



**Department of Economics & Politics**  
**Vidya-Bhavana**  
**Visva-Bharati**

**FOUR YEAR UNDERGRADUATE PROGRAMME SYLLABUS**  
**OF**  
**ECONOMICS (MAJOR),**  
**ECONOMICS (MINOR) &**  
**POLITICAL SCIENCE (MINOR)**

[Following Curriculum and Credit Framework for Undergraduate Programmes of UGC under National Education Policy (NEP) 2020 **and upgraded to figure the Indian Knowledge System (IKS)**]

**2023**

**[UPGRADED IN 2025]**

*[As adopted in the Board of Studies (BOS) meeting held on 12 September 2023 and subsequently at the Institute Board and Academic Council and effective from the academic year 2023-2024; **and as upgraded to figure the Indian Knowledge System (IKS) in the BOS meeting held on 14 July 2025 subsequently at the Institute Board held on 16 July 2025 and Academic Council held on 31 July 2025]***

**COURSE STRUCTURE**

## Four Year UG Programme Course Structure under NEP in Economics (Major & Minor) and Political Science

Semester I				Semester II			
Course Type	Course Code	Course Name	Credit	Course Type	Course Code	Course Name	Credit
Major	MJEC01	Introductory Microeconomics	4	Major	MJEC03	Introductory Macroeconomics	4
Major	MJEC02	Mathematical Methods for Economics I	4	Major	MJEC04	Mathematical Methods for Economics II	4
Minor	MNPS01/ MNEC01	Political Theory I/ Introductory Microeconomics	4	Minor	MNPS01/ MNEC01	Political Theory I/ Introductory Microeconomics	4
Multi	To be chosen as offered by other department(s) / centre(s)		3	Multi	To be chosen as offered by other department(s) / centre(s)		3
AECC	To be offered by other department(s) / centre(s)	English / Modern Indian Language 1	2	AECC	To be offered by other department(s) / centre(s)	English / Modern Indian Language 2	2
SEC	SEEC01	Statistical Methods I	3	SEC	SEEC02	Statistical Methods II	3
CVAC	To be offered by other department(s) / centre(s)	Tagore Studies	3	CVAC	To be offered by other department(s) / centre(s)	Environmental Studies	3
Total Credit			23	Total Credit			23
YEAR 1: Semester I (23 Credits) + Semester II (23 Credits) + Internship (4 Credit) = UG Certificate							

Semester III				Semester IV			
Course Type	Course Code	Course Name	Credit	Course Type	Course Code	Course Name	Credit
Major	MJEC05	Intermediate Microeconomics I	4	Major	MJEC07	Intermediate Microeconomics II	4
Major	MJEC06	Intermediate Macroeconomics I	4	Major	MJEC08	Intermediate Macroeconomics II	4
Minor	MNPS02/ MNEC02	Political Theory II/ Introductory Macroeconomics	4	Major	MJEC09	Introduction to Econometrics	4
Multi	To be chosen as offered by other department(s) / centre(s)		3	Major	MJEC10	International Economics	4
AECC	To be offered by other department(s) / centre(s)	Modern Indian Language / English 1	2	Minor	MNPS02/ MNEC02	Political Theory II/ Introductory Macroeconomics	4
SEC	SEEC03	Mathematical Methods	3	AECC	To be offered by other department(s) / centre(s)	Modern Indian Language / English 2	2
Total Credit			20	Total Credit			22
YEAR 2: Year 1 + Semester III (20 Credits) + Semester IV (22 Credits) + Internship (4 Credit) = UG Diploma							

Semester V				Semester VI			
Course Type	Course Code	Course Name	Credit	Course Type	Course Code	Course Name	Credit
Major	MJEC11	Public Economics	4	Major	MJEC14	Knowledge System: Indian Economy II	4
Major	MJEC12	Development Economics I	4	Major	MJEC15	Applied Quantitative Techniques	4
Major	MJEC13	Knowledge System: Indian Economy I	4	Major	MJEC16	Environmental Economics	4
Minor	MNPS03 / MNEC03	Choose anyone from Minor (Political Science / Economics) - Group I	4	Minor	MNPS03 / MNEC03	Choose anyone from Minor (Political Science /Economics) - Group I	4
Total Credit			16	Total Credit			16
YEAR 3: Year 2 + Semester V (16 Credits) + Semester VI (16 Credits) + Internship (4 Credit) = UG Degree							

Semester VII				Semester VIII			
Course Type	Course Code	Course Name	Credit	Course Type	Course Code	Course Name	Credit
Major	MJEC17	Choose any THREE from Major - Group I	4	Major	MJEC20	Choose any TWO from Major - Group II	4
Major	MJEC18		4	Major	MJEC21		4
Major	MJEC19		4	Minor	MNPS04/ MNEC04	Choose anyone from Minor (Political Science / Economics) - Group II	4
Minor	MNPS04/ MNEC04	Choose anyone from Minor (Political Science / Economics) - Group II	4	Research / Major	RSEC02* / MJEC23	Either DISSERTATION (if atleast 75% marks obtained till Year 3) OR Choose any TWO from Major - Group II	4
Research / Major	RSEC01* / MJEC22	Either DISSERTATION (if atleast 75% marks obtained till Year 3) OR choose any ONE from Major - Group I	4	Research / Major	RSEC03* / MJEC24		4
Total Credit			20	Total Credit			20
YEAR 4: Year 3 + Semester VII (20 Credits) + Semester VIII (20 Credits) + Internship (4 Credit) = UG Honours							

## Lists of Optional Courses

<b>Major (Economics) Optional Courses (To be chosen in Semester VII &amp; VIII)<sup>#</sup></b>	
<b>Group I (Semester VII)</b>	<b>Group II (Semester VIII)</b>
(a) Money and Financial Markets	(k) Development Economics II
(b) Economic History of India (1857-1947)	(l) Economic History of the World (Late 19 <sup>th</sup> Century to Late 20 <sup>th</sup> Century)
(c) Fundamentals of Health Economics	(m) Trade, Growth and Development
(d) Computer Applications in Economics	(n) Advanced Statistical Methods
(e) Open Economy Macroeconomics	(o) Economics of Health and Education with Reference to India
(f) Advanced Econometric Methods	(p) Financial Economics
(g) Introductory Public Finance	(q) Monetary Economics
(h) Advanced Microeconomics	(r) Advanced Macroeconomics
(i) Trade Theory	(s) Economic Thought
(j) Topics in Microeconomics	(t) Dissertation

<b>Minor (Political Science) Optional Courses (To be chosen in Semester V / VI and VII / VIII)*</b>	
<b>Group I (Semester V / VI)</b>	<b>Group II (Semester VII / VIII)</b>
(a) Comparative Government I	(f) Comparative Government II
(b) Indian Government and Politics I	(g) Indian Government and Politics II
(c)	(h)
(d)	(i)
(e)	(j)

<b>Minor (Economics) Optional Courses (To be chosen in Semester VII or VIII)*</b>	
<b>Group I</b>	<b>Group II (Semester VII / VIII)</b>
(a) Indian Economy I	(f) Indian Economy II
(b) Money and Banking	(g) Economic History of India 1857-1947
(c) Environmental Economics	(h) Public Finance
(d)	(i)
(e)	(j)

<sup>#</sup>more optional courses may be included into the lists

### Credit wise marks distribution:

1 Credit = 25 Marks

20% of total marks of all papers will be evaluated on the basis of Internal Assessments

### Abbreviations:

**MJEC:** Economics Undergraduate Major Course

**MNEC:** Economics Undergraduate Minor Course

**MNPS:** Political Science Undergraduate Minor Course

**AECC:** Ability Enhancing Compulsory Course

**SEEC:** Economics Undergraduate Skill Enhancing Compulsory Course

**CVAC:** Compulsory Value Added Course

**Multi:** Multidisciplinary Course(s) to be offered by other department(s) / centre(s)

**RSEC:** Economics Undergraduate Research Course

*\*Atleast one of RSEC papers (RSEC01 / RSEC02 / RSEC03) should be related to the Indian Knowledge System (IKS).*

## MAJOR COURSES

### SEMESTER I

#### MJEC01: INTRODUCTORY MICROECONOMICS

**Course objectives:** The course will focus on adopting an economist's perspective, demonstrating how microeconomic principles can be utilized to analyze real-world scenarios. It will also address the influence of traditional Indian economic thought on contemporary microeconomics, while exploring the capacity of Indigenous Knowledge Systems (IKS) to offer sustainable solutions to economic challenges.

**Learning Outcomes:** This course aims to introduce first-year students, who may be unfamiliar with economics, to the fundamental concepts of microeconomic theory, as well as to examine the influence of cultural factors on economic decision-making.

##### 1. Exploring the subject matter of Economics (8L)

Why study economics? Scope and method of economics; the economic themes: scarcity and efficiency; thinking like an economist: the question of what to produce, how to produce and how to distribute output; marginal benefits and marginal costs; opportunity cost (private and social); the basic competitive model; prices, property rights, the role of property rights in markets and profits; incentives and information; rationing; opportunity sets; economic systems; reading and working with graphs. Explore Indian economic thought (e.g., Arthashastra), historical Indian economic practices (e.g., guilds, trade routes)

##### 2. Supply and Demand: How Markets Work, Markets and Welfare (10L)

Elementary theory of demand: determinants of household demand, market demand, and shifts in the market demand curve.

Elementary theory of supply: factors influencing supply, derivation of the supply curve, and shifts in the supply curve.

The elementary theory of market price: determination of equilibrium price in a competitive market; the effect of shifts in demand and supply; the excess demand function: Existence, uniqueness, and stability of equilibrium; consumer surplus, producer surplus and efficiency of competitive markets (graphical approach); the idea of market failure; Elasticities and their applications, the idea of market failure.

Government intervention and their impact on market equilibrium and efficiency: controls on prices (Price ceilings and price floors); indirect taxation

Analyze historical Indian market structures, trade practices, and impact on economic development.

##### 3. The Households (18L)

The consumption decision –budget constraint, consumption and income and price changes, demand for all other goods and price changes; description of preferences; consumer's optimum choice; income and substitution effects; Marshallian and compensated demand curves; Price consumption curve, income consumption curve, and Engel Curve; Homothetic tastes; labour supply and savings decision - choice between leisure and consumption. Relate to Indian philosophical perspectives on consumption (e.g., Dharma, Artha, Kama), traditional consumption patterns

##### 4. The Firm, Production and Cost (18L)

Production :Input output relation , concept of production function, fixed factor , variable factor, laws of variable proportion, total , average and marginal product, returns to factor , and returns to scale, Cost and revenue functions: total, average and marginal cost and revenue. Short run and long run cost functions, cost minimization subject to given output, output maximization subject to given cost. Examine Indian traditional agricultural practices, village economies, and artisanal industries.

##### 5. Theory of the Firm and the Market Organisation (2L)

Profit maximization of the firm under perfect Competition — short run and long analysis; the short run supply curve of the competitive firm and the industry.

## **6. Imperfect Market Structure**

**(2L)**

Monopoly and anti-trust policy; measuring monopoly power; government policies towards competition; various types of imperfect competition.

## **7. Input Markets**

**(2L)**

Theory of rent-Ricardo, Marshall, and Modern theory of rent; Labour and land markets - basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); demand for labour; input demand curves; shifts in input demand curves, competitive labour markets; labour market and public policy.

## **Reference Books**

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, Cengage Learning India Private Limited, 4th Edition, 2007.
3. Robert Pindyck, Daniel Rubinfeld and P L Mehta, Microeconomics, 7th Edition. Pearson. 2009.
4. Kauṭalya. (2013). King, Governance, and law in ancient India: Kautilya's Arthashastra. Oxford University Press.

## **MJEC02: MATHEMATICAL METHODS FOR ECONOMICS I**

### **Course Objectives**

The discipline of economics deals with complex interactions of markets and its participant entities that are largely captured in terms of mathematical modeling. An economist needs to grasp various mathematical tools and their fundamental details. This course is designed to build the mathematical foundations of a successful student economics.

### **Learning Outcomes**

This course enables the students to understand the evolution of number system and more complex mathematical operations and tools that are developed on it. It will also prepare the student to learn complex mathematical functions and optimization techniques that will help in understanding economic theories dealt in other courses under this four-year Economics (Major) UG programme.

It is well-established that modern mathematics is founded upon the classical Indian number system that had migrated to Europe through Arabian traders and eventually replaced the Roman number system. The advent of 'zero' is a remarkable development of the traditional Indian Knowledge System (IKS). A student will be aware of the contribution of IKS in modern mathematics through this course.

### **1. The number system – real numbers – mathematics in ancient India (5L)**

### **2. Preliminaries (5L)**

- a) Logic and proof techniques;
- b) Sets and set operations; relations;
- c) Convex Sets and Relations
- d) Functions and their properties.

### **3. Functions of one real variable (10L)**

- a) Elementary types of functions: quadratic, polynomial, power, exponential, logarithmic;
- b) Sequences and series: convergence, algebraic properties and applications;
- c) Limit and Continuity of Functions

### **3. Derivative of functions of one variable (10L)**

- a) Derivative using first principles
- b) Derivative of important types of functions: polynomial functions, logarithmic functions,
- c) Exponential functions etc
- d) Rules of differentiation
- e) Successive differentiation: Higher Order Derivatives
- f) Expansion of Functions; Rolle's Theorem, Mean Value Theorem, Taylor's & Maclaurin's series
- g) Indeterminate Forms

### **4. Single-variable optimization (10L)**

- a) Maximum / Minimum of a function of single variable – First order and Second order Conditions b) Global and Local Maximum and Minimum

### **5. Solution of Simultaneous Linear Equations (10L)**

- a) System of simultaneous linear equations
- b) Solution by Gaussian elimination and backward substitution
- c) Geometric interpretation

### **6. Vectors (10L)**

- a) Ordered set and its geometric interpretation
- b) Length of a Vector
- c) Basic Vector Operations
- d) Linear dependence and Independence
- e) Vector Space and its Basis

f) Orthogonality

**Readings:**

- 1) K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002. Simon Carl P and Blume Lawrence, *Mathematics for Economists*, Viva Books,
- 2) Marc Lipson and Seymour Lipschutz, *Linear Algebra*, Schaum's Outlines, 4<sup>th</sup> Edition
- 3) *Ancient Indian Leaps into Mathematics (2010): B. S. Yadav and Mon Mohan (ed); Springer New York.*

## SEMESTER II

### MJEC03: INTRODUCTORY MACROECONOMICS

#### Course Objectives:

To teach the fundamental questions, categories, methodologies and debates. Thus to discuss the basic questions and concepts focusing on long-run trend and short-run fluctuations; to teach circular flow of income, national income accounting with its components and **also accounting in context of Indian economy**, classical model with policies, simple Keynesian model with policies, and consumption functions and the associated policy debate.

#### Learning Outcomes:

- The students gain an understanding of the basic questions, concepts, structures and debates of macroeconomics, and an understanding on the methods of national income accounting, and practical learning in context of Indian economy.
- They learn the fundamental difference between the Classical and Keynesian schools.
- The paper is helpful to know the policy implications of Classical and Keynesian models.
- The students learn why the consumption function debate has been a crucial aspect of macroeconomics and its transformation.

- 1. Introduction to Macroeconomics (3L)**
  - a. Why macroeconomics? Fallacy of aggregation
  - b. Important categories
  - c. Fundamental question: long-run trend and short-run fluctuations
- 2. National Income Accounting (15L)**
  - a. Circular flow: from spendthrift economy to open-economy with government
  - b. Different approaches to measurement of NI
  - c. **NI accounting in the context of Indian Economy**
- 3. Classical Model with policy issues (12L)**
  - a. Barter economy and Say's Law
  - b. Competitive capitalism with frictionless market economy and Say's Law
  - c. Wage-price flexibility, full employment and long-run aggregate supply
  - d. QTM, Cambridge Cash Balance and aggregate demand (money financed)
  - e. Loanable fund market and aggregate demand (loan financed)
  - f. Money-financed and Loan-financed demand side policy irrelevance
  - g. Supply side policies
- 4. Simple Keynesian Model with policy implications (14L)**
  - a. Advanced capitalism, effective demand problem and demand determined output in short-run
  - b. Short-run price-fix under excess-capacity unemployment
  - c. Keynesian cross model, existence and stability of equilibrium (demand determined)
  - d. Demand side policies, inventory adjustment and a variety of multipliers.
  - e. Investment function and acceleration principle: an introduction.
- 5. Consumption function and policy debate (16L)**
  - a. Keynes, Absolute Income hypothesis, stagnation thesis and vital role of government
  - b. Kuznets, long-run constancy of APC, short-run variability of APC, policy debate
  - c. Relative Income Hypothesis and policy irrelevance
  - d. Life-Cycle Hypothesis and policy irrelevance
  - e. Permanent Income Hypothesis and policy irrelevance
- 6. Critique to the application of Mainstream Macroeconomic policies in India (6L)**

#### Readings:

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



2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. William H. Branson, *Macroeconomic Theory and Policy*, East-West Press, 3rd edition, 2005.
4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005.
5. SoumyenSikdar, *Principles of Macroeconomics*, OUP, 2<sup>nd</sup> Edition, 2006.
6. Rosalind Levacic, *Macroeconomics*, London (UK) MacMillan Press, 1976.
7. Gardner Ackley, *Macroeconomics: theory and policy*, New York: Macmillan, 1978.
8. Yiannis P. Venieris and Frederick D. Sebold, *Macroeconomics: models & policy*, Santa Barbara: Wiley, 1977.
9. Snowdon, Vane and Wynarczyk, A. *Modern Guide to Macroeconomics*, Edward Elgar Publishing.
10. Mishra, M. (2018). *The Indian economy: a macroeconomic perspective*.

## MJEC04: MATHEMATICAL METHODS FOR ECONOMICS II

### Course Objectives

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. This course teaches the method of applying mathematical techniques to economic theory in general. **The course also includes a few concepts of Mathematics from Indian Knowledge System.**

### Learning Outcomes

The course provides the mathematical foundations necessary for further study of postgraduate economics, statistics, computer science, finance and data analytics. The analytical tools introduced in this course have applications wherever optimization techniques are used in business decision-making for managers and entrepreneurs alike. These tools are necessary for anyone seeking employment as an analyst in the corporate world. **The students will also understand a few History and Development of Mathematics in India.**

#### 1. Matrices and Determinants

(20L)

- a) Matrices: Definition and Examples
- b) Basic Matrix Operations: Addition, subtraction, Scalar and Matrix Multiplication, Transposition
- c) Special Matrices: Idempotent Matrices, Symmetric and Skew-Symmetric Matrices, Identity Matrix, Partitioned Matrices, Trace of a Matrix
- d) The determinant of a Matrix
- e) Properties of Determinants
- f) Minors and Cofactors
- g) Adjoint of a Matrix
- h) Rank of a Matrix
- i) Matrix Inversion
- j) Solution of Systems of Simultaneous Equations using Matrix Methods

#### 2. Partial Derivatives

(8L)

- a) Functions of Several Variables
- b) Partial Derivates
- c) Rules of Partial Differentiation
- d) Second Order partial derivatives
- e) Level Curves/Sets
- f) Homogenous Functions and Euler's Theorem
- g) Total Differential
- h) Taylor's Series for Several Variables
- i) The tangent to a curve
- j) The normal to a curve
- k) The envelope to a family of curve

#### 3. Implicit Function Theorem and Comparative Statics

(12L)

- a) Systems of Equations/Relations
- b) Equilibrium and Solution of Systems of Equations
- c) Stability of Equilibrium
- d) Implicit Function Theorem
- e) Comparative Statics

#### 4. Optimisation of Functions of Several Variables

(20L)

- a) Convex and concave functions of several variables
- b) Second Order Conditions for Convex and Concave Functions of several Variables
- c) Maximum/Minimum of a function of several variables

- d) First order and Second Order conditions
- e) Maximum and Minimum of a Function with (Equality) constraints
- f) Lagrangian Functions and First and Second Order Conditions
- g) Inequality constraints and Kuhn-Tucker Conditions
- h) Optimisation and the Envelope Theorem

## **5. History and Development of Mathematics in India: A few Selected Concepts**

### **Readings:**

- 1) K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia: Delhi, 2002.
- 2) Marc Lipson and Seymour Lipschutz, *Linear Algebra*, Schaum's Outlines, 4<sup>th</sup> Edition.
- 3) Ghosh and Chakravorty, *Higher Algebra*, U N Dhar and Sons Publishing.
- 4) Ram, S. S., & Ramakalyani, V. (2022). History and development of mathematics in India. (*Selected Chapters*).

## SEMESTER III

### MJEC05: INTERMEDIATE MICROECONOMICS I (Mathematical Approach)

#### Course Objective

It is aimed to be a foundation course on using mathematical tools to understand more clearly various microeconomic analyses and models that students are previously introduced to in a logical way. The discipline of economics is increasingly relying on mathematical techniques to explain complex phenomenon relating to micro and macro issues. The broad objective of this course is to equip the students with basic tools of mathematics and showing examples of how they help in understanding the rational decision making process of an economic agent.

