

Manipur University Syllabus for Four-Year B.A. (Hons.) Economics



Manipur University

(DRAFT - Revised as per the New Ordinance (yet to be approved), July 2025)
FOUR YEAR UNDERGRADUATE PROGRAMME (FYUP), 2025 BASED ON NEP-2020

Curriculum Structure of BA Economics under New Guideline (ordinance) 2025

| Year | Semester | Major (Credit) | Minor (Credit) | MDC (Credit) | AEC (Credit) | SEC*/ Dissertation (Credit) | Experiential Learning (Credit) | VAC (Credit) | Total Credits | Additional Summer Internship |
|--|--------------|---|--|---|--|--|---|--------------|------------------|--|
| I | I L100 | Major – 1 (4) Introductory Microeconomics | Minor – 1 (4) (Level 100) (same as major) | MDC - 1 (3) Intro Micro economics | AEC – 1 (Communi- cation Skills) (4) | SEC – 1 (3) Data Entry and Visualisation | | VAC – 1 (2) | 20 | Additional for Bachelor's Certificate (4) |
| | II L100 | Major – 2 (4) Introductory Macroeconomics | Minor – 2 (4) (Level 100) (same as major) | MDC – 2 (3) Money and Banking | AEC – 2 (Academic Writing) (4) | SEC – 2 (3) Data Analysis | | VAC – 2 (2) | 20 | |
| | | | | | | | I Year Credit | | 40 | |
| Students exiting at 1 Year will be awarded Bachelor's Certificate after earning minimum credit in the concerned discipline provided the student earned additional 4 credits in work-based vocational courses offered during the Summer internship or apprenticeship. | | | | | | | | | | |
| II | III L200 | Major – 3 (4) Intermediate Microeconomics Major – 4 (4) Mathematical Methods for Economics 1 | Minor – 3 (4) (Level 200 & above) (Intermediate Microeco- nomics) | MDC – 3 (3) Indian Economy | | SEC – 3 (3) Financial literacy and budgeting | | VAC – 3 (2) | 20 | Additional for Bachelor's Diploma, if not done in 1 st Year (4) |
| | IV L200 | Major – 5 (4) Intermediate Macroeconomics Major – 6 (4) Mathematical Methods for Economics 2 Major – 7 (4) Intro International Eco Major – 8 (4) Development Economics-I | Minor – 4 (4) (Level 200 & above) (Intermediate Macroeco- nomics) | | | | | | 20 | |
| | | | | | | | II Year Credit | | 80 | |
| Students exiting at 2 Year will be awarded Bachelor's Diploma after earning minimum credit in the concerned discipline provided the student earned additional 4 credits in work-based vocational courses offered during first year or second year summer internship or apprenticeship. | | | | | | | | | | |
| III | V (L 300) | Major – 9 (4) Statistical Methods for Economics Major – 10 (4) Environmental Economics-I Major – 11 (4) Economics of | Minor - 5 (4) (Level 200 & above) (Environmental Economics-I) | | | | Internship/ Community engagement and service/ Field Project (4) | | 20 | |

| Year | Semester | Major (Credit) | Minor (Credit) | MDC (Credit) | AEC (Credit) | SEC*/ Dissertation (Credit) | Experiential Learning (Credit) | VAC (Credit) | Total Credits | Additional Summer Internship |
|---|---------------|---|--|------------------|------------------|--|-----------------------------------|------------------|------------------|------------------------------------|
| | | Health and Education | | | | | | | | |
| | VI (L 300) | Major – 12 (4) Indian Economy Major – 13 (4) Introductory Econometrics Major – 14 (4) Public Finance Major – 15 (4) Comparative Eco Development (1850-1950) | Minor - 6 (4) (Level 200 & above) (Indian Economy) | | | | | | 20 | |
| | Total | 60 Credits | 24 Credits | 9 Credits | 8 Credits | 9 Credits | 4 Credits | 6 Credits | 120 | |
| Students who want to exit at 3-year will be awarded Bachelor's Degree in the relevant Discipline /Subject upon earning the required credit of 120 from 1 st , 2 nd and 3 rd year. | | | | | | | | | | |
| ***IV | VII L 400 | Major – 16 (4) Adv Microeconomics Major – 17 (4) Adv Macroeconomics Major – 18 (4) Research Methodology (RM) | Minor – 7 (4) Economics of Health and Education (Level 300 & above) | | | For Honours with Research Dissertation Part 1 (4 Credits) For Honours students DSE-1** (4) Environmental Economics-II | | | 20 | |
| | VIII | Major – 19 (4) Public Economics Major – 20 (4) International Economics (Level 400) | Minor – 8 (4) Public Finance (Level 300 & above) | | | For Honours with Research Dissertation Part 2 (8 Credits) For Honours students DSE-2** (4) (Level 400) Development Economics-II DSE-3** (4) (Level 400) Statistics and Econometrics in lieu of Dissertation. | | | 20 | |
| | Total | 80 Credits | 32 Credits | 9 Credits | 8 Credits | | | 6 Credits | 160 | |
| Students will be awarded Bachelor's Degree (Honours/Honours with Research) in the relevant discipline after earning 160 credits | | | | | | | | | | |

*** The VII and VIII Semesters courses are finalised after a thorough discussion by the faculty members of Department of Economics, Manipur University since these two semesters are to be aligned completely with MA 1st and 2nd Semesters under the New ordinance while framing the syllabus of MA.

Courses for BA Economics

| Semester | Major Course | | |
|----------|---|---|--|
| I | MJC45ECO101(T)25: Introductory Microeconomics | 4 | |
| II | MJC45ECO102(T)25: Introductory Macroeconomics | 4 | |
| III | MJC50ECO203(T)25: Intermediate Microeconomics | 4 | |
| III | MJC50ECO204(T)25: Mathematical Methods for Economics 1 | 4 | |
| IV | MJC50ECO205(T)25: Intermediate Macroeconomics | 4 | |
| IV | MJC50ECO206(T)25: Mathematical Methods for Economics 2 | 4 | |
| IV | MJC50ECO207(T)25: Introductory International Economics | 4 | |
| IV | MJC50ECO208(T)25: Development Economics-I | 4 | |
| V | MJC55ECO309(T)25: Statistical Methods for Economics | 4 | |
| V | MJC55ECO310(T)25: Environmental Economics-I | 4 | |
| V | MJC55ECO311(T)25: Economics of Health and Education | 4 | |
| VI | MJC55ECO312(T)25: Indian Economy | 4 | |
| VI | MJC55ECO313(T)25: Introductory Econometrics | 4 | |
| VI | MJC55ECO314(T)25: Public Finance | 4 | |
| VI | MJC55ECO315(T)25: Comparative Economic Development (1850-1950) | 4 | |
| VII | MJC60ECO416(T)25: Advanced Microeconomics | 4 | |
| VII | MJC60ECO417(T)25: Advanced Macroeconomics | 4 | |
| VII | MJC60ECO418(T)25: Research Methodology | 4 | |
| VIII | MJC60ECO419(T)25: Public Economics | 4 | |
| VIII | MJC60ECO420(T)25: International Economics | | |
| | Minor Course | | |
| I | MNC45ECO101(T)25: Introductory Microeconomics | 4 | |
| II | MNC45ECO102(T)25: Introductory Macroeconomics | 4 | |
| III | MNC50ECO203(T)25: Intermediate Microeconomics | 4 | |
| IV | MNC50ECO204(T)25: Intermediate Macroeconomics | 4 | |
| V | MNC55ECO205(T)25: Environmental Economics-I | 4 | |
| VI | MNC55ECO206(T)25: Indian Economy | 4 | |
| VII | MNC60ECO307(T)25: Economics of Health and Education | 4 | |
| VIII | MNC60ECO308(T)25: Public Finance | 4 | |
| | Multidisciplinary Course | | |
| I | MDC45ECO101(T)25: Introductory Microeconomics | 3 | |
| II | MDC45ECO102(T)25: Money and Banking | 3 | |
| III | MDC50ECO203(T)25: Indian Economy | 3 | |
| | Ability Enhancement Course | | |
| I | AEC45ENG101(T)25: Communication Skills | 4 | |
| II | AEC45ENG102(T)25: Academic Writing | 4 | |
| | Skill Enhancement Course | | |
| I | SEC45ECO101(T)25: Data Entry and Visualisation | 3 | |
| II | SEC45ECO102(T)25: Data Analysis | 3 | |
| III | SEC50ECO203(T)25: Financial Literacy and Budgeting | 3 | |
| | Value Added Course | | |
| I | VAC45ECO101()25: | 2 | |
| II | VAC45ECO102()25: | 2 | |
| III | VAC50ECO203()25: | 2 | |
| | Internship | | |
| I, II | Summer Internship (1 st year or 2 nd year for Exit) | 4 | |
| V | Internship/Community service (compulsory) | 4 | |

| | Discipline Specific Elective (Honours only) | | |
|------|--|---|--|
| VII | DSE60ECO401(T)25: Environmental Economics-II | 4 | |
| VIII | DSE60ECO402(T)25: Development Economics-II | 4 | |
| VIII | DSE60ECO403(T)25: Statistics and Econometrics | 4 | |
| | Discipline Specific Elective (Honours with Research) | | |
| VII | Dissertation of 4 credits in lieu of DSE60ECO401(T)25: DIS60ECO401(D)25 | 4 | |
| VIII | Dissertation of 8 credits in lieu of DSE60ECO402(T)25 and DSE60ECO403(T)25: DIS60ECO402(D)25 | 8 | |

Courses in the Semesters

| Semester | Course | Credit |
|----------|--|--------|
| I | MJC45ECO101(T)25: Introductory Microeconomics | 4 |
| | MNC45ECO101(T)25: Introductory Microeconomics | 4 |
| | MDC45ECO101(T)25: Introductory Microeconomics | 3 |
| | AEC45ENG101(T)25: Communication Skills | 4 |
| | SEC45ECO101(T)25: Data Entry and Visualisation | 3 |
| | VAC45ECO101(I)25: | 2 |
| | Semester Total | 20 |
| II | MJC45ECO102(T)25: Introductory Macroeconomics | 4 |
| | MNC45ECO102(T)25: Introductory Macroeconomics | 4 |
| | MDC45ECO102(T)25: Money and Banking | 3 |
| | AEC45ENG102(T)25: Academic Writing | 4 |
| | SEC45ECO102(T)25: Data Analysis | 3 |
| | VAC45ECO102(I)25: | 2 |
| | Summer Internship (only for Exit after 1 st year of BA) | 4 |
| | | 20+(4) |
| III | MJC50ECO203(T)25: Intermediate Microeconomics | 4 |
| | MJC50ECO204(T)25: Mathematical Methods for Economics 1 | 4 |
| | MNC50ECO203(T)25: Intermediate Microeconomics | 4 |
| | MDC50ECO203(T)25: Indian Economy | 3 |
| | SEC50ECO203(T)25: Financial Literacy and Budgeting | 3 |
| | VAC50ECO203(I)25: | 2 |
| | | 20 |
| IV | MJC50ECO205(T)25: Intermediate Macroeconomics | 4 |
| | MJC50ECO206(T)25: Mathematical Methods for Economics 2 | 4 |
| | MJC50ECO207(T)25: Introductory International Economics | 4 |
| | MJC50ECO208(T)25: Development Economics-I | 4 |
| | MNC50ECO204(T)25: Intermediate Macroeconomics | 4 |
| | Summer Internship (only for Exit after 2 nd year of BA in not done in 1 st year) | 4 |
| | | 20+(4) |
| V | MJC55ECO309(T)25: Statistical Methods for Economics | 4 |
| | MJC55ECO310(T)25: Environmental Economics-I | 4 |
| | MJC55ECO311(T)25: Economics of Health and Education | 4 |
| | MNC55ECO205(T)25: Environmental Economics-I | 4 |
| | Internship (Compulsory) | 4 |
| | | 20 |
| VI | MJC55ECO312(T)25: Indian Economy | 4 |
| | MJC55ECO313(T)25: Introductory Econometrics | 4 |

| | | |
|------|--|----|
| | MJC55ECO314(T)25: Public Finance | 4 |
| | MJC55ECO315(T)25: Comparative Economic Development (1850-1950) | 4 |
| | MNC55ECO206(T)25: Indian Economy | 4 |
| | | 20 |
| VII | MJC60ECO416(T)25: Advanced Microeconomics | 4 |
| | MJC60ECO417(T)25: Advanced Macroeconomics | 4 |
| | MJC60ECO418(T)25: Research Methodology | 4 |
| | MNC60ECO307(T)25: Economics of Health and Education | 4 |
| | DSE60ECO401(T)25: Environmental Economics-II (Honours)/ Dissertation of 4 credits in lieu of DSE60ECO401(T)25 (Honours with Research): DIS60ECO401(D)25 | 4 |
| | | 20 |
| VIII | MJC60ECO419(T)25: Public Economics | 4 |
| | MJC60ECO420(T)25: International Economics | 4 |
| | MNC60ECO308(T)25: Public Finance | 4 |
| | DSE60ECO402(T)25: Development Economics-II (Honours) | 4 |
| | DSE60ECO403(T)25: Statistics and Econometrics (Honours) / Dissertation of 8 credits in lieu of DSE60ECO402(T)25 and DSE60ECO403(T)25 (Honours with Research): DIS60ECO402(D)25 | 4 |
| | | 20 |

Major Course

MJC45ECO101(T)25: INTRODUCTORY MICROECONOMICS

Course Description

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

Course learning outcome

1. The students would have learned the basic principles of microeconomic theory, important terms and concepts used in microeconomics etc.
2. The working of the markets is explained in terms of demand and supply in the market. The concept of welfare is also dealt in the context of market operation.
3. The behavior of basic units in consumption and production respectively are explained in terms of key concepts in respective areas.
4. The students would have learned the market structures of a perfectly competitive and monopoly market via their equilibrium states and relevant government policies.

