RABINDRANATH TAGORE UNIVERSITY: HOJAI: ASSAM

DEPARTMENT OF ECONOMICS

SYLLABUS

(*"The syllabi of different papers have been mapped with Bloom's Taxonomy."*)

(NATIONAL EDUCATION POLICY – 2020)

COURSE: B.A.

SEMESTER I, II, III & IV

DURATION OF COURSE: ONE YEAR

AFTER COMPLETION OF THE COURSE, STUDENTS CAN AVAIL **ONE YEAR** CERTIFICATE OF GRADUATION IN ECONOMICS

COURSE STRUCTURE FOR B.A. / B.Sc. ECONOMICS

(MAJOR & HONOURS)

SEM	CATEGORY OF COURSE	NAME OF PAPER/COURSE	CREDIT
SEM - I	Major – 1.1	INTRODUCTORY MICROECONOMICS	4
	Minor – 1.1	PRINCIPLES OF MICROECONOMICS - I	4
	MD/GE- 1.1	INTRODUCTORY ECONOMICS	3
	AECC-1.1		
	SEC -1.1	DATA ANALYSIS - I	3
	VAC -1.1		
	VAC -1.2		
		TOTAL	**14**
		NAME OF PAPER/COURSE	
	Major – 2.1	INTRODUCTORY MACROECONOMICS	4

SEM - II	Minor – 2.1	PRINCIPLES OF MACROECONOMICS - I	4
	MD/GE- 2.1	ESSENTIAL OF ECONOMICS	3
	AECC-2.1		
	SEC -2.1	DATA ANALYSIS - II	3
	VAC -2.1		
	VAC -2.2		
		TOTAL	**14**
		NAME OF PAPER/COURSE	
SEM - III	Major – 3.1	INTERMEDIATE MICROECONOMICS	4
	Major – 3.2	MATHEMATICAL METHODS IN ECONOMICS - I	4
	Minor - 3.1	MICROECONOMICS – II	4
	Minor -3.2	MONETARY ECONOMICS	4
	MD/GE -3.1	INDIAN ECONOMY	3
	AECC -3.1		3
	SEC	DATA ANALYSIS -III	3
		TOTAL	**21**

		NAME OF PAPER/COURSE	
SEM - IV	Major – 4.1	INTERMEDIATE MACROECONOMICS	4
	Major – 4.2	STATISTICAL METHODS FOR ECONOMICS	4
	Major - 4.3	INDIAN ECONOMY	4
	Minor – 4.1	MACROECONOMICS – II	4
	Minor – 4.2	FUNDAMENTAL OF STATISTICS	3
	Summer	***Internship***	2
		TOTAL	**21**
		NAME OF PAPER/COURSE	
SEM - V	Major – 5.1	MONETARY ECONOMICS	4
	Major – 5.2	MATHEMATICAL METHODS FOR ECONOMICS – II	4
	Major - 5.3	DEVELOPMENT ECONOMICS – I	4
	Major - 5.4	ENVIRONMENTAL ECONOMICS	4
	Minor – 5.1	INDIAN ECONOMY	4
	Minor - 5.2	DEVELOPMENT ECONOMICS	
		TOTAL	**20**

		NAME OF PAPER/COURSE	
SEM - VI	Major – 6.1	INTRODUCTORY ECONOMETRICS	4
	Major – 6.2	PUBLIC ECONOMICS	4
	Major - 6.3	INTERNATIONAL ECONOMICS	4
	Major - 6.4	DEVELOPMENT ECONOMICS – II	4
	Minor – 6.1	PUBLIC ECONOMICS	4
	Minor – 6.2	HISTORY OF ECONOMIC THOUGHT	
		TOTAL	**20**
		NAME OF PAPER/COURSE	
SEM- VII	Major-7.1		
	Major-7.2		
	Major-7.3		
	Major-7.4		

FIRST SEMESTER

COURSE: MAJOR
INTRODUCTORY MICROECONOMICS
PAPER: MAJOR – 1.1
CREDIT POINT: 04

Course Description: The course is designed to provide conceptual clarity about the basic principles of microeconomics. The course is designed to provide an understanding of the concepts like subject matter of microeconomics, market forces, market competition, consumer behaviour, factors of production. Understanding these topics would help students develop critical thinking about the subject at large, further developing interest in the area for prospects.

Course objectives

1. Remember & Understand: Introduce fundamental economic concepts such as scarcity, choice, opportunity cost, and the basic economic problems. Explain key theories and models related to demand and supply, utility, cost, and market structures.
2. Apply & Analyse: Enable students to apply economic models such as the Production Possibility Curve, utility analysis, and cost functions to real-world scenarios. Analyse consumer and producer behaviour, the functioning of different market types, and the impact of elasticity on decision-making.
3. Evaluate & Create: Evaluate the efficiency of different economic systems and market structures in resource allocation. Develop reasoned economic arguments using theoretical frameworks and propose solutions to economic problems using comparative and static analysis.

Learning Outcome
By the end of this course, students will be able to:

1. Define and explain foundational economic concepts such as scarcity, opportunity cost, allocation, and equilibrium. ***(Remember, Understand)***
2. Interpret and illustrate economic models such as the Production Possibility Curve and Edgeworth Box. ***(Understand, Apply)***
3. Describe and compare different types of economic systems—capitalism, socialism, and mixed economies. ***(Understand, Analyse)***
4. Construct and analyse demand and supply curves, and identify shifts caused by changes in determinants. ***(Apply, Analyse)***
5. Calculate and evaluate different elasticity measures (price, income, cross) and their implications for firms and consumers. ***(Apply, Evaluate)***
6. Differentiate between cardinal and ordinal utility approaches and analyse consumer equilibrium using utility theory***. (Analyse)***
7. Explain the laws of production and analyse the relationship between various cost and product measures. ***(Understand, Analyse)***
8. Evaluate the short-run and long-run equilibrium of firms under perfect competition and assess allocative efficiency. ***(Evaluate)***
9. Propose solutions to economic allocation problems using static, dynamic, and comparative static analysis. ***(Create)***

Course Outline	Lectures required	Marks
Unit I: Exploring the subject matter of Economics Economic problems, scarcity and choice, problem of allocation, distribution and efficiency of resources, production possibility curve and Edgeworth box, opportunity cost, concepts of equilibrium: stable and unstable, static, dynamic and comparative static, economic systems: capitalism, socialism and mixed economy (concepts only)	10	20
Unit II: Demand and Supply Demand: meaning, types, determinants of demand, demand schedule and demand curve, law of demand, exceptions to the law of demand, shifts in demand curve. Supply: meaning, types, determinants of supply, supply schedule and supply curve, law of supply, shift in supply curve, elasticity: different concepts of elasticity of demand, price elasticity, income elasticity and cross elasticity, measurement of elasticity of demand, elasticity of supply and factors affecting elasticity.	15	25
Unit III: Consumer Behaviour General concept of utility, cardinal vs ordinal measurement of utility, total and marginal utility, the law of diminishing marginal utility, the law of equi-marginal utility, consumer's equilibrium, limitations of the cardinal utility analysis and the derivation of the demand curve, Diamond- water paradox.	10	15
Unit IV: Theory of Production and Cost Meaning, classification of factors of production, concepts of product: total average and marginal product and their interrelations, Production function, Law of variable proportion, cost: total cost, average cost, marginal cost and their interrelations, money cost, real cost, explicit cost, implicit cost, sunk cost, opportunity cost, private cost, social cost, fixed cost and variable cost (concepts only).	15	20
Unit V: Concepts of Market Meaning of market in economics; classification of markets, concept of total, average and marginal revenue, relation between revenue and elasticity, concept of a firm and industry, perfect competition: assumptions, price determination and equilibrium of the firm in short run and long run, long run industry supply curve: increasing decreasing and constant cost industries, welfare: allocative efficiency under perfect competition.	10	20

TOTAL	60	100

Suggested Readings

1. M. L. Jhingan, *Principles of Economics,* Vrinda Publication P. Ltd, 4th Edition, 2014
2. H. L. Ahuja, *Principles of Microeconomics, S. Chand & Company Pvt. Ltd. 22nd Revised Edition,2020*
3. D. N. Dwivedi, *Microeconomics Theory and Applications, Pearson Education Pvt. Ltd, 18th Edition, 2022*
4. Dominick Salvatore, *Principles of Microeconomics,* Oxford University Press, Fifth Edition, 2020
5. G. S. Maddala, Ellen Miller, *Microeconomics Theory and Applications,* McGraw Hill Education (India) Private Limited, Fourteenth Edition, 2018

FIRST SEMESTER

COURSE: MAJOR
SKILL ENHANCEMENT COURSE (SEC)- I
PAPER: DATA ANALYSIS -I
CREDIT: 03

Course Description: The objective of **Data Analysis** is to equip students with the knowledge and skills to gather, process, and analyse data using statistical and computational methods, enabling them to derive meaningful insights and support evidence-based decision-making. This would develop the ability to collect, organize, and interpret data effectively, use statistical and computational tools to identify patterns and trends, and apply insights to make informed decisions and solve real-world problems.

Course Objectives

1. **Remember & Understand:** Introduce students to the importance and types of data used in social sciences and familiarize them with basic data sources and collection methods. Explain the concepts of population census, sample surveys, and sampling techniques including random sampling.
2. **Apply & Analyse:** Enable students to design effective tools for data collection such as questionnaires and interview schedules. Equip students to organize and present data in meaningful formats using tables and visual tools.
3. **Evaluate & Create:** Encourage students to critically assess the appropriateness of different data sources and collection techniques. Guide students in creating accurate and visually compelling charts and diagrams using software tools like MS Excel.

Learning Outcome

By the end of this course, students will be able to:

1. Define and differentiate types of data used in social sciences and explain various data sources and collection methods. ***(Remember, Understand)***
2. Distinguish between population census and sample surveys and describe the process and importance of random sampling. ***(Understand, Analyse)***
3. Design well-structured questionnaires and interview schedules for data collection. ***(Apply, Create)***
4. Use questionnaires and schedules effectively for field data collection. ***(Apply)***
5. Organize data in tabular form for clarity and comparability. ***(Apply)***
6. Create appropriate visual representations such as bar graphs, pie charts, scatter plots, and population pyramids using MS Excel. ***(Apply, Create)***
7. Evaluate the suitability and clarity of different data presentation methods. ***(Evaluate)***

Course Outline	Lectures required	Marks
Unit I: Use of Data Use of data in social sciences; types and sources of data; data collection methods. Population census versus sample surveys. Random sampling.	10	30
Unit II: Questionnaires and Schedules Meaning; how to prepare a questionnaire and interview schedule; use of questionnaire and interview schedule for data collection.	15	20
Unit III: Presentation of Data Data presentation in tabular formats; use of diagrams for data presentation; creating charts and diagrams in MS-Excel – bar, line, pie, scatter, radar, bubble diagrams, population pyramids.	20	25
TOTAL	45	75

Readings

1. S P Gupta, *Statistical Methods*, S Chand.

2. Webtech Solutions Inc., ***Mastering Microsoft Excel Functions and Formulas***

FIRST SEMESTER

COURSE: MINOR

PRINCIPLES OF MICROECONIOMICS

PAPER: MINOR – 1.1

CREDIT - 04

Course Description: This course intends to introduce the students to the basic principles in microeconomics such as: Theory of consumer behaviour, production, costs and revenues, market forces and market forms. The course would help the students to illustrate the economic issues with applications. Learning economic applications would help the students to understand the significance of microeconomic variables in their day today life.

Course Objectives

By the end of this course, students will:

1. **Remember & Understand**: Grasp fundamental microeconomic concepts including scarcity, opportunity cost, utility, and market mechanisms. Understand the functioning of different economic systems and cost structures.
2. **Apply & Analyse**: Apply economic theories such as demand-supply, utility analysis, and cost functions to real-life and hypothetical scenarios. Analyse consumer choices, producer decisions, and pricing strategies in competitive settings.
3. **Evaluate & Create**: Evaluate the efficiency of market outcomes and firm behaviour in perfect competition. Develop structured economic reasoning to propose solutions to resource allocation and production issues.

Learning Outcome

Upon successful completion of this course, students will be able to:

1. Define key microeconomic terms and explain foundational principles such as scarcity, opportunity cost, and economic choice. ***(Remember, Understand)***
2. Illustrate economic models like the Production Possibility Frontier and apply them to real-world trade-offs. ***(Apply)***
3. Analyse market behaviour using the laws of demand and supply and assess changes through shifts and movements along curves. ***(Analyse)***
4. Calculate and interpret price elasticity of demand and evaluate its significance for producers and consumers. ***(Apply, Evaluate)***
5. Compare cardinal and ordinal utility theories and apply them to determine consumer equilibrium**.** ***(Analyse, Apply)***
6. Explain and analyse production processes using concepts such as marginal product, law of variable proportions, and returns to scale. ***(Understand, Analyse)***
7. Distinguish among various cost concepts (explicit, implicit, opportunity, fixed, variable) and evaluate cost behaviour over time. ***(Analyse, Evaluate)***
8. Describe the characteristics of different market structures and determine firm behaviour under perfect competition. ***(Understand, Apply)***
9. Evaluate the implications of market outcomes on efficiency and resource allocation in a competitive environment. ***(Evaluate)***

Course Outline	Lectures required	Marks
Unit I: Introduction Problems of scarcity and choice: scarcity choice and opportunity cost; production possibility frontier; economic systems. Demand and supply; law of demand, determinants of demand, shifts of demand versus movements along a demand curve, market demand, law of supply, determinants of supply shifts of supply versus movement along a supply curve, market supply, market equilibrium. Price elasticity of demand, measuring price elasticity of demand and its determinants.	15	30
Unit II: Consumer Theory General concept of utility; Cardinal Vs ordinal measurement of utility; Total and Marginal utility; Law of diminishing marginal utility; Law of Equi-Marginal utility, Consumer's Equilibrium, limitations of the cardinal utility analysis	15	20
Unit III: Production and Costs Meaning, classification of factors of production, production function, total average and marginal product (concepts), law of variable proportions, law of returns to scale, Types of Cost – Money cost, real cost, explicit cost, implicit cost, sunk cost, opportunity cost, private cost, social cost, fixed cost, variable cost, total cost, average Cost, marginal Cost and their interrelation, economies and diseconomies of scale	20	30
Unit IV: Concept of market Meaning of Market in economics, Classification of markets, concept of firm and industry, Concept of total, average and marginal revenue, perfect competition: assumptions, price determination and equilibrium of the firm in short run and long run	10	20
TOTAl	60	100

Suggested Readings

1. H. L. Ahuja, *Principles of Microeconomics*, S. Chand & Company Pvt. Ltd., 22nd Revised Edition, 2020.
2. D.N Dwivedi, *Microeconomics Theory and Applications, Pearson Education Pvt. Ltd, 18th Edition, 2022*
3. Dominick Salvatore, *Principles of Microeconomics,* Oxford University Press, Fifth Edition, 2020.