#### Learning Outcome

At the end of the course, students are expected to be familiar with basic mathematical techniques like differential and integral calculus and how mathematics deals with limiting situation of a continuous variable. They also learn the techniques and logic of unconstrained optimization, constrained optimization and can deal with discrete and continuous time in analysing inter-temporal decision making. These mathematical tools are shown to be applied to analyse the behaviour of different economic agents like buyers and sellers. These techniques prepare the students to deal with more complex economic systems like General Equilibrium models and Dynamic Optimization, which are covered in different other courses down the line in their pursuit for higher degrees.

#### 1. Consumer Theory

(22L)

- Basic Concepts
- The Maximization of Utility
- Demand Curves
- Income and Leisure
- Substitution and Income Effects
- The Theory of Revealed Preference
- Lexicographic preference
- A Linear Expenditure System
- Separable and Additive Utility Functions
- Homogenous and Homothetic Utility Functions
- Consumer's Surplus

#### 2. Production and Costs

(18L)

- Basic Concepts
- Optimizing Behavior
- Cost Functions
- Homogeneous Production Functions
- CES Production function and its connection with IKS
- Joint Products
- Least-Cost Combination of Inputs
- Coefficients of a Cubic Total Cost Functions

#### 3. Competitive Equilibrium

(20L)

- The Assumptions of Perfect Competition
- Demand Functions
- The Derivation of Supply Functions
- The Equilibrium of a Commodity Market
- An Application of Taxation

#### Readings:

1. A. C. Chiang, *Fundamental Methods of Mathematical Economics*, Tata McGraw Hill.

2. J.M. Henderson and R.E. Quandt, *Microeconomic Theory: A Mathematical Approach*, Tata McGraw Hill.
3. K. Sydsaeter and P. Hammond, *Mathematics for Economic Analysis*, Pearson Educational Asia.
4. M. Hoy, J Livernois, C McKenna, R Rees, and T Stengos, *Mathematics for Economics*, MIT Press
5. Pindyck and Rubinfeld, *Microeconomics*, Prentice Hall/ Pearson Education, 8<sup>th</sup> Edition, 2013.
6. J M Perloff, *Microeconomics: Theory and Applications with Calculus* (7th Edition) (The Pearson Series in Economics) 2015.
7. Varian, Hal R. *Intermediate microeconomics: a modern approach: ninth international student edition*. WW Norton & Company, 2014.
8. Gould, John P., and Charles E. Ferguson. *Microeconomic theory*. No. 04; HB172, G6 1980. RD Irwin, 1980.
9. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics* (10<sup>th</sup> Edition), Cengage Learning, 2008.

## MJEC06: INTERMEDIATE MACROECONOMICS I

### Course Objectives:

To teach the fundamental questions, theoretical concepts and structures and policy debates relevant for an advanced money-using macro economy.

### Learning Outcomes:

The Students will learn the concept of money, functions of money, issues of money supply and demand and corresponding theories, concepts of high powered money, and various versions of quantity theory of money.

The Students will be equipped to participate in the contemporary policy debates in the light of IS-LM, Complete Keynesian, Monetarist and New Classical Models.

- 1. Money Supply (6L)**
  - a. What is money?
  - b. M1 M2 M3 M4
  - c. Functions of money
  - d. Determinants of money supply
  - e. Credit creation
  - f. Tools of monetary policy
- 2. Money Demand (8L)**
  - a. Keynes
  - b. Baumol
  - c. Tobin
  - d. Friedman
- 3. IS-LM and policy question (10L)**
  - a. Commodity, money, bond markets in short-run
  - b. Demand determined output but fix-price
  - c. Derivation of IS and LM, slopes, crowding out, policy effectiveness
- 4. Complete Keynesian Model and a variety of policy implications (11L)**
  - a. Integration of labour market, money market, commodity market, bond market
  - b. Demand determined output and flex-price
  - c. Derivation of short-run AD and short-run AS curves
  - d. Policy analysis: monetary policy, fiscal policy, double crowding out effect, wage-cut
- 5. Monetarism and rule versus discretion (8L)**
  - a. Critique of Classics and Keynes and the long run problem of stagflation, although short run monetary policy effectiveness; irrelevance of fiscal policy
  - b. Adaptive expectation and short-run long-run dichotomy
  - c. Integration of labour market, money market, commodity market, bond market
  - d. Derivation of short and long run AS curves; AD from IS-LM
  - e. Short run long run monetary policy outcomes
  - f. Monetary rule versus discretion
- 6. Basic tenets of New Classical Macroeconomics and policy irrelevance (5L)**
  - a. Micro-foundation, Rational expectation and Lucas critique
  - b. Structures of AD and especially AS
  - c. Policy irrelevance, unanticipated shock, policy effect and Barro critique
- 7. Critique from the Indian perspectives (8L)**
  - a. Macroeconomics and the question of social and environmental sustainability.
  - b. Macroeconomics and the question of inclusiveness.

c. Macroeconomic Policy and the questions of sustainability and inclusivity.

**9. Agriculture - Industry balance and the questions of stability, inclusivity, and sustainability (4L)**

**Readings:**

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. William H. Branson, *Macroeconomic Theory and Policy*, East-West Press, 3rd edition, 2005.
4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005.
5. Soumyen Sikdar, *Principles of Macroeconomics*, OUP, 2<sup>nd</sup> Edition, 2006.
6. Amit Bhaduri: *Macroeconomics - dynamics of commodity production*, Macmillan UK, 1986.
7. Saumya Chakrabarti: *Inclusive Growth and Social Change: formal-informal-agriculture relations in India*, OUP, 2016.

## SEMESTER IV

### MJEC07: INTERMEDIATE MICROECONOMICS II

#### Course Objective

It develops a basis for evaluating the efficiency and equity implications of competition and other market structures, and a perspective on the appropriate role of government. Given the emphasis on applications in earlier courses this course will put more emphasis on the mastery of theoretical concepts and analytical tools, and their application to real world problems.

#### Learning Outcomes

Upon successful completion, students will have the knowledge and skills to: apply economic concepts to assess the economic efficiency of market outcomes for different market structures, also in the presence of externalities, and/or when influenced by government intervention

#### I. Market Structure and Game Theory (37L)

1. Introduction to imperfect market; basic features of Monopoly; **examples of private and public monopolies from India; monopoly buyer and monopoly seller between public and private entities; pricing with market power; measures of degree of monopoly power; multi-plant monopoly** (4+2= 6L)
2. Concept of price discrimination; types of price discrimination; **price discrimination using both linear and non-linear pricing; examples of price discrimination from Indian experiences; pay-what-you like (PWYL) pricing and its application from Indian practices; profitability of PWYL pricing; First-Degree Price Discrimination: Evidence from Informal Markets in India; inter-temporal price discrimination and peak-load pricing; evidences from Indian experiences; two-part tariff and Buffet pricing; is it a price or quantity discrimination; practice of buffet pricing from India; Taxation under Monopoly.** (10+4 =14L)
3. Monopolistic Competition; short-run equilibrium; long-run equilibrium; (in) efficiency. (4L)
4. Oligopoly: Non-collusive and Collusive models (Cournot Equilibrium and extension, Bertrand Equilibrium and extension, Hotelling Model; Stackleberg Equilibrium; Price Leadership). (8L)
5. Game theory (Cooperative and Non-cooperative static games; simultaneous move and sequential move games; non-cooperative games of perfect information; the Prisoner's dilemma, Nash equilibrium in pure and mixed strategies); Applications of game theory in oligopolistic markets. (5L)

#### II. Factor price determination (6L)

1. **Input Market under Perfect Competition** (3L)  
Derived demand for input, marginal product and marginal revenue product, input demand for competitive firm and competitive industry, returns to scale and product exhaustion theorem.
2. **Input Market under Imperfect Competition** (3L)  
Monopolistic product and input market; Monopsony, bilateral monopoly in labour market.

#### III. General Equilibrium, Efficiency, and Welfare (9L)

1. Exchange Economy, Consumption Allocation and Pareto Optimality; Edgeworth box and contract curve; Equilibrium and efficiency under pure exchange. (7L)
2. Perfect competition and Pareto efficiency. (2L)

#### IV. Market Failure, Externalities (8L)

Externalities and Market Failure, Markets with asymmetric information, Lemons Problem, Moral Hazard. (8L)

#### Readings

- Pindyck and Rubinfeld, Microeconomics, Prentice Hall/ Pearson Education, 8<sup>th</sup> Edition, 2013.  
<https://bankcollege.ac.in/wp-content/uploads/2020/12/8th-Edition-The-Pearson-Series-in-Economics-Robert-Pindyck-Daniel-Rubinfeld-Microeconomics-Prentice-Hall-2012.pdf>



- J M Perloff, Microeconomics: Theory and Applications with Calculus (7th Edition) (The Pearson Series in Economics) 2015.  
[http://dl.rasabourse.com/MIT.Mircroeconomics.Jeffrey%20M.%20Perloff%20-%20Microeconomics%20\(2014,%20Pearson\).pdf](http://dl.rasabourse.com/MIT.Mircroeconomics.Jeffrey%20M.%20Perloff%20-%20Microeconomics%20(2014,%20Pearson).pdf)
- Anindya Sen, Microeconomics: Theory and Applications, OUP, 1999  
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- Varian, Hal R. Intermediate microeconomics: a modern approach: ninth international student edition. WW Norton & Company, 2014.[https://faculty.ksu.edu.sa/sites/default/files/microeco-\\_varian.pdf](https://faculty.ksu.edu.sa/sites/default/files/microeco-_varian.pdf)
- Gould, John P., and Charles E. Ferguson. *Microeconomic theory*. No. 04; HB172, G6 1980.. RD Irwin, 1980.
- C. Snyder and W. Nicholson, Fundamentals of Microeconomics (10<sup>th</sup> Edition), Ceneage Learning, 2008.  
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- Babu Nahata, Krzysztof Ostaszewski and Prasanna Sahoo (1999), Buffet Pricing, The Journal of Business, Vol. 72, No. 2, pp. 215-228.
- Babu Nahata and Staffan Ringbom (2007), Price discrimination using linear and nonlinear pricing simultaneously, Economics Letters Vol. 95, Issue 2, pp. 267–271.
- Yong Chao, Jose Fernandez and Babu Nahata (2015), Pay-what-you-want pricing: Can it be profitable?, Journal of Behavioral and Experimental Economics Vol. 57, pp. 76–185.
- Rishab Srivastava, (2020), First-Degree Price Discrimination: Evidence from Informal Markets in India, [Rishab\\_Srivastava\\_Final\\_Honors\\_Thesis.pdf](#).

## MJEC08: INTERMEDIATE MACROECONOMICS II

**Course Objectives:** To teach the contemporary issues/problems in macroeconomics including inflation and unemployment debates under different schools, policy issues pertaining to New Keynesian and RBC Schools, investment and economic growth models (covering the basics – questions, models, debates – of a major part of the 20<sup>th</sup> century contributions), **ancient Indian economy along with some critiques of Macroeconomics in Indian context.**

### Learning Outcomes:

- The Students will be equipped to deal with the recent theoretical developments and will be able to participate in policy analysis.
- Understanding the relationship between investment and savings, demonstrate investment multiplier, and the meaning of PDV, IRR/MEC and MEI.
- Illustrations of the issues on inflation and unemployment using Phillips curve and its different variants/developments, the economic growth models including Harrod-Domar, Solow and AK model; economic growth and technical progress.
- **Concept of Ancient Indian economy, and criticisms in the new consensus macroeconomics in Indian aspects.**

### 1. Inflation, Unemployment and Expectations: Classics, Keynes, Friedman, Lucas, Barro, Policy debate (12L)

- a. Policy effectiveness (brief review): AD--AS framework and fiscal and monetary policies in different schools of macroeconomic thought: Classics, Keynes, Friedman, Lucas, Barro critique.
- b. Inflation and Unemployment: Phillips curve short and long run under adaptive and rational expectations; policy relevance debate: Classics, Keynes, Friedman, Lucas, Barro critique.

### 2. Basic tenets of New Keynesian Macroeconomics and policy relevance (8L)

- a. Nominal rigidities and real rigidities even under rational expectation
- b. Introductory models (coordination failure, menu cost, and staggered price/wage).
- c. Policy implications

### 3. Basic tenets of RBC School and policy irrelevance (4L)

### 4. Investment Function (6L)

- a. PDV, NPDV, IRR, MEC, MEI
- b. Acceleration principle – fixed and flexible accelerator

### 5. Economic Growth (18L)

- a. Harrod and Domar models of economic growth
- b. Solow one sector growth model – golden rule – dynamic efficiency and Technological progress
- c. Elements of endogenous growth theory – basic ideas – the AK model

### 6. Ancient Indian Economy: a brief discussion (5L)

### 7. Critiques of the New Consensus Macroeconomics and Implications for India (7L)

- a. Sustaining Growth with Monetary and Financial Stability in India

### Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. William H. Branson, *Macroeconomic Theory and Policy*, East-West Press, 3rd edition, 2005.
4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005.
5. Helmut Frisch, *Theories of Inflation*, Cambridge University Press, 1983.
6. Amartya Sen (ed), *Growth economics: selected readings*, Penguin, 1970.
7. Dipankar Dasgupta, *The macroeconomy*, OUP, 1998.
8. Grham Hacche, *The theory of Economic Growth: An Introduction*, Macmillan Education.
9. Gardner Ackley, *Macroeconomics: theory and policy*, New York: Macmillan, 1978.
10. Nachane, D. M. (2018). *Critique of the new consensus macroeconomics and implications for India* (p. 268). New Delhi: Springer.
11. Das, S. K. (2006). *The economic history of ancient India*. Genesis Publishing Pvt Ltd.

## MJEC09: INTRODUCTION TO ECONOMETRICS

### Course Objectives

Arriving at a conclusion regarding a testable hypothesis and drawing inference on the basis of statistical data analyses is a basic prerequisite of empirical research in social sciences. This course is aimed to proceed further in the direction of enabling students to learn about explaining the association and causality between two variables and making statistical inferences. **The course also offers applications of basic econometric methods to analyze various aspects of the Indian economy in different eras.**

### Learning Outcomes

This course would enable the students to understand the scientific way in understanding socio-economic data which is basically stochastic in nature. One would learn how to find out the nature and degree of association and causality in a two variable world and to draw statistically valid conclusions. It will prepare the students to more easily deal with complexities in real world that would be introduced in the post-graduate level. **The students will also learn how to analyse Indian economic data using these econometric methods.**

### Course Outline

#### 1. Classical Statistical Inference and Testing of Hypotheses

(16L)

- 1.1 Estimators – point estimation and interval estimation
- 1.2 Properties of a good estimator – Unbiasedness, Minimum Variance, Consistency and Sufficiency
- 1.3 Maximum Likelihood Estimators and their properties
- 1.4 Null hypothesis and alternative hypothesis
- 1.5 One-tailed and two tailed tests – confidence limits and concept of p-value
- 1.6 Error in hypothesis testing - Type-I and Type –II errors; power of a test
- 1.7 Applications of tests for the Mean and Variance – tests for comparison of mean and proportion of two groups

#### 2. Nature and Scope of Econometrics

(5L)

#### 3. Simple Linear Regression Model: Two Variable Case

(15L)

- 3.1 Estimation of model by method of ordinary least squares;
- 3.2 Properties of estimators;
- 3.3 Gauss-Markov theorem;
- 3.4 Goodness of fit;
- 3.5 Confidence intervals and tests of hypotheses;
- 3.6 Scaling and units of measurement;
- 3.7 Forecasting.

#### 4. Violations of Classical Assumptions: Consequences, Detection and Remedies (using examples only) (12L)

- 4.1 Problem of multicollinearity;
- 4.2 Problem of heteroscedasticity;
- 4.3 Problem of Autocorrelation.

#### 5. Applications of Basic Econometric methods to analyse the Indian economy in several phases. (12L)

### 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.
7. **Panchanan Das, *Econometrics in Theory and Practice—Analysis of Cross Section, Time Series and Panel Data with Stata 15.1*. Springer Singapore.**

## MJEC10: INTERNATIONAL ECONOMICS

**Course objectives:** This course aims to provide students with a comprehensive understanding of the essential theories of international trade. It begins with Adam Smith's concept of Absolute Advantage and David Ricardo's theory of Comparative Advantage, and it encompasses fundamental trade theories, including the Heckscher-Ohlin trade theory and the International Product Life Cycle theory. Additionally, students will examine various trade policies, such as tariffs and quotas. The curriculum also introduces the basics of international finance, which covers the study of balance of payments accounts and exchange rate theories. **Furthermore, the course will explore long-distance trade practices from ancient India. The Indian perspective in relation to international economics will also be discussed.** Overall, this course equips students with a broad understanding of the trade theories that have evolved over time.

### Learning Outcomes:

Upon successful completion of the course, students will have the

1. knowledge and skills to be familiar with the basic models of international trade and their essential properties;
2. Understand the tools taught in class and be able to recognise their application to the analysis of real world fact situations;
3. Read and understand professional economics articles in the field of international trade theory.
4. **The course would also familiarize the students about real behavior of India's Balance of payment and sensitize them for its effective management.**

1. **Introduction** (8L)
  - What is international economics about? An overview of world trade.
  - **Long distance trade in ancient India.**
2. **International Trade Theory** (16L)
  - Labor Productivity and Comparative Advantage: The Ricardian Model
  - Resources and Trade: The Heckscher-Ohlin Model
  - International Equilibrium and the Terms of Trade
  - **India in the World economy**
3. **International Trade Policy** (16L)
  - Instruments of trade policy
  - Import Tariff and Export Subsidies
  - Qualitative Restrictions, Non-tariff Barriers, and Equivalence
  - **Foreign Trade Policy of India**
4. **International Macroeconomic Policy** (20L)
  - **Balance of Payment and its equilibrium from Indian perspective**
  - Foreign Trade Multiplier (with or without repercussions)
  - International Currency Systems and Exchange Rate Regimes
  - **India's BOP Crisis and its Exchange Rate Policies**

### Readings:

1. Paul Krugman, Maurice Obstfeld and Marc Melitz, International Economic: Theory and Policy, Addison-Wesley (Pearson Education Indian Edition), 9<sup>th</sup> edition, 2012.
2. Domonick Salvatore, International Economics: Trade and Finance, John Wiley International Student Edition, 10<sup>th</sup> edition, 2011.
3. Caves, Frankel and Jones; World Trade and Payments: An Introduction, Pearson, 10<sup>th</sup> edition.
4. Olivelle, P. (2020). Long-distance trade in ancient India: Evidence from Kauṭilya's *Arthaśāstra*; *The Indian Economic and Social History Review*, 57(1), 31-47. <https://doi.org/10.1177/0019464619892894> (Original work published 2020)
5. Miltiades Chacholiades, International Economics, McGrawhill Education.
6. Rajat Acharya, International Economics: An Introduction to Theory and Policy, Oxford University Press.

## SEMESTER V

### MJEC11: PUBLIC ECONOMICS

#### Course Objectives:

The focus of the course, which draws from microeconomic theory, is on the development of analytical tools and their application to key policy issues relating to the spending, taxing and financing activities of government. **It starts by discussing the ancient Indian public financing system as prescribed by Kautilya and its relevance in present day India & the world.** Emphasis is given to recent developments in public economics, including findings from current research, in areas such as behavioral public economics, new empirical methods and policy innovations.

#### Learning Outcomes:

**The course first orients the students about the basic idea of theory of public economics which has been an integral part of Indian knowledge system following Kautilya's Arthashastra.** Students will learn the analytical methods in economics to have a grasp on the study of the public sector and the role of the state in principle and in practice. It would provide a thorough understanding in the principles underlying the role of the state, the design of social insurance and the welfare state and the design of the tax system and to enable students to understand the practical problems involved in implementing these principles.

#### Course Outline

##### **Module - I: ancient Indian public financing system as prescribed by Kautilya (12L)**

1. Structure, Origin & Nature of the State
2. The System of Governance
3. Structure & Scope of Government Revenue & Optimised Expenditure

##### **Module - II: Introduction with Markets (8L)**

1. The Exchange Economy
2. An Algebraic Exchange Economy
3. The Production Economy
4. Consumer and Producer Surplus

##### **Module - III: Externalities & Public Goods (20L)**

1. Externalities and Negotiation
2. Permit Trading
3. Public Goods
4. Impure Public Goods
5. The Link between Public Goods and Externalities

##### **Module – IV: Taxation and Efficiency (20L)**

1. Taxation
2. The Welfare Cost of Tax Interactions
3. The Theory of the Second Best
4. The Limits to Income Redistribution
5. Redistributing Income through Tagging and Targeting
6. The Role of Government in a Market Economy

#### Readings:

1. Banerjee, P. (1916). *Public Administration in Ancient India*, Macmillan, London.
- 2, Bisht, Medha (2020). *Kautilya's Arthashastra: Philosophy of Strategy*. Routledge (London & New York).
3. J. Hindriks, G. Myles: *Intermediate Public Economics*, MIT Press, 2013 (2<sup>nd</sup> Edition).
4. H. Rosen, T. Gayer: *Public Finance*, McGraw-Hill/Irwin, 2010 (9<sup>th</sup> Edition).
5. John Leach: *A Course in Public Economics*, CUP, 2004.
6. Holley H. Ulbrich: *Public Finance in Theory and Practice*, Routledge, 2011 (2<sup>nd</sup> Edition).
7. Jonathan Gruber: *Public Finance and Public Policy*, Worth Publishers, 2016 (5<sup>th</sup> Edition).
8. Rangarajan, L.N. (1987). *The Arthashastra*, Penguin Books, New Delhi.

