

**Second Semester**

**Course Name: Basic Elements of Economics**

**Course Code: ECO020104**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 100-199**

<b>Prerequisites: -</b>	No
<b>Theory Credit:</b>	04
<b>Practical Credit:</b>	NIL
<b>No. of Required Classes:</b>	
<b>No. of Contact Classes:</b>	50
<b>No. of Non-contact Classes:</b>	10

**Course Outcome:**

CO 1: Describe the Indian economy in terms of its income and demographic features

CO 2: Discuss the various measures of development

CO 3: Explain the functioning of a financial system

CO 4: Use the relevant statistical tools to systematically examine any given economic phenomenon

CO 5: Compare the current events of the global and national economy

<b>Unit No</b>	<b>Unit Content</b>	<b>No. of Classes</b>	<b>Marks</b>
<b>1</b>	<b>Basics of data collection</b>	<b>20</b>	<b>25</b>
	Primary and Secondary, Census versus Sample Survey, Distinction between population and sample, Distinction between population parameters and sample statistics, Principal steps in a sample survey, Methods of sampling - random, stratified, multi-stage and systematic random sampling. Measures of Central Tendency – Mean: Arithmetic mean (simple and weighted), Geometric mean, Harmonic mean, Median, Mode. Measures of Dispersion: Range, Inter-quartile deviation,		

	mean deviation, standard deviation, Variance.		
<b>2</b>	<b>Index Number</b>	<b>8</b>	<b>10</b>
	Meaning and Types, Construction, uses and limitations of index numbers, Cost of Living Index Numbers. Consumer Price Index Numbers for Agricultural Labourers in India, Consumer Price Index Numbers for Industrial Workers in India (concept only)		
<b>3</b>	<b>Economic growth and development</b>	<b>10</b>	<b>25</b>
	Per Capita Income (PCI) as a measure of development, International comparison of PCI and role of Purchasing Power Parity (PPP). Human Development Index (HDI), Concept of Sustainable development.		
<b>4</b>	<b>Financial System and its functions</b>	<b>10</b>	<b>20</b>
	Formal and informal financial system, Components of a financial system and their interdependence, Relationship between financial system and economic growth		
<b>5</b>	<b>Basic features of Indian economy</b>	<b>12</b>	<b>20</b>
	Trend of national and per capita income, Sector-wise composition of GDP, Basic demographic features – age, sex composition, density, urbanization, Labour force and Work force and Participation rate , Unemployment, Occupational Pattern, Demographic Dividend.		

**Readings:**

1. A.N. Agarwal: Indian Economy - Problems of Development and Planning, New Age International Publishers
2. B. V. Pathak: Indian Financial System, Pearson Education, Singapore.
3. Debraj Roy: Development Economics

4. Michael P.Todaro, Stephen C. Smith: Economic Development
5. Padmalochan Hazarika: Statistical Methods for Economics, Ashok book Stall
6. S.C. Gupta: Fundamentals of Statistics, Himalayas Publishing House, Seventh Edition
7. S.K.Misra, V K Puri: Economics of Development and Planning
8. V.K.Puri and S.K.Mishra: Indian Economy, Himalay Publishing House
9. William G. Cochran: Sampling Techniques, John Wiley, 2007.

#### **Fourth Semester**

**Course Name: Public Finance**

**Course Code: ECO040104**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 200-299**

<b>Prerequisites:</b>	This course requires successful completion of first and second semester courses in Economics.
<b>Theory Credit:</b>	04
<b>Practical Credit:</b>	NIL
<b>No. of Required Classes:</b>	
<b>No. of Contact Classes:</b>	50
<b>No. of Non-contact Classes:</b>	10

#### **Course Outcomes:**

- CO-1: Identify the concept of market failure and its implications for public policy.
- CO-2: Illustrate the reasons for and consequences of public debt accumulation.
- CO-3: Classify the role of budget in funding government activities and its impact on economic behavior.
- CO-4: Choose the objectives, instruments and outcomes of fiscal policy in different economic contexts.
- CO-5: Assess the components of a government budget and their role in achieving economic stability and growth.

