

**Two-Year/One-Year M.A. (Economics) Programme
(Under NEP- 2020)**

**Course Structure & Syllabus
(w.e.f. 2026-27)**



**Department of Economics
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Curriculum Structure for Two-Year M.A. (Economics) Programme (Semesters I and II)

Semester I (Course Level 400)	Course Work		
	Course Code	Nature of Course	Credits
	26-ECO-C-400	Core Course 1: Microeconomics	4
	26-ECO-C-401	Core Course 2: Macroeconomics	4
	26-ECO-C-402	Core Course 3: Advanced Mathematics	4
	26-ECO-C-403	Core Course 4: Mathematical Statistics	4
	26-ECO-C-404	Research Methodology	4
	26-ECO-C-405	Seminar Course*	4
	Total		24
Semester II (Course Level 500)	Course Code	Nature of Course	Credits
	26-ECO-C-500	Core Course 1: India and World Economy	4
	26-ECO-C-501	Core Course 2: Econometric Analysis	4
	26-ECO-C-502	Core Course 3: International Economics	4
	26-ECO-C-503	Seminar Course*	4
	Total		16

(Semesters III and IV)/ One-Year M.A. (Economics) Programme (Semesters I and II)

Semester III (for 2-year) Semester I (for 1-year) (Course Level 500)	Course Work		
	Course Code	Nature of Course	Credits
	26-ECO-C-550	Core Course 1: Advanced Microeconomics	4
	26-ECO-C-551	Core Course 2: Open Economy Macroeconomics	4
	26-ECO-C-552	Core Course 3: Growth and Development	4
	26-ECO-C-553	Seminar Course*	4
	26-ECO-C-554	Advanced Research Methods	4
	Total		20
Semester IV (for 2-year) Semester II (for 1-year) (Course Level 500)	Research		
	Course Code	Nature of Course	Credits
	26-ECO-C-560	PG Thesis (Written Submission)/Project Report/Research paper	16
	26-ECO-C-561	PG Thesis (Viva-voce)/Presentation	4
	Total		20

Core Courses may require students to write term papers, to be submitted at the end of the semester.

*Involves student presentations on representative readings, and interactive/participatory modes of pedagogy.



Structure of Two-Year/One-Year PG Programme under NEP 2020

As per NEP 2020, the revised Two-Year PG programme is for students who have graduated with a 3-year Bachelor's degree, while the One-Year PG programme is open to students graduating with a 4-year bachelor's degree (Hons. / Hons. with Research).

The programme integrates coursework and research components for all postgraduate students, as follows:

2-year PG enrolments will be required to do three semesters of coursework and one final semester of research; 1-year PG enrolments will be required to do one semester of coursework and one semester of research.

There is only one exit option in the 2-year PG programme, i.e. at the end of the 1st year, where the student shall be awarded a PG Diploma.

The courses on offer for Semesters III and IV in the Two-Year PG curriculum will be the same as those on offer for Semester I and II in the One-Year PG curriculum.

As enshrined in the UGC Curriculum and Credit Framework for Postgraduate Programmes 2024, Research focus is the highlight of the PG curricula, wherein the first two semesters in the Two-Year PG programme include advanced courses in the concerned subject, ranging from lecture courses with practicum, seminar-based courses, term papers, research methodology, advanced laboratory experiments/software training, research projects, hands-on-training, internship/apprenticeship projects. The One-Year PG programme provides an opportunity to admitted students to carry out original study or investigation in their field of specialization on an individual and autonomous basis. During the programme, students are expected to actively participate in the seminar discussions and produce original written work as part of their training.



General Guidelines

Credit Requirement and Eligibility Conditions for Admission into PG Programmes

- A bachelor's degree with Honours/ Honours with Research with a minimum of 160 credits for a 1-year/2-semester PG programme at level 6.5 on the NHEQF.
- A 3-year/6-semester bachelor's degree with a minimum of 120 credits for a 2-year/4-semester PG programme at level 6.5 on the NHEQF.
- A 4-year Bachelor's degree (e.g. B.E., B.Tech. etc.) with a minimum of 160 credits for a 2-year/4-semester PG programme (e.g. M.E., M. Tech. etc.) at level 7 of NHEQF.

Subject to fulfilment of the credit and NHEQF requirements, as also subject to clearing the entrance test, the admission to PG programme may be permitted in both the major or minor subjects taken at the UG level. Moreover, Departments / Centres may specify the subjects, other than major and minor, in which they would allow students to be admitted into their respective PG programmes, and pass it through their respective BOS/COS, Faculty Committee/Board of Management and other statutory bodies of the university.

What do the NHEQF Levels mean?

- Under the National Higher Education Qualifications Framework (NHEQF), higher education qualifications are classified along a continuum of levels from level 4.5 to level 8. The NHEQF levels represent a series of sequential stages expressed in terms of learning outcomes.
- NHEQF level 4.5 represents learning outcomes appropriate to the first year (first two semesters) of the undergraduate programme of study, while Level 8 represents learning outcomes appropriate to the doctoral-level programme of study.

NHEQF Levels for PG programmes

S. No.	Qualifications	Level	Credits	Credit Points
1	1 year PG after a 4-year UG	6.5	40	260
2	2-year PG after a 3-year UG	6.5	40+40	260
3	2-year PG after a 4-year UG, such as B.E., B.Tech. etc	7	40+40	280

Course Levels

- **400-499:** Advanced courses which would include lecture courses with practicum, seminar-based courses, term papers, research methodology, advanced laboratory experiments/software training, research projects, hands-on-training, internship/apprenticeship projects at the undergraduate level or First year Postgraduate theoretical and practical courses.
- **500-599:** For students who have graduated with a 4-year bachelor's degree. It provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis at the postgraduate level



Syllabus for Two-Year M.A. Economics

(Semester I)



Course 1: Microeconomics

Type of Course: Core

Code: 26-ECO-C-400

Semester: I

Credits: 4

I. Introduction to the Course

This microeconomics course is designed to offer the students a rigorous introduction to modern microeconomic theory. The course will provide the understanding of fundamental principles which govern the modeling of individual choice behavior. Students will be able to understand how individuals, firms make decision to maximize their objective under given circumstances. This course also offers the students the functioning of imperfectly competitive markets.

II. Course Objectives

- To provide students with a strong foundation in the theory of demand and individual choice behavior under risky situations.
- To develop a sound understanding about the production function and cost structure of the firms.
- To build analytical thinking about the market functioning and its implication on prices, output and overall welfare of the individuals.

III. Learning Outcomes

- The student will acquire a sound understanding of the core concepts that economists use to understand the implication of public policy that affect the individual and firms 'decisions.
- Students will learn thinking like an economist about the implications of different market structures and their outcomes.
- Students will learn the usefulness of the concepts studied in the course with the help of appropriate applications to real world problems.

