St. Aloysius College (Autonomous), Jabalpur

Reaccredited 'A++' by NAAC (CGPA – 3.58/4.00)
College with Potential for Excellence (CPE) by UGC
DST FIST Supported & Star College Scheme by DBT

Department of Economics

Syllabus

M.A. II Semester

Session : 2025-26

M.A. – II Semester
Paper –I(Macro Economics)

Course Title	Macro Economics
Course Type	Core Course
Credit Value	05
Max. Marks	100
Course Learning outcomes (CLO)	On successful completion of this course, the students. **CLO 1** To understand core macroeconomic concepts, variables, and national income accounting methods. **CLO 2** To analyze the functioning of aggregate demand and supply in determining macroeconomic equilibrium. **CLO 3** To compare Classical and Keynesian economic models and evaluate their assumptions and criticisms. **CLO 4** To explain the objectives, instruments, and macroeconomic impacts of fiscal and monetary policy using the IS-LM framework. **CLO 5** To interpret key theories of consumption, investment, and money demand, and relate them to current economic trends.

Unit	Topics
Unit 1 Introduction to Macroeconomics and its concepts	Macroeconomic variables: Consumption expenditure. savings, investment, national income and its components. Concept of stock and flow variables. Circular flow of money in two sector, three sector & open economy. Aggregate Supply & aggregate demand curve. Equilibrium in AS & AD in the long run. Methods of national income accounting: Income Approach. Expenditure Approach. Value Added Approach. --- Unit Activity: Identify Stock and Flow variables from the news article and justify your reasoning. Calculate year-on-year growth of the National Income of India for the last three years, for Market Price, Factor cost and GVA.
Unit 2 Classical and Keynesian Economics	Classical Theory, Say's Law of Market, Classical Model with and without saving and Investment, Criticism of the Model. Keynesian Model of aggregate demand and supply. Keynes Vs Classicals, Criticism of the Model. IKS: Growth Pattern, Structures of Economy in Ancient India and Significance of Indian Knowledge System in Modern Trade --- Unit Activity: Identify Indian government policies in the recent past which have been successful in Keynes's concept.
Unit 3 Introduction to	Introduction to Fiscal & Monetary Policy Its Objectives and instruments of Fiscal Policy. Objectives & instruments of

Fiscal & Monetary Policy	Monetary Policy. Effect of these instruments on the economy. IS-LM Curve - The Goods market: IS curve. The Money market: LM Curve. Equilibrium in IS-LM Curve, crowding effect and effects of Tax, Money supply on these curves. Multiplier Theory- Simple Investment & Govt. Budget multiplier, Tax Multiplier & Foreign Trade Multipliers, Effects of Multipliers.
Unit 4 Theories of Consumption and Investment- Consumption	Theories of Consumption and Investment-Consumption: Concept of Consumption Function, APC and MPC. Factors affecting consumption. Theories of consumption -Absolute, relative, life cycle, Permanent Income Hypothesis. Investment: Investment Function, Determinants of Investments, MEC and MEI, Dynamic Multiplier. Saving function and Paradox of thrift. Trend of Consumption, Saving and Investment in India. -- Unit Activity: Estimate growth of Aggregate Consumption Expenditure of India, Gross savings, Financial savings and Physical Savings for the last three years.
Unit 5 Money	Money- Functions & Types, Theories of Demand for money-Pre Keynesianism, Liquidity Preference theory, Theories of Demand for money-Post Keynesianism, Money multiplier and its components, Supply of money and stock of money supply -- Unit Activity: Make a time series of M3 and M4 for the past 8 weeks. What are New Monetary Aggregates of Money Supply.

Text Books, Reference Books, and Other resources

1. Shapiro, E. (1996), Macroeconomic Analysis, Galgotia Publications, New Delhi.
2. Mankiw, N.G. (2009) Macroeconomics. 7th Edition,Worth, New York.
3. Dornbusch, R. and F. Stanley (1997), Macroeconomics, McGraw Hill, Inc., New York.
4. Ackley, G. (1978), Macroeconomics: Theory and Policy, Macmillan, New York.
5. Ahuja H.L. Modern Economics 13th Edition, 2008, S. Chand and Company Ltd., New Delhi.
6. Jhingan, M.L. (2002) Macro Economics Theory. Vrinda Publishers, New Delhi.
7. Agrawal S., (2025) Growth of Indian Economy through Indian Knowledge System.

