# FYUGP Syllabus in Economics
# Gauhati University

(Recommended by the meeting of the CCS in Economics held on 26.02.2026, the Joint Faculty Meeting held on 20.05.2026, and the Academic Council held on 26.05.2026)

**Department of Economics**
**Gauhati University**
**Guwahati, Assam**
**INDIA**

**Programme Specific Outcomes (PSOs)**

1. Apply quantitative techniques to analyse and interpret economic data effectively.
2. Analyse economic phenomena using appropriate theoretical frameworks and methodologies.
3. Synthesize economic concepts and principles to address real-world socio-economic challenges.
4. Demonstrate proficiency in economic research by formulating hypotheses, collecting relevant data, and drawing meaningful conclusions.

**Four Year Undergraduate Programme**
**Subject: Economics**

| Programme name | Semester | Course name | Course code |
|---|---|---|---|
| FYUGP in Economics (Major/ Minor) | 1 | Introductory Economics | ECO010104 |
| | 2 | Basic Elements of Economics | ECO020104 |
| | 3 | Intermediate Economics | ECO030104 |
| | | Indian Economy | ECO030204 |
| | 4 | Advanced Microeconomics | ECO040104 |
| | | Advanced Macroeconomics | ECO040204 |
| | | Public Finance | ECO040304 |
| | | Introductory Quantitative Techniques for Economics | ECO040404 |
| | 5 | Development Economics | ECO050104 |
| | | International Economics | ECO050204 |

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|---|---|---|---|
| | | Intermediate Quantitative Techniques for Economics | ECO050304 |
| | 6 | Assam Economy | ECO060104 |
| | | Basics of Econometrics | ECO060204 |
| | | Financial System | ECO060304 |
| | | Environmental Economics | ECO060404 |

**Template for Economics (Fourth Year) (FYUGP in Economics with Honours)**

| Programme name | Semester | Course name | Course code |
|---|---|---|---|
| FYUGP in Economics (Honours) | 7 | Contemporary Economic Theory (C) | ECO4700104MJ |
| | | Statistical Inference and Econometrics (C) | ECO4700204MJ |
| | | Economics of Health (E) | ECO4700404MJ |
| | | Environmental Valuation and Management (E) | ECO4700504MJ |
| | | Population & Human Resource Economics (E) | ECO4700304MN |
| | | Research Methodology for Social Science (C) | ECO4700604MJ |
| | | Project Formulation and Execution (C) | ECO4800104MJ |

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|---|---|---|---|
| | 8 | Public Finance: Theory and Application (C) | ECO4800204MJ |
| | | Indian Economy in the Global Environment (C) | ECO4800304MN |
| | | Agricultural Economics and Rural Development (E) | ECO4800404MJ |
| | | Foundations of Financial Evaluation (E)<br><br>(**Effective only for students who joined FYUGP/FYIMP in 2023)** | ECO4800504MJ |
| | | **Fundamentals of Financial Analysis (E)**<br><br>**(Not applicable to students admitted under FYUGP/FYIMP in 2023)** | ECO4800504MJ |
| | | Development Economics: Theory and Practice (E) | ECO4800604MJ |
| | | Project/Seminar/Fieldwork | ECO4800704MJ |

**Template for Economics (Fourth Year) (FYUGP in Economics Honours with Research)**

| Programme name | Semester | Course name | Course code |
|---|---|---|---|
| FYUGP in Economics (Honours with Research) | 7 | Contemporary Economic Theory (C) | ECO4700104MJ |
| | | Statistical Inference and Econometrics (C) | ECO4700204MJ |
| | | Economics of Health (E) | ECO4700404MJ |
| | | Environmental Valuation and Management (E) | ECO4700504MJ |
| | | Population & Human Resource Economics (E) | ECO4700304MN |
| | | Research Methodology for Social Science (C) | ECO4700604MJ |
| | 8 | Dissertation (c) | ECO4800812MJ |
| | | Project Formulation and Execution (C) | ECO4800104MJ |

**Course Name: Introductory Economics**

**Course Code: ECO010104**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 100-199**

**Prerequisites**: - NIL

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60
**No. of Non-contact Classes:** NIL

**Course Outcomes:**

CO-1: Interpret national income and its measurement

CO-2: Apply the idea of equilibrium to basic macroeconomics

CO-3: Analyze the essence of the economic problem

CO-4: Analyze different types of taxation, government budgets, revenue and capital components, as well as fiscal and primary deficits.

CO-5: Examine the role of markets in the economy

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **The Essence of the Economic Problem:** | 15 | 25 |
| | Scarcity and Alternative Usability of Resources, Problem of Choice and Optimization by an Economic Agent. The Notion of Opportunity Cost. Notions of Individual Demand and Supply. Individual Demand Function, Demand Curve and the Law of Demand, Shift of the Demand Curve, The Idea and calculation of Elasticity: Price, Income and Cross Elasticities of Demand and their Significance. Cost of Production and Supply. Elasticity of supply. | | |
| **2** | **Market and Its Role in the Economy** | **12** | **20** |
| | Market and its Different Forms - Perfectly Competitive Market versus Monopoly. Individual Demand to Market Demand, Individual Supply to Market Supply. Price determination in a Competitive Market. Stability of the Competitive Market Equilibrium. Consumers' and Producers' Surplus and Efficiency of the Markets Equilibrium. | | |
| **3** | **National Income and its Measurement** | **10** | **15** |
| | From Microeconomics to Macroeconomics. Income (Hicks' Definition), Domestic Income and National Income, GNP and its | | |

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|---|---|---|---|
| | Measurement, Circular Flow of the Economy, NDP at Factor Cost as Domestic Income. Personal and Disposable Income, Purchasing Power Parity. Concepts of Unemployment, Inflation and Recession. Balance of Payment –current and capital accounts | | |
| **4** | **Macroeconomic Equilibrium and Income Determination** | **12** | **20** |
| | Idea of Equilibrium as Applied to a Basic Macroeconomy, Ex Post and Ex Ante Savings and Investment, Keynes' Approach of Aggregate Effective Demand and Determination of Income, Multiplier Analysis | | |
| **5** | **Basic Concepts in Public Finance Operations** | **12** | **20** |
| | Definition of Tax, Direct and Indirect Tax, Tax Rate, Buoyancy and Elasticity of a Tax, Proportionate, Progressive and Regressive Taxation. Government Budget and Its Revenue and Capital Components; Fiscal and Primary Deficits. | | |

Readings:


1. N C Ray, *Microeconomic Theory*, MacMillan
2. Dominick Salvatore, Microeconomic Theory, Schaum's Outline Series, McGraw Hill
3. Soumyen Sikdar, *Principles of Macroeconomics*, Oxford


**Second Semester**

**Course Name: Basic Elements of Economics**

**Course Code: ECO020104**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 100-199**

**Prerequisites**: - No

**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: 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

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Basics of data collection** | **20** | **25** |
| | 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.<br>Measures of Central Tendency – Mean: Arithmetic mean (simple and weighted), Geometric mean, Harmonic mean, Median, Mode.<br>Measures of Dispersion: Range, Inter-quartile deviation, mean deviation, standard deviation, Variance. | | |
| **2** | **Index Number** | **8** | **10** |
| | 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) | | |
| **3** | **Economic growth and development** | **10** | **25** |
| | Per Capita Income (PCI) as a measure of development, International comparison of PCI and role of Purchasing | | |

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|---|---|---|---|
| | Power Parity (PPP). Human Development Index (HDI), Concept of Sustainable development. | | |
| **4** | **Financial System and its functions** | **10** | **20** |
| | Formal and informal financial system, Components of a financial system and their interdependence, Relationship between financial system and economic growth | | |
| **5** | **Basic features of Indian economy** | **12** | **20** |
| | 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.