Course Outline

1. Exploring the subject matter of Economics

Why study economics? Scope and method of economics; the economic problem: scarcity and choice; the question of what to produce, how to produce and how to distribute output; science of economics; the basic competitive model; prices, property rights and profits; incentives and information; rationing; opportunity sets; economic systems; reading and working with graphs.

2. Supply and Demand: How Markets Work, Markets and Welfare

Markets and competition; determinants of individual demand/supply; demand/supply schedule and demand/supply curve; market versus individual demand/supply; shifts in the demand/supply curve, demand and supply together; how prices allocate resources; elasticity and its application; controls on prices; taxes and the costs of taxation; consumer surplus; producer surplus and the efficiency of the markets.

3 The Household

The consumption decision - budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences (representing preferences with indifference curves); properties of indifference curves; consumer's optimum choice; income and substitution effects; labour supply and savings decision - choice between leisure and consumption.

4 Theory of Firm

Behavior of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run.

5 Market Structures:

Perfectly competitive markets- short run and long-run equilibrium, monopoly-short run and long run equilibrium, monopoly and anti-trust policy, government policies towards competition and imperfect competition.

Readings:

1. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8th Edition, 2007.
2. N. Gregory Mankiw, *Economics: Principles and Applications*, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
3. Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.

MJC45ECO102(T)25: INTRODUCTORY MACROECONOMICS

Course Description

This course aims to introduce the students to the basic concepts of Macroeconomics. Macroeconomics deals with the aggregate economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.

Course learning outcome

1. Students in this course will get familiarized with basic concepts of macroeconomics, its subject matter, its difference from microeconomics etc.
2. The students would have learned the basic concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.
3. The students would also have learned the basic structure of a classical and Keynesian system, how macroeconomic variables appear in them.

Course Outline

1. Introduction to Macroeconomics

Basic issues studied in macroeconomics; Macro vs. Micro Economics; Why Study Macroeconomics? Limitations of Macroeconomics; Stock and Flow variables, Equilibrium and Disequilibrium

2. National Income Accounting

Measurement of gross domestic product; income, expenditure and the circular flow; real versus nominal GDP; price indices; national income accounting for an open economy; balance of payments: current and capital accounts, the concept of System of National accounts

3. Money

Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy.

4. Inflation

Inflation – Meaning, Causes, Costs and Anti-Inflationary Measures; Inflation and its social costs; hyperinflation.

5. The Closed Economy in the Short Run

Classical and Keynesian systems; simple Keynesian model of income determination.

Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.

2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009.
4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.
6. Errol D 'Souza, *Macroeconomics*, Pearson Education, 2009.
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012.

MJC50ECO203(T)25: INTERMEDIATE MICROECONOMICS

Course Description

The course is designed to provide a sound training in microeconomic theory to formally analyse the behaviour of individual agents. Since students are already familiar with the quantitative techniques in the previous semesters, mathematical tools are used to facilitate understanding of the basic concepts. This course looks at the behaviour of the consumer and the producer and also covers the behaviour of a competitive firm.

Course learning outcome

1. The students will learn the ways to analyze the behavior of individual agents through exposure to various microeconomic theories.
2. The students will be taken deeper understanding of the basic concepts through the mathematical tools taken up earlier.
3. Specifically the students would have studied the behavior of consumers and producers and that of a competitive firm.

Course Outline

1. Consumer Theory

Preference; utility; budget constraint; choice; demand; Slutsky equation; buying and selling; choice under risk and intertemporal choice; revealed preference.

2. Production Theory

Technology; isoquants; production with one and more variable inputs; returns to scale; profit maximization

3. Theory of Costs

Short-run and long-run costs; cost curves in the short run and long run; cost minimization

4. Perfect Competition

Review of perfect competition, nature of demand, supply decision of a competitive firm, the inverse supply function, profits and producer's surplus, the long run supply curve of a firm.

5. General Equilibrium, efficiency and welfare

Equilibrium in a pure exchange economy, Walrasian General Equilibrium model, Pareto efficiency and welfare

Readings:

1. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
2. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.
3. B. Douglas Bernheim and Michael D. Whinston, *Microeconomics*, Tata McGraw-Hill (India), 2009.

MJC50ECO204(T)25: MATHEMATICAL METHODS for ECONOMICS-I**Course Description**

This is the first of a compulsory two-course sequence. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical

techniques to economic theory in general. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Course learning outcome

1. The students would have learned the preliminary building blocks to mathematical tools used in basic economic theory.
2. The students would have learned about the mathematical concepts like functions of real variable, characterizations of functions, integration and difference equations.
3. The students will see how these concepts appear in various economic models their significance in specific contexts.
4. The models are illustrations of methods of application of mathematical techniques to economic theory in general.

Course Outline

1. Preliminaries

Logic and proof techniques; sets and set operations; relations; functions and their properties; number systems.

2. Functions of one real variable

Graphs; elementary types of functions: quadratic, polynomial, power, exponential, logarithmic; sequences and series: convergence, algebraic properties and applications; continuous functions: characterizations, properties with respect to various operations and applications; differentiable functions: characterizations, properties with respect to various operations and applications; second and higher order derivatives: properties and applications.

3. Single-variable optimization

Geometric properties of functions: convex functions, their characterizations and applications; local and global optima: geometric characterizations, characterizations using calculus and applications.

4. Integration

Areas under curves, indefinite integrals, the definite integral, integration by parts, integration by substitution, economic applications of integration.

5. Difference equations

First-order difference equations, compound interest and present discounted values, linear equations with a variable coefficient, second-order equations, second-order equations with constant coefficients

Readings:

K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002.

Alpha C. Chiang and Kevin Wainwright, *Fundamental methods of Mathematical Economics*, McGraw Hill, 4e Indian edition

MJC50ECO205(T)25: INTERMEDIATE MACROECONOMICS

Course Description

This course introduces the students to formal modelling of a macro-economy in terms of analytical tools. It discusses various alternative theories of output and

employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. It also introduces the students to various theoretical issues related to an open economy.

Course learning outcome

1. The students would have learned the formal modelling of a macroeconomy in terms of analytical tools.
2. They would also have learned various alternative theories of output and employment determination in a closed economy in the short run as well as medium run and the role of policy in this context.
3. Various theoretical issues related to an open economy would also have taught.

Course Outline

1. IS-LM model and its policy effects

2. Aggregate Demand and Aggregate Supply

Derivation of aggregate demand curve using IS LM framework, Derivation of aggregate supply curve; interaction of aggregate demand and supply.

3. Demand for and Supply of Money

Demand for Money – Classical, Neoclassical and Keynesian Approaches, The Keynesian Liquidity Trap and its Implications, Supply of Money – Classical and Keynesian Approaches, The Theory of Money Supply Determination and Money Multiplier, Measures of Money Supply in India

4. Inflation Unemployment and Expectations

Classical, Keynesian, Monetarist and Modern Theories of Inflation, Deflation-Meaning, Causes, Costs and Anti-Deflationary Measures, Depression and Stagflation; Inflation vs Deflation

Phillips curve; adaptive and rational expectations; policy ineffectiveness debate.

5. Open Economy Models

Short-run open economy models; Mundell-Fleming model; exchange rate determination; purchasing power parity; asset market approach; Dornbusch's overshooting model; monetary approach to balance of payments; international financial markets.

Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009.
4. Steven M. Sheffrin, *Rational Expectations*, Cambridge University Press, 2nd edition, 1996.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.
6. Errol D'Souza, *Macroeconomics*, Pearson Education, 2009
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012

MJC50ECO206(T)25: MATHEMATICAL METHODS for ECONOMICS-II**Course Description**

This course is the second part of a compulsory two-course sequence. This part is to be taught in Semester II following the first part in Semester I. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this Syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Course learning outcome

1. The students will learn the concepts of differential equations, linear algebra, functions of several real variables and multivariable optimization.
2. The students will be able to see how these mathematical concepts are used in building and interpretation of various economic models.

Course Outline**1 Differential equations**

First-order differential equations, separable differential equations, first-order linear differential equations, Qualitative Theory and Stability, second-order differential equations, second-order differential equations with constant coefficients

2 Linear Algebra: Vector Spaces and Transformations

Vector spaces: algebraic and geometric properties; Scalar products, norms, and orthogonality;

Linear transformations: properties and matrix representations. Elementary matrix operations

3 Linear Algebra: Systems and Determinants

Systems of linear equations: properties of their solution sets; Determinants: characterization, properties, and applications; Applications of linear algebra in solving economic and mathematical problems

4 Functions of several real variables

Geometric representations: graphs and level curves; differentiable functions: characterizations, properties with respect to various operations and applications; second order derivatives: properties and applications; the implicit function theorem, and application to comparative statics problems; homogeneous and homothetic functions: characterizations and applications.

5 Multi-variable optimization

Convex sets; geometric properties of functions: convex functions, their characterizations, properties and applications; further geometric properties of functions: quasiconvex functions, their characterizations, properties and applications; unconstrained optimization: geometric characterizations, characterizations using calculus and applications; constrained optimization with equality constraints: geometric characterizations, Lagrange characterization using calculus and applications; properties of value function: envelope theorem and applications.

Readings:

K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002.

Alpha C. Chiang and Kevin Wainwright, *Fundamental methods of Mathematical Economics*, McGraw Hill, 4e Indian edition

MJC50ECO207(T)25: INTRODUCTORY INTERNATIONAL ECONOMICS

Course Description

This course develops a systematic exposition of models that try to explain the composition, direction, and consequences of international trade, and the determinants and effects of trade policy. It then builds on the models of open economy macroeconomics developed in courses 08 and 12, focusing on national

policies as well as international monetary systems. It concludes with an analytical account of the causes and consequences of the rapid expansion of international financial flows in recent years. Although the course is based on abstract theoretical models, students will also be exposed to real-world examples and case studies.

Course learning outcome

1. The students would have learned the composition, direction, and consequences of international trade, and the determinants and effects of trade policy via models studied.
2. They would also be acquainted with the working of open economy macroeconomics where the focus is on national policies and international monetary fund.
3. They will also learn the causes and consequences of the rapid expansion of international financial flows in recent years.
4. The students will also be exposed to real world examples and case studies.

Course Outline

1 Introduction to International Economics

What is international economics? An overview of world trade. Stylized facts about international trade

2 Theories of International Trade

Ricardian trade theory (notion of comparative advantage and gains from trade due to specialisation); an introduction to the distributional effects of trade; the specific factor model; Heckscher-Ohlin theory: Rybczynski and Stolper-Samuelson theorems; Heckscher-Ohlin theorem; factor price equalisation

3 Balance of Payments and Exchange Rate

Balance of payments and its components, Exchange Rate Determination, System of Fixed and Floating Exchange Rate; Theories of Exchange rates: Mint- Paper theory and Purchasing Power Parity theory – India's exchange rate policy.

4 Trade Policy and Protection

Instruments of trade policy; tariffs, quotas, export subsidies, voluntary export restraints. The economics of trade policy; political economy of trade policy; controversies in trade policy

5 Global Economic Integration and Governance

The evolving trends of world economy – the shift of the centre of gravity from West to East and from North to South; Indian Economy and the Globalizing World – Regional Cooperation and World Economic Integration – SAARC, BRICS, ASEAN and Act – East Policy; Relevance of Global Economic Governance – World Bank, IMF, WTO

Readings:

1. Paul Krugman, Maurice Obstfeld, and Marc Melitz, *International Economics: Theory and Policy*, Addison-Wesley (Pearson Education Indian Edition), 9th edition, 2012.
2. Dominick Salvatore, *International Economics: Trade and Finance*, John Wiley International Student Edition, 10th edition, 2011.
3. Bo Sodersten and Geoffrey Reed, *International Economics*. Palgrave Macmillan

MJC50ECO208(T)25: DEVELOPMENT ECONOMICS-I**Course Description**

This is the first part of a two-part course on economic development. The course begins with a discussion of alternative conceptions of development and their justification. It then proceeds to aggregate models of growth and cross-national comparisons of the growth experience that can help evaluate these models. The axiomatic basis for inequality measurement is used to develop measures of inequality and connections between growth and inequality are explored. The course ends by linking political institutions to growth and inequality by discussing the role of the state in economic development and the informational and incentive problems that affect state governance.

Course learning outcome

1. The students will learn about the alternative conceptions of development and their justification.
2. The students will also learn aggregate models of growth and cross-national comparisons of the growth experience.
3. They will also learn definitions, measures and mechanisms concerning the topic of poverty and inequality required in going further deep into this topic.
4. They will also learn the role of the State in economic development and also the informational and incentive problem that affect the State governance.

Course Outline**1. Concepts of Development**

Economic growth vs Development, weaknesses of Income measures, Alternative measures of development, documenting the international variation in these

measures, comparing development trajectories across nations and within them.