IV. Course Contents:

Unit 1: Theory of Consumer Behavior

- Demand Theory: Preference Based Approach and Choice Based Approach
- Revealed Preference Theory: Basic Properties, Preference and Utility, Consumption Set, Competitive Budget, Utility Maximization Problem
- Walrasian Demand Function and Comparative Statics, Indirect Utility Function, Expenditure Minimization problem, Expenditure Function, Duality Theorem, Hicksian Demand Function



- Welfare Analysis and Aggregate Demand: Welfare Evaluation of Economic Changes, Compensating Variation and Equivalent Variation
- Choice under Uncertainty: Description of Risky Alternatives, Simple and Compound Lottery, Preferences over Lotteries and Independence Axiom, The von-Neumann-Morgenstern axioms, Expected Utility Theorem, Risk Aversion and Insurance

Unit 2: Theory of Production and Cost

- Theory of Production: Production Set, Properties of Production Set, Efficient Production
- Theory of Cost: Cost Function and its Properties, Output Supply Function, and Input Demand Function, Application of Envelope Theorem, Constraint Cost Minimization, Conditional Factor Demand Correspondence
- Profit Function and Its Properties, Profit Maximization
- Homogeneous, Homothetic, CES, Cobb Douglas, Translog Production Function

Unit 3: Market Structure

- Monopoly: Price Determination, Lerner Index, Deadweight loss, Price Discrimination, Natural Monopoly
- Monopolistic Competition: Markets for Differentiated Products, Short run and Long run Equilibrium in Monopolistic Competitive Market
- Oligopoly – Price Competition, Game Theoretic Approach: Simultaneous Move, Bertrand Paradox, Properties of Bertrand Equilibrium
- Oligopoly – Quantity Competition, Simultaneous Move- Cournot Competition- Duopoly Homogeneous and heterogeneous Market Structure, Properties of Cournot Equilibrium

V. References

Mas-Colell, Andreu, Michael D. Whinston and Jerry R. Green, (1995), Microeconomic Theory, OUP, New York.

Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India

Varian, Hall R., (1992), Microeconomic Analysis (Third Edition), W.W. Norton & Company, New York, London.

Varian, Hall R. (1990), Intermediate Microeconomics, W.W. Norton & Company, New York, London.

Walter Nicholson and Christopher Snyder (2008), Microeconomic Theory, South Western Pub, Nashville, Tennessee, USA

Kreps, David M. (1998), A Course in Microeconomic Theory, Prentice Hall, India, New Delhi (For Unit V).

Silberberg E., The Structure of Economics: A Mathematical Analysis, McGraw-Hill.



Course 2: Macroeconomics

Type of Course: Core

Code: 26-ECO-C-401

Semester: I

Credits: 4

I. Introduction to the Course

This course provides an advanced analytical treatment of macroeconomic theory, tracing the evolution from classical and Keynesian foundations to modern expectation-based and imperfect market models. Emphasis is placed on inflation, unemployment, stabilization policy and labour market dynamics, enabling students to critically assess macroeconomic policies in theoretical and applied contexts.

II. Course Objectives

- To develop a rigorous understanding of major macroeconomic theories and their underlying assumptions.
- To analyze the determination of output, employment and inflation using alternative macroeconomic frameworks.
- To critically evaluate the effectiveness of fiscal and monetary policies in economies with expectations and market imperfections.

III. Learning Outcomes

After completing the course, students will be able to:

- Explain and compare classical, Keynesian and modern macroeconomic models at an advanced level.
- Analyze inflation–unemployment dynamics and equilibrium unemployment using expectations-based approaches.
- Critically assess macroeconomic policy choices with reference to theoretical models and empirical insights.

IV. Course Contents:

Unit 1: Keynesian and Monetarist Approaches

- Keynesian Critique of Classical Approach, Determination of Price, Output and Employment, IS-LM
- Analysis-Aggregate Demand and Supply, Keynes Model with Flexible wages: Liquidity Trap argument and Interest insensitivity argument
- The Real-Balance Effect: Classical Rejoinder to Keynes



- Original (Keynesian) Phillips Curve, The Natural Rate of Unemployment (NRU)
- The Short Run and Long Run Phillips Curve, Expectation, Interest Rates and Inflation,
- The Trade-off Between Inflation and Unemployment, Expectations-augmented Phillips Curve and breakdown of the inflation–unemployment trade-off, hysteresis,
- The Natural Rate of Unemployment (NRU) and Full Employment, Freidman’s Version of Quantity Theory of Money –Fiscal and Monetary Policy.

Unit 2: New Classical Macroeconomics and New Keynesian Responses

- Foundations of New Classical macroeconomics; rational expectations hypothesis; market clearing and continuous equilibrium
- Lucas supply function and imperfect information models; policy ineffectiveness proposition efficient market hypothesis and macroeconomic implications; critiques of rational expectations
- Keynesian reappraisal through disequilibrium and coordination failure models
- Clower’s dual-decision hypothesis; Leijonhufvud’s interpretation of Keynes
- Malinvaud’s theory of unemployment regimes
- Introduction to New Keynesian economics with microfoundations of nominal rigidities, menu costs, efficiency wages, insider–outsider models and staggered wage–price contracts
- Core Idea of Calvo Pricing and New Keynesian Phillips Curve.

Unit 3: Imperfect Competition, Labour Markets and Macroeconomic Policy

- Imperfect competition in goods and labour markets; wage-setting and price-setting behaviour; bargaining, mark-ups and real wage determination
- NAIRU and natural rate of unemployment with hysteresis; estimation and policy relevance of equilibrium unemployment;
- Fiscal, monetary and income policies in imperfect markets; supply-side fiscal policies and labour market reforms; rules versus discretion and policy credibility; time inconsistency; crowding-out effects of fiscal policy; short-run and long-run effectiveness of macroeconomic policy.

V. References

Text Books

Wendy Carlin and David Soskice (1996)- *Macroeconomics and The Wage Bargain*; Oxford University Press

Branson, W. (1989) – *Macroeconomic Theory and Policy*; (3rd Ed, Harper & Row)

Dornbush, R. and S. Fischer (2004) – *Macroeconomics* (9th Ed, Tata-Mcgraw Hill)).

Blanchard, O. (2021). *Macroeconomics* (8th ed.). Pearson Education.

Leijonhufvud, A. (1968). *On Keynesian economics and the economics of Keynes*. Oxford University Press.



- Malinvaud, E. (1977). *The theory of unemployment reconsidered*. Basil Blackwell.
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- Romer, D. (2019). *Advanced macroeconomics* (5th ed.). McGraw-Hill Education.
- Snowdon, B., & Vane, H. R. (2005). *Modern macroeconomics: Its origins, development and current state*. Edward Elgar.
- Woodford, M. (2003). *Interest and prices: Foundations of a theory of monetary policy*. Princeton University Press.

Research Articles

- Akerlof, G. A., & Yellen, J. L. (1985). A near-rational model of the business cycle. *Quarterly Journal of Economics*, 100(Supplement), 823–838.
- Blanchard, O., & Summers, L. (1986). Hysteresis and the European unemployment problem. *NBER Macroeconomics Annual*, 1, 15–78.
- Calvo, G. A. (1983). Staggered prices in a utility-maximizing framework. *Journal of Monetary Economics*, 12(3), 383–398.
- Clower, R. W. (1965). The Keynesian counter-revolution: A theoretical appraisal. In F. H. Hahn & F. P. R. Brechling (Eds.), *The theory of interest rates*. Macmillan.
- Friedman, M. (1968). The role of monetary policy. *American Economic Review*, 58(1), 1–17.
- Kydland, F. E., & Prescott, E. C. (1977). Rules rather than discretion: The inconsistency of optimal plans. *Journal of Political Economy*, 85(3), 473–491.
- Lucas, R. E. (1972). Expectations and the neutrality of money. *Journal of Economic Theory*, 4(2), 103–124.
- Lucas, R. E. (1976). Econometric policy evaluation: A critique. *Carnegie–Rochester Conference Series on Public Policy*, 1, 19–46.
- Modigliani, F. (1944). Liquidity preference and the theory of interest and money. *Econometrica*, 12(1), 45–88.
- Muth, J. F. (1961). Rational expectations and the theory of price movements. *Econometrica*, 29(3), 315–335.
- Phillips, A. W. (1958). The relation between unemployment and the rate of change of money wages in the United Kingdom, 1861–1957. *Economica*, 25(100), 283–299.
- Phelps, E. S. (1967). Phillips curves, expectations of inflation and optimal unemployment over time. *Economica*, 34(135), 254–281.
- Sargent, T. J., & Wallace, N. (1975). Rational expectations, the optimal monetary instrument, and the optimal money supply rule. *Journal of Political Economy*, 83(2), 241–254.
- Lindbeck, A., & Snower, D. (1988). *The Insider–Outsider Theory of Employment and Unemployment*. MIT Press.
- Blanchard, O., & Summers, L. (1986). “Hysteresis and the European Unemployment Problem.” *NBER Macroeconomics Annual*.



