



**Centre for Distance and Online Education  
Central University of Himachal Pradesh  
Dharamshala (H.P.)- INDIA**



## **Programme Structure and Detailed Syllabus**

### **MASTER OF ARTS IN ECONOMICS TWO YEAR ONLINE PROGRAMME**



**Centre for Distance and Online Education (CDOE)  
Central University of Himachal Pradesh  
Dharamshala, Distt. Kangra (HP) - INDIA**

## Programme Structure Semester I

Course Code	Course Name	Credits	Name of Course Coordinator
ECN 405	Microeconomic Theory	4	Dr Kamal Singh
ECN 404	Mathematics for Economists	4	Dr Amit Kumar Basantaray
ECN 464	Contemporary Issues in Indian Economy I	2	Dr Vinod Naik
ECN 403	Statistical Methods	4	Dr Indervir Singh
ECN 406	Basics of Macroeconomics	2	Dr Kamal Singh
IKS	Indian Knowledge System	2	Prof. Bhag Chand Chauhan
HIS 469	Foundation of Indian Culture	2	Dr Parvat Ranjan Sethi

## Semester II

Course Code	Course Name	Credits	Name of Course Coordinator
ECN 402	Macroeconomic Theory	4	Dr Kamal Singh
ECN 453	Development Economics	4	Dr Amit Kumar Basantaray
ECN 423	International Economics	4	Dr Babburu Venkateshwarlu
ECN 463	Introductory Econometrics	2	Dr Narendra Nath Dalei
ECN 459	Indian Economic Thought	2	Dr Kamal Singh
ECN 465	Contemporary Issues in Indian Economy II	2	Dr Vinod Naik
HIS 473	Cultural Heritage of Bharat	2	Dr Parvat Ranjan Sethi

## Semester III

Course Code	Course Name	Credits	Name of Course Coordinator
ECN 408	Public Economics	4	Dr Kamal Singh
ECN 455	Research Methodology for Social Sciences	4	Dr Amit Kumar Basantaray
ECN 466	Econometrics with Statistical Software - I	4	Dr Narendra Nath Dalei
ECN 468	Review of Literature & Research Proposal Writing (Theory)	4	Dr Amit Kumar Basantaray
ECN 469	Review of Literature & Research Proposal Writing (Practical)	4	Dr Kamal Singh

## Semester IV

Course Code	Course Name	Credits	Name of Course Coordinator
ECN 411	Agricultural Economics	4	Dr Vinod Naik
ECN 467	Econometrics with Statistical Software - II	4	Dr Narendra Nath Dalei

ECN 470	Academic Writing for Economics (Theory)	2	Dr Amit Kumar Basantaray
ECN 471 A	Academic Writing for Economics (Viva-Voce)	2	Dr Amit Kumar Basantaray
ECN 499	Dissertation (M.A.)	4	Dr Vinod Naik
ECN 499A	Viva-Voce	4	Prof. Sanjeet Singh

The course-wise detailed syllabus is provided as follows:

# **SEMESTER I**

## **ECN 405: MICROECONOMIC THEORY**

**Course Code:** ECN 405

**Course Name:** Microeconomic Theory

**Credit:** 4

### **Course Objectives:**

- (i) To equip students with comprehensive and rigorous theoretical concepts and methodology;
- (ii) To enable students to analyze the behaviour of individuals, firms and markets using general, static and partial equilibrium approaches.

### **Course Outcomes:**

- (i) Students will be able to explain the fundamental principles of microeconomics;
- (ii) Students will be able to analyze the behaviour of individuals, firms, and markets using general, static, and partial equilibrium approaches.
- (iii) Students will develop the ability to apply microeconomic theories and models to analyze real-world economic issues and policy debates.

## **COURSE CONTENT**

### **Unit-I: Theory of Consumer**

Module/Chapter 1: Theory of Demand: Demand Side of the Market; Supply Side of the Market; Consumer Surplus; Normal and Inferior Goods; Income Offer Curves and Engel Curves; Ordinary and Giffen Goods; Price Offer Curve and Demand Curve; Substitutes and Complementary Goods; Inverse Demand Curve

Module/Chapter 2: Indifference Curve and Budget Constraint: Meaning & Concept of Indifference Curve; Budgetary Constraint and The Budget Line; Marginal Utility and Consumer Choice

Module/Chapter 3: Consumer Equilibrium: The Ordinal Utility Approach: First-order and Second Order Conditions of Consumer Equilibrium; Corner Solution: Extreme Choice; Corner Solution: Changes in Income and Prices and Consumer Behaviour; Income and Substitution Effects of Price Change for Normal, Inferior and Giffen Goods

### **Unit-II: Theory of Production and Cost**

Module/Chapter 4: Theory of Production: Firms and Their Production Decisions; Production with One Variable Input (Labor); Production with Two Variable Inputs; Returns to Scale