**Third Semester**

**Course Name: Intermediate Economics**

**Course Code: ECO030104**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 200-299**

**Prerequisites**: - NIL
**Theory Credit:** 04
**Practical Credit:** NIL
**No. of Required Classes:**
**No. of Contact Classes:** 60
**No. of Non-contact Classes:** NIL
**Course Outcomes:**

CO1: Identify basic micro and macroeconomic concepts.
CO2: Associate with the elementary exposure to International Economics.
CO3: Explain the behavior of individual economic agents and outcome of their decisions on the aggregated levels.
CO4: Analyse real economic issues like consumer behavior, producer behavior, money, inflation, employment, International Economics and basic theories.
CO5: Assess real life consumer behaviour on the basis of economic theories.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Consumer's Behaviour** | **12** | **20** |
| | Consumer's Budget Constraints and Effects of Income and Price Changes on it, Consumer's Preference Ordering and Indifference Curves, Axioms of Preference and Properties of Indifference Curves: Consumer's Optimized Choice; Income and Substitution Effects, Derivation of Demand Theorem. Normal and Inferior Goods and the Giffen Paradox | | |
| **2** | **Theory of Production and Cost** | **15** | **20** |
| | Total, Average & Marginal Product of a Single Variable Factor; Production Function with Two Variable Factors, Isoquant, Marginal Rate of Technical Substitution, Elasticity of Substitution; Homogeneity of Production Function, Returns to Scale, Least Cost Factor Combination, Expansion path, cost curves-Short and Long run | | |
| **3** | **Firm's Revenue and Equilibrium** | **9** | **14** |

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|---|---|---|---|
| | Total, Average and Marginal Revenue of a Firm under Perfect Competition and Monopoly, Equilibrium of a Profit Maximizing Firm under Perfect Competition and Monopoly. Need for Regulation of Monopoly | | |
| **4** | **Money, Interest, Income** | **10** | **17** |
| | Definition and Functions of Money, Classical Theory of Full Employment Equilibrium, Quantity Theory of Money Keynes' Critique of the Classical Theory, Liquidity Preference and the Rate of Interest, Keynesian Income Determination Model with Rate of Interest | | |
| **5** | **Credit Creation, Money Supply and Inflation** | **8** | **14** |
| | Banking System and Credit Creation Process; Money Supply; Inflation: Demand-pull and cost-pushed, Effects on production and distribution; Central Bank's Tools of Monetary Control | | |
| **6** | **Elements of International Trade Theory** | **6** | **15** |
| | Autarky versus Trade, Absolute and Comparative cost, Gains from Trade | | |

**Readings:**


1. N C Ray, *Microeconomic Theory*, MacMillan
2. Dominick Salvatore, *Microeconomic Theory*, Schaum's Outline Series, McGraw Hill
3. Soumyen Sikdar, *Principles of Macroeconomics*, Oxford
4. Dominick Salvatore, *International Economics*,


**Third Semester**

**Course Name: Indian Economy**

**Course Code: ECO030204**

**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:** 53

**No. of Non-contact Classes:** 07

**Course outcome**:

CO 1: Summarise the status of Indian economy in terms of development indicators since independence

CO 2: Analyse the various changes initiated in India's agriculture and the rural sector

CO 3: Examine the growth of India's manufacturing and service sector.

CO 4: Assess the reforms and the recent policy initiatives introduced in the Indian economy

CO 5: Appraise the role of the Indian economy in the global context

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Broad Trends and Compositions** | **10** | **20** |
| | State of the Indian Economy at the time of independence – Growth in GDP and per capita income and changes in sector-wise composition during 1951-80 - BOP crisis brewing in 1980s – market oriented economic reforms initiated in 1991 – Growth trends, sector-wise composition, poverty and inequality in the post reform period | | |
| **2** | **Agriculture and the rural sector** | **13** | **25** |
| | Land reforms – Green Revolution – Agrarian crisis of 1990s Horticulture and livestock as new areas of growth – Role of PMGSY and MGNREGS in rural transformation - Challenges in the 21st century: GM crops, Climate smart agriculture and doubling of farmers' income – Reforms in agriculture | | |
| **3** | **Manufacturing and Service Sectors** | **12** | **20** |
| | Slow growth of manufacturing and its impact on employment generation – Growing role of services in income and employment generation – Definition, composition and prospects of MSME | | |
| **4** | **Key Initiatives and Reforms** | **08** | **15** |

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| | GST – Direct Benefit Transfer – Jan Dhan Yojana and financial inclusion – Outstanding reforms: Land acquisition, Labour laws, and banking sector reforms – the challenge of formalizing of the economy | | |
| **5** | **India in the Global Economy** | **10** | **20** |
| | Size of the Indian Economy in the global context - Trade openness in the post-reforms and post-WTO regime – trends in the trade-GDP ratio - Capital flows (FDI and FII) and their impact – BIMSTEC and India-ASEAN free trade initiatives | | |

**Readings**:


1. Arvind Panagariya (2010): *India the Emerging Giant*, OUP
2. Jagdish Bhagyawati and Arvind Panagariya (2015)*Why Growth Matters*, OUP
3. Abhijit Banerjee, Rajan, Raghuram Rajan, Gita Gopinath, Mihir S. Sharma (2019) *What the Economy Needs Now*, Juggernaut Books, New Delhi
4. Statistical Appendix of the Latest Economic Survey, Ministry of Finance, Government of India


**Fourth Semester**

**Course Name: Advanced Microeconomics**

**Course Code: ECO040104**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 200-299**

**Prerequisites**: No
**Theory Credit:** 04
**Practical Credit:** NIL
**No. of Required Classes:**
**No. of Contact Classes:** 60
**No. of Non-contact Classes:** 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.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Input Markets** | **20** | **10** |
| | 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 Labour. | | |
| **2** | **Theory of Production and Cost** | **15** | **10** |
| | 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. | | |
| **3** | **Consumer Theory and Information Economics** | **20** | **10** |
| | A review of Indifference Curve, Violation of premises of Indifference curve approach, Revealed Preference Theory.<br><br>Inter-temporal choice, Choice under risk-Expected Return, variability and Expected utility hypothesis-Asymmetric information- Adverse Selection and Moral Hazard | | |

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|---|---|---|---|
| **4** | **Market Structure and Game Theory** | **25** | **10** |
| | Monopoly, Pricing with Market Power; Degree of Monopoly, Price Discrimination- Different Degrees; Multi-plant Monopoly.<br><br>Monopolistic competition: Product Differentiation, Perceived and Proportionate Demand Curves, Price-Output Determination.<br><br>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). | | |
| **5** | **General Equilibrium & Welfare Economics** | **20** | **10** |
| | Partial versus General Equilibrium Approaches-Walrasian General Equilibrium System.<br><br>Pareto optimality, Kaldor-Hicks compensation criteria, Social Welfare Function, Fundamental Theorems of Welfare Economics, Arrow's Impossibility Theorem. | | |

**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. &Rubinfield, 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.


**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.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Consumption Function** | **15** | **20** |
| | 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. | | |
| **2** | **Investment Function** | **15** | **20** |
| | 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. | | |
| **3** | **Macroeconomic modeling** | **14** | **30** |

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|---|---|---|---|
| | 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. | | |
| **4** | **Inflation, Unemployment and Expectations** | **08** | **15** |
| | Inflation-unemployment trade off and Phillips curve; Adaptive and Rational expectations; policy ineffectiveness debate. | | |
| **5** | **Economic Growth** | **08** | **15** |
| | 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, 10th 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, 9th edition, 2011.

**Fourth Semester**

**Course Name: Public Finance**

**Course Code: ECO040304**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 200-299**

**Prerequisites**: This course requires successful completion of first and second semester courses in Economics.

**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: 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.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Meaning, Scope and Nature** | **10** | **15** |
| | Public Finance and its nature. Objectives of Fiscal Intervention: Allocation, Distribution and Stabilization. Parameters for policy evaluation: *Equity, Efficiency, Paternalism* | | |
| **2** | **Market Failure and Public Intervention** | **10** | **15** |
| | Public Goods and the Free Rider Problem. Externalities: inefficiencies and corrections, property rights, Coase theorem | | |
| **3** | **Taxation** | **10** | **20** |
| | Principles of taxation: Benefit vs Ability. Shifting and Incidence of tax. Economic effects, dead weight loss and distortion. Efficiency and equity considerations. | | |
| **4** | **Public Expenditure** | **15** | **20** |
| | 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 | | |
| **5** | **Public Debt and Budgeting** | **10** | **15** |

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|---|---|---|---|
| | Sources of Public Debt and its redemption. Burden of Public Debt. Strategies of Debt Management. Budgeting: Incremental vs Zero-based budgeting. Outcome Budget. | | |
| 6 | **Fiscal Policy and Federal Finance** | **10** | **15** |
| | 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: Introductory Quantitative Techniques for Economics**