Course 3: Advanced Mathematics

Type of Course: Core

Code: 26-ECO-C-402

Semester: I

Credits: 4

I. Introduction to the Course

This course provides a comprehensive foundation in the mathematical methods essential for modern economic analysis and research. The course introduces students to the use of computational methods for analyzing and solving complex economic models. It bridges theory and practice by combining economic reasoning with programming and numerical techniques.

II. Course Objectives

- Remember fundamental concepts and formulas from numerical analysis, linear algebra, and optimization.
- Understand the principles behind iterative numerical methods, matrix operations, and optimization techniques.
- Apply these mathematical techniques in economic model building

III. Learning Outcomes

At the end of this course, students will:

- Identify and recall fundamental concepts, formulas, and definitions related to numerical analysis, linear algebra, and optimization.
- Explain the theoretical foundations of numerical methods, vector spaces, and optimization principles.
- Apply these mathematical techniques in economic model building

IV. Course Contents:

Unit 1: Numerical Analysis

- **Solutions of Equations in One Variable:** Bisection Method, Fixed- Point Iteration, Newton's Method, Error Analysis for Iterative Methods', Numerical Integration and Differentiation (Simpson's, Trapezoidal).
- **Interpolation and Polynomial Approximation:** Interpolation and the Lagrange Polynomial, Data Approximation and Neville's Method, Divided Differences, Hermite Interpolation, Cubic Spline Interpolation, Parametric Curves.
- **Initial Value and Boundary-Value Problems for Ordinary Differential Equations:** Euler's Method, Runge-Kutta Methods, Taylor Series Method, Multistep Methods, Extrapolation Methods, Shooting Method, Finite Difference Method, Rayleigh-Ritz Method.



- **Numerical Solutions to Differential Equations:** Elliptic Equations, Forward Difference Method, Backward-Difference Method, Crank-Nicolson Method, Hyperbolic Partial Differential Equations, Finite- Element method.

Unit 2: Linear Algebra

- **Vector Spaces:** Vector Spaces and Subspaces, Solving equations of the type $Ax = 0$ and $Ax = b$, Linear Independence, Basis, Dimension, The Four Fundamental Subspaces, Graphs and Networks, Linear Transformations, Vector Norms.
- **Orthogonality:** Orthogonal Vectors and Subspaces, Cosines and Projections onto Lines, Projections and Least Squares, Orthogonal Bases and Gram-Schmidt process.
- **Matrix Decomposition/Factorization:** LU Decomposition, QR Decomposition, Cholesky Decomposition, Eigen decomposition, Singular-Value Decomposition.
- **Intersection, Sum, and Product of Spaces:** Intersection of Two Vector Spaces, Sum of Two Vector Spaces, Cartesian Product of Two Vector Spaces, Tensor Product of Two Vector Spaces, Kronecker Product A-B of Two Matrices

Unit 3: Optimization

- **Unconstrained Optimization:** Univariate Functions, Multivariate Functions, Gradient-Based Methods, Newton's Method, Steepest Descent Method, Hooke-Jeeves Pattern Search.
- **Linear Programming:** Graphical Approach-The Extreme Point Theorem, Slack and Surplus Variables, The Basis Theorem, Simplex Algorithm – Maximization/Minimization, Shadow Pricing, The Dual – Dual Theorems, Shadow Prices in the Dual, Shadow Prices and the Lagrangian Multiplier.
- **Non-Linear Programming:** Kuhn-Tucker Conditions, The Constraint Qualification, Sufficiency Theorems, Maximum Value Functions and The Envelope Theorem, Duality and The Envelope Theorem.
- **Optimal Control Theory:** The Simplest Problem of Optimal Control, The Maximum Principle, Alternative Terminal Conditions, Calculus of Variations and Optimal Control Theory Compared

V. References

Unit 1: Numerical Analysis

- Richard L. Burden & J. Douglas Faires – Numerical Analysis (10th ed., Cengage)
- S. S. Sastry – Introductory Methods of Numerical Analysis (5th ed., PHI Learning, India)
- John H. Mathews & Kurtis D. Fink – Numerical Methods Using MATLAB (4th ed., Pearson)



- Steven C. Chapra & Raymond P. Canale – Numerical Methods for Engineers (8th ed., McGraw-Hill)

Unit 2: Linear Algebra

- Gilbert Strang – Introduction to Linear Algebra (5th ed., MIT Press)
- Sheldon Axler – Linear Algebra Done Right (3rd ed., Springer)
- David C. Lay, Steven R. Lay & Judi McDonald – Linear Algebra and Its Applications (6th ed., Pearson)
- Carl D. Meyer – Matrix Analysis and Applied Linear Algebra (SIAM, 2000)

Unit 3: Optimization

- Dimitri P. Bertsekas – Nonlinear Programming (3rd ed., Athena Scientific)
- Hamdy A. Taha – Operations Research: An Introduction (10th ed., Pearson)
- Stephen Boyd & Lieven Vandenberghe – Convex Optimization (Cambridge University Press, 2004)
- Chiang, Alpha C. & Wainwright, Kevin – Fundamental Methods of Mathematical Economics (4th ed., McGraw-Hill)



Course 4: Mathematical Statistics

Type of Course: Core

Code: 26-ECO-C-403

Semester: I

Credits: 4

I. Introduction to the Course

The course Mathematical Statistics is designed to provide rigorous training in probability theory, statistical distributions, sampling theory, and statistical inference. The course builds a strong theoretical foundation in mathematical statistics while emphasizing applications relevant to economics and empirical research. It introduces students to both classical and modern statistical tools required for data analysis and hypothesis testing. Through mathematical derivations and numerical illustrations, the course aims to develop logical reasoning, quantitative skills, and statistical intuition necessary for advanced study and research.

II. Course Objectives

- To develop a rigorous understanding of probability theory and probability distributions.
- To explain sampling theory and sampling distributions used in statistical analysis.
- To introduce fundamental concepts of statistical inference, estimation, and hypothesis testing and develop the ability to apply statistical tools to real-world data and empirical research problems.
- To prepare students for advanced courses in econometrics, data analysis, and quantitative research especially master dissertation.

III. Learning Outcomes

- Understand and apply foundational concepts of probability and distributions, including classical, empirical, and axiomatic probability; random variables; discrete, continuous, and multivariate probability distributions; and their moments in theoretical and applied contexts.
- Analyze sampling theory and statistical inference methods, including sampling distributions, estimation of population parameters, use of Z, t, chi-square, and F distributions, and construction and interpretation of confidence intervals and hypothesis tests.
- Apply statistical reasoning to economics research, by formulating appropriate hypotheses, selecting suitable parametric and nonparametric methods, interpreting p-values and test results, and drawing valid conclusions from empirical data.