Module/Chapter 5: Theory of Cost: Cost concepts; Cost in the Short Run and Long Run; Long-Run versus Short-Run Cost Curves; Economies of Scope; The Learning Curve

**Unit-III: Theory of Firm-I**

Module/Chapter 6: Perfect Competition: Characteristics of Perfect Competition; Profit Maximization; Short-run Equilibrium; Long Run Equilibrium; Long-run Supply Curve of a Competitive Industry

Module/Chapter 7: Monopoly: Introduction; Short and Long Run Equilibrium of the Monopolist; Price Discrimination Under Monopoly; Measures of Monopoly Power; Social Costs of Monopoly Power; Monopoly vs. Perfect Competition

**Unit-IV: Theory of Firm-II**

Module/Chapter 8: Monopolistic Competition: Definition and Characteristics of Monopolistic Competition; Chamberlin's Theory of Monopolistic Competition; Firm's Equilibrium Under Monopolistic Competition; Excess Capacity Under Monopolistic Competition; Selling Cost and Firm's Equilibrium; Monopolistic Competition Versus Perfect Competition

Module/Chapter 9: Oligopoly: Definition, Factors and Features of Oligopoly; Duopoly Models of Oligopoly; Non-Collusive Models of Oligopoly; Collusive Model of Oligopoly

**Unit-V: General Equilibrium and Welfare Economics**

Module/Chapter 10: General Equilibrium Analysis: General Equilibrium in Exchange; General Equilibrium in Production; General Equilibrium in Competitive Product Market

Module/Chapter 11: Welfare Economics: Definitions and Nature of Welfare Economics; New Welfare Economics; Theory of Second Best

**Prescribed Text Books:**

1. Varian Hal R (1995), *Intermediate Micro Economics: A Modern Approach*, W.W Norton, New York.
2. Pindyck, Robert S. and Rubinfeld, Daniel L. (2009), *Micro Economics* (7<sup>th</sup> Edition), Pearson Education, New Delhi.

## **ECN 403: STATISTICAL METHODS**

**Course Code:** ECN 403

**Course Name:** Statistical Methods

**Credits:** 4

### **Course Objectives:**

- (i) Develop a solid foundation in statistical theories and concepts relevant to economic analysis
- (ii) Gain proficiency in probability theory and its applications in economics
- (iii) Understand methods of estimation and statistical inference, including hypothesis testing

### **Course Outcomes:**

- (i) Students will be able to explain and apply core statistical concepts and theories within the context of economic analysis.
- (ii) Students will demonstrate the ability to use statistical tools to describe and interpret economic data
- (iii) Students will understand and apply probability theory to solve problems in economics.
- (iv) Students will be able to use probability distributions to model economic phenomena.
- (v) Students will demonstrate proficiency in calculating and interpreting probabilities in economic contexts.
- (vi) Students will be able to apply various estimation techniques to economic data.
- (vii) Students will understand and conduct hypothesis tests, including formulating null and alternative hypotheses and making decisions based on test results.

## **COURSE CONTENT**

### **Unit-I: Summary Statistics**

Module/Chapter 1: Measures of Central Tendency: Mean, Median, Mode and their Comparison, Applications of Measures of Central Tendency in Economics

Module/Chapter 2: Measures of Dispersion: Range, Variance, Standard Deviation, Interquartile Range (IQR), Coefficient of Variation, Comparing Measures



of Dispersion, Box Plots, Applications of Measures of Dispersion in Economics

Module/Chapter 3: Skewness and Kurtosis: Skewness, Kurtosis, Visualizing skewness and kurtosis using histograms and box plots, Applications of Skewness and Kurtosis in Economics

## **Unit-II: Index Numbers**

Module/Chapter 4: Methods of Index Numbers: Commonly Used Index Numbers, Simple Index Numbers, Weighted Index Numbers, Applications of Index Numbers, Limitations of Index Numbers

Module/Chapter 5: Base Shifting in Index Numbers: Base Year Selection, Base Shifting Techniques, Methods of Splicing, Applications of Base Shifting in Economics

## **Unit-III: Probability**

Module/Chapter 6: Basic Terminology and Rules of Probability: Approaches to Probability, Concepts of Probability, Probability Axioms, Probability Rules

Module/Chapter 7: Probabilities of Independent and Dependent Events: Statistical Independence, Statistical Dependence, Mutually Exclusive and Complementary Events, Joint Probability, Conditional Probability, Tree Diagrams, Bayes' Theorem

## **Unit-IV: Probability Distribution**

Module/Chapter 8: Random Variables and Expected Values: Definition of Random Variables, Probability Distribution, Expected Value: Properties of Expected Value, Variance and Standard Deviation, Joint Distributions, Covariance and Correlation, Law of Large Numbers

Module/Chapter 9: Binomial, Poisson and Normal Distribution: Definition and Properties of Binomial Distribution, Poisson Distribution, Normal Distribution, Mean and Variance of Binomial Distribution, Poisson Distribution, Normal Distribution, Standard normal distribution and the Z-score, Central Limit Theorem.