2. Human Development and Social Sectors

Human capital formation: education, health, and nutrition; Gender and development; Poverty, inequality, and social exclusion; Employment and informal sector issues; Social protection and welfare programmes

3. Growth Models and Empirics

The Harrod-Domar model, the Solow model and its variants, endogenous growth models and evidence on the determinants of growth.

4. Poverty and Inequality: Definitions, Measures and Mechanisms

Inequality axioms; connections between inequality and development -Kuznet Curve; a comparison of commonly used inequality measures –Lorenz curve, Gini coefficient, Decile ratio, Quintile ratio and Palma ratio

Poverty: Absolute and relative Poverty; Popular measures - Poverty line, Head Count Ratio, Multidimensional Poverty (MPI); Vicious Circle of Poverty (poverty trap) and path dependence of growth processes.

5. Political Institutions and the Functioning of the State

The determinants of democracy; alternative institutional trajectories and their relationship with economic performance; within-country differences in the functioning of state institutions; state ownership and regulation; government failures and corruption.

Readings:

1. Debraj Ray, *Development Economics*, Oxford University Press, 2009.
2. Partha Dasgupta, *Economics, A Very Short Introduction*, Oxford University Press, 2007.
3. Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, *Understanding Poverty*, Oxford University Press, 2006.
4. Kaushik Basu, *The Oxford Companion to Economics in India*, OUP, 2007.
5. Amartya Sen, *Development as Freedom*, OUP, 2000.
6. Daron Acemoglu and James Robinson, *Economic Origins of Dictatorship and Democracy*, Cambridge University Press, 2006.
7. Robert Putnam, *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton University Press, 1994

MJC55ECO309(T)25: STATISTICAL METHODS FOR ECONOMICS

Course Description

This is a course on statistical methods for economics. It begins with some basic concepts and terminology that are fundamental to statistical analysis and inference. It then develops the notion of probability, followed by probability distributions of discrete and continuous random variables and of joint distributions. This is followed by a discussion on sampling techniques used to collect survey data. The course introduces the notion of sampling distributions that act as a bridge between probability theory and statistical inference. The semester concludes with some topics in statistical inference that include point and interval estimation.

Course learning outcome

1. The students would have learned some basic concepts and terminology that are fundamental to statistical analysis and inference.
2. The notion of probability, probability distributions of discrete and continuous random variables and of joint distributions would have been learned.
3. They will be taught sampling techniques used to collect survey data as well as the notion of sampling distributions that act as a bridge between probability theory and statistical inference.
4. They would also have learned some topics in statistical inference that include point and interval estimation.

Course Outline

1. Introduction and Overview

The distinction between populations and samples and between population parameters and sample statistics; the use of measures of location and variation to describe and summarize data; population moments and their sample counterparts.

2. Probability Theory and Random Variables

Sample spaces and events; probability axioms and properties; counting techniques; conditional probability and Bayes' rule; independence.

Random variables; probability distributions; expected values of random variables and of functions of random variables; properties of commonly used discrete and continuous distributions (uniform, binomial, normal, Poisson and exponential random variables).

3. Random Sampling and Jointly Distributed Random Variables

Density and distribution functions for jointly distributed random variables; computing expected values; covariance and correlation coefficients.

4. Sampling

Principal steps in a sample survey; methods of sampling; the role of sampling theory; properties of random samples.

5. Point and Interval Estimation

Estimation of population parameters using methods of moments and maximum likelihood procedures; properties of estimators; confidence intervals for population parameters.

Readings:

1. Jay L. Devore, *Probability and Statistics for Engineers*, Cengage Learning, 2010.
2. John E. Freund, *Mathematical Statistics*, Prentice Hall, 1992.
3. Richard J. Larsen and Morris L. Marx, *An Introduction to Mathematical Statistics and its Applications*, Prentice Hall, 2011.
4. William G. Cochran, *Sampling Techniques*, John Wiley, 2007.

MJC55ECO310(T)25: ENVIRONMENTAL ECONOMICS -I

Course Description

This course focuses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies. Economic implications of environmental policy are also addressed as well as valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments. Selected topics on international environmental problems are also discussed.

Course learning outcome

1. The students will learn the linkage of the current environmental problems of the world with economic factors.
2. The students will learn the application of economic principles to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies.
3. The students will also get familiarized with economic implications of environment policies.

4. Concepts like valuation of environmental quality, quantification of environmental damages, inclusive cost-benefit analysis of projects, environmental impact analysis will also be taught.

Course Outline

1. Introduction and Concepts

What is environmental economics; review of microeconomics and welfare economics. Pareto optimality and market failure in the presence of externalities; property rights and the Coase theorem.

2. The Design and Implementation of Environmental Policy

Overview; Pigouvian taxes and effluent fees; tradable permits; choice between taxes and quotas under uncertainty; implementation of environmental policy.

3. International Environmental Problems

Trans-boundary environmental problems; economics of climate change; trade and environment.

4. Valuation, Measurement

Non-Market values and measurement methods of environmental improvements; risk assessment and perception.

5. Sustainable Development

Concepts; measurement

Readings:

1. Charles Kolstad, *Intermediate Environmental Economics*, Oxford University Press, 2nd edition, 2010.
2. Robert N. Stavins (ed.), *Economics of the Environment: Selected Readings*, W.W. Norton, 5th edition, 2005.
3. Roger Perman, Yue Ma, James McGilvray and Michael Common, *Natural Resource and Environmental Economics*, Pearson Education/Addison Wesley, 3rd edition, 2003.
4. Maureen L. Cropper and Wallace E. Oates, 1992, —Environmental Economics: A Survey,|| *Journal of Economic Literature*, Volume 30:675-740.

MJC55ECO311(T)25: ECONOMICS OF HEALTH AND EDUCATION

Course Description

The importance of education and health in improving well-being is reflected in their inclusion among the Millennium Development Goals adopted by the United Nations member states, which include among other goals, achieving universal primary education, reducing child mortality, improving maternal health and combating diseases. This course provides a microeconomic framework to analyze, among other

things, individual choice in the demand for health and education, government intervention and aspects of inequity and discrimination in both sectors. It also gives an overview of health and education in India.

Course learning outcome

- a. The students will learn the demand aspect for health and education, government intervention, inequity and discrimination issue in these two sectors within the microeconomics framework.
- b. They will also learn the importance of education and health in raising the wellbeing of a society.

Course Outline

1. Role of Health and Education in Human Development

Importance in poverty alleviation; health and education outcomes and their relationship with macroeconomic performance.

2. Microeconomic Foundations of Health Economics and Evaluation of Health Programs

Demand for health; uncertainty and health insurance market; alternative insurance mechanisms; market failure and rationale for public intervention; equity and inequality. Costing, cost effectiveness and cost-benefit analysis; burden of disease.

3. Health Sector in India: An Overview

Health outcomes; health systems; health financing.

4. Education: Investment in Human Capital

Rate of return to education: private and social; quality of education; signaling or human capital; theories of discrimination; gender and caste discrimination in India.

5. Education Sector in India: An Overview

Literacy rates, school participation, school quality measures.

Readings:

1. William, Jack, *Principles of Health Economics for Developing Countries*, World Bank Institute Development Studies, 1999.
2. World Development Report, *Investing in Health*, The World Bank, 1993.
3. Ronald G., Ehrenberg and Robert S., Smith, *Modern Labor Economics: Theory and Public Policy*, Addison Wesley, 2005.
4. Sumitra Naha Das. *Introduction to the Economics of Health and Education*, Abhijit Publications, 2021.

MJC55ECO312(T)25: INDIAN ECONOMY

Course Description

Using appropriate analytical frameworks, this course reviews major trends in economic indicators and policy debates in India in the post-Independence period, with particular emphasis on paradigm shifts and turning points. Given the rapid changes taking place in India, the reading list will have to be updated annually. This course also tries to incorporate the economic development issues and challenges of the Northeastern India.

Course learning outcome

1. The students will try to understand the development path of India since independence as paradigm shifts and turning points in the growth path of India.
2. The very important topic of growth and distribution will also be taught.
3. The students will also learn about the change in the structure of institutions responsible for planning and growth of the country.
4. The various aspects of economy of North eastern region of India including main economic activities of the region, natural resources will also be taught in this course.

Course Outline

1: Economic Development – Concepts

Concept of Developed and Developing Economies

Characteristics of a developing economy – basic features of Indian economy at the time of independence, Economic development since independence

2: Population and Economic Development

Demographic trends of India –Concept of Demographic Dividend - Occupational Structure - Population policy, Employment in organised and unorganised sectors.

3: Growth and Distribution and Poverty in India

Poverty, inequality, employment – organised and unorganised, unemployment and policy interventions relating to poverty, inequality and unemployment.

4. Economic Planning and Policy Framework in India

Evolution and objectives of economic planning in India;
Plans Issues in Indian Planning – Objectives and critical evaluation of each plan, Centre-State relationship, Niti Aayog and Planning Commission.

5: Economy of North-Eastern Region:

Basic Features: Trends of state GDP and Sector-Wise contribution, Occupational Pattern; Natural Resources: Land, Water and Forest Resources; Agriculture: Cropping Pattern; Industry: Importance, conditions, Small-Scale Industries, Role of NEC; Tourism: importance, potential and challenges; Act East Policy and North East India.

Readings:

2. Balakrishnan, P. (2007). The recovery of India: Economic growth in the Nehru era. *Economic and Political Weekly*, 42(45-46), 52-66.
3. Bardhan, P.(2012). *Awakening giants, feet of clay: Assessing the economic rise of China and India*. Princeton University Press.
4. Basu, K., Maertens, A. (2007). The pattern and causes of economic growth in India. *Oxford Review of Economic Policy*, 23, 143-167.
5. Bhagwati, J., Panagariya, A.(2012). *India's tryst with destiny*, Collins Business.
6. Centre for Sustainable Employment. (2018). *State of working India 2018*. Azim Premji University.
7. Desai, S. (2015). Demographic deposit, dividend and debt. *The Indian Journal of Labour Economics*, 58, 217-232.
8. Dreze, J., Khera, R. (2017). Recent social security initiatives in India, *World Development*, 98, 555-572.
9. Dreze, J., Sen, A. (2013). *India: An uncertain glory*. Allen Lane.
10. Joshi, V. (2016). *India's long road: The search for prosperity*. Allen Lane.
11. Meenakshi, J. (2016). Trends and patterns in the triple burden of malnutrition in India. *Agricultural Economics*, 47, 115-134.
12. Ministry of Finance. (2016). Universal basic income: A conversation with and within the mahatma. Chapter 9 in *Economic Survey*, 172-212.
13. Panagariya, A., Mukim, M. (2014). A comprehensive analysis of poverty in India. *Asian Development Review*, 31, 1-52.
14. Rangarajan Committee. (2014). *Report of the expert group to review the methodology for measurement of poverty*. Government of India.
15. Rawal, V., Bansal, V., Bansal, P. (2019). Prevalence of undernourishment in Indian states: Explorations based on NSS 68th round data. *Economic and Political Weekly*, 54(15), 35-45.
16. Rodgers, G. (2018). Inequality in the Indian growth regime. *Indian Journal of Human Development*, 12, 134-148.
17. Thomas, J. (2014). India's labour market during the 2000s: An overview. In K. Ramaswamy (ed.): *Labour, employment and economic growth in India*. Cambridge University Press, 21-56.
18. Verick, S. (2018). Female labor force participation and development. *IZA World of Labor*, 2, 1-11.
19. Bansil, P.C, *Agricultural Problems of India*, Vikas Publishing House Pvt. Ltd.
20. Datt, R. and Sundharam, K.P.M, *Indian Economy*, S. Chand & Company Ltd, New Delhi.
21. Kapila, U. (2008-09), *Indian Economy since Independence*, Academic Foundation, New Delhi.
22. Mookherjee, D. (1997), *Indian Industry: Policies and Performance*, Oxford

- University Press,
 23. North-East Vision Document (2020).
 24. Shukla Commission Report (1997)

MJC55ECO313(T)25: INTRODUCTORY ECONOMETRICS

Course Description

This course provides a comprehensive introduction to basic econometric concepts and techniques. It covers statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models. The course also covers the consequences of and tests for misspecification of regression models.

Course learning outcome

1. The students would learn the basic econometric concepts and techniques and statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models.
2. The course also teach the consequences of and tests for misspecification of regression models.

Course Outline

1. Nature and Scope of Econometrics and statistical concepts

Nature and scope of Econometrics, Normal distribution; chi-sq, t- and F-distributions; estimation of parameters; properties of estimators; testing of hypotheses: defining statistical hypotheses; distributions of test statistics; testing hypotheses related to population parameters; Type I and Type II errors; power of a test; tests for comparing parameters from two samples.

2. Simple Linear Regression Model: Two Variable Case

Estimation of model by method of ordinary least squares; properties of estimators; goodness of fit; tests of hypotheses; scaling and units of measurement; confidence intervals; Gauss- Markov theorem; forecasting.

3. Multiple Linear Regression Model

Estimation of parameters; properties of OLS estimators; goodness of fit - R² and adjusted R²; partial regression coefficients; testing hypotheses – individual and joint; functional forms of regression models; qualitative (dummy) independent variables.

4. Violations of Classical Assumptions

Consequences, Detection and Remedies Multicollinearity; heteroscedasticity; serial correlation.

5. Model Specification:

Omission of a relevant variable; inclusion of irrelevant variable; tests of specification errors.