IV. Course Contents

Unit 1: Probability and Probability Distributions

- Introduction to Probability: Classical, Frequentists, Empirical and Axiomatic Definitions
- Random Experiments – Sample Space, Sigma Field and Probability Measure



- Methods of Counting - Permutations and Combinations
- Rules of Probability, Conditional, Independence, Bayes' Theorem; Numerical Examples.
- Random Variable – Discrete and Continuous; Probability Distribution - Pdf, Pmf and Cdf; Mathematical Expectation of Random Variables and Their Functions; Mean and Variance
- Moment Generating Function and Characteristic Function; Numerical Examples.
- Discrete Distributions – Uniform, Bernoulli, Binomial, Poisson, Negative Binomial, Geometric; Hypergeometric, Multinomial; Use of Tables and Numerical Examples.
- Continuous Distributions – Uniform, Exponential, Normal, Lognormal, Gamma, Beta; Use of Tables and Numerical Examples.
- Multivariate Distributions – Bivariate Pdf and Cdf, Covariance, Marginal Distributions, Normal Bivariate, Multivariate Hypergeometric, Numerical Examples.

Unit 2: Sampling and Sampling Distributions

- Population Versus Sample, Iid Random Variables, Sampling Errors
- Non-Random or Judgement Sampling
- Methods of Random Sampling – Simple Random, Cluster, Stratified, Systematic; Sample Statistic – Sample Mean and Sample Variance; Standard Error and Weight Calculation.
- Methods of Finding Sampling Distributions – Direct Method, Transformation of Variables Method, MGF Method.
- Z, Chi-Square, t and F Distributions.
- Chebyshev's Inequality, Law of Large Numbers, Central Limit Theorem, Sampling Distribution of Sample Mean, Sampling Distribution of Sample Variance, resampling method
- Sampling from Finite and Infinite Population, Finite Population Correction Factor, Sampling from Normal Population.

Unit 3: Methods of Statistical Inference

- Desirable Properties of An Estimator - Unbiasedness, Consistency, Efficiency and Sufficiency. Robustness, Mean-Squared Error. Consistency and Best Asymptotically Normal Estimator, Cramer-Rao Inequality
- Method of Moments, Method of Maximum Likelihood
- Interval Estimation - Confidence Intervals for Mean and Variance
- Types of Hypotheses, Types of Errors, Level of Significance, Power of a Test, Interpretation of P-Value
- Most Powerful Test – Neyman-Pearson Lemma.
- Loss Function and Risk Function. Generalized Likelihood-Ratio Tests. Uniformly Most Powerful Tests. Unbiased Test. Uniformly Most Powerful Unbiased Test. Sequential Probability Ratio Test.
- Non-parametric test
- Analysis Variance and Analysis of Covariance, Correlation and Regression.



V. References

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- Chou, Y. (1975), *Statistical Analysis*, Holt, Reinhart and Winston, New York.
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- Lind, Douglas A., William G. Marchal, and Samuel A. Wathan (2006). *Business Statistics for Business & Economics*, 5th ed. Boston: McGraw-Hill Irwin.
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- R. L. Schaeffer (1990), *Introduction to Probability and its Applications*, Pws-Kent.
- Rice, J. A., & Rice, J. A. (2007). *Mathematical Statistics and Data Analysis* (Vol. 371). Belmont, CA: Thomson/Brooks/Cole.
- S. C. Gupta (1993), *Fundamentals of Applied Statistics*, S. Chand and Sons, New Delhi
- S. Ross (1976), *A First Course in Probability*, Macmillan.
- Sukhatme, P. V. and B. V. Sukhatme (1970), *Sampling Theory of Survey With Applications*, Iowa State University Press, Ames.
- Wackerly, D. D., Mendenhall, W., & Scheaffer, R. L. (2008). *Mathematical Statistics with Applications* (Vol. 7). Belmont, CA: Thomson Brooks/Cole.



Course 5. Research Methodology

Type of Course: Core

Code: 26-ECO-C-404

Semester: I

Credits: 4

I. Introduction to the Course

This course introduces postgraduate students of Economics to the fundamentals of research methodology. It focuses on the philosophical foundations of research, research design, methods of data collection, and basic analytical techniques required for economic research. The course aims to prepare students for dissertation work and evidence-based policy analysis.

II. Course Objectives

- To understand the nature, scope, and importance of research in economics.
- To develop skills to formulate research problems and design appropriate research strategies.
- To acquire knowledge of data collection methods and basic analytical tools used in economic research.

III. Learning Outcomes

At the end of this course, the student will be able to:

- Formulate clear research questions, objectives, and hypotheses relevant to economic issues.
- Select appropriate research designs, data sources, and methods for economic analysis.
- Analyze economic data using statistical/econometrical tools.

IV. Course Contents

Unit 1: Introduction to Research Methodology

- Nature, scope, and purpose of research
- Types of research: Pure & Applied research, Explanatory research, Exploratory research, Historical research, Experimental research, Survey research.
- Review of literature: Sources and importance
- Research problem: Identification and formulation of research problem, Criteria of a good research problem.
- Research objectives; Research design: Definition, concepts, and types: Exploratory, Descriptive and Diagnostic; Experimental and Analytical research designs.

Unit 2: Data Collection and Processing Types of Data

- Types of data: Primary and Secondary
- Population, Census and Sample; Sampling Techniques: Probability and Non-probability.



- Methods of collection of primary data: Observation, Interview, Questionnaire, and Schedule.
- Secondary data: Sources, Limitations of secondary data, Precautions in the use of secondary data
- Hypothesis: Meaning, types and formulation; Hypothesis testing, level of significance, and Type I and Type II errors.

Unit 3: Research Writing and Ethics

- Research report: Meaning and significance; Layout of a research report: Preliminary pages, Main body and end matters
- Principles of writing the research report: Organization and style
- Citation and referencing: Footnotes, end notes, citation styles, bibliography and appendices
- Research Ethics: Meaning and principles of research ethics; Ethical issues relating to research: Falsification, Fabrication and Plagiarism.

V. References

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Gupta, S. P. – *Statistical Methods*, 43rd Revised Edition, 2017, Sultan Chand & Sons, New Delhi.

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Booth, Wayne C., Colomb, Gregory G. and Williams, Joseph M. – *The Craft of Research*, 4th Edition, 2016, University of Chicago Press, Chicago.



Course 6: Seminar Course*

Type of Course: Core

Code: 26-ECO-C-405

Semester: I

Credits: 4

I. Introduction to the Course

The seminar course shall be based on the broad areas of specialization of the department. The students shall be randomly allotted supervisors among permanent faculty members. The course involves student presentations on representative readings, and adopts interactive and participatory modes of pedagogy.

Seminar Course in Semester I: Review of literature & presentation of at least 4 readings assigned by the supervisor.



Syllabus for Two-Year M.A. Economics

(Semester II)



Course 1: India and World Economy

Type of Course: Core

Code: 26-ECO-C-500

Semester: II

Credits: 4

I. Introduction to the Course

This course examines India's position and performance within the evolving global economy by integrating economic, social, political, and environmental perspectives. Moving beyond a narrow focus on trade and growth, the course emphasizes the interaction between domestic economic structures, global production systems, social policy, demographic change, climate challenges, and geopolitics. Special attention is given to unequal exchange between developed and developing economies, the oligopolistic nature of global manufacturing and Global Value Chains (GVCs), and the persistence of informality in India. The course aims to equip students with analytical tools to critically assess India's development trajectory and policy choices in a rapidly changing world order.

II. Course Objectives

- To develop an analytical understanding of the structural features and policy regimes of the pre-reform Indian economy and their role in shaping India's integration with the world economy.
- To examine the emergence of the neoliberal world order and critically assess the theoretical foundations, institutional mechanisms, and policy instruments of liberalisation, privatisation, and globalisation, with special reference to India and the Global South.
- To evaluate the economic and social outcomes of India's LPG reforms in terms of growth, inequality, employment, structural transformation, and integration into global value chains.
- To analyse contemporary global and domestic challenges—including climate change, inequality, digitalisation, geopolitics, and sustainable development—and assess India's policy choices and developmental prospects in the evolving world economy.