**Course Code: ECO040404**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 200-299**

**Prerequisites**: No
**Theory Credit:** 04
**Practical Credit:** NIL
**No. of Required Classes:**
**No. of Contact Classes:** 60
**No. of Non-contact Classes:** 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.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Preliminaries of Mathematics** | **8** | **10** |
| | 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. | | |
| **2** | **Differential Calculus** | **12** | **20** |
| | Differentiation of a function, Basic rules of differentiation, partial and total differentiation, second and higher order derivatives for single variable, economic applications of differentiation. | | |
| **3** | **Integration of Functions** | **12** | **20** |
| | 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. | | |
| **4** | **Single Variable Optimization** | **8** | **20** |
| | Local and global optima: geometric characterization, characterization using calculus: tests for maximization and minimization, applications: profit maximization, cost minimization, revenue maximization. | | |

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|---|---|---|---|
| **5** | **Correlation Analysis** | **10** | **15** |
| | Correlation, Coefficient of linear correlation, Properties of Correlation coefficient, Rank Correlation, Partial Correlation, Multiple Correlation. | | |
| **6** | **Regression Analysis** | **10** | **15** |
| | 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

**Fifth Semester**

**Course Name: Development Economics**

**Course Code: ECO050104**

**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:** 50

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

**Course Outcomes**:

CO 1: Interpret the various development strategies followed by different societies of the world.

CO 2: Examine the process of development in different parts of the world.

CO 3: Relate poverty, inequality and environment to the process of development.

CO 4: Compare and contrast the alternate theories of growth and development.

CO 5: Measure development using various indices to assess development conditions.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Concepts of Development** | **11** | **20** |
| | Measurement of development: Traditional measure of development, HDI as a measure of development, Gender Related Development Index. Structural Change and Economic Development. Sustainable Development Goals, Climate Change Challenges and Global Coordination Initiatives. | | |
| **2** | **Poverty, Inequality and Development** | **12** | **20** |
| | Poverty - Conceptual Issues, Its Measurement, Poverty Trap - Definition, Causes and Economic Implications. Inequality - Conceptual Issues, Its Axioms and Measurement, Connections between Inequality and Development | | |
| **3** | **Classical Development Theories** | **12** | **20** |
| | Theories of Evolution of a Capitalist Economy- Classical, Marx, Schumpeter. Theories of Persistence of Underdevelopment: Vicious Circle, Rostow's Stages of Growth | | |
| **4** | **Strategies of Development** | **10** | **15** |
| | Big Push Theory, Balanced and unbalanced Growth Theory. Leibenstein's Critical Minimum Effort Theory | | |
| **5** | **Dualistic Pattern of Development** | **15** | **25** |

| | | | |
|---|---|---|---|
| | Unlimited Supply of Labour and the Dual Economy - Models of Arthur Lewis and Fei-Renis, Rural-Urban Migration: The Harris–Todaro Model, Core-Periphery Models - The Process of Cumulative Causation: Myrdal, Neo-Colonial Dependence Model; Dependency School of Development | | |

**Readings:**


1. Barro & Salai-Martin, "Economic Growth", Prentice Hall of India.
2. Basu, K., "Analytical Development Economics:", OUP.
3. Meier, G.M., "Leading Issues in Economic Development", OUP.
4. Roy, D., "Development Economics", OUP.
5. Thirlwall, A. P. "Growth and Development" Palgrave
6. Todaro, M.P., "Development Economics", Pearson.
7. UNDP, "Human Development Reports", OUP.
8. World Bank, "World Development Reports", OUP
9.


**Fifth Semester**

**Course Name: International Economics**

**Course Code: ECO050204**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 300-399**

**Prerequisites**: Preliminary knowledge on international Economics as outlined in 3rd semester course on Intermediate Economics.

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60

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

**Course Outcomes:**

CO1: Describe economic relationships among countries in terms of both trade and monetary issues.

CO2: Explain the composition, direction and consequences of international trade.

CO3: Analyse the determinants and effects of various trade policies.

CO4: Assess the advances in trade theories over the years, trade policies as well as international monetary systems.

CO5: Explain real-world examples and case studies related to international trade.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Evolution of International Trade Theories** | 15 | 25 |
| | The Ricardian theory- comparative advantage, Heckscher-Ohlin model, Factor price equalisation- Absolute and Relative, specific factors model, Empirical testing of H-O model: Leontief Paradox, factor-intensity reversal. | | |
| **2** | **Advances in Trade Theories** | 13 | 20 |
| | International trade in the context of economies of scale and imperfect competition, technological gap model of Posner and product cycle theory of Vernon; multinational enterprises and international trade. | | |
| **3** | **Trade Policy** | 12 | 25 |
| | Instruments of trade policy- tariff and quota- partial equilibrium analysis; political economy of trade policy- free trade vs. protection; controversies in trade policy, fixed versus flexible exchange rates; system of managed floating exchange rate. | | |
| **4** | **International Economic Integration** | 10 | 15 |
| | Importance and forms of economic integration; costs of economic integration; Theories of Customs Union- partial equilibrium analysis. | | |
| **5** | **International Monetary System** | 10 | 15 |
| | International monetary systems-definition, properties of a good international monetary system, Evolution of | | |

| | | | |
|---|---|---|---|
| | international monetary system from past to present; financial globalization and historical financial crises. | | |

**Readings:**

1. Paul Krugman, Maurice Obstfeld, and Marc Melitz, *International Economics: Theory and Policy*, Addison-Wesley (Pearson India Education Services), 10th edition, 2019.
2. Dominick Salvatore, *International Economics: Trade and Finance*, John Wiley International Student Edition, 10th edition, 2011.
3. Bo Sodersten and Geoffrey Reed: International Economics, Macmillan, 3rd edition, 1994.
4. H G Mannur, *International Economics: Theory and Practice*, Vikash Publishing House.

**Fifth Semester**

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

**Course Code: ECO050304**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 300-399**

**Prerequisites**: Preliminary knowledge on Mathematical Economics as outlined in 4th semester course on Introductory Quantitative Techniques for Economics.

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60

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

**Course Outcomes:**

CO-1: Identify topics of Quantitative Techniques for students of Economics at intermediate level.

CO-2: Compute solutions of simple market model, national income model and other simultaneous equations by using matrix.

CO-3: Explain some basic concepts of functions and their applications.

CO-4: Measure trend value by using Moving Average method and least square.

CO-5: Integrate the knowledge of quantitative methods in interpreting economic issues.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Linear Algebra** | **10** | **25** |
| | Matrix: various types of matrices, vector and vector space-concept, matrix operations: addition, subtraction and multiplication; rank, norm and trace of a matrix, introduction to the concept of determinants and their properties, non-singularity of matrix, matrix inversion, solutions of simultaneous equations by using matrix inversion and Cramer's rule, simple market model and national income model. | | |
| **2** | **Functions of Real Variables** | **06** | **10** |
| | Homogeneous and homothetic functions: concepts, Differentiable functions: concepts, Implicit Function Theorem and applications; convex, quasi-convex and concave functions. | | |
| 3 | **Multi-variable Optimization** | **12** | **20** |
| | Unconstrained optimization: geometric characterization, characterization using calculus and applications: price discrimination and multi-plant firm; constrained optimization with equality constraints, Lagrange multiplier, applications: consumer's equilibrium and producer's equilibrium. | | |
| 4 | **Elementary Probability Theory** | **12** | **15** |
| | Sample spaces and events; probability axioms and properties; addition and multiplication theorem of probability, counting techniques; conditional probability and Bayes' rule (concept only); Defining random variables; expected values of random variables. | | |
| 5 | **Theoretical distributions** | **10** | **15** |
| | Functions of random variables (probability mass function and probability density function), Commonly used discrete | | |

| | | | |
|---|---|---|---|
| | and continuous distributions (Uniform, Binomial, Poisson and Normal). | | |
| 6 | **Introduction to Time Series** | **10** | **15** |
| | Time Series Analysis-Concept and Components; Measurement of Trend | | |

**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 and V.K. Kapoor. Fundamentals of Applied Statistics
8. S. C. Gupta and V.K. Kapoor. Fundamentals of Mathematical Statistics