## MJEC12: DEVELOPMENT ECONOMICS I

### Course Objective

This is an introductory course in development economics. The course begins with a discussion of alternative conceptions of development and their justification. It then proceeds to strategies and models of development. 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 economic and political institutions to development by discussing the role of the state and market in economic development. **In addition, the course incorporates Indian perspectives from thinkers such as Amartya Sen, Gandhi, Tagore, and Ambedkar, as well as insights from Indian Knowledge Systems and historical texts.**

### Learning Outcome

The course would help students understand alternative concepts of development and their justification; equip them to make appraisal of development issues from the historical record of economic progress in the now developed world **and indigenous models of development such as those of Gandhi, Tagore, and Ambedkar.** They will be able to identify the development gap, measure poverty and understand the role of institutions in economic development and enable them to formulate as well as make appraisals of policies for development.

#### 1. Meaning of Development

(6L)

Distinction between growth and development— alternative concepts of economic development: income based approach and **Capability-based approach (Amartya Sen)**

**Gandhian Perspective: Development as *Swaraj*, village self-sufficiency, simplicity, and moral economics.**

**Tagore's Perspective: Development as *inner growth*, cultural self-expression, and harmony with nature (Sriniketan model)**

#### 2. The Characteristics of Underdevelopment and Structural Change

(10L)

The dominance of agriculture and petty services, low level of capital accumulation, rapid population growth, weak institutional structure, etc. Stages of development and structural change. Industrialization and growth.

**Dharampal's findings: Evidence of vibrant indigenous village industries and education systems before colonial disruption**

#### 3. The development gap and the measurement of poverty and Inequality

(15L)

The development gap and income distribution in the world economy, measures of inequality and historical trends, Connections between inequality and development. **Ambedkar's perspective on economic exclusion and social justice (caste-based inequality), Thoughts of Swami Vivekananda, Tagore, Gandhi and Amartya Kumar Sen.**

The measurement and comparability of per capita income, purchasing power parity (PPP), Human Development Index. Measures of poverty, Human poverty index, Millennium poverty reduction target and sustainable development goals pertaining to poverty.

#### 4. Problems of labour surplus economy

(15L)

The trap models and their criticisms (models of Nelson & Leibenstein) — Lewis model and its criticism — Nurkse's idea of disguised saving potential – concept of labour surplus (disguised unemployment)—Sen's model—labour migration and Harris-Todaro model.

**Tagore's Sriniketan Model: dignified rural labour, skill-based livelihoods, community reconstruction**

#### 5. Institutions and Development

(8L)

Definition of institutions. **Statecraft and Governance by Kautilya.** Evolution of Political and Economic Institutions. Alternative institutional trajectories and their relationship with economic performance. State ownership and regulation. Government and Market failures and Corruption.

#### 6. The role of state, the allocation of resources and Sustainable Development

(6L)

The market mechanisms and market failures, the role of the state, corruption, Development plans, choice of technique, Balanced versus unbalanced growth.



**Text Books:**

1. A. P. Thirlwall (2011): *Economics of Development* (Ninth Edition); Palgrave Macmillan.
2. Todaro and Smith(2003): *Economic Development*, Pearson Education

**Selected References:**

1. Sen, A. (1999). *Development as freedom*. Oxford University Press.
2. Koulogi, Sumanas (2023), *Development as Swaraj: Towards a Sustainable and Equitable Future*. Routledge.
3. Debraj Ray(1998): *Development Economics*; Oxford University Press (OUP)
4. Hayami and Godo (2005): *Development Economics*, OUP.
5. Abhijit Banerjee, Roland Benabou and DilipMookerjee, *Understanding Poverty*, OUP, 2006.
6. Daron Acemoglu and James Robinson, *Economic Origins of Dictatorship and Democracy*, Cambridge University Press, 2006.
7. Gandhi, M. K. (1997). *Hind Swaraj and other writings* (A. J. Parel, Ed.). Cambridge University Press. (Original work published 1909)
8. Tagore, R. (1933). *Personality*. Macmillan.
9. Tagore, R. (1961). *Towards universal man*. Asia Publishing House.
10. Ambedkar, B. R. (2014). *Annihilation of caste: The annotated critical edition* (A. Roy, Ed.). Navayana. (Original work published 1936)
11. Tagore, R. (2020). *Sriniketan: The idea and the experiment* (U. Das Gupta, Ed.). Niyogi Books.
12. Kautilya. (1992). *The Arthashastra* (L. N. Rangarajan, Trans.). Penguin Books. (Selected: Book II Ch. 1 & 15; Book VII Ch. 1)
13. Dharampal. (2000). *The beautiful tree: Indigenous Indian education in the eighteenth century*. Other India Press. (Selected: Intro & Ch. 2)

## MJEC13: KNOWLEDGE SYSTEM: INDIAN ECONOMY I

### Course Objectives

This course gives an overview of India economy. It aims at showing the picture of our economy right from the eve of independence – as underdeveloped one, with low growth as one of the important characteristics – to the present one – as being one of the fastest growing economies. As such, the syllabus covers the plans and strategies taken for the development of the country since independence, with particular focus on paradigm shifts and turning points. **The course also introduces students to key contemporary challenges such as population growth, employment, inequality, and human development. In doing so, it encourages a holistic understanding by also considering traditional Indian approaches to planning, health, and education that have influenced development thinking in the Indian context.**

### Learning Outcomes

- The course would help students understand the basic characteristics of economic development and growth of the Indian economy in the backdrop of its glorious past.
- **Critically assess India's economic planning, including the role of Five-Year Plans and indigenous approaches such as decentralised development and self-reliance.**
- Students will be able to analyze different economic policies (such as, privatization, liberalization and globalization, etc.) in India.
- Help students understand and get knowledge about the contemporary issues of our economy
- **Recognize the relevance of traditional Indian models of education and healthcare, such as Gurukulas and Ayurveda, in shaping India's human development trajectory.**
- **Assessment of India's success in achieving Sustainable Development Goals.**

#### 1. Economic Development since Independence

(18L)

Major features of the economy at independence; growth and development under different policy regimes — goals, constraints, institutions and policy framework. **Evolution of Five-Year Plans and their role in shaping economic strategy; Creation of NITI Aayog and its role in transforming India.** Inclusion of indigenous approaches to planning such as **Gandhian principles of decentralised development and village self-reliance rooted in Indian Knowledge Systems (IKS)**; an assessment of performance — sustainability and regional contrasts; structural change, savings and investment.

#### 2. Population and Human Development

(16L)

Demographic Structure and trends and issues; education and health: basic problems and government measures; **traditional Indian approaches to human development through indigenous models of health and education**

#### 3. Growth and Distribution

(16L)

Trends in GDP and per capita GDP; growth, poverty and inequality; employment and unemployment.

#### 4. International Comparisons

(10L)

### Readings:

1. Uma Kapila (eds), 2021. Indian Economy Since Independence, Academic Foundation. 32<sup>nd</sup> Edition
2. Jean Dreze and Amartya Sen, 2013. An Uncertain Glory: India and its Contradictions, Princeton University Press.
3. Pulapre Balakrishnan, 2007, The Recovery of India: Economic Growth in the Nehru Era, Economic and Political Weekly, November.
4. Rakesh Mohan, 2008 — Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment, Economic and Political Weekly, May.
5. 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.



6. Himanshu, 2010, Towards New Poverty Lines for India, Economic and Political Weekly, January.
7. Jean Dreze and Angus Deaton, 2009, Food and Nutrition in India: Facts and Interpretations, Economic and Political Weekly, February.
8. Himanshu. 2011, — Employment Trends in India: A Re-examination, Economic and Political Weekly, September.
9. Rama Baru et al., 2010, —Inequities in Access to Health Services in India: Caste, Class and Region, Economic and Political Weekly, September.
10. Geeta G. Kingdon, 2007, —The Progress of School Education in India, Oxford Review of Economic Policy.
11. J.B.G. Tilak, 2007 — Post-Elementary Education, Poverty and Development in India, International Journal of Educational Development.
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, Journal of Development Studies.
15. Aniruddha Krishna and Devendra Bajpai, 2011, —Lineal Spread and Radial Dissipation: Experiencing Growth in Rural India, 1992-2005, Economic and Political Weekly, September.
16. Kaushik Basu and A. Maertens, eds, 2013, The New Oxford Companion to Economics, Oxford University Press.
17. Gandhi, M. K. (1909/2008). *Hind Swaraj or Indian Home Rule*. Ahmedabad: Navajivan Publishing House.
18. Gandhi, M. K. (1942). The village of my dreams. *Harijan*, July 26, 1942.
19. **Government of India – Economic Survey** (latest) Chapters on health, education, and demographic trends.

## SEMESTER VI

### MJEC14: KNOWLEDGE SYSTEM: INDIAN ECONOMY II

#### Course Objectives

This course will help students understand the key issues related to the Indian economy. At the end of the course, a student should be able to understand the role of economic policies in shaping and improving economic performance in agriculture, manufacturing and services. The course also introduces traditional and indigenous practices in agriculture and industry, allowing students to appreciate alternative models of development rooted in local knowledge systems. By engaging with contemporary policy debates and empirical evidence, students will be better equipped to analyze and evaluate economic strategies, enhancing their preparedness for careers in policy, research, and governance.

#### Learning Outcomes

Students will have capability to understand government policies and will enable informed participation in economic decision making, thus improving their employment prospects and career advancement. The integration of traditional and indigenous economic practices will enable students to critically engage with alternative, context-specific models of development that are grounded in India's historical and socio-cultural context. This interdisciplinary understanding will strengthen their analytical capabilities and enhance their employability in sectors such as public policy, rural development planning, sustainable agriculture, governance, and academic or policy-oriented research.

#### Course Description

This course examines sector-specific policies and their impact in shaping trends in key economic indicators in India. It highlights major policy debates and evaluates the Indian empirical evidence. The course also encourages critical engagement with traditional and indigenous approaches to economic activity, such as community-based agricultural practices and artisanal production systems, as alternative frameworks for sustainable development. Given the rapid changes taking place in the country, the reading list will have to be updated annually.

#### Course Outline

1. Macroeconomic Policies and Their Impact (14L)  
Fiscal Policy; trade and investment policy; financial and monetary policies; labour regulation.
2. Policies and Performance in Agriculture and Food Management (18L)  
Growth; productivity; agrarian structure and technology; capital formation; pricing and procurement; WTO and Indian Agriculture; food security and food policy: traditional agricultural knowledge systems, such as indigenous crop diversification, organic farming methods, traditional water harvesting techniques (e.g., johads, tankas), and community-based food security practices.
3. Policies and Performance in Industry (16L)  
Growth; productivity; diversification; small scale industries; public sector; competition policy; foreign investment; economic reforms and industry; role of traditional small-scale and cottage industries such as khadi, handlooms, and artisan clusters in rural livelihoods and employment.
4. Trends and Performance in Services (12L)

#### Readings:

1. Singhanian, Nitin, Indian Economy. Mc. Graw Hills. 2025 or latest Edition.
2. Shankar Acharya, 2010, —Macroeconomic Performance and Policies 2000-8, in Shankar Acharya and Rakesh Mohan, editors, India's Economy: Performance and Challenges: Development and Participation, Oxford University Press.

3. Rakesh Mohan, 2010 — India's Financial Sector and Monetary Policy Reforms, in Shankar Acharya and Rakesh Mohan, editors, India's Economy: Performance and Challenges: Development and Participation, Oxford University Press.
4. Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008 — Agricultural Growth in India Since 1991, RBI DEAP Study no. 27.
5. B. N. Goldar and S. C. Aggarwal, 2005 — Trade Liberalisation and Price-Cost Margin in Indian Industries, The Developing Economics, September.
6. P. Goldberg, A. Khandelwal, N. Pavcnik and P. Topalova, 2009 — Trade Liberalisation and New Imported Inputs, American Economic Review, Papers and Proceedings, May.
7. Kunal Sen, 2010 — Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, The Rise of Asia, Routledge.
8. Ahsan, C. Pages and T. Roy, 2008, — Legislation, Enforcement and Adjudication in Indian Labour Markets: Origins, Consequences and the Way Forward, in D. Mazumdar and S. Sarkar, editors, Globalization, Labour Markets and Inequality in India, Routledge.
9. Dipak Mazumdar and Sandeep Sarkar, 2009 — The Employment Problem in India and the Phenomenon of the Missing Middle, Indian Journal of Labour Economics.
10. April, J. Dennis Rajakumar, 2011 — Size and Growth of Private Corporate Sector in Indian Manufacturing, Economic and Political Weekly.
11. Ramesh Chand, 2010 — Understanding the Nature and Causes of Food Inflation, Economic and Political Weekly, February.
12. Bishwanath Goldar, 2011 — Organised Manufacturing Employment: Continuing the Debate, Economic and Political Weekly.
13. Kaushik Basu and A. Maertens, eds, 2013, The New Oxford Companion to Economics in India, Oxford University Press.
14. Ministry of Textiles. (2024). *Sustainability in the handloom traditions of India*. Government of India.
15. Lahiri, D., & Das, S. (2020). Women as carriers of the 'weaving legacy': Shifting labour and cultural identity. *Fashion and Textiles*, 7(1), 1–15. <https://doi.org/10.1186/s40691-020-00220-x>
16. Dasra. (2016). *Crafting a livelihood: Building sustainability for Indian artisans*. Mumbai: Dasra.
17. Khadi and Village Industries Commission (KVIC). (2023). *Annual report 2022–23*. Ministry of Micro, Small and Medium Enterprises, Government of India. Retrieved from <https://kvic.gov.in>

## MJEC15: APPLIED QUANTITATIVE TECHNIQUES

### Course Objectives:

The objective of the course is to provide the foundational knowledge of econometric tools and their applications for developing skills required for empirical research in economics and allied studies. It builds on statistics and introductory econometrics courses and teaches students a wide set of frequently used quantitative research methods **with a special focus to use Indian concepts and data.**

### Learning Outcomes:

On successful completion of the course, students would be able to:

- Conduct econometric and statistical analyses in economic and associated research using advanced software and computing skills.
- Understand the estimation techniques, learn the difficulties involved in parameter estimation, and acquire research knowledge.
- Demonstrate their hands-on learning of applied econometric methods concerning the choice of model, estimation method and interpretation of results, **especially using Indian data.**

### 1. Revisiting statistics and basic econometrics as research methods (5L)

Basic concepts along with software applications of various statistical and econometrics methods used in research.

### 2. Concepts of data used in econometric research (5L)

Types and characteristics of data - cross-section, time-series and panel data; primary and secondary data; various sources of secondary data used in statistical and econometric analyses.

### 3. Stages in econometric analysis of data (8L)

Applications of econometric models in empirical research - basic concepts, introduction to software (Excel / Stata / Eviews) for data analysis

### 4. Regression analysis with software applications (10L)

Simple linear regression models: estimation, specification, diagnostic testing and inference; misspecification, functional forms and model selection; applications with Excel / Stata / Eviews.

### 5. Advances in Regression with software applications (10L)

Basics of estimation, specification, diagnostic testing in case multiple linear regression models specific to cross-section, time series and panel data and their applications with Excel / Stata / Eviews.

### 6. Fundamental statistical analysis (10L)

univariate and bivariate analysis, ANOVA; factor analysis, principal component analysis; Applications with SPSS/ Excel / Stata / Eviews.

### 7. Advanced Statistical Applications with Indian data during pre and post independence era. (12L)

### Readings:

Asteriou, D., & Hall, G. S. (2007). *Applied Econometrics: a Modern Approach* Palgrave Macmillan. New York, 6.

Bhaumik, S. K. (2015). *Principles of econometrics: A modern approach using eviews*. OUP Catalogue.

Das, P. (2019). *Econometrics in theory and practice*. Springer Singapore.

Gujarati, D. N. (2011). *Econometrics by example* (Vol. 1). New York: Palgrave Macmillan.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.

Wooldridge, J. M. (2009). *Econometrics*. Cengage Learning India Pvt. Ltd New Delhi.

**Panchanan Das, *Econometrics in Theory and Practice—Analysis of Cross Section, Time Series and Panel Data with Stata 15.1*. Springer Singapore**

## MJEC16: ENVIRONMENTAL ECONOMICS

**Course Objectives:** This course aims to provide a comprehensive introduction to the economic analysis of issues arising from the interactions between the natural environment and the human economy. It underscores the role of entropy laws in this process of interaction and discusses comprehensively the challenges arising due to externalities, public-good character and non-tradability of environmental services and the resulting nature of market failure, along with issues for social welfare and distributive implications in determining human well-being. **The Indian Knowledge System (IKS) offers valuable insights and practices for environmental economics, emphasizing sustainability and harmony with nature. IKS principles, rooted in ancient traditions, promote resource management, ecological balance, and community well-being, aligning with modern sustainable development goals.**

**Learning Outcomes:** Students should be able to apply economic principles to environmental issues, evaluate and design environmental policies, assess the economic value of natural resources, and understand the economic implications of environmental regulations. They should also be able to communicate complex environmental economic concepts to diverse audiences.

### 1. Introduction

What is environmental economics? Review of microeconomics and welfare economics. **Concept of "Vasudhaiva Kutumbakam" (the world is one family), highlighting the interconnectedness of all life and the importance of maintaining ecological balance. Worship of nature and its elements, such as certain trees, is another aspect of this worldview.**

### 2. The Theory of Externalities

Pareto optimality and market failure in the presence of externalities, property rights and the Coaseththeorem. **Role of local communities in managing and conserving natural resources. Traditional knowledge holders possess valuable insights into local ecosystems and sustainable practices.**

### 3. 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.

### 4. International Environmental Problems

Trans boundary environmental problems; economics of climate change; trade and environment. **Indigenous knowledge in developing climate-resilient strategies for agriculture, water management, and disaster preparedness.**

### 5. Measuring the Benefits of Environmental Improvements

Non-market values and measurement methods; risk assessment and perception.

### 6. Sustainable Development

Concepts: measurement. **Responsible use of natural resources, drawing on traditional knowledge of local ecosystems, seasons, and biodiversity. Practices like organic farming, crop rotation, and rainwater harvesting are examples of sustainable resource management rooted in IKS.**

### References:

1. Acharyya Achiransu (ed.) *Environmental Economics in Developing Countries Issues and Challenges*. Routledge & Taylor and Francis, 2023.
2. Barry C. Field and Martha K. Field, *Environmental Economics*, McGraw Hill, 2012.
3. Rabindranath Bhattacharya (ed.) *Environmental Economics: An Indian Perspective*, OUP, 2002.
4. Charles Kolstad, *Intermediate Environmental Economics*, Oxford University Press, 2<sup>nd</sup> edition, 2010.
5. Robert N. Stavins (ed.), *Economics of the Environment: Selected Readings*, W.W. Norton, 5<sup>th</sup> edition, 2005.
6. Roger Perman, Yue Ma, James McGilvray and Michael Common, *Natural Resource and Environmental Economics*, Pearson Education/Addison Wesley, 3rd edition, 2003.
7. Maureen L. Cropper and Wallace E. Oates, 1992, Environmental Economics: A Survey, *Journal of Economic Literature*, Volume 30:675-740.
8. Borkar, Vedprakash (2024), *Environmental consciousness and sustainable development in the Indian knowledge system*. Authors press New Delhi.

**MAJOR OPTIONAL COURSES**  
**(To be chosen in Semester VII & VIII)**

**GROUP I (SEMESTER VII)**

**(a) MONEY AND FINANCIAL MARKETS**

**Course Objectives:**

Exposing the theory and functioning of the monetary and financial sectors of the economy with a special focus on India. The course highlights the structure and role of money and financial markets and institutions, interest rates, banking systems, international aspects, **and their concepts from Indian Knowledge System.**

**Learning Outcomes:**

On successful completion of this course, students will be able to:

- Analyze and deconstruct the monetary and financial sectors' functioning mechanisms, Interest rate differentials, Banking sector and the central bank.
- Describe the international monetary system and key developments under the regime of economic liberalization.
- **Conceptualize banking and finance from Indian Knowledge System and** interpret recent developments in the Indian economy's monetary and financial sectors.

**1. Introduction to Money**

**(5L)**

Concept, Functions, measurements, Money Supply, Credit Creation- Deposit and Money Multiplier

**2. Financial Institutions, Markets and Instruments**

**(15L)**

Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises; Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations; capital asset pricing model

**3. Interest Rates**

**(8L)**

Determinants; sources of interest rate differentials; theories of term structure of interest rates; interest rates in Indian financial market

**4. Banking System and Central Banking**

**(12L)**

Changing role and structure; Indian banking system; banking sector reforms; functions and monetary policy tools of Central Bank

**5. International Aspects of Money and Finance**

**(8L)**

International monetary system, financial liberalization, financial crisis

**6. Issues on Banking and Finance from Indian Knowledge System**

**(12L)**

**Ancient banking and its drawbacks, Indigenous banking, Settling accounts, Transition from Indian to British Indian Systems of Money and Banking 1800–1850**

**Readings:**

F. S. Mishkin, *The Economics of Money, Banking, and Financial Markets*, 11th Edition, Pearson.

F. S. Mishkin and S. G. Eakins, *Financial Markets and Institutions*, Pearson Education, 6<sup>th</sup> edition, 2009.

Krugman and Obstfeld, *International Economics- Theory & Policy*, 9th Edition (Chapter 19).