III. Learning Outcomes

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

- Analyse the structural and institutional features of the pre-reform Indian economy and explain their role in shaping India's macroeconomic constraints and external sector crisis.
- Critically evaluate neoliberalism as a global economic order using alternative theoretical perspectives and assess its differentiated impact on India and the Global South.
- Assess the outcomes of India's LPG reforms in terms of growth, employment, inequality, informality, fiscal capacity, and structural transformation.



- Apply concepts from international political economy to formulate policy-relevant arguments on contemporary global and Indian challenges including climate change, digitalisation, geopolitics, and sustainable development.

IV. Course Contents

Unit 1: The Indian Economy in Perspective

- Three distinct phases of growth and policy regimes in pre-reform Indian economy,
- Period of Mixed Economy approach (1950–1965)
- Era of regulation and licenses (1965-1980)
- Period of accelerated growth and Delicensing (1980-1990)
- Land reforms vs green revolution
- Subsidy Vs investment in Agriculture
- Growth of regional disparity
- Subdued industrial growth
- Intersectoral terms of trade
- Nationalisation of energy sources and financial institutions
- Limited attention to institutions and human development
- Fiscal and external deficits leading to crisis in 1990

Unit 2: Neoliberal World Order & India's LPG Reform

- **Towards neoliberal world:** Theoretical debate: Keynesianism Vs Chicago School (Friedrich Hayek and Milton Friedman); The Turning Point: Oil price shock induced stagflation in the 1970s, Failure of Keynesian tools. Big policy boost from Thatcher and Reagan (1980s); The "*Washington Consensus*" (1990s); The Fall of the Berlin Wall (1989–1991); The creation of the *World Trade Organization (WTO)* in 1995.
- **Neoliberalism in Global South:** *Structural Adjustment Programs (SAPs)*: fiscal responsibility, privatization, and liberalization
- **Adoption of SAP by India after the crisis in 1990:** *Stabilisation (immediate) Policy*: Currency Devaluation, Fiscal Austerity (mainly impacted social sector spending); *Structural(long-term) Reforms*: Trade Liberalization, Industrial Delicensing, flexible exchange rate regime, capital mobility, financial sector reforms, sequencing of reform by India.
- **Outcomes of Reform:** Growth, inequality, poverty, regional disparity, human development, employment, GVC integration (intra industry trade) and informality of labour, unequal exchange between formal and informal sector, premature de-industrialisation, jobless growth, unbalanced structural transformation in output & employment; growing regressivity of taxation, fiscal resources; social spending.



Unit 3: The World Economy and India: Contemporary and emerging issues

- **Global Issues:** Inequality within and across countries of global north and south; Climate change: climate finance & technology transfer; Financing gaps for SDGs; increasing dependence on regressive taxation; aging and emergence of silver economy; pressure on global financial architecture for reform; green protectionism (CBAM); market concentration in digital platforms and digital divide; data as a factor of production; geo-political uncertainties; supply chains: efficiency vs security trade-off; risk of depopulation or challenge of stabilizing global population
- **Indian Issues:** *Domestic Growth & Structural Transformation:* Vision 2047: *Viksit Bharat*; Middle income trap; potentialities of India as manufacturing hub.
Demographics and human capital: window of demographic dividend; potential of NEP in skill formation for global labour demand and potentialities of services led domestic economy;
Inequality and social justice: regional disparity and fiscal federalism; social group-based inequality,
Climate Change and Sustainable Development: India's shared but differentiated responsibility in combatting, climate change; progress on SDGs and its financing.
Geopolitics & External Risks: Trade Balance, foreign investment, Green Protectionism (CBAM); Supply Chain Resilience; Data Sovereignty.

V. References

Unit 1

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- Byres, T. J. (Ed.). (1998). *The state, development planning and liberalisation in India*. Oxford University Press.
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- Varshney, A. (1998). *Democracy, development, and the countryside: Urban-rural struggles in India*. Cambridge University Press.

Unit 2

- Ahluwalia, M. S. (2002). Economic reforms in India since 1991: Has gradualism worked? *Journal of Economic Perspectives*, 16(3), 67–88.
- Amin, S. (2004). *The liberal virus: Permanent war and the Americanization of the world*. Monthly Review Press.
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- Chang, H.-J. (2002). *Kicking away the ladder: Development strategy in historical perspective*. Anthem Press.



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Unit 3

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- Mehrotra, S. (2023). The youth employment crisis: Is the demographic dividend becoming a disaster? *Economic and Political Weekly*, 58(15).
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World Bank. (2024). *World development report 2024: The digital progress and divide*. World Bank Publications.

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Course 2: Econometric Analysis

Type of Course: Core

Code: 26-ECO-C-501

Semester: II

Credits: 4

I. Introduction to the Course

This course provides an in-depth understanding of econometric techniques for analyzing cross-sectional, time series, and panel data. It emphasizes model specification, estimation, diagnostic testing, and interpretation of results. Students will learn both classical and modern approaches, including regression analysis, limited dependent variable models, vector autoregressive models, cointegration, and panel data methods. The course integrates theoretical foundations with empirical applications, enabling students to critically analyze economic, financial, and social data.

II. Course Objectives

- To develop a comprehensive understanding of econometric models for cross-sectional, time series, and panel data analysis.
- To equip students with practical skills for estimating econometric models, performing diagnostic tests, and interpreting results.
- To enhance the ability to apply econometric techniques to real-world economic and financial problems.

III. Learning Outcomes

At the end of this course, the student will be able to:

- Specify, estimate, and interpret cross-sectional, time series, and panel data models using appropriate econometric techniques.
- Conduct diagnostic tests for model validity, including tests for multicollinearity, heteroskedasticity, autocorrelation, and cross-sectional dependence.
- Critically evaluate empirical results and apply econometric methods to analyze economic phenomena and policy issues.

IV. Course Content

Unit 1: Cross-Section Models, Diagnostics, and Estimation

- Nature and characteristics of cross-section data
- Classical Linear Regression Model (CLRM)
- Ordinary Least Squares (OLS): Estimation, properties, and interpretation of coefficients
- Goodness of fit and hypothesis testing (t-test, F-test, confidence intervals)
- Problems in regression analysis: multicollinearity, heteroskedasticity



- Model selection criteria: Akaike Information Criterion (AIC), Bayesian Information Criterion (BIC)
- Detection of outliers and influential observations: leverage, Cook's distance

Unit 2: Time Series Models, Diagnostics, and Estimation

- Nature and characteristics of time series data
- Problem of Autocorrelation, Autocorrelation Function (ACF), Partial Autocorrelation Function (PACF), and correlogram
- Concept of stationarity and unit root testing: Dickey-Fuller (DF), Augmented Dickey-Fuller (ADF), Phillips-Perron (PP) tests
- Vector Autoregressive (VAR) models: structure, assumptions, estimation, and interpretation
- Stability condition and structural analysis in VAR models
- Cointegration in multivariate systems: Johansen cointegration, Trace test, Maximum Eigenvalue test
- Vector Error Correction Models (VECM): specification, short-run and long-run dynamics