FIRST SEMESTER

COURSE: MULTIDISCIPLINARY
INTRODUCTORY ECONOMICS
PAPER: MD/GE- 1.1
CREDIT – 03

Course Description: The course is designed to introduce the basic concepts of Economics by giving a brief outline of concepts from microeconomics, macroeconomics, public finance, monetary economics and markets. The course is designed to create and develop interest in economics among students from different disciplines. The course is structured in such a way that it would give a clear vision of understanding and applying Economics in their day-to-day life by learning the empirical methods.

Course Objectives

By the end of the course, students will:

1. **Remember & Understand:** Understand key economic terms and concepts in microeconomics, macroeconomics, public finance, and monetary economics. Recognize different types of markets and economic systems.
2. **Apply & Analyse:** Apply laws of demand, supply, utility, and cost to practical scenarios. Analyse the behaviour of consumers, firms, and government in various economic contexts.
3. **Evaluate & Create**: Evaluate the effectiveness of monetary and fiscal policies in addressing macroeconomic problems. Propose solutions to economic issues such as inflation, unemployment, and inequality based on sound theoretical understanding.

Learning Outcome

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

1. Define key concepts in micro and macroeconomics including scarcity, opportunity cost, elasticity, inflation, and GDP. ***(Remember)***
2. Describe how different economic systems address central economic problems. ***(Understand)***
3. Illustrate and apply the laws of demand and supply and analyse market equilibrium. ***(Apply, Analyse)***
4. Interpret national income statistics and understand circular flow of income. ***(Understand, Apply)***
5. Compare the characteristics of different market structures and determine price/output decisions. ***(Analyse*, *Evaluate)***
6. Explain public finance principles including taxation, public goods, and government expenditure. ***(Understand)***
7. Assess the role of money, commercial banks, and central banks in the economy. *(Evaluate)*
8. Evaluate macroeconomic policies aimed at solving unemployment, inflation, and balance of payments problems. ***(Evaluate)***

Course Outline	Lectures required	Marks
Unit I: Introduction to Microeconomics What is Microeconomics (Scope and subject matter), Central problems of an economy; Economic systems: Capitalism, Socialism and Mixed Economy, meaning of demand and its types, factors affecting demand, Law of demand, exception of the law of demand, Law of supply, factors affecting supply.	08	10
Unit II: Introduction to Macroeconomics What is macroeconomics? Macroeconomic problems, Basic issues studied in macroeconomics: employment and unemployment, circular flow of income and national income, general price level and inflation, business cycle, economic growth, balance of payments and exchange rates (concepts only), consumption and investment (meaning and types).	10	20
Unit III: Markets and its forms Meaning of Market in economics; Classification of markets: Perfect competition; monopoly; monopolistic, oligopoly, duopoly (concepts only), Concept of total, average and marginal revenue, perfect competition: assumptions, price determination and equilibrium of the firm in short run and long run	10	20
Unit IV: Public Finance Meaning, subject matter and nature of public finance, public goods and private goods, Role of public finance, public expenditure, public revenue, public debt (Meaning and Objectives) Taxation: Meaning Principles of taxation.	07	10
Unit V: Monetary Economics Definition, types, functions of money, demand for money: Classical theory of money (Fisher and Cambridge), supply of money: measures of money supply, functions of commercial Bank and central bank,	10	15

monetary policy: Objectives and role.		
TOTAL	45	75

Suggested Readings

1. H. L. Ahuja, *Principles of Microeconomics, S.* Chand & Company Pvt. Ltd., 22nd Revised Edition, 2020
2. Rudiger Dornbusch, Stanly Fischer, Richard Startz, *Macroeconomics,* McGraw Hill Education (India) Private Limited, Twelfth Edition, 2019.
3. R. K. Lekhi, Joginder Singh**,** *Public Finance,* Kalyani Publishers, Fourteenth Edition, 2022
4. R. R. Paul, *Monetary Economics*, Kalyani Publishers, 13th Edition, 2020.

SECOND SEMESTER

COURSE: MAJOR
INTRODUCTORY MACROECONOMICS
PAPER: MAJOR – 2.1
CREDIT: 04

Course description: The course is designed to provide the basic concepts of macroeconomics by providing a brief outline of the following concepts: The nature of macroeconomics, its scope, national income, the consumption function, investment function, theories of Income output and employment and money.

Course Objectives

(What the course aims to achieve overall – aligned with Bloom's cognitive levels)

By the end of this course, students will:

1. **Understand** the fundamental concepts, terminology, and scope of macroeconomics, including national income, inflation, unemployment, and money.
2. **Explain and interpret** the behaviour of macroeconomic variables such as consumption, saving, investment, output, and employment.
3. **Apply** core macroeconomic theories and models—such as the consumption function, investment multiplier, and income determination—to real-world situations.
4. **Analyse** the interrelationships among major macroeconomic aggregates and evaluate the effects of changes in economic indicators.
5. **Evaluate** classical and Keynesian theories and critically assess the strengths and limitations of each.
6. **Develop** basic macroeconomic models or frameworks to demonstrate understanding of dynamic economic behaviour and policy implications.

Learning outcome

Upon successful completion of the course, students will be able to:

1. Define and recall key macroeconomic concepts such as GDP, inflation, unemployment, money supply, and business cycles. ***(Remember)***
2. Describe and explain foundational theories, models, and relationships in macroeconomics including the circular flow of income and psychological law of consumption. ***(Understand)***
3. Apply methods of measuring national income and use macroeconomic tools to analyse data trends and policy scenarios**.** ***(Apply)***
4. Differentiate and analyse macroeconomic theories and functions such as consumption vs. saving and classical vs. Keynesian models. ***(Analyse)***
5. Critically evaluate macroeconomic indicators, policy responses, and theoretical limitations. *(Evaluate)*
6. Construct and present basic macroeconomic models to simulate economic activities such as income determination and multiplier effects. ***(Create)***

Course Outline	Lectures required	Marks
Unit I: Introduction to Macroeconomics Nature and Scope of macroeconomics, basic issues studied in macroeconomics: employment and unemployment, determination of national income, general price level and inflation, business cycle, stagflation, economic growth, balance of payments and exchange rates (concepts only), The circular flow of income, national income, meaning, components, real and nominal GDP, methods of measuring national income, limitations of national income.	25	20
Unit II: Consumption Function Consumption, meaning, technical attributes of consumption, factors affecting consumption; Keynes' Psychological law of consumption, Limitations of the Keynesian consumption function, saving and saving function, technical attributes of saving.	10	20
Unit III: Investment Function Investment: meaning, types of investment, technical attributes of investment function, factors affecting investment, Multiplier, Accelerator (Concepts only)	05	20
Unit IV: Theories of Income, Output and E **mployment** Classical theory, Say's law of market, Pigou's theory of wage price flexibility, limitations of classical theory, simple Keynesian theory of income determination.	10	20
Unit V: Money Types of money; functions of money, demand for money: Classical theory of money (Fisher and Cambridge), Keynes' liquidity preference theory of interest, supply of money: measures of money supply, money multiplier (concept only).	10	20

TOTAL	60	100

Suggested Readings

1. Andrew B. Abel, Ben S. Bernanke, Dean Croushore, *Macroeconomics*, Pearson Education in South Asia, Eight Edition.
2. H. L. Ahuja, *Macroeconomics Theory and Policy*, 22nd Edition, S Chand & Company, 2020
3. Rudiger Dornbusch, Stanly Fischer, Richard Startz, *Macroeconomics*, McGraw Hill Education (India) Private Limited, Twelfth Edition, 2019.
4. Richard T. Froyen, *Macroeconomics Theory and Policies*, Pearson Education in South Asia, Tenth Edition, 2019

SECOND SEMESTER

COURSE- SEC 2.1

SKILL ENHANCEMENT COURSE (SEC)-
PAPER: DATA ANALYSIS -II
CREDIT: 03

Course Description: The focus of the course is to introduce the students to data analysis by understanding how data can be collected, summarized and presented. The students will also be trained to use SPSS/Excels statistical software to analyses data. This would develop the ability to collect, organize, and interpret data effectively, use statistical and computational tools to identify patterns and trends, and apply insights to make informed decisions and solve real-world problems.

Course Objectives

By the end of this course, students will be able to:

1. **Understand** the basic statistical concepts related to univariate and bivariate data distributions.
2. **Compute and interpret** statistical measures such as mean, median, mode, range, standard deviation, correlation, and regression.
3. **Apply** statistical techniques to real-world data using manual calculations and software tools such as MS Excel and SPSS.
4. **Analyse** relationships between variables using graphical and numerical methods.
5. **Evaluate** data using appropriate statistical tools and software outputs.
6. **Create** organized datasets and produce summary statistics using Excel/SPSS.

Learning Outcome

By the end of this course, students will be able to:

1. Define and explain foundational statistical concepts related to univariate and bivariate data. ***(Remember, Understand)***
2. Calculate and apply appropriate statistical measures for summarizing and analysing data. ***(Apply)***
3. Interpret and analyse statistical relationships using correlation and regression techniques. ***(Analyse)***
4. Evaluate statistical results to draw meaningful conclusions from data. ***(Evaluate)***
5. Use software tools like MS Excel/SPSS for data entry, computation, and visualization of statistical data. ***(Apply, Create)***

Course Outline	Lectures required	Marks
Unit I: Univariate frequency distribution Measures of central tendency – Mean, Median and Mode. Measures of dispersion: Range, Mean Deviation and Standard Deviation. .	10	30

Unit II: Bivariate frequency distribution Correlation, regression and rank correlation.	15	20
Unit III: Data entry in software like MS Excel /SPSS.	20	25
TOTAL	45	75

Readings

5. S P Gupta, *Statistical Methods,* S Chand.

6. Webtech Solutions Inc., ***Mastering Microsoft Excel Functions and Formulas***

SECOND SEMESTER

COURSE: MINOR

PRINCIPLES OF MACROECONOMICS

PAPER: MINOR- 2.1

CREDIT - 04

Course Description: This course intends to introduce the students to the basic concepts macroeconomics such as: National Income accounting and its components, balance of payments, consumption, savings, investment and money. The course would enable the students to understand the aggregate economy and deal with it.

Course Objectives

By the end of this course, students will be able to:

1. **Understand** the scope, concepts, and key issues studied in macroeconomics, including national income, inflation, and employment.
2. **Explain and apply** the framework of national income accounting and the circular flow of income to measure macroeconomic performance.
3. **Analyse** the behaviour and determinants of consumption and investment functions within the economy.
4. **Interpret and evaluate** the role of money, its demand and supply, and how it influences interest rates and macroeconomic equilibrium.
5. **Use** macroeconomic tools to assess economic indicators and understand business cycles, inflation, and policy impacts.

Learning Outcome

Upon completing the course, students will be able to:

1. Define and explain essential macroeconomic terms and issues such as inflation, GDP, and unemployment. ***(Remember, Understand)***
2. Apply national income accounting techniques to calculate and interpret GDP and related indicators. ***(Apply)***
3. Analyse economic behaviour using consumption and investment functions**.** ***(Analyse)***
4. Evaluate classical and Keynesian views on money and interest and apply them to understand monetary dynamics. ***(Evaluate)***
5. Demonstrate conceptual understanding of the circular flow, income distribution, and the interaction of macroeconomic aggregates. ***(Apply, Analyse)***

Course Outline	**Lectures required**	**Marks**
Unit I: Introduction What is Macroeconomics? Major issues of macroeconomics: employment and unemployment, determination of national income, general price level and inflation, business cycle, stagflation, economic growth, balance of payments and exchange rates	15	20

(concepts only)		
Unit II: National Income Accounting Circular flow of income, Nominal income and real income; Domestic income; National Income and its concepts; Measurement of national income, Actual and Potential GDP .	10	30
Unit III: Consumption and Investment A. Consumption: Consumption function; Meaning; Types, Technical attributes, Factors affecting Consumption. B. Investment: Investment function; Meaning, types, technical attributes of investment and factors affecting investment.	20	30
Unit III: Money in Modern Economy Definition, types, functions, demand for money: Classical theory of money (Fisher and Cambridge), Keynes' liquidity preference theory of interest, supply of money: measures of money supply, money multiplier (concept only).	15	20
TOTAL	60	100

Suggested Readings

1. H. L. Ahuja, *Macroeconomics Theory and Policy*, 22nd Edition, S Chand & Company, 2020
2. R. R. Paul, *Monetary Economics*, Kalyani Publishers, 13th Edition, 2020

SECOND SEMESTER

COURSE: MULTIDISCIPLINARY

ESSENTIALS OF ECONOMICS

PAPER: MD/GE- 2.1

CREDIT – 03

Course Description: The course is structured to provide a brief idea about the essentials of Economics. It has touched upon the following few significant areas - concept of growth and development, HDI, National Income accounting, Business environment in the Indian context, International Economics and the basics of data collection. The course is designed to provide a brief idea about the internal as well as international economics. Introducing data collection in the syllabus would help the students in their future research activities.