IKS- Chapter 29 -
https://shodhsamagam.com/uploads/issues_tbl/1743859421rowth-of-Indian-Economy-through-Indian-Knowledge-System.pdf

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Paper –II (Computer Applications for Economic Analysis)

Course Title पाठ्यक्रम का शीर्षक	**Computer Applications for Economic Analysis**
Course Type पाठ्यक्रम का प्रकार	Core
Credit Value क्रेडिट मान	**04**
Max. Marks अधिकतम अंक	100
Course Learning Outcomes CLO)	On successful completion of this course, the students will be able to: CLO 1: Master data management and manipulation CLO 2: Apply statistical analysis techniques CLO 3: Interpret data visualization tools CLO 4: Utilize R programming for data analysis CLO 5: Work with advanced statistical software (SPSS)

Unit	Topics

Unit I
MS-Excel
	MS-Excel: Introduction, Features of MS-Excel, Worksheet, Workbook, Cell Pointer, Cell Range, Cell Address, Name Box, Function Bar, insert function, Functions – Date, Time, DAY, TODAY, VLOOKUP, HLOOKUP, Basic Statistical Functions – Sum, Average, Max, Min, Count, Insertion of charts, wrap text, merge & centre.
	
	Unit Activity:
	1. Worksheet & Workbook Basics:
	   o Create a new workbook and rename 3 worksheets as "Sales," "Expenses," and "Summary."
	   o Enter sample data (e.g., product names, monthly sales, costs) using cell ranges (A1:D10).
	   o Use Merge & Center to create a header titled "2024 Sales Report."
	2. Formulas & Functions:
	   o Apply SUM, AVERAGE, MAX, and MIN to calculate total sales, average costs, and highest/lowest values.
	   o Use TODAY() and DAY() to auto-populate the current date and extract the day from it.
	   o Create a VLOOKUP table to find product prices from a reference list.
	3. Charts & Formatting:
	   o Insert a Column Chart to visualize monthly sales data.
	   o Use Wrap Text for lengthy product descriptions and adjust column

	widths. IKS Activity: Discuss the use of binary methods in development of IT.
Unit II **MS-Excel**	Data Validation, Import Procedure of Data Analysis Tab, Hypothesis, T-test, Measures of central tendency (Mean, Median, Mode), Correlational Analysis, Linear Regression, What-if Analysis – Goal Seek, Scenario Manager, Data Table.

	Activities –
	1.Data Validation & Import:
	   o Set Data Validation rules to restrict entries in the "Region" column (e.g., "North," "South," "East," "West").
	   o Import a CSV file into Excel using the Data Analysis ToolPak.
	2.Statistical Analysis:
	   o Calculate Mean, Median, and Mode for a dataset (e.g., student scores).
	   o Perform a T-Test to compare average sales between two regions.
	   o Use Correlational Analysis to find relationships between advertising spend and sales.
	3.What-If Analysis:
	   o Apply Goal Seek to determine the required sales to achieve a profit target.
	   o Create scenarios using Scenario Manager (e.g., "Best Case," "Worst Case").

Unit III **R Programming**	Introduction, Features of R, R Studio, Installation of R, R Basic Syntax, R Packages, Basic Algebra, Vectors, Operators, Data Types, String, Matrices, Lists, Data Frame, Sorting, R Charts & Graphs, Arrays, Factors,Built-in functions – abs, sqrt, ceiling, trunc, round, floor, seq, rnorm, print, log(x), exp(x).

	Activities –
	1.Setup & Syntax:
	   o Install R and RStudio. Write a script to print "Hello, R!" and perform basic algebra (e.g., 5^3 + sqrt(25)).
	2.Vectors & Matrices:
	   o Create a numeric vector of temperatures (e.g., temp <- c(22, 25, 19, 30)).
	   o Build a matrix of student marks and use rowSums() to calculate totals.
	3.Functions & Data Frames:
	   o Generate a sequence of numbers using seq() and round decimals with floor(), ceiling(), and trunc().
	   o Create a data frame for employee details (Name, Age, Salary) and sort it by salary.
	4. Visualization:
	   o Plot a bar chart for monthly sales data using R's built-in functions.

