Four-year Undergraduate Programme
Subject: Economics
First Semester

Course Name: Introductory Economics
Existing Base Syllabus: UG CBCS Syllabus
Course Level: 100-199

Unit No	Unit Content	No. of Classes	Marks
1.	**The Essences of the Economic Problem:**	15	25
	Scarcityand 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 theMarkets Equilibrium.		
3	**National Income and its Measurement**	**10**	**15**
	From Microeconomics to Macroeconomics. Income (Hicks' Definition), Domestic Income and National Income, GNP and its 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 IndirectTax,TaxRate,Buoyancy andElasticityofaTax,Proportionate,ProgressiveandRegressiveTaxation. Government Budget and Its Revenue and Capital Components;		

	F i s c a l 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

Graduate Attributes:

Course Objective:

The course is designed to expose the students to the basic idea of microeconomics, macroeconomics and public finance. The emphasis will be on thinking like an economist and the course will illustrate how the concepts of microeconomics, macroeconomics and public finance can be applied to analyze real-life situations.

Learning outcome:

This course aims to develop the simple conceptual frameworks which will enable students to understand and comments upon real economic issues like the basic economic problems, demand, supply, GDP and their inter-linkages and also simple ideas of public finance. It will also allow them to evaluate economic policies in terms of coherent logical structure.

Prerequisites: -

Theory Credit: 04

Practical Credit: -

No. of Required Classes:

No. of Contact Classes: 60

No. of Non-contact Classes: -

Particulars of Course Designer 1:

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Particulars of Course Designer 2:

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Subject: Economics

Paper: Basic Elements of Economics

Semester: 2nd Semester

Existing base syllabus:

Course Level: 100-199

Course Objective: The course is designed to introduce the students to the basic ideas of Development Economics, Statistics, Indian economy and elements of the financial system. The focus will be on exposing the students to the various issues of the global and national economy along with the basic statistical tools for analysing these issues.

Graduate Attributes:

At the end of the course, the students will be able to:

 Understand and critically evaluate the various measures of development

 Use and apply the relevant statistical tools to systematically examine any given economic phenomenon

 Describe and analyse the Indian economy in terms of its income and demographic features

 Understand the functioning of a financial system

 Relate and analyse the current events of the global and national economy

Prerequisites: None

Theory credit: 4

Practical credit: None

Number of required classes

Number of contact classes: 50

Number of non-contact classes: 10

Basic Elements of Economics

Content	Marks/Classes
Unit 1: Basics of data collection - 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	25/20

systematic random sampling. Measures of Central Tendency – Mean: Arithmetic mean (simple and weighted), Geometric mean, Harmonic mean, Median, Mode. Measures of Dispersion: Range, Inter-quartile deviation, mean deviation, standard deviation, Variance.	
Unit 2: Index Number - 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)	10/8
Unit 3: Economic growth and development, Per Capita Income (PCI) as a measure of development, International comparison of PCI and role of Purchasing Power Parity (PPP). Human Development Index (HDI), Concept of Sustainable development.	25/10
Unit 4: Financial System and its functions, Formal and informal financial system, Components of a financial system and their interdependence, Relationship between financial system and economic growth	20/10
Unit 5: Basic features of Indian economy, 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.	20/12

References

A.N. Agarwal: Indian Economy - Problems of Development and Planning, New Age

International Publishers

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

Debraj Roy: Development Economics

Michael P.Todaro, Stephen C. Smith: Economic Development

Padmalochan Hazarika: Statistical Methods for Economics, Ashok book Stall

S.C. Gupta: Fundamentals of Statistics, Himalayas Publishing House, Seventh Edition

S.K.Misra, V K Puri: Economics of Development and Planning

V.K.Puri and S.K.Mishra: Indian Economy, Himalay Publishing House

William G. Cochran: Sampling Techniques, John Wiley, 2007.