Course Objectives

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

1. **Understand** fundamental concepts of economic development, growth, national income accounting, and the international economy.
2. **Describe and analyse** the key demographic, social, and economic characteristics of developing economies, particularly India.
3. **Apply** appropriate methods for measuring national income, economic development, and sampling techniques in data analysis.
4. **Evaluate** the business environment in India using economic indicators and contextual variables.
5. **Explain and compare** classical and modern theories of international trade and analyse the role of international institutions.
6. **Use and interpret** economic data through statistical methods such as sampling and tabulation to support economic reasoning.

Learning Outcome

Upon successful completion of the course, students will be able to:

1. Define and explain key concepts in economic growth, development, and national income. ***(Remember, Understand)***
2. Apply national income accounting methods and demographic indicators to assess development. ***(Apply)***
3. Analyse and evaluate macroeconomic issues such as population growth, business environment, and international trade theories. ***(Analyse, Evaluate)***
4. Use economic data and sampling methods to support and communicate economic analysis. ***(Apply, Evaluate, Create)***

Course Outline	Lectures required	Marks
Unit I**:** (A) **Economic Growth and Development** Concept; Measurement of Economic Development; Nature and Characteristics of developing nations; Core values of development; Millennium Development Goals; Difficulties in measuring economic development. **(B) Human Resource Development** Demographic features: birth and death rate, infant mortality rate, age and sex composition; urbanization, occupational structure and density of population. Population explosion causes and consequences, Physical Quality of Life Index (PQLI), Human Development Index (HDI) (concepts only).	08	10
Unit II: National Income Accounting National Income: Features, components, methods of measuring national income. Real vs nominal GDP, difficulties in estimating National Income in India.	07	10
Unit III: Business Environment and Indian Economy Business Environment: Meaning, Components, features of Indian business environment, economic and non-economic factors determining business environment in a country like India,	10	15
Unit IV: International Economics Difference between internal and international trade, Ricardian theory of international trade, Heckscher- Ohlin model of international trade, Terms of trade and gains from trade, Balance of payments and Balance of Trade (Concepts only); IMF, IBRD and UNCTAD (Objectives only)	10	20

Unit V: Data Collection Sources of data, types of data, distinction between population parameter and sample statistics, distinction between complete enumeration and sample survey, Tabulation of data, Methods of Sampling – random, stratified, multistage and systematic random sampling (concepts only).	10	20
TOTAL	45	75

Suggested Readings

1. S. P. Gupta, *Statistical Methods*, Sultan Chand & Sons, Forty Seventh Revised Edition, 2021
2. H. L. Ahuja, *Macroeconomics Theory and Policy*, 22nd Edition, S Chand & Company, 2020
3. Michael P. Todaro, Stephen C. Smith, *Economic Development*, Pearson India Education Service Pvt. Ltd. Fourth Impression, 2019
4. Paul Krugman, Maurice Obstfeld, Marc Melitz, *International Economics Theory and Policy*, Pearson India Education Service Pvt. Ltd. Third Impression, 2019.

THIRD SEMESTER

COURSE-MAJOR

INTERMEDIATE MICROECONOMICS
PAPER: MAJOR- 3.1
CREDIT: 04

Course Description: The course is structured to provide conceptual knowledge about microeconomic principles. It has focused on the following few significant areas - consumer behaviour, producer behaviour, market, general equilibrium, monopoly and oligopoly market structure and producer's decision under different situations. Studying microeconomics enables learners to understand how supply, demand, and market forces determine prices and resource allocation. It develops the ability to analyse consumer choices, business decisions, and different market structures. Additionally, it equips individuals with practical tools to address real-world issues like resource optimization, market failures, and economic policy design.

Course Objectives

By the end of this course, students will be able to:

1. **Understand** foundational theories of consumer behaviour, production, and market structures.
2. **Apply** microeconomic principles to analyse demand, cost, and firm behaviour under various market structures.
3. **Evaluate** how input markets determine wages, rent, interest, and profits under competitive and non-competitive conditions.
4. **Analyse** and assess the conditions for general equilibrium and optimal welfare allocations.
5. **Develop** the ability to reason logically about economic decisions and market interactions using formal models and graphical tools

Learning Outcome

By the end of this course, students will be able to:

1. Define and explain the core concepts in consumer choice, production, and welfare economics. ***(Remember, Understand)***
2. Apply analytical tools such as indifference curves, isoquants, and market models to solve microeconomic problems**.** ***(Apply)***
3. Analyse firm and consumer behaviour under different market conditions and input pricing scenarios. ***(Analyse)***
4. Evaluate the implications of market failures, welfare trade-offs, and equilibrium outcomes in real economies. ***(Evaluate)***

Course Outline	Lectures required	Marks
UNIT 1 CONSUMER BEHAVIOUR AND DEMAND: Indifference curve analysis: assumptions and properties, Budget line and shift in budget line, consumers equilibrium and Corner Solution, derivation of demand curve from indifference curves, Limitations of indifference curve analysis, Income effect, Income Consumption curve and Engel curve, price effect and breaking up price effect into income and substitution effects, Giffen Paradox, Hicks and Slutsky's substitution effect and equation, Revealed Preference theory.	**15**	**20**
Unit 2 TREORY OF PRODUCTION : Isoquants: properties and marginal rate of technical substitution, Isoquants of perfect substitutes and complements, factor price line, returns to scale: – choice of technology: least cost combination of factor inputs, economic region of production and Ridge lines, Iso-cost lines, Economies and Diseconomies of scale.	**10**	**20**
Unit 3 IMPERFECT MARKET STRUCTURE: Monopoly: features, price and output determination, measurement of monopoly power, price discrimination, dumping, multi-plant monopoly and anti-trust policy. Monopolistic competition: Product differentiation and demand curve, perceived and proportional demand curve, Price output determination in monopolistic competition, Oligopoly: characteristics of oligopoly, price leadership model, the kinked demand curve and classical models. (Cournot and Bertrand model)	**15**	**25**
Unit 4 THEORY OF DISTRIBUTION: Personal vs. functional distribution, derived demand, Productivity of factor inputs, Marginal Productivity theory of distribution, Inputs demand curve and shift in input demand curve, competitive labour market and price policy: Wage determination under perfect and imperfect competition, monopoly, monopsony and bilateral monopoly. Interest: Loanable fund theory of interest. Rent: Scarcity rent and differential rent, modern theory of rent. Profits: Knight's theory of profits, Innovation theory of profits.	**10**	**20**
Unit 5 GENERAL EQUILIBRIUM AND WELFARE: Partial vs. general equilibrium approach, Pareto optimality, Edge Worth Box and contract curve, Pareto efficiency with production, social indifference Curves and Resource Allocation, Kaldor-Hicks compensation criteria, social welfare function.	**10**	**15**
Total	**60**	**100**

Suggested Readings:

1) *Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8 thEdition,2007.*
2) *N. Gregory Mankiw, Economics: Principles and Applications, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007*

3) Joseph E. Stiglitz and Carl E. Walsh, Economics, W.W. Norton & Company, Inc., New York,International Student Edition, 4th Edition, 2007

4) G.S. Maddala and Ellen Miller, Microeconomics: Theory and Applications, McGraw Hill Education, Tenth Reprint, 2013, New Delhi Edition.

5) Mc Connell, Brue and Flynn, Microeconomics: Principles, Problems, and Policies, McGrawHill Education (India) Private Limited, 2017

THIRD SEMESTER

COURSE: MAJOR
MATHEMATICAL METHODS IN ECONOMICS
PAPER: MAJOR-3.2
CREDIT: 04

Course Description: The course aims to equip students with mathematical tools and techniques, such as calculus, linear algebra, and optimization, to analyse and solve economic problems effectively. The learning outcome of the course is to enable students to apply mathematical techniques like calculus, linear algebra, and optimization to formulate and analyse economic models, interpret quantitative results, and solve complex economic problems.

Course Objectives

By the end of this course, students will be able to:

1. **Understand** and use fundamental mathematical tools relevant to economic modelling and analysis.
2. **Apply** concepts of calculus, algebra, and matrix operations in solving economic problems.
3. **Analyse** and interpret economic functions and their properties using graphical and algebraic methods.
4. **Solve** optimization problems involving cost, revenue, and profit using calculus.
5. **Evaluate** the utility of mathematical methods in deriving and interpreting economic relationships.

Learning Outcome

After completing this course, students will be able to:

1. Define and understand mathematical foundations including sets, functions, and limits relevant to economic analysis. ***(Remember, Understand)***
2. Apply differential and integral calculus to problems in optimization, cost, and welfare economics. ***(Apply)***
3. Solve and analyse economic problems using matrix algebra and systems of linear equations. ***(Analyse)***
4. Evaluate mathematical methods in economic reasoning and policymaking. ***(Evaluate)***

Course Outline	Lectures required	Marks
Unit 1 BASIC CONCEPTS: Set theory: Types; set operations; use of Venn Diagram. Function: Concept; Types of Function and graphical presentation (linear, quadratic, polynomial, exponential, logarithmic, convex and concave); Homogeneous and Homothetic functions. Equations and Identities; System of equations Limit and Continuity of functions.	**15**	**20**
Unit 2 DIFFERENTIAL CALCULAS: Differentiation of a function; Basic rules of differentiation; Partial and total differentiation; Second order derivatives for single and multiple variables; economic applications of differentiation.	**15**	**20**
Unit 3 SINGLE VARIABLE OPTIMIZATION: Unconstrained Maxima and Minima with single explanatory variable – Application to cost minimization, profit maximization, revenue maximization and tax revenue maximization.	**10**	**15**
Unit 4 INTEGRAL CALCULAS: Meaning and significance of integration; Basic rules of integration; Definite Integrals and Indefinite integrals; Economic applications obtaining total functions (total cost, total revenue, consumption and savings) from marginal functions; Consumer's Surplus and Producer's surplus	**20**	**20**
Unit 5 MATRIX AND DETERMINANTS: Meaning; Types of matrices; Matrix operations – addition, subtraction and multiplication; Rank of a matrix; Inverse of a matrix; Determinants: properties and Evaluation, solution of simultaneous equations, Crammer's Rule.	**15**	**25**
Total	**75**	**100**

Suggested Readings:

1) *Baruah, S.N, Basic Mathematics and its Economic Applications, MacMillan*
2) *Mehta & Madnani, G M, Mathematics for Economists, Sultan Chand and Sons*
3) *Chiang A. C, Fundamental Methods of Mathematical Economics, McGrow Hill*
4) *Allen R. G. D, Mathematical Economic, St Martin's Press 1959*

THIRD SEMESTER

COURSE: SEC
SKILL ENHANCEMENT COURSE (SEC)
PAPER: DATA ANALYSIS-III
CREDIT: 03

Course Description: **"**A project is a whole-hearted purposeful activity proceeding in a social environment," by W.H Kilpatric. Keeping in view, the present-day scenario of the modern education system at par with the New Education Policy 2020, the know-how of project preparation provides a purposeful platform to sustain in the competitive world. The purpose of the paper is to make the students learn to develop an understanding of preparing a project using statistical tools for analysis.

Course Objectives

By the end of this course, students will be able to:

1. **Understand** the key concepts and objectives of research and project work.
2. **Apply** data collection and presentation techniques using appropriate formats and visualizations.
3. **Analyze** and interpret organized data to derive meaningful insights.
4. **Evaluate** the significance of proper citation, referencing, and structured data presentation.
5. **Create and present** a coherent research project using digital tools.

Learning Outcome

Upon successful completion of the course, students will be able to:

1. Define and explain the process of developing a research project. ***(Remember, Understand)***
2. Apply appropriate data visualization and tabulation techniques. ***(Apply)***
3. Analyse structured data for interpretation and decision-making***. (Analyse)***
4. Evaluate the quality of referencing, citation, and data interpretation in research. ***(Evaluate)***
5. Create and present a structured and meaningful research project. ***(Create)***

Course Outline	**Lectures required**	**Marks**
Unit 1: Project-Work: Project report (meaning, objectives and significance), Steps towards developing a project	10	20
Unit 2: Collection, organization and presentation of data: **A. Graphs:** Bar Chart (Bar Graph), Stacked Bar/Column Chart, Pie	20	20

Chart, Line Graph, Histogram, Scatter Plot, Ogives and Logarithmic graphs. **B. <u>Tables</u>:** **i. Parts of a Table:** Title, Table Number, Headings (Column and Row Headers), Body (Data Cells), Stub, Footnotes, Source, Unit of Measurement and Gridlines **ii. Types of tables:** Frequency Distribution Table, Two-Way (Contingency) Table, Simple Table, Complex Table, Pivot Table, Statistical Table, Percentage Table, Time Series Table, Crosstab (Cross Tabulation) Table, Comparison Table, Hierarchical Table, Correlation Table. **iii. Referencing and Citation:** Definition, purpose and significance		
Unit 3: **Preparation and data analysis:** Meaning, steps in data analysis, significance of data analysis.	10	15
Unit 4: **Presentation** of the project. (Power point)	05	20
Total	45	75

Suggested Readings:

1) *C., Arunabha, and S. Choudhury. Consumer Behaviour: A Strategic Approach. Tata McGraw - Hill Education, 2014.*

2) *Gupta, R. K., & Sharma, S. (2020). Project Management in the Indian Context: Strategies and Practices. Mumbai: Tata McGraw-Hill Education.*

3) *K. Nagarajan, Project Management: The Indian Context.*

4) *Kumar, A. (2017). Principles of Project Management: An Indian Approach. Chennai: Pearson Education India.*

5) *M. Aditya and Rajat Gera, Project Management in India edited*

6) *Ramaswamy, V. S., and S. Namakumari. Marketing Management: Global Perspective Indian Context. Macmillan India, 2013.*

7) *Reddy, S., & Patel, A. (2019). Contemporary Issues in Project Management: Case Studies from Indian Economic Perspective. Hyderabad: Himalaya Publishing House.*

8) *Robert K. Wysocki, Effective Project Management: Traditional, Agile, Extreme*

9) *Singh, P. (2018). Project Management Techniques: A Comprehensive Guide for Indian Economists. New Delhi: Oxford University Press.*

10) *V. Kumar, A. Kumar, and G. Vajpai, Project Management for Development Professionals: A Handbook for Field Practitioners*

THIRD SEMESTER
COURSE: MINOR
MICROECONOMICS -II
PAPER: MINOR- 3.1
CREDIT: 4

Course Description: The course is structured to provide conceptual knowledge about microeconomic principles. It has focused on the following few significant areas – market structure, consumer's equilibrium, factor price determination under different market structure, monopoly and oligopoly market structure and producer's decision under different situation. The course would enable students to understand how different market forms operate, analyse the implications of imperfect competition on pricing and output, evaluate the determination of factor prices, and identify the causes and consequences of market failures to propose appropriate corrective measures.