F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, *Foundations of Financial Markets and Institutions*, Pearson Education, 3<sup>rd</sup> edition, 2009.

M. R. Baye and D. W. Jansen, *Money, Banking and Financial Markets*, AITBS, 1996.

Rakesh Mohan, *Growth with Financial Stability- Central Banking in an Emerging Market*, OUP, 2011.

L. M. Bhole and J. Mahukud, *Financial Institutions and Markets*, Tata McGraw Hill, 5<sup>th</sup> edition, 2011.

N. Jadhav, *Monetary Policy, Financial Stability and Central Banking in India*, Macmillan, 2006.

Reserve Bank of India (RBI). *Report of the Working Group: Money Supply Analytics and Methodology of Compilation*, 1998; and Bulletins, Annual Reports and Reports on Currency and Finance (latest).

**A K. Bagchi, Transition from Indian to British Indian systems of money and banking 1800–1850. *Modern Asian Studies* 19, no. 3 (1985): 501-519.**

**J. Wheatley, Ancient banking, modern crimes: How hawala secretly transfers the finances of criminals and thwarts existing laws. *U. Pa. J. Int'l Econ. L.* 26 (2005): 347.**

**L. Subramanian, Settling accounts: Indigenous bankers in search of new histories in the twentieth century. *The Indian Economic and Social History Review* 60, no. 2 (2023): 125-157.**

**K. Leonard, Indigenous banking firms in Mughal India: A reply. *Comparative Studies in Society and History* 23, no. 2 (1981): 309-313.**

## **(b) ECONOMIC HISTORY OF INDIA (1857-1947)**

### **Course Objective**

It aims to be a foundation course on understanding India's history, especially the British colonial era, from an economic perspective. The objective of the course is to enable them to look at colonial history from a very rational perspective. They are taught economic issues like the theory of economic drain that was actually calculated by Dadabhai Naoroji, trade restrictions, land revenue-related policies, etc. It is an important course for the students to understand the foundation of independent India.

### **Learning Outcome**

At the end of the course, students are expected to look at Indian history more rationally and from an economic perspective. This will help them in their argument and in their process when they discuss the country's history.

### **Course Description**

This course analyses key aspects of Indian economic development during the second half of British colonial rule. In doing so, it investigates the place of the Indian economy in the wider colonial context and the mechanisms that linked economic development in India to the compulsions of colonial rule. This course links directly to the course on India's economic development after independence in 1947.

### **Course Outline**

#### **1. Introduction: Colonial India: Background and Introduction (5L)**

Overview of the colonial economy.

#### **2. Macro Trends (10L)**

National Income; population; occupational structure.

#### **3. Agriculture (15L)**

Agrarian structure and land relations; agricultural markets and institutions – credit, commerce and technology; trends in performance and productivity; famines.

#### **4. Railways and Industry (15L)**

Railways; the de-industrialisation debate; evolution of entrepreneurial and industrial structure; nature of industrialisation in the interwar period; constraints to industrial breakthrough; labour relations.

#### **5. Economy and State in the Imperial Context (15L)**

The imperial priorities and the Indian economy; drain of wealth; international trade, capital flows and the colonial economy – changes and continuities; government and fiscal policy.

### **Readings:**

- 1) Lakshmi Subramanian, "History of India 1707-1857", Orient Blackswan, 2010, Chapter 4.
- 2) Sumit Guha, 1991, Mortality decline in early 20th century India, Indian Economic and Social History Review (IESHR), pp 371-74 and 385-87.
- 3) Tirthankar Roy, The Economic History of India 1857-1947, Oxford University Press, 3rd Edition, 2011.
- 4) J. Krishnamurty, Occupational Structure, Dharma Kumar (editor), The Cambridge Economic History of India, Vol. II, (henceforth referred to as CEHI), 2005, Chapter 6.
- 5) Irfan Habib, Indian Economy 1858-1914, A People's History of India, Vol. 28, Tulika, 2006.
- 6) Ira Klein, 1984 - When Rains Fail: Famine relief and mortality in British India, IESHR 21.
- 7) Jean Dreze, Famine Prevention in India in Dreze and Sen (eds.) political economy of Hunger, WIDER Studies in Development Economics, 1990, pp.13-35.
- 8) John Hurd, Railways, CEHI, Chapter 8, pp. 737-761.



- 9) Rajat Ray (ed.), Entrepreneurship and Industry in India, 1994.
- 10) A K Bagchi,— Deindustrialization in India in the nineteenth century: Some theoretical implications, Journal of Development Studies, 1976.
- 11) M D Morris, Emergence of an Industrial Labour Force in India, OUP 1965, Chapter 11, Summary and Conclusions.
- 12) K. N. Chaudhuri, Foreign Trade and Balance of Payments, CEHI, Chapter 10.
- 13) B. R. Tomlison, 1975, India and the British Empire 1880-1935, IESHR, Vol. XII.
- 14) Dharma Kumar, The Fiscal System, CEHI, Chapter 12.
- 15) Basudev Chatterjee, Trade, Tariffs and Empire, OUP 1992, Epilogue.

**Background reading for students:**

- Irfan Habib, Indian Economy 1858 -1914 (A People's History of India), Vol. 28, Tulika 2006. Daniel Thorner, Agrarian Prospect in India, 1977.
- L. Visaria and P. Visaria, Population. CEHI, Chapter 5.



## (c) FUNDAMENTALS OF HEALTH ECONOMICS

### Course Objective:

Health economics is the study of how scarce healthcare resources are allocated among competing interventions and among groups in society. This course introduces basic concepts and practical issues faced by decision makers at all levels in the health system in allocating scarce resources so that the choices they make maximise health benefits to the population. The course content includes modules introducing public health and policy, basic research methods in health, microeconomic theory, health economics, and in-depth modules on concepts and applications of economic evaluation, health care financing, health policy, health system.

### Learning Outcomes:

The overall goal of this course is to increase appreciation of role of health economics, health care financing and policy in public health. It will provide a fundamental understanding of key issues in health economics, health care financing, pharmaceutical economics, and economic evaluation for public health practice for informed decision making and implementation. Therefore, the emphasis on analytics will prepare you to address a wide-range of issues in public health, development economics, and more!

<b>1. Introduction to Economic Analysis in Health Care</b>	<b>4L</b>
1.a. Why health economics?	
1.b. Health care as an economic good	
1.c. Differential characteristics of health care	
1.d. Organization of health care market	
1.e. Structure of a health care system	
<b>2. The Demand for Health Care</b>	<b>10L</b>
2.a. Demand, profits and health policy targets	
2.b. Consumer choice theory in health care	
2.c. Demand functions for health care	
2.d. The value of life and quality of life	
2.e. Modelling choice about health care	
<b>3. The Production and Cost of Health Care</b>	<b>6L</b>
3.a. Theory of production in health care	
3.b. Multi-product firms	
3.c. Returns to scale, additivity and fixed factors	
3.d. Costs of health care	
<b>4. The Supply of Health Care</b>	<b>10L</b>
4.a. Firms, markets and industries in the health care sector	
4.b. Structure, conduct and performance in health care industry	
4.c. Profit maximization models of health care	
4.d. Other than profit maximization in health care	
<b>5. Markets, Market Failures and government</b>	<b>10L</b>
5.a. Competitive markets to allocate resources	
5.b. Market failures in health care	
5.c. Government intervention in health care & government failures	
<b>6. Health Insurance and Health Care Financing</b>	<b>20L</b>
6.a. Uncertainty and risk	
6.b. Demand and supply of health insurance	
6.c. Health insurance market failures	
6.d. Asymmetric information in health care market	

## 6.e. Supplier induced demand

### Readings:

1. Paul J. Feldstein (**F**) – Economics of Health Care, Cengage Learning, India Edition (2011).
2. C. E. Phelps (**P**) – Health Economics, Routledge, (2012).
3. F. A. Sloan and C. Hsieh (**S-H**) – Health Economics, MIT Press (2012).
4. R. E. Santerre and S. P. Neun(**S-N**) – Health Economics, Cengage Learning (2012).
5. P. Zweifel and F. Breyer and M. Kifmnn(**Z-B-K**) – Health Economics, Heidelberg, Springer-Verlag, (2009).
6. A. McGuire, J. Hendersin and G. Mooney (**M-H-M**) – The Economics of Health Care, London, Routledge (1999).
7. S. Folland, A.C. Goodman and M. Stano(**F-G-S**) – The Economics of Health and health Care, Boston, Prentice Hall (2009).
8. P. Barros and Xavier Martinez-Giralt (**B-G**) – Health Economics: An Industrial Organization Perspective, Routledge, UK (2012).
9. A.M. Jones, N. Rice, T. B d’Uva, S. Balia(**J-R-D-B**) – Applied Health Economics, Routledge, UK (2012).
10. Bhattacharya J, T. Hyde, P. Tu (**B-H-T**) - Health Economics, London: Palgrave-MacMillan, (2013).

## (d) COMPUTER APPLICATIONS IN ECONOMICS

### Course Objective:

Applied economics currently deals with large and complex datasets, which should be analyzed and interpreted with economic reasoning based on the theoretical understanding. As an empirical researcher in social sciences, a graduate in economics is expected to handle various dimensions of socio-economic data and find hidden patterns/results with the help of specialized statistical software. This Course aims to equip the students to deal with datasets containing socio-economic and other related information. Also, students in economics often need to plan and implement primary surveys that should yield datasets in the appropriate format for further statistical analyses. Other courses in this curriculum impart the knowledge of statistical parameters, modeling, and analytical logic. However, practical estimation of parameters and application of various statistical tools require data handling skills with the appropriate software. This course aims to impart that complementary skill to the students. **Also, as an Economics graduate from India, the students should be aware of the current estimates and historical trends of various socio-economic indicators in India. This would constitute the IKS component of this course.**

### Learning Outcomes:

This Course will enable the students to:

1. Learn the basic principles of organizing information as statistically amenable datasets using spreadsheet (MS\_Excel). Also students will be able to compute various indicators using raw data and generate appropriate charts for diagrammatic representation of the information.
2. Develop survey instruments for generating primary datasets that are readily amenable to statistical analyses.
3. Explore datasets with advanced statistical software (Stata) and carrying out statistical tests of significance.
4. **Know about the major sources of secondary data on Indian economy and the value of some major macro-economic and demographic indicators (IKS)**
5. Handle primary/secondary data for their future research and/or as a data analyst

### 1. Fundamentals of Computer and information presentation (5L)

- 1.1 Basic idea of the digital world - Concept of binary and decimal system – representation of a decimal number in binary system and vice-versa
- 1.2 Short introduction to data arrangement in a spreadsheet using MS\_Excel

### 2. Generating primary information through survey instruments (10L)

- 2.1 Designing a questionnaire to capture quantitative and qualitative information
- 2.2 Structured and modular questionnaires – sample questionnaires
- 2.3 Use of coding in survey instruments
- 2.4 Data entry rules in a spreadsheet - conditional formatting in Excel
- 2.5 Units of analyses and arrangement of data in the appropriate format

### 3. Data analyses with MS Excel (15L)

- 3.1 Data management within a worksheet – use of functions
- 3.2 Creating charts (line, column, pie, scatter) and formatting components of a chart.
- 3.3 Generating random numbers between specified intervals in MS\_Excel
- 3.4 Use of random numbers in sample selection – practical exercises
- 3.5 Statistical functions and tests in Excel – simple linear regression results

### 4. Data Analyses using Stata (20L)

- 4.1 Introduction to Stata and its data formats
- 4.2 Managing variables in Stata – types of variables and their conversion – basic commands for variable description and data labeling
- 4.3 Managing data in Stata – shifting between ‘long’ and ‘wide’ formats depending on units of analyses – merging and appending datasets
- 4.4 Creating charts and diagrams in Stata – formatting of charts

- 4.5 Creating and formatting tables of summary statistics with basic Stata commands
- 4.6 Statistical tests using Stata – two-sample parametric and non-parametric tests
- 4.7 Managing Stata commands – use of batch files (Stata ‘Do’ files)

## **5. Presentation using MS\_PowerPoint**

**(10L)**

- 5.1 Preparing PPT slides and formatting - presentation of research works
- 5.2 Tips for a research report presentation – how to make it simple but effective

### **References:**

1. Reserve Bank of India: Database on Indian Economy (Weblink: [DBIE](#) )
2. Open Government Data (OGD) Platform (Weblink: [Home | Open Government Data \(OGD\) Platform India](#))
3. India Data Portal: (Weblink: [IndiaDataPortal](#))
4. *Web- based free tutorials that will be referred to in the classes and will be updated with time.*

## (e) OPEN ECONOMY MACROECONOMICS

**Course Objectives:** The course explores how a country's global relations impact its macroeconomic activities. It prepares students for professional discussions on monetary and fiscal policy design and macroeconomic fluctuations, **with fundamental implications in India as an open economy.**

**Learning Outcomes:** The student will understand the macroeconomic structure of an open economy with exchange rates, interest rates, and capital movements, as well as the impact of foreign exchange markets and foreign trade on output, employment, and inflation. They will also analyze macroeconomic events, exchange rate expectations, and policy suggestions over time, **with practical lessons from India's position in the world.**

### 1. Macroeconomic Structure of the Open Economy (6L)

Introduction to National Income accounting and balance of payment of an open economy; Foreign Exchange Market and Interest rate of an open economy

### 2. Macroeconomic Modeling of the Open Economy (15L)

IS-LM Model under open economy: under Flexible and Fixed Exchange Rates; Effectiveness of Fiscal and Monetary Policies under different contexts; Monetary Approach to the Balance of Payments; Purchasing Power Parity and the long run monetary approach; Macroeconomic equilibrium in an open economy.

### 3. International Macroeconomics (16L)

International Macroeconomic Concepts and Policy: International Monetary Systems: An Historical Overview; Financial Globalization; Developing Countries: Growth, Crisis, and Economic Reform; Global North and Global South: Major Groups G-7, G-20 and BRICS.

### 4. Open Macroeconometric Issues Using Global Data (11L)

Analyzing global level macroeconomic data from major sources including World Bank, IMF, UNCTAD etc. in case of developed and developing economies to see their open economic scenarios and performances.

### 5. Macroeconomic Issues in India as an Open Economy (12L)

India as an open economy: major open economic policy issues and their implications in India during pre and post-economic reform periods.

#### Reading/ References List:

- Feenstra, R., Taylor, A. (2014), International Economics, Worth Publishers.
- Gandolfo, Giancarlo (2016). International Finance and Open Economy Macroeconomics, Springer.
- Krugman, P., Obstfeld, M. and Melitz (2018) International Economics - Theory and Policy, 11th ed., Pearson Education.
- Patnaik, P. (ed.) (2015). Open Economy Macroeconomics and the Indian Economy, *Economics: Volume 3: Macroeconomics* (Delhi, 2015; Oxford Academic, 22 Sept. 2016).
- Dua, P., Ranjan, R., & Goel, D. (2023). *Macroeconometric Methods*. Springer.

## (f) ADVANCED ECONOMETRIC METHODS

### Course Objectives

This Course will provide a basic understanding of limited dependent variable models, Simultaneous Equation Models and Dynamic Econometric Models. Lectures will focus on introducing the relevant econometric theory and **discussing application of econometric techniques using Indian databases**. Equal importance is attached to the development of an intuitive understanding of the material that will allow these econometric tools to be utilised effectively and creatively.

### Learning Outcomes

On successful completion of this Course, students will be able to:

1. Learn various advanced econometric methods, and related econometric theories.
2. Apply these methods to data or econometric modelling techniques
3. Use E-views/Stata to estimate econometric models, interpret econometric estimates and analyse the results.

### 1. Limited Dependent Variable Models

(20 + 5) L

Review of Dummy variable techniques  
The Linear Probability Model  
The Logit Model  
The Probit Model  
Estimation – the Maximum Likelihood Estimator for Logit and Probit Models  
Problem of Inference; Measuring goodness of fit; Interpretation of Logit and Probit estimates.  
The Tobit Model – Estimation and Interpretation of Tobit estimates  
The Multinomial Logistic Regression Models  
The Ordinal Logistic Regression Models  
Estimation and Interpretations of the MLRM and OLRM  
Applications using E-views/Stata **and Indian data sources**

### 2. Dynamic Econometric Models

(8 + 2) L

Lagged effects in a Dynamic Model  
Distributed Lag Models – Specification; Geometric Lag Approach; The Koyck approach to Distributed Lag Models  
An application – The Adaptive Expectations Model  
Polynomial Lag Model: The Almon approach  
Autoregressive Models: Estimation – Instrumental variable  
Applications using E-views/Stata **and Indian data sources**

### 3. Simultaneous Equation Models

(20 + 5) L

The Nature of Simultaneous Equation Models with examples  
The simultaneous equation bias and inconsistency of OLS estimators  
The Recursive models  
The Identification problem – rules of identification – The order and rank conditions  
Single Equation/Limited Information Estimation Method – The Indirect Least Square Method  
The Two-stage Least Square Method  
The Least Variance Ratio Method  
System Methods of estimation – The Three Stage Least Square  
Applications using E-views/Stata **and Indian data sources**

### References:

1. Wooldridge, J (2012): *Introductory Econometrics A Modern Approach*, (5<sup>th</sup> Edition) South Western Cengage Learning.
2. Johnston, J (–): *Econometric Methods*, (3<sup>rd</sup> Edition) (McGraw Hill)
4. Green, W (2006): *Econometric Analysis* (5<sup>th</sup> Edition) Pearson Education, Delhi.
5. Dougherty, C (2011): *Introduction to Econometrics* (4<sup>th</sup> Edition), Oxford University Press.
6. Chatterjee, S and Hadi, A S (–): *Regression Analysis by Example* (Wiley Interscience)
7. Cameron, A C and Trevedi, P K (2005): *Micro Econometric Methods and Applications*, Cambridge University Press.
8. Bhaumik S K (2015): *Principles of Econometrics: A Modern Approach using E-views*, Oxford University Press, New Delhi.

## (g) INTRODUCTORY PUBLIC FINANCE

### Course Objectives:

After studying a basic course on public economics, a course on public finance is required to understand how government and public institutions finance their spending; and its impact on larger macroeconomic issues. The course will help students to broaden their understanding of fiscal policy management of government and its implications on macroeconomic health of a country. **The course specially focuses on fiscal rules and fiscal federalism in Indian context to reflect the significance of India's Knowledge System (IKS).**

### Learning Outcomes:

After completion of the course, students will learn theories of public expenditures, various types of deficits and public debt, growing problem of fiscal imbalances and their management, fiscal responsibility legalization and functioning of federal finance of a federal system like India. Successful completion of the course would help students to deepen their understanding of the various facets of fiscal policy and functioning of fiscal federalism in Indian context.

#### 1. Overview of Public Finance (10L)

Meaning, nature, scope and significance of public finance; classification of revenue and expenditures; concept of optimal taxation and Ramsey rule; marginal cost of public funding; public expenditures theories (Wagner's Law and Peacock-Wiseman's Hypothesis); role of public finance in a developing country context like India.

#### 2. Deficit and Public Debt: (15L)

Meaning, definition and classification of various types of deficit and public debt; funded/permanent/long-term vs. unfunded/floating/short-term debt; internal & external debt and their economic implications in Indian context; public debt and other liabilities of Central and State governments in India; fiscal dominance in Indian context.

Theories on burden of public debt: Richardo – Pigou Thesis, Buchanan Thesis, Musgrave Thesis

Macro consequences of theories of public debt: Classical view, Keynesian view, Ricardian view, Functional Finance and Modern Monetary Theoretic view of deficit and debt.

#### 3. Fiscal imbalance and Fiscal Responsibility Legalization: (15+5 = 20L)

Meaning of fiscal imbalance and objective of public debt management; Understanding the issue of fiscal sustainability.

Approaches to fiscal sustainability and their empirics: Domar's Approach, Solvency Approach, Fiscal Gap Approach, Forward-looking Approach, Balance Sheet Approach and Inter-generational Equity Approach.

Background of legal restrictions on deficit and public debt and fiscal dominance of monetary policy; Maastricht Treaty of Europe and **background of FRBM Act in India, FRBM targets and their implications, State level FRLs and their targets in India, Problems of off-budget liabilities and their fiscal implications for FRBM/FRL in India.**

#### 4. Fiscal Federalism: (15L)

**Conceptual understanding of federation and its relevance in Indian context, Meaning and Principles of Federal Finance, Constitutional Provisions and Indian Fiscal Federalism, Federal Fiscal imbalances in India - Vertical and Horizontal fiscal imbalances, Inter-governmental transfers of resources: Role of Finance Commission and the erstwhile Planning Commission, Assistance for Central Sector Scheme and Centrally Sponsored Scheme, Economic Liberalization and Fiscal Decentralization.**

### Readings:

Acharya, V.V., (2020), Fiscal Dominance - A Theory of Everything in India, Indian Public Policy Review, Vol. 1(2), pp.1-15.