Unit 3: Panel Data Models, Diagnostics, and Estimation

- Nature and structure of panel data: balanced vs unbalanced panels
- Advantages over cross-sectional and time-series data
- Panel data regression models: Pooled OLS, Fixed Effects (FE), Random Effects (RE)
- Estimation methods: Within transformation (FE), GLS (RE)
- Diagnostics: heteroskedasticity, serial correlation, cross-sectional dependence
- Remedial Measures: Weighted Least Squares, Robust standard errors
- Model selection: FE vs RE (Hausman test)
- Interpretation of results: coefficient estimates, significance, economic implications

V. References

- Gujarati, D. N. & Porter, D. C. (2021). *Basic Econometrics* (6th Edition). McGraw-Hill.
- Wooldridge, J. M. (2019). *Introductory Econometrics: A Modern Approach* (7th Edition). Cengage.
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- Wooldridge, J. M. (2010). *Econometric Analysis of Cross Section and Panel Data* (2nd Edition). MIT Press.
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Course 3: International Economics

Type of Course: Core

Code: 26-ECO-C-502

Semester: II

Credits: 4

I. Introduction to the Course

This course provides a comprehensive analytical framework for understanding international economic relations. It focuses primarily on theories of international trade, trade policy instruments, and the functioning of the multilateral trading system, along with the broader developmental and welfare implications of globalization. The course equips students with theoretical and policy perspectives essential for advanced economic analysis.

II. Course Objectives

- To develop a rigorous understanding of classical, neoclassical, and modern theories of international trade.
- To analyze trade policy instruments and their effects on welfare, income distribution, and economic efficiency.
- To examine the role of globalization and international economic institutions in shaping development outcomes.

III. Learning Outcomes

After completing the course, students will be able to:

- Explain and critically assess alternative theories of international trade and specialization.
- Evaluate the economic effects of tariffs, quotas, and other trade policy instruments.
- Analyze the developmental, distributional, and environmental implications of globalization and international trade.

IV. Course Content

Unit 1: Classical and Neo-Classical Theories of International Trade

- Notion of Comparative Advantage (Static Versus Dynamic, Natural Versus Acquired, Theoretical Versus Empirical, Etc); Sources of Comparative Advantage (Technology, Resource Endowments, Demand Patterns, Economies of Scale, Government Policies Etc).
- Classical Model (Smith, Ricardo, and Haberler): Assumptions, Implications and Limitations; Extension of Ricardian Model: The Specific Factor Model.
- Standard Model: Analysis of Gains from Free Trade.
- Neo-Classical Model: Assumptions and Their Implications, Factor Substitution, One-to-One Relationship Between Factor-Prices, Commodity-Prices and Factor-Intensities; Heckscher-



Ohlin, Stolper-Samuelson, Rybczynski and Factor Price Equalization Theorems; Empirical Evidence - the Leontief Paradox.

Unit 2: Modern Trade Theory and Firm-Level Models

- Modern Trade Theories under Imperfect Competition: Intra-Industry Trade: Concept and measurement, Trade with Economies of Scale and Imperfect Competition, Linder's Hypothesis and demand-based explanations of trade
- Dynamic Theories of International Trade: Product Cycle Theory (Vernon) and Technology Gap Model (Posner)
- Firm-Level Approaches to Trade: Heterogeneous Firms and Trade, Melitz Model (2003): Productivity, firm selection and trade liberalization
- Strategic Trade Theory and Policy: Rationale, applications, and limitations

Unit 3: Trade Policy, Global Governance, and Development

- Trade Policy Instruments: Free trade vs. protection, Tariff and non-tariff barriers, Tariffs vs. quotas, Lerner Symmetry Theorem, Nominal and Effective Rates of Protection.
- Economic Effects of Trade Policy: Tariff analysis for small and large countries (partial equilibrium), Distribution of gains from trade (general equilibrium), Optimum tariff.
- International Trading System and Trade Agreements: WTO and RTAs
- International Trade and Development: Effects of Trade on Poverty, Inequality, Environment, Gender, Technological Transfers Etc.

V. References

Text Books

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- Sodersten, B., & Reed, G. (1994). *International economics*. Macmillan Press.
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Cherunilam, F. (2006). *International economics* (4th ed.). Tata McGraw-Hill.

Research Articles

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Krugman, P. R. (1980). Scale economies, product differentiation, and the pattern of trade. *American Economic Review*, 70(5), 950–959.

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Posner, M. V. (1961). International trade and technical change. *Oxford Economic Papers*, 13(3), 323–341.

Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics*, 80(2), 190–207.

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de Graft, V. J. (1949). On optimum tariff structure. *Review of Economic Studies*, 16(1), 47–59.

Samuelson, P. A. (1948). International trade and the equalization of factor prices. *Economic Journal*, 58(230), 165–184.

Johnson, H. G. (1985). The gains from free trade with Europe: An estimate. *Manchester School of Economics and Social Studies*, 53(3), 247–255.

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Rodrik, D. (2001). The global governance of trade as if development really mattered. *UNDP Background Paper*.

Subramanian, A., & Wei, S. J. (2007). The WTO promotes trade, strongly but unevenly. *Journal of International Economics*, 72(1), 151–175



Seminar Course*

Type of Course: Core

Code: 26-ECO-C-503

Semester: II

Credits: 4

I. Introduction to the Course

The seminar course shall be based on the broad areas of specialization of the department. The students shall be randomly allotted supervisors among permanent faculty members. The course involves student presentations on representative readings, and adopts interactive and participatory modes of pedagogy.

Seminar Course in Semester II: At least additional 4 readings along with description of data & methodology learned from the previous reading will be presented by the students to the concerned supervisor.



Syllabus for
Two-Year M.A. Economics (Semester III)
&
One-Year M.A. Economics (Semester I)



Course 1: Advanced Microeconomics

Type of Course: Core

Code: 26-ECO-C-550

Semester III/I: Two-Year M.A. Economics/
One-Year M.A. Economics

Credits: 4

I. Introduction to the Course

This course aims to provide students with rigorous training in advanced microeconomic theory. It develops the analytical framework for understanding general equilibrium, strategic behaviour, information asymmetry, and mechanism design. The course equips students with theoretical foundations necessary for research in microeconomics and related fields.

II. Course Objectives

- Provide students with rigorous training in advanced microeconomic theory
- Develop the analytical framework for understanding general equilibrium, strategic behaviour, information asymmetry, and mechanism design
- Equip students with theoretical foundations necessary for research in microeconomics and related field

III. Course Outcome

At the end of this course, students will:

- Understand the fundamental concepts of advanced microeconomic theory
- Apply the fundamental concepts of advanced microeconomic theory to model strategic interactions
- Analyse relationships/causes/connections for equilibrium, payoffs, market outcomes and market Design
- Evaluate equilibrium, payoffs, market outcomes and market design based on sound analysis

IV. Course Content

Unit 1: General Equilibrium Theory

- Pure exchange economy; preferences, endowments, feasibility
- Edgeworth Box and Pareto efficiency
- Walrasian/Competitive equilibrium
- Existence and uniqueness of equilibrium
- First and Second Welfare Theorems
- Arrow–Debreu general equilibrium model
- General equilibrium with production
- Comparative statics of equilibrium



Unit 2: Game Theory

- Normal-form games; best responses; Nash equilibrium
- Mixed strategies and existence of Nash equilibrium
- Extensive-form games; backward induction
- Subgame Perfect Nash Equilibrium (SPNE)
- Repeated games; Folk theorems
- Bayesian games; Bayesian Nash equilibrium

Unit 3: Information Economics and Mechanism Design

- Asymmetric information: hidden information and hidden action
- Adverse selection, Moral hazard and incentive contracts
- Screening models; principal–agent problems
- Signaling (Spence model)
- Social choice functions
- Incentive compatibility: DSIC and BIC
- Revelation principle
- Direct and indirect mechanisms
- Mechanism design for public goods and allocation problems