Readings:

1. Jay L. Devore, *Probability and Statistics for Engineers*, Cengage Learning, 2010.
2. John E. Freund, *Mathematical Statistics*, Prentice Hall, 1992.
3. Richard J. Larsen and Morris L. Marx, *An Introduction to Mathematical Statistics and its Applications*, Prentice Hall, 2011.
4. D. N. Gujarati and D.C. Porter, *Essentials of Econometrics*, McGraw Hill, 4th edition, International Edition, 2009.
5. Christopher Dougherty, *Introduction to Econometrics*, Oxford University Press, 3rd edition, Indian edition, 2007.
6. Jan Kmenta, *Elements of Econometrics*, Indian Reprint, Khosla Publishing House, 2nd edition, 2008.

MJC55ECO314(T)25: PUBLIC FINANCE

Course Description

Public economics is the study of government policy from the points of view of economic efficiency and equity. The paper deals with the nature of government intervention and its implications for allocation, distribution and stabilization. Inherently, this study involves a formal analysis of government taxation and expenditures. The subject encompasses a host of topics including public goods, market failures and externalities. The paper is divided into two sections, one dealing with the theory of public economics and the other with the Indian public

finances.

Course learning outcome

1. The students would have learned the nature of government fiscal intervention and its implications for allocation, distribution and stabilization.
2. Specifically, they will learn about the government taxation and expenditure.
3. They will learn about other topics as well including public goods, market failures and externalities.

Course Outline

1. Role of government

- a. Fiscal functions: An over view
- b. Public goods: Definition, characteristics- exclusion and non-rivalry, pure and impure public goods, free rider problem, merit goods
- c. Externalities: The problems and solutions, taxes vs regulation,

property rights, Coase theorem

2. Public expenditure theory

- a. Wagner's law, Peacock -Wiseman hypothesis, Cost - Benefit analysis, Multiplier and accelerator effects

3. Taxation

- a. Principles of taxation- Ability to pay, benefit approach; elasticity and buoyancy of taxation; tax shifting
- b. Tax structure in India; Value added tax, Goods and Services Tax

4. Budgeting and fiscal policy

- a. Concepts – Revenue account, capital account, deficits; economic and functional classification of budget, Balanced and unbalanced budget; Budget preparation
- b. Fiscal policy – Fiscal policy in under developed countries

5. Federal finance

- a. Horizontal and vertical fiscal imbalances; decentralization, merits and demerits of decentralization
- b. Centre-state financial relations in India, Finance Commission, latest Finance Commission recommendations; Planning Commission and Niti Ayog, Local bodies in India

Readings:

1. Bhatia, H.L. (2020). *Public finance*, New Delhi: Vikas Publications.
2. Musgrave, R.A. and Musgrave, P.B. (1989). *Public Finance in theory and practice*. Singapore: McGraw Hills.
3. Rao, Hemlata (2006). *Fiscal Federalism, Issues and Policies*, New Delhi: New Century Publications
4. Rao, M. (2005). 'Changing contours of federal fiscal arrangements in India'. In A. Bagchi (ed.): *Readings in public finance*. Oxford University Press.
5. Reddy, Y. (2015). Fourteenth finance commission: Continuity, change and way forward. *Economic and Political Weekly*, 50(21), 27-36.
6. Economic Survey, Government of India (Latest).
7. State Finances: A Study of Budgets, Reserve Bank of India (Latest).

MJC55ECO315(T)25: COMPARATIVE ECONOMIC DEVELOPMENT (1850-1950)

Course Description

This course investigates selected issues in comparative historical perspective over the 19th century and the first few decades of the 20th century. The course focuses on a set of countries, which followed clearly diverse trajectories and patterns of growth to achieve their industrial transition and compares the outcomes of these diverse trajectories on sectoral change, inter-sectoral relations, labour processes and industrial relations and also compares the role of the state in facilitating the respective trajectories.

Course learning outcome

1. The students would have learned the economic systems followed by these selected countries namely US, USSR, UK and Japan.
2. They would have learned about the different trajectories and patterns of growth experienced by these diverse forms of economic systems and their outcomes on sectoral change, intersectoral relations, labour processes and industrial relations.
3. They would also have learned about the role of the State in facilitating the respective trajectories.

Course Outline

1: Introduction and Comparative Perspectives

- Introduction to comparative economic development
- Perspectives and approaches to studying economic development
- Overview of selected case study countries: USA, USSR, UK, and Japan

2: Agriculture and Economic Development

- Agrarian surplus and its role in economic transformation
- The role of the peasantry in economic development

3: Industrialisation and the Working Class

- The Industrial Revolution in Britain
- Industrialisation in late industrialisers

4. The Factory System and Making of the Industrial Working Class

- The factory system: division of labour, structure of industrial authority, and organisation of work
- Making of the industrial working class: relationships between workers and managers

5: The Role of the State in Developmental Transition

- State intervention in industrialisation and development
- Comparative role of the state in USA, USSR, UK, and Japan

Readings:

1. E.J. Hobsbawm, *World of Labour: Further studies in the history of labour*, London Weidenfeld & Nicholson, 1984.

2. E.J. Hobsbawm, *Industry and Empire: An Economic History of Britain since 1750*, Weidenfeld & Nicholson, 1968.
3. Peter Mathias, *The First Industrial Nation, An Economic History of Britain, 1700-1914*. 2nd edition Methuen, 1983.
4. T. Nakamura, *Economic Growth in Pre-War Japan*, Tr. by Robert A Feldman, Yale University Press, 1983.
5. Okochi, Karsh and Levine, *Workers and Employees in Japan, The Japanese Employment Relations System*, University of Tokyo, 1965.
6. Y. Hayami, *A Century of Agricultural Growth in Pre-War Japan: Its Relevance to Asian Development*, University of Minnesota Press, 1975.
7. Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy 1925- 1975*, Stanford University Press, 1982.
8. W.W. Lockwood, *Economic Development of Japan*, Expanded edition, Princeton University Press, 1966.
9. Dobb M., *Soviet Economic Development Since 1917*, Universal Book Stall, New Delhi, 1995.
10. Paul R. Gregory and Robert C. Stuart, *Soviet Economic Structure and Performance*, Harper & Row, 3rd edition, 1986.
11. Timothy W. Guinnane, 2002, —Delegated Monitors, Large and Small: Germany 's banking System, 1800 –1914||, *Journal of Economic Literature*, Volume XL:73-124.
12. Richard A. Easterlin, Davis and Parker, *American Economic Growth: An economist's History of the United States*, Harper & Row, 1972.
13. Hughes and Cain, *American Economic History*, HarperCollins College Publishers, 4th edition, 1994.
14. Angus Maddison, *Dynamic Forces in Capitalist Development, A Long-Run Comparative View*, Oxford University Press, 1991.
15. P.K. O'Brien, 1986, —Do we have a Typology for the Study of European Industrialization in the XIXth Century?, *Journal of European Economic History*, XV 3:291-333.
16. Smith, *Modern Labor Economics: Theory and Public Policy*, Addison Wesley, 2005.

MJC60ECO416(T)25: ADVANCED MICROECONOMICS

Course Description

This course provides an advanced understanding of the principles of microeconomic analysis. It covers the behavior of individual consumers and firms, market structures, and general equilibrium theory. The course also examines welfare economics, choice under uncertainty, and the role of information in economic decision-making. Emphasis is placed on analytical reasoning, mathematical formulation, and the application of theoretical models to real-world economic problems. Students will gain insights into how markets function under various

conditions and how economic agents make decisions given constraints, risks, and information asymmetries.

Course Outcomes

1. **Understand and apply consumer theory** to analyze utility maximization, demand systems, and duality relationships.
2. **Explain and derive production and cost functions** and apply them to firm behavior under different market conditions.
3. **Analyze various market structures**—including perfect competition, monopoly, and oligopoly—and predict pricing and output outcomes.
4. **Evaluate general equilibrium and welfare outcomes**, and understand the implications of the fundamental theorems of welfare economics and social choice theory.
5. **Assess decision-making under uncertainty**, using expected utility, risk aversion, and portfolio theory.
6. **Examine information-related market problems**, such as adverse selection, moral hazard, and principal–agent relationships, and discuss mechanisms to improve market performance.
7. **Develop analytical and problem-solving skills** necessary for research and policy analysis in microeconomic contexts.

Course Outline

1: Consumer and Producer Theory

Consumer Theory:

Preferences and Utility; The Consumer's Problem; Constrained Utility Maximisation and Demand Curves; Properties of Demand (Income and Substitution Effects); Duality in Consumer Theory – Marshallian Demand, Indirect Utility, Hicksian Demand, Expenditure Function.

Theory of the Firm:

Production and Returns to Scale; Cost Functions and Duality in Production; The Competitive Firm and Profit Maximisation; The Profit Function.

2: Market Structures

Perfect Competition; Imperfect Competition (Monopoly, Monopolistic Competition), Oligopoly, (Bertrand, Cournot) Competition

3: General Equilibrium and Welfare

Equilibrium in Exchange; Equilibrium in Competitive Market Systems; General Equilibrium and Resource Allocation; Prices of Commodities and Factors; Social Choice Theory and Arrow's Impossibility Theorem; Fundamental Theorems of Welfare Economics; Theory of the Second Best

4: Choice under Uncertainty Expected Utility Theory; Risk Attitudes and Risk Aversion; Gambling and Insurance; Risk Pooling and Spreading; Mean-Variance Analysis and Portfolio Selection; State-Dependent Utility; Subjective Probability; Risk Bearing Optimum; Market Equilibrium under Uncertainty.

5: Information Economics

Adverse Selection; Market Signalling and Screening; Moral Hazard; Principal–Agent Problem; Information and Market Performance.

READING LIST

1. Sushil Bikhchandani, Jack Hirshleifer and John G. Riley (2013) *“The Analytics of Uncertainty and Information”*, Second edition, Cambridge.
2. Hal R Varian (1992) *“Microeconomic Analysis”*. W.W. Norton and Company Third edition.
3. Hal R Varian (2010) *“Intermediate Microeconomics”*. W W Norton and Company
4. Andrew Mascolel, Michael D. Whinston and Jerry R. Green (1995) *“Microeconomic Theory”*, Oxford University Press.
5. Gravell, Hugh and Ray Rees (2004), *“Microeconomics”*, Singapore: Pearson Education
6. Kreps, D.M (1992). *“A Course in Microeconomic Theory”*, Prentice Hall of India.
7. Christopher Snyder and Walter Nicholson (2012) *“Microeconomic Theory Basic Principles and Extensions”*, South Western, Cengage Learning.
8. Robert S. Pindyck and Daniel L. Rubinfeld (2001) *“Microeconomics”*. Fifth edition. Pearson Education.
9. Anindya Sen (2007) *“Microeconomics Theory and Applications”*. Oxford University Press, Second Edition.
10. Koutsoyiannis, A (1982) *Modern Microeconomics*, Macmillan
11. Paul Krugman and Robin Wells (2015). *Microeconomics*. (4th Edition). Worth Publishers, New York

MJC60ECO417(T)25: ADVANCED MACROECONOMICS

Course Description

This course explores the development of macroeconomic theory beyond the classical and Keynesian frameworks, focusing on equilibrium and disequilibrium analysis, post-Keynesian developments, and modern schools of thought. It examines how economies adjust through prices and quantities, the dynamics of stabilization policies, and the evolution of macroeconomic models in open and politically influenced contexts. The course integrates theoretical models with policy applications, offering students a comprehensive understanding of contemporary macroeconomic analysis and debates.

Learning outcome

1. Students will be able understand both equilibrium and disequilibrium models in macroeconomics
2. Students will be able to understand the various school of thought on macroeconomics beyond Classical and Keynesian
3. Students will be able to understand the various aspects on macroeconomic policies with special focus on policy debates surrounding inflation and unemployment
4. Student will be able to understand the how macroeconomic parameters and variables are played out in an open economy
5. Students will be able to understand the interface between politics and macro economy

Course Outline

1. **Equilibrium and Disequilibrium Analysis:** The real balance effect and Patinkin's rehabilitation of classical theory. Effective demand, notional demand, and involuntary unemployment – price and quantity flexibility – sources of non-instantaneous price adjustment. Reinterpretation of Keynes.
2. **Macroeconomics After Keynes:** Monetarism, Supply Side Economics and Rational Expectations, New-Keynesian Economics, New Classical Economics, Real Business Cycle
3. **Stabilization Policy:** Phillips Curve – theoretical explanations: Lipsey, Friedman-Phelps. Short-run and long-run Phillips curve, natural rate of unemployment, and NAIRU; Lags in the effects of policy. Rules vs discretion Debate. Role of Monetary Policy: Taylor's Rule & Inflation Targeting
4. **Macroeconomics in the Open Economy:** Mundell-Fleming Model: Small & Large Economy, Fixed & Flexible Price; floating and fixed exchange rates. Dornbusch Overshooting Model.
5. **The New Political Macroeconomics:** Politico-economic models, Political business cycles, The Nordhaus Opportunistic Model, The Hibbs Partisan Model & Rational Partisan Theory; Policy Implications of Politico-Economic Models.