Unit IV SPSS	Introduction, Features of SPSS, Uses of SPSS, Installation of SPSS, Qualitative & Quantitative data, Variables – Nominal, Ordinal, Ratio, Interval, Method of preparing datasheet and entering data according to its characteristics, Importing MS-Excel file in SPSS.

	Activities –
	1. SPSS Setup & Data Types:
	  o Install SPSS and create a new dataset.
	   Define variables (e.g., Nominal: Gender, Ordinal: Education Level).
	2. Data Entry & Import:
	  o Prepare a datasheet for survey responses (e.g., Age, Income, Satisfaction Score).
	  o Import an Excel file (e.g., "Customer_Data.xlsx") into SPSS.
	3. Variable View vs. Data View:
	  o Adjust variable properties (e.g., labels, measurement scales) in Variable View.

Unit V SPSS	Use of various statistical tools on SPSS, t-Test, Chi-Square test, functions to estimate descriptive statistics, Frequency, Measures of central tendency and variation (Mean, Mode, Median).

	Activity
	1. Descriptive Statistics:
	  o Run Frequency Analysis for categorical data (e.g., product categories).
	  o Calculate Mean, Median, and Mode for a numeric variable (e.g., monthly income).
	2. Hypothesis Testing:
	  o Perform a Chi-Square Test to check associations between gender and product preference.
	  o Conduct an Independent Samples T-Test to compare employee performance across departments.
	3. Data Visualization:
	  o Generate a Pie Chart to show the distribution of survey responses.

Suggested Readings:

1. Microsoft Office Excel 2007 Step by Step:Frye, PHI, MS Office: Sanjay Saxena, Vikas Publishing House, Mahoney, M. (2019).
2. Introduction to Data Exploration and Analysis with R:Performing Data Analysis using IBM SPSS, Lawrence S. Meyers, Glenn C. Gamst, A. J. Guarino, Wiley Publication.
3. SPSS for Windows Step by Step:A Simple Guide and Reference, Darren George and Paul Malley.
4. https://bookdown.org/mikemahoney218/IDEAR/Phillips, N.D. (2018). *YaRrr, The Pirate's Guide to R*.https://bookdown.org/ndphillips/YaRrr/

Paper –III (Financial Institutions & Markets)

Course Title	Financial Institutions & Markets
Course Type	Core Course
Credit Value	05
Max. Marks अधिकतम अंक	100
Course Learning Outcomes CLO)	On successful completion of this course, the students will be able to: 1. Understand the fundamental structure and functions of the Indian Financial System. 2. Explain the characteristics and prerequisites for a well-functioning financial system. 3. Identify and analyze the various players within the Indian Financial System. 4. Comprehend the evolution and different segments of Indian Financial Markets. 5. Analyze the role and importance of financial markets in the economy. 6. Gain in-depth knowledge of the Indian Money Market. 7. Assess the impact of technological developments on Indian Financial Markets. 8. Gain knowledge of the structure and functioning of Foreign Exchange Markets.

Unit	Topics
Unit-1 Indian Financial System and Major Institutions	**Structure of Indian Financial System**- An overview of the Indian financial system, Introduction of financial system, Functions of the Financial System, Structure and Characteristics of Financial system, Prerequisites of a Financial System, Players in the Financial System. Major reforms in the last decade: Payment banks, monetary policy and restructuring. Regulatory Institutions in India: RBI, SEBI, IRDA, PFRDA. Describe Hundis as indigenous credit instruments used for remittance and trade finance across vast distances. Commercial Banking: Role of Banks, corporate banking, Core banking solution (CBS), Arthashastra acknowledges the concept of interest (vriddhi) and even discusses different rates for various types of loans and borrowers, showing an early understanding of the time value of money and risk. Non-Banking Finance Companies: NBFCs Introduction and its types; Services Provided by NBFCs, comparison between Banks and NBFCs, Growth of NBFC in India. **Unit Activity:** • Structure Diagram Creation: Draw a hierarchical diagram illustrating the structure of the Indian Financial System (e.g., Regulators at the top, then Financial Institutions and Markets, with sub-categories under each). • Create a chart illustrating the regulatory framework for NBFCs in India, primarily focusing on the role of the RBI. Include different categories of NBFCs and any variations in their regulation.