**Sixth Semester**

**Course Name: Assam Economy**

**Course Code: ECO060104**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 300-399**

**Prerequisites**: No
**Theory Credit:** 04
**Practical Credit:** NIL
**No. of Required Classes:**
**No. of Contact Classes:** 60
**No. of Non-contact Classes:** NIL

**Course outcomes**:

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** | **The Economy under Colonial Rule (1837 -1947)** | **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** | **Growth and Sectoral Composition in the Post-Independence Period** | **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.<br>Trends and Sector-wise Composition of GSDP, Trend in Per Capita NSDP in comparison with trends in all-India Per Capita Income<br>Trends in Other Indicators of Development in Comparison with all-India standard: Life expectancy, Literacy, Enrolment and Forest Cover | | |
| **3** | **Sectoral Status and Prospects**: | **20** | **35** |

| | | | |
|---|---|---|---|
| | **Infrastructure:** Status of Road, Rail and Air Connectivity within and out of the State; Potentials and Limitation of Waterways Development; Status of Power and Telecommunication<br>**Agriculture:** 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.<br>**Industry:** Tea Industry and Role of Small Tea Growers, The Future of Hydrocarbon Industry. Traditional Handloom Handicraft and their Prospect;<br>**Service Sector**: Size and Composition.<br>Tourism Resources and their Economic Potentials: Policies for sustainable realization | | |
| **4** | **State Finances**: | **9** | **15** |
| | 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) | | |
| **5** | **Assam Economy in its Neighborhood** | **6** | **10** |
| | Mutual inter-dependence with neighboring States<br>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 edition

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: ECO060204**

**Existing Base Syllabus: UG CBCS Syllabus**

**Course Level: 300-399**

| | |
|---|---|
| **Prerequisites**: | No |
| **Theory Credit:** | 04 |
| **Practical Credit:** | NIL |
| **No. of Required Classes:** | |
| **No. of Contact Classes:** | 52 |
| **No. of Non-contact Classes:** | 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.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Statistical Background** | **10** | **15** |
| | Statistical Inferences, Confidence Intervals, Hypothesis testing, Level of Significance, Type I and Type II errors, power of a test; , Normal distribution, chi-square, t-distribution, and F-distribution | | |
| **2** | **Simple Linear Regression Model** | **12** | **25** |
| | 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. | | |
| **3** | **Multiple Linear Regression Model** | **10** | **15** |
| | 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. | | |
| 4 | **Violations of Classical Assumptions** | **10** | **15** |
| | Sources, Consequences, Detection and Remedies of Multicollinearity, heteroscedasticity, serial correlation | | |
| 5 | **Specification Analysis** | **10** | **15** |
| | 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,4th edition, Indian edition, 2011.
4. Wooldridge J.M., Introductory Econometrics: A Modern Approach, Cengage Learning India Pvt. Ltd, 2014

**Sixth Semester**

**Course Name: Financial System**

**Course Code: ECO060304**

**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: 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 No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **The Financial System** | **10** | **20** |

| | | | |
|---|---|---|---|
| | 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. | | |
| **2** | **The Money Market** | **15** | **25** |
| | 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 | | |
| **3** | **The Capital Market** | **18** | **30** |
| | 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 | | |
| **4** | **Banking Sector Operations** | **12** | **25** |
| | 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**:


1. Bodie Z, Merton R. C. &Cleeton D. L. ***Financial Economics***. Pearson/ Prentice Hall.
2. Madura J. ***Financial Institutions and Markets***, Thomson South Western.
3. Pathak B. V. ***Indian Financial System***, Pearson Education, Singapore.
4. Prasanna Chandra.**Fundamentals of Financial Management**. McGraw Hill Education
5. Rustagi, R.P. **Fundamentals of Financial Management**. Taxmann Publication Pvt. Ltd.


**Sixth Semester**

**Course Name: Environmental Economics**

**Course Code: ECO060404**

**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** | **Introduction** | **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** | **Market Failure in allocation of Environmental resources** | **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. | | |
| **3** | **The Design and Implementation of Environmental Policy** | **20** | **15** |
| | 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. | | |
| **4** | **Sustainable Development:**<br>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) | **20** | **10** |
| **5** | **International Environmental Problems and Initiatives:**<br>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 | **20** | **10** |

**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: ASurvey, ‖ Journal of Economic Literature, Volume 30:675-740.
7. Subhashini Muthukrishnan, Economics of Environment, PHI Learning Private Limited, 2nd edition, 2015.

**7th Semester**

**Course Name: Contemporary Economic Theory (C)**

**Course Code: ECO4700104MJ**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400**

**Prerequisites**: - NIL
**Theory Credit:** 04
**Practical Credit:** NIL
**No. of Required Classes:**
**No. of Contact Classes:** 60
**No. of Non-contact Classes:** NIL

**Course Outcomes:**

CO 1: Analyse some advances in the field of theory of Economics
CO 2: Support students in the field of research
CO 3: Explain the influence of chaotic factors in Economics
CO 4: Apply business cycle theory to analyze historical and contemporary economic events.
CO 5: Apply information economics concepts to real-world scenarios.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **General Economic Equilibrium** | 12 | 20 |

| | | | |
|---|---|---|---|
| | Walrasian General Equilibrium System: Existence, Stability and Uniqueness of the Equilibrium - Tatonnement and Non–tatonnement Process–Arrow and Debreu re-specification of the Walrasian Economy – Idea of Fixed Point, Computable General Equilibrium Model and Dynamic stochastic general equilibrium(DSGE) model. | | |
| **2** | **Advances in Business Cycle Theory** | **15** | **25** |
| | Theory of Real Business Cycle, Interpretation of the labour market, Importance of technology shock, neutrality of money, New Keynesian Economics: Menu Cost Model, Recessions as Co-ordination Failure. New Trade theories: Returns to trade, Network Effect | | |
| **3** | **Role of Technological Advances in Economics** | **10** | **15** |
| | Issues of estimation- Data Envelopement Analysis-Impact of technological advances on the relationship between ageing and economic growth- proxies of technological advancement: life expectancy, labour productivity, automation and total factor productivity | | |
| **4** | **Information Economics** | **12** | **20** |
| | Signalling and screening, Principal Agent's problem and Lemon's market | | |
| **5** | **Influence of Chaos in Economics** | **12** | **20** |
| | Chaos theory and its implication in economic dynamics, butterfly effect | | |

Readings:

1. Layard and Walters, Microeconomic Theory, McGraw Hill International Edition

2. Snyder and Nicholson, Microeconomics

3. Madalla and Miller, Microeconomics, Tata McGraw Hill.

4. Varian, Hall, Intermediate Microeconomics.

5. David Romer, Advanced Macroeconomics;

6. Ola Olson, Essentials of Advanced Macroeconomic Theory

**Course Name: Statistical Inference and Econometrics (C)**

**Course Code: ECO4700204MJ**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400**

**Prerequisites**: - NIL

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60

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

**Course Outcomes:**

CO 1: Explain the essential elements of sampling technique

CO 2: Choose the relevant method of drawing a sample

CO 3: Apply the appropriate non-parametric test for hypothesis testing

CO 4: Analyze economic data using time series econometric techniques

CO 5: Combine the key components of simultaneous equation models

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **Review of Sampling Concepts** | **13** | **25** |
| | Need for sampling; Theoretical basis of Sampling Distribution; Standard Error of a Statistic; Sampling and non-sampling errors; Estimation of Sample Size.<br>Simple Random Sampling, Stratified Random Sampling, Systematic Sampling, Cluster Sampling, and Non-Probability Sampling Methods. | | |
| **2** | **Non-Parametric Tests** | **13** | **25** |
| | Parametric versus non-parametric tests, Chi-square test; Sign Test; Mann-Whitney U Test; Kruskal-Wallis test | | |
| **3** | **Introduction to Time Series Econometrics (20 classes, 30 Marks)** | **20** | **30** |

| | | | |
|---|---|---|---|
| | The Idea of a Stochastic Time Series - Stationary and Non-stationary – Simple Random Walk and Random Walk with a Drift–Unit Root: Testing for Unit Roots: Augmented Dickey-Fuller Tests –Spurious Regression– Integrated Series and an Introduction to Cointegration- | | |
| **4** | **Introduction to Simultaneous Equation Model** | **14** | **20** |
| | Structural and Reduced Forms – Simultaneity Bias – Informal Introduction to Identification Problem, Recursive and non-recursive systems, Endogeneity and instrumental variables estimation, Indirect Least Squares method. | | |

Readings:

Cochran, W.G, "Sampling Techniques", Wiley

Yamane, Taro, "Statistics – An Introductory Analysis".