Course Objectives

By the end of this course, students will be able to:

1. **Understand** different forms of market structures and their pricing/output decisions.
2. **Analyse** firm behaviour under monopoly, monopolistic competition, and oligopoly.
3. **Evaluate** the functioning of factor markets under perfect and imperfect competition.
4. **Identify** causes and consequences of market failure and the role of government intervention.
5. **Apply** theoretical models to explain real-world phenomena like price discrimination and asymmetric information.

Learning Outcome

Upon successful completion of the course, students will be able to:

1. Describe and compare various market structures and firm behaviour. ***(Remember, Understand)***
2. Apply theoretical tools to determine equilibrium conditions under monopoly, monopolistic competition, and oligopoly. ***(Apply)***
3. Analyse factor pricing in both competitive and monopsonistic markets. ***(Analyse)***
4. Evaluate the reasons and consequences of market failure including externalities and public goods. ***(Evaluate)***
5. Recommend economic solutions to address inefficiencies in real-world markets. ***(Create)***

Course Outline	Lectures required	Marks
Unit 1 Market Structure : Theory of Monopoly Firm Concept of imperfect competition: short and long run price and output decision of a monopoly firm; concept of a supply curve under monopoly; comparison of perfect competition and monopoly, social cost of monopoly, price discrimination in monopoly	20	30
Unit 2 Imperfect competition; Monopolistic competition; assumptions, short and long run price and output determination under monopolistic competition, Oligopoly; assumptions, Classical oligopoly models,	20	30
Unit 3 Factor pricing: Demand for a factor input in a competitive factor market, supply of inputs to a firm, market supply of inputs, equilibrium in a competitive factor market. Factor markets in monopsony power.	10	25
Unit 4 Market failure: Efficiency of perfect competition, sources of market failure. Externalities and market failure, public goods and market failure, Markets with asymmetric information (Ideas only)	10	15
Total	60	100

Suggested Reading:

1) *Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8thEdition,2007.*
2) *N. Gregory Mankiw, Economics: Principles and Applications, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition,2007*
3) *Joseph E. Stiglitz and Carl E. Walsh, Economics, W.W. Norton & Company, Inc., New York,International Student Edition, 4th Edition, 2007*
4) *G.S. Maddala and Ellen Miller, Microeconomics: Theory and Applications, McGraw HillEducation, Tenth Reprint, 2013, New Delhi Edition.*
5) *Mc Connell, Brue and Flynn, Microeconomics: Principles, Problems, and Policies,McGraw Hill Education (India) Private Limited, 2017*

THIRD SEMESTER
COURSE: MD/GE
INDIAN ECONOMY
PAPER: MD/GE- 3.1
CREDIT:3

Course Description: The course is a sequel to the various concepts on Indian economy. The courseis designed in such a way that it would help the students to gain conceptual clarity about various issues, problems, features and policies etc. of economic growth and development of Indian economy. The learning outcome of this course is to equip students with a comprehensive understanding of the key issues, challenges, features, and policies related to the economic growth and development of the Indian economy, enabling them to critically analyse its progress and propose informed solutions to contemporary economic problems.

Course Objectives

By the end of this course, students will be able to:

1. **Understand** the structure and state of the Indian economy at the time of independence.
2. **Analyse** the evolution, goals, and outcomes of India's planning system.
3. **Identify and examine** key developmental challenges facing India.
4. **Interpret** economic indicators used to assess a nation's development.
5. **Evaluate** policy responses to major economic issues such as poverty, unemployment, and inflation.

Learning Outcome

Upon completion of the course, students will be able to:

1. Describe the structural characteristics of the Indian economy at independence. ***(Remember, Understand)***
2. Analyse the evolution and impact of India's planned development framework. ***(Analyse)***
3. Explain and evaluate major socio-economic challenges using empirical data. ***(Understand, Evaluate)***
4. Interpret and use development indicators to assess economic progress. ***(Apply, Analyse)***

Course Outline	Lectures required	Marks
Unit 1 Indian economy on the Eve of Independence: Features of Indian Economy; State of major economic sectors; agriculture, industrial sector, foreign trade, Infrastructure, demographic structure, occupational structure.	**10**	**20**
Unit 2 Common Goals of five-year plans: Origin and development of plans in India, features, common goals, achievements, and failures of Indian plans, Niti ayog.	**10**	**20**
Unit 3 Current challenges facing Indian economy: Poverty, inflation, unemployment, income inequality, regional imbalance (meaning, types, features, measurement, causes, remedial measures)	**15**	**20**
Unit 4 Indicators of development: GDP, Per capita income, Human development Index; birth rate, death rate, infant mortality rate, dependency ratio, density of population, sex ratio, literacy rate **(concepts only)**	**10**	**15**
Total	**45**	**75**

Suggested Readings:

1) *Abhijit V. Banerjee and Esther Duflo "Poor Economics: A Radical Rethinking of the Wayto Fight Global Poverty"*
2) *Amartya Sen, "The Argumentative Indian: Writings on Indian History, Culture andIdentity"*
3) *Amartya Sen, Poverty and Famines: "An Essay on Entitlement and Deprivation"*
4) *Chandra Shekhar Kumar, "Indian Economy Since Independence: Persisting ColonialDisruption"*
5) *Datta and Sundaram, "Indian Economy"*
6) *Gerry Rodgers and Janine Rodgers, "Employment, Poverty, and Development. Edited*
7) *G. S. Bhalla, "Unemployment in India: Nature, Measurement and Strategy for EmploymentPlanning"*
8) *Gurcharan Das, "India Unbound: From Independence to the Global Information Age"*
9) *Jagdish Bhagwati and Arvind Panagariya, "India's Tryst with Destiny: Debunking Mythsthat Undermine" Progress and Addressing New Challenges*
10) *Jaya Prakash Pradhan, Unemployment, Poverty and Inequality in Urban India*
11) *Jean Drèze and Amartya Sen, "An Uncertain Glory: India and its Contradictions"*
12) *M. Govinda Rao and Nirvikar Singh, Economic Reforms and Regional Inequality in India,edited*

13) *M. A. Oommen, "Regional Development and Planning in India"*
14) *P.K Dhar, "Indian Economy Its Growing Dimensions"*
15) *Ramachandra Guha, "India After Gandhi: The History of the World's Largest Democracy"*
16) *Shrawan Kumar Singh, "Regional Disparities in India: A Comprehensive Overview" edited*

FOURTH SEMESTER

COURSE: MAJOR

INTERMEDIATE MACROECONOMICS

PAPER: MAJOR 4.1

CREDIT: 04

Course Description: The course builds upon the foundational macroeconomic concepts introduced in previous semesters, offering a more integrated and advanced exploration of key macroeconomic theories and models. The primary objective is to enhance students' understanding of critical issues such as economic growth, business cycles, inflation, unemployment, banking, and financial systems. Through the application of analytical tools, students will learn to evaluate real-world economic policies and interpret macroeconomic trends.

Macroeconomics plays a crucial role in comprehending the broader functioning of an economy, shaping policy decisions that influence fiscal and monetary stability. It provides essential insights for policymakers aiming to achieve sustainable growth and stability, while also equipping businesses and investors with the knowledge to anticipate economic shifts and make informed strategic decisions in an ever-changing economic environment.

Course Objectives

By the end of this course, students will be able to:

1. **Understand** the functioning and interdependence of aggregate demand and aggregate supply in macroeconomic equilibrium.
2. **Analyse** the IS-LM model to explore the interaction between the goods and money markets.
3. **Evaluate** macroeconomic challenges such as inflation and unemployment, along with relevant theoretical frameworks (e.g., the Phillips Curve).
4. **Apply** fiscal and monetary policies within the AD-AS and IS-LM frameworks to assess their implications for economic stabilization and growth.
5. **Explain** the structure and role of financial systems in supporting economic development.

Learning Outcome

1. Explain core macroeconomic concepts such as aggregate demand and supply, inflation, unemployment, and the role of financial institutions and markets. ***(Explain)***

2. Apply theoretical models including the AD-AS and IS-LM frameworks to analyse economic fluctuations and policy impacts on growth, stability, and employment. ***(Apply &analyse)***

3. Analyse the interaction between fiscal and monetary policies and assess their effectiveness in addressing macroeconomic challenges using real-world scenarios. ***(Analyse).***

4. Evaluate the implications of inflation, unemployment, and market expectations (adaptive and rational) within the framework of economic stabilization and development. ***(Evaluate.)***

5. Interpret and assess the structure and functions of financial systems and their role in facilitating economic activity and policy transmission. ***(interpret& assess)***

6. Develop critical thinking to examine policy trade-offs and formulate informed views on macroeconomic and financial developments.

Course Description	Lectures required	Marks
UNIT:1 Aggregate Demand and Aggregate Supply (AD&AS) Definition, significance, components and derivation of AD&AS, AD-AS model, macroeconomic policies and the AD-AS model: Role of fiscal policy (government spending and taxation) in influencing AD and AS, role of monetary policy (money supply and interest rates) in the AD-AS framework and Policy implications for economic stabilization and growth.	**20**	**25**
Unit 2: IS-LM Framework Introduction to IS-LM Model: Assumptions and key features, Relationship between goods market and money market equilibrium, Derivation of IS Curve, Derivation of LM Curve, General Equilibrium in IS-LM Framework, Policy Analysis in IS-LM Model: fiscal policy, monetary policy and policy mix.	**15**	**25**
Unit 3 Inflation, unemployment Inflation: Meaning, causes, types: demand pull and cost push inflation, effects of inflation, social cost of inflation Unemployment -natural rate of unemployment, frictional and wait unemployment. Phillips curve, Phillips curve in short run and long run. Sacrifice ratio, role of expectations adaptive and rational.	**10**	**25**
Unit 4: Financial Systems Definition and components of the financial system, role and importance of financial systems in the economy, Structure of financial systems: Institutions, markets, instruments, and services.	**25**	**25**
Total	**75**	**100**

Suggested Readings:

Dronbusch ,Fisher and Startz : Macroeconomics theory , Tata McGraw Hill

1) *Rana &Verma : Macroeconomics theory ; Vishal publishing*
2) *Pual R.R : Monetary economics , Kalyani publisher*
3) *N Gregory Mankiw, Macroeconomics , worth publishers ,7th edition 2010*
4) *Olivier Blanchard , Macroeconomics , Pearson education ,Inc, 5th edition 2009*
5) *M.L Jhingan , Macroeconomics Theory 12th edition 2005*

6) *H . L. AHUJA, Macroeconomics theory and policy S Chand and company limitedublisher 20th edition 2010*
7) *Andrew B. Aabel and Ben S. Bernanke , macroeconomics , Pearson education Inc , 5thedition ,2009*
8) *Suraj B, Gupta : Monetary Economics , S Chand and Co-Ltd.*
9) *K.K. Kurihara ,monetary theory and public policy , Kalyani publication*
10) *P.N . Chopra Macro Economics , Kalyani publication , Ludhiana -New Delhi Noida(U.P)*

FOURTH SEMESTER

COURSE: MAJOR

STATISTICAL METHODS FOR ECONOMICS

PAPER: MAJOR: 4.2

CREDIT: 04

Course Description: The syllabus incorporates the basic terminology and concepts of statistics vital to statistical analysis and inference like the measures of location, measures of variation, Correlation, Index numbers, Time series, the probability distribution of both discrete and continuous random variables, sample survey and types of sampling techniques. The idea behind preparing such a course is to help students learn and develop an interest in statistical tools for research analysis. The course would enable students to apply statistical tools and techniques for data analysis, interpret economic relationships using descriptive and inferential statistics, and make informed decisions based on empirical evidence.

Course Objectives

To introduce students to fundamental concepts in statistics and probability, including population, sample, parameters, and statistics, enabling them to understand the basics of data analysis.