V. References

Unit 1: General Equilibrium Theory

Mas-Colell, Whinston & Green — Microeconomic Theory, Publisher: Oxford University Press

Andreu Mas-Colell — The Theory of General Economic Equilibrium: A Differentiable Approach, Publisher: Cambridge University Press

Gerard Debreu — Theory of Value, Publisher: Yale University Press

Hal R. Varian — Microeconomic Analysis, Publisher: W. W. Norton & Company

Jeanne M. McDermott (ed.) — General Equilibrium Models Publisher: North-Holland (Elsevier)

Unit 2: Game Theory

Mas-Colell, Whinston & Green — Microeconomic Theory, Publisher: Oxford University Press

Drew Fudenberg & Jean Tirole — Game Theory, Publisher: MIT Press

Martin J. Osborne & Ariel Rubinstein — A Course in Game Theory, Publisher: MIT Press

Robert Gibbons — Game Theory for Applied Economists, Publisher: Princeton University Press

Unit 3: Information Economics and Mechanism Design

Mas-Colell, Whinston & Green — Microeconomic Theory, Publisher: Oxford University Press



Jean-Jacques Laffont & David Martimort — The Theory of Incentives: The Principal–Agent Model, Publisher: Princeton University Press

Joseph E. Stiglitz — Economics of Information and Uncertainty (collected essays), Publisher: University of Chicago Press

Dennis Carlton & Jeffrey Perloff — Modern Industrial Organization, Publisher: Pearson

Jean-Jacques Laffont & David Martimort — The Theory of Incentives, Publisher: Princeton University Press

Tilman Börgers — An Introduction to the Theory of Mechanism Design, Publisher: Oxford University Press

Vijay Krishna — Auction Theory, Publisher: Academic Press (Elsevier)



Course 2: Open Economy Macroeconomics

Type of Course: Core

Code: 26-ECO-C-551

Semester III/I: Two-Year M.A. Economics/
One-Year M.A. Economics

Credits: 4

I. Introduction to the Course

This course develops advanced macroeconomic analysis with a strong emphasis on open economy dynamics, labour markets, and international interdependence. It integrates short-run stabilization models with medium- and long-run adjustment, enabling rigorous evaluation of fiscal, monetary, and exchange-rate policies in a globalized economy.

II. Course Objectives

- To provide advanced theoretical understanding of open economy macroeconomic models and policy frameworks.
- To analyse inflation, unemployment, and external balance within integrated short-, medium-, and long-run macroeconomic settings.
- To examine international macroeconomic interdependence, spillovers, and the case for policy coordination.

III. Learning Outcomes

After completing the course, students will be able to:

- Apply advanced macroeconomic models to evaluate fiscal, monetary, and exchange-rate policies in open economies.
- Analyse macroeconomic adjustment to domestic and external shocks across different time horizons.
- Critically assess international policy spillovers and the effectiveness of macroeconomic coordination.

IV. Course Content

Unit 1: Short-Run Open Economy Models (IS–LM–BP Framework)

- Open-economy goods market and IS curve
- Money market and LM curve in an open economy
- Balance of Payments equilibrium and BP curve: current vs capital account
- IS–LM–BP equilibrium under alternative degrees of capital mobility
- Mundell–Fleming model as a special case (small open economy)
- Fiscal and monetary policy effectiveness under fixed and flexible exchange rates
- Role of expectations, UIP, and risk premium
- Trade balance, real exchange rate, Marshall–Lerner condition and J-curve



Unit 2: Adjustment, Inflation, and Employment in Open Economies

- Price-setting and wage-setting behavior in open economies
- Imported inflation and exchange-rate pass-through
- Equilibrium Rate of Unemployment (ERU) and labour-market institutions
- Interaction of output, inflation, and external balance
- Short-run, medium-run, and long-run equilibrium paths
- Macroeconomic adjustment to demand, supply, and external shocks
- Role of fiscal, monetary, exchange-rate, and supply-side policies

Unit 3: Internal–External Balance and International Policy Coordination

- Salter–Swan model: internal balance (IB) and external balance (EB) schedules
- Policy instruments: expenditure-changing vs expenditure-switching policies
- Relationship between Salter–Swan and IS–LM–BP frameworks
- Two-country (two-bloc) models of macroeconomic interdependence
- International transmission of fiscal and monetary policy
- Policy interdependence under fixed vs flexible exchange-rate regimes
- Beggar-thy-neighbour policies and gains from coordination

V. References

Text Books

Carlin, W., & Soskice, D. (2015). *Macroeconomics: Institutions, instability, and the financial system*. Oxford University Press.

Obstfeld, M., & Rogoff, K. (1996). *Foundations of international macroeconomics*. MIT Press.

Turnovsky, S. J. (1997). *International macroeconomic dynamics*. MIT Press.

Blanchard, O., & Johnson, D. (2021). *Macroeconomics* (8th ed.). Pearson.

Research Articles

Fleming, J. M. (1962). Domestic financial policies under fixed and floating exchange rates. *IMF Staff Papers*, 9(3), 369–380.

Mundell, R. A. (1963). Capital mobility and stabilization policy under fixed and flexible exchange rates. *Canadian Journal of Economics and Political Science*, 29(4), 475–485.

Obstfeld, M. (1995). International currency experience: New lessons and lessons relearned. *Brookings Papers on Economic Activity*, 1995(1), 119–220.

Ghosh, A. R., Ostry, J. D., & Qureshi, M. S. (2015). Exchange rate management and crisis susceptibility. *IMF Economic Review*, 63(1), 1–34.



Calmfors, L., & Driffill, J. (1988). Bargaining structure, corporatism and macroeconomic performance. *Economic Policy*, 3(6), 13–61.

Layard, R., Nickell, S., & Jackman, R. (1991). Unemployment: Macroeconomic performance and the labour market. *Oxford Economic Papers*, 43(1), 1–37.

Frenkel, J. A., & Razin, A. (1996). Fiscal policies and real exchange rates in the world economy. *Journal of Political Economy*, 104(2), 309–340.



Course 3: Growth and Development

Type of Course: Core

Code: 26-ECO-C-552

Semester III/I: Two-Year M.A. Economics/
One-Year M.A. Economics

Credits: 4

I. Introduction to the Course

This course explores the fundamental concepts, theories, and contemporary issues related to economic growth and development. It introduces students to classical, neoclassical, and modern growth theories, structural transformation, human development, and the role of institutions. Contemporary challenges such as technology, globalization, and environmental sustainability are also examined, enabling students to understand and evaluate development policies.

II. Course Objectives

- To understand the key concepts and theories of economic growth and development.
- To analyze structural transformation, human development, inequality, and the role of institutions.
- To evaluate the impact of technology, globalization, and environmental sustainability on development.

Learning Outcomes

At the end of this the course, the student will be able to:

- Differentiate between growth and development, and evaluate classical, neoclassical, and endogenous growth models.
- Assess structural transformation, human capital, inequality, and the institutional framework in development.
- Critically analyze the roles of technology, globalization, and sustainability in shaping development policy and outcomes.