Hooda, P.R., "Statistics for Business and Economics", Macmillan.

Gupta, S.C. and Kapoor, U.K., "Fundamentals of Mathematical Statistics"

Nagar, A.L. and Das, R.K., "Basic Statistics", Oxford.

Christopher Daugherty, Introduction to Econometrics, OUP

Jeffery M Wooldridge, Introductory Econometrics: a Modern Approach

Johnston and Dinardo, Econometric Methods, McGraw Hill

**Course Name: ECONOMICS OF HEALTH [Elective]**

**Course Code: ECO4700404MJ**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400**

**Prerequisites**: - NIL
**Theory Credit:** 04
**Practical Credit:** NIL
**No. of Required Classes:**
**No. of Contact Classes:** 60
**No. of Non-contact Classes:** NIL

**Course Outcomes:**

• Given the fact that resources for meeting health requirements are scarce, and the future is uncertain, this course intends to enable students to look at health related aspects from an economic perspective

• It covers core topics such as information asymmetry, health insurance, disparity in access to health care, and tries to explain, among others, why educated people experience better health and the aging experience declining health

• It helps the students to draw connections between the theoretical models and health policy debates around the world

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **Introduction to Health Economics** | 15 | 25 |
| | Determining the demand for health care. Elasticity of the demand curve for health. The Grossman Model: production possibility frontier, health production schedule, the labour – leisure –health improvement tradeoff, the marginal efficiency of capital. Unifying the Grossman Model. | | |
| **2** | **Health Care Provisions** | **12** | **20** |
| | Creating the Physician: Medical School and Residency. Physician work hours and wages. Returns to medical training and specialization. Market Distortions: barriers to entry, physician induced demand, defensive medicine and discrimination. Organization of a modern hospital. The market for hospitals. | | |

| | | | |
|---|---|---|---|
| **3** | **Health Insurance** | **10** | **15** |
| | Uncertainty and Insurance. Comparing Insurance Contracts. The role of asymmetric information. Adverse Selection: Akerlof‟s Market for Lemons, Rothschild-Stiglitz Model. Moral Hazard and its magnitude. Limiting moral hazard: coinsurance and copayment, deductibles, monitoring and gate keeping. | | |
| **4** | **Innovations in the Health Industry and Health Policy** | **12** | **20** |
| | Patents as an incentive. Technology and the Price of Health Care. Technology Overuse: The Dartmouth Atlas. The Health Policy Trilemma: *Health, Wealth and Equity*. Strategies for an optimal Health Insurance System. Regulating health care provision. Controlling costs through price controls. | | |

Readings:

1. Bhattacharya J, Hyde T and Tu P (2014) ***Health Economics***, New York, Palgrave Macmillan.

2. Folland S, Goodman AC and Stano M ( 2013) ***The Economics of Health and Health Care*** New Jersey USA, Pearson.

3. Jack, W (1999) ***Principles of Health Economics for Developing Countries***. Washington DC, WBI Development Studies, World Bank.

4. McGuire A, Henderson J and Mooney G (1988) ***The Economics of Health Care. An Introductory Text.*** London, Routledge

**Course Name: Environmental Valuation and Management (Elective)**

**Course Code: ECO4700504MJ**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400**

**Prerequisites**: - NIL
**Theory Credit:** 04
**Practical Credit:** NIL
**No. of Required Classes:**
**No. of Contact Classes:** 60
**No. of Non-contact Classes:** NIL

**Course Outcomes:**

1. Employ non-market valuation techniques to environmental goods and services

2. Locate the sources of environmental pollution and examine the methods of pollution control and waste management.

3. Outline the process of Environment Impact Assessment and Environmental Management Planning.

4. Illustrate the relevance of Indian Knowledge Systems in Environmental Management and Conservation.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **Valuation of Environmental Goods and Services** | 12 | 20 |
| | Demand for environmental goods –ordinary goods vs. environmental goods- Willingness to pay and willingness to accept- Use and Non-use Values; measuring demand-revealed preference and stated preference. Methods for measuring benefits of environmental improvement –the market pricing approach, the replacement cost approach. Hedonic Pricing approach-valuation of health risks; Household Production Function Approach-Aversive expenditure, Travel Cost method; Contingent Valuation Method | | |
| **2** | **Environmental Pollution and Control** | **12** | **20** |

| | | | |
|---|---|---|---|
| | Sources and types of Pollutants - Natural and anthropogenic sources, primary and secondary pollutants; Criteria air pollutants, Indian National Ambient Air Quality Standards, Impact of air pollutants on human health, plants, and materials. Acid rain; Water pollution: Types and sources of water pollution. Impact on humans, plants and animals and control measures; Case study; Soil pollution: Types and sources of soil pollution, Impact on humans, plants and animals and control measures; Noise pollution: Types and sources of noise pollution. Impact on humans, plants and animals and control measures | | |
| **3** | **Solid & Hazardous Waste Management** | **12** | **20** |
| | Waste generation, need and requirement for management and planning; Solid waste - types and sources; solid waste characteristics, generation rates, solid waste components, proximate and ultimate analyses of solid wastes. Integrated Solid Waste Management; Hazardous waste: Types, characteristics, and health impacts, collection, and segregation hazardous waste management: Treatment Methods. Plastic waste: sources, consequences, and management; radioactive waste and its management; The Plastic Waste Management Rules, 2016, The Bio-Medical Waste Management Rules, 2016, The Solid Waste Management Rules, 2016, The e-waste (Management) Rules 2016, Municipal Waste (Management and Handling) Rules 2000. | | |
| **4** | **Environmental Impact Assessment** | **12** | **20** |
| | 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; Environmental Management System Standards (ISO14000 series); Eco-labelling schemes. | | |
| **5** | **Indian Knowledge Systems and Sustainable Environmental Management** | **12** | **20** |

| | | | |
|---|---|---|---|
| | Harmonious co-existence of man and nature as per the Indian Knowledge Systems; Indigenous practices of natural resource management and biodiversity conservation- the concept of sacred groove, sacred sites, sacred forests or trees; Indigenous agricultural practices – crop management and patterns of land use- *jhoom* cultivation practices; Water harvesting practices, Waste management practices | | |

Readings:


1. Aggarwal, A. (2008). Indigenous Institutions for Natural Resource Management: Potential and Threats. *Economic and Political weekly, 43*(23), 21-24.
2. Bandyopadhya, J. (1992). Sustainability and Survival in the Mountain. *Ambio,21*(4), 297-302.
3. BGupta, A.K. (2000). Shifting Cultivation and Conservation of Biological Diversity in Tripura, North-east India. Human Ecology, 28(4), 605-629.
4. Kumar, S. (2001). Indigenous Communities 'Knowledge of Local Ecological Services. *Economic and Political weekly, 36*(30), 2859-2869.
5. Madegowda, C. (2009). Traditional Knowledge and Conservation. *Economic and Political weekly, 44*(21), 65-69..
6. Prajuli, D. R. & Das, T. (2013). Indigenous Knowledge and Biodiversity: Interconnectedness for Sustainable Development. *International journal of Scientific and Technology Research, 2*(8), 220-224
7. Ramdas, S.R. (2009). Women, Forestspace and the law: Transgressing the Boundaries. . *Economic and Political weekly, 44*(44), 65-73.
8. Ramakrishnan, P.S. (2000). Ecological Threads in the Sacred Fabric. *India international centre Quarterly, 27*(4), 109-122.
9. Sharma, A.K. (2014). Indigenous Knowledge Communication in the 21st Century. *International Journal of Digital Library Services,4*(1),128-135.
10. Tiwari, B.K., Tynsong,H., &Lynser , M.B. (2010). Forest Management Practices of the Tribal People of Meghalaya, North-east India. *Journal of Tropical Forest Science, 22*(3), 329-342.


**Course Name: Population and Human Resource Economics (Elective)**

**Course Code: ECO4700304MN**

**Existing Base Syllabus: PG Non-CBCS Syllabus**

**Course Level: 400**

**Prerequisites**: - NIL

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60

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

**Course Outcomes:**

CO-1: Define the major theories of population

CO-2: Describe the process of constructing and the applications of life tables.