1. **To equip** students with the skills to compute and interpret measures of central tendency and variation, both absolute and relative, and apply these to real-world datasets.
2. **To develop** students' ability to construct and analyse index numbers, including Consumer Price Index (CPI), Wholesale Price Index (WPI), and Producer Price Index (PPI), using various methods (Laspeyres, Paasche, Fisher, and unweighted indices).
3. **To build** conceptual and computational understanding of correlation and regression analysis, including both graphical and formula-based techniques for exploring relationships between variables.
4. **To introduce** the foundational concepts and rules of probability, including classical, frequentist, and subjective interpretations, conditional probability, and Bayes' Theorem, as well as commonly used probability models (Binomial, Poisson, Normal).
5. **To familiarize** students with various sampling techniques, both probability-based (e.g., simple random, stratified, cluster) and non-probability-based (e.g., convenience, quota, snowball), along with considerations for sample size and their implications for data collection.
6. **To prepare students** to analyse and interpret real-world data using statistical and probabilistic methods, and apply these tools in the context of economics, business, and social science.

Learning Outcome

1: Understand and Differentiate Core Concepts: Describe and differentiate between populations and samples, parameters and statistics, and various measures of central tendency and dispersion.
(*Remembering, Understanding*)

2: Construct and Analyse Index Numbers: Compute and interpret various index numbers including Consumer Price Index (CPI), Wholesale Price Index (WPI), and Producer Price Index (PPI) using both weighted and unweighted methods.
(*Applying, Analysing*)

3: Explore Relationships Using Correlation and Regression: Measure correlation using Pearson's, Spearman's, and graphical methods; construct and interpret regression equations to examine linear relationships between variables.
(*Applying, Analysing, Evaluating*)

4: Apply Probability Theories in Real-World Contexts: Understand and apply the classical, frequentist, and subjective interpretations of probability; solve problems using laws of probability, conditional probability, and Bayes' Theorem.
(*Understanding, Applying*)

5: Model and Analyse Using Probability Distributions: Recognize and apply discrete and continuous probability distributions (Binomial, Poisson, and Normal) for statistical modelling and decision-making.
(*Applying, Analysing*)

6: Design and Evaluate Sampling Strategies: Distinguish between probability and non-probability sampling methods; design and justify appropriate sampling strategies for various research problems.
(*Understanding, Evaluating, Creating*)

Course Description	**Lectures required**	**Marks**
Unit 1 Introduction and Overview: Population, sample, population parameter, sample statistic (concepts only), kinds of statistical averages and Measures of variation (absolute and relative)	**15**	**20**
Unit 2 Index numbers: Introduction to Index Numbers**:** Definition, importance, types (Consumer Price Index,Wholoesale Price Index, Producers Price Index) Methods of construction: (A) Weighted index numbers: Laspeyres' Price Index, Paasche's Price Index and Fisher's Ideal Index. (B) Unweighted index numbers: Simple aggregative method and simple average of relatives' method.	**15**	**20**

Limitations of index numbers,		
Unit 3 Correlation and Regression: (A) Correlation: meaning, types, degrees of correlation, methods of measuring correlation (scatter diagram method, Karl Pearson's coefficient of correlation and Rank correlation) (B) Regression: meaning, uses, properties of regression coefficient and estimation of Regression lines.	**20**	**25**
Unit 4 Theory of Distribution: Definition (Classical, frequentist, and subjective interpretations of probability), Importance, **Basic Terminology** (Experiment, outcome, sample space, event), Axioms of probability (Kolmogrov's), Theorems (addition and multiplication) conditional probability and Bayes' rule. Probability Model: (Binomial, Poisson and Normal),	**20**	**25**
Unit 5 Sampling Probability sampling (Random Sampling): Simple random sampling, systematic sampling, stratified sampling, cluster sampling, multi-stage random sampling. Non-Probability Sampling:Convenience Sampling, j**udgmental or Purposive Sampling,** Quota Sampling, Snowball Sampling Understanding sampling and its role in research, sample size determination	**05**	**10**
Total	**75**	**100**

Suggested Readings:

1) *Jay L. Devore, Probability and Statistics for Engineers, Cengage Learning, 2010.*
2) *Jeff Ralf, Rob O' Neil and Joe Winton, A Practical Introduction to Index numbers, Wileypublictions*
3) *John E. Freund, Mathematical Statistics, Prentice Hall, 1992.*
4) *Peter J Brockwell and Richard A. Davis, Introduction to Time Series and Forecasting,Springer*
5) *Richard I Levin and David S. Rubin, Statistics for Management, Prentice Hall, 1998.*
6) *S.P Gupta, StatisticalMethods, Sultan Chand and Sons*
7) *Richard J. Larsen and Morris L. Marx, An Introduction to Mathematical Statistics andits Applications, Prentice Hall, 2011.*
8) *William G. Cochran, Sampling Techniques, John Wiley, 2007.*

FOURTH SEMESTER

COURSE: MAJOR
INDIAN ECONOMY
PAPER: MAJOR-4.3
CREDIT: 04

Course Description: The course is a sequel to the various concepts on Indian economy. The course designed in a way that would help students gain conceptual clarity about various issues, problems, features, policies etc. of economic growth and development of the Indian economy. The idea of the course is to provide students with an understanding of the structure, trends, and challenges of the Indian economy, analyse its historical and contemporary developments, and evaluate the impact of policies on economic growth, agriculture, industry, economic reforms and HDI.

Course Objectives

This course aims to:

1. **Familiarize** students with the growth and structural patterns of India's national income, including sectoral contributions and national income estimation methods.
2. Provide an in-depth **understanding** of the agricultural and industrial sectors, including their roles, challenges, and policy interventions for development.
3. **Enable** students to critically analyse India's economic reforms, particularly liberalization, privatization, and globalization, in the context of post-1991 economic policy shifts.
4. **Introduce** students to demographic and social indicators used in assessing human development, including components of the Human Development Index (HDI).
5. **Develop** analytical and interpretative skills to assess India's economic performance, sectoral trends, and the impact of reforms on inclusive growth.

Learning Outcome

1. Define key economic concepts such as national income, sectoral contributions, liberalization, and demographic indicators. Recall historical trends of national income growth and development in India. ***(Remember)***

2. Explain the structure and features of the Indian economy on the eve of independence and post-reform period. Describe the role of agriculture and industry in India's development process. Summarize demographic and human development indicators (birth rate, literacy, HDI, etc.). ***(Understand)***.

3. Use statistical indicators to interpret trends in national income and human development. Apply economic concepts to real-world Indian economic scenarios (e.g., policy discussions, sectoral performance). ***(Apply).***

4. Distinguish between the roles of agriculture and industry in different phases of India's development. Examine the impact of LPG (Liberalization, Privatization, Globalization) reforms on different sectors of the economy. Analyse causes of slow sectoral growth and propose logical explanations using economic frameworks. ***(Analyse).***

Course Outline	**Lectures required**	**Marks**
Unit 1: Growth and Pattern of India's National Income: Features of national income, National Income estimates in India, Rate of growth of National income in India, sectoral contribution of national income in India.	**20**	**25**
Unit 2: Sectorial Development **(A) Agriculture:** Agriculture: Its role, causes of backwardness, remedial measures, sources of agricultural credit, agricultural marketing, green revolution, diversification of agriculture in India, meaning and relevance of organic farming in India., land tenure and land reforms system in India (its objectives, achievements, and failures). **(B) Industry:** Industry (post Economic Reforms): Importance and role of industries in economic development; trends of industrial production in India, causes of slow growth of industries in India, cottage, and small-scale industries in India**.**	**25**	**30**
Unit 3 Economic reforms in India Liberalization, globalization, and privatization (its meaning, features, Objectives, arguments in favor of and against the new economic policy).	**20**	**25**
Unit 4: Human development Index Birth rate, death rate, infant mortality rate, dependency ratio, density of population, sex ratio, literacy rate, workforce and occupational structure of population in India.	**10**	**20**
Total	**75**	**100**

Suggested Readings:

1) *Abhijit V. Banerjee and Esther Duflo Poor Economics: A Radical Rethinking of the Wayto Fight Global Poverty*
2) *Sen, The Argumentative Indian: Writings on Indian History, Culture and Identity*
3) *Amartya Sen, Poverty and Famines: An Essay on Entitlement and Deprivation*
4) *C. S. Kumar, Indian Economy Since Independence: Persisting Colonial Disruption*
5) *G. Rodgers and J. Rodgers, "Employment, Poverty, and Development. Edited*
6) *G. S. Bhalla, Unemployment in India: Nature, Measurement and Strategy forEmployment Planning*
7) *Gurcharan Das, India Unbound: From Independence to the Global Information Age*
8) *J. Bhagwati and A. Panagariya, India's Tryst with Destiny: Debunking Myths thatUndermine Progress and Addressing New Challenges*
9) *J. P. Pradhan, Unemployment, Poverty and Inequality in Urban India*
10) *Jean Drèze and Amartya Sen, An Uncertain Glory: India and its Contradictions*
11) *M. Govinda Rao and Nirvikar Singh, Economic Reforms and Regional Inequality inIndia, edited*
12) *M. A. Oommen, Regional Development and Planning in India*
13) *R. Guha, India After Gandhi: The History of the World's Largest Democracy*
14) *S. K. Singh, Regional Disparities in India: A Comprehensive Overview edited*
15) *Tirthankar Roy, The Economic History of India, 1857-1947*

FOURTH SEMESTER
COURSE: MINOR
MACROECONOMICS-II
PAPER: MINOR-4.1
CREDIT: 04

Course Description:

This is a sequel to Fundamentals of Macroeconomics. It analyses General equilibrium with the IS-LM framework. It also introduces students to the concepts of inflation, unemployment, BOP, and a few basic concepts in an open economy. Macroeconomics is vital for understanding the overall functioning of an economy, including growth, inflation, and unemployment, which affect businesses and individuals alike. It guides policymakers in making decisions about fiscal and monetary policies to stabilize economies and promote sustainable growth. Additionally, it helps businesses and investors anticipate economic trends, enabling informed decision-making in a dynamic market environment.

Course Objectives

Upon completion of this course, students will be able to:

1. **Understand** the fundamental concepts, models, and analytical tools used in the field.
2. **Apply** economic theories and principles to contemporary issues and policy debates.
3. **Analyse** sectoral and macroeconomic data to interpret trends and interrelationships among variables.
4. **Evaluate** policy measures and institutional frameworks with respect to their objectives and outcomes.
5. **Develop** independent arguments and critique diverse perspectives on economic and developmental issues.
6. **Create** structured reports, policy notes, or presentations integrating theoretical and empirical evidence.

Learning Outcome

1.Recall and define key economic concepts, terminology, and theories (e.g., GDP, inflation, fiscal policy, sectoral development). ***(remember)***
2. Explain the functioning of macroeconomic systems, the role of institutions, and the impact of various policies on economic outcomes. ***(understand)***
3. Use appropriate models and tools to assess economic conditions and interpret national income data, inflation trends, or employment statistics. ***(apply)***
4. Compare and contrast different development strategies and evaluate sectoral performance using quantitative and qualitative indicators. ***(Analyse)***

5. Critically assess the effectiveness of macroeconomic policies and institutional reforms in achieving inclusive and sustainable development. (***Evaluate)***

6. Design a research proposal, policy intervention, or simulation model addressing a current economic issue using appropriate frameworks and evidence. ***(Creating)***

Course Description	**Lectures required**	**Marks**
Unit 1 Definition and measurement of GDP, Real vs. Nominal GDP, Importance of price levels in the economy, Distinction between short-run and long-run perspectives. **Aggregate Demand (AD)**: Definition and components of aggregate demand (C, I, G, NX) **Aggregate Supply (AS)**: Short-run aggregate supply (SRAS): Definition and determinants of SRAS Long-run aggregate supply (LRAS): Definition and determinants of LRAS	**25**	**25**
Unit 2: IS-LM Framework Introduction to the IS-LM Model, The Goods Market and the IS Curve, The Money Market and the LM Curve, General Equilibrium in the IS-LM Framework.	**20**	**30**
Unit 3 Inflation and Unemployment: Concept of inflation, determinants of inflation, relationship between inflation and unemployment (Phillips Curve in short run and long run).	**20**	**25**
Unit 4 Balance of Payments and Exchange Rate: Introduction to Balance of Payments (BOP), definition, structure of BOP (Current account and capital account) Exchange rates: Definition, types: Fixed, floating, and managed exchange rates. (concepts only) Foreign exchange markets: Definition, hedging, speculation, and arbitrage in foreign exchange markets. (concepts only)	**10**	**20**
Total	**75**	**100**

Suggested Readings:

1. *Case, Karl E. & Ray C. Fair, Principles of Economics, Pearson Ed 8th edition, 2007.*
2. *Sikdar, Shoumyen, Principles of Macroeconomics, 2nd Edition, Ox Press.India*
3. *H . L. AHUJA, Macroeconomics theory and policy S Chand and company limited .publisher 20th edition 2010*
4. *Andrew B. Aabel and Ben S. Bernanke , macroeconomics , Pearson education Inc , 5th*

edition ,2009

5. *Suraj B, Gupta : Monetary Economics , S Chand and Co-Ltd.*
6. *K.K. Kurihara ,monetary theory and public policy , Kalyani publication*
7. *P.N . Chopra Macro Economics , Kalyani publication , Ludhiana -New Delhi Noida(U.P)*

FIFTH SEMESTER, ECONOMICS

Monetary Economics

PAPER: 5.1

CREDIT POINT: 04

Marks: 100

Course description: The theory and operation of the monetary and financial sectors of the economy are introduced to the students in this course. In addition to discussing monetary management and tools of monetary control, it emphasizes the organization and function of financial markets and institutions. Reforms to the banking and financial sectors as well as monetary policy are discussed, with reference to India. The course is designed to provide a concrete idea about the important concepts of microeconomics. This would help develop critical thinking and decision making among students.

