

COURSE OUTCOME (POST-GRADUATION)

UNIVERSITY DEPARTMENT OF ECONOMICS

B.R.A BIHAR UNIVERSITY

PG First Semester:

CC- 1: Microeconomics Analysis-I

1. Consumer Demand Theory Proficiency: Students will gain a thorough understanding of consumer behaviour, including utility maximization, indifference curves, and the derivation of demand curves, enabling them to analyse how changes in prices and income affect consumer choices.
2. Application of Elasticity Concepts: Learners will analyse the concepts of price elasticity of demand, income elasticity, and cross-price elasticity, and apply these concepts to assess the responsiveness of consumers to changes in market conditions.
3. Production Theory Understanding: Understanding concepts such as the production function, short-run and long-run production decisions, and the law of diminishing returns, enabling them to evaluate how firms optimize output.
4. Cost Analysis Skills: Students will analyse different types of costs (fixed, variable, total, average, and marginal) and their implications for production decisions and pricing strategies in various market structures.
5. Perfect Competition Dynamics: Learners will understand the characteristics of perfect competition, including price-taking behaviour, market equilibrium, and long-run adjustments, and apply these principles to analyse real-world market scenarios.
6. Imperfect Competition: Graduates will critically evaluate market structures including monopolies, oligopolies, and monopolistic competition, and understand the implications of market power on pricing and output decisions.
7. Game Theory Application: Students will apply basic concepts of game theory to analyse strategic interactions among firms in oligopolistic markets, exploring concepts such as Nash equilibrium and dominant strategies.
8. Policy Implications Analysis: Learners will evaluate the implications of microeconomic theories for public policy, including antitrust regulations, price controls, and taxation, fostering a critical perspective on how these policies affect market outcomes.

CC-2: Macroeconomic Analysis-I

1. National Income Accounting Mastery: Students will gain proficiency in national income accounting, including understanding the components of GDP, GNP, and NNP, and their significance in measuring economic performance.
2. Analysis of the Consumption Function: Learners will analyse the consumption function, exploring factors influencing consumer behaviour, such as income, wealth, and expectations, and apply this understanding to predict changes in aggregate demand.
3. Investment Function Evaluation: Graduates will evaluate the investment function, identifying key determinants of investment decisions, including interest rates, business expectations, and government policies, and assessing their impact on economic growth.

4. **Monetary Supply Dynamics:** Students will develop an understanding of the money supply, including the role of central banks, the mechanisms of money creation, and the factors influencing changes in the money supply.
5. **Demand for Money Analysis:** Learners will analyse the demand for money, focusing on theories such as the quantity theory of money and liquidity preference, and understand how these theories inform monetary policy decisions.
6. **Interrelationships Among Key Macroeconomic Variables:** Graduates will demonstrate the ability to synthesize knowledge of national income, consumption, investment, and monetary dynamics to understand their interrelationships.
7. **Application of Macroeconomic Models:** Students will apply macroeconomic models to real-world scenarios, assessing how changes in consumption, investment, and money supply influence economic equilibrium and growth.
8. **Critical Policy Evaluation:** Learners will critically evaluate macroeconomic policies related to national income, consumption, and investment, developing informed opinions on their effectiveness in achieving economic stability and growth.

CC-3: Mathematical Methods

1. **Understanding Functions and Their Types:** Students will demonstrate a solid understanding of various types of mathematical functions (linear, quadratic, exponential, logarithmic), their properties, and their applications in economic modelling.
2. **Proficiency in Partial Differentiation:** Learners will be able to apply partial differentiation techniques to analyse functions of multiple variables, interpreting the marginal effects of changing one variable while holding others constant.
3. **Matrix and Determinant Analysis:** Graduates will gain the ability to compute and interpret determinants and matrix operations, utilizing these concepts in the context of solving systems of equations relevant to economic models.
4. **Optimization Techniques:** Students will develop skills in optimization, identifying critical points and utilizing first and second derivative tests to determine maximum and minimum values of functions relevant to economic theory.
5. **Application of Lagrange Multipliers:** Learners will apply the method of Lagrange multipliers to solve constrained optimization problems, demonstrating how to maximize or minimize functions subject to specific constraints.
6. **Linear Programming Proficiency:** Graduates will understand the principles of linear programming, formulating and solving linear optimization problems using graphical and simplex methods to determine optimal resource allocation.
7. **Input-Output Analysis Understanding:** Students will learn the concepts of input-output analysis, including constructing input-output tables, understanding inter-industry relationships, and applying the Leontief model to analyse the effects of changes in one sector on the entire economy.
8. **Interpreting Economic Models Mathematically:** Learners will apply mathematical methods to interpret and analyse economic models, enhancing their ability to articulate the relationship between mathematical solutions and economic theories.