Lerner, A. P., (1943), Functional Finance and the Federal Debt, Social Research, , Vol. 10 (1), pp. 38-51.

Auerbach, A. J., Kotlikoff, L. J., and Leibfritz, W., (1999), Generational Accounting around the World, University of Chicago Press.

Dahlby, B., (2008), The Marginal Cost of Public Funds: Theory and Applications, MIT Press.

Rosen, H., and Gayer, T. (2010), Public Finance (9<sup>th</sup> Edition), McGraw Hill Publications, New York.

Singh, C., Prasad, D., Sharma, K.K., Reddy, K.S., (2017), A Review of the FRBM Act, 2017, IIMB-WP# 550, Bangalore

Gruber, J., (2022), Public Finance and Public Policy, 7<sup>th</sup> Edition, Worth Publishers, Macmillan Learning, New York.

K. Pradhan, (2019), Analytical Framework for Fiscal Sustainability: A Review, Review of Development and Change, Vol. 24(1), pp. 100-122.

Rao, M. G., (2005), Changing Contours of Federal Fiscal Arrangements in India, Amaresh Bagchi (ed.), Readings in Public Finance, Oxford University Press, New Delhi.

Rao, M. G., and Sen, T.K., (1995), Federal Finance in India: Theory and Practice, NIPFP WP

Mosler, W., (1998), Full employment and price stability, *Journal of Post Keynesian Economics*,

Mosler, W. (2010), The 7 Deadly Innocent Frauds of Economic Policy, Valance Co Inc, USA.

Roubini, N., & Hemming, R., (2004), A balance sheet crisis in India? Paper presented at the IMF/NIPFP Conference on Fiscal Policy in India, 2004, New Delhi.

Musgrave R.A., and Musgrave, P.B. (2017), Public Finance in Theory & Practice, McGraw Hill Publications, 5th edition (Paperback), New Delhi.

Rakshit, M., (2005), Budget Deficit: Sustainability, Solvency, and Optimality, In A. Bagchi (Ed.), Readings in Public Finance (pp.339-80), Oxford University Press, New Delhi.

Kelkar V., and Shah, A., (2019), In Service of the Republic: The Art and Science of Economic Policy, Penguin Random House, India.

Oates, W.E., (2008), On the Evolution of Fiscal Federalism: Theory and Institutions, National Tax Journal, Vol.61 (2), pp. 313-334. .

Reddy, Y.V., and Reddy, G.R. (2019), Indian Fiscal Federalism, OUP, India,

Govt. of India, Government Debt: Status Paper, 2012 and 2022

Govt. of India, Various Finance Commission Reports, preferably the latest one.

Govt. of India, Various Reports of Comptroller and Auditor General (CAG), Govt. of India.



## (h) ADVANCED MICROECONOMICS

**Course objectives:** The main objective of a course is to provide students with a deeper understanding of the models and tools used to analyze individual and firm decision-making in markets. It aims to equip students with the analytical skills to understand contemporary research, approach advanced research topics in microeconomics and related fields, and apply theoretical knowledge to real-world economic problems. The Indian Knowledge System (IKS) offers valuable perspectives that can enrich advanced microeconomic theory. The IKS also encompasses insights into economics, management, and governance that can be relevant to modern economic thought. Specifically, IKS can offer insights into areas like resource allocation, ethical considerations in economic activity, and the interconnectedness of economic systems with social and environmental factors.

**Learning Outcomes:** Key learning outcomes include mastering mathematical tools for formalizing economic concepts, analyzing decision-making under uncertainty and asymmetric information, and understanding strategic interactions through game theory. Students will also develop the ability to apply these concepts to real-world scenarios and conduct independent research in microeconomics.

### Theory of Consumer Behaviour

- 1.1 Preference Relations and their Properties, Existence and Properties of the Utility Functions, Utility Maximization, Demand Functions and their Properties.
- 1.2 Indirect Utility Functions and Roy's Identity.
- 1.3 Expenditure Minimization, Hicksian Demand and Duality.
- 1.4 Income Effect, Substitution Effect and Slutsky Equation.
- 1.5 The Theory of Revealed Preference.
- 1.6 Consumers' Surplus and Analysis of Consumers' Welfare EQVar&Comp Var
- 1.7 Ethical behaviour and the consequences of actions (karma), which can be relevant to understanding ethical decision-making in consumer behaviour and social responsibility.
- 1.8 Concept of "Dharma," which highlights the importance of ethical conduct in all aspects of life, including business and consumption.

### 2. Theory of the Firm

- 2.1 Production Sets, Input Requirement Sets and Production Functions, Returns to Scale and Homogeneity.
- 2.3 Cost Minimization and Properties of Cost Functions, Input Demand Functions and Shephard's Lemma.
- 2.4 Duality between Cost and Production Functions, Short-run and Long-run Cost Functions.
- 2.5 Principles like Dharma (righteousness), Artha (wealth creation), and Karma (action) from texts like the Bhagavad Gita for businesses towards ethical and effective decision-making.
- 2.6 Concept of interconnectedness emphasizing the importance of teamwork, collaboration, and building strong relationships within the organization and with stakeholders.

### 3. Partial Equilibrium in a Competitive Market.

- 3.1 Profit Maximization and Profit Functions, Input Demand Functions and Hotelling's Lemma.
- 3.2 Short Run Profit Maximization: Break-even and Shut-down points, Short Run Market Equilibrium and the Supply Function.
- 3.3 Long Run Supply, Market Equilibrium under Perfect Competition: Short and Long Runs.
- 3.4 Stability of Equilibrium, Comparative Statics: Exogenous Changes and Impact of Policy.
- 3.5 Welfare in a Perfectly Competitive Market
- 3.6 Sustainable, ethical, and culturally relevant solutions that resonate with consumers and enhance business performance.
- 3.7 Business practices that lead to increased customer satisfaction, brand loyalty, and improved sustainability, giving businesses a competitive edge, particularly in niche markets prioritizing ethical and sustainable products.

### References

1. Mascollel, Whinston and Green: *Microeconomic Theory*, Publisher: OUP (Indian Edition).
2. Hal Varian: *Microeconomics Analysis*, Viva Books, Indian Edition.
3. Kreps: *Microeconomic Theory*, Princeton University Press.
4. A. Mukherjee: *An Introduction to General Equilibrium Theory*, OUP (Indian Edition)
5. L.N. Rangarajan: *The Arthashastra*. Penguin India
6. Satischandra Chatterjee: *Nyaya Theory of Knowledge: A Critical Study of Some Problems of Logic and Metaphysics*: Motilal Banarsidass.

## (i) TRADE THEORY

### Course Objective:

International Trade deals with the economics of globalization or cross-border economic activities. More specifically, the course focuses on international transactions that involve a movement of goods and services (trade flows) or of factors of production (migration, foreign direct investment). Three themes are explored: the basis of trade, the pattern of trade, and the gains from trade. We will also study models of trade where factors of production are heterogeneous and so need to match to form production teams. Finally, we will study new trade theory. **The Indian perspective in relation to international economics will also be discussed.**

### Learning Outcomes:

By the end of this course, students should understand the concept of different bases for trade and the gains from trade, understand what determines the pattern of trade, and be able to outline the costs, benefits, and impact on income distribution of different instruments of trade protection. They should be able to explain the effects of free trade areas, and of factor mobility. Students should be able to apply the analytical toolbox of trade theory to real world situations, **especially in the context of India**, in order to make qualitative predictions. So this course will enable the takers to: 1. Provide a written description of each trade models covered in the course explaining the key assumptions and results. 2. Mathematically solve/prove important insights from selected trade models. 3. Summarize existing empirical evidence and critically analyze the evidence in light of the trade models covered in the course.

### 1. Introducing trade and the concept of comparative advantage. (5L)

#### 2. The Exchange model

- 2.1 The offer curve and the exchange equilibrium
- 2.2 The terms of trade and real income
- 2.3 Import substitution and export led growth and immiserization
- 2.4 **Some examples in the context of India**

### 3. The Ricardian model of trade (10L)

- 3.1 Absolute and comparative advantage, pattern of trade and specialization.
- 3.2 Specialization and country size
- 3.3 Specialization with a continuum of stages of production
- 3.4 Labor mobility and trade.
- 3.5. **Ricardian Trade model in the Indian context**
- 3.5 *Some selected papers on Ricardian model*

### 4. Specific-factor model of trade (15L)

- 4.1 Factors and income distribution.
- 4.2 The pattern of trade.
- 4.3 Dutch diseases
- 4.4 Factor growth and factor prices.
- 4.5 *Some selected papers on Specific factor model*

### 5. Factor endowment model of trade (15L)

- 5.1. Pattern of trade and gains from trade
- 5.2 The Rybczynski theorem
- 5.3 The Stolper-Samuelson theorem
- 5.4 Higher dimensions of HOSV model of trade.
- 5.5 *Some selected papers on H-O model*

### 6. Introducing New trade theory (10L)

**(This section is primarily based on leading journal articles by Paul Krugman)**

- 6.1. International Trade with Increasing Returns to Scale
- 6.2 IRS and Monopolistic Competition- Intra-industry Trade
- 6.3 IIT in identical products.
- 6.5 Horizontal and Vertical Product Differentiation

6.6 The Game Theoretic Structure of Strategic Trade

6.7 Firm Heterogeneity and trade.

6.8. **New Trade theory in the Indian context**

6.9 *Some selected papers*

## **7. Relevance of Chanakya's Arthashastra, Vedic economics, and Manusmriti in today's global economy (5L)**

### **Readings:**

R. Caves, J. Frenkel and R. Jones, *World Trade and Payments*, 4th edition,

R. Jones, *International Trade: Essays in Theory*, North Holland, 1979.

P. Krugman, *Rethinking International Trade*, 1994, MIT press.

Helpman & Krugman (1987): *Market Structure and Foreign Trade*, MIT Press

H. Kierzkowski (ed.): *Monopolistic Competition and International Trade*, 1984, OUP

Robert C. Feenstra: *Advanced International Trade: Theory and Evidence*. Princeton University Press.

R. Findlay, *International Trade and Development Theory*, Columbia University Press, 1973.

S. Marjit, *International Trade and Economic Development- Theory and Policy*, OUP, 2008.

R. Acharyya, *International Economics*, OUP, 2014.

**Kaṭālyā. (2013). *King, Governance, and law in ancient India: Kautilya's Arthasastra*. Oxford University Press.** (Journal articles to be supplied during the classes)

## (j) TOPICS IN MICROECONOMICS

### Course Objectives:

1. To provide an advanced level knowledge regarding the decision making of rational consumers and firms.
2. To provide students with the basic concept of economics of information.
3. To provide the students with advanced level knowledge of game theory techniques.
4. To apply the theoretical concepts in Indian agriculture, insurance industry and in stock market.

### Learning Outcomes:

1. To able to understand how efficient allocation of resources takes place in a free market economy.
2. To able to solve problems and applications related to microeconomics theory.
3. To learn about different measures of risk aversion.

### 1. Optimization in Economic Theory: Value function, Envelope theorem and Duality approach.

#### Applications: (20L)

- a) Indirect utility function and its properties; Roy's identity; Expenditure function and Shepherd's lemma; Slutsky equation.
- b) Cost function and its properties; Shepherd's lemma and conditional factor demand functions.
- c) Profit function and its properties; Hotelling's lemma; Unconditional factor demand functions and supply function.

### 2. Game Theory Basics: Normal form game and Extensive form games with perfect information; The game tree; strategies; sub game perfection; backward induction. Applications: a) Cournot Equilibrium b) Stackelberg Equilibrium c) Tragedy of commons. (20L)

### 3. Expected Utility Theorem: measures of risk aversion. Applications- a) investment in risky assets b) insurance c) the principal agent problem: adverse selection and moral hazard.

Mean-variance utility function and its application in capital asset pricing model (CAPM), efficient market hypothesis.

Application of expected utility theory in Indian agriculture, Indian insurance industry, and application of CAPM and efficient market hypothesis in Indian stock market.

(8 + 12 = 20L)

### Reading / Reference List:

1. Martin J. Osborne, *An Introduction to Game Theory*, Oxford University Press, New Delhi, 2004
2. R. Gibbons, *Game Theory for Applied Economists*, Princeton University Press, 1992
3. Avinash K. Dixit, *Optimization in Economic Theory*, 2nd Edition, Oxford University Press, 1990
4. P. K. Dutta, *Strategies and Games*, The MIT Press.
5. Hal. R Varian, *Intermediate Microeconomics, A modern Approach*, 3rd Edition, WW Norton and Company Inc., 2010
6. D. Fudenberg and J. Tirole, *Game Theory*, MIT Press, 1991

## MAJOR OPTIONAL COURSES: GROUP II (SEMESTER VIII)

### (k) DEVELOPMENT ECONOMICS II

#### Course Objectives:

This is the second module of the economic development sequence. It begins with basic demographic concepts and their evolution during the process of development **including the role of traditional family and kinship structures in influencing demographic behaviour**. The structure of markets and contracts is linked to the particular problems of enforcement experienced in poor countries. The governance of communities and organizations is studied and this is then linked to questions of sustainable growth. The course ends with reflections on the role of globalization and increased international dependence on the process of development, **incorporating India's historical participation in global trade networks and indigenous systems of production and exchange**.

#### Learning Outcomes:

It will help the students go deeper into the various development issues of everyday life and will be able to make appraisals of different development programmes as well as equip them formulate such programmes – **past and present – while also recognizing the role of traditional institutions, community-based knowledge systems, and indigenous practices in shaping development outcomes**. The course will equip them to formulate more inclusive, context-sensitive development strategies that integrate both conventional economic analysis and culturally grounded approaches.

#### 1. Demography and Development

(16L)

Demographic concepts; birth and death rates, age structure, fertility and mortality; demographic transitions during the process of development; gender bias in preferences and outcomes and evidence on unequal treatment within households; connections between income, mortality, fertility choices and human capital accumulation; migration; **traditional family and kinship structures and socio-cultural norms influencing demographic behaviour in rural and indigenous communities**.

#### 2. Land, Labor and Credit Markets

(14L)

Introduction, ownership and tenancy, land rental contracts, land ownership; labour categories; poverty, nutrition and labour markets; rural credit markets, theories of informal credit markets, interlinked transactions

#### 3. Gender Issues and Development

(12L)

Women's education in developing countries: an overview; women in the labour force; women, poverty and development in the third world; women in developing countries and 'missing women' empowerment of women and women in sustainable development goals; **indigenous knowledge systems transmitted by women in agriculture, healthcare, and crafts, and the role of matrilineal and community-based institutions in shaping gender roles and empowerment**.

#### 4. Environment and Sustainable Development

(8L)

Sustainable Development and Environmental Accounting; population, resources and environment; poverty and the environment; growth versus the environment; rural development and the environment; urban development and the environment.

#### 5. Globalization

(10L)

Globalization in historical perspective; the economics and politics of multilateral agreements; trade, production patterns and world inequality; financial instability in a globalized world; **India's historical integration into global trade networks through early maritime and overland exchanges, including the Indus Valley Civilization and Silk Route, emphasizing indigenous systems of production and commerce**.

#### Text Books:

1. Debraj Ray, *Development Economics*, Oxford University Press, 2009.
2. Todaro and Smith(2003): *Economic Development*, Pearson Education

3. A. P. Thirlwall (2011): *Economics of Development* (Ninth Edition); Palgrave Macmillan.
4. A Mukherjee and S Chakrabarti, *Development Economics: A Critical Perspective*, PHI, 2016.
5. Roy, T. (2012). *India in the World Economy: From Antiquity to the Present*. Cambridge University Press.
6. Chakravarti, R. (2002). *Trade and Traders in Early Indian Society*. Manohar Publishers.

#### **Selected References:**

1. Partha Dasgupta, *Economics, A Very Short Introduction*, Oxford University Press, 2007.
2. Dani Rodrik, *The Globalization Paradox: Why Global Markets, States and Democracy Can't Coexist*, Oxford University Press, 2011.
3. Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, *Understanding Poverty*, Oxford University Press, 2006.
4. Raghuram Rajan, *Fault Lines: How Hidden Fractures Still Threaten the World Economy*, 2010.
5. Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press, 1990.
6. Michael D. Bordo, Alan M. Taylor and Jeffrey G. Williamson (ed.), *Globalization in Historical perspective*, University of Chicago Press, 2003
7. United Nations Development Programme. (2004). *Gender and Indigenous Peoples: Overview*. UNDP.
8. Agarwal, B. (1994). *A Field of One's Own: Gender and Land Rights in South Asia*. Cambridge University Press.
9. Caldwell, J. C. (1982). *Theory of Fertility Decline*. Academic Press.
10. Dyson, T., & Moore, M. (1983). On kinship structure, female autonomy, and demographic behavior in India. *Population and Development Review*, 9(1), 35–60.

## (I) ECONOMIC HISTORY OF THE WORLD (LATE 19<sup>TH</sup> CENTURY TO LATE 20<sup>TH</sup> CENTURY)

**Course Objective:** This course is concerned with the history of industrialization and economic growth from the late 19<sup>th</sup> century to the present day; the period when some countries rapidly became rich and generated massive divergence in the standard of livings around the globe. The aim here is to explore factors that helped or hindered countries to industrialize. These factors include investment in physical and human capital, infant industry protection, political institutions, culture and geography. By examining these factors, this course provides an insight into the complexity of long-run economic development.

This course is based on a reading list rather than a textbook. The readings are mostly empirical studies and any student with a basic background in economics would be able to follow them.

**Learning Outcome:** By studying the patterns of past industrial revolutions, this course encourages you to think like a historian about the possible effects of the ongoing changes.

Becoming familiar with the First, Second & Third industrial revolutions. How did these revolutions happen and how did they spread to other countries? Who were the winners and losers of these revolutions within and across countries?

Understanding the possible causes of the Industrial Revolution in Britain, the European reconstruction after the WWII, the American Golden Age and the East Asian economic miracle.

### Compulsory readings:

#### 1: A short history of industrialization before 1870 (7L)

Allen, R. C. (2011). Why the industrial revolution was British: commerce, induced invention, and the scientific revolution 1. *The Economic History Review*, 64(2), 357-384. <http://www.jstor.org/stable/41262428>  
Crafts, N.F. (1997), Some Dimensions of the 'Quality of Life' During the British Industrial Revolution. *The Economic History Review*, 50:617-639. doi: [10.1111/1468-0289.00071](https://doi.org/10.1111/1468-0289.00071)

#### 2: A short history of industrialization after 1870 (7L)

Pritchett, L. (1997). 'Divergence, Big Time', *Journal of Economic Perspectives*, 11(3):3-17. <https://www.aeaweb.org/articles?id=10.1257/jep.11.3.3>  
Allen, R, C (2011), Global Economic History: A Very Short Introduction, Oxford University Press. Read chapter 8.

#### 3: Demographic transition (7L)

Guinnane, T. (2011). The Historical Fertility Transition: A Guide for Economists. *Journal of Economic Literature*, 49(3), 589-614. Retrieved from <http://www.jstor.org/stable/23071723>  
Bloom, D., & Williamson, J. (1998). Demographic Transitions and Economic Miracles in Emerging Asia. *The World Bank Economic Review*, 12(3), 419-455. Retrieved from <http://www.jstor.org/stable/3990182>

#### 4: Capital accumulation and technological progress (7L)

Robert C. Allen (2012) 'Technology and the Great Divergence: Global Economic Development Since 1820'. *Explorations in Economic History* 49 (1) (January): pp. 1-16. <https://www.sciencedirect.com/science/article/abs/pii/S0014498311000416>  
Piketty, T., & Goldhammer, A. (2014). *Capital in the twenty-first century: The dynamics of inequality, wealth, and growth*. Cambridge Massachusetts: The Belknap Press of Harvard University Press. Read chapter 6.

