid Payments instruments. (25 Hrs)

##### Module-4 Money market

Money Market-Functions-Structure of money market-Call Money Market-CBLO market,Collateral Loan Market-Acceptance Market-Bill or Discount Market- Features of Indian Money Market. (15 Hrs)

##### Module5 –

Capital market Capital Market –Functions –structure and functions of primary market and secondary market –Methods of Public issue-IPO, FPO- Book building –Major investment groups –Retail Investors-Domestic Institutional Investors and Foreign Portfolio Investors-

SEBI-Functions. (30 Hrs)

Core Course-14-- EC6CRT14- Indian Economy

Module I: Economic Development Strategy since Independence

Mixed Economic Framework - Key and Strategic Role of PSUs – Economic Crisis of 1990 – Macro Economic Reforms Implemented Since 1991-Structural Adjustment Programmes - Globalisation, Liberalisation and Privatisation –Performance of Indian Economy before and after Economic Reforms -External Sector Reforms since 1991 - Trade and Currency Reforms, - foreign capital - FDI, portfolio investments and MNCs (25hrs)

Module II-

Demographic Features- Population–size, structure (sex and age) – characteristics – population change – rural– urban migrations, occupational distribution, problems of over population, population dividend, population policy, Gender inequality, women empowerment. (15hrs)

Module III:

Agriculture, Industry and Service Sector Role of Agriculture in Indian Economy-Land Reforms-New Agricultural Strategy - Green Revolution – Need for Second Green Revolution - Agricultural Growth and Performance - New Agricultural Policy – Changes in Land use and Cropping Pattern-Agricultural Finance and Issues - Agriculture during Economic Reform Period - WTO and Indian Agriculture. Industrial growth during pre reform and post reform period-Industrial Policy Resolution of 1956 and 1991 - Role of Micro, Small and Medium Scale Industries (MSMEs) in Indian Economy Its problems and remedies- Role and Performance of Service sector in Indian Economy. (20 hrs)

Module IV:

Economic Planning and Development Issues Meaning and rationale of Planning-Basic Strategies, Objectives and Achievements of Planning in India-Strategies of 12th Plan, Inclusive Development-NITI Aayog - Trends in India's National Income – Magnitude of poverty and inequality in India - unemployment, black money and corruption – rising prices - energy crisis – Micro finance and its significance – importance of infrastructure in India's economic development. (15hrs)

Module V: Kerala Economy

Features, Kerala model of development - Structural change and economic growth in Kerala - Land reforms - current issues in agriculture – food crisis – changes in cropping pattern – agricultural indebtedness – unemployment - IT sector in Kerala - fiscal crisis in Kerala, Gulf migration, energy policy and energy crisis, decentralized planning in Kerala. (15hrs)

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