CC-4: History of Economic Thought

1. **Understanding Economic Theories:** Students will gain a comprehensive understanding of foundational economic theories, including Mercantilism, Physiocracy, Classical Economics, and Neo-Classical Economics, and their historical contexts.

2. **Analysis of Classical Economic Thinkers:** Learners will critically analyse the contributions of key classical economists such as Adam Smith, David Ricardo, and John Stuart Mill, assessing their influence on economic thought and policy.
3. **Insights into Neo-Classical Economics:** Graduates will explore the ideas of neo-classical economists, including Alfred Marshall and Leon Walras, focusing on concepts such as utility, marginalism, and equilibrium.
4. **Evaluation of Indian Economic Thinkers:** Students will examine the ideas of influential Indian economists and thinkers, including Kautilya, Dadabhai Naoroji, M.K. Gandhi, Gopal Krishna Gokhale, and D.R. Gadgil, VKRV Rao and Amartya Sen, etc. evaluating their contributions to economic thought and national policy.
5. **Interdisciplinary Connections:** Learners will connect the economic theories discussed with broader social, political, and historical developments, understanding how these theories influenced and were influenced by their contexts.

PG Second Semester:

CC-5: Indian Economy- Issues and Policies-I

1. **Analysis of the Indian Economy Under British Rule:** Students will critically analyse the economic policies and structures established during British rule in India, evaluating their impact on agriculture, industry, and overall economic development.
2. **Understanding Human Development Index (HDI):** Learners will explore the components of the Human Development Index, assessing its use as a measure of development and its implications for policy-making in the Indian context.
3. **Poverty and Inequality Measurement Techniques:** Graduates will apply understand methods to measure poverty and economic inequality in India, utilizing tools such as the Gini coefficient and Lorenz curve to analyse income distribution and wealth disparities.
4. **Agricultural Sector Evaluation:** Learners will study the role of agriculture in the Indian economy to analyse productivity, income levels, and the impact of agricultural policies on rural development.
5. **Industrial Sector Insights:** Graduates will examine the evolution of the industrial sector in India to assess industrial growth, investment patterns, and the impact of policy reforms on industry.
6. **Service Sector Dynamics:** Students will analyse the growing importance of the service sector in the Indian economy to evaluate its contribution to GDP, employment, and economic development.
7. **Economic Reform Analysis:** Learners will critically evaluate the economic reforms implemented in India post-1991 to assess their impact on various sectors, including agriculture, industry, and services.

CC-6: Economics of Growth and Development-I

1. **Understanding Economic Growth and Development:** Students will differentiate between economic growth and development, gaining a comprehensive understanding of their concepts, indicators, and significance in assessing national progress.
2. **Globalization and Economic Development:** Exploring both opportunities and challenges for developing countries in a globalized economy along with the understanding of different indices like, HDI, Human Poverty Index, Gender Development Index, etc.

3. Analysis of Structural Transformation: Learners will explore the process of structural transformation with the understanding of economic theories of Rostow, Malthus, Kuznets along with examining how shifts from agriculture to industry and services influence overall economic development and employment patterns.
4. Theoretical Frameworks of Economic Growth: Graduates will critically evaluate major theories of economic growth, including classical, neoclassical, endogenous, and heterodox approaches, assessing their implications for policy and practice.
5. Role of Institutions in Growth: Students will analyze the impact of institutions—such as governance, legal systems, and financial institutions—on economic growth, understanding how institutional quality influences development outcomes.
6. Social Aspects of Growth: Learners will examine the role of social factors—such as education, health, gender equality, and social capital—in promoting or hindering economic growth, emphasizing the importance of inclusive development.
7. Measurement and Indicators of Development: Graduates will develop skills in measuring economic growth and development using various indicators, including GDP, HDI, and other multidimensional measures of well-being.

