

RABINDRANATH TAGORE UNIVERSITY: : HOJAI : : ASSAM

DEPARTMENT OF ECONOMICS

SYLLABUS

(NATIONAL EDUCATION POLICY – 2020)

COURSE: B.A.

SEMESTER I, II, III & IV

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		2
	SEC -1.1	DATA ANALYSIS - I	3
	VAC -1.1		2
	VAC -1.2		2
		TOTAL	20
		NAME OF PAPER/COURSE	
SEM - II	Major – 2.1	INTRODUCTORY MACROECONOMICS	4
	Minor – 2.1	PRINCIPLES OF MACROECONOMICS - I	4
	MD/GE- 2.1	ESSENTIAL OF ECONOMICS	3
	AECC-2.1		2
	SEC -2.1	DATA ANALYSIS - II	3
	VAC -2.1		2
	VAC -2.2		2
		TOTAL	20
		NAME OF PAPER/COURSE	
	Major – 3.1	INTERMEDIATE MICROECONOMICS	4
	Major – 3.2	MATHEMATICAL METHODS IN ECONOMICS - I	4
	Minor - 3.1	MICROECONOMICS - II	4
	MD/GE -3.1	INDIAN ECONOMY	3

SEM - III	AECC -3.1		2
	SEC	DATA ANALYSIS -III	3
		TOTAL	20

		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
	AECC - 4.1		2
	Summer	Internship	2
		TOTAL	20
		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
		TOTAL	20
		NAME OF PAPER/COURSE	
SEM - VI	Major – 6.1	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
		TOTAL	20

FIRST SEMESTER

COURSE: MAJOR

INTRODUCTORY MICROECONOMICS

PAPER: MAJOR – 1.1

CREDIT POINT: 04

Course Objective: The course is designed to provide conceptual clarity about the basic principles of microeconomics.

Learning Outcome: 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 future prospects.

Course Outline	Lectures required	Marks
<p>Unit I: Exploring the subject matter of Economics</p> <p>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)</p>	10	20
<p>Unit II: Demand and Supply</p> <p>Demand: meaning, types, determinants of demand, demand schedule and demand curve, law of demand, exceptions to the law of demand, shifts in demand curve.</p> <p>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.</p>	15	25
<p>Unit III: Consumer Behaviour</p> <p>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.</p>	10	15
<p>Unit IV: Theory of Production and Cost</p> <p>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).</p>	15	20
<p>Unit V: Concepts of Market</p> <p>Meaning of market in economics; classification of markets, concept of total,</p>	10	20

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.		
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 Objective: The objective of Data Analysis is to equip students with the knowledge and skills to gather, process, and analyze data using statistical and computational methods, enabling them to derive meaningful insights and support evidence-based decision-making.

Learning Outcome: 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 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 MICROECONOMICS

PAPER: MINOR – 1.1

CREDIT - 04

Course Objective: 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.

Learning Outcomes: 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-to-day life.

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 Objective: 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.

Learning Outcome: 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 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	07	10

Principles of taxation.		
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, monetary policy: Objectives and role,	10	15
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 objective: 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.

Learning Outcome: 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 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,	05	20

Accelerator (Concepts only)		
Unit IV: Theories of Income, Output and Employment		
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. A
ndre
w B.
Abel,
Ben
S.
Bern
anke,
Dean
Crou

shore, *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- MAJOR

SKILL ENHANCEMENT COURSE (SEC)-II

PAPER: DATA ANALYSIS -II

CREDIT: 03

Course Objective: 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.

Laerning Outcome: 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 Outline	Lectures required	Marks
Unit I: Univariate frequency distribution Measures of central tendency – Mean, Median and Mode. Measures of dispersions: 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 Objective: 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.

Learning Outcome: The course would enable the students to understand the aggregate economy and deal with it.

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 (concepts only)	15	20
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 – II

ESSENTIALS OF ECONOMICS

PAPER: MD/GE- 2.1

CREDIT – 03

Course Objective: 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.

Learning Outcome: 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 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. Todoro, 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 Objective: 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.