Course Objectives

1. **Remember & Understand**: To introduce the basic concepts and functions of money and financial institutions. To explain the theories of money supply, including Classical, Keynesian, and Modern approaches.
2. **Apply & Analyse**: To enable students to analyse the structure and functions of financial markets and institutions. To apply theoretical knowledge in examining real-world financial crises and their implications.
3. **Evaluate & Create**: To evaluate the role of central and commercial banks in economic development. To develop an informed understanding of India's monetary policy and financial reforms and propose evidence-based policy recommendations.

Learning Outcome

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

1. Define and explain key concepts related to money, financial institutions, and financial markets. ***(Remember, Understand)***
2. Compare different monetary theories (e.g., Keynesian, Friedman's, Schumpeterian) and their assumptions**.** ***(Analyse)***
3. Identify and describe the structure, instruments, and functioning of money and capital markets. ***(Understand, Apply)***
4. Analyse the causes and consequences of major financial crises like the Global Financial Crisis (2008) and BoP crisis (1991). ***(Analyse)***
5. Interpret the balance sheets and portfolio management techniques of commercial banks. ***(Apply, Analyse)***
6. Assess the effectiveness of monetary policy tools used by the Reserve Bank of India. ***(Evaluate)***
7. Critically evaluate the impact of financial sector reforms (e.g., SEBI, NSE, BSE reforms) on the Indian economy. ***(Evaluate)***

8. Propose policy solutions or improvements to monetary management in India based on current economic indicators. ***(Create)***

Course Description	**Lectures required**	**Marks**
Unit 1: MONEY Money: concept, measurement. Theories of money supply determination: Modern monetary theory (Milton Friedman), Keynesian, & credit theory (Schumpeterian),	**15**	**25**
Unit 2. FINANCIAL INSTITUTION & MARKET Financial Institutions: Meaning, types, nature & role Financial Markets (Money and capital market): Meaning, objectives, structure, instruments and functions. Financial Crises: Banking crisis (Global Financial Crisis 2008), Currency crisis (Asian Financial crisis-1997), Balance of Payments (BoP) crisis-1991, NBFC liquidity crisis-2018	**20**	**30**
Unit 4. BANKING SYSTEM Commercial and central: Functions, credit creation, balance sheet & portfolio management of commercial banks, qualitative and quantitative instruments of central bank. Indian financial system reforms: capital market reforms (SEBI, NSE, BSE) & money market reforms.	**20**	**25**
Unit V: MONETARY POLICY Objectives of monetary policy, current monetary policy & monetary management in India.	**10**	**20**
Total	**75**	**100**

Suggested 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.

Bhole , L, Mahukud J (2017) , financial institution and markets , 6th ed , tata Mc Graw -hill

Khan m (2015) Indian financial system , 9th ed , tata Mc Graw -Hill

Mishkin , F Eakins , s (2017) financial markets and institution , 8th ed , Pearson

Various latest issues of RBI bulletins , annual reports , reports on currency and finance , reports of the working group IMF staff papers

Fabozzi , F Modigliani , F. Jones , Ferri , M (2010) . Foundation of financial markets and institution 4th ed . Pearson education

FIFTH SEMESTER, ECONOMICS

Mathematical Methods in Economics-II

PAPER: 5.2

CREDIT POINT: 04

Marks: 100

Course Description: This is the second part of a compulsory two course sequence. The objective of this sequence is to enable the students to understand economics with the help of mathematics. The study of mathematical economics equips the students to develop various models which are used by the policy makers to make qualifiable predictions about future economic activities.

Course Objectives

1. **Understand**: To familiarize students with the concepts of difference and differential equations and their economic applications. To build a conceptual understanding of optimization problems with and without constraints in economic contexts.
2. **Apply**: To enable students to apply mathematical tools such as linear programming, game theory, and input-output analysis to solve real-world economic problems.
3. **Analyse**: To develop analytical skills for solving economic models using multivariable calculus, optimization techniques, and strategic interactions in game theory.
4. **Evaluate & Create**: To foster the ability to critically assess different mathematical approaches and construct economic models using quantitative tools.

Learning Outcome

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

1. Define and explain the concepts of difference and differential equations and their relevance to economic modelling. ***(Remember, Understand)***
2. Solve first-order difference and differential equations and apply them to models like the cobweb model. ***(Apply)***
3. Apply unconstrained and constrained optimization techniques to solve economic problems related to monopoly pricing, cost minimization, and resource allocation. ***(Apply)***
4. Use the method of Lagrange multipliers and interpret its economic significance in consumer and producer equilibrium problems. ***(Apply, Analyse)***
5. Formulate and solve linear programming problems using graphical and simplex methods; differentiate between primal and dual forms. ***(Apply, Analyse)***
6. Evaluate properties of production functions such as Cobb-Douglas and CES using partial and total derivatives, Euler's theorem, and assess their economic implications. ***(Evaluate)***
7. Demonstrate understanding of strategic decision-making using game theory, including Nash equilibrium and Prisoner's Dilemma. ***(Understand, Apply)***
8. Analyse input-output models to assess inter-sectoral relationships and solve open static input-output models. ***(Analyse, Apply)***

9. Critically assess the applicability and limitations of mathematical tools in solving complex economic problems. ***(Evaluate)***
10. Construct basic economic models using quantitative methods such as optimization, game theory, and input-output analysis. ***(Create)***

-	**Lectures required**	**Marks**
Unit I: DIFFERENCE AND DIFFERENTIAL EQUATIONS: (a) Difference Equations: Meaning, solution of first order difference equation, lob-web market model (b) Differential equations: Meaning, solution of linear first order differential equation with constant term economic applications.	**15**	**20**
Unit II: Multi-Variable Optimization (a) Unconstrained optimization: unconstrained maxima an minima with more than one explanatory variable, applications: discriminating monopoly, multiproduct and multi-plant firms, equilibrium of firms with advertisement cost and subsidy. (b) Constrained optimization with equality constraints: Optimization using the method of lag-range multiplier, applications: consumer's equilibrium, producer's equilibrium (c) Constrained optimization with equality constraints: Linear programming: assumptions, formulation of a linear programming problem and solutions using graphical methods, simplex method, duality in LP, difference between primal and dual	**20**	**25**

Unit III: Applications of partial and total derivatives in Economics: Homogenous production function, Euler's theorem, Cobb-douglas production function and its properties, CES production function and its properties	**15**	**15**
Unit IV: Introduction to Game theory: Two-person zero sum game, pure strategies with saddle point, solution of games without saddle points, mixed strategies, basic ideas and examples of non-zero-sum games, Nash equilibrium, prisoner's dilemma	**15**	**25**
Unit V: Input output Analysis: Meaning, assumptions, technology matrix, solution of open static input output model	**10**	**15**
Total	**75**	**100**

Suggested Readings:

- *Chiang. A C Fundamental Methods of Mathematical Economics, MC Graw Hill, 2025*
- *Allen RGD Mathematical Economics, St. marlin's Press 1959*
- *K Sydsaeter and P Hammond - Mathematics for Economic Analysis, Pearson Educational Asia, Delhi 2002*
- *Barnal Srinath: Basic Mathematics and its Application in Economics, MacMillan India Limited 2000*
- *Mehta B C and Madnani G M, Mathematics for Economists Sultan Chand and Sons ND, 2000*

FIFTH SEMESTER, ECONOMICS

Development Economics-I

PAPER: 5.3

CREDIT POINT: 04

Marks: 100

Course Description: The course covers different perspectives and concepts of development and explains its inequality & measurement. Further, it discusses the classical and modern growth models and their practical implications in the current context. Further, the course explains the connectedness of political institutions to inequality & growth. The course would familiarize students with different growth strategies, implications of poverty and inequality and knowledge of various institutional structures under which development policies operate.

Course Objectives

1. **Understand** the foundational concepts and distinctions between economic growth and development, and the various indicators used to measure them.
2. **Apply** major development theories and strategies to real-world scenarios and historical examples.
3. **Analyse** classical and modern growth models to interpret development trends and outcomes.
4. **Evaluate** poverty and inequality measurements and their relationship to long-term development.
5. **Critically assess** the role of political institutions, governance, and state functioning in shaping economic development.

Learning Outcome

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

1. Define and explain the key concepts of economic growth and development and differentiate between them. ***(Remember, Understand)***
2. Describe and interpret various indicators of development such as per capita income, HDI, and infrastructure indices. ***(Understand, Apply)***
3. Examine the role of agriculture, industry, and infrastructure in economic development. ***(Analyse)***
4. Apply development strategies like the Big Push, Balanced vs. Unbalanced Growth, and the Low-Level Equilibrium Trap to contemporary development challenges. ***(Apply)***
5. Compare and contrast major growth models (e.g., Harrod-Domar, Solow, Romer) and Analyse their assumptions and implications. ***(Analyse)***
6. Measure poverty and inequality using tools such as the Head Count Ratio, Gini Coefficient, and Lorenz Curve, and evaluate their effectiveness. ***(Apply, Evaluate)***
7. Discuss the interlinkages between poverty, inequality, and development using the concepts of poverty traps and path dependence. ***(Understand, Analyse)***
8. Critically evaluate how political institutions, governance structures, and corruption impact economic development. ***(Evaluate)***

9. Assess the effects of democracy and institutional quality on development outcomes across countries. ***(Evaluate)***
10. Develop reasoned arguments and basic models that link institutional performance with economic outcomes in both developed and developing contexts. ***(Create)***

Unit I: CONCEPTS OF GROWTH AND DEVELOPMENT: Evolution of Development Economics, Meaning & distinction of economic growth and development, measurement and indicators of economic development, factors affecting economic growth, role of agriculture, industry and infrastructure in economic development.	**10**	**20**
Unit II: STRATEGIES FOR DEVELOPMENT: Stages of economic growth – Rostow, low level equilibrium trap, the critical minimum effort hypothesis, the big push theory, Balanced vs. Unbalanced growth and choice of technique	**10**	**20**
Unit III: GROWTH MODELS Classical growth models, growth models by Harrod-Domar, Kaldor, Solow (variants), Meade and Romer's Endogenous growth model	**15**	**20**
Unit IV: POVERTY AND INEQUALITY: Concept and Measures of poverty-Head count ratio, Sen's Index, Human Poverty Index (HPI), Multi-Dimensional Poverty Index (MPI, Inequality measures: Gini Coefficient and Lorenz Curve, connections between inequality and development, mechanisms that generate poverty traps and path dependence of growth processes.	**20**	**20**
Unit V: POLITICAL INSTITUTIONS AND FUNCTIONING OF THE STATE: Determinants of democracy, alternative institutional trajectories and their relationship with economic performance, relationship	**20**	**20**

between democracy and economic development, within-country differences in the functioning of state institutions, State ownership and regulation, Government failures and Corruption.		
Total	**75**	**100**

Suggested Readings:

1. Debraj Ray, Development Economics, Oxford University Press, 2009.
2. Partha Dasgupta, Economics, A Very Short Introduction, Oxford University Press, 2007.
3. Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, Understanding Poverty, Oxford University Press, 2006.
4. Thomas Schelling, Micro motives and Macro behaviour, W. W. Norton, 1978.
5. Albert O. Hirschman, Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States, Harvard University Press, 1970.
6. Raghuram Rajan, Fault Lines: How Hidden Fractures Still Threaten the World Economy, 2010.
7. Elinor Ostrom, Governing the Commons: The Evolution of Institutions for Collective Action, Cambridge University Press, 1990.
8. Dani Rodrik, The Globalization Paradox: Why Global Markets, States and Democracy Can,,t Coexist, Oxford University Press, 2011.
9. Michael D. Bordo, Alan M. Taylorand Jeffrey G. Williamson (ed.), Globalization in Historical Perspective, University of Chicago Press, 2003.

FIFTH SEMESTER, ECONOMICS

Environmental Economics

PAPER: 5.4
CREDIT POINT: 04
Marks: 100

Course Description: This course explores the economic drivers of environmental problems and the use of economic tools to address them. It covers policy instruments, valuation of environmental quality, damage assessment, and project evaluation methods such as cost-benefit analysis and environmental impact assessments. By the end of this course, students will be able to analyse environmental problems through an economic lens and apply appropriate economic tools and policies for their management. They will gain skills in valuing environmental quality, assessing environmental damages, and evaluating projects using methods like cost-benefit analysis and environmental impact assessments.

Course Objectives

1. **Understand** key environmental, ecological, and economic concepts and the interrelationships among them.
2. **Analyse** the role of externalities and market failure in environmental degradation, and explore policy responses.
3. **Apply** economic instruments and policy tools for environmental management and evaluate their effectiveness.
4. **Assess** global environmental challenges and examine international policy implications.
5. **Evaluate** the benefits of environmental improvement using various valuation techniques.
6. **Critique** traditional development models and formulate alternative frameworks based on the principles of sustainable development.