Unit -2 **Introduction of Financial Markets & Products**	Evolution of the Financial Markets, Segments of Financial Markets, Types of Financial Products, Types of Shares, Bonds, Mutual Fund, Insurance etc. Stages in the Development of Financial Products, Role of Financial markets, Market Efficiency. Introduction to Foreign Exchange Markets, Structure of Foreign Exchange Markets, Types of transactions and settlement. **Unit Activity** • Market Segmentation Chart: Develop a visual chart illustrating the different segments of financial markets (e.g.. Money Market vs. Capital Market, Primary vs. Secondary). Under each segment, list examples of relevant instruments and participants Foreign Exchange Markets: • Create a detailed mind map starting with "Foreign Exchange Markets." Branch out to "Introduction, "Structure "Types of Transactions," and "Settlement." Within each branch, add key concepts, participants, and examples.
Unit -3 **Money Market:**	Introduction to Money Market, Characteristics and functions, Development of money market in India: The Hundi system served as a vital instrument for short-term credit, remittances, and exchange, enabling merchants to access funds and settle transactions across vast distances without physical movement of cash. Money Market instruments-T-bills, Commercial Papers, Certificates of deposits, call money markets, Repo-purchase and factors affecting their growth: Focus on Commercial Papers. Short-term instruments "Role of RBI in the development of money market, Money market and its linkage with Monetary Policy. **Unit Activity** For each function of the money market (e.g., providing liquidity, facilitating trade finance, implementing monetary policy), find a real-world example or a hypothetical scenario illustrating how that function operates in India.
Unit -4 **Capital Market**	Introduction to Capital Market, Characteristics and functions, Development of Capital market in India, Primary and Secondary Capital markets, Role of SEBI in regulation of the Capital Markets, Reforms in the Capital Markets, Capital Market instruments, Classification of Stock Markets, IPO, Stock Exchanges, etc **Unit Activity** • Construct a detailed mind map starting with "Indian Capital Market." Branch out "Characteristics,""Functions, ""Development, ""Primary to Market, ""Secondary Market,"Role of SEBI,""Reforms," and "Instruments." Populate each branch with specific details and examples
Unit -5 **Technology and the Markets and Other Fin-tech Innovations**	Technological developments in financial markets; both money and capital markets especially after post reform period: Ancient India, preceding modern Fin-Tech, developed key "technologies" crucial for commerce. The decimal system and zero revolutionized complex calculations and accounting for trade and treasuries. The Bahi-khata system (early double-entry bookkeeping) and the Hundi system for payments and credit as indigenous financial innovations. Impact of Technology on the Market, On-Line Trading, Clearing &

	Settlement system, Technology and payment System, Technology and global market. Role of E-Commerce in the development of Financial Markets. **Unit Activity** • If available, use online trading platforms (even demo accounts) to understand the mechanics of online order placement, execution, and market data access. 'Focus on how technology facilitates this process

Recommended Supporting Books/Texts/Reading Material:

1. Ohlson J.A (1987)The theory of Financial Market and Insitutions North Holl and Ams
2. Bhole, L.M(1991) Financial Insitutions and market, Tata Mc Grawhill Company Limited New Delhi
3. Jhon H.J (1993) Financial Insitution and Market Mc Grawhill Company Limited New Delhi
4. Machiraju M.R(1999) Indian Financial System Vikas publication House New Delhi
5. Bhole, L.M(2000)Indian Financial System, Chung Publication Allahabad
6. Prasad k.n (2001) Developmentof Indian Financial SystemSarup & son's New Delhi
7. Mith P.F (1978)Money and Financial Intermediation The Theory and Structure of Financial SystemEnglewood cliffs Newjersey
8. Chandra,P.(1997), Financial Markets,(4thEdition), TataMcGrawHill,NewDelhi
9. Machiraju,H.R.(1997),InternationalFinancialMarketsinIndia,WheelerPublishing,Allahbad..
10. . Fenstermaker,J.V.(1969),ReadingsinFinancialMarketsandInstitutions,Appleton, NewYork.
11. Gupta,S.B.(1983),MonetaryEconomics,S.Chand&Company, NewDelhi.
12. Bhatt,R.S.(1996), UnitTrustofIndiaandMutualFunds:AStudy, UTIInstituteofCapi talMarkets, Mumbai. 13Sahadevan,K.G.andM.T.Thiripalraju(1997),Mutual Funds, PrenticeHallofIndia, NewDelhi
13. Sahadevan,K.G.andM.T.Thiripalraju(1997),Mutual Funds, PrenticeHallofIndia, NewDelhi.
14. Goss,B.A.andB.S.Yamey(1978),TheEconomicsof FuturesTrading, Macmillan,London.
15. Gupta,L.C.(Ed.)(1999), India'sFinancialMarketsandInstitutions, Society for Capital ResearchandDevelopment, Delhi.
16. Crocker,A.(1982),InternationalMoney;IssuesandAnalysis,TheEnglishLanguage BookSociety, Nelson, London.