<b>Unit No</b>	<b>Unit Content</b>	<b>No. of Classes</b>	<b>Marks</b>
<b>1</b>	<b>Meaning, Scope and Nature</b>	<b>10</b>	<b>15</b>
	Public Finance and its nature. Objectives of Fiscal Intervention: Allocation, Distribution and Stabilization. Parameters for policy evaluation: <i>Equity, Efficiency, Paternalism</i>		
<b>2</b>	<b>Market Failure and Public Intervention</b>	<b>10</b>	<b>15</b>
	Public Goods and the Free Rider Problem. Externalities: inefficiencies and corrections, property rights, Coase theorem		
<b>3</b>	<b>Taxation</b>	<b>10</b>	<b>20</b>
	Principles of taxation: Benefit vs Ability. Shifting and Incidence of tax. Economic effects, dead weight loss and distortion. Efficiency and equity considerations.		
<b>4</b>	<b>Public Expenditure</b>	<b>15</b>	<b>20</b>
	Principles of Expenditure Analysis, Fixed Quantity Subsidy for Marketed goods: overconsumption and underconsumption. Excise Subsidy: Allocative and Distributive Effect. Public Investment and Social Cost-Benefit Analysis		
<b>5</b>	<b>Public Debt and Budgeting</b>	<b>10</b>	<b>15</b>
	Sources of Public Debt and its redemption. Burden of Public Debt. Strategies of Debt Management. Budgeting: Incremental vs Zero-based budgeting. Outcome Budget.		
<b>6</b>	<b>Fiscal Policy and Federal Finance</b>	<b>10</b>	<b>15</b>
	Objectives and Strategies, Compensatory fiscal policy, pump priming, functional finance. Balanced Budget Multiplier. Fiscal Federalism: Vertical and Horizontal Equity, Inter-governmental Transfers. Finance Commission of India.		

**Readings:**

1. Browning E K & Browning J M, Public Finance and the Price System, Pearson Education. Singapore.
2. Hyman D N, Public Finance: A Contemporary application of Theory to Policy, Thomson South Western.
3. Ulbrich H, Public Finance in Theory and Practice, Thompson South Western.
4. Mukherjee S, Ghose A & Nag N N, Analytical Public Finance. Public Economics-Public Choice-Public Policies, New Central Book Agency (P), Kolkata.
5. Musgrave & Musgrave., Public Finance in Theory and Practice, McGraw Hill, Singapore.

**Fourth Semester****Course Name: Advanced Macroeconomics****Course Code: ECO040204****Existing Base Syllabus: UG CBCS Syllabus****Course Level: 200-299**

**Prerequisites:** This course requires successful completion of Intermediate Economics course offered in the third semester

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 50

**No. of Non-contact Classes:** 10

**Course Outcomes:**

CO-1: Provide an outline of the domain of Macro Economics

CO-2: Describe basic ideas on macroeconomic indicators or variables.

CO-3: Discusses various alternative theories of output and employment determination in a closed economy in short-run, medium-run.

CO-4: Analyses long run dynamic issues like growth and technical progress.

CO-5: Develops theoretical understanding of issues related to an open economy.

<b>Unit No</b>	<b>Unit Content</b>	<b>No. of Classes</b>	<b>Marks</b>
<b>1</b>	<b>Consumption Function</b>	<b>15</b>	<b>20</b>
	Average and Marginal Propensity to Consume; Factors influencing Consumption spending;		

	Keynesian consumption function; An Overview of Post Keynesian theories of consumption: absolute income, relative income, permanent income & life cycle hypothesis.		
<b>2</b>	<b>Investment Function</b>	<b>15</b>	<b>20</b>
	Types of investment- Autonomous and Induced, residential investment and inventory investment; determinants of business fixed investment; marginal efficiency of capital, marginal efficiency of investment; Accelerator theory of Investment; Multiplier-Accelerator interaction.		
<b>3</b>	<b>Macroeconomic modeling</b>	<b>14</b>	<b>30</b>
	IS-LM model and policy analysis, Income determination in an open economy; Mundell-Fleming model; Exchange rate and its determination; Purchasing power parity; Demand-Supply and Balance of Payments theory.		
<b>4</b>	<b>Inflation, Unemployment and Expectations</b>	<b>08</b>	<b>15</b>
	Inflation-unemployment trade off and Phillips curve; Adaptive and Rational expectations; policy ineffectiveness debate.		
<b>5</b>	<b>Economic Growth</b>	<b>08</b>	<b>15</b>
	Harrod- Domar model; Solow model; Technological progress and elements of endogenous growth.		