#### 5: Structural change (7L)

Rodrik, D. (2013). Unconditional Convergence in Manufacturing. *The Quarterly Journal of Economics*, 128(1), 165. <https://academic.oup.com/qje/article/128/1/165/1839808>  
Adam Szirmai (2009), industrialisation as an engine of growth in developing countries, UNU-WIDER Working Paper No. 2011/75. <http://collections.unu.edu/view/UNU:330>

## **6: State-led industrialisation**

(5L)

Pack, H. (2006). Is There a Case for Industrial Policy? A Critical Survey. *WorldBank Research Observer*, 21(2), 267-297. <https://elibrary.worldbank.org/doi/abs/10.1093/wbro/lk1001>

## **7: Political institutions & colonialism**

(7L)

North, D., & Thomas, R. (1970). An Economic Theory of the Growth of the Western World. *The Economic History Review*, 2S(1), 1-17. <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-0289.1970.tb01010.x>

Acemoglu, D., Johnson, S., & Robinson, J. (2001). The Colonial Origins of Comparative Development: An Empirical Investigation. *The American Economic Review*, 91(5), 1369- 1401. Retrieved from <http://www.jstor.org/stable/2677930>

## **8: Culture**

(6L)

Nathan Nunn (2012), Culture and historical process, NBER Working Paper 17869, Accessible at: <http://www.nber.org/papers/w17869>

Alesina, A., & Giuliano, P. (2015). Culture and Institutions. *Journal of Economic Literature*, 53(4), 898-944. Retrieved from <http://www.jstor.org/stable/43927694>

## **9: Natural resources & economic development**

(7L)

Rosser, A. (2006), The political economy of the resource curse: A literature survey, Institute for Development Studies working paper No 268. <http://www.ids.ac.uk/publication/the-political-economy-of-the-resource-curse-a-literature-survey>

Torvik, R. (2009), Why do some resource abundant countries succeed while others do not?, *Oxford Review of Economic Policy*, Vol 25, No 2, pp 241-256. <https://academic.oup.com/oxrep/article/25/2/241/1745929>



## **(m) TRADE, GROWTH AND DEVELOPMENT**

### **Course Objective**

This course deals with the economic analyses related to international trade, economic growth and development theories. It focuses on fundamental trade theories, the changing patterns of trade, development theories in trade framework and the issues related to economic reform policies in developing country **with a special focus in India.**

### **Learning Outcome**

On successful completion of the course, students would be able to apply general equilibrium and other models in analysing the economic effects of trade and allied policies, various developmental issues under the era of economic reform **with a special focus in India.**

#### **1. Trade and Economic Growth**

**(20L)**

Effect of international trade on the Solow growth model. Trade in the endogenous growth model. Pro trade growth vs anti trade growth in the neoclassical model. Effect of economic growth on intra-industry trade.

#### **2. Development Theories in Trade Framework**

**(20L)**

Trade Liberalisation - Skilled-Unskilled Wage Inequality **and its Indian Context** - Measures of Social Welfare -Labour Market Segmentation - Informal Economy **and its Indian Context** - Harris-Todaro Model - Rural and Urban Employment - Labour Market Distortion

#### **3. Economic Reform in Developing Economy**

**(20L)**

Immiserising Growth and its Indian Context - Bhagwati (1958) Proposition - Brecher and Alejandro (1977) Proposition – Sector Wise Gainful Effects of Foreign Capital - Economic Liberalisation **and its Indian Context**, Capital Mobility and Informal Wage

### **References:**

- Basu, Kausik (1997): Analytical Development Economics, Oxford University Press, Delhi.
- Jones, R.W. (1965). 'The Structure of Simple General Equilibrium Models', Journal of Political Economy, 73, pp. 551–572.
- Jones, R.W. (1971). 'A Three-factor Model in Theory, Trade and History', in Bhagwati, J., et al. (eds.), Trade, Balance of Payments and Growth, North-Holland, Amsterdam.
- Charles I Jones (2006): Introduction to Economic Growth, W W Norton and Company (Indian Edition)
- Marjit, S. (2008): International Trade and Economic Development, OUP
- Marjit, S., & Acharyya, R. (2003). International Trade, Wage Inequality and the Developing Economy- A General Equilibrium Approach. Germany: Springer-Verlag.
- Marjit, S., & Kar, S. (2005). Emigration and Wage Inequality. Economics Letters 88 , 141-145.
- Acharyya, R. and Kar, S (2014). International Trade and Economic Development, OUP Some selected journal articles.

## (n) ADVANCED STATISTICAL METHODS

### Course Objective:

The main objective of this course is to understand and implement various concepts of numerical analysis and statistics to solve real life problems **including some statistical concepts originated in India**. This course is delivered as a combination of lectures, class discussions and practical exercises.

### Learning outcome:

The learning outcome of the course is mastery of a suite of methods and workflow styles that will enable the student to produce several new statistical analyses, and correctly and efficiently present the results from those analyses, **including the importance of some statistical concepts originated in India**.

### Unit I: (18L)

Univariate, Bivariate and Multivariate Analysis; ANOVA, MANOVA – applications with real life data using software

### Unit II: (12L)

Cluster Analysis and Discriminant Analysis – techniques and applications with real life data using software

### Unit III: (15L)

Factor Analysis - understand the terminology of factor analysis, including the interpretation of factor loadings, specific variances, and communalities; Principal Component Analysis- Understand how to apply principal component; Applications of EFA and PCA.

### Unit IV: (15L)

Structural Equation Modelling – conceptual understanding and applications of technique as the combination of factor analysis and multiple regression analysis.

### Unit V: (15L)

**Statistical concepts originated in India and their importance in current context: Mahalanobis and the development of the National Sample Survey, Bhattacharyya Distance and Coefficient**

### References:

- Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- Kerlinger, F.N. (1966). *Foundations of behavioral research*. Holt, Rinehart and Winston: New York.
- Westfall, P. H., & Henning, K. S. (2013). *Understanding advanced statistical methods* (p. 543). Boca Raton, FL, USA:: CRC Press.
- Di Ciaccio, A., Coli, M., & Ibanez, J. M. A. (Eds.). (2012). *Advanced statistical methods for the analysis of large data-sets*. Springer Science & Business Media.
- Mahalanobis, P. C. (1944). On large-scale sample surveys. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 329-451.**
- Murthy, M. N. (1965). ON MAHALANOBIS'CONTRIBUTIONS TO THE DEVELOPMENT OF SAMPLE SURVEY THEORY AND METHODS. In *Contributions to Statistics* (pp. 283-316). Pergamon.**
- Bhattacharyya, A. (1946). On some analogues of the amount of information and their use in statistical estimation. *Sankhyā: The Indian Journal of Statistics*, 1-14.**
- Singh, P. K., Sinha, M., Das, S., & Choudhury, P. (2020). Enhancing recommendation accuracy of item-based collaborative filtering using Bhattacharyya coefficient and most similar item. *Applied Intelligence*, 50(12), 4708-4731.**

## **(o) ECONOMICS OF HEALTH AND EDUCATION**

### **Course Objective**

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.

### **Learning Outcome**

At the end of the course, students are expected to look at the relevance of social sectors and their interconnectedness with long run sustainable development of the society in general and the economy in general.

### **Course Outline**

#### **1. Role of Health and Education in Human Development (10L)**

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

#### **2. Microeconomic Foundations of Health Economics (20L)**

Demand for health; uncertainty and health insurance market; alternative insurance mechanisms; market failure and rationale for public intervention; equity and inequality.

#### **3. Evaluation of Health Programs (5L)**

Costing, cost-effectiveness and cost-benefit analysis; burden of disease.

#### **4. Health Sector in India: An Overview (5L)**

Health outcomes; health systems; health financing.

#### **5. Education: Investment in Human Capital (10L)**

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

#### **6. Education Sector in India: An Overview (10L)**

Literacy rates, school participation, school quality measures.

### **Readings:**

- William, Jack, Principles of Health Economics for Developing Countries, World Bank Institute Development Studies, 1999.
- World Development Report, Investing in Health, The World Bank, 1993.
- Ronald G., Ehrenberg and Robert S., Smith, Modern Labor Economics: Theory and Public Policy, Addison-Wesley, 2005.

## (p) FINANCIAL ECONOMICS

### Course Objectives

- To help the students to understand the investment in financial and nonfinancial assets.
- To enable the students to understand the working of financial ratios.
- To understand the concepts of finance and financial economics from Indian Knowledge System

### Learning Outcomes

This course introduces students to the economics of finance. Some of the basic models used to benchmark valuation of assets and derivatives are studied in detail; these include the CAPM, and the Binomial Option Pricing models. The course ends with a brief introduction to corporate finance and a few concepts of finance and financial economics from Indian Knowledge System

### Course Outline:

#### 1. Investment Theory and Portfolio Analysis

(20L)

- *Deterministic cash-flow streams*

Basic theory of interest; discounting and present value; internal rate of return; evaluation criteria; fixed-income securities; bond prices and yields; interest rate sensitivity and duration; immunization; the term structure of interest rates; yield curves; spot rates and forward rates.

- Single-period random cash flows

Random asset returns; portfolios of assets; portfolio mean and variance; feasible combinations of mean and variance; mean-variance portfolio analysis: the Markowitz model and the two-fund theorem; risk-free assets and the one-fund theorem.

- *CAPM*

The capital market line; the capital asset pricing model; the beta of an asset and of a portfolio; security market line; use of the CAPM model in investment analysis and as a pricing formula.

#### 2. Options and Derivatives

(16L)

Introduction to derivatives and options; forward and futures contracts; options; other derivatives; forward and future prices; stock index futures; interest rate futures; the use of futures for hedging; duration-based hedging strategies; option markets; call and put options; factors affecting option prices; put-call parity; option trading strategies: spreads; straddles; strips and straps; strangles; the principle of arbitrage; discrete processes and the binomial tree model; risk-neutral valuation.

#### 3. Corporate Finance

(13L)

Patterns of corporate financing: common stock; debt; preferences; convertibles; capital structure and the cost of capital; corporate debt and dividend policy; the Modigliani-Miller theorem.

#### 4. Some Concepts of Finance and Financial Economics in Ancient India

(12L)

Financial Inclusion: A Saga of Indian Financial System; Financing warfare in ancient India

### Readings

David G. Luenberger, Investment Science, Oxford University Press, USA, 1997.

Hull, John C., Options, Futures and Other Derivatives, Pearson Education, 6th edition, 2005.

Thomas E. Copeland, J. Fred Weston and Kuldeep Shastri, Financial Theory and Corporate Policy, Prentice Hall, 4th edition, 2003.

Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance, McGraw-Hill, 7th Edition, 2002.

Stephen A. Ross, Randolph W. Westerfield and Bradford D. Jordan, Fundamentals of Corporate Finance. McGraw-Hill, 7th edition, 2005.

Burton G. Malkiel, A Random Walk Down Wall Street, W. W. Norton & Company, 2003.

William Sharpe, Gordon Alexander and Jeffery Bailey, Investments, Prentice Hall of India, 6th edition, 2003.

Dangi, V. (2012). Financial inclusion: a saga of Indian financial system. *Asia-Pacific Journal of Management Research and Innovation*, 8(2), 111-125.

Roy, K. (2022). Financing warfare in ancient India: 1500 BCE–circa 800 CE. *International Area Studies Review*, 25(3), 241-257.

## (q) MONETARY ECONOMICS

**Course Objective:** After some elementary level of understanding on concept and functions of money, money supply and monetary aggregates in previous semesters, a basic course on monetary economics would help students to gain some in depth understanding about the nature of money market and its components, monetary policy transmission mechanism, fiscal policy and monetary policy interactions and recent development of monetary theory like Modern Monetary Theory in Indian context. **How some of the monetary instruments like Treasury bill and bill of exchange got developed is incorporated to reflect the essence of Indian Knowledge System (IKS).**

### Learning Outcomes:

After the successful completion of the course, students will be able to understand the nature and functioning of Indian money market, monetary policy instruments, and channels of monetary policy transmission mechanism; **and theories and empirics of different facets of fiscal and monetary policy interactions in Indian context reflecting some aspects of the IKS.**

1. **Overview of Monetary Economics** **02L**
2. **Money Market and Instruments:** **12L**  
Nature of Indian money market (organized and unorganized), constituents of organized money market, money market instruments, special importance of treasury bills and bill of exchange in money market, role of discount and clearing houses in money market, direct and indirect instruments of Monetary Policy
3. **Monetary Policy Transmission Mechanism:** **15L**  
Meaning of monetary transmission, channels of transmission – Banking channels (interest rate and credit), exchange rate, asset price, Efficacy of such channels in Indian context, application of Taylor rule in monetary policy
4. **Monetary Policy and Fiscal Policy Interactions:** **(10+15) = 25L**  
Fiscal-Monetary Co-ordination: theory (orthodox theory, unpleasant monetary arithmetic theory, fiscal theory of price levels, multiple objectives of monetary policy problems, and International experience (developed and developing countries),  
Fiscal- Monetary Co-ordination in India - Fiscal Imperatives on Monetary policy, Interaction between fiscal and monetary policy under different regimes since 1980s, Fiscal and Monetary Policy Co-ordination and Inflation Management, Debt-Deficit dynamics and Monetary management, Fiscal operations and RBI's Balance sheet impact, Fiscal-Monetary policy Co-ordination and institutional arrangements for Government debt and Cash management.
5. **Modern Monetary Theory (MMT):** **6L**  
Functional finance and basic tenets of MMT, MMT: a fiscal or monetary theory? Exogenous and endogenous debates of money.

### Readings:

1. Acharya, V.V., (2020), Fiscal Dominance – A Theory of Everything in India, Indian Public Policy Review 2020, 1(2), pp. 1-15.
2. Bassetto, M., Fiscal Theory of the Price Level, [ftheorystat.dvi](https://ftheorystat.dvi)
3. Blinder, A. S. (1983), “Issues in the Coordination of Monetary and Fiscal Policy”, Monetary Policy Issues in the 1980s, Federal Reserve Bank of Kansas City.
4. Buiter, W. H., (2000) “The Fiscal Theory of the Price Level: A critique”, Economic Journal, Vol. 112(481), pp. 459–480.
5. Chakraborty, L., (2015), Fiscal Seigniorage “Laffer-curve effect” on Central Bank Autonomy in India, NIPFP WP No. 2015-156
6. Cochrane, J. H., (2023), The Fiscal Theory of the Price Level, [Princeton University Press](https://princetonuniversitypress.com/).
7. Desai, M., (1989). Endogenous and Exogenous Money. In: Eatwell, J., Milgate, M., Newman, P. (eds) Money. The New Palgrave. Palgrave Macmillan, London
8. IGNOU (2017), Unit-9 Indian Money Market, eGyanKosh, [Unit-9.pdf](#)
9. \_\_\_\_ (2022), Unit 21 Monetary Policy, [Unit-21.pdf](#)

10. Lerner, A.P., (1943), Functional Finance and The Federal Debt, Social Research, 10 (1), pp. 38-51.
11. Palley, T. I., (2013), Horizontalists, verticalists, and structuralists: The theory of endogenous money reassessed, Macroeconomic Policy Institute WP # 121.
12. Patra, M.D., Bhattacharyya, I., John, J. and Kumar A., (2024), Monetary Policy Transmission in India: The Recent Experience, RBI Bulletin, pp. 189-201.
13. RBI (2013), Report on Currency and Finance 2009-12 Fiscal-Monetary Co-Ordination
14. Sargent, T. J., and Wallace, N., (1981), Some Unpleasant Monetary Arithmetic, Federal Reserve Bank of Minneapolis Quarterly Review, Vol.5 (3), pp. 1-17.
15. Sivaramkrishna, S., (2015), In Search of Stability: Economics of Money, History of the Rupee, Manohar Publishers & Distributors, New Delhi.
16. \_\_\_\_\_ (2016), What Does Modern Money Theory Tell us About Demonetisation?, The Wire,
17. Woodford, M., (1994). "Monetary Policy and Price Level Determinacy in a Cash-Advance Economy." Economic Theory, Vol. 4, pp. 345–80.

## **(r) ADVANCED MACROECONOMICS**

### **Course Objectives:**

The course discusses at the advanced level the major developments in Macroeconomics, starting from the complete Keynesian model, using figures and algebra. The course (i) presents and compares the major modern macroeconomic theories and their associated policy effectiveness. (ii) provides a detailed account of the Keynesian, new Classical and new Keynesian economics, and various unemployment theories. (iii) offers a detailed analysis of the challenges to Keynesian economics by the new classical economists. (iv) evaluates the relative effectiveness of fiscal and monetary policies associated with the theories considered. (v) **discuss the traditional economic concepts like resource management, trade, and social organization.**

### **Learning Outcomes:**

It provides the students to acquire a sound and up-to-date knowledge on the developments in macroeconomic theories and policies, and understand the behaviour of different economies and explain the behaviour in terms of the standard macroeconomic theories. It enables them to know the type of policy or policy-mix required for correcting deviations from equilibrium condition and for achieving macroeconomic objectives and targets.

#### **1. Macroeconomics and IKS (10)**

- a. Explore how IKS measures wealth, well-being, and productivity.
- b. Discuss the limitations of using GDP as a measure of economic progress in societies with strong social and ecological values.
- c. Introduce alternative indicators that incorporate social and environmental factors, drawing on IKS examples.
- d. Examine the impact of interest rates, inflation, and other monetary policy tools on indigenous economies.

#### **2. Macroeconomic policy debate: Classical, Keynes, Monetarism, New Classical, New Keynesian, RBC Schools (6)**

#### **3. New Classical Macro-models (8)**

- a. Distinction between adaptive and rational expectations
- b. The Natural Unemployment Rate (NUR) hypothesis with adaptive and rational expectations
- c. Macroeconomic model with rational expectation – Policy implications.
- d. Lucas's model with perfect information.
- e. Lucas's model with imperfect information.

#### **4. Business cycle (12)**

- a. Introduction: Some Facts about Economic Fluctuations
- b. Theories of Fluctuations
- c. A Baseline Real Business Cycle Model
- d. A Special Case of the Model
- e. Solving the model in the General Case
- f. Implications
- g. Extensions and Limitations

#### **5. New Keynesian Macro-models and Theories of Unemployment (12)**

- a. Aggregate Supply and Demand
- b. Aggregate Supply and the Phillips Curve
- c. Theories of Unemployment

#### **6. Macroeconomic Models and Policies in Open Economy (12)**

- a. **Ancient intra-national and international concepts of trade as prescribed in Chanakya's Arthasashtra.**

- b. Means and modes of exchanges as initiated by Chanakya.
- c. Exchange Rates and the Foreign Exchange Market: An Asset Approach
- d. Money, Interest Rates, and Exchange Rates
- e. Fixed Exchange Rates and Foreign Exchange Intervention
- f. Mundell-Fleming Model- Monetary and Fiscal Policy
- g. Process of Adjustment and Exchange Rate Overshooting- An Alternative Formulation of the Process of Adjustment and Divergent Paths
- h. Treatment of Financial Crisis in Mundell-Fleming Model

#### Readings:

- 1. Blanchard, O., & Fischer, S. *Lectures on macroeconomics*. MIT press, 1989.
- 2. Macroeconomics: Policy & Practice by Frederic S. Mishkin, Addison-Wesley, 2012
- 3. Advanced macroeconomics by David Romer, Fifth Edition. McGraw-Hill Education, 2019
- 4. N. G. Mankiw A Quick Refresher Course in Macroeconomics. *Journal of Economic Literature*. Vol. XXVIII (December 1990), pp. 1645-1660
- 5. Krugman, P., Obstfeld, M., & Melitz, M. (2017). *International Economics: Theory and Policy*, the latest edition.
- 6. N. G. Mankiw A Quick Refresher Course in Macroeconomics. *Journal of Economic Literature*. Vol. XXVIII (December 1990), pp. 1645-1660
- 7. Banerjee, P. (1916). *Public Administration in Ancient India*, Macmillan, London.
- 8. Bisht, Medha (2020). *Kautilya's Arthashastra: Philosophy of Strategy*. Routledge (London & New York).
- 9. Rangarajan, L.N. (1987). *The Arthashastra*, Penguin Books, New Delhi.



## (s) ECONOMIC THOUGHT

**Course Objective:** The purpose of the course is to give students an overview of the process of development of economic thought including some crucial contributions from India. Special attention will be paid to the nature of the problems the economists of all times faced and tried to explain and/or solve. Understanding continuity and changes in the problem-solving and/or explaining activity of economists may contribute to a better grasp of the logic of evolution of economics as a discipline. Upon successful completion of the course, students should be able to distinguish between the main schools and trends in the history of economic thought and to understand the analytical foundations of the approaches in economics of the 20<sup>th</sup> century.

**Learning Outcomes:** At the conclusion of the course, students should have -

- The ability to understand the fundamental problems of economics, going beyond formalism.
- Some perceptions about economic history as well.
- The ability to understand contemporary problems and build theoretical frameworks accordingly, given the knowledge about the vast array of economic conditions (that prevail over time) and their theorizations.
- The essential skills of critical thinking and appraisal of theory.
- The interest in further study of this subject, knowing that economics as a subject is not static.
- To have a grasp over some of the most pertinent Indian thoughts.