CC- 7: Microeconomics Analysis-II

1. Understanding Advanced Firm Behaviour Theories: Comprehend the Baumol Model of Sales Revenue Maximization, Williamson’s Model of Managerial Discretion, focusing on the trade-offs between profit maximization and managerial utility maximization in large firms and understanding the Marris Model of Managerial Enterprise.
2. Limit Pricing and Market Structures: Evaluating Bain’s Limit Pricing Theory, which examines how incumbent firms may set prices below profit-maximizing levels to deter entry from potential competitors.
3. Rent Theories: Understanding the concept of differential rent based on land productivity and its implications in resource allocation.
4. Factor Pricing Theories: Exploring Marginal Productivity Theory of Wages, theory of Profit and Interest, risk-bearing, innovation, and dynamic change as key factors.
5. General Equilibrium Theory: Students will analyse how supply and demand in different markets are interlinked, ensuring equilibrium across the economy rather than in isolated markets.
6. Welfare Economics: Understanding the criteria for social welfare optimization, such as Pareto efficiency, and exploring concepts like consumer surplus, producer surplus, and overall economic efficiency.
7. Risk and Uncertainty: Student will analyse decision-making under Risk and Uncertainty, studying how economic agents make choices when faced with uncertain outcomes, using expected utility theory and other approaches.

CC-8: Macroeconomic Analysis-II

1. Understanding Post-Keynesian Theories of Demand for Money: Students will understand Baumol-Tobin Model and Tobin's Portfolio Approach to the broader dynamics of money demand .
2. Comprehending the Neo-Classical and Keynesian Synthesis: Analysing Hicks and Samuelson integration with Keynesian short-run macroeconomic analysis with long-run classical theories of price and wage flexibility.

3. Exploring Theories of Inflation: Analysing different theories, including Demand-Pull Inflation and Cost-Push Inflation, understanding how inflation is driven by aggregate demand or rising production costs, studying Structuralist Theories of Inflation, evaluating Monetarist and New Classical Views on inflation.
4. Understanding Business Cycle Theories: Exploring various theories, including Keynesian, Monetarist, and Real Business Cycle Theories, understanding the causes and characteristics of cyclical fluctuations in output, employment, and prices.
5. New Classical Macroeconomics: Students will gain a comprehensive understanding of concepts such as Rational Expectations and Market Clearing and studying the New Classical approach challenges Keynesian economics.
6. Evaluating Policy Implications in Modern Macroeconomics: Examining the policy recommendations arising from both Keynesian and New Classical schools of thought.

CC-9: Statistical Methods

1. Understanding Methods of Data Collection: Students will comprehend various methods of Collecting Data, including primary and secondary data, surveys, experiments, interviews, and observations.
2. Correlation and Regression: Gaining a thorough understanding of Pearson's correlation coefficient and Spearman's rank correlation, applying Regression Analysis to model relationships between dependent and independent variables, and interpret results for prediction and decision-making.
3. Constructing and Interpret Index Numbers: Learning the Laspeyres and Paasche indices, and measuring economic variables like price levels, inflation, and cost of living, evaluating the advantages and limitations of various types of index numbers.
4. Understanding Probability Theory: Students will acquire knowledge of probability distributions, random variables, conditional probability, and the laws of probability.
5. Estimation and Properties of Estimators: Student will understand Point Estimators and Interval Estimators, and understand the properties of good estimators—unbiasedness, efficiency, consistency, and sufficiency, developing skills.
6. Understanding Sampling Distribution: Analysing Sampling Distributions and inferences about population parameters, learning key concepts such as the Central Limit Theorem, which is essential in determining the distribution of sample means and performing hypothesis testing.
7. Time Series Analysis: Understanding the fundamental components like, trend, seasonal, cyclical, and irregular variations, learning methods for analysing and forecasting time series data using techniques such as moving averages, exponential smoothing, and autoregressive models (ARIMA).