**Readings:**

1. Debraj Ray, Development Economics, Oxford University Press, 2009
2. Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010
3. Dominick Salvatore, International Economics: Trade and Finance, John Wiley, 10<sup>th</sup> Edition 2011

4. N. Gregory Mankiw. Macroeconomics, Worth Publishers, 7th edition, 2010
5. Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005
6. Thirlwall, A. P. "Growth and Development" Palgrave, 9<sup>th</sup> edition, 2011.

**Fourth Semester**

**Course Name: Introductory Quantitative Techniques for Economics**

**Course Code: 040304**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 200-299**

<b>Prerequisites:</b>	No
<b>Theory Credit:</b>	04
<b>Practical Credit:</b>	NIL
<b>No. of Required Classes:</b>	
<b>No. of Contact Classes:</b>	60
<b>No. of Non-contact Classes:</b>	NIL

**Course Outcomes:**

CO-1: Select some important topics of Quantitative Techniques for beginners of Economics.

CO-2: Explain various preliminaries of mathematics like Differential Calculus, Integration of Functions, Single variable Optimization, Correlation Regression etc.

CO-3: Differentiate Differentiation from Integration, Correlation from Regression etc

CO-4: Interpret the results of correlation and regression coefficients.

CO-5: Design students' own model and interpret results.

<b>Unit No</b>	<b>Unit Content</b>	<b>No. of Classes</b>	<b>Marks</b>
<b>1</b>	<b>Preliminaries of Mathematics</b>	<b>8</b>	<b>10</b>
	Constants and Variables, Number system, Sets and set operations, Ordered pairs and Cartesian products, relations and functions, Types of functions: quadratic, polynomial, power, exponential, logarithmic, Limit and		

	Continuity of a Function.		
<b>2</b>	<b>Differential Calculus</b>	<b>12</b>	<b>20</b>
	Differentiation of a function, Basic rules of differentiation, partial and total differentiation, second and higher order derivatives for single variable, economic applications of differentiation.		
<b>3</b>	<b>Integration of Functions</b>	<b>12</b>	<b>20</b>
	Meaning and significance of integration, basic rules of integration, significance of a constant after integration, applications: derivations of total functions (total cost, total revenue, consumption and saving functions) from marginal functions, Definite integral and its application-consumer's surplus and producer's surplus.		
<b>4</b>	<b>Single Variable Optimization</b>	<b>8</b>	<b>20</b>
	Local and global optima: geometric characterization, characterization using calculus: tests for maximization and minimization, applications: profit maximization, cost minimization, revenue maximization.		
<b>5</b>	<b>Correlation Analysis</b>	<b>10</b>	<b>15</b>
	Correlation, Coefficient of linear correlation, Properties of Correlation coefficient, Rank Correlation, Partial Correlation, Multiple Correlation.		
<b>6</b>	<b>Regression Analysis</b>	<b>10</b>	<b>15</b>
	Regression: Concept, Difference with Correlation Analysis, Properties, Estimation of regression line in a bivariate distribution-Least squares method, properties of regression coefficients.		

**Readings:**

1. K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002
2. Chiang A.C. and K. Wainwright, *Fundamental Methods of Mathematical Economics*, McGraw Hill International Edition
3. Baruah S.N., *Basic Mathematics and its Economic Applications*, MacMillan
4. Jay L. Devore, *Probability and Statistics for Engineers*, Cengage Learning, 2010.
5. John E. Freund, *Mathematical Statistics*, Prentice Hall, 1992.

6. Richard J. Larsen and Morris L. Marx, *An Introduction to Mathematical Statistics and its Applications*, Prentice Hall, 2011.

7. S.C Gupta. Fundamentals of Statistics

**Fourth Semester**

**Course Name: Advanced Microeconomics**

**Course Code:040404**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 200-299**

<b>Prerequisites:</b>	No
<b>Theory Credit:</b>	04
<b>Practical Credit:</b>	NIL
<b>No. of Required Classes:</b>	
<b>No. of Contact Classes:</b>	60
<b>No. of Non-contact Classes:</b>	NIL

**Course Outcomes:**

CO-1: Apply game theory to analyze market decisions.