Reading List

1. Abel, Andrew, Ben Bernanke and Dean Croushore (2011). Macroeconomics. 7th Edition. Prentice Hall, New Delhi
2. Ackley, G. (1978). Macroeconomics Theory and Policy. London: Macmillan
3. Alesina, A. (1988), 'Macroeconomics and Politics', NBER Macroeconomics Annual
4. Bain, Keith and Peter Howells (2003). Monetary Economics: Policy and Its Theoretical Basis. New York: Palgrave
5. Blanchard, O.J. (2003), Macroeconomics, 3rd edn, New Jersey: Prentice-Hall.
6. Branson, W. H.(2007). Macroeconomics Theory and Policy. East West Press Private Ltd.
7. Clower, R. W. (1969). Monetary Theory. Harmondsworth: Penguin
8. Dornbusch, Rudiger, Stanley Fischer, Richard Startz (2011). Macroeconomics 11th Edition New York: McGraw Hill
9. Edgmand, M. R. (1985). Macroeconomics Theory and Policy. New Delhi: Prentice Hall
10. Friedman, Milton & Walter W. Heller (1969). Monetary vs Fiscal Policy. New York: WW Norton and Company

12. Froyen, Richard T. (2013) *Macroeconomics Theory and Policies* 10th Edition. New Delhi: Pearson
13. Farmer, Roger E. A. (2009). *Macroeconomics in the Small and the Large: Essays on Microfoundations, Macroeconomic Applications and Economic History in Honor of Axel Leijonhufvud*. Massachusetts: Edward Elgar Publishing
14. Garrison, Roger W (2000) *Time and money: The macroeconomics of capital structure* 1 ed. London: Routledge
5. 14 Hall, Robert E. and J.B Taylor (1986) *Macroeconomics*. New York: W. W. Norton
15. Heijdra, Ben (2017) *Foundations of Modern Macroeconomics*. OUP: New York
16. Jha, Raghendra (2008). *Contemporary Macroeconomic Theory and Policy*. New Delhi: New Age International
17. Kellison, Stephen G. (2008) *Theory of Interest* 3 ed. New York: McGraw Hill
18. Mankiw, N. Gregory. (2009) *Macroeconomics*. 7th Edition New York: Worth Publishers
19. Patinkin, D. (1965). *Money, Interest and Prices*. 2nd Edition. London: Harper and Row
20. Snowdon, Brian and Howard R. Vane (2005). *Modern macroeconomics: its origins, development and current state*. Massachusetts: Edward Elgar Publishing
21. Snowdon, Brian and Howard R. Vane (1997). *A Macroeconomics Reader*. Massachusetts: Edward Elgar Publishing
22. Walsh, Carl E. (2010). *Monetary Theory and Policy*. Cambridge: The MIT Press

MJC60ECO418(T)25: Research Methodology

Course Outcomes

- CO1: Identify and explain the fundamental concepts and scope of research.
- CO2: Formulate research problems, objectives, and hypotheses.
- CO3: Choose appropriate research designs and sampling techniques.
- CO4: Collect, process, and analyse data using suitable tools.
- CO5: Prepare a well-structured research report with proper referencing.

Course Outline

1 Introduction to Research

- Meaning, objectives, and significance of research
- Types of research: fundamental, applied, descriptive, analytical, exploratory
- Ethics in research and plagiarism

2 Research Process: Identification of Problem, Formulation of Objectives and Hypothesis

- Steps in research
- Identifying and defining research problems
- Review of literature
- Formulation of objectives and hypotheses

3 Research Design and Sampling

- Concepts of research design; types: exploratory, descriptive, experimental, case study
- Concepts of population and sample
- Probability and non-probability sampling techniques
- Determining sample size

4 Data Collection and Analysis

- Sources of data: primary and secondary
- Tools for data collection: questionnaires, interviews, observation, schedules
- Measurement and scaling techniques
- Data processing: coding, editing, tabulation
- Basics of statistical analysis: descriptive statistics, correlation, regression, chi-square test, t-test, F test(concept only)

5 Report Writing and Presentation

- Structure of a research report
- Writing styles, citations, and referencing
- Use of plagiarism detection tools
- Presenting research findings

Reading Lists:

1. Kothari, C. R. & Garg, G. (2019). *Research Methodology: Methods and Techniques*. New Age International.
2. Kumar, R. (2021). *Research Methodology: A Step-by-Step Guide for Beginners*. SAGE.
3. Dr. M. Ranganatham, O.R. Krishnaswami, P.N. Harikumar (2023). *Research Methodology*. Himalaya Publishing House.
4. Deepak Chawla & Neena Sondhi. *Research Methodology: Concepts and Cases*. Vikas Publishing House, Second Edition, 2018

MJC60ECO419(T)25: PUBLIC ECONOMICS

Learning outcome

1. The students will understand the different roles of government in any country & the types of goods and services that government should be providing to the public.
2. Different types of taxes of both the central and the state governments including new ones like VAT and GST shall be studied which will be of immense knowledge to the students.
3. Unlike private investments, public investments should be based on different criteria. Social cost benefit analysis will impart this knowledge.
4. Government budget and the different components of it. This will enable them to read the budget and analyze it.
5. India is a federal country and students will learn the dynamics of centre-state financial relations. Decentralization is being done increasingly all over the world. Some theories on decentralization will be studied.

Course Outline

1. Role of the Government in Economic activity: Allocation, distribution and stabilization functions; Private, public and merit goods; Theories of growth of public expenditure - Wiseman & Peacock, Wagner.
2. Public revenue. Tax and Non-tax revenue. Impact, shifting and incidence of tax; Elasticity and buoyancy; Principles of taxation - Ability to pay principle, Benefit principle.
3. Public utilities and public enterprises, Public investment criteria: shadow pricing, cost benefit analysis, impact assessment.
4. Fiscal policy in underdeveloped countries including India; Value Added Tax (VAT), Goods & Services Tax (GST); The analysis and interpretation of government budget in India, Budget classifications and their significance, different concepts of budget deficits.
5. Fiscal federalism in India; Leviathan hypothesis, Oates' decentralization theorem.

READING LIST

1. Brennan, J. and James Buchanan (1980): *The power to tax: Analytical foundations of the fiscal constitution*. Cambridge University Press.
2. Chelliah, R.J. (1969). *Fiscal Policy in Underdeveloped Countries: With Special Reference to India*. Reprint: 2010, Routledge.
3. Dalton, H.(1995). *Principles of Public Finance*. Allied Publishers Ltd.
4. David, P. Lawrence (2013). *Impact Assessment: Practical solutions to recurrent problems and contemporary challenges*, New Jersey: Wiley.
5. Ebrill, L. P. (2001). *The Modern VAT*. Washington: International Monetary Fund.
6. Jha, R. (2017). *Modern Theory of Public Finance*. New Age International Ltd.
7. Musgrave, R. and Peggy Musgrave (1995). *Public Finance*. McGraw Hill.
8. Rao, H. (2006). *Fiscal Federalism: Issues and Policies*. Delhi: New Century Publications.

MJC60ECO420(T)25: INTERNATIONAL ECONOMICS

Learning outcome

1. The students will be able to understand the core economic concepts of International Economics.
2. They will be able to explain the basis of trade between the countries and how the gains from trade are measured.
3. They will be able to examine the theoretical and practical aspects of international economics applied to both developed and less developed countries.
4. The exposition to different trade theories will help in developing the analytical bent of mind

Course Outline

1. Pre doctrinal contribution to International Trade Thought: Ancient Greek, Mercantilism, Physiocracy
2. Development of International Trade Theory: Adam Smith's Theory of Absolute Advantage, David Ricardo's Theory of Comparative Advantage, John Stuart Mill's Theory of International Value, Haberler's Theory of Opportunity Cost, Heckscher Ohlin Theory of Factor-Endowment, Leontief Paradox
3. Modern Trade Theories: Balassa –Samuelson Effect, Stopler Samuelson Theorem, Paul Krugman's New Trade Theory

4. Theories of Foreign Direct Investment, Role of technologies in the Theory of International trade
5. Trade Policy and Welfare with special reference to developing countries, Trade and Foreign Direct Investment, Trade and MNCs

READING LIST

1. Dixit, Avinash, and Victor Norman (1980). *Theory of International Trade: A Dual, General Equilibrium Approach*. Cambridge, UK: Cambridge University Press
2. Feenstra, Robert (2003). *Advanced International Trade: Theory and Evidence*. Princeton, NJ: Princeton University Press
3. Grossman, Gene, and Elhanan Helpman (1991). *Innovation and Growth in the Global Economy*. Cambridge, MA: MIT Press
4. Grossman, Gene, and Kenneth Rogoff (1995). *Handbook of International Economics*. Vol. 3. New York, NY: Elsevier.
5. Helpman, Elhanan, and Paul R. Krugman (1987). *Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition, and the International Economy*. Cambridge, MA: MIT Press
6. Jones, Ronald, and Peter Kenen (1984). *Handbook of International Economics*. Vol. 1. New York; Elsevier.
7. Rodrick, Dani (1995). 'Trade and industrial policy reform', in Jere Behman, and T.N. Srinivasan (eds), *Handbook of Development Economics*. Vol.3 B, North Holland.
8. Salvatore, Dominick (2002). *International Economics*. Singapore: John Wiley and Sons.
9. Sodersten, Bo, and Geoffrey Reed (1994). *International Economics*. London: Macmillan.
10. John H. Dunning and Sarinna M. Lunda (2008). *Multinational Enterprises and the Global Economy*. (2nd Edition). Edward Elgar Publishing, UK
11. Linder, S. (1961). *An Essay on Trade and Transformation*. John Wiley and Sons, New York
12. John H. Dunning (1997). *Alliance Capitalism and Global Business*. Routledge, London, UK
13. Paul Krugman and Robin Wells (2015). *Microeconomics*. (4th Edition). Worth Publishers, New York

Minor Course

MNC45ECO101(T)25: INTRODUCTORY MICROECONOMICS

Course Description

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

Course learning outcome

1. The students would have learned the basic principles of microeconomic theory, important terms and concepts used in microeconomics etc.
2. The working of the markets is explained in terms of demand and supply

in the market. The concept of welfare is also dealt in the context of market operation.

3. The behavior of basic units in consumption and production respectively are explained in terms of key concepts in respective areas.
4. The students would have learned the market structures of a perfectly competitive and monopoly market via their equilibrium states and relevant government policies.

Course Outline

1. Exploring the subject matter of Economics

Why study economics? Scope and method of economics; the economic problem: scarcity and choice; the question of what to produce, how to produce and how to distribute output; science of economics; the basic competitive model; prices, property rights and profits; incentives and information; rationing; opportunity sets; economic systems; reading and working with graphs.

2. Supply and Demand: How Markets Work, Markets and Welfare

Markets and competition; determinants of individual demand/supply; demand/supply schedule and demand/supply curve; market versus individual demand/supply; shifts in the demand/supply curve, demand and supply together; how prices allocate resources; elasticity and its application; controls on prices; taxes and the costs of taxation; consumer surplus; producer surplus and the efficiency of the markets.

3. The Household

The consumption decision - budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences (representing preferences with indifference curves); properties of indifference curves; consumer's optimum choice; income and substitution effects; labour supply and savings decision - choice between leisure and consumption.

4. Theory of Firm

Behavior of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run.

5. Market Structures:

Perfectly competitive markets- short run and long-run equilibrium, monopoly-short run and long run equilibrium, monopoly and anti-trust policy, government policies towards competition and imperfect competition.

Readings:

1. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8th Edition, 2007.

2. N. Gregory Mankiw, *Economics: Principles and Applications*, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
3. Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.

MNC45ECO102(T)25: INTRODUCTORY MACROECONOMICS

Course Core Description

This course aims to introduce the students to the basic concepts of Macroeconomics. Macroeconomics deals with the aggregate economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.

Course learning outcome

1. Students in this course will get familiarized with basic concepts of macroeconomics, its subject matter, its difference from microeconomics etc.
2. The students would have learned the basic concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.
3. The students would also have learned the basic structure of a classical and Keynesian system, how macroeconomic variables appear in them.

Course Outline

1. Introduction to Macroeconomics

Basic issues studied in macroeconomics; Macro vs. Micro Economics; Why Study Macroeconomics? Limitations of Macroeconomics; Stock and Flow variables, Equilibrium and Disequilibrium

2. National Income Accounting

Measurement of gross domestic product; income, expenditure and the circular flow; real versus nominal GDP; price indices; national income accounting for an open economy; balance of payments: current and capital accounts, the concept of System of National accounts

3. Money

Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy.

4. Inflation

Inflation – Meaning, Causes, Costs and Anti-Inflationary Measures; Inflation and its

social costs; hyperinflation.

5. The Closed Economy in the Short Run

Classical and Keynesian systems; simple Keynesian model of income determination.

Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009.
4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.
6. Errol D 'Souza, *Macroeconomics*, Pearson Education, 2009.
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012.

MNC50ECO203(T)25: INTERMEDIATE MICROECONOMICS

Course Description

The course is designed to provide a sound training in microeconomic theory to formally analyse the behaviour of individual agents. Since students are already familiar with the quantitative techniques in the previous semesters, mathematical tools are used to facilitate understanding of the basic concepts. This course looks at the behaviour of the consumer and the producer and also covers the behaviour of a competitive firm.

Course learning outcome

1. The students will learn the ways to analyze the behavior of individual agents through exposure to various microeconomic theories.
2. The students will be taken deeper understanding of the basic concepts through the mathematical tools taken up earlier.
3. Specifically the students would have studied the behavior of consumers and producers and that of a competitive firm.

Course Outline

1. Consumer Theory

Preference; utility; budget constraint; choice; demand; Slutsky equation; buying and selling; choice under risk and intertemporal choice; revealed preference.