PG Third Semester:

CC-10: Indian Economy- Issues and Policies-II

1. Understanding Population Dynamics and Empowerment: Analysing population growth, age structure, and demographic dividend, and their impact on economic development, evaluating policies aimed at Population Control, Poverty Alleviation, and Human Resource Development.
2. Examining Social Aspects of the Indian Economy: Developing insights into the Social Dimensions such as gender equality, education, health, and social security, and understand their role in shaping India's economic progress.

3. **Analysing Fiscal Issues:** Understanding government revenue, expenditure, and deficits, evaluating the challenges of fiscal sustainability, government debt, and the effectiveness of fiscal measures in promoting economic growth and reducing income disparities.
4. **Understanding Financial and External Sector Issues:** Understanding of the Indian Financial System and analysing challenges in the financial sector, such as financial inclusion, non-performing assets (NPAs), and regulatory reforms aimed at improving financial stability.
5. **Balance of Payments (BoP):** Understanding how trade in goods and services, remittances, and capital flows impact external sector stability, evaluating the causes and consequences of BoP deficits or surpluses.
6. **Understanding Exchange Rate Mechanisms:** Studying how domestic and global factors influence the rupee's value against other currencies, analysing the impact of exchange rate policies and currency depreciation.
7. **Economy of Bihar:** Students will study the key sectors such as agriculture, industry, and services, analysing poverty, infrastructure deficits and evaluate state-level policy initiatives aimed at economic development and inclusive growth.
8. **Understanding WTO and ASEAN:** Gaining a thorough understanding of India's role in Global Trade Organizations and evaluating the impact of trade liberalization, protectionism on India's trade dynamics.

CC-11: Economics of Growth and Development-II

1. **Migration and Urbanization:** Understanding rural-to-urban migration and international migration, income distribution, and economic development, with special attention to the Harris-Todaro Model of rural-urban migration and impact of urbanization on infrastructure, housing, and social services.
2. **Understanding the Role of Technological Change in Economic Development:** Examining innovation, and productivity improvements, analysing how technology impacts labour markets, industrial transformation, research and development (R&D).
3. **Evaluating the Prebisch-Singer Thesis:** Gaining insights into terms of trade between primary commodities and manufactured goods tend to deteriorate over time, leading to economic challenges for developing nations reliant on primary exports.
4. **Applying Cost-Benefit Analysis:** Understanding evaluation and decision-making, costs and benefits of development projects, accounting for externalities, discounting future values, evaluating the overall economic, social, and environmental impacts of investments.
5. **Input-Output Analysis and Linear Programming:** Learning the fundamentals of mathematical optimization technique used in planning, resource allocation and cost minimization in economic development projects.
6. **Growth Models:** Understanding endogenous growth models of Meade, Phelps and the role of factors such as human capital, innovation, and knowledge.

CC-12: Public Economics

1. **Understanding the Role of the State in Economic Functions:** Analysing the Allocation, Distribution, and Stabilization Functions through fiscal and monetary policies, maintaining full employment, price stability, and economic growth.
2. **Public Choice Theory:** Students will understand how individual preferences, incentives, and collective actions influence government policies, analysing issues such as voting

- behaviour, government inefficiency, rent-seeking, and the role of interest groups in shaping public policy.
3. **Public Policy Formation: Understanding the role of political institutions, bureaucracies, and social actors in decision-making, evaluating the effectiveness of various public policies in addressing economic and social issues, such as healthcare, education, and environmental sustainability.**
 4. **Understanding Public Expenditure Theories: Analysing theories of Public Expenditure, such as Wagner's Law and the Peacock-Wiseman Hypothesis, to understand the growth and pattern of government spending over time.**
 5. **Taxation and Its Economic Impact: Developing a thorough understanding of the principles of Taxation, including tax incidence, equity, efficiency, and optimal taxation, examining the structure of various tax systems.**
 6. **Understanding Fiscal Federalism: Understanding division of taxing and spending powers between different levels of government, intergovernmental transfers, revenue-sharing mechanisms, and fiscal decentralization.**