CO-2: Analyze the implications of public policy on labour markets.

CO-3: Differentiate between forms of production functions such as Cobb-Douglas, CES, and Fixed coefficient type, and analyze their implications on total and partial factor productivity.

CO-4: Compare partial and general equilibrium approaches.

CO-5: Assess the criteria for social welfare optimization.

<b>Unit No</b>	<b>Unit Content</b>	<b>No. of Classes</b>	<b>Marks</b>
<b>1</b>	<b>Input Markets</b>	<b>20</b>	<b>10</b>
	Labour and land markets - basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); demand for labour; input demand curves; shifts in input demand curves;		

	competitive labour markets; and labour markets and public policy. Factors share & Technical progress- Backward bending supply curve of Labor.		
<b>2</b>	<b>Theory of Production and Cost</b>	<b>15</b>	<b>10</b>
	Forms of Production Function; Cobb-Douglas, CES and Fixed coefficient Type – the Ideas of Partial and Total Factor Productivity– Derivation of Cost Function from Production Function – Multi-product Firm: production Efficiency Locus, Production Possibility Frontier.		
<b>3</b>	<b>Consumer Theory and Information Economics</b>	<b>20</b>	<b>10</b>
	A review of Indifference Curve, Violation of premises of Indifference curve approach, Revealed Preference Theory.  Inter-temporal choice, Choice under risk- Expected Return, variability and Expected utility hypothesis- Asymmetric information- Adverse Selection and Moral Hazard		
<b>4</b>	<b>Market Structure and Game Theory</b>	<b>25</b>	<b>10</b>
	Monopoly, Pricing with Market Power; Degree of Monopoly, Price Discrimination- Different Degrees; Multi-plant Monopoly.  Monopolistic competition: Product Differentiation, Perceived and Proportionate Demand Curves, Price-Output Determination.  Oligopoly and Game Theory (Two Person Zero Sum Game, Basic ideas and examples of non-zero-sum games, Prisoner's Dilemma), Applications of Game Theory in Oligopolistic Markets (Cournot Equilibrium).		
<b>5</b>	<b>General Equilibrium &amp; Welfare Economics</b>	<b>20</b>	<b>10</b>
	Partial versus General Equilibrium Approaches- Walrasian General Equilibrium System.		

	Pareto optimality, Kaldor-Hicks compensation criteria, Social Welfare Function, Fundamental Theorems of Welfare Economics, Arrow's Impossibility Theorem.		
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**Readings:**

1. Dominick Salvatore, Schaum's Outline of Microeconomics, McGraw-Hill Education
2. G.S. Maddala and Ellen Miller, Micro Economic Theory and Application, Tata McGraw Hill.
3. Koutsoyiannis. A, Modern Micro-Economics, ELBS/Macmillan.
4. Pindyck, R. & Rubinfeld, D.L., " Microeconomics", Pearson
5. C. Snyder and W. Nicholson, Fundamentals of Microeconomics, Cengage Learning (India).
6. Anindya Sen, Microeconomics-Theory and Application, Oxford University Press.

**Sixth Semester**

**Course Name: Assam Economy**

**Course Code: 060104**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 300-399**

<b>Prerequisites:</b>	No
<b>Theory Credit:</b>	04
<b>Practical Credit:</b>	NIL
<b>No. of Required Classes:</b>	
<b>No. of Contact Classes:</b>	60
<b>No. of Non-contact Classes:</b>	NIL

**Course outcome:**

CO1: Describe the status of Assam economy in some development indicators since independence

CO2: Discuss the linkage between human capital formation and different sectors of an economy.

CO3: Analyse the relevance of policies and its effects on different sectors in the context of the economy of Assam.

CO4: Justify the need for the state's relationship with her neighbouring states.

CO5: Prescribe policies for the overall upgrade of the state economy.