Learning Outcome

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

1. Define key concepts such as environment, ecosystem, and environmental economics, and distinguish between environmental and ecological economics. ***(Remember, Understand)***
2. Explain the conceptual foundations of welfare economics including utility, social choice, and compensation principles. ***(Understand)***
3. Illustrate how externalities and market failures occur and analyse their implications for environmental degradation. ***(Apply, Analyse)***
4. Classify environmental policy instruments into market-based and non-market approaches and evaluate their effectiveness in managing pollution. ***(Analyse, Evaluate)***

5. Interpret the implications of property rights and apply the Coase Theorem to externality resolution. ***(Apply, Analyse)***
6. Compare major international environmental problems (e.g., climate change, biodiversity loss) and assess global responses. ***(Analyse, Evaluate)***
7. Apply valuation methods such as Contingent Valuation and Hedonic Pricing to estimate non-market environmental benefits. ***(Apply)***
8. Evaluate the significance of use, non-use, and option values in environmental decision-making. ***(Evaluate)***
9. Critique conventional development models from an ecological and economic perspective and propose sustainable alternatives. ***(Evaluate, Create)***
10. Identify and use sustainability indicators and principles to guide policy formulation and assess development outcomes. ***(Apply, Evaluate)***

Course Description	**Lectures required**	**Marks**
Unit I: INTRODUCTION **Fundamental Concepts:** Understanding key terms: environment, ecology, economy, and ecosystem, definition and scope of environmental economics, exploring the relationship between the environment and economy, distinction between environmental economics and ecological economics, linkages between environmental economics and resource economics. **Microeconomic and Welfare Foundations (Conceptual Overview):** Basic idea of the utility function, introduction to social choice mechanisms, concept of the compensation principle, understanding the social welfare function.	**10**	**10**
Unit II: THE THEORY OF EXTERNALITIES **Pareto efficiency (pareto optimality):** Understanding the concept of Pareto efficiency and its significance in resource allocation, externalities (definition and classification), market failure: explanation of market failure and its causes, how externalities contribute to market failure, market failure related to public goods, public goods and environment: (definition and characteristics, examination of the environment as a public good), Property Rights and the Coase Theorem: Role of property rights in resource management, overview and implications of the Coase theorem in addressing externalities.	**10**	**10**

Unit-III: ENVIRONMENTAL POLICY INSTRUMENTS AND ENFORCEMENT – OVERVIEW **Environmental Policy Tools (Market and Non-Market Approaches):** Command-and-Control (CAC) Mechanisms: Direct regulatory methods, including setting emission standards and technology requirements. **Market-Based Instruments:** Pigouvian taxes, effluent fees, tradable Permits: (cap-and-trade systems), Hybrid/Mixed Instruments **Monitoring and Enforcement of Environmental Regulations:** definition and importance of monitoring and enforcement in environmental policy, types and implications of penalties for non-compliance, cost considerations in pollution abatement efforts, assessment of environmental damages due to pollution, Incentive structures designed to encourage compliance by polluters.	**20**	**25**
Unit IV: NATURE OF INTERNATIONAL ENVIRONMENTAL ISSUES transboundary pollution –Climate change, global warming, ozone depletion and bio-diversity loss Trade and environment: pollution haven hypothesis.	**10**	**15**

Unit V: MEASURING THE BENEFITS OF ENVIRONMENTAL IMPROVEMENTS **Understanding Non-Market Environmental Values** Types of Values: Use Values, Non-Use Values, Option Value. Valuation Methods for Environmental Benefits: Contingent Valuation Method (CVM-Direct Method), Hedonic Pricing Method (indirect Method) Special Concepts in Valuation: Value of Statistical Life (VSL) (Applications and Limitations)	**10**	**20**
Unit V: Unit V: SUSTAINABLE DEVELOPMENT **Critique of the Conventional Development Model:** Examination of the limitations and environmental consequences of traditional development approaches. **The Concept of Sustainable Development:** Origins and evolution of the idea, core objectives of sustainable development, including environmental, economic, and social dimensions. **Approaches to Sustainable Development:** Weak Sustainability, Strong Sustainability, Safe Minimum Standard Approach, Ecological Perspective, Social Perspective **Guiding Principles and Indicators:** Rules for promoting sustainability in policy and practice, Indicators used to assess progress toward sustainable development	**15**	**20**
Total	**75**	**100**

Suggested Readings:

Readings: 1. Charles Kolstad, Intermediate Environmental Economics, Oxford University Press, 2nd edition, 2010.

2. Robert N. Stavins (ed.), Economics of the Environment: Selected Readings, W.W. Norton, 5th edition, 2005.

3. Roger Perman, Yue Ma, James McGilvray and Michael Common, Natural Resource and Environmental Economics, Pearson Education/Addison Wesley, 3rd edition, 2003.

4. Maureen L. Cropper and Wallace E. Oates, 1992, ―Environmental Economics: A Survey, ‖ Journal of Economic Literature, Volume 30:675-740.

5. SubhashiniMuthukrishnan, Economics of Environment, PHI Learning Private Limited, 2nd edition, 2015.

6. Bhattacharyya R, Environmental Economics, Oxford University Press.

7. Nick Hanley, Jason F. Shogren and Ben White, Introduction to Environmental Economics, Oxford University Press.

8. GautamPurkayastha, Environmental Economics:Theory ,Problems and Solutions, Kalyani Publishers , Reprinted 2016

FIFTH SEMESTER, ECONOMICS

INDIAN ECONOMY

PAPER: MINOR: 5.1
CREDIT POINT: 04
Marks: 100

Course Description: The course is a sequel to the various concepts on Indian economy. The course is designed in such a way that it would help the students to gain conceptual clarity about various issues, problems, features, policies etc. of economic growth and development of the Indian economy. The idea of the course is to provide students with an understanding of the structure, trends, and challenges of the Indian economy, analyses its historical and contemporary developments and evaluate the impact of policies on economic growth, agriculture, industry, economic reforms and HDI.

Course Objectives

1. **Understand** the structure and trends of India's national income and sectoral development.
2. **Analyse** the role and challenges of major sectors such as agriculture and industry in India's economic development.
3. **Evaluate** the impact of economic reforms including liberalization, globalization, and privatization.
4. **Interpret** key demographic indicators and their implications for human development in India.
5. **Apply** theoretical knowledge to assess current economic trends and policy measures.

Learning Outcome

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

1. Define and explain key concepts related to national income, including features, growth trends, and sectoral contributions. ***(Remember, Understand)***
2. Describe the structure and challenges of the agricultural sector in India, including credit sources, marketing systems, and land reforms**. *(Understand)***
3. Assess the impact of the Green Revolution and the significance of organic farming and agricultural diversification in India. ***(Analyse, Evaluate)***
4. Explain the role of the industrial sector post-economic reforms and Analyse the causes of its slow growth. ***(Understand, Analyse)***
5. Evaluate the contribution of small-scale and cottage industries to India's economic development. ***(Evaluate)***
6. Discuss the key features and objectives of India's economic reforms (LPG) and critically assess their impact. ***(Understand, Evaluate)***
7. Interpret demographic indicators such as birth/death rates, sex ratio, and literacy, and Analyse their role in shaping India's human development index. ***(Analyse)***

8. Compare India's economic performance across time periods and sectors to understand growth patterns. ***(Analyse)***
9. Apply basic economic concepts and indicators to contemporary issues in the Indian economy. ***(Apply)***
10. Formulate informed perspectives on policy measures to address economic challenges in India. ***(Create)***

Course Description	**Lectures required**	**Marks**
Unit I: Growth and Pattern of India's National Income: Features of national income, National Income estimates in India, Rate of growth of National income in India, sectoral contribution of national income in India.	**20**	**25**
Unit II: Sectoral development **(A) Agriculture:** Agriculture: Its role causes of backwardness, remedial measures, sources of agricultural credit, agricultural marketing, green revolution, diversification of agriculture in India, meaning and relevance of organic farming in India., land tenure and land reforms system in India (its objectives, achievements and failures). **(B) Industry:** Industry (post Economic Reforms): Importance and role of industries in economic development; trends of industrial production in India, causes of slow growth of industries in India, cottage and small-scale industries in India**.**	**25**	**30**
Unit III Economic reforms in India Liberalization, globalization and privatization (its meaning, features, Objectives, arguments in favor of and against the new economic policy).	**20**	**25**
Unit IV: Human development Index Birth rate, death rate, infant mortality rate, dependency ratio, density of population, sex ratio, literacy rate, workforce and occupational structure of population in India.	**10**	**20**
Total	**75**	**100**

Suggested Readings:

1. Abhijit V. Banerjee and Esther Duflo *Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty*

2. A. Sen, *The Argumentative Indian: Writings on Indian History, Culture and Identity*

3. Amartya Sen, Poverty and Famines: An Essay on Entitlement and Deprivation

4. C. S. Kumar, *Indian Economy Since Independence: Persisting Colonial Disruption*

5. G. Rodgers and J. Rodgers, "*Employment, Poverty, and Development.* edited

6. G. S. Bhalla, *Unemployment in India: Nature, Measurement and Strategy for Employment Planning*

7. Gurcharan Das, India *Unbound: From Independence to the Global Information Age*

8. J. Bhagwati and A. Panagariya, India's Tryst with Destiny: Debunking Myths that Undermine Progress and Addressing New Challenges

9. J. P. Pradhan, Unemployment, Poverty and Inequality in Urban India

10. Jean Drèze and Amartya Sen, *An Uncertain Glory: India and its Contradictions*

11. M. Govinda Rao and Nirvikar Singh, Economic Reforms and Regional Inequality in India, edited

12. M. A. Oommen, Regional Development and Planning in India

13. R. Guha, *India After Gandhi: The History of the World's Largest Democracy*

14. S. K. Singh, *Regional Disparities in India: A Comprehensive Overview* edited

15. Tirthankar Roy, *The Economic History of India*, 1857-1947

SIXTH SEMESTER, ECONOMICS

IMTRODUCTORY ECONOMETRICS

PAPER: MAJOR: 6.1
CREDIT POINT: 04
Marks: 100

Course Description: This course is designed to provide a comprehensive introduction to basic econometric concepts and techniques.

It covers methodology of studying econometrics, statistical concept of hypothesis testing, estimation of two variable and multivariable regression methods, and problems in regression analysis.

Learning outcomes: Econometrics helps researcher to test economic theories using real world data and statistical methods that can be used by the policy makers.

Course Objectives

By the end of this course, the learners will be able to:

1. Understand the nature, scope, and methodology of econometrics.
2. Apply statistical inference techniques in hypothesis testing relevant to economic data.
3. Estimate and interpret simple and multiple linear regression models.
4. Identify and assess violations of classical linear regression assumptions.
5. Examine model specification errors and take appropriate corrective measures.
6. Conduct time series analysis for trend estimation and forecasting in economic data.

Learning Outcome

1. Define econometrics and describe its methodology, scope, and applications. (***Remember, Understand***)
2. Explain and apply statistical inference concepts including estimation and hypothesis testing. (***Understand, Apply***)
3. Estimate parameters in simple and multiple regression models using OLS and evaluate their properties. (***Apply, Analyse*****)**
4. Analyse the consequences of heteroscedasticity, multicollinearity, and autocorrelation in regression models. (***Analyse, Evaluate***)
5. Detect and test for specification errors and suggest corrective measures. (***Evaluate, Apply***)
6. Decompose time series data and fit trend lines using moving averages and least square methods. (***Apply, Analyse, Create***)

Course Description	Lectures required	Marks
Unit I: Nature and Scope of Econometrics What is Econometrics; Economic and Econometric model; Methodology of Econometrics; Goals of Econometrics.	15	10
Unit II: **Statistical Inference** Concepts of Sampling distribution and Standard Error of Statistic; Estimate and Estimator; Characteristics of a good estimator; Testing of Hypothesis- Type I and Type II errors; One tailed and two tailed tests- Test based on standard normal, t and chi square distribution	15	20
Unit III: Linear regression models a) Two variable cases: Estimation of models by method of Ordinary Least Square (OLS) ; Properties of OLS estimators; The Gauss Markov Theorem; BLUE, The coefficient of determination R^2- A measure of goodness of fit; Test of hypothesis about regression parameters and their confidence intervals; Forecasting. b) Multiple variable case: K variable linear regression model; Estimation of parameters; Properties of OLS estimators; Good ness of fit- R^2; Qualitative dummy independent variables	15	20
Unit IV: Violation of classical assumptions Heteroscedasticity: Concept and consequences; Test of heteroscedasticity. Autocorrelation: Concept and consequences; Tests and remedial measures. Multicollinearity: Problems and consequences; Detection and remedies.	15	20
Unit V: Specification analysis Omission of Relevant variables; Inclusion of irrelevant variables; Tests of specification errors.	15	10
Unit VI: Timeseries analysis Concepts and Components; Measurement of trend; Moving average and least square methods; Fitting of linear and exponential		20

trend curves		
Total	75	100

Suggested Readings

1. *G.M.K Madnani; Introduction to Econometrics, Principles and Applications Oxford & IBH publishing Co. Pvt. Ltd, Eight edition*
2. *D. N. Gujarati 1995 Basic Econometrics, McGraw Hill 4th edition 2006*
3. *A. Koutsoyannis, Theory of Econometrics: An Introductory Exposition of Economic Methods.*
4. *Econometric Methods 1996 by Jack Johnston , John Dinardo, McGraw Hill 4th Edition, 2006*
5. *C. Dougherty, Introduction to Econometrics, Oxford University Press, 4th edition, Indian Edition, 2011*
6. *Woldridge J.M.; Introductory Econometrics: A Modern Approach*

SIXTH SEMESTER, ECONOMICS

PUBLIC ECONOMICS
PAPER: MAJOR: 6.2
CREDIT POINT: 04
Marks: 100

Course Description: This course deals with the nature and scope of public finance. It incorporates a formal analysis of public revenue, public expenditure, public debt, government budgeting, fiscal policy and fiscal federalism with special reference to India.

Course Objectives

By the end of this course, students will be able to:

1. **Understand** the nature, evolution, and significance of public finance in modern economies, distinguishing it from private finance.
2. **Analyse** the sources and principles of public revenue, taxation systems, and the economic implications of tax structures.
3. **Examine** theories and trends in public expenditure and assess its role in economic growth, redistribution, and stabilization.
4. **Evaluate** the rationale, structure, and impact of public debt, including its management and implications for fiscal health.
5. **Develop** an understanding of government budgeting processes and fiscal indicators, with reference to the Indian context.
6. **Understand** the concept of fiscal federalism, mechanisms of financial resource sharing, and assess Centre-State fiscal relations in India.