IV. Course Content

Unit 1: Concepts and Theories of Growth and Development

- Meaning of growth and development: Definitions, indicators, determinants
- Distinction between growth and development
- Classical and Neoclassical Growth Models: Adam Smith, Ricardo, Solow–Swan model (role of savings, population, technological progress), Convergence hypothesis
- Endogenous Growth Models: AK model, Romer model; Role of knowledge, human capital, and R&D



Unit 2: Structural Change, Institutions, and Development Issues

- Structural transformation: Role of agriculture, industry, and services
- Lewis Model of Unlimited Supplies of Labour; Fei-Ranis model; Kuznets process of structural change
- Poverty, inequality, and human development: Measurement (Gini coefficient, Lorenz curve, Kuznets hypothesis), Human capital formation (education, health)
- Role of institutions: Governance, property rights, legal systems, and their impact on growth and development

Unit 3: Contemporary Issues: Technology, Globalisation, Environment & Sustainable Development

- Technology and Innovation: Technological progress, productivity, ICT and development
- Globalisation and Development: Trade and development linkages, Export-led growth, FDI, global value chains, Role of international institutions (IMF, World Bank, WTO)
- Sustainable Development: Environment–economy linkages, Green growth, climate change impacts
- Inclusive and sustainable development policies

V. References

- Todaro, M. P., & Smith, S. C. (2020). *Economic Development* (13th Edition). Pearson.
- Aghion, P., & Howitt, P. (2009). *The Economics of Growth*. MIT Press.
- Jones, C. I. (2016). *Introduction to Economic Growth* (3rd Edition). W.W. Norton.
- Chenery, H., & Srinivasan, T. N. (1988). *Handbook of Development Economics*, Vol. 1. Elsevier.
- Acemoglu, D., Johnson, S., & Robinson, J. (2005). *Institutions as a Fundamental Cause of Long-Run Growth*. In *Handbook of Economic Growth*, Vol. 1B.
- Sen, A. (1999). *Development as Freedom*. Oxford University Press.
- Sachs, J. D. (2015). *The Age of Sustainable Development*. Columbia University Press.
- Stiglitz, J. E., & Charlton, A. (2005). *Fair Trade for All*. Oxford University Press.
- World Bank (2022). *World Development Report: Data for Better Lives*.
- Barro, R. J., & Sala-i-Martin, X. (2004). *Economic Growth* (2nd Edition). MIT Press.
- Todaro, M. P. (2012). *Development Economics* (11th Edition). Pearson.
- Rodrik, D. (2011). *The Globalization Paradox*. W.W. Norton.



Course 4: Seminar Course*

Type of Course: Core

Code: 26-ECO-C-553

Semester III/I: Two-Year M.A. Economics/
One-Year M.A. Economics

Credits: 4

I. Introduction to the Course

The seminar course shall be based on the broad areas of specialization of the department. The students shall be randomly allotted supervisors among permanent faculty members. The course involves student presentations on representative readings, and adopts interactive and participatory modes of pedagogy.

Seminar Course in Semester III: Exhaustive Review of literature (at least 5 more readings) and exploratory data analysis.



Course 5: Advanced Research Methods

Type of Course: Core

Code: 26-ECO-C-554

Semester III/I: Two-Year M.A. Economics/
One-Year M.A. Economics

Credits: 4

I. Introduction to the Course

This course introduces advanced quantitative and econometric techniques for empirical economic research. It covers quantitative modelling, limited dependent variable models, causal inference, time-series, and panel data analysis. The course emphasizes the application of analytical tools and interpretation of empirical results for economic and policy analysis.

II. Course Objectives

- To develop an understanding of quantitative techniques and economic modelling tools, including Principal Component Analysis (PCA), Linear Programming, and Input–Output Analysis.
- To provide knowledge of econometric methods for analysing qualitative outcomes and evaluating public policies using limited dependent variable models and causal inference techniques.
- To develop students' proficiency in advanced time-series and panel data modelling techniques for analysing long-run relationships and conducting empirical economic research.

III. Learning Outcomes

After completing this course, students will be able to:

- Apply quantitative techniques, including Principal Component Analysis (PCA), Linear Programming, and Input–Output Analysis, to analyse economic problems and support decision-making.
- Employ appropriate econometric models, including dummy variable, Probit, Logit, Tobit, and causal inference methods (PSM, DiD, and IV), for empirical and policy analysis.
- Analyse long-run economic relationships using cointegration, ARDL, FMOLS, DOLS, ECM, and panel data models for applied economic research.

IV. Course Content

Unit 1: Quantitative Techniques and Economic Modelling

- Principal Component Analysis (PCA): Concepts, eigenvalue decomposition, factor extraction, and data reduction.



- Linear Programming Techniques: Graphical and simplex methods for optimization and economic applications.
- Input–Output Analysis: Inter-sectoral linkages, Hawkins–Simon conditions, and applications in economic planning and sectoral analysis.

Unit 2: Development Methodologies and Limited Dependent Variable Models

- Dummy Variable Models: Specification, estimation, and interpretation.
- Limited Dependent Variable Models: Probit, Logit and Tobit Models; Estimation, Interpretation, Marginal effects, and applications.
- Introduction to Causal Inference: Propensity Score Matching (PSM), Difference-in-Differences (DiD), and Instrumental Variables (IV): Concepts, assumption, and applications.

Unit 3: Advanced Time-Series and Panel Data Modelling

- Cointegration and ARDL Model: Concept of cointegration, Johansen Cointegration test, Autoregressive Distributed Lag (ARDL) Model: Bounds Testing Approach, Long-run equilibrium and short-run dynamics, Error Correction Model (ECM)
- Long-run Estimation Techniques: Fully Modified Ordinary Least Squares (FMOLS), Dynamic Ordinary Least Squares (DOLS), Estimation and interpretation of long-run relationships, Comparison of FMOLS, DOLS, and ARDL approaches
- Advanced Panel Data Modelling: Fixed effects, Random effects; First Difference Estimation; Hausman Specification Test; Feasible Generalized Least Squares (FGLS); and Dynamic panel Data Models (System GMM Estimation).

V. References

- Wooldridge, J. M. (2020). *Introductory Econometrics: A Modern Approach* (7th ed.). Cengage Learning.
- Greene, W. H. (2020). *Econometric Analysis* (9th ed.). Pearson.
- Gujarati, D. N., & Porter, D. C. (2020). *Basic Econometrics* (6th ed.). McGraw-Hill Education.
- Enders, W. (2015). *Applied Econometric Time Series* (4th ed.). Wiley.
- Pesaran, M. H., & Pesaran, B. (2009). *Time Series Econometrics Using Microfit 5.0: A User's Manual*. Oxford University Press.
- Johnson, R. A., & Wichern, D. W. (2007). *Applied Multivariate Statistical Analysis* (6th ed.). Pearson.
- Hillier, F. S., & Lieberman, G. J. (2015). *Introduction to Operations Research* (10th ed.). McGraw-Hill Education.
- Leontief, W. (1986). *Input–Output Economics* (2nd ed.). Oxford University Press.
- Cameron, A. C., & Trivedi, P. K. (2022). *Microeconometrics Using Stata* (2nd ed.). Stata Press.



Syllabus for
Two-Year M.A. Economics (Semester IV)
&
One-Year M.A. Economics (Semester II)



PG Thesis (Written Submission)/Project Report/Research Paper

Type of Course: Core

Code: 26-ECO-C-560

Semester IV/II: Two-Year M.A. Economics/
One-Year M.A. Economics)

Credits: 16

Introduction

The seminar course shall be based on the broad areas of specialization of the department. The students shall be randomly allotted supervisors among permanent faculty members. The course involves student presentations on representative readings, and adopts interactive and participatory modes of pedagogy.

Semester IV: The P.G. thesis/research project/research paper shall be of the in continuation of previous seminar courses.



PG Thesis (Viva-voce)/Presentation

Type of Course: Core

Code: 26-ECO-C-561

Semester IV/II: Two-Year M.A. Economics/
One-Year M.A. Economics

Credits: 4

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