Particular of course designer:

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Four-year Undergraduate Programme
Subject: Economics
Third Semester
Course Name: Intermediate Economics
Existing Base Syllabus: UG CBCS Syllabus
Course Level: 200-299

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 and Marginal Product of a Single Variable Factor; Production Function with Two Variable Factors, Isoquant, Marginal Rate of Technical Substitution and Elasticity of Substitution; Homogeneity of Production Function and Returns to Scale, The Least Cost Factor Combination, Expansion path, cost curves-Short and Long-run.		
3	**Firm's Revenue and Equilibrium**	**9**	**14**
	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-pulled 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*,

Graduate Attributes:

Course Objective:

The course is designed to provide a sound training in micro and macroeconomic theory and elementary exposure to International Economics. This involves more formal treatment of behavior of individual economic agents and outcome of their decisions on the aggregated levels. Students will also get further insights to the subjects of money, inflation and Credit system

Learning Outcome:

This course aims to develop the broad conceptual frameworks which will enable students to understand the contents upon real economic issues like consumer behavior, producer behavior, money, inflation, employment, International Economics and basic theories.

Prerequisites: -

Theory Credit: 04

Practical Credit: -

No. of Required Classes:

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

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Fourth Semester

1. **Subject Name:** **Economics**
2. **Course Name:** **Public Finance**
3. **Existing Base Syllabus:** **GU -UGCBCS**
4. **Course Level:** **200-299**
5. **Graduate Attributes:**

Course Description:
This course introduces the nature and scope of Public Finance. It will look into efficiency and equity aspects of taxation and expenditure. It examines the objective of fiscal policy and explores Fiscal Federalism in India.

Learning Outcomes**:**

The course will be useful for students aiming for careers in the government sector, policy analysis, business and journalism.

6. **Pre-requisites:** This course requires successful completion of first and second semester courses in Economics.

7. **Theory Credit:** **04**
8. **Practical Credit:** **00**

9. **Number of Required classes:**
   a) **Number of Contact classes:** **50**
   b) **Number of No-contact classes:** **10**

10. **Reference Books and Materials:**

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.

11. Particulars of Course Designer:

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Public Finance
Class: 4th Semester
Paper Code:

Credit: 04
Total marks: 100

Unit 1: Meaning, Scope and Nature (10 classes, 15 marks)

Public Financeand its nature. Objectives of Fiscal Intervention: Allocation, Distribution and Stabilization. Parameters for policy evaluation: *Equity, Efficiency, Paternalism*

Unit 2: Market Failure and Public Intervention(10 classes, 15 marks)

Public Goods and the Free Rider Problem. Externalities: inefficiencies and corrections, property rights, Coase theorem

Unit 3: Taxation (10 classes, 20 marks)

Principles of taxation: Benefit vs Ability. Shifting and Incidence of tax. Economic effects, dead weight loss and distortion. Efficiency and equity considerations.

Unit 4: Public Expenditure (10 classes, 20 marks)

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

Unit 5: Public Debt and Budgeting (10 classes, 15 marks)

Sources of Public Debt and its redemption. Burden of Public Debt.
Strategies of Debt Management.
Budgeting: Incremental vs Zero-based budgeting. Outcome Budget.

Unit-6 Fiscal Policy and Federal Finance (10 classes, 15 marks)

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.

Subject Name: **Economics**

Course Name: **Advanced Macroeconomics**

Existing Base Syllabus: **GU -UGCBCS**

Course Level: **200-299**

Graduate Attributes:

Learning Outcomes:

This course is designed to provide a comprehensive knowledge in macroeconomics. It provides basic ideas on macroeconomic indicators or variables. It discusses various alternative theories of output and employment determination in a closed economy in short-run, medium-run. In addition, it covers long run dynamic issues like growth and technical progress. It also provides different theoretical understanding of issues related to an open economy.

Pre-requisites: This course requires successful completion of Intermediate Economics course offered in the third semester.