CC-13: International Economics

1. **Understanding the Theory of International Trade: Comprehensive understanding of classical and modern Theories of International Trade, including Ricardian Comparative Advantage, Heckscher-Ohlin Theory, and new trade theories.**
2. **Measuring Gains from Trade: Learning how to quantify and assess the Gains from Trade using tools such as Production Possibility Frontiers and Community Indifference Curves.**
3. **Analysing Balance of Payments (BoP): Understanding the structure and components of the Balance of Payments (BoP), including the current account, capital account, and financial account, causes of deficits and surpluses, and evaluate the effectiveness of different policy measures.**
4. **Understanding Exchange Rate Determination: Exploring the theories and models of Exchange Rate Determination, including the Purchasing Power Parity (PPP) theory, Interest Rate Parity (IRP), and Monetary Models of Exchange Rate.**
5. **Regional Trade Blocks and Economic Integration: Gaining insights into the formation and functioning of Regional Trade Blocks, such as the European Union (EU), ASEAN, and NAFTA, and their impact on global trade and economic integration.**
6. **Evaluating Trade Policies and Protectionism: Understanding different types tariffs, quotas, subsidies, and non-tariff barriers, and their impact on domestic industries, consumers, and international trade relations, the role of international organizations like the World Trade Organization (WTO) in regulating global trade practices.**

CC-14: Research Methodology

1. **Understanding the Aim, Objective, and Scope of Research: Comprehend the fundamental of research, generation of new knowledge, solving specific problems.**
2. **Formulating a Research Problem: Developing the skills to identify research gaps in existing literature and to create research questions that are precise, focused, and relevant to academic inquiry.**
3. **Understanding Sampling Techniques: Gaining knowledge of various Sampling Techniques, such as random sampling, stratified sampling, and systematic sampling, and learn how to select appropriate samples for both qualitative and quantitative research.**

4. **Methods of Data Collection:** Learning different Data Collection Methods, including primary methods like surveys, interviews, observations, and experiments, and secondary methods like the use of published statistics.
5. **Formulating and Test Hypotheses:** Learning the steps involved in Hypothesis Testing, using statistical methods to determine the validity of hypotheses, and interpret the results to draw meaningful conclusions from the data.
6. **Analysing Data Using Statistical and Analytical Tools:** Acquiring skills to apply statistical and econometric tools such as regression analysis, correlation and hypothesis testing.
7. **Learning the Principles of Report Writing:** Learning how to structure a report that effectively communicates the research objectives, methods, findings, and conclusions,
8. **Research Ethics and Integrity:** Understanding data collection, participant confidentiality, and the avoidance of plagiarism by ensuring transparency, honesty, and accountability throughout the research process.

PG Fourth Semester:

EC-1: Paper-A: Agricultural Economics

1. **Understanding the Role of Agriculture in Economic Development:** Analysing the contribution of food security, employment, and poverty reduction and examining the linkages between the agricultural sector and other sectors of the economy.
2. **Agricultural Productivity and Efficiency:** Understanding the determinants like, land, labour, capital, and technological innovations and the factors affecting productivity growth, such as research and development, farm size, irrigation, and input usage.
3. **Examining Agricultural Finance:** Gaining insights into the sources and role of credit in agriculture, including formal institutions and informal sources (moneylenders), challenges of access to agricultural credit, risk management, and promoting financial inclusion for farmers.
4. **Analysing Agricultural Marketing:** Developing a comprehensive understanding of the structure, conduct, and performance of agricultural markets and the roles of intermediaries, market infrastructure, transportation, and storage facilities in the agricultural supply chain.
5. **Understanding Agricultural Price Policy:** Analyse the dynamics of Agricultural Prices, focusing on the determinants of agricultural price fluctuations, the impact of market forces, and the role of government price support mechanisms.

EC-1: Paper-C: Basic Econometrics

1. **Understanding to Apply Tests of Significance:** Gaining knowledge of t-tests, F-tests, and chi-square tests, to make inferences about population parameters based on sample data and testing hypotheses about relationships between economic variables.
2. **Frequency Distribution and Descriptive Statistics:** Understanding the role in summarizing data, using measures such as mean, variance, and standard deviation to describe the distribution of economic data.
3. **Mastering the Linear Regression Model:** Focussing on the estimation of relationships between dependent and independent variables using Ordinary Least Squares (OLS), interpreting the regression coefficients..