Unit No	Unit Content	No. of Classes	Marks
1	<b>The Economy under Colonial Rule (1837 -1947)</b>	10	15
	Imposition of Land Revenue and Its Impact, Prohibition of Opium Production and State Takeover of Opium Trade, Inflow of Colonial Investment in Plantation, Mining and Other Industries. Development of Water Transport and Railways, In-migration of Population and its Impact on the Economy: Shock of Partition and its Impact		
2	<b>Growth and Sectoral Composition in the Post-Independence Period</b>	15	25
	Population growth trends before and after 1971, Trends in Demographic Parameters: Population Density, Sex Ratio, Life Expectancy, Fertility Rate and Infant Mortality Rate – Work Force and Labour Force Participation, Occupational Distribution. Trends and Sector-wise Composition of GSDP, Trend in Per Capita NSDP in comparison with trends in all-India Per Capita Income Trends in Other Indicators of Development in Comparison with all-India standard: Life expectancy, Literacy, Enrolment and Forest Cover		
3	<b>Sectoral Status and Prospects:</b>	20	35
	<b>Infrastructure:</b> Status of Road, Rail and Air Connectivity within and out of the State; Potentials and Limitation of Waterways Development; Status of Power and Telecommunication <b>Agriculture:</b> Land Holding Patterns, Land Tenure and Land Reforms, Cropping Pattern, Production and Productivity of Principal Crop –Diversification of the Rural Economy to Horticulture, Fishery, Livestock and Non-farm activities – Prospects and Challenges of the Sector.		

	<p><b>Industry:</b> Tea Industry and Role of Small Tea Growers, The Future of Hydrocarbon Industry. Traditional Handloom Handicraft and their Prospect;</p> <p><b>Service Sector:</b> Size and Composition.</p> <p>Tourism Resources and their Economic Potentials: Policies for sustainable realization</p>		
<b>4</b>	<b>State Finances:</b>	<b>9</b>	<b>15</b>
	Trends and composition of State Government receipts before and after GST regime. Composition of Public Expenditure and its implications. Sustainability of Government Borrowing. Fiscal Devolution to Local Bodies (Panchayats, Municipalities and Autonomous Councils)		
<b>5</b>	<b>Assam Economy in its Neighborhood</b>	<b>6</b>	<b>10</b>
	Mutual inter-dependence with neighboring States Stakes of Assam in the Act East Policy		

**Readings:**

1. Atul Goswami "Assam's Industrial Development: Urgency of New Direction", Economic and Political Weekly 1981
2. Department of Economics, Gauhati University, "Identity Aspirations, Developmental Backlogs and Governance Issues in Northeast India" Maliyata Offset Press, Mirza, 2016
3. Directorate of Economics and Statistics, Government of Assam, "Economic Survey Assam" [recent issues] <https://des.assam.gov.in/information-services/economic-survey-assam>
4. Directorate of Economics and Statistics, Government of Assam, "Statistical Handbook of Assam" 2018 or later addition
5. Guha, Amalendu, Planter's Raj to Swaraj, Second Edition (paperback)
6. India Brand Equity Foundation "About Assam: Tourism, Industries In Assam, Agriculture, Economy & Geography", June 2020, <https://www.ibef.org/states/assam.aspx>
7. J B Ganguli, "Economic Conditions and Change in North-East India" in A.P. Singha (ed) Changing North East India, Ludhiana: Gagan Publishers, 1986
8. J N Sarma, "Problems of Economic Development in Assam" Economic and Political Weekly, Vol. 1, No. 7, Pp. 281+283-286.

9. Planning and Development Department, Government of Assam “Assam Human Development Report 2014”

**Sixth Semester**

**Course Name: Basics of Econometrics**

**Course Code: 060204**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 300-399**

<b>Prerequisites:</b>	No
<b>Theory Credit:</b>	04
<b>Practical Credit:</b>	NIL
<b>No. of Required Classes:</b>	
<b>No. of Contact Classes:</b>	52
<b>No. of Non-contact Classes:</b>	08

**Course Outcomes:**

CO-1: Identify sources, consequences, and detection methods of violations of classical assumptions in regression analysis.

CO-2: Estimate parameters in multiple linear regression models and evaluate the properties of Ordinary Least Squares (OLS) estimators

CO-3: Demonstrate proficiency in utilizing MS Excel for econometric applications and solutions, including data analysis and interpretation of econometric models.

CO-4: Analyze the properties and applications of statistical distributions

CO-5: Utilize simple linear regression models for forecasting purposes.