Theory Credit: **04**

Practical Credit: **0**

Number of Required classes:

c) Number of Contact classes: **50**

d) Number of Non-contact classes: **10**

Reference Books and Materials:

- Debraj Ray, Development Economics, Oxford University Press, 2009
- Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010
- Dominick Salvatore, International Economics: Trade and Finance, John Wiley, 10th Edition 2011
- N. Gregory Mankiw. Macroeconomics, Worth Publishers, 7th edition, 2010
- Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005
- Thirlwall, A. P. "Growth and Development" Palgrave, 9th edition, 2011.

Particulars of Course Designer:

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Advanced Macroeconomics
Class: 4th Semester
Paper Code:

Credit: 04
Total Marks: 100

Course Outline:

Unit 1: Consumption Function: (15 Classes, 20 marks)

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.

Unit 2: Investment Function: (15 Classes, 20 marks)

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.

Unit 3: Macro economic modeling: (14 Classes, 30 marks)

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.

Unit 4: Inflation, Unemployment and Expectations: (08 Classes, 15 marks)

Inflation-unemployment trade off and Phillips curve; Adaptive and Rational expectations; policy ineffectiveness debate.

Unit 5: Economic Growth: (08 Classes, 15 marks)

Harrod- Domar model**;** Solow model**;** Technological progress and elements of endogenous growth.

References:

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.

Four-year Undergraduate Programme
Subject: Economics
Fourth Semester
Course Name: Introductory Quantitative Techniques for Economics
Existing Base Syllabus: UG CBCS Syllabus
Course Level: 200-299

1. Preliminaries of Mathematics (Classes: 8) (Marks: 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 (Classes: 12) (Marks: 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 (Classes: 12) (Marks: 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 (Classes: 8) (Marks: 20)
Local and global optima: geometric characterization, characterization using calculus: tests for maximization and minimization, applications: profit maximization, cost minimization, revenue maximization.

5. Correlation Analysis(Classes: 10) (Marks: 15)
Correlation, Coefficient of linear correlation, Properties of Correlation coefficient, Rank Correlation, Partial Correlation, Multiple Correlation.

6. Regression Analysis(Classes: 10) (Marks: 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

Graduate Attributes:

The course is designed to provide some ideas related to basic mathematics and elementary statistics. The main objective is to acquaint the students with the basic quantitative techniques like calculus, optimization techniques, correlation, regression etc. which are very much helpful for studying economic theories and analyzing economic phenomena. This course will enable students to have some basic ideas of elementary mathematics like number system, sets, functions, calculus and some basics on statistical measures to be applied for solvingeconomic problems.

Prerequisites: -

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

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Advanced Microeconomics

Class: 4th Semester

Difficulty Level: 200-299

Credit: 4

Total Marks: 100

Course Objective:

The course is designed to provide a sound understanding of the concepts and theories of advanced microeconomics. Since students have been taught perfect competition, this course focuses on the main pillars of Microeconomics such as Imperfect Competition, General Equilibrium, Welfare Economics, and Information Economics. In addition, the principle of factor pricing, input markets, consumer theory, production and cost analysis have been included.

Learning Outcome:

- To provide a better understanding of the market structure.
- To provide an understanding of general equilibrium, welfare economics, market structure, game theory, and economics of information.
- To demonstrate that the theories discussed in class will usually be applied in real-life situations.

Unit 1: Input Markets (20 Marks) (10 Classes)

Labour and land markets - basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); demand for labour; input demand curves; shifts in input demand curves; competitive labour markets; and labour markets and public policy.

Factors share & Technical progress- Backward bending supply curve of Labor.

Unit - 2: Theory of Production and Cost (15 Marks) (10 Classes)

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.

Unit 3: Consumer Theory and Information Economics (20 Marks) (10 Classes)

A review of Indifference Curve, Violation of premises of Indifference curve approach, Revealed Preference Theory.