Paper – IV(Statistics for Economics)

Course Title	Statistics for Economics
Course Type	Core Course
Credit Value	05
Max. Marks अधिकतम अंक	100
Course Learning Outcomes CLO)	On successful completion of this course, the students will be able to: 1. To summarize and interpret datasets using descriptive statistics (arithmetic/geometric mean, median, quartiles, dispersion, skewness), building on foundational concepts to assess variability and distributional symmetry. 2. To model real-world economic phenomena with probability distributions (Binomial, Poisson, and Normal), leveraging PDFs, CDFs, and measures like expectation/variance to quantify uncertainty. 3. To construct and refine index numbers (price, quantity, cost-of-living) for tracking economic trends, incorporating techniques like base shifting and deflation to adjust for inflation and structural changes. 4. To analyze relationships between economic variables using correlation (Pearson, Spearman) and predict outcomes through regression models, extending insights from data interpretation to forecast trends. 5. To critically evaluate the utility and limitations of mathematical/statistical tools in economics, integrating knowledge from modeling, analysis, and prediction to inform ethical and practical decision- making.

Unit	Topics
Unit-1 Understanding the Data	Data Presentation: Definition, scope and uses of Statistics in Economics; Classification of data: Quantitative and Qualitative; Attributes, Variables, Scales of measurement: Nominal, Ordinal, Interval and Ratio; Presentations: Tabular and Graphical presentation, such as Bar Diagram, Line Diagram, Pie Chart, Histogram, Ogive etc. **Activities** - Using 5 Data Sets from RBI, plot appropriate graphs on Excel.
Unit -2 Frequency Distribution, Measures of Central Tendencies, Quartile, Dispersion and Skewness	Distribution, Frequency Distribution, Mathematical Average- Mean (Arithmetic Mean, Geometric Mean); Positional Averages - Median and Mode; Quartile. Measures of dispersion- Range, Inter-Quartile range, Quartile deviation, Mean deviation, Variance and Standard deviation; Skewness. **Activity** - Using a dataset from RBI's website compute the Measures of dispersion of at least 5 variables
Unit -3	Concept, types, application and problems in construction of Index

Index Numbers	numbers, The chain index numbers, Base shifting and deflating the index numbers, cost of living index numbers. **Activity** - India's Industrial Production Index (IIP) uses 2011-12 as the base year. The government wants to shift the base to 2017. Rebase the index to 2017.Convert the 2010-2023 series to the 2017 base.
Unit -4 **Correlation and Regression**	Correlation Analysis: Karl Pearson coefficient of correlation, Spearman's rank correlation, and concept of Probable Error. Regression Analysis: Concept, Regression lines, Regression coefficients, equations and prediction. **Activity** -Using the appropriate variables from RBI dataset, find the any 3 pairs of correlated variables and interpret the results.
Unit -5 **Probability and Probability Distributions**	Probability Theory: Probability concepts, Axiomatic probability: laws of probability, conditional probability and independence; Random variable; Expectation; Discrete and continuous probability distributions, CDF and PDF of Binomial, Poisson and Normal distributions. IKS: Probability in Ancient India (Raju, C. (2011).) **Activities -** Collect a sample of 7 data points on the marks obtained in class 12th from your class, and make a sampling distribution of the sample means obtained. And check how many z scores away was your sample from the mean.

Recommended Supporting Books/Texts/Reading Material:
1. Chiang. A. C. "Fundamental Methods of Mathematical Economics." Mc Graw-Hill. New York, 1984.
2. Gupta, S.C. and Kapoor, V.K. (1997) Fundamentals of Mathematical Statistics. Sultan Chand and Sons, New Delhi. 11.23-12.23.
3. Gupta. S. P. "Statistical Methods," Sultan Chand and Sons, New Delhi, 2000.
4. Raju, C. (2011) Probability in Ancient India in Elsevier e-Books (pp. 11751195).