### 1. What is Economics? Why Study the history of economic thought? 2L

- Blaug, M. (2001). "No history of ideas, please, we're economists". *Journal of Economic Perspectives*, 15(1), 145–164. <https://doi.org/10.1257/jep.15.1.145>
- Roncaglia, Alessandro (2017). *A Brief History of Economic Thought*. Cambridge University Press. Chapter 1. [file:///C:/Users/Admin/Downloads/vdoc.pub\\_a-brief-history-of-economic-thought.pdf](file:///C:/Users/Admin/Downloads/vdoc.pub_a-brief-history-of-economic-thought.pdf)  
[<https://vdoc.pub/download/a-brief-history-of-economic-thought-5kf02p83ce80>]

### 2. The Beginnings of "Western" Political Economy and Mercantilism 3L

- Rubin, I.I. (1979). *A history of economic thought*. Chapters 3, 4, and 5 (all very short). Online: <http://digamo.free.fr/rubin29.pdf>
- Roncaglia, A. (2017). *A Brief History of Economic Thought*. CUP. Chapter 2

### 3. The Physiocrats: Land, the theory of value and a first "model" of the economy 4L

- Rubin, I.I. (1979). *A history of economic thought*. Chapters 10, 12, 13, 14 and 15 (all very short)
- Roncaglia, A. (2017). *A Brief History of Economic Thought*. CUP. Chapter 3 & 4

### 4. Economics of Adam Smith 7L

Division of labour, Competition, Increasing returns and Capitalist growth

- Foley, Duncan. K. (2006). *Adam's Fallacy: a guide to economic theology*. Harvard University Press. Chapter 1. <http://digamo.free.fr/duncan06.pdf>
- Roncaglia, A. (2017). *A Brief History of Economic Thought*. CUP. Chapter 5

### 5. Economics of David Ricardo and T.R. Malthus 8L

- Theories of value and distribution      ii. Malthus and Ricardo: on growth and distribution
- Foley, D.K. (2006). *Adam's Fallacy: a guide to economic theology*. HUP. Chapter 2
- Roncaglia, A. (2017). *A Brief History of Economic Thought*. CUP. Chapter 6,7,8
- Mitra, Ashok. (1977/2005). *Terms of trade and class relations*. Frank Cass. Chapter 2

### 6. Basic Postulates of Marginalism, Alfred Marshal and Liberalism 9L

- Foley, D.K. (2006). *Adam's Fallacy: a guide to economic theology*. HUP. Chapter 4
- Roncaglia, A. (2017). *A Brief History of Economic Thought*. CUP. Chapter 10,11,12,13

### 7. Keynesian perspective 3L

- Foley, D.K. (2006). *Adam's Fallacy: a guide to economic theology*. HUP. Chapter 5

- b. Roncaglia, A. (2017). A Brief History of Economic Thought. CUP. Chapter 14

## 8. Marx

16L

1. Marx's Method (2 lectures) Readings: - MC\*: Ch. 1
2. History of Capitalism in Europe and America (6lectures) Readings: - MC\*: Ch.6
3. Commodity Production (1 lecture) Readings: - MC\*: Ch. 2
4. Absolute and Relative Surplus Value (2 lectures) Readings: - MC\*: Ch. 3
5. Capital and Exploitation (3 lectures) Readings: - MC\*: Ch. 3, 4
6. Technology and the Social Relations of Production (2 lectures) Readings: - MC\*: Ch. 3, 4, 5
7. Accumulation of Capital (2 lectures) Readings: - MC\*: Ch. 5, 6.
8. Capitalism and Crises (2 lectures) Readings: - MC\*: Ch.7

\*a. \*MC: Marx's Capital, 2004. Ben Fine and Alfredo Saad-Filho, 4th Ed. Pluto Press.  
<http://digamo.free.fr/benfika.pdf>

- b. Foley, D.K. (2006). Adam's Fallacy: a guide to economic theology. HUP. Chapter 3  
 c. Roncaglia, A. (2017). A Brief History of Economic Thought. CUP. Chapter 9

## 9. Neo-liberalism

2L

- a. Schwartz, P. In Praise of Neo-liberalism.  
<https://www.econlib.org/library/Columns/y2013/Schwartzneoliberalism.html>
- b. Fine, Ben (2014). Politics of neoliberal development: Washington consensus and post-Washington consensus. In H. Weber (ed.) The Politics of Development: A Survey. London: Routledge.  
[https://kclpure.kcl.ac.uk/portal/files/130001903/Fine\\_Saad\\_Filho\\_Neoliberal\\_Devt\\_Its\\_Critics\\_in\\_Weber\\_.pdf](https://kclpure.kcl.ac.uk/portal/files/130001903/Fine_Saad_Filho_Neoliberal_Devt_Its_Critics_in_Weber_.pdf)

## 10. Gandhi and Tagore

6L

- a. Tagore R: *The Co-operative Principle*; Visva-Bharati.
- b. Gandhi, M.K: *Village Industries*. Navajivan Publishing House: Ahmedabad
- c. Chakrabarti, A., & Dhar, A. (2019). Non-violent socialism: Marx and Gandhi in dialogue. In '*Capital*' in the East: *Reflections on Marx* (pp. 195-219). Singapore: Springer Singapore.
- d. Dhar, A., & Chakrabarti, A. (2021). Tagore and the Marxian Political: From Critique to Reconstruction to Askesis. *Beyond Capitalism and Neoliberalism*, 23.

## ORIGINAL AND OTHER IMPORTANT SOURCES

- #Smith, Adam. The Wealth of Nations. <http://www.econlib.org/library/Smith/smWN.html>
- #Ricardo, David. Principles of Political Economy. <http://www.econlib.org/library/Ricardo/ricP.html>
- #Marx, Karl, Capital Volume 1: <http://www.econlib.org/library/YPDBooks/Marx/mrxCpA.html>  
 Volume 3: <http://www.econlib.org/library/YPDBooks/Marx/mrxCpC.html>
- #Marshall, Alfred. Principles of Economics <http://www.econlib.org/library/Marshall/marP.html>
- #Keynes, John. The General Theory of Employment, Interest, and Money  
<http://www.marxists.org/reference/subject/economics/keynes/general-theory/>
- #Wolff, Richard D. and Stephen A. Resnick. 2012. Contending Economic Theories: Neoclassical, Keynesian, and Marxian; The MIT Press. <http://digamo.free.fr/wolffresnick12.pdf>
- #Harvey, David (2017). Marx, Capital and the Madness of Economic Reason. Profile Books. UK (Chap – Prologue & 2 & 3)
- #Basu, Deepankar (2021). The Logic of Capital. Cambridge University Press.
- #Harvey, D. 2005. A Brief History of Neoliberalism, Oxford University Press.

Useful Online Resources:

- #The History of Economic Thought Website: <http://www.hetwebsite.net/het/>
- #Chang, Ha-Joon. Lecture 1.1: The Nature of Economics:  
<https://www.ineteconomics.org/perspectives/videos/economics-for-people>  
 #5 Free Online Courses on Marx's Capital from Prof. David Harvey  
<https://www.openculture.com/2021/04/prof-david-harvey-makes-5-courses-on-marxs-capital-available-for-free.html>

### **(t) DISSERTATION**

[May be offered if BOS/DC decides in respective year / semester depending upon situation / availability following other Dissertation guidelines and the Dissertation should be related to Indian Knowledge System]

# SKILL ENHANCING COMPULSORY (SEC) COURSES

## SEMESTER I

### SEEC01: STATISTICAL METHODS I

#### Course Objectives

The discipline of economics largely depends on information to be processed by the tools of statistics. The objective of this course is to introduce the students to the discipline of statistics and to familiarize them with techniques of information processing that has wide application in economics, **including the applications of statistical methods in Indian context.**

#### Learning Outcomes

This course introduces the types of information that are collected for various economics analyses and the standard and basic ways to produce and represent summary information hidden in a raw dataset. The course also prepares them to various statistical terms which in their later days become a common language in communicating empirical results. **The course will also offer different statistical applications with socio-economic data in India.**

#### 1. Collection of data and descriptive statistics:

(8L)

- 1.1 Types of statistical data, Primary and Secondary data, Sampling and Census, methods of collecting primary data.
- 1.2 Data compilation, Classification, Tabulation and Diagrammatic representation of data (line, bar and pie diagram), semi-logarithmic line diagram and ratio charts.
- 1.3 Frequency Distribution, discrete (ungrouped) and grouped frequency distribution, Cumulative frequency distribution.
- 1.4 Graphical representation of frequency distribution, Histogram, Frequency Polygon and Ogive.

#### 2. Analysis of Univariate quantitative data:

(12L)

- 2.1 Measures of Central Tendency: Concept of central tendency of statistical data: Statistical average, characteristics of a good statistical average Simple and weighted Arithmetic, geometric and harmonic mean. Median and Mode for simple and grouped frequency distribution.
- 2.2 Measures of Dispersion: Introduction and meaning, absolute and relative measures. Absolute Measures - Range, Quartile Deviation, Mean Deviation and Standard Deviation – merits and limitations. Relative measures – Coefficient of quartile and mean deviation, Coefficient of variation
- 2.3 Moments, Skewness and Kurtosis: Moments of a frequency distribution. Moments about arbitrary point, Raw moments and Central Moments. Meaning and measurement of skewness – Bowley's measure and measure of moments. Concepts of kurtosis - leptokurtic, mesokurtic and platykurtic frequency distributions. Measures of kurtosis based on moments.

#### 3. Analysis of Bivariate quantitative data

(8L)

- 3.1 Concept of Bivariate data and bivariate frequency distribution.
- 3.2 Concept of correlation between two variables
- 3.3 Scatter diagram and its use
- 3.4 Covariance between two variables - Definition and computation
- 3.5 Karl Pearson's coefficient of correlation ( $r$ ) : Definition and computation
- 3.6 Spearman's rank correlation coefficient : Definition and computation (with and without ties)
- 3.7 Concept of regression, lines of regression, fitting of lines of regression by the least squares method, interpretation of slope and intercept.
- 3.8 Analysis of variance: explained and unexplained variation - explained and residual sum of squares, coefficient of determination.

#### 4. Index Number

(8L)

- 4.1 Index Numbers and their use

- 4.2 Problems in the construction of index numbers
- 4.3 Laspeyres' Index; Paasche's Index; Fisher's Index
- 4.4 Tests for Index numbers: Time reversal test, Factor reversal test
- 4.5 Cost of living index number

## **5. Calculating Different Socio-Economic Statistics using Indian Data (9L)**

### **References:**

1. Goon A.M., Gupta M. & Dasgupta B (2010): Fundamentals of Statistics (Vol 1), World Press.
2. Gupta and Kapoor (2005): Fundamentals of Mathematical Statistics, Sultan Chand and Sons, New Delhi.
3. Richard J. Larsen and Morris L. Marx (2011), *An Introduction to Mathematical Statistics and its Applications*, Prentice Hall.
4. William G. Cochran (2007) *Sampling Techniques*, John Wiley.
5. N G Das (2017) *Statistical Methods (Combined Vol)*

## SEMESTER II

### SEEC02: STATISTICAL METHODS II

#### Course Objectives

The discipline of economics largely depends on information or data to be processed by various tools of statistics. Statistics largely deals with the stochastic variables that are present in almost every empirical study in social sciences, especially in economics. The objective of this course is to introduce the students to the basic premise of probability theory that helps in scientific analyses of variables having inherent randomness in them. The course also introduces the students to the basic principles in sampling techniques, which is a fundamental step for beginning an empirical investigation.

The course also integrates itself with the Indian Knowledge System (IKS) by introducing students with various facets of the Indian society and culture that needs to be taken care of in selecting a random sample of respondents in a socio-economic survey in India that captures the social and cultural diversity in the country.

#### Learning Outcomes

This course enables the students to grasp the basic concepts of probability distribution of a random variable and its related measurable characteristics. It constitutes the foundation for more advanced statistical techniques that a student of economics is required to learn at later stage. After this course, a student will be prepared to venture into various advanced probability distributions and the whole bunch of statistical estimation and inference techniques that is recognized as a specialized field of 'econometrics'.

Also, the IKS component of this course will prepare the students to deal with practical challenges in sampling techniques when applied to the Indian context. It will make students aware and sensitive on the variations in socio-economic parameters and indicators in terms of caste, religion, gender and rural-urban locations that are integral part of the Indian society. Students will learn to devise sampling strategies for their future empirical research, keeping in mind the socio-economic and cultural landscape of India.

#### 1. Elementary Probability Theory:

(15L)

- 1.1 Classical definition of probability
- 1.2 Events, outcome and sample space
- 1.3 Probability axioms and properties; counting techniques through permutation and combination
- 1.4 Conditional probability, statistical independence of events, Bayes' Theorem, , circular test

#### 2. Random Variable and its Probability Distribution

(15L)

- 2.1 Concept of random variable - discrete and continuous random variables
- 2.2 Probability distribution - mass function density function and distribution function
- 2.3 Moments of a random variable – moment generating functions - expectation and variance
- 2.4 Theoretical distributions of a discrete random variable - Binomial, Poisson and Hypergeometric – MGF of theoretical distributions.
- 2.5. Distribution of a continuous random variable - Normal and Standard Normal Distribution –Moments of a normal distribution.
- 2.6. Limiting form of binomial and Poisson distribution, importance of Normal Distribution in Statistics, Central Limit Theorem (statement only)

#### 3. Sampling Methods

(6L)

- 3.1 Designing of a sample survey
- 3.2 Various methods of sampling: Simple random sampling (SRSWR and SRSWOR), Multistage sampling, Stratified random sampling, Systematic random sampling, Quota Sampling
- 3.3 Parameter, statistics and sampling distribution

#### 4. Sample designs in social sciences – Indian examples.

(9L)

#### Readings:

1. Goon A M, Gupta M K and Dasgupta B: *Basic Statistics*, World Press Private Ltd.
2. Goon A M, Gupta M K and Dasgupta B: *Fundamental of Statistics (Vol I & II)*, World Press Private Ltd.
3. Mathai & Rathie – Probability and Statistics
4. Gupta S C and Kapoor V K: *Fundamental of Mathematical Statistics*, Sultan Chand & Sons.
5. Spiegel, M R and Stephen, L.J.: *Statistics*, Schaum Series.
6. Review of Concepts and Measurement Techniques in Employment and Unemployment Surveys of NSSO; NSSO (SDRD) Occasional Paper/1/2008 : [https://www.mospi.gov.in/sites/default/files/workshop/nsc\\_paper\\_SDRD\\_12jan09.pdf](https://www.mospi.gov.in/sites/default/files/workshop/nsc_paper_SDRD_12jan09.pdf).

## SEMESTER III

### SEEC03: MATHEMATICAL METHODS

#### Course Objective

In this course students are introduced to the basic mathematical tools necessary to analyze dynamic economic models as well as stochastic models that are crucial to empirical studies. These skills are not only essential prerequisites for many courses on economic growth, development as well as econometrics but also crucial to handle statistical data **including socio-economic data in India** which are important requirement in various jobs available for students of economics.

#### Learning Outcome

At the end of this course the students would be equipped to deal with issues in dynamic economics involving time as a variable. **Students will also learn how to calculate different quantitative measures using Indian data.**

#### 1. Integral Calculus (14L)

- 1.1 Integration of a function: Basic Concept and Examples
- 1.2 Indefinite Integrals
- 1.3 Integration of key functions; polynomials, exponential and logarithmic functions
- 1.4 Rules of integration
- 1.5 Method of substitution
- 1.6 Integration by Parts
- 1.7 Definite Integrals

#### 2. Differential Equations (14L)

- 2.1 Differential equations of first order and first degree (linear): Autonomous Equations - Homogenous equations - Exact Equations and Conditions of Exactness - General Solution and Particular solution - Initial Value Problem - Steady State and Convergence – Non-autonomous Equations
- 2.2 Differential equations of first order and higher degree (Non-linear): Bernoulli's Equation - Separable Equations
- 2.3 Second and higher order Linear Differential Equations

#### 3. Difference Equations (17L)

- 3.1 Discrete time and first order difference equations: Nature of solution – time path – application in economics – The Cobweb Model- time path of price with inventory
- 3.2 Second order difference equation: Nature of solution – the distinct real root, repeated real root and complex root cases – Application in economics – the Multiplier-Accelerator interaction model
- 4.5 Cost of living index number
- 4.6 Calculations of different types of Indices using socio-economic data in India**

#### Readings

- 1) Hoy, M., Livernois, J., McKenna, C., Rees, R., & Stengos, T. (2022). *Mathematics for economics*. MIT press.
- 2) Chiang, A. & Wainwright, K. (2017). *Fundamental Methods of Mathematical Economics*, 4<sup>th</sup> Edition. McGraw Hill Education.
- 3) **MOSPI, Government of India, <https://mospi.gov.in/socio-economic-statistics>**

## MINOR COURSES

### MINOR: POLITICAL SCIENCE

#### SEMESTER I

#### MNPS01: POLITICAL THEORY I

**Course Objectives:** The emphasis of the course will be on examining a fairly wide range of issues concerning the ever-expanding field of political theory.

**Learning Outcomes:** This course is designed to expose the students who maybe new to political science, the basic context of political theory.

(45L)

1. **Nature and scope of Political Theory**
2. **Approaches to the study of Political Theory**
3. **Origin of the State:** Different Theories
4. **Nature of the State:** Organic Theory-Idealist Theory-Marxist Theory
5. **Sovereignty of the State:** Austinian Theory of Sovereignty-Pluralist theory of Sovereignty-Doctrine of Popular Sovereignty-Location of Sovereignty
6. **Law:** Analytical, Historical and Sociological theories the nature of Law-International Law: Meaning and Nature
7. **Rights:** Theories of Rights: Natural, Legal and Marxist
8. **Concept of Ideology:** Ideology as a set of ideas; Liberalism; Socialism; Marxism
9. **Concept of Power:** Power and authority; Elite theory
10. **Liberty and Equality:** Nature and dimensions
11. **Justice:** Diverse perspectives of Justice

#### Readings:

1. Ernest Barker: Principles of Social and Political Theories
2. O.P. Gauba: An Introduction to Political Theory
3. A.R Ball: Modern Politics And Government
4. S.P Varma: Modern Political Theory
5. V.P Varma: Modern Indian Political Thought I
6. Rabindranath Tagore: Nationalism
7. J.Bandopadhyaya: Social and Political Thoughts of Gandhi



## SEMESTER III

### MNPS02: POLITICAL THEORY II

**Course Objectives:** The emphasis of the course will be on examining a fairly wide range of issues concerning the ever-expanding field of political theory. This course would also shed light on Rabindranath Tagore, B.R. Ambedkar, Karl Marx and Mahatma Gandhi.

**Learning Outcomes:** This course is designed to expose the students who maybe new to political science, the basic issues of political theory and Indian political thought.

(45L)

1. **Liberty and Equality:** Nature, Meaning and interrelationship
2. **Democracy:** Meaning and conditions of success; Liberal Democracy
3. **Power and Authority:** Meaning and Implications, Structure of Power, Gender perspective
4. **Nationalism, Internationalism and Civilization** (with particular reference to Tagore's view)
5. **Marxism:** Fundamental Principles
6. **Gandhism:** Basic Principles
7. **B.R. Ambedkar:** Gandhi-Ambedkar debate

#### Readings:

1. Ernest Barker: Principles of Social and Political Theories
2. O.P. Gauba: An Introduction to Political Theory
3. A.R Ball: Modern Politics And Government
4. S.P Varma: Modern Political Theory
5. V.P Varma: Modern Indian Political Thought I
6. Rabindranath Tagore: Nationalism
7. J.Bandopadhyaya: Social and Political Thoughts of Gandhi

## **MINOR: POLITICAL SCIENCE (OPTIONAL COURSES)**

### **GROUP I: SEMESTER V**

(Any one of the following is to be chosen)

#### **(a) COMPARATIVE GOVERNMENT I**

**Course Objectives:** The course is designed to acquaint the students with the basic idea of Comparative Government and politics.

**Learning Outcomes:** This course is designed to expose the students who maybe new to political science, the basic context of Comparative Government.

**(45L)**

1. **Constitution** :Meaning, Classification: Written And Unwritten, Flexible and Rigid
2. **Forms of Government:** Federal/Unitary/ Parliamentary/ Presidential
3. **Political System:** Liberal-Democratic and Socialist
4. **The Legislature:** Functions of the Legislature
5. **The Executive:** Functions of the Executive
6. **The Judiciary:** Functions of the Judiciary
7. **Approaches to the study of Comparative Politics:** Structural-Functional approach, Systems Analysis

Note: This paper discusses the concepts used in comparing governments

#### **Readings**

1. J. Harvey and I. Bather: The British Constitution
2. Rakhahari Chatterji: Introduction to Comparative Political Analysis
3. Ogg and Ray: Essentials of American Government
4. D.J Waller: The Government and Politics of Communist China
5. Ogg and Zink: Modern Foreign Government
6. V.D Mahajan: Select Modern Governments

## **(b) INDIAN GOVERNMENT AND POLITICS I**

**Course Objectives:** The course is primarily designed to acquaint the students with the issues and ideas of Indian government. It contains other important topics of Indian Government like the Judicial Review, PIL, Federalism in India and so forth. It would provide a brief overview of the Indian Constitution.

**Learning Outcomes:** This course is designed to expose the students who maybe new to political science, the basic context of Indian Government and Politics.

**(45L)**

- 1. Constitutional Development in India**
- 2. Landmarks in Constitutional Development:** Morley-Minto reforms, Simon Commission, Government of India Act 1935
- 3. Philosophy of the Constitution:** Preamble to the Constitution
- 4. Main Features of the Constitution**
- 5. Citizenship**
- 6. Fundamental Rights and Duties**
- 7. Directive Principles of State Policy**
- 8. Procedure for Amendment of the Constitution**
- 9. 73<sup>rd</sup> and 74<sup>th</sup> Amendment Acts**
- 10. Legislative Relation between the Union and the States**
- 11. Administrative Relation between the Union and the State**
- 12. Public Interest Litigation**
- 13. Independence of Judiciary:** Judicial Review in India
- 14. Federalism in India**

### **Readings**

1. Bidyut Chakrabarty and Rajendra Kumar Pandey: Indian Government and Politics
2. Himanshu Roy and Mahendra Prasad Singh: Indian Political System
3. N.D Palmer: Indian Political System
4. W.H Morris-Jones: Government and Politics of India
5. D.D. Basu: An Introduction to the Constitution of India
6. Paul R. Brass: The Politics of India since Independence
7. Rajni Kothari: Politics in India

**GROUP II: SEMESTER VII**  
(Any one of the following is to be chosen)

**(f) COMPARATIVE GOVERNMENT II**

**Course Objectives:** The course is designed to acquaint the students with the basic ideas of Comparative Government and politics.