CO-3: Apply demographic concepts to analyze population issues.

CO-4: Evaluate the effectiveness of various educational financing methods in achieving equity.

CO-5: Evaluate the role of education and healthcare in human resource development.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **Theories of Population** | **12** | **20** |
| | Malthusian, Optimum Theory of Population &Theory of Demographic Transition- Views of Thompson; Notestein; Davis and Blake. | | |
| **2** | **Population Dynamics** | **23** | **35** |
| | Measures of Crude Birth Rate, General Fertility Rate, Total Fertility Rate,Gross Reproduction Rate and Net Reproduction Rate. Crude Death Rate – Infant Mortality, Life expectancy. Measures of Morbidity. Age Structure, Population Pyramid, Population aging– Causes, trends, issues and consequences. Dependency ratio, Concept of Demographic Dividend, Capturing India's Demographic Dividend. Life table: Construction and Applications; Migration: meaning, types & causes | | |

| | | | |
|---|---|---|---|
| **3** | **Population Data Base in India** | **10** | **25** |
| | Census-Nature of information collected—1991,2001, 2011; National Family Health Survey (NFHS); Sample surveys India; Registration system in India. | | |
| **4** | **Economics of Education** | **15** | **25** |
| | Cost –Benefit Analysis of Education, The Rate of Return of Investment in Education, Social Rate of Return to Investment in Education, Criteria for Adequacy of Education Finance, Traditional as well as Modern Concept of Adequacy, Financing of Education and Equity. Education, skills, and their impact on economic development | | |

Readings:


1. Bhende, A. and T. Kantikar, "Principles of Population Studies", Himalaya Publishing House
2. G. Psacharopolous (ed) (1987). "Economics of Education", Perdgaman Press.
3. Gupta, S.C. and V.K. Kapoor, (2014) "Fundamentals of Applied Statistics", Sultan Chand & Sons
4. Gun, A.M, Gupta, M.K., and Dasgupta, B. (2016) "Fundamentals of Statistics", World Press
5. Ian Beardwell and Len Holden (ed) (2004). "Human Resource Management – Contemporary Perspective", Prentice Hall
6. Kapila, Uma. (2017). "Demography and Development", Academic Foundation Publication.


**Course Name: Research Methodology for Social Science (C)**

**Course Code: ECO4700604MJ**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400**

**Prerequisites**: - NIL

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60

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

**Course Outcomes:**

CO1: Familiarise students with the different types of research

CO2: Distinguish between different types of research technique

CO3: Enable students with different types of data collection

CO 4: Equip students inclined to do research with the procedure and discipline of a research activity

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| **1** | **Meaning of Research, Research Foundations and Research Motivations** | **12** | **20** |
| | Meaning of Research-Different definitions of Research; Research Foundations-Debating points-Abstract and Concrete Knowledge, Epistemological foundations-Quantitative and Qualitative Research-, Etic and Emic approaches; Research Motivations, Features, Norms and Assumptions | | |
| **2** | **Objectives and Significance of Research** | **12** | **20** |
| | Objectives of research, Research methods versus methodology, Research approaches - Types of research- Descriptive vs. Analytical, Applied vs. Fundamental, Quantitative vs. Qualitative, Conceptual vs. Empirical, Other types of research, Qualities of a researcher, Significance of research. | | |
| **3** | **Research Process** | **12** | **20** |
| | Formulating the research problem: Sources of Ideas-Literature Review, Library and Web-sources, Constructing Frameworks, Role of Theory Choosing a Research Topic-Developing Research Questions/Hypothesis- preparing the research design; determining sample design; collecting data; execution of the project; analysis of | | |

| | | | |
|---|---|---|---|
| | data; hypothesis testing; generalization and interpretation, preparation of the report or presentation of the results | | |
| **4** | **Research Design** | **12** | **20** |
| | Features of research design , Concepts relating to research design ,Types of research design -exploratory research design- descriptive and diagnostic research design hypothesis-testing research design; Characteristics of a good research design .Case study research, Hypothesis and its testing, Sample survey and sampling methods | | |
| **5** | **Data Collection and Presentation** | **12** | **20** |
| | Sources of data: Primary Data -Methods of collecting primary data; Sources of secondary data- Published sources, Unpublished sources. Questionnaire and Sampling: Meaning of questionnaire. Drafting of questionnaire. Size of questions Clarity of questions Logical sequence of questions Simple meaning questions other requirements of a good questionnaire, Meaning and essentials of sampling. Statistical Laws: The Law of Statistical Regularity, Law of Inertia of Large Numbers.<br><br>Structure and Components of Research Reports -Characteristics of a good report -Framework of a Report -Parts of a Research Report; Format and Presentation of a Report -Importance of Presentation of a Report -Common Components of a Format –Precautions-Presentation of Reports | | |

Readings:

1. Bhandarkar , P.L. and T.S. Wilkinson, Methodology And Techniques Of Social Research. Himalaya Publishing
2. Druckman , Daniel, Doing Research, Sage
3. Kothari, C.R., Research Methodology: Methods and Techniques, New Age International

**Course Name: Project Formulation and Execution**

**Course Code: ECO4800104MJ**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400-499**

**Prerequisites**: - NIL

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60

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

**Course Outcomes:**

CO-1: Explain the concepts, principles, and procedures involved in preparing research proposals for academic, sponsored, and consultancy projects.

CO-2: Formulate a structured research proposal by identifying a research problem, reviewing relevant literature, selecting appropriate methodologies, and preparing a work plan and budget.

CO-3: Apply project appraisal techniques, including cost–benefit analysis, cost-effectiveness analysis, and environmental impact assessment, in evaluating research and consultancy projects.

CO-4: Demonstrate the ability to prepare and present different types of reports, including technical reports, popular reports, interim reports, executive summaries, and research abstracts.

CO-5: Develop practical skills in executing research projects, managing project activities, preparing budgets, and communicating research findings effectively to academic and professional audiences.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **Preparing Research Proposal for Ph.D Programmes** | 15 | 25 |
| | Meaning and Purpose, Structure of the format, Report Outline, Body of the report-Introduction, Review of literature, Methodology, description of study area. Presentation Techniques: | | |

| | | | |
|---|---|---|---|
| | Results and Discussion, Findings, Conclusion and Recommendation, References/ Bibliography | | |
| **2** | **Preparing Research Proposal for Academic Sponsorship** | **12** | **20** |
| | Meaning and Purpose, Structure of the format, Report Outline, Body of the report- Introduction, Statement of research problem, Review of literature and recent development, Inter-disciplinary/ Interdepartmental/Inter Institutional Relevance, Methodology, description of study area, Presentation Techniques: Results and Discussion, Policy Implication, References, Budget, Duration. | | |
| **3** | **Preparing Research Proposal for Consultancy Services** | **10** | **15** |
| | Meaning and Purpose, Structure of the format, Report Outline, Body of the report- Introduction, Review of literature, Methodology, description of study area. Dimensions of Study: Project Appraisal (Cost-Benefit Analysis, Cost-Efficiency Analysis, Environmental Impact Assessment). Presentation Techniques: Results and discussion, References | | |
| **4** | **Execution of different types of reports** | **12** | **20** |
| | Technical Report, Popular Report, Interim Report, Executive / Summary Report, Research Abstract | | |
| **5** | **Preparation of Work Plan** | **12** | **20** |
| | Meaning and Purpose, content of a work plan, Preparation of budget Meaning and Purpose, Content of budget, Guidelines of a budget | | |

Readings:

1. Baker, R.P and Howell, A.C (2003): The Preparation of Reports, Ronald Press, New York
2. Kothari, C.R (2004): Research Methodology: Methods and Techniques, New Age International Publishers, Delhi
3. Krishnaswami, O.R. (2003): Methodology of Research in Social Sciences, Himalaya Publishing House, Delhi

**Course Name: Public Finance: Theory and Application (C)**

**Course Code: ECO4800204MJ**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400-499**

**Prerequisites**: - NIL

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60

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

**Course Outcomes:**

CO 1: Explain the rationale for Public Goods and how it can be efficiently provided.

CO 2: Demonstrate how public choice can be determined under market failure.

CO 3: Develop an understanding of public expenditure undertaken for social and economic welfare.