<b>Unit No</b>	<b>Unit Content</b>	<b>No. of Classes</b>	<b>Marks</b>
<b>1</b>	<b>Statistical Background</b>	<b>10</b>	<b>15</b>
	Normal distribution, chi-square, t- distribution, and F-distribution; estimation of parameters, properties of estimators, Statistical Inferences, Hypothesis testing, Type I and Type II errors, power of a test; Level of		

	Significance, Confidence Interval.		
<b>2</b>	<b>Simple Linear Regression Model</b>	<b>12</b>	<b>25</b>
	Two Variable Case, Estimation of model by method of ordinary least squares, properties of estimators, Gauss-Markov theorem, BLUE, goodness of fit; tests of hypotheses, scaling and units of measurement, confidence intervals, forecasting.		
<b>3</b>	<b>Multiple Linear Regression Model</b>	<b>10</b>	<b>15</b>
	Estimation of parameters, properties of OLS estimators, goodness of fit, $R^2$ and adjusted $R^2$ , partial regression coefficients, testing hypotheses – individual and joint, functional forms of regression models, qualitative (dummy) independent variables.		
<b>4</b>	<b>Violations of Classical Assumptions: (Marks: 15) (Class: 10)</b>	<b>10</b>	<b>15</b>
	Sources, Consequences, Detection and Remedies of Multicollinearity, heteroscedasticity, serial correlation		
<b>5</b>	<b>Specification Analysis: (Marks: 10) (Class: 10)</b>	<b>10</b>	<b>15</b>
	Omission of a relevant variable, inclusion of irrelevant variable, tests of specification errors		

**Readings:**

1. R P Hooda, Statistics for Business and Economics, Vikas Publishing
2. D. N. Gujarati and D.C. Porter, Essentials of Econometrics, McGraw Hill, 4th edition, International Edition, 2009.
3. Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 4<sup>th</sup> edition, Indian edition, 2011.
4. Wooldridge J.M., Introductory Econometrics: A Modern Approach, Cengage Learning India Pvt. Ltd, 2014

**Sixth Semester**  
**Four-year Undergraduate Programme**  
**Subject: Economics**  
**Sixth Semester**

**Course Name: Financial System**

**Paper Code: ECO060304**

**Internal Marks – 40, External Marks – 60**

**Existing Base Syllabus:**  
**Course Level: 300-399**

**Prerequisites: -**

**Theory credit: 4**

**Number of required classes**

**Number of contact classes: 45**

**Number of non-contact classes: 15**

**Course Outcomes:**

CO-1: Identify the various components of a financial system.

CO-2: Explain the operation of a bank as a financial intermediary and understand measures undertaken to regulate banks.

CO-3: Illustrate the trading process in the stock market.

CO-4: Assess the operation of the various instruments of the money market.

CO-5: Explain the modalities of resource mobilization in capital markets through various capital market assets.

**Unit-1: The Financial System**

The nature of credit, Financial system and its Components: *Instruments, Markets, Institutions and Services*, The Functional Perspective of the Financial System, Financial System in Economic Growth and Global Integration.

**Unit-2: The Money Market**

Structure and functions, Instruments in the money market, Call Money Market and its participants, Volatility in Call Rates, Money Market Intermediaries: *The Discount and Finance House of India and Money Market Mutual Funds*, Liquidity Management Instruments in the Money Market

### **Unit-3: The Capital Market**

The Capital market: Its nature and functions, Primary Capital Market: Instruments of resource mobilization- *Public Issues: IPO & FPO, Right Issues, and Private Placement*, Resource mobilization from International Capital Market, Pricing of new issues: the Book Building process, Reverse Book Building and Green Shoe Option, Secondary Capital Market: Organization, Management and Membership, Trading & Settlement, *The Over the Counter Exchange of India*, The Depository System and its operation, Stock Market Index- Method of calculating the index, Mutual Fund and its functional classification, Net Asset Value

### **Unit -4 Banking Sector Operations**

Overview of bank operations: Banks as financial intermediaries, Sources of Funds of banks, Uses of Funds by banks, Off-balance sheet activities of banks, Regulation of banks: Capital Regulation, Operations Regulation, Bank Monitoring Measures undertaken by Regulators, Issues relating to government bailout, Reforms in Banking Sector in India.