Learning Outcomes: Studying microeconomics enables learners to understand how supply, demand, and market forces determine prices and resource allocation. It develops the ability to analyze 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 Description	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 THEORY 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., 8th Edition, 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, McGraw Hill Education (India) Private Limited, 2017*

THIRD SEMESTER

COURSE: MAJOR

MATHEMATICAL METHODS IN ECONOMICS

PAPER: MAJOR-3.2

CREDIT: 04

Course Objective: The course aims to equip students with mathematical tools and techniques, such as calculus, linear algebra, and optimization, to analyze and solve economic problems effectively.

Learning Outcomes: The learning outcome of the course is to enable students to apply mathematical techniques like calculus, linear algebra, and optimization to formulate and analyze economic models, interpret quantitative results, and solve complex economic problems.

Course Description	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, McGraw Hill*
- 4) *Allen R. G. D, Mathematical Economic, St Martin 's Press 1959*

THIRD SEMESTER

COURSE: MAJOR

SKILL ENHANCEMENT COURSE(SEC)-III

PAPER: DATA ANALYSIS-III

CREDIT: 03

Course Objective: “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 knowhow 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 Description	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 Chart, Line Graph, Histogram, Scatter Plot, Ogives and Logarithmic graphs. B. Tables: 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	20	20
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 Behavior: 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 Objective: 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.

Learning Outcome: The course would enable students to understand how different market forms operate, analyze 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 Description	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., 8th Edition, 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, McGraw Hill Education (India) Private Limited, 2017*

THIRD SEMESTER

COURSE: MD/GE

INDIAN ECONOMY

PAPER: MD/GE- 3.1

CREDIT:4

Course Objective: 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 and policies etc. of economic growth and development of Indian economy.

Learning Outcome: 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 analyze its progress and propose informed solutions to contemporary economic problems.

Course Description	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 Way to Fight Global Poverty"*
- 2) *Amartya Sen, "The Argumentative Indian: Writings on Indian History, Culture and Identity"*
- 3) *Amartya Sen, Poverty and Famines: "An Essay on Entitlement and Deprivation"*
- 4) *Chandra Shekhar Kumar, "Indian Economy Since Independence: Persisting Colonial Disruption"*
- 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 Employment Planning"*
- 8) *Gurcharan Das, "India Unbound: From Independence to the Global Information Age"*
- 9) *Jagdish Bhagwati and Arvind Panagariya, "India's Tryst with Destiny: Debunking Myths that 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 Objective: The course is continued with a connectedness with the syllabus taught in the previous semesters. The objective of the course is to deepen students' understanding of macroeconomic theories and models, including economic growth, business cycles, inflation, and unemployment, banking, financial systems, while equipping them with analytical tools to evaluate real-world economic policies and trends.

Learning Outcome: 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 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:

- 1) *Dronbusch ,Fisher and Startz : Macroeconomics theory , Tata McGraw Hill*
- 2) *Rana &Verma : Macroeconomics theory ; Vishal publishing*
- 3) *Pual R.R : Monetary economics , Kalyani publisher*
- 4) *N Gregory Mankiw, Macroeconomics , worth publishers ,7th edition 2010*
- 5) *Olivier Blanchard , Macroeconomics , Pearson education ,Inc, 5th edition 2009*
- 6) *M.L Jhingan , Macroeconomics Theory 12th edition 2005*
- 7) *H . L. AHUJA, Macroeconomics theory and policy S Chand and company limited .publisher 20th edition 2010*
- 8) *Andrew B. Aabel and Ben S. Bernanke , macroeconomics , Pearson education Inc , 5th edition ,2009*
- 9) *Suraj B, Gupta : Monetary Economics , S Chand and Co-Ltd.*
- 10) *K.K. Kurihara ,monetary theory and public policy , Kalyani publication*
- 11) *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 Objective: 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.

Learning Outcome: 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 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, Wholesale 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. Limitations of index numbers,	15	20
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, judgmental 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, Wiley publications*
- 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, Statistical Methods, Sultan Chand and Sons*
- 7) *Richard J. Larsen and Morris L. Marx, An Introduction to Mathematical Statistics and its 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 Objective: 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.

Learning Outcome: 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 Description	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 Way to 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 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*

FOURTH SEM ESTER

COURSE: MINOR

MACROECONOMICS-II

PAPER: MINOR-4.1

CREDIT: 04

Course Objective: 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.

Learning Outcome: 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 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	10	20

exchange rates. (concepts only)		
Foreign exchange markets: Definition, hedging, speculation, and arbitrage in foreign exchange markets. (concepts only)		
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)*