2. Production Theory

Technology; isoquants; production with one and more variable inputs; returns to scale; profit maximization

3. Theory of Costs

Short-run and long-run costs; cost curves in the short run and long run; cost minimization

4. Perfect Competition

Review of perfect competition, nature of demand, supply decision of a competitive firm, the inverse supply function, profits and producer's surplus, the long run supply curve of a firm.

5. General Equilibrium, efficiency and welfare

Equilibrium in a pure exchange economy, Walrasian General Equilibrium model, Pareto efficiency and welfare

Readings:

1. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
2. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.
3. B. Douglas Bernheim and Michael D. Whinston, *Microeconomics*, Tata McGraw-Hill (India), 2009.

MJC50ECO204(T)25: INTERMEDIATE MACROECONOMICS**Course Description**

This course introduces the students to formal modelling of a macro-economy in terms of analytical tools. It discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. It also introduces the students to various theoretical issues related to an open economy.

Course learning outcome

1. The students would have learned the formal modelling of a macroeconomy in terms of analytical tools.
2. They would also have learned various alternative theories of output and employment determination in a closed economy in the short run as well as medium run and the role of policy in this context.
3. Various theoretical issues related to an open economy would also have taught.

Course Outline

1. IS-LM model and its policy effects**2. Aggregate Demand and Aggregate Supply**

Derivation of aggregate demand curve using IS LM framework, Derivation of aggregate supply curve; interaction of aggregate demand and supply.

3. Demand for and Supply of Money

Demand for Money – Classical, Neoclassical and Keynesian Approaches, The Keynesian Liquidity Trap and its Implications, Supply of Money – Classical and Keynesian Approaches, The Theory of Money Supply Determination and Money Multiplier, Measures of Money Supply in India

4. Inflation, Unemployment and Expectations

Classical, Keynesian, Monetarist and Modern Theories of Inflation, Deflation-Meaning, Causes, Costs and Anti-Deflationary Measures, Depression and Stagflation; Inflation vs Deflation

Phillips curve; adaptive and rational expectations; policy ineffectiveness debate.

5. Open Economy Models

Short-run open economy models; Mundell-Fleming model; exchange rate determination; purchasing power parity; asset market approach; Dornbusch's overshooting model; monetary approach to balance of payments; international financial markets.

Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009.
4. Steven M. Sheffrin, *Rational Expectations*, Cambridge University Press, 2nd edition, 1996.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.
6. Errol D'Souza, *Macroeconomics*, Pearson Education, 2009
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012

MNC55ECO205(T)25: ENVIRONMENTAL ECONOMICS-I**Course Description**

This course focuses on economic causes of environmental problems. In particular, economic principles are applied to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies. Economic implications of environmental policy are also addressed as

well as valuation of environmental quality, quantification of environmental damages, tools for evaluation of environmental projects such as cost-benefit analysis and environmental impact assessments. Selected topics on international environmental problems are also discussed.

Course learning outcome

1. The students will learn the linkage of the current environmental problems of the world with economic factors.
2. The students will learn the application of economic principles to environmental questions and their management through various economic institutions, economic incentives and other instruments and policies.
3. The students will also get familiarized with economic implications of environment policies.
4. Concepts like valuation of environmental quality, quantification of environmental damages, inclusive cost-benefit analysis of projects, environmental impact analysis will also be taught.

Course Outline

1. Introduction and Concepts

What is environmental economics; review of microeconomics and welfare economics. Pareto optimality and market failure in the presence of externalities; property rights and the Coase theorem.

2. The Design and Implementation of Environmental Policy

Overview; Pigouvian taxes and effluent fees; tradable permits; choice between taxes and quotas under uncertainty; implementation of environmental policy.

3. International Environmental Problems

Trans-boundary environmental problems; economics of climate change; trade and environment.

4. Valuation, Measurement

Non-Market values and measurement methods of environmental improvements; risk assessment and perception.

5. Sustainable Development

Concepts; measurement

Readings:

1. Charles Kolstad, *Intermediate Environmental Economics*, Oxford University Press, 2nd edition, 2010.
2. Robert N. Stavins (ed.), *Economics of the Environment: Selected Readings*, W.W. Norton, 5th edition, 2005.

3. Roger Perman, Yue Ma, James McGilvray and Michael Common, *Natural Resource and Environmental Economics*, Pearson Education/Addison Wesley, 3rd edition, 2003.
4. Maureen L. Cropper and Wallace E. Oates, 1992, —Environmental Economics: A Survey,|| *Journal of Economic Literature*, Volume 30:675-740.

MNC55ECO206(T)25: INDIAN ECONOMY

Course Description

Using appropriate analytical frameworks, this course reviews major trends in economic indicators and policy debates in India in the post-Independence period, with particular emphasis on paradigm shifts and turning points. Given the rapid changes taking place in India, the reading list will have to be updated annually. This course also tries to incorporate the economic development issues and challenges of the Northeastern India.

Course learning outcome

1. The students will try to understand the development path of India since independence as paradigm shifts and turning points in the growth path of India.
2. The very important topic of growth and distribution will also be taught.
3. The students will also learn about the change in the structure of institutions responsible for planning and growth of the country.
4. The various aspects of economy of North eastern region of India including main economic activities of the region, natural resources will also be taught in this course.

Course Outline

1: Economic Development – Concepts

Concept of Developed and Developing Economies; Characteristics of a developing economy – basic features of Indian economy at the time of independence, Economic development since independence

2: Population and Economic Development

Demographic trends of India –Concept of Demographic Dividend - Occupational Structure - Population policy, Employment in organised and unorganised sectors.

3: Growth and Distribution and Poverty in India

Poverty, inequality, employment – organised and unorganised, unemployment and policy interventions relating to poverty, inequality and unemployment.

4. Economic Planning and Policy Framework in India

Evolution and objectives of economic planning in India; Plans Issues in Indian Planning – Objectives and critical evaluation of each plan, Centre-State relationship, Niti Aayog and Planning Commission.

5: Economy of North-Eastern Region:

Basic Features: Trends of state GDP and Sector-Wise contribution, Occupational Pattern; Natural Resources: Land, Water and Forest Resources; Agriculture: Cropping Pattern; Industry: Importance, conditions, Small-Scale Industries, Role of NEC; Tourism: importance, potential and challenges; Act East Policy and North East India.

Readings:

1. Balakrishnan, P. (2007). The recovery of India: Economic growth in the Nehru era. *Economic and Political Weekly*, 42(45-46), 52-66.
2. Bardhan, P. (2012). *Awakening giants, feet of clay: Assessing the economic rise of China and India*. Princeton University Press.
3. Basu, K., Maertens, A. (2007). The pattern and causes of economic growth in India. *Oxford Review of Economic Policy*, 23, 143-167.
4. Bhagwati, J., Panagariya, A. (2012). *India's tryst with destiny*, Collins Business.
5. Centre for Sustainable Employment. (2018). *State of working India 2018*. Azim Premji University.
6. Desai, S. (2015). Demographic deposit, dividend and debt. *The Indian Journal of Labour Economics*, 58, 217-232.
7. Dreze, J., Khera, R. (2017). Recent social security initiatives in India, *World Development*, 98, 555-572.
8. Dreze, J., Sen, A. (2013). *India: An uncertain glory*. Allen Lane.
9. Joshi, V. (2016). *India's long road: The search for prosperity*. Allen Lane.
10. Meenakshi, J. (2016). Trends and patterns in the triple burden of malnutrition in India. *Agricultural Economics*, 47, 115-134.
11. Ministry of Finance. (2016). Universal basic income: A conversation with and within the mahatma. Chapter 9 in *Economic Survey*, 172-212.
12. Panagariya, A., Mukim, M. (2014). A comprehensive analysis of poverty in India. *Asian Development Review*, 31, 1-52.
13. Rangarajan Committee. (2014). *Report of the expert group to review the methodology for measurement of poverty*. Government of India.
14. Rawal, V., Bansal, V., Bansal, P. (2019). Prevalence of undernourishment in Indian states: Explorations based on NSS 68th round data. *Economic and Political Weekly*, 54(15), 35-45.
15. Rodgers, G. (2018). Inequality in the Indian growth regime. *Indian Journal of Human Development*, 12, 134-148.
16. Thomas, J. (2014). India's labour market during the 2000s: An overview. In K. Ramaswamy (ed.): *Labour, employment and economic growth in India*. Cambridge University Press, 21-56.
17. Verick, S. (2018). Female labor force participation and development. *IZA World*

- of Labor, 2, 1-11.
18. Bansil, P.C, Agricultural Problems of India, Vikas Publishing House Pvt. Ltd.
 19. Datt, R. and Sundharam, K.P.M, Indian Economy, S. Chand & Company Ltd, New Delhi.
 20. Kapila, U. (2008-09), Indian Economy since Independence, Academic Foundation, New Delhi.
 21. Mookherjee, D. (1997), Indian Industry: Policies and Performance, Oxford University Press,
 22. North-East Vision Document (2020).
 23. Shukla Commission Report (1997)

MNC60ECO307(T)25: ECONOMICS OF HEALTH AND EDUCATION

Course Description

The importance of education and health in improving well-being is reflected in their inclusion among the Millennium Development Goals adopted by the United Nations member states, which include among other goals, achieving universal primary education, reducing child mortality, improving maternal health and combating diseases. This course provides a microeconomic framework to analyze, among other things, individual choice in the demand for health and education, government intervention and aspects of inequity and discrimination in both sectors. It also gives an overview of health and education in India.

Course learning outcome

- c. The students will learn the demand aspect for health and education, government intervention, inequity and discrimination issue in these two sectors within the microeconomics framework.
- d. They will also learn the importance of education and health in raising the well being of a society.

Course Outline

1. Role of Health and Education in Human Development

Importance in poverty alleviation; health and education outcomes and their relationship with macroeconomic performance.

2. Microeconomic Foundations of Health Economics and Evaluation of Health Programs

Demand for health; uncertainty and health insurance market; alternative insurance mechanisms; market failure and rationale for public intervention; equity and inequality. Costing, cost effectiveness and cost-benefit analysis; burden of disease.

3. Health Sector in India: An Overview

Health outcomes; health systems; health financing.

4. **Education: Investment in Human Capital**

Rate of return to education: private and social; quality of education; signaling or human capital; theories of discrimination; gender and caste discrimination in India.

5. **Education Sector in India: An Overview**

Literacy rates, school participation, school quality measures.

Readings:

1. William, Jack, *Principles of Health Economics for Developing Countries*, World Bank Institute Development Studies, 1999.
2. World Development Report, *Investing in Health*, The World Bank, 1993.
3. Sumitra Naha Das. *Introduction to the Economics of Health and Education*, Abhijit Publications, 2021.

MNC60ECO308(T)25: PUBLIC FINANCE

Course Description

Public economics is the study of government policy from the points of view of economic efficiency and equity. The paper deals with the nature of government intervention and its implications for allocation, distribution and stabilization. Inherently, this study involves a formal analysis of government taxation and expenditures. The subject encompasses a host of topics including public goods, market failures and externalities. The paper is divided into two sections, one dealing with the theory of public economics and the other with the Indian public finances.

Course learning outcome

1. The students would have learned the nature of government fiscal intervention and its implications for allocation, distribution and stabilization.
2. Specifically, they will learn about the government taxation and expenditure.
3. They will learn about other topics as well including public goods, market failures and externalities.

Course Outline

1. Role of government

- a. Fiscal functions: An over view

- b. Public goods: Definition, characteristics- exclusion and non-rivalry, pure and impure public goods, free rider problem, merit goods
- c. Externalities: The problems and solutions, taxes vs regulation, property rights, Coase theorem

2. Public expenditure theory

- a. Wagner's law, Peacock -Wiseman hypothesis, Cost - Benefit analysis, Multiplier and accelerator effects

3. Taxation

- a. Principles of taxation- Ability to pay, benefit approach; elasticity and buoyancy of taxation; tax shifting
- b. Tax structure in India; Value added tax, Goods and Services Tax

4. Budgeting and fiscal policy

- a. Concepts – Revenue account, capital account, deficits; economic and functional classification of budget, Balanced and unbalanced budget; Budget preparation
- b. Fiscal policy – Fiscal policy in under developed countries

5. Federal finance

- a. Horizontal and vertical fiscal imbalances; decentralization, merits and demerits of decentralization
- b. Centre-state financial relations in India, Finance Commission, latest Finance Commission recommendations; Planning Commission and Niti Ayog, Local bodies in India

Readings:

1. Bhatia, H.L. (2020). *Public finance*, New Delhi: Vikas Publications.
2. Musgrave, R.A. and Musgrave, P.B. (1989). *Public Finance in theory and practice*. Singapore: McGraw Hills.
3. Rao, Hemlata (2006). *Fiscal Federalism, Issues and Policies*, New Delhi: New Century Publications
4. Rao, M. (2005). 'Changing contours of federal fiscal arrangements in India'. In A.
5. Bagchi (ed.): *Readings in public finance*. Oxford University Press.
6. Reddy, Y. (2015). Fourteenth finance commission: Continuity, change and way forward. *Economic and Political Weekly*, 50(21), 27-36.
7. Economic Survey, Government of India (Latest).
8. State Finances: A Study of Budgets, Reserve Bank of India (Latest).