### **References**

Bodie Z, Merton R. C. & Cleeton D. L. *Financial Economics*. Pearson/ Prentice Hall.

Madura J. *Financial Institutions and Markets*, Thomson South Western.

Pathak B. V. *Indian Financial System*, Pearson Education, Singapore.

Prasanna Chandra. **Fundamentals of Financial Management**. McGraw Hill Education

Rustagi, R.P. **Fundamentals of Financial Management**. Taxmann Publication Pvt. Ltd.

Course Objective: The course is designed to introduce the students to the basic ideas of finance and financial system. The focus will be on exposing the students to the various financial instruments, markets and strategies along with the tools for analysing the same.

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## Sixth Semester

Course Name: Environmental Economics

Course Code: 060404

Existing Base Syllabus: UG CBCS Syllabus

Course Level: 300-399

Prerequisites: None

Theory Credit: 04

Practical Credit: NIL

No. of Required Classes:

No. of Contact Classes: 55

No. of Non-contact Classes: 05

### Course Outcome:

CO-1: Draw a comprehensive knowledge and understanding of the issues related to environment and economy.

CO-2: Indicate the issues related to market failure of environmental goods and the instruments which can prevent the damages of market failure of environmental goods.

CO-3: Differentiate environmental policies to reduce anthropogenic effect on environment.

CO-4: Explain how an economy should use the natural resources in an optimum way, such that an economy can take up the path of sustainable development.

CO-5: Make aware of global environmental issues.

Unit No	Unit Content	No. of Classes	Marks
1	<b>Introduction</b>	20	10
	Basic concepts: Environment, Ecology, Economy and the ecosystem. Definition and scope of Environmental economics, why study environmental economics. Interaction between the environment and the economy, environmental economics and ecological economics, Environmental economics and resource economics.		
2	<b>Market Failure in allocation of Environmental resources</b>	20	10
	Externality and its types; Market Failure: Meaning, Causes of market failure; Environment as a public good, Solutions to market failure: Government Intervention; Common Property Resources and its management.		

<b>3</b>	<b>The Design and Implementation of Environmental Policy</b>	<b>20</b>	<b>15</b>
	Environmental Policies: Overview; Conventional Instruments: Command and Control (CAC) approach; Economic Instruments of Environmental Policies: Pigovian taxes and effluent fees, tradable permits and Liability rules. Monitoring and Enforcement: Meaning, Penalties, Cost of abatement.		
<b>4</b>	<b>Sustainable Development:</b> Approaches to Sustainable Development: weak sustainability, strong sustainability, Safe minimum standard approach, ecological perspective and social perspective, Rules and indicators of Sustainable Development; Green Accounting (concept only)	<b>20</b>	<b>10</b>
<b>5</b>	<b>International Environmental Problems and Initiatives:</b> Transboundary pollution (Problems of International Externalities), Economics of Climate change and Variability: Causes and Consequence; Inter linkages and trade off between Environment and Development. Environmental Kuznet Curve. Trade and environment: pollution haven hypothesis. Global Intervention for Sustainable Development	<b>20</b>	<b>10</b>

**Readings:**

1. Charles Kolstad, Intermediate Environmental Economics, Oxford University Press,
2. Bhattacharyya R, Environmental Economics, Oxford University Press.
3. Nick Hanley, Jason F. Shogren and Ben White, Introduction to Environmental Economics, Oxford University Press.
4. Robert N. Stavins (ed.), Economics of the Environment: Selected Readings, W.W. Norton, 5th edition, 2005.
5. Roger Perman, Yue Ma, James Mc Gilvray and Michael Common, Natural Resource and Environmental Economics, Pearson Education/Addison Wesley, 3rd edition, 2003.
6. Maureen L. Cropper and Wallace E. Oates, 1992, —Environmental Economics: A Survey, || Journal of Economic Literature, Volume 30:675-740.
7. Subhashini Muthukrishnan, Economics of Environment, PHI Learning Private Limited, 2nd edition, 2015.