Inter-temporal choice, Choice under risk-Expected Return, variability and Expected utility hypothesis- Asymmetric information- Adverse Selection and Moral Hazard

Unit 4: Market Structure and Game Theory (25 Marks) (10 Classes)

Monopoly, Pricing with Market Power; Degree of Monopoly, Price Discrimination- Different Degrees; Multi-plant Monopoly.

Monopolistic competition: Product Differentiation, Perceived and Proportionate Demand Curves, Price-Output Determination.

Oligopoly and Game Theory (Two Person Zero Sum Game, Basic ideas and examples of non-zero-sum games, Prisoner's Dilemma), Applications of Game Theory in Oligopolistic Markets (Cournot Equilibrium).

Unit 5: General Equilibrium & Welfare Economics (20 Marks) (10 Classes)

Partial versus General Equilibrium Approaches- Walrasian General Equilibrium System.

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

Recommended 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

Number of required classes

No of Contact classes: 50
No of non-Contact classes:10

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Fifth Semester

Subject: Economics

Paper: Development Economics

Semester: 5th Semester

Existing base syllabus:

Course Level: 300-399

Course Objective: The course is designed to introduce the students to the basic ideas of Development Economics, namely the concepts and meaning of development. The focus will be on exposing the students to the various theories and strategies of development and relate them to issues of poverty, inequality and the environment.

Graduate Attributes:

At the end of the course, the students will be able to:

 Understand and critically evaluate the process of development.

 Interpret the various development strategies and theories to assess the different development paths followed by different societies of the world.

 Gain awareness on the real meaning of development and comprehend how poverty, inequality and environment are linked to the process of development.

Prerequisites: None

Theory credit: 4

Practical credit: None

Number of required classes

Number of contact classes: 50

Number of non-contact classes: 10

Syllabus

Unit 1: Concepts of Development (Marks - 20, No. of classes – 10)

Measurement of development: Traditional measure of development, HDI as a measureof development, Gender Related Development Index.Structural Change and Economic Development. Sustainable Development Goals, Climate Change Challenges and Global Coordination Initiatives.

Unit 2: Poverty, Inequality and Development (Marks - 15, No. of classes – 10)

Poverty - Conceptual Issues, Its Measurement, Poverty Trap - Definition, Causes and Economic Implications
Inequality - Conceptual Issues, Its Measurement, Connections between Inequality and Development

Unit 3: Theories of Economic Growth and Development (Marks - 25, No. of classes – 15)

The Lewis Growth Model
Kaldor Growth Model
Dependency School of Development
Haris-Todaro Model
Myrdal Cumulative Causation Theory
Issues relating to Informal Sector

Unit 4: Strategies of Development (Marks - 20, No. of classes – 15)

Rostow's Stages of Growth
Big Push Theory
Balanced and unbalanced Growth Theory
Leibenstein Critical Minimum Theory

Unit 5: Economic Development and Environmental Problems (Marks - 20, No. of classes – 10)

Causes of Environmental Problems
Rural Poverty and Environmental Destruction
Industrialisation and Environmental Pollution
Lowering the Peak of the Inverted-U-Shape Curve

References:

Bhattacharyya, R.N. (ed) (2004), Environmental Economics: An Indian Perspective, Oxford

University Press, New Delhi.

Ray, Debraj (2012), Development Economics, Oxford University Press, New Delhi.

Thirwall, A.P. (2006), Growth and Development: With Special Reference to Developing Economies, Palgrave.

Todaro, M., Smith, S (2015), Economic Development, Pearson.

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INDIAN ECONOMY

5th Semester

Credit: 4 Total Marks: 100

Difficulty level: 300-399

Course objective/Description:

This course will give the students an idea of the Indian economy at the time of independence to the contemporary time. The course is expected to provide students a better pictureof the situation and appreciate the challengesand opportunities.

Course outcome:

 Help students to know the status of Indianeconomy in some development indicators since independence

 Built up an analytical thought among students to see the relevance of policies and its effects on different sectors.

Graduate Attributes:

This syllabus will help the students to update their knowledge along with the requisite data which will be of immense help in competitive exams and in getting jobs.