CO 4: Identify the excess burden of taxation

CO 5: Analyse the phenomenon of Crowding Out Effect.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **The Provision of Public Goods** | **12** | **20** |
| | Public Goods and market failure. The efficient provision of public goods. The Theory of Clubs, Inter-local competition and Tiebout Hypothesis Inefficiency from externalities and its correction. Viability of government intervention. | | |
| **2** | **The Theory of Public Choice** | **15** | **25** |
| | Preferred political outcome of a voter and Downs' Rational Voter Hypothesis. Majority Rule and the Median Voter Model. Cyclical Majority Phenomenon and Arrows Impossibility Theorem. Political Positioning and the Median Voter. Voting on multiple issues: Logrolling. | | |
| **3** | **Public Expenditure** | **10** | **15** |

| | | | |
|---|---|---|---|
| | Rationale of Food Security and its effects. Public expenditure on Primary education – issues of efficiency and effectiveness. Rationale for subsidy in Higher education. Health Care as an economic good. Externalities in health care and its resolution. Universal Health Care insurance and problems of moral hazards. Provision of Social security. Individual Equity versus Social Adequacy. Sustainability of Social Security programmes. | | |
| **4** | **Public Revenue and Deficit Financing** | **12** | **20** |
| | Excess burden- Lumpsum Tax versus Price Distorting Tax, Efficiency Loss Ratio of a tax. The welfare cost of taxation. Goods and Services Tax (GST) and the Indian experience. Concepts of Budget Deficits Burden of Deficit Finance. Deficit financing and the Capital market: *The Crowding Out Effect*. The Welfare Cost of Deficit Finance. Rationale and methods of reducing deficits. | | |

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. Ghosh A & Ghosh C, Public Finance, PHI Learning Private Limited, Delhi.
6. Musgrave & Musgrave., Public Finance in Theory and Practice, McGraw Hill, Singapore.
7. Cullis, John & Jones, Philip, Public Finance and Public Choice, McGraw Hill

**Course Name: Indian Economy in the Global Environment**

**Course Code: ECO4800304MN**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400-499**

**Prerequisites**: - NIL

**Theory Credit:** 04
**Practical Credit:** NIL
**No. of Required Classes:**
**No. of Contact Classes:** 60
**No. of Non-contact Classes:** NIL

**Course Outcomes:**

CO1: Understand the state of Indian economy in pre and post-colonial times.

CO2: Discuss the effectiveness of economic reforms on economic development of India.

CO3: Evaluate the present status of Indian economy at the global context.

CO4: Assess the evolution of the global economy through centuries.

CO5: Analyse the major economic issues the global economy has now been confronting with.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **Evolution of Indian Economy through Colonialism** | **15** | **25** |
| | Characteristics of the Indian economy during the pre-colonial period, Transition to colonialism-Colonial Times, Basic features of the Indian Economy at the time of Independence, The Strategy of Rapid industrialization through Planning and Expansion of the Public Sector, the tickle down effect theory | | |
| **2** | **Era of Economic Reforms** | **10** | **20** |
| | Rationale for Economic Reforms –Foreign Trade Policy – Convertibility of Rupee –WTO and the Indian Economy – Foreign Investment and Multinational Corporations -Privatisation and Competition – Financial Sector Reforms | | |
| **3** | **India: Present Economic Outlook** | **13** | **20** |
| | Macroeconomic Indicators-GDP-Real Economy-Prices-Saving-Investment- Government Finance, Money and Finance, External Sector, Infrastructural Indicators; Human Development Indicators; Institutional Development in the Financial Sector; Competitiveness Indicators-India and the Global Financial Crisis, Capital flows: FDI and FII | | |
| **4** | **Global Economy: Concept and Evolution** | **12** | **20** |

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|---|---|---|---|
| | Global Economy- Nature of Global Economy; Emergence and evolution of the Global Economy-Pre-Industrial Revolution to the Present Times | | |
| **5** | **Global Economy: Key Issues** | **10** | **15** |
| | International Trade, Global Financial System, Global Division of Labour, Global Environmental change, Ideas, Security, Governance. | | |

Readings:

1. Bardhan, P., "The Political Economy of Development of India", OUP.
2. Brahmananda, P.R. and Panchamukhi, V.R., "The Development Process of Indian Economy", Himalaya.
3. Jalan, Bimal (Ed), "The Indian Economy – Problems and Prospects", Viking.
4. Kapila, Uma (Ed), "India's Economic Reforms", Academic Foundation.
5. Hazari, R.K., "Industrial Planning and Licensing Policy", Final Report.
6. Sen, A. and Dreeze, J., "Economic Development and Social Opportunities", OUP.
7. Wadhwa, C. (Ed), "Some Problems of India's Economic Policy", Tata McGraw Hill.
8. Rao, V.K.R.V., "India's National Income, 1950-1980", Sage.
9. Byres, T.J. (Ed), "The State, Development Planning and Liberalisation in India".
10. O'Brien ,Robert and Marc WilliamsGlobal Political Economy: Evolution and Dynamics, Palgrave Macmillan
11. Roy Tirthankar, The Economic History of India, 1857-1947Oxford

**Course Name: Agricultural Economics and Rural Development (E)**

**Course Code: ECO4800404MJ**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400-499**

**Prerequisites**: - NIL

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60

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

**Course Outcomes:**

CO-1: Identify and list the technical and institutional issues related to agriculture.

CO-2: Describe the various farming systems, including subsistence farming, commercial farming, and cooperative farming.

CO-3: Apply the understanding of agricultural prices and market behavior to predict price fluctuations and its effects on farmers' income.

CO-4: Analyze the factors contributing to agrarian distress and evaluate the effectiveness of rural development programs in addressing these issues.

CO-5: Evaluate the effectiveness of agricultural subsidies and the Public Distribution System (PDS) in improving rural livelihoods.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **Agriculture: An Overview** | **17** | **25** |
| | Nature of Agriculture as a distinct economic activity, Understanding the technical and institutional issues related to agriculture, Land Reforms, Tenancy Reforms Co-operative to Contract Farming; Overview of the Indian agriculture sector peculiarities; Various components of Agriculture- Crop Cultivation, Horticulture, Sericulture, Animal husbandry; Integrated farming systems | | |
| **2** | **Agricultural Factor Markets and Prices** | **18** | **30** |
| | Land Market: Land Use and Land Prices, Lease Market- Land Tenure System. Labour Markets- Farmers and Agricultural Labourers, Mobility of Labour. Credit Market: Role of Capital in Agricultural Development. Agricultural Prices- Features, Intra and Inter Seasonal and Inter-Year Price Behaviour – Agricultural Price | | |

| | | | |
|---|---|---|---|
| | Indices- Minimum Support Price (MSP), farmers' income, Crop Insurance | | |
| **3** | **Farming Systems** | **10** | **20** |
| | Farming Systems-Subsistence farming, Peasant Farming-Chhayanovian Farm Household Model, Shifting Cultivation, Cooperative Farming, Commercial Farming, Crop Insurance | | |
| **4** | **Rural Development** | **15** | **25** |
| | Formal and informal rural credit markets, micro-finance; agrarian distress-agricultural subsidies, Public Distribution System, Rural Development Programmes. | | |

Readings:


1. Debraj, R. (1999). Development Economics, OUP
2. Cohen, R., "The Economics of Agriculture", Cambridge University Pres
3. Heady, E.O."Economics of Agricultural Production and Resource Use", Prentice Hall.
4. Kay, Ronald D. ,William M. Edwards, and Patricia A. Duffy. " Farm Management" McGraw
5. Katar Singh "Rural Development: Principles, Policies, and Management"
6. Christopher B. Barrett and Michael R. Carter "Agricultural and Rural Development Policies in the Developing World"