MULTIDISCIPLINARY COURSE

MDC45ECO101(T)25: INTRODUCTORY MICROECONOMICS

Course Description

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

Course learning outcome

5. The students would have learned the basic principles of microeconomic theory, important terms and concepts used in microeconomics etc.
6. The working of the markets is explained in terms of demand and supply in the market. The concept of welfare is also dealt in the context of market operation.
7. The behavior of basic units in consumption and production respectively are explained in terms of key concepts in respective areas.
8. The students would have learned the market structures of a perfectly competitive and monopoly market via their equilibrium states and relevant government policies.

Course Outline

1. Exploring the subject matter of Economics

Why study economics? Scope and method of economics; the economic problem: scarcity and choice; the question of what to produce, how to produce and how to distribute output; science of economics; the basic competitive model; prices, property rights and profits; incentives and information; rationing; opportunity sets; economic systems; reading and working with graphs.

2. Supply and Demand: How Markets Work, Markets and Welfare

Markets and competition; determinants of individual demand/supply; demand/supply schedule and demand/supply curve; market versus individual demand/supply; shifts in the demand/supply curve, demand and supply together; how prices allocate resources; elasticity and its application; controls on prices; taxes and the costs of taxation; consumer surplus; producer surplus and the efficiency of the markets.

3. The Household

The consumption decision - budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences (representing preferences with indifference curves); properties of indifference curves; consumer's optimum choice; income and substitution effects; labour supply and savings decision - choice between leisure and consumption.

4. Theory of Firm

Behavior of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run.

5. Market Structures

Perfectly competitive markets- short run and long-run equilibrium, monopoly- short run and long run equilibrium, monopoly and anti-trust policy, government policies towards competition and imperfect competition.

Readings:

1. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8th Edition, 2007.
2. N. Gregory Mankiw, *Economics: Principles and Applications*, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
3. Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.

MDC45ECO102(T)25: Money and Banking**Course Description**

This course exposes students to the theory and functioning of the monetary and financial sectors of the economy. It highlights the organization, structure and role of financial markets and institutions. It also discusses interest rates, monetary management and instruments of monetary control. Financial and banking sector reforms and monetary policy with special reference to India are also covered.

Learning outcome

1. The students would have learned about the theory and functioning of the monetary and financial sectors of the economy.
2. Specifically, they would have learned the organization, structure and role of financial markets and institutions.

3. They will also learn concepts like interest rates, monetary management and instruments of monetary control.
4. Financial and banking sector reforms and monetary policy with special reference to India will also be taught.

Course Outline

1 Money – Concepts and Theories

Concept, functions, and measurement of money, Theories of money supply determination, Role of money in the economy.

2 Financial Institutions, Markets, and Innovations

Role and structure of financial markets and institutions; Financial crises — causes and consequences; Financial derivatives and financial innovations.

3 Money and Capital Markets in India

Organization and structure of money and capital markets in India; Major reforms and regulatory changes; Role of markets in economic development.

4 Interest Rates and Theories

Determination of interest rates; Sources of interest rate differentials; Theories of term structure of interest rates; Interest rate trends and policies in India.

5 Banking and Monetary Policy

Banking system: balance sheet and portfolio management; Indian banking structure: evolution, reforms, and changing role; Central banking: functions and balance sheet; Monetary policy: goals, targets, indicators, and instruments; Monetary management in an open economy and current monetary policy of India

Readings:

1. F. S. Mishkin and S. G. Eakins, *Financial Markets and Institutions*, Pearson Education, 6th edition, 2009.
2. F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, *Foundations of Financial Markets and Institutions*, Pearson Education, 3rd edition, 2009.
3. L. M. Bhole and J. Mahukud, *Financial Institutions and Markets*, Tata McGraw Hill, 5th edition, 2011.
4. M. Y. Khan, *Indian Financial System*, Tata McGraw Hill, 7th edition, 2011.
5. Various latest issues of R.B.I. Bulletins, Annual Reports, Reports on Currency and Finance and Reports of the Working Group, IMF Staff Papers.

MDC50ECO203(T)25: Indian Economy

Course Description

Using appropriate analytical frameworks, this course reviews major trends in economic indicators and policy debates in India in the post-Independence period, with particular emphasis on paradigm shifts and turning points.

Course learning outcome

1. The students will try to understand the development path of India since independence as paradigm shifts and turning points in the growth path of India.
2. The very important topic of growth and distribution will also be taught.
3. The students will also learn about the change in the structure of institutions responsible for planning and growth of the country.
4. The various aspects of economy of North eastern region of India including main economic activities of the region, natural resources will also be taught in this course.

Course Outline

1: Economic Development – Concepts

Concept of Developed and Developing Economies

Characteristics of a developing economy – basic features of Indian economy at the time of independence, Economic development since independence

2: Population and Economic Development

Demographic trends of India –Concept of Demographic Dividend - Occupational Structure - Population policy, Employment in organised and unorganised sectors.

3: Growth and Distribution and Poverty in India

Poverty, inequality, employment – organised and unorganised, unemployment and policy interventions relating to poverty, inequality and unemployment.

4. Economic Planning and Policy Framework in India

Evolution and objectives of economic planning in India;

Plans Issues in Indian Planning – Objectives and critical evaluation of each plan, Centre-State relationship, Niti Aayog and Planning Commission.

5: Economy of North-Eastern Region:

Basic Features: Trends of state GDP and Sector-Wise contribution, Occupational Pattern; Natural Resources: Land, Water and Forest Resources; Agriculture: Cropping Pattern; Industry: Importance, conditions, Small-Scale Industries, Role of NEC; Tourism: importance, potential and challenges; Act East Policy and North East India.

Readings:

1. Jean Dreze and Amartya Sen, 2013. *An Uncertain Glory: India and its Contradictions*, Princeton University Press.
2. Pulapre Balakrishnan, 2007, The Recovery of India: Economic Growth in the Nehru Era, *Economic and Political Weekly*, November.
3. Rakesh Mohan, 2008, —Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment, *Economic and Political Weekly*, May.
4. S.L. Shetty, 2007, —India 's Savings Performance since the Advent of Planning, in K.L. Krishna and A. Vaidyanathan, editors, *Institutions and Markets in India's Development*.
5. Himanshu, 2010, —Towards New Poverty Lines for India, *Economic and Political Weekly*, January.
6. Jean Dreze and Angus Deaton, 2009, —Food and Nutrition in India: Facts and Intepretations, *Economic and Political Weekly*, February.
7. Himanshu. 2011, —Employment Trends in India: A Re-examination, *Economic and Political Weekly*, September.
8. Rama Baru et al, 2010, —Inequities in Access to Health Services in India: Caste, Class and Region, *Economic and Political Weekly*, September.
9. Geeta G. Kingdon, 2007, —The Progress of School Education in India, *Oxford Review of Economic Policy*.
10. J.B.G. Tilak, 2007, —Post Elementary Education, Poverty and Development in India, *International Journal of Educational Development*.
11. T. Dyson, 2008, —India's Demographic Transition and its Consequences for Development in Uma Kapila, editor, *Indian Economy Since Independence*, 19th edition, Academic Foundation.
12. Kaushik Basu, 2009, —China and India: Idiosyncratic Paths to High Growth, *Economic and Political Weekly*, September.
13. K. James, 2008, —Glorifying Malthus: Current Debate on Demographic Dividend in India, *Economic and Political Weekly*, June.
14. Reetika Khera, 2011, —India's Public Distribution System: Utilisation and Impact
15. *Journal of Development Studies*.
16. Aniruddha Krishna and Devendra Bajpai, 2011, —Lineal Spread and Radial Dissipation: Experiencing Growth in Rural India, 1992-2005, *Economic and Political Weekly*, September.

18. Kaushik Basu and A. Maertens, eds, 2013, *Oxford Companion to Economics*, Oxford University Press.

SKILL Enhancement Course

SEC45ECO101(T)25: Data Entry and Visualisation

Credits: 3

Contact Hours: 3 per week (45 total hours per semester)

Level: Undergraduate BA – SEC-1

Course Objectives

1. To equip students with the ability to collect, enter, and manage data using appropriate software tools.
2. To develop competence in visualising data for interpretation and presentation.
3. To introduce basic statistical summaries and visual storytelling techniques.
4. To promote hands-on learning for academic, research, and workplace applications.

Course Outcomes

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

- CO1: Enter, clean, and manage datasets efficiently.
- CO2: Use spreadsheet and statistical software for data manipulation.
- CO3: Create charts, maps, and dashboards for data visualisation.
- CO4: Interpret and present data findings effectively.

Course Outline

1: Basics of Data Entry and Management

- Types and sources of data (primary, secondary)
- Data formats: text, numeric
- Spreadsheet basics (Microsoft Excel or similar application)
- Data entry practices: validation, drop-down lists, avoiding errors

2: Data Cleaning and Preparation

- Identifying and handling missing data
- Removing duplicates
- Text-to-columns, find-and-replace, data formatting
- Introduction to basic formulas: SUM, AVERAGE, COUNT,
- Sorting and filtering data

3: Data Visualisation Principles

- Importance of data visualisation
- Types of charts: bar, line, pie, scatter, histogram
- Choosing the right chart for the data
- Basic design principles: clarity, accuracy, aesthetics

4: Practical Tools for Visualisation

- Creating charts and graphs in Excel/Google Sheets
- Introduction to pivot tables and pivot charts
- Conditional formatting for insights
- Introduction to free visualisation tools (Tableau Public / Google Data Studio / Flourish)
- Exporting visualisations for reports and presentations

Suggested Readings

1. Cole Nussbaumer Knaflic (2015). *Storytelling with Data: A Data Visualization Guide for Business Professionals*. Wiley.
2. Schwabish, Jonathan A.(2021). *Better data visualizations : a guide for scholars*. New York : Columbia University Press
3. Shirshendu Roy. (2021). *Data Visualization: Using Power BI, Orange and Excel*. Notion Press
4. Microsoft Excel official documentation: <https://support.microsoft.com/excel>

SEC45ECO102(T)25: Data Analysis

Course Objective

This is a skill enhancement course for data analysis. The students will be given hands on training on using statistical and computing software to better visualize and understand data concepts. The course is designed to be delivered through 2 classroom lectures and 4 computer lab classes per week.

Course Learning Outcomes

The course will use data simulations and publicly available data sources to help students learn about data types, their organization and visual representation. They will learn how to compute summary statistics and do some basic statistical inference.

Unit 1

Introduction to the course: How can the representation and analysis of data help us study real- world problems. Publicly available data sets.

Unit 2

Using Data: Available statistical software, steps in data storage, organisation and cleaning using Excel

Unit 3

Alternative forms of presenting summarising and presenting data using Excel

Unit 4

Simple estimation techniques and tests for statistical inference using Excel

Readings:

1. Levine, D., Stephan, D., Szabat, K. (2017). *Statistics for Managers using Microsoft Excel, 8th ed.* Pearson.
2. Tattar, P., Ramaiah, S., Manjunath, B. (2018). *A course in statistics with R.* Wiley.

SEC50ECO203(T)25: Financial Literacy and Budgeting (3 Credits)**Course Objectives**

- To develop financial awareness and decision-making skills among students.
- To equip students with practical knowledge of budgeting, saving, investment, and debt management.
- To prepare students for responsible use of financial resources in personal and family life.

Course Outcomes (COs)

After successful completion, students will be able to:

1. Understand the fundamentals of financial literacy and its social relevance.
2. Prepare and analyze personal/household budgets.
3. Apply knowledge of savings, investments, and credit in real-life scenarios.
4. Develop a basic financial plan including protection through insurance and digital finance.

Course Outline**1 Fundamentals of Financial Literacy**

- Meaning, scope, and importance of financial literacy
- Components of personal finance: income, expenditure, saving, investment
- Financial goals: short-term, medium-term, and long-term
- Role of financial literacy in households, students, and society

2 Budgeting Skills

- Concept and importance of budgeting
- Steps in preparing a personal/household budget
- Types of budgets: balanced, surplus, deficit
- Practical workshop: preparing a monthly budget for a student and family

3 Saving, Investment, and Credit

- Importance of saving and thrift culture
- Saving instruments: bank deposits, PF, RD, FD, post office savings
- Introduction to investment: risk–return trade-off, mutual funds, SIPs, bonds, shares (basic level)
- Understanding credit: loans, credit cards, EMI, interest rates, credit score
- Responsible borrowing and debt management

4 Financial Planning and Protection

- Basics of personal financial planning
- Emergency funds, retirement planning
- Insurance: life, health, and general – concept and need
- Digital financial services: UPI, mobile banking, e-wallets, net banking
- Government initiatives: Jan Dhan Yojana, Financial Inclusion, social security schemes (PMJJBY, PMSBY, APY, etc.)

Readings/References

1. Sinha, Madhu. *Financial Planning: A Ready Reckoner*, McGraw Hill
2. **National Centre for Financial Education (NCFE)** – *Financial Literacy Material for College Students*.
3. Halan, Monika, *Lets Talk Money: You've Worked Hard for It, Now Make It Work for You*, July 2018 Harper Business. •
4. Pandit, Amar *The Only Financial Planning Book that You Will Ever Need*, Network 18 Publications Ltd
5. Kapoor, Jack R., Dlabay, Les R., & Hughes, Robert J. – *Personal Finance*.
6. Chandra, Prasanna – *Personal Finance*.
7. Mishra, S.K. & Puri, V.K. – *Indian Economy* (selected chapters on savings & financial institutions).
8. Reserve Bank of India (RBI) – *Financial Education Booklets*.
9. SEBI – *Investor Education and Protection Fund (IEPF) Learning Resources*.
10. Government of India portals on financial inclusion and digital finance (PMJDY, NPCI, etc.).