OTHER DETAILS

1. Subject Name- ECONOMICS

2. Course Name- 4-year Degree course (ECONOMICS)

Paper- Indian Economy

3. Existing base syllabus- CBCS present syllabus ECO-HC-5016 and 6016

4. 300-399

5. Theory credit-3

6. No of required classes- a) No of contact classes- 53

b) No of non-contact classes-07

Unit	Content	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
	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		

Books Recommended:

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

Moderator: Prof. Madhurjya P. Bezbaruah, GU

Prof. Ratul Mahanta, Department of Economics, GU

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Four-year Undergraduate Programme
Subject: Economics
Fifth Semester
Course Name: International Economics
Existing Base Syllabus: UG CBCS Syllabus
Course Level: 300-399

1. Evolution of International Trade Theories (Classes: 15) (Marks: 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 (Classes: 13) (Marks: 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 (Classes: 12) (Marks: 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 (Classes: 10) (Marks: 15)
Importance and forms of economic integration; costs of economic integration; Theories of Customs Union- partial equilibrium analysis.

5. International Monetary System(Classes: 10) (Marks: 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

Graduate Attributes: This course helps students to comprehend the economic relationships among countries in terms of both trade and monetary issues. It also assists the students in understanding and explaining the composition, direction and consequences of international trade, and the

determinants and effects of trade policy. It covers extensive discussions on advances in trade theories over the years,trade policies as well as international monetary systems. Although the course is based on abstract theoretical models, students will also be exposed to real-world examples and case studies.

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

Theory Credit: 04

Practical Credit: -

No. of Required Classes:

No. of Contact Classes: 60

No. of Non-contact Classes: -

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Four-year Undergraduate Programme
Subject: Economics
Fifth Semester
Course Name: Intermediate Quantitative Techniques for Economics
Existing Base Syllabus: UG CBCS Syllabus
Course Level: 300-399

1. Linear Algebra (Classes: 10) (Marks: 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 (Classes: 6) (Marks: 10)
Homogeneous and homothetic functions: concepts, Differentiable functions: concepts, Implicit Function Theorem and applications; convex, quasi-convex and concave functions.

3. Multi-variable Optimization (Classes: 12) (Marks: 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(Classes: 12) (Marks: 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 (Classes: 10) (Marks: 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 (Classes: 10) (Marks: 15)
Time Series Analysis-Concept and Components; Measurement of Trend-
Moving average and Least square method, Fitting of linear trend curves.

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

Graduate Attributes:

This course is designed to give students the knowledge of mathematical tools like matrix algebra, multivariable optimization, etc. along with statistical tools of probability, theoretical distribution and time series to build up strong quantitative skill. On completion of this course, students are expected to be able to apply these quantitative tools for solving economic problems.

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

Theory Credit: 04

Practical Credit: -

No. of Required Classes:

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

Particulars of Course Designer 1:

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Assam Economy

6th Semester

Credit: 4 Total Marks: 100

Difficulty level: 300-399

Course objective/Description:

This course will provide students an idea of Assam economy since independence to the contemporary time. The course is expected to help students to better appreciate the challenges and opportunities of the economy of Assam in the present context.

Course outcome:

 Help students to know the status of Assam economy in some development indicators since independence

 To enhance knowledge about the linkage between human capital formation and different sectors of an economy.

 Built up an analytical thought among students to see the relevance of policies and its effects on different sectors.

Graduate Attributes:

This syllabus will help the students to update their knowledge base on Assam along with the requisite data which will be of immense help in competitive exams and in getting jobs.