Learning Outcome

1. Identify and define key concepts such as public goods, tax elasticity, public expenditure, public debt, budget deficits, and fiscal federalism. ***(remember)***
2. Explain the differences between public and private finance and describe the structure and purpose of various government financial mechanisms. ***(understand)***
3. Apply principles of taxation and budgeting to interpret fiscal policies and budget documents, including the Union Budget of India. ***(apply)***
4. Analyse the effects of taxation, public expenditure, and borrowing on income distribution, resource allocation, and economic stability. ***(analyse)***
5. Critically assess fiscal policies, budgetary practices, and intergovernmental financial relations for their effectiveness and equity. ***(evaluate)***
6. Design a basic budget proposal or fiscal policy framework incorporating principles of taxation, expenditure control, and fiscal responsibility. ***(create).***

Course Description	Lectures required	Marks
Unit I: Nature and Scope of Public Finance: Origin and development of public finance, meaning and subject matter, public finance versus private finance, role of public finance, public goods: characteristics, types, public versus private goods, the Free Rider problem.	10	15
Unit II Public Revenue: Tax and non-tax revenue, sources of tax and non-tax revenue, base of a tax, buoyancy and elasticity of tax, characteristics of a good tax system, rate schedules of taxation, principles of taxation – the Benefit Principle and Ability to Pay principle, effects of taxation, impact, shifting and incidence of taxation.	15	20
Unit III: Public Expenditure and Public Debt: **(A)Public Expenditure:** Meaning and nature of public expenditure, Wagner's Law of Increasing State Activities, Wiseman-Peacock Theory, Critical Limit Hypothesis, canons of public expenditure, effects of public expenditure, public expenditure as a compensatory mechanism and promoter of growth **(B)Public Debt:** Meaning and classification of public debt, mechanism of public borrowing, sources of public borrowing, reasons for the growth of public debt, effects of public debt, redemption of public debt, growth of public debt in India.	20	25
Unit IV: Government Budgeting: Meaning and role of budget, budget framing, types of government budget, concepts of deficit – (revenue deficit, budgetary deficit, fiscal deficit and primary deficit), budgetary policy in India – components of revenue and capital budget, Study of the latest Union Budget.	15	20
Unit V: Fiscal Federalism: Nature and formative factors of federation, principles of federal finance, methods of resource transfer, Horizontal and vertical imbalance, centre-state financial relations in India – an overview.	15	20
Total	75	100

SIXTH SEMESTER, ECONOMICS
INTERNATIONAL ECONOMICS
PAPER: MAJOR: 6.3
CREDIT POINT: 04
Marks: 100

Course Description: This course provides a comprehensive understanding of international trade and finance, emphasizing their role in economic development, especially in developing countries. It explores key trade theories, global financial institutions, trade policies, exchange rate systems, and the balance of payments. Students will also examine capital flows, foreign investment, and the challenges of macroeconomic management in an open economy.

Course Objectives

By the end of this course, students will be able to:

1. **Understand** the core principles and theories of international trade and finance.
2. **Analyse** the role of international trade in economic development, especially for developing countries.
3. **Examine** the structure and functioning of trade policies, trade blocs, and global financial institutions.
4. **Interpret** the components of the balance of payments and evaluate the impact of exchange rate systems on national economies.
5. **Explore** the dynamics of capital flows, foreign investment, and macroeconomic management in an open economy**.**

Learning outcome

1. Define key terms and concepts such as trade theories, BoP, FDI/FPI, WTO, and exchange rates. ***(remember)***
2. Explain classical and modern trade theories and distinguish between different trade and exchange rate policies. ***(understand)***
3. Apply theoretical frameworks to real-world trade issues, BoP accounting, and policy instruments. ***(apply)***
4. Analyse the impact of tariffs, quotas, and trade agreements on national and global economies. ***(analyse)***
5. Critically assess trade and exchange rate policies and evaluate the effectiveness of international economic cooperation. ***(evaluate)***
6. Propose strategies for improving trade performance or for managing BoP crises in developing countries. ***(create)***

Course Description	Lectures required	Marks
Unit I: Unit 1: Introduction Meaning, scope & importance of international economics, differentiating inter-regional trade and international trade, role of trade in economic development; trade-related issues in less-developed countries	10	10
Unit II: **Theories of International Trade** Absolute cost advantage (Adam Smith), Comparative cost advantage (Ricardo), Heckscher–Ohlin model of factor endowments, Leontief paradox, Opportunity Cost theory (Haberler), Product Life-Cycle Theory (Vernon's model)	15	20
Unit III: Trade Policy and Terms of Trade Free trade vs protection: arguments for and against Instruments of protection: tariffs-partial equilibrium effects of tariffs, quotas, dumping Concepts of terms of trade: types, measurement.	15	20
Unit IV: Regional & International Economic Cooperation Regional economic integration: forms, objectives, and benefits Working of trade blocs (EU, ASEAN, NAFTA) Multilateral trade systems: IMF, WTO – objectives, functioning and its role in developing nations.	15	20
Unit V: Open Economy Macroeconomics & Balance of Payments Balance of Payments (BoP): structure and components Exchange rate systems: Spot and Forward, fixed, flexible, and managed exchange rates, determination of equilibrium exchange rates. Relationship between BoP and exchange rates.	15	20
Total	75	100

Suggested Readings:

1. Dominick Salvatore: *International Economics: Trade and Finance*, 11th Edition, Wiley
2. Paul Krugman, Maurice Obstfeld, and Marc Melitz: *International Economics: Theory and Policy*, 10th or 11th Edition, Pearson.
3. Bo Sodersten and Geoffrey Reed: *International Economics*, 3rd Edition, Macmillan.
4. K.R. Gupta: *International Economics*, Atlantic Publishers.
5. P.T. Ellsworth and J.W. Leith: *The International Economy*, Macmillan
6. H.G. Mannur: *International Economics*, Vikas Publishing House
7. D.M. Mithani: *International Economics*, Himalaya Publishing House
8. **Reports & Web Resources**
   World Trade Organization (WTO) – www.wto.org.

Reserve Bank of India (RBI) – www.rbi.org.in
International Monetary Fund (IMF) – www.imf.org
UNCTAD – https://unctad.org

SIXTH SEMESTER, ECONOMICS

DEVELOPMENT ECONOMICS-II

PAPER: MAJOR: 6.4
CREDIT POINT: 04
Marks: 100

Course Description

This course examines key issues in development, including demographic transitions, land reforms, labour productivity, and credit market challenges in low-income countries. It also explores environmental concerns, common property resource failures, and the role of globalization in shaping development outcomes.

Course Objectives (COs) (aligned with Bloom's Taxonomy)

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

1. **Understand** the role of demographic transitions in shaping development outcomes and social structures.
2. **Analyse** the functioning of land, labour, and credit markets in rural economies and assess the impact of reforms and institutional arrangements.
3. **Evaluate** environmental sustainability, the management of common-pool resources, and the consequences of environmental degradation.
4. **Examine** the role of communities in rural development and investigate the implications of community failure and local institutional arrangements.
5. **Assess** the impact of trade, globalization, and foreign capital on economic development, inequality, and structural transformation.
6. **Apply** theoretical models and empirical evidence to evaluate development policies and design context-appropriate solutions for low-income countries.

Learning Outcome

1. Define core concepts related to demography, rural markets, sustainability, and trade (e.g., fertility rate, land tenure, environmental externalities, trade liberalization). ***(Remember)***

2. Explain the relationships between demographic change, human capital accumulation, rural institutional structures, and development outcomes. ***(understand)***

3. Use conceptual and empirical tools to assess the effectiveness of land reforms, credit systems, and environmental regulations in promoting development. ***(apply)***

4. Examine how migration, gender bias, credit constraints, and globalization influence income distribution, productivity, and development. ***(analyse)***
5. Critically evaluate the role of community-based institutions, environmental policies, and trade strategies in achieving inclusive and sustainable development. **(*evaluate*)**
6. Propose context-specific policy recommendations or research frameworks to address development challenges related to population growth, land ownership, environmental change, or trade***. (create)***

Course Description	**Lectures required**	**Marks**
Unit I: Demography and development: Demographic concepts; birth and death rates, age structure, fertility and mortality; demographic transitions during the process of development; gender bias in preferences and outcomes and evidence on unequal treatment within households; connections between income, mortality, fertility choices and human capital accumulation; migration.	**12**	**12**
Unit II Land, labour and credit Markets: The distribution of land ownership; land reform and its effects on productivity; contractual relationships between tenants and landlords; land acquisition; nutrition and labour productivity; informational problems and credit contracts; microfinance; inter-linkages between rural factor markets	**12**	**12**
Unit III: Environment and Sustainable Development: Defining sustainability for renewable resources; a brief history of environmental change; common-pool resources; environmental externalities and state regulation of the environment; economic activity and climate change.	**12**	**12**
Unit IV: Communities and Economic Development: The economic functions of Community; Collective intervention in Rural economies: Management of Common Property Resources; Impact of Community failure, Overcoming the community failure; Experience from Asian Economies	**12**	**12**
Unit V: Trade, Globalization and Development: Trade and growth; gains from trade- static and dynamic; Trade as a vent for surplus; import substitution vs export promotion; Trade, liberalization and growth; advantages and disadvantages of free trade for development; Tariffs vs	**12**	**12**

subsidies; The Prebisch-Singer Thesis; trade, production patterns and world inequality; Role of Foreign Capital and Foreign Aid in Economic Development; Trade policy for development		
Total	**60**	**60**

Suggested Readings:

1. Debraj Ray, Development Economics, Oxford University Press, 2009.
2. Partha Dasgupta, Economics, A Very Short Introduction, Oxford University Press, 2007.
3. Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, Understanding Poverty, Oxford University Press, 2006.
4. Thomas Schelling, Micro motives and Macro behaviour, W. W. Norton, 1978.
5. Albert O. Hirschman, Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States, Harvard University Press, 1970.
6. Raghuram Rajan, Fault Lines: How Hidden Fractures Still Threaten the World Economy, 2010.
7. Elinor Ostrom, Governing the Commons: The Evolution of Institutions for Collective Action, Cambridge University Press, 1990.
8. Dani Rodrik, The Globalization Paradox: Why Global Markets, States and Democracy Can„t Coexist, Oxford University Press, 2011.
9. Michael D. Bordo, Alan M. Taylorand Jeffrey G. Williamson (ed.), Globalization in Historical Perspective, University of Chicago Press, 2003.

SIXTH SEMESTER, ECONOMICS

PUBLIC ECONOMICS
PAPER: MINOR: 6.1
CREDIT POINT: 04
Marks: 100

Course Description: This course introduces the fundamental concepts and analytical frameworks of public finance. It explores the nature and scope of government intervention in the economy, sources of public revenue, and principles of taxation. Special emphasis is placed on the Indian tax system, including GST, and the constitutional framework of fiscal federalism in India. Students will develop the ability to Analyse the role of taxation and public policy in resource allocation, income distribution, and economic stabilization.

Course Objectives

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

1. **Understand** the nature, evolution, and scope of public finance in both theoretical and applied contexts.
2. **Examine** the rationale for government intervention through the provision of public goods and correction of market failures.
3. **Analyse** different sources and principles of taxation, along with the impact and incidence of various taxes.
4. **Evaluate** the structure and recent reforms of the Indian tax system, particularly the implementation of GST.
5. **Understand** the constitutional basis of fiscal federalism and the distribution of taxation powers between the Union and States.

Learning Outcome

1. Define key terms and concepts in public finance, such as public goods, taxation, and fiscal federalism. ***(Remember)***
2. Explain the differences between public and private finance, and the role of government in addressing externalities and market failure. ***(understand)***
3. Apply taxation principles to identify the characteristics and implications of different tax systems. ***(apply)***
4. Analyse the impact of tax structures (direct vs indirect; progressive vs regressive) on economic equity and efficiency. ***(analyse)***
5. Critically evaluate India's tax system, including GST implementation and its implications for federal finance. ***(evaluate)***
6. Propose reforms for tax policies or fiscal institutions that enhance revenue mobilization and intergovernmental equity ***(create)***

Course Description	Lectures required	Marks
Unit I: Nature and the Scope of Public Finance Meaning, subject matter, evolution of public finance, Distinction: Public vs Private finance, Role of government in market economies: Allocation, distribution, stabilization, public goods vs private goods; externalities, Free rider problem and market failure.	**10**	**20**
Unit II Public Revenue and Taxation Sources of revenue: tax and non-tax, Principles of taxation: Benefit and Ability-to-Pay, Characteristics of a good tax system, Tax bases, incidence, impact and shifting of taxation, Buoyancy and elasticity of tax, Direct vs indirect taxation; progressive, regressive, proportional taxes, GST.	**20**	**25**
Unit III: Public Debt and Deficits Meaning and classification of public debt, mechanism of public borrowing, sources of public borrowing, reasons for the growth of public debt, Impact of public debt, redemption of public debt.	**15**	**25**
Unit IV: Government Budgeting and Fiscal Policy Meaning and importance of the budget, types: balanced, surplus, deficit, components of revenue and capital budgets	**15**	**15**
Unit V: Fiscal federalism Principles of fiscal devolution, horizontal and vertical fiscal balance, federal finance and finance commission (objectives, functioning, and role)	**15**	**15**
Total	**75**	**100**

Suggested Readings:

1. Rosen & Gayer – *Public Finance*, McGraw-Hill
2. Harvey Rosen – *Public Finance in Theory and Practice*
3. H.L. Bhatia – *Public Finance*, Vikas Publishing
4. Musgrave & Musgrave – *Public Finance in Theory and Practice*
5. M. Govinda Rao – *Fiscal Federalism in India*
6. Government Reports – Finance Commission, FRBM Review, Union Budget Documents