**Second Semester: FYIMP**  
**SEC: Code 0200103**  
**Credit: 3:: Theory: 0, Practical :3 credits**  
**Marks: 75 (Int: 20+Prac: 25 + Final:30)**  
**Course name: Data Analysis**

**Course Objective:**

This course will give an idea to students about the use of computer for presenting and summarizing data. Students can learn appropriate use of diagrammatical and tabular presentation of information. The use of computer and other statistical software in computing basic statistical tools and other relevant statistical technique will also be covered in this course. The students will have to compute the different statistical tools taking data from real life examples.

**Course Outcomes:**

- To describe the use of computer for presenting and summarizing data.
- Students can learn appropriate use of diagrammatical and tabular presentation of information.
- The use of computer and other statistical software in computing basic statistical tools and other relevant statistical technique is also covered in this course.
- There will be hands-on training for each student with individual computer.

<b>Unit</b>	<b>Unit content</b>	<b>Class</b>	<b>Marks</b>
1	Presentation of data Diagrammatic Presentation- One dimensional – single, subdivided, multiple deviation; Two dimensional- histogram, pie diagram; Three dimensional- rectangular, cube; Pictograms and cartograms, scatter, line and radar diagrams; Tabular Presentation - Single; Double, Multiple	15	20
2	Overview of Basic statistics Frequency, Summation, maximum, Minimum, Mean, Median, Mode, standard deviation, skewness	10	20
3	Statistical relations Covariance; correlation- Bivariate, Partial, Rank, Correlation matrix.	20	25

**Second Semester:VAC**  
**Course Name: Environmental Assessment and Education**

Course level:100-199

No. of contact classes: 30 (Theory 26 hours + Practical  
4hours)

Credits: 2 credits

**Course objectives:**

This course will help students to get an idea about the biodiversity and its conservation. By going through the biodiversity losses which is mostly by human activities, the students could learn the importance of the conservation of biodiversity. Unit 2 of this course will give an overall idea of the basic environmental assessment practices and its role in environmental management. This course also educates students about environmental ethics and the role of religious and cultural norms in environmental conservation.

**Learning outcomes:**

- Expose students to the real - life world, natural and social, in which they live
- Enable students to analyse, evaluate, and draw inference about problems
- Help students to understand the ethical issues related to environment

**Theory**

**Unit 1: Biodiversity and Conservation :** (10 lectures: 16 marks)

Levels of biological diversity: genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hot spots; India as a mega-biodiversity nation; Endangered and endemic species of India; Threats to biodiversity: Habitat loss, poaching of wildlife, man- wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex situ conservation of biodiversity; Ecosystem and diversity services: Ecological, economic, social, ethical, aesthetic and informational value.

**Unit 2: Environmental Impact Assessment:** (8 lecture: 12 marks)

Introduction to Environmental Impact Assessment; Environmental Impact Statement (EIS) and Environmental Management Plan (EMP). Strategic Environmental Assessment (SEA); EIA Guidelines: notification of the Government of India 2006; Impact Assessment Methodologies.

**Unit 3: Environmental ethics:** (8 lectures: 10 marks)

Concept of Sustainable Development, Natural resources, and their assessment; Environmental education, and awareness. Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.

**Practical:** (4 lectures:12 marks)

Each student will prepare a project about the various religious and cultural norms that are used in their locality for environmental conservation

**Suggested Readings:**

- Botkin, Daniel B. and Keller, Edward A. Environmental Science: Earth as a Living Planet. 6<sup>th</sup> ed. John Wiley & Sons, USA. 2007
- Gaston, K.J. and Spicer, J.I. Biodiversity: An Introduction. Blackwell, UK. 1998
- Enger, E.D. and Smith, B.F. Environmental Science: A study of Interrelationships. 11<sup>th</sup> ed. McGraw Hill Inc., USA. 2006.
- Ramakrishnan, P.S. Ecology and Sustainable Development. National Book Trust of India, Delhi, India. 2001.
- Kulkarni, V. and Ramachandra, T.V. Environmental Management. Capitol Pub. Co., New Delhi. 2006.
- Glasson, J. Therivel, R. and Chadwick, A. Introduction to Environmental Impact Assessment. Routledge, London. 2006.
- V.S. Kulkarni, S.N. Kaul and R.K. Trivedy. A Handbook of Environmental Impact Assessment. Scientific Publishers.
- Sustainable Development report. <https://www.sustainabledevelopment.report/>