OTHER DETAILS

1. Subject Name- ECONOMICS

2. Course Name- 4 year Degree course (ECONOMICS)

Paper- Assam Economy

3. Existing base syllabus- CBCS present syllabus ECO-HE-6036 The Economy of Assam

4. 300-399

5. Theory credit-3

6. No of required classes- a) No of contact classes- 60

Unit	Content	Classes	Marks
1	**The Economy under Colonial Rule (1837 -1947)**		
	Imposition of Land Revenue and Its Impact, Prohibition of Opium Production and State Takeover of Opium Trade, Inflow of Colonial	10	15

	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. Trends and Sector-wise Composition of GSDP, Trend in Per Capita NSDP in comparison with trends in all-India Per Capita Income Trends in Other Indicators of Development in Comparison with all-India standard: Life expectancy, Literacy, Enrolment and Forest Cover		
3	**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 **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. **Industry:** Tea Industry and Role of Small Tea Growers, The Future of Hydrocarbon Industry. Traditional Handloom Handicraft and their Prospect; **Service Sector**: Size and Composition. 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 Stakes of Assam in the Act East Policy		

Readings:

Atul Goswami "Assam's Industrial Development: Urgency of New Direction", Economic and Political Weekly 1981

Department of Economics, Gauhati University, “Identity Aspirations, Developmental Backlogs and Governance Issues in Northeast India” Maliyata Offset Press, Mirza, 2016

Directorate of Economics and Statistics, Government of Assam, “Economic Survey Assam” [recent issues] https://des.assam.gov.in/information-services/economic-survey-assam

Directorate of Economics and Statistics, Government of Assam, “Statistical Handbook of Assam” 2018 or later addition

Guha, Amalendu, Planter’s Raj to Swaraj, Second Edition (paperback)

India Brand Equity Foundation “About Assam: Tourism, Industries In Assam, Agriculture, Economy & Geography”, June 2020, https://www.ibef.org/states/assam.aspx

J B Ganguli, "Economic Conditions and Change in North-East India" in A.P. Singha (ed) Changing North East India, Ludhiana: Gagan Publishers, 1986

J N Sarma, “Problems of Economic Development in Assam" Economic and Political Weekly, Vol. 1, No. 7, Pp. 281+283-286.

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

Moderator: Prof. Madhurjya P. Bezbaruah, GU

Prof. Ratul Mahanta, Department of Economics, GU

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Basics of Econometrics
Class: 6th Semester
Difficulty Level: 300-399
Number of Contact Class: 52
Number of Non-contact Class: 08
Credit: 4
Total Marks: 100

Course objective:

This course aims to provide students with an introduction to the theory and application of econometrics. The course will cover basic concepts such as linear regression, estimation techniques, hypothesis testing, and other topics related to the analysis of economic data. Students will gain an understanding of how econometrics can be used to explain economic relationships, forecast future outcomes, and analyze public policy.

Learning outcome:

The main learning outcomes of the paper include:

1. Understanding the basic concepts and principles of econometrics,

2. Developing an understanding of the components of a linear regression model, including the intercept and slope terms,

3. Applying linear regression analysis to real-world data,

4. Understanding the meaning and interpretation of a linear regression analysis results

5. Employ alternative estimation techniques such as multi-variable regression,

6. Understanding the assumptions underlying linear regression models and the implications of violating these assumptions

7. Using software tools to facilitate the application of econometric methods.

Unit-1: Statistical Background: (Marks: 15) (Class: 10)

Normal distribution, chi-square, t- distribution, and F-distribution; estimation of parameters, properties of estimators, Statistical Inferences, Hypothesis testing, Type I and Type II errors, power of a test; Level of Significance, Confidence Interval.

Unit-2: Simple Linear Regression Model: (Marks: 25) (Class: 12)

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.

Unit-3: **Multiple Linear Regression Model: (Marks: 15) (Class: 10)**

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.

Unit-4: Violations of Classical Assumptions: **(Marks: 15) (Class: 10)**

Sources, Consequences, Detection and Remedies of Multicollinearity, heteroscedasticity, serial correlation

Unit-5: Specification Analysis: (Marks: 10) (Class: 10)

Omission of a relevant variable, inclusion of irrelevant variable, tests of specification errors

Unit-5: Applications: (Marks: 20) (Class: 8)

Use of MS Excel in applications and solutions for econometric models.