4. Single Equation Models: Identifying problems like, multicollinearity, heteroscedasticity, and autocorrelation, which can affect the reliability of regression estimates.
5. Working with Dummy Variables in Econometric Models: Understanding the use of Dummy Variables in regression models to represent qualitative factors, such as categorical or binary variables and its application in modelling policy impacts, gender effects, or seasonality in time series data.
6. Analysis of Variance (ANOVA): Learning to compare means across multiple groups and testing whether there are significant differences between them.
7. Understanding Simultaneous Equations Models: Learning Simultaneous Equations Models and their applications in economics, Two-Stage Least Squares (2SLS) and Instrumental Variables (IV).

EC-1: Paper-H: Environmental Economics

1. Historical Perspectives: Analysing the evolution of thought from Classical to Neo-Classical economic theories regarding the environment.
2. Economics of Environmental Degradation: Understand the causes and economic consequences of environmental issues such as pollution, deforestation, and climate change and to study externalities and market failure.
3. Designing Incentives for Environmental Protection: Exploring taxes, subsidies, tradable permits and learning environment education and sustainable development.
4. Valuing Environmental Goods and Services: Develop skills in methods like Contingent Valuation, Hedonic Pricing, and Travel Cost Method, to assess the economic value of non-market goods such as clean air, water, biodiversity, and ecosystem services and to conduct cost-benefit analysis for environmental projects and policies.
5. Environmental Problems and Policy Issues: Issues like, climate change, global warming, acid rain, greenhouse effect and to assess national and international Environmental Policy frameworks, such as the constitutional provisions, legislations, Sustainable Development Goals (SDGs) and Green GDP.
6. Environment and Sustainable Development: Studying the concept of Sustainable Development, which seeks to balance economic growth, environmental sustainability, and social equity.

EC-2: Paper-C: Demography

1. Understanding the Meaning and Scope of Demography: Learning population dynamics, including its size, composition, distribution, and changes over time and the demographic factors such as birth rates, death rates, migration, and aging influence socio-economic development, labour markets, and public policies.
2. Examine Theories of Population: Knowledge of various Theories of Population, including Malthusian Theory, Optimum Population Theory, and Demographic Transition Theory and understanding their implications for economic development.
3. Learning the Measurement of Fertility and Mortality: Understanding various demographic tools and indices, such as the Crude Birth Rate (CBR), Crude Death Rate (CDR), Total Fertility Rate (TFR), and Infant Mortality Rate (IMR).
4. Migration and Urbanisation: Exploring how migration affects labour markets and social integration and evaluating the challenges of rapid urbanization, including overcrowding, infrastructure strain and housing shortages.

5. Population Policy in India: Exploring the efforts to control population growth, improve health and education, and promote gender equality and the effectiveness of various government programs, such as Family Planning Initiatives.
6. Indian Demographic Trends: Studying the declining fertility and mortality rates, increasing life expectancy, urbanization, skewed sex ratios, aging populations along with the issues such as the Demographic Dividend and regional population disparities.

EC-2: Paper-E: Labour Economics

1. Structure and Functioning of Labour Markets: Understanding the structure, key participants (workers, employers, government), and the factors that influence labour supply and demand and to explore the impact of government policies and trade unions.
2. Theories of Wage Determination: Studying the various theories such as the Marginal Productivity Theory, Bargaining Theory, and Efficiency Wage Theory influencing wage levels and wage inequality.
3. Analyze Conditions of Decent Work: Understanding the concept of Decent Work as outlined by the International Labour Organization (ILO), focusing on fair wages, safe working conditions, and workers' rights and policy challenges in achieving decent work.
4. Applying Basic Statistical Tools to Labour Market Analysis: Learning to use descriptive and inferential statistics to analyse labour market data and using mean, median, regression analysis, and correlation to assess wage patterns, employment trends and labour productivity.
5. Labour Mobility and Migration: Analysing how migration affects labour markets, wages, and employment in both sending and receiving regions and to explore the economic impact of labour migration.
6. Evaluate Labour Market Policies: Analysing the effectiveness of minimum wage laws, employment protection legislation, unemployment insurance, and training programs.
7. Gender and Labour Market Issues: Understand the challenges faced by women in the labour market, including gender wage gaps, labour force participation rates, and occupational segregation.