Discipline Specific Electives

DSE60ECO401(T)25: ENVIRONMENTAL ECONOMICS-II

Learning outcome

1. The students will learn firstly the subject matter of the environmental economics. The market failure in case of environmental goods in its production and distribution sphere is explained from the perspective of its being a public good.
2. The students will learn the application of economic principles in designing solutions to environmental problems. In particular the use of economic incentives and creation of appropriate institutions are seen as means of addressing environmental problems. Economic implications of environmental problems are also addressed.
3. Unit 3 is about economics of resource management. The case of exhaustible and renewable resources are dealt separately given the different issues which crop up in their respective management.
4. The importance of knowing the right/correct value of environmental goods can't be overemphasized as it will lead to its wise use/protection. This unit addresses the valuation of environmental qualities, quantification of environmental damages etc. The unit also includes the topic of environmental impact assessment, a mandatory step to be undertaken often before any development project is approved.
5. The last unit deals with the concept of sustainability, its relevance in today's world; the viewpoints of the two differing schools of thought with regard to it namely the neo-classical school and the ecological school. Again for any developmental program, its sustainability has to be first assessed before approval. The criteria and the procedure of assessing the sustainability has been dealt here.

Course Outline

1. Definition, linkages between economy, ecology and environment, social choice mechanisms, Arrow's impossibility theorem; Theory of Externalities, Public goods and its types, Pure and mixed public goods and environmental resources, Public goods and market failure, property rights and externalities, competitive equilibrium externality and inefficiency, optimal provision of public goods, Lindahl's equilibrium, Common property resources.
2. **Design of Environmental Policy:** Environmental externalities, Pigouvian taxes and subsidies, price vs quantity instruments. Mixed instruments, imperfect markets and the design of economic instruments, Coase's bargaining solution and collective action, Institutions and enforcement.
3. **Economics of Resource Management**
 - I. Exhaustible Resources-socially optimum extraction under different market structures, role of government and its extraction.
 - II. Renewable Resources- static and dynamic models of fisheries, forestry and mining under different market structures, exploitation of renewable resources under endogenous prices.
4. **Environmental Valuation**

- I. Environmental and resource values- use values, option values and non-use values; Valuations based on market behaviour- direct and indirect methods, travel cost method and hedonic pricing; Valuations based on hypothetical markets- direct and indirect methods.
- II. Environmental impact assessment –criteria and methods and its application

5. Sustainability

- I. Sustainable Development the concept, Sustainability paradigms- the ecological paradigm vs the neo-classical paradigm; related concepts- economics of conservation, the safe minimum standard, co-evolutionary development, population pressure, resource scarcity, sustainability indicators and evidence, the Environmental Kuznets curve;
- II. Sustainability Assessment- criteria and processes.

Reading list

1. Baumol, W. J., and O.E. Oates (1988), *The Theory of Environmental Policy*, Oxford University Press.
2. Bromley, D.W. (ed) (1995), *The Handbook of Environmental Economics*, Basil Blackwell.
3. Cornelius, G., Van Kooten and Erwin H. Bulte (2000), *The Economics of Nature: Managing Biological Assets*, Blackwell.
4. Hanley, N., J.F. Shogren and Ben White (1997), *Environmental Economics in Theory and Practice*, Macmillan.
5. Hartwick, J.M. and N.D. Olewiler (1998), *The Economics of Natural Resources Use*, Addison-Wesley.
6. Kolstad, C.D. (2000), *Environmental Economics*, Oxford University Press.
7. Kolstad, C.D. (2011), *Intermediate Environmental Economics*, Oxford University Press.
8. Perman. R., Y. Ma and J. McGilvray (1996), *Natural Resources and Environmental Economics*, Longman.
9. Bhattacharya, Rabindra N. (ed) (2001), *Environmental Economics-an Indian Perspective*, Oxford University Press.
10. Morris, P. and R. Therivel (ed) (2009), *Methods of Environmental Impact Assessment*, 3rd edition, Routledge, Taylor and Francis group.
11. Glasson, John, Ricki Therivel and Andrew Chadwick (2005), *Introduction to Environmental Assessment*, 3rd edition, Routledge.
12. Eccleston, Charles H. (2011), *Environmental Impact Assessment; A Guide to Best Professional Practices*, CRC Press, Taylor and Francis Group.
13. Gibson, Robert B., Selma Hassan, Susan Holtz, Jamesa Tansey and Graham Whitelaw (2005), *Sustainability Assessment; criteria and processes*, Earthscan, London. Sterling, VA.

DSE60ECO402(T)25: DEVELOPMENT ECONOMICS-II

Learning outcome

- 1 The students will learn some growth theories which is very important in developmental studies.

- 2 Measures of poverty and inequality. Changes in these measures along with growth of the economy.
- 3 Characteristics of economic growth in East Asia. How they managed high economic growth in a very short period of time will be examined. Special focus will be given in human capital formation.
- 4 Phases of population growth along with theories on urbanization.
- 5 The students will learn why underdeveloped countries are using capital intensive technologies despite the abundance of labour force.

Course Outline

1. **Growth and Development:** Characteristics of underdeveloped countries; Difference between growth and development; Factors affecting economic growth: capital, labour and technology; Growth models: Harrod-Domar, Solow, Endogenous growth.
2. **Poverty and inequality:** Measurements of poverty and inequality and their relationship with economic growth; Kuznets inverted U curve; Human development index and other indices of development and quality of life.
3. **East Asian Economic Growth:** Common characteristics of high performing Asian economies, Economic reforms in China, Education in East Asia, Burmese way to Socialism.
4. **Population and Development:** The cost and benefits of Population growth; Malthusian population trap; Impact of migration on urbanisation and urban unemployment.
5. **The market mechanism and market failure;** Role of state; the capital intensity techniques in underdeveloped countries.

READING LIST

1. Hayami, Yujiro (1990). *Development Economics: From the Poverty to the Wealth of Nations*. Clarendon Press.
2. Hung, Ho-Fung (ed.). (2009). *China and the Transformation of Global Capitalism*. Johns Hopkins.
3. Ray, Debraj (1998). *Development Economics*. Oxford University Press.
4. Rowen, Henry S.(ed.). (1998). *Behind East Asian Growth: The Political and Social Foundations of Prosperity*. Routledge.
5. Thirwall, A.P. (2006). *Growth and Development: With Special Reference to Developing Economies*. Palgrave MacMillan.
6. Todaro, Michael P., and Stephen C. Smith (2004): *Economic Development*. Pearson.
7. World Bank (1996): *The East Asian Miracle: Economic Growth and Public Policy*. Oxford University Press.
8. Thein, M (2004). *Economic Development of Myanmar*. The Institute of South East Asian Studies.

DSE60ECO403(T)25: STATISTICS AND ECONOMETRICS

Learning outcome

1. The students will revisit the basic concepts and terms which are fundamental in statistics. The notion of probability is developed along with the very important concept of random variable, its types and their distribution and of joint distribution.
2. They will learn about sampling methods and sampling distributions which will help in inference exercises.
3. After introduction to concept of estimators and their desirable properties, concepts of hypothesis and techniques of hypothesis testing are taken up.
4. They will also learn about the basic concepts of two variable linear model and Gauss Markov theorem, causes and consequences of various forms of violations of the classical linear model structure.
5. Finally the paper ends by introducing the basic concepts and terms in simultaneous equation models.

Course Outline

1. Set, Sample space, Algebra of sets, methods of enumeration, Concept of Probability, basic probability theorems, conditional probability and Bayes theorem, random variables, probability density and distribution functions, expectation and moments of a random variable, Joint distributions, marginal and conditional distributions, Binomial, Normal, Lognormal, Pareto distribution.
2. Sampling methods and sampling distributions; simple random sampling, systematic sampling, stratified sampling, cluster sampling, non-probability sampling, statistic and sampling moments, sampling distributions- Student's t-distribution, chi-square and F-distribution.
3. Estimators, desirable properties of estimators, small sample properties and asymptotic properties; concept of confidence interval, types of hypotheses, hypothesis testing and level of significance of the test, p-value and power of a test.
4. The two variable linear regression model, Gauss-Markov theorem (proof not required), Multicollinearity, Autocorrelation, Heteroscedasticity, Distributed lags and Errors in variables- Causes and consequences only.
5. Simultaneous equation models, Structural and reduced form. The problem of identification, rank and order condition (proof not required).

READING LIST

1. Aggarwal, B. L. (1996), Basic Statistics. New Age International Publishers.
2. Gujarati, Damodar N. (2004). Basic Econometrics. Tata McGraw Hill.
3. Kmenta, Jan (1971), Elements of Econometrics. Macmillan Publishing Co. Inc.

4. Maddala, G.S. (1987), *Econometrics*. 4th edition. McGraw-Hill International Editions.
5. Ramanathan, R. (2002). *Introductory Econometrics with Applications*. Thomson South-Western,
6. Greene, William H., (2016), *Econometric Analysis*, 5th edition, Pearson
7. Blalock, Jr., Hubert M., (1987), *Social Statistics*, McGraw-Hill International Editions

DISSERTATION

Dissertation Part-I:DIS60ECO401(D)25

Review of Literature and Presentation

Learning Outcome

- To understand the purpose and process of reviewing literature in research.
- To train students in systematic search, organization, and evaluation of scholarly works.
- To develop skills in writing a coherent and critical review.
- To enhance oral and visual presentation skills for academic contexts.

Course Outline

1: Introduction to Literature Review

- Meaning, scope, and importance of literature review.
- Types of literature review: narrative, systematic, theoretical, conceptual.
- Sources of literature: books, journals, reports, government publications, databases, internet resources.
- Identifying research problems and gaps.

2: Literature Search and Management

- Search strategies: keywords, Boolean operators, citation tracking.
- Use of digital libraries, academic databases (Google Scholar, Scopus, JSTOR).
- Reference management tools (Zotero, Mendeley, EndNote).
- Note-taking, paraphrasing, and avoiding plagiarism.

3: Writing the Literature Review

- Structure of a literature review: introduction, thematic discussion, synthesis, conclusion.
- Summarizing vs. synthesizing research findings.
- Critical analysis and evaluation of studies.
- Citation and referencing styles (APA, MLA, Chicago, etc.).
- Common errors in literature review writing.

4: Presentation of Research Work

- Principles of academic presentation (clarity, structure, flow).
- Designing and delivering PowerPoint/visual presentations.
- Poster and seminar presentation techniques.
- Communication skills: verbal, non-verbal, and audience engagement.
- Practical component: preparation of a short review paper and class presentation.

Suggested Readings

1. Ridley, D. (2012). *The Literature Review: A Step-by-Step Guide for Students*. Sage.
2. Hart, C. (2018). *Doing a Literature Review: Releasing the Research Imagination*. Sage.
3. Machi, L. A., & McEvoy, B. T. (2016). *The Literature Review: Six Steps to Success*. Corwin Press.
4. Alley, M. (2013). *The Craft of Scientific Presentations*. Springer.
5. Wallwork, A. (2016). *English for Academic Research: Writing Exercises*. Springer.

Dissertation Part-II: DIS60ECO402(D)25

Dissertation should be done maintaining the guidelines given in the following units.

Course Outcome

- To enable students to undertake independent research in their chosen field of study.
- To familiarize students with research methods, tools, and academic writing.
- To encourage critical thinking, analytical ability, and originality.
- To provide practical experience in project planning, execution, and presentation.

Course Outline

1: Development of Research Proposal for Dissertation

- Meaning and significance of research at the undergraduate level.
- Identification of research problem, objectives, and hypotheses.
- Review of literature and formulation of conceptual/theoretical framework.
- Preparation of detailed research proposal/synopsis.
- Ethical standards and plagiarism awareness.

2: Identification of Data Sources

- Types of data: primary and secondary.
- Sources of data: surveys, interviews, official reports, archives, digital databases.
- Sampling methods and sample size determination.
- Designing and pre-testing data collection instruments.
- Ensuring reliability and validity of data.

3: Research Methodology

- Application of Research designs: descriptive, analytical, experimental, and case study.
- Qualitative and quantitative research methods.
- Data collection, fieldwork management, and data recording.
- Use of software tools for analysis.

4: Application of Analytical Tools and Methods

- Quantitative analysis: descriptive statistics, correlation, regression, hypothesis testing.
- Data visualization and graphical presentation.
- Interpretation of findings and comparison with existing studies.
- Drawing conclusions and policy/theoretical implications.

5: Report writing and Communicating the Results

- Structure of a dissertation: Title, Abstract, Introduction, Literature Review, Methodology, Data Analysis, Results, Discussion, Conclusion, Bibliography, Appendices.
- Plagiarism, ethics, and originality in research.
- Referencing styles (APA/MLA/Chicago).
- Drafting and editing research reports.
- Visual presentation of data: tables, charts, and graphs.
- Final submission: formatting and binding guidelines.
- Viva-voce on the dissertation (methodology/techniques and findings)

Suggested Reading

1. Hart, Chris. – *Doing a Literature Review: Releasing the Social Science Research Imagination* (SAGE Publications)
2. Murray, Rowena. – *How to Write a Thesis* (Open University Press)
3. Kothari, C.R. & Garg, Gaurav. – *Research Methodology: Methods and Techniques*
4. Gujarati and Porter. - *Basic Econometrics*