**Course Name: Foundations of Financial Evaluation (Elective)**
**Course Code: ECO4800504MJ**

**Effective only for students who joined FYUGP/FYIMP in 2023**

**Existing Base Syllabus: PG CBCS Syllabus**
**Course Level: 400-499**

**Prerequisites**: - NIL

**Theory Credit:** **04**
**Practical Credit:** **NIL**
**No. of Required Classes:**
**No. of Contact Classes:** **60**

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

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **Overview of the Financial System** | **22** | **35** |
| | The nature of credit, Financial System: *Structure and Functions*, Financial System and its Components, Money Market: Instruments and functions, Liquidity Management Instruments in the Money Market, Capital market: Primary Capital Market: Instruments of resource mobilization- *Public Issues: IPO & FPO, Right Issues, and Private Placement,* Pricing of new issues: the Book Building process, Secondary Capital Market: Trading & Settlement, Stock Market Index, Mutual Fund, Net Asset Value | | |
| **2** | **Principles of Time Value and Financial Valuaion** | **22** | **35** |
| | *Time Value of Money* **-** Concept and significance, Compounding and Discounting - Single cash flow, Multiple cash flows, Annuities (ordinary annuity, annuity due), Net Present Value (NPV), Internal Rate of Return (IRR); *Bond Valuation* – Concept of bonds, Valuation as present value of coupons and principal, Interest rate sensitivity, *Equity Valuation* - Dividend Discount Model: Zero Growth, Constant Growth, Multiple Growth | | |

| | | | |
|---|---|---|---|
| **3** | **Tools of Financial Analysis** | **16** | **30** |
| | Meaning and purpose of financial analysis, *Earnings-Based Dimension (Profitability)* - Earnings Per Share (EPS), Price-to-Earnings Ratio (P/E Ratio), EBIT & EBITDA; *Cash Flow Dimension* - Operating Cash Flow (OCF), Free Cash Flow (FCF), Discounted Cash Flow (DCF) Method; *Asset-Based Dimension* - Book Value per Share, Price-to-Book Ratio (P/B Ratio), Net Asset Value (NAV); *Growth Dimension* - Revenue Growth Rate, Earnings Growth Rate, PEG Ratio (Price/Earnings to Growth); *Risk Dimension* - Beta (β), Debt-to-Equity Ratio , Interest Coverage Ratio; *Dividend Dimension* - Dividend Per Share (DPS), Dividend Yield, Dividend Payout Ratio; *Market-Based Dimension (Relative Valuation)* - P/E, P/B, EV/EBITDA ratios compared to industry, Market Capitalization, Enterprise Value (EV); *Qualitative Dimension* - Management quality, Brand strength, Competitive advantage, Corporate governance, Industry position | | |

References:

Alexander G J, Sharpe W F & Bailey J V. *Fundamentals of Investments* Pearson Education, Singapore

Bodie Z, Merton R. C. & Cleeton D. L. *Financial Economics*. Pearson/Prentice Hall.
Panday I.M. *Financial Management*. Vikas.

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 Name: Fundamentals of Financial Analysis (Elective)**

**Course Code: ECO0800504MJ**

**Not applicable to students admitted under FYUGP/FYIMP in 2023**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400-499**

**Prerequisites**: - NIL

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60

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

**Course Outcomes:**

CO-1: Explain the valuation process of both debt and equity instruments.

CO-2: Interpret and understand various financial ratios.

CO-3: Illustrate the process of investment in in securities and assets in terms of investment policy, security analysis, portfolio construction.

CO-4: Analyze the complexities of the derivative market.

CO-5: Estimate the present value and future value of financial assets.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **The Investment Setting** | | |
| | Securities, Risk & Return, Markets, and Financial Intermediaries. Process of Investing: *investment policy, security analysis, portfolio construction, portfolio revision and portfolio evaluation*. Financial Goals: *Profit Maximization versus Wealth Maximization.* Trading in Securities: *types of orders, margin purchases, and short sales*. | | |
| **2** | **Intertemporal Value of Money** | | |
| | Time Value of Money, Future Value: Single Cash Flow, Multiple Cash Flows, Annuity, Present Value: Single Cash Flow, Multiple Cash Flows, Annuity, Present Value, Net Present Value, Rate of Return, Internal Rate of Return | | |
| **3** | **Valuation of Financial Assets** | **12** | **20** |
| | The law of One Price and Arbitrage, The valuation of debt instruments: Pure Discount Bonds. Coupon Bonds, Current Yield | | |

| | | | |
|---|---|---|---|
| | and Yield to Maturity, Interest Rates and Bond Values. Bond duration and Interest Rate Sensitivity, Valuing stock: Value of a Common Stock and the Dividend Discount Model: Zero Growth, Constant Growth, Multiple Growth. Linkage between Share Price, Earnings and Dividends. The significance of Price-Earnings Ratio | | |
| **4** | **Financial Analysis** | **12** | **20** |
| | Financial Ratios: Liquidity Ratios, Leverage Ratios, Turnover Ratios, Profitability Ratios, Valuation Ratios. Dupont Analysis, Relationships, Interpretations and Analysis | | |
| **5** | **The Derivative Market** | | |
| | Nature of the Derivative Market, Traders and Instruments in a derivative market, Trading Strategies: Hedging with Index futures, Speculation Strategies and Strategies for Arbitrage | | |

Readings:


Alexander G J, Sharpe W F & Bailey J V. *Fundamentals of Investments* Pearson Education, Singapore

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 Name: Development Economics: Theory and Practice (Elective)**

**Course Code: ECO4800604MJ**

**Existing Base Syllabus: PG CBCS Syllabus**

**Course Level: 400-499**

**Prerequisites**: - NIL

**Theory Credit:** 04

**Practical Credit:** NIL

**No. of Required Classes:**

**No. of Contact Classes:** 60

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

**Course Outcomes:**

CO-1: Identify the various sources of financing economic development, and the associated theoretical models suggesting the objective and the practical outcomes.

CO-2: Analyse the linkages between trade and development

CO-3: Determine the role of planning in an economy

CO-4: Examine the role of institutions as a determinant of growth

CO-5: Understand the concept of the Fourth Industrial Revolution and its implications for economic development.

| Unit No | Unit Content | No. of Classes | Marks |
|---|---|---|---|
| 1 | **Financing of Development** | 12 | 20 |
| | Domestic Sources: Private Savings, Taxation, Financing by Money Creation and its Effects, The Dual Gap Analysis: Saving-Investment Gap and the Foreign Exchange Gap, Foreign Borrowing and the Debt Servicing Problem, Private Foreign Investment: Portfolio and Direct Investment, Effects on Host and Investing Countries – Direct Investment and Exploitation | | |
| **2** | **Trade and Development** | **12** | **20** |
| | Trade as an Engine of Growth, Trade and Aid, Gains from Trade, Terms of Trade and LDC, Secular Deterioration; Prebisch, Singer, Myrdal views | | |
| **3** | **Role of Institutions in Development** | **10** | **15** |
| | Overview of growth models, Introducing institutions, Institutions as a determinant of growth, Institutional characteristics, Pitfalls of institutional reform | | |
| **4** | **Development Planning** | **10** | **15** |
| | Types of Planning, its rationale, Planning process: Projection of Macro variables - Input -Output Model and sectoral projections, Project evaluation and Social cost-benefit analysis | | |
| **5** | **Introduction to Industrial Revolution 4.0** | **16** | **30** |

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|---|---|---|---|
| | Definition and characteristics of the Fourth Industrial Revolution, Historical context and comparison with previous industrial revolutions, Key technological drivers: AI, automation, big data, and blockchain, Automation and job displacement, Gig economy, and informal sector in the digital age, Contribution of digital technologies to economic growth, Inclusive growth and the digital divide, The Challenge of Redistributing the Growth from Technological Revolution. | | |

Readings:


1. Acemoglu, D and J Robinson, “The Role of Institutions in Growth and Development”, Working Paper No.10, Commission on Growth and Development, World Bank.

2. Aghion, P and Steven N Durlauf (ed), “Handbook of Economic Growth”, Volume 1A, Elsevier

3. Basu, K., “The Less Developed Economy:”, OUP.

4. G. Psacharopolous (ed), “Economics of Education”, Perdgaman Press.

5. Ian Beardwell and Len Holden (ed), “Human Resource Management – Contemporary Perspective”, MacMillan.

6. Meier, G.M., “Leading Issues in Economic Development”, OUP.

7. Thirlwal, A. P. “ Growth and Development”, Palgrave

8. Todaro, M.P., “Development Economics”, Pearson.

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10. Klaus Schwab(2017). "The Fourth Industrial Revolution" Portfolio Penguin

11. Shoshana Zuboff (2018). The Age of Surveillance Capitalism, Profile Books

12. Erik Brynjolfsson and Andrew McAfee (2016). "The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies" W. W. Norton & Company