**Learning Outcomes:** This course is designed to expose the students who maybe new to political science, the basic context of Comparative Government.

**(45L)**

- 1. Features of the Constitution:** U.K, USA and China
- 2. Legislature:** U.K, USA and China
- 3. Executive:** U.K, USA and China
- 4. Judiciary:** U.K, USA and China
- 5. Political parties:** U.K, USA and China
- 6. Rights of the citizens:** U.K, USA and China

Note: This paper deals with the institutions and governments of specific countries

**Readings**

1. J. Harvey and I. Bather: The British Constitution
2. Ogg and Ray: Essentials of American Government
3. D.J Waller: The Government and Politics of Communist China
4. Ogg and Zink: Modern Foreign Government
5. V.D Mahajan: Select Modern Governments

## **(g) INDIAN GOVERNMENT AND POLITICS II**

**Course Objectives:** The course is primarily designed to acquaint the students with the basic idea of the Indian government. This course focuses on the organs of the Indian government and the powers and positions of the President, Prime Minister and the Governor. A brief overview of Caste, Dalit movements, Social Movements, New Social Movements is also taught in this course.

**Learning Outcomes:** This course is designed to expose the students who maybe new to political science, the basic context of Indian Government and Politics.

**(60L)**

- 1. President:** Position and Power
- 2. Prime Minister:** Appointment, Power, Function and Role
- 3. Lok Sabha:** Organisation, Functions, Law-making Procedure, Speaker
- 4. Rajya Sabha:** Organisation, Functions
- 5. Supreme Court:** Position and Jurisdiction
- 6. High Court:** Position and Jurisdiction
- 7. Governor:** Position and Power
- 8. Party system**
- 9. Panchayati Raj** (with special reference to West Bengal)
- 10. Caste in Indian Politics**
- 11. Social movements and New Social Movements:** Nature and Purpose
- 12. Religion and Politics in India**
- 13. Dalit movements in India: Emergence**

### **Readings**

1. Bidyut Chakrabarty and Rajendra Kumar Pandey: Indian Government and Politics
2. Himanshu Roy and Mahendra Prasad Singh: Indian Political System
3. N.D Palmer: Indian Political System
4. W.H Morris-Jones: Government and Politics of India
5. D.Basu: An Introduction to the Constitution of India
6. Paul R. Brass: The Politics of India since Independence
7. Rajni Kothari: Politics in India

## **MINOR: ECONOMICS**

### **SEMESTER II**

#### **MNEC01: INTRODUCTORY MICROECONOMICS**

##### **Course Objectives:**

The course provides an introduction to a core area of economics known as microeconomics. It considers the operation of a market economy and the problem of how best to allocate society's scarce resources. The course considers the ways in which various decision making units in the economy (individuals and firms) make their consumption and production decisions and how these decisions are coordinated. It considers the laws of supply and demand, and introduces the theory of the firm, and its components, production and cost theories and models of market structure. The various causes of market failure are assessed, and consideration is given to public policies designed to correct this market failure.

##### **Learning Outcomes:**

This course aims to develop an understanding of the framework that economists use to analyse choices made by individuals in response to incentives and consider how these choices can also serve the social interest. The course introduces students to models of how individuals and firms interact within markets, when markets fail, and how government policy may improve outcomes for society. A theoretical framework is developed in which students acquire an understanding of how economic agents interact and by doing so develop the literacy and verbal communication skills necessary for presenting arguments of an economic nature.

##### **Course Outline:**

##### **1. Exploring the subject matter of Economics (5L)**

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 (10L)**

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 Households (10L)**

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; consumers optimum choice; income and substitution effects; labour supply and savings decision - choice between leisure and consumption.

##### **4. The Firm and Perfect Market Structure (7L)**

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

##### **5. Imperfect Market Structure (15+5=20)**

Introduction to imperfect market; basic features of Monopoly; examples of private and public monopolies from India; monopoly buyer and monopoly seller between public and private entities; pricing with market power; measures of degree of monopoly power; multi-plant monopoly in Indian context. Concept and types of price discrimination; examples of price discrimination from Indian experiences; First-

Degree Price Discrimination: Evidence from Informal Markets in India; inter-temporal price discrimination and peak-load pricing; evidences from Indian experiences; two-part tariff and Buffet pricing; is it a price or quantity discrimination; practice of buffet pricing from India; Taxation under Monopoly.

Monopolistic competition, oligopoly market structure, duopoly models: basic features and equilibrium analysis.

## 6. Input Markets

(8L)

Labour and land markets - basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); demand for labour; input demand curves; shifts in input demand curves; competitive labour markets; and labour markets and public policy.

### Readings:

- 1) Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8<sup>th</sup> Edition, 2007.
- 2) N. Gregory Mankiw, *Economics: Principles and Applications*, India edition by SouthWestern, a part of Cengage Learning, Cengage Learning India Private Limited, 4<sup>th</sup> edition, 2007.
- 3) Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4<sup>th</sup> Edition, 2007.
- 4) Babu Nahata, Krzysztof Ostaszewski and Prasanna Sahoo (1999), Buffet Pricing, *The Journal of Business*, Vol. 72, No. 2, pp. 215-228.
- 5) Babu Nahata and Staffan Ringbom (2007), Price discrimination using linear and nonlinear pricing simultaneously, *Economics Letters* Vol. 95, Issue 2, pp. 267–271.
- 6) Yong Chao, Jose Fernandez and Babu Nahata (2015), Pay-what-you-want pricing: Can it be profitable?, *Journal of Behavioral and Experimental Economics* Vol. 57, pp. 76–185.
- 7) Rishab Srivastava, (2020), First-Degree Price Discrimination: Evidence from Informal Markets in India, [Rishab\\_Srivastava\\_Final\\_Honors\\_Thesis.pdf](#)

## SEMESTER IV

### MNEC02: INTRODUCTORY MACROECONOMICS

#### Course Objectives

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.

#### Learning Outcomes

The students gain an understanding of the basic questions, concepts, structures and debates of macroeconomics, and an understanding on the methods of national income accounting. They learn the fundamental difference between the Classical and Keynesian schools.

#### Course Outline

##### 1. Introduction to Macroeconomics and National Income Accounting (15L)

Basic issues studied in macroeconomics; 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.

##### 2. Money (15L)

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

##### 3. Inflation (15L)

Inflation and its social costs; hyperinflation.

##### 4. The Closed Economy in the Short Run (15L)

Classical and Keynesian systems; simple Keynesian model of income determination; IS- LM model; fiscal and monetary multipliers.

#### Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11<sup>th</sup> edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7<sup>th</sup> edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5<sup>th</sup> edition, 2009.
4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2<sup>nd</sup> edition, 2005.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7<sup>th</sup> edition, 2011.
6. Errol D. Souza, *Macroeconomics*, Pearson Education, 2009.
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9<sup>th</sup> edition, 2012.



## MINOR: ECONOMICS (OPTIONAL COURSES)

### GROUP I: SEMESTER VI

(Any one of the following is to be chosen)

#### (a) INDIAN ECONOMY I

##### Course Objective:

This course gives an overview of India economy. It aims at imparting knowledge about the development process of our economy from the eve of independence. As such, the syllabus covers the plans and strategies taken for the development of the country since independence, with particular focus on paradigm shifts and turning points. Furthermore, the objective is also to equip students with other contemporary issues of our economy such as, human development, inequality, employment and population growth.

##### Learning Outcome:

- (a) To have idea of the basic nature of Indian economy.
- (b) To know about the current five year plan and new economic policies.
- (c) To able to understand about the contemporary issues of our Indian economy.

##### Course Outline

#### 1. Economic Development since Independence (15L)

Major features of the economy at independence; growth and development under different policy regimes—goals, constraints, institutions and policy framework; an assessment of performance—sustainability and regional contrasts; structural change, savings and investment.

#### 2. Population and Human Development (15L)

Demographic trends and issues; education; health and malnutrition.

#### 3. Growth and Distribution (15L)

Trends and policies in poverty; inequality and unemployment.

#### 4. International Comparisons (15L)

##### 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 Performances in 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 Interpretations, *Economic and Political Weekly*, February.
7. Himanshu, 2011, —Employment Trends in India: A Re-examination, *Economic and Political Weekly*, September.
8. Rama Barua 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 UmaKapila, editor, *Indian Economy Since Independence*,19<sup>th</sup> 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'sPublic Distribution System: Utilisation and Impact *Journal of Development Studies*.
15. Aniruddha Krishna and Devendra Bajpai, 2011,—Lineal Spread and Radial Dissipation: Experiencing Growth in Rural India, 1992-2005, *Economic and Political Weekly*, September.
16. KaushikBasu and A. Maertens, eds, 2013,*Oxford Companion to Economics*, Oxford University Press.

## (b) MONEY AND BANKING

### Course Objective:

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, **and their concept from Indian Knowledge System are also covered.**

### Learning Outcome:

This course exposes students to the theory and functioning of the monetary and financial sectors of the economy, along with thoughts **from Indian Knowledge System.**

#### 1. Money (8L)

Concept, functions, measurement; theories of money supply determination.

#### 2. Financial Institutions, Markets, Instruments and Financial Innovations (12L)

a. Role of financial markets and institutions; problem of asymmetric information—adverse selection and moral hazard; financial crises.

b. Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations.

#### 3. Interest Rates (8L)

Determination; sources of interest rate differentials; theories of term structure of interest rates; interest rates in India.

#### 4. Banking System (8L)

a. Balance sheet and portfolio management.

b. Indian banking system: Changing role and structure; banking sector reforms.

#### 5. Central Banking and Monetary Policy (12L)

Functions, balance sheet; goals, targets, indicators and instruments of monetary control; monetary management in an open economy; current monetary policy of India.

#### 6. Concept on Banking and allied Issues from Indian Knowledge System (12L)

**Ancient banking and its drawbacks, Indigenous banking, Settling accounts, Transition from Indian to British Indian Systems of Money and Banking 1800–1850.**

### Readings:

1. F.S. Mishkin and S.G. Eakins, *Financial Markets and Institutions*, Pearson Education, 6<sup>th</sup> edition, 2009.
2. F.J. Fabozzi, F. Modigliani, F.J. Jones, M.G. Ferri, *Foundations of Financial Markets and Institutions*, Pearson Education, 3<sup>rd</sup> edition, 2009.
3. L. M. Bhole and J. Mahukud, *Financial Institutions and Markets*, Tata McGraw Hill, 5<sup>th</sup> edition, 2011.
4. M.Y. Khan, *Indian Financial System*, Tata Mc Graw Hill, 7<sup>th</sup> 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.
6. A K. Bagchi, Transition from Indian to British Indian systems of money and banking 1800–1850. *Modern Asian Studies* 19, no. 3 (1985): 501-519.
7. J. Wheatley, Ancient banking, modern crimes: How hawala secretly transfers the finances of criminals and thwarts existing laws. *U. Pa. J. Int'l Econ. L.* 26 (2005): 347.
8. L. Subramanian, Settling accounts: Indigenous bankers in search of new histories in the twentieth century. *The Indian Economic and Social History Review* 60, no. 2 (2023): 125-157.
9. K. Leonard, Indigenous banking firms in Mughal India: A reply. *Comparative Studies in Society and History* 23, no. 2 (1981): 309-313.

## **(c) ENVIRONMENTAL ECONOMICS**

### **Course Objectives**

The canvas of environmental economics is vast and cuts across several disciplines. While the more advanced topics are taught in detail at the Under Graduate (core course) and Post Graduate levels, this course aims at preparing the students with the basic tenets of environmental economics.

### **Learning Outcomes**

This course begins with the typical concepts of ‘market failure’ and ‘externality’ that are taught in earlier courses like microeconomics. But then it leads the student to understand their implication for the environment and sustainability. The course would equip the students with the basic concepts, definitions, and theoretical backgrounds of environmental management and sustainability.

### **Course Outline:**

#### **1. Introduction**

**(15L)**

Key environmental issues and problems, economic way of thinking about these problems, basic concepts from economics; Pareto optimality and market failure in the presence of externalities; property rights and other approaches.

#### **2. The Design and Implementation of Environmental Policy**

**(15L)**

Overview, Pigouvian taxes and effluent fees, tradable permits, implementation of environmental policies in India and international experience; trans boundary environmental problems; economics of climate change.

#### **3. Environmental Valuation Methods and Applications**

**(15L)**

Valuation of non-market goods and services—theory and practice; measurement methods; cost-benefit analysis of environmental policies and regulations.

#### **4. Sustainable Development**

**(15L)**

Concepts; measurement; perspectives from Indian experience

### **Readings**

1. Roger Perman, Yue Ma, Michael Common, David Maddison and James McGilvray, —*Natural Resource and Environmental Economics*”, Pearson Education/Addison Wesley, 4<sup>th</sup> edition, 2011.
2. Charles Kolstad, —*Intermediate Environmental Economics*”, Oxford University Press, 2<sup>nd</sup> edition, 2010.
3. Robert N. Stavins (ed.), —*Economics of the Environment: Selected Readings*”, W.W. Norton, 6<sup>th</sup> edition, 2012.
4. Robert Solow —An Almost Practical Step toward Sustainability, Resources for the Future 40th anniversary lecture, 1992.
5. Kenneth Arrow et al. , —Are We Consuming Too Much? *Journal of Economic Perspectives*, 18(3): 147-172, 2004.
6. IPCC (Inter governmental Panel on Climate Change), Fifth Assessment Report (forthcoming 2014).

**GROUP II: SEMESTER VIII**  
(Any one of the following is to be chosen)

**(f) INDIAN ECONOMY II**

**Course Objective**

This course examines sector-specific policies and their impact in shaping trends in key economic indicators in India. It highlights major policy debates and evaluates the Indian empirical evidence.

**Learning Outcome**

- It helps in developing understanding of the students related to different sectors of Indian Economy
- Students will be able to understand how planning and infrastructure support can develop an economy.

**Course Outline**

**1. Macroeconomic Policies and Their Impact (15L)**

Fiscal Policy; trade and investment policy; financial and monetary policies; labour regulation.

**2. Policies and Performance in Agriculture (15L)**

Growth; productivity; land reforms; green revolution in India, farm size and productivity; institutionalization of rural credit; agricultural marketing.

**3. Policies and Performance in Industry (15L)**

Growth; small scale industries; public sector; industrial stagnation and crisis of the Indian economy, new industrial policy and the changing Indian state in the era of globalization.

**4. Trends and Performance in Services (15L)**

**Readings:**

- Shankar Acharya, 2010, —Macroeconomic Performance and Policies 2000-8, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.
- Rakesh Mohan, 2010, —India's Financial Sector and Monetary Policy Reforms, in Shankar Acharya and Rakesh Mohan, editors, *India's Economy: Performances and Challenges: Development and Participation*, Oxford University Press.
- Pulapre Balakrishnan, Ramesh Golait and Pankaj Kumar, 2008, —Agricultural Growth in India Since 1991, *RBI DEAP Study no. 27*.
- Kunal Sen, 2010, —Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, *The Rise of Asia*, Routledge.
- Ahsan, C. Pages and T. Roy, 2008, —Legislation, Enforcement and Adjudication in Indian Labour Markets: Origins, Consequences and the Way Forward, in D. Mazumdar and S. Sarkar, editors, *Globalization, Labour Markets and Inequality in India*, Routledge.
- Dipak Mazumdar and Sandeep Sarkar, 2009, —The Employment Problem in India and the Phenomenon of the Missing Middle, *Indian Journal of Labour Economics*.
- J. Dennis Rajakumar, 2011, —Size and Growth of Private Corporate Sector in Indian Manufacturing, *Economic and Political Weekly*, April.
- Ramesh Chand, 2010, Understanding the Nature and Causes of Food Inflation, *Economic and Political Weekly*, February.
- Bishwanath Goldar, 2011, Organised Manufacturing Employment: Continuing the Debate, *Economic and Political Weekly*, April.
- Kaushik Basu and A. Maertens, eds, 2013. *The new Oxford Companion to Economics in India*, Oxford University Press.

## (g) ECONOMIC HISTORY OF INDIA 1857-1947

### Course Objective

It aims to be a foundation course on understanding India's history, especially the British colonial era, from an economic perspective. The objective of the course is to enable them to look at colonial history from a very rational perspective. It is an important course for the students to understand the foundation of independent India.

### Learning Outcome

At the end of the course, students are expected to look at Indian history more rationally and from an economic perspective. This will help them in their argument and in their process when they discuss the country's history.

- 1. Introduction: Colonial India: Background and Introduction (15L)**  
Overview of colonial economy.
- 2. Macro Trends (10L)**  
National Income; population; occupational structure.
- 3. Agriculture (15L)**  
Agrarian structure and land relations; agricultural markets and institutions—credit, commerce and technology; trends in performance and productivity; famines.
- 4. Railways and Industry (10L)**  
Railways; the de-industrialisation debate; evolution of entrepreneurial and industrial structure; nature of industrialisation in the inter war period; constraints to industrial break through; labor relations.
- 5. Economy and State in the Imperial Context (10L)**  
The imperial priorities and the Indian economy; drain of wealth; international trade, capital flows and the colonial economy – changes and continuities; government and fiscal policy.

### Readings:

1. Lakshmi Subramanian, “*History of India 1707-1857*”, Orient Blackswan, 2010, Chapter4.
2. Sumit Guha, 1991, Mortality decline in early 20<sup>th</sup> century India, *Indian Economic and Social History Review (IESHR)*, pp 371-74 and 385-87.
3. Tirthankar Roy, *The Economic History of India 1857-1947*, Oxford University Press, 3rd edition, 2011.
4. J. Krishnamurty, *Occupational Structure*, Dharma Kumar (editor), The Cambridge Economic History of India, Vol. II, (henceforth referred to as CEHI), 2005, Chapter6.
5. Irfan Habib, *Indian Economy 1858-1914*, A People’s History of India, Vol.28, Tulika, 2006.
6. Ira Klein, 1984,—When Rains Fail: Famine relief and mortality in British India, *IESHR* 21.
7. Jean Dreze, *Famine Prevention in India in Dreze and Sen(eds.) Political Economy of Hunger*, WIDER Studies in Development Economics, 1990, pp.13-35
8. John Hurd, *Railways*, CEHI, Chapter8, pp.737-761.
9. Rajat Ray(ed.), *Entrepreneurship and Industry in India*, 1994.
10. A K Bagchi,—Deindustrialization in India in the nineteenth century: Some theoretical implications, *Journal of Development Studies*, 1976.
11. M D Morris, *Emergence of an Industrial Labour Force in India*, OUP 1965, Chapter11, Summary and Conclusions.
12. K.N. Chaudhuri, *Foreign Trade and Balance of Payments*, CEHI, Chapter10.
13. B.R. Tomlison, 1975, *India and the British Empire 1880-1935*, IESHR, Vol.XII.
14. Dharma Kumar, *The Fiscal System*, CEHI, Chapter12.
15. Basudev Chatterjee, *Trade, Tariffs and Empire*, OUP 1992, Epilogue.

### Background reading for students:

Irfan Habib, *Indian Economy 1858-1914* (A People’s History of India), Vol.28, Tulika 2006. Daniel Thorner, *Agrarian Prospect in India*, 1977.

## (h) PUBLIC FINANCE

### Course Objectives

The focus of the course, which draws on microeconomic theory, is on the development of analytical tools and their application to key policy issues relating to the spending, taxing and financing activities of government.

### Learning Outcomes

The course aims to give students an appreciation of the analytical methods in economics for the study of the public sector and the role of the state. This course will enable students to understand the practical problems involved in implementing economic policies.

### Course Outline

#### Part-1: Theory

(30L)

1. Overview of Fiscal Functions, Tools of Normative Analysis, Pareto Efficiency, Equity and the Social Welfare.
2. Market Failure, Public Good and Externalities.
3. Elementary Theories of Product and Factor Taxation (Excess Burden and Incidence).

#### Part-2: Issues from Indian Public Finance

(30L)

4. Working of Monetary and Fiscal Policies.
5. Current Issues of India's Tax System.
6. Analysis of Budget and Deficits
7. Fiscal Federalism in India
8. State and Local Finances

### Readings:

1. Musgrave, R.A. and P.B. Musgrave, *Public Finance in Theory and Practice*, McGraw Hill, 1989.
2. Mahesh Purohit, *Value Added Tax: Experience of India and Other Countries*, Gayatri Publications, 2007.
3. Kaushik Basu, and A. Maertens (ed.), *The Oxford Companion to Economics in India*, Oxford University Press, 2007.
4. M.M. Suri, *Government Budgeting in India*, Commonwealth Publishers, 1990
5. Shankar Acharya, Thirty years of tax reform in India, *Economic and Political Weekly*, May 2005. Government of India, *Report of the 13<sup>th</sup> Finance Commission*.
6. *Economic Survey*, Government of India (latest edition)
7. State Finances: A Study of Budgets, *Reserve Bank of India* (latest).