Reference books & materials

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

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Dr. Mofidul Hassan

Subject: Economics

Paper: FUNDAMENTALS OF FINANCIAL ANALYSIS

Semester: 6th Semester

Existing base syllabus: None

Course Level: 300-399

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

Graduate Attributes:

At the end of the course, the students will be able to:

 Understand and undertake valuation of both debt and equity instruments

 Gain awareness on the structure and functions of financial markets

 Illustrate the trading in the stocks market and analyze the complexities of the derivative market.

Prerequisites: None

Theory credit: 4

Practical credit: 0

Number of required classes

Number of contact classes: 45

Number of non-contact classes: 15

Syllabus

Unit 1 Financial Markets(15 Classes, 25 marks)
Money Market: Structure and functions, Instruments in the money market. Liquidity Management Instruments in the Money Market
The Capital Market: Nature and functions, Primary Capital Market: Instruments of resource mobilization- *Public Issues: IPO & FPO, Right Issues, and Private Placement.* Pricing of new issues.
Secondary Capital Market: Trading & Settlement. Stock Market Index. Mutual Fund and its functional classification.

Unit- 2. Valuation of Financial Assets(12 Classes, 20 marks)
The law of One Price and Arbitrage, The valuation of debt instruments: Pure Discount Bonds. Coupon Bonds, Current Yield and Yield to Maturity, Valuing stock: Value of a Common Stock and the Dividend Discount Model: Zero Growth and Constant Growth.

Unit-3 Financial Analysis(12 Classes, 20 marks)
Financial Ratios: Liquidity Ratios, Leverage Ratios, Turnover Ratios, Profitability Ratios, Valuation Ratios. Dupont Analysis, Relationships, Interpretations and Analysis

Unit -4 Risk and Return (11 Classes, 20 marks)
Risk and Return of an Asset and a Portfolio.
Measurement of Market Risk. Beta of a stock.
The Risk Management Process. Dimensions of Risk Transfer.

Unit 5: The Derivative Market(10 Classes, 15 marks)
Nature of the Derivative Market, Traders and Instruments in a derivative market, Trading Strategies: Hedging, Speculation for ArbitrageStrategies.

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.

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.

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6th Semester

Environmental Economics,

Full Marks 100, Total Credit = 4

Contact Classes: 55 Non-contact classes:05

Syllabus Components

1. **Subject Name** : Economics
2. **Course Name**: Environmental Economics
3. **Existing base Syllabus**: Existing CBCS Economics (Hons Course) Paper ECO-HE-6016 Environmental Economics and Non CBCS (M503) Introduction to Environmental Economics and (M605) Economics of Natural Resources and Sustainable Development
4. **Course Level**: 300-399 Higher level course which is required for majoring in Economics for the award of a degree
5. **Graduate Attributes:**

Course Objective:

This course focuses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies. Economic implications of environmental policy are also addressed along with selected topics on international environmental problems. Selected topics of international environmental problems are also selected.

Learning Outcome:

- Help to develop a comprehensive knowledge and understanding of the issues related to environment and economy.
- Acquaint someone with the issues related to market failure of environmental goods and the instruments which can prevent the damages of market failure of environmental goods.
- Build up a critically analysis as to how an economy should use the natural resources in an optimum way, such that an economy can take up the path of sustainable development.
- Make aware of global environmental issues.

Unit	Topic	Marks	Class Hrs
Unit-1	**Introduction:** 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.	20	10
Unit-2	**Market Failure in allocation of Environmental resources:** 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.	20	10
Unit-3	**The Design and Implementation of Environmental Policy:** 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.	20	15
Unit-4	**Sustainable Development:** 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
Unit-5	**International Environmental Problems and Initiatives:** 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

Reference Books:

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.

1. Theory Credit: **4**
2. Practical Credit: 0
3. Number of required Classes: **Contact Classes:55 Non-contact classes:05**

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