**Unit-V: Hypothesis Testing**

Module/Chapter 10: One-Sample Tests For Means: Hypothesis Testing, Sample Size, Large Sample Test (Z-test), Small Sample Test (t-test), Application and Interpretation of One-Sample Tests.

Module/Chapter 11: Tests for Frequency Distributions: Independence of Attributes, Chi-Square Test for Independence of Attributes, Chi-Square Test and Goodness-of-Fit, Application and Interpretation of Chi-square Test

Module/Chapter 12: Two or More Samples Test of Means: Two-Sample Mean Difference Test, K-Sample Test: Analysis of Variance (ANOVA), Application and Interpretation of ANOVA

**Prescribed Text Books**

1. Levin, Richard I., Rubin, David S., Siddiqui, Masood H., and Rastogi, Sanjay (2017). Statistics for Management, 8th Edition, Noida: Pearson India Education Pvt. Ltd.
2. Gupta, S.C. and Kapoor, V.K. (2002). Fundamentals of Mathematical Statistics, 11th Edition. New Delhi: Sultan Chand & Sons.
3. Lewis, Margaret (2011) Applied Statistics for Economists, Routledge.

**Supplementary Readings**

1. Hamilton, Lawrence C. (1990). Modern Data Analysis: A First Course in Applied Statistics. Belmont, CA: Brooks/Cole Publication.
2. Nagar, A. L. and R. K. Das. (1976). Basic Statistics, 2nd edition. New Delhi: Oxford University Press.
3. Hamilton, Lawrence C. (2003). Statistics with STATA, 8th edition. Boston: Brooks/Cole, Cengage Learning.

## **ECN 404: MATHEMATICS FOR ECONOMISTS**

**Course Code:** ECN 404

**Course Name:** Mathematics for Economists

**Credits:** 4

### **Course Objectives:**

- (i) To provide students with a foundation in mathematical concepts and techniques that are essential for economic analysis.
- (ii) To enable students to apply mathematical methods to understand economic theories.
- (iii) To develop students' analytical skills and their ability to think critically about economic issues using mathematical tools.

### **Course Outcomes:**

- (i) Students will be able to understand and use mathematical tools in economic analysis.
- (ii) Students will develop the ability to think critically about economic issues using mathematical techniques.
- (iii) Students will be able to effectively communicate mathematical concepts and their applications in economics.

## **COURSE CONTENT**

### **Unit-I: Introduction to Mathematical Economics**

Module/Chapter 1: Mathematics and Economics: Mathematical versus Nonmathematical Economics, Why Do We Need Mathematics to Study Economics, History of Using Mathematics in Economics

Module/Chapter 2: Economic Models: Ingredients of Mathematical Model, Real Numbers, Sets, Relation and Function

Module/Chapter 3: Equilibrium Analysis in Economics: Meaning of Equilibrium, Partial Equilibrium (Market Model)- Linear Model, General Equilibrium (Two-Commodity Market Model)

### **Unit-II: Linear Algebra**

Module/Chapter 4: Matrix Algebra: What is Matrix Algebra? Types of Matrices, Matrix Operations, Transpose, Determinant of Matrix, Matrix Rank, Inverse of Matrix, Cramer Rule

Module/Chapter 5: Economic Application of Matrix Algebra: Leontief Input-Output Model

### **Unit-III: Comparative Statistics**

Module/Chapter 6: Limits and Continuity: Concepts of Limit and Continuity, Continuity of a Function, Differentiability

Module/Chapter 7: Differentiation Rules: Rules of Differentiation, Second and Higher Derivatives, Partial Differentiation

Module/Chapter 8: Total Differentials and Derivatives of Implicit Functions: Differentials, Total Derivatives and Derivatives of Implicit Functions

Module/Chapter 9: Economic Applications of Derivatives: Marginal Analysis in Economics: Marginal Revenue, Marginal Cost; Market Model: Effect of Change in Parameters of Demand and Supply Function

### **Unit-IV: Optimization**

Module/Chapter 10: Unconstrained Optimisation: Local versus Global Optimum, First and Second Order Conditions of Optimization with Single Choice Variable, Optimization with 'n' Choice Variables

Module/Chapter 11: Optimization with Equality Constraints: Constrained versus Unconstrained Optimization, Lagrangian-Multiplier Method, First and Second Order Conditions of Optimisation with Equality Constraints

Module/Chapter 12: Economic Application of Optimization: Profit Maximization, Utility Maximisation under Budget Constraint (two commodities)

### **Unit-V: Dynamic Analysis**

Module/Chapter 13: Integral Calculus: Meaning of Integration, Indefinite Integrals, Definite Integrals, Improper Integral, Economic Applications: Marginal Function to Total Function

### **Prescribed Text Books:**

1. Chiang, Alpha C. and Kevin Wainwright (2005) Fundamental Methods of Mathematical Economics 4th Edition. New York: McGraw-Hill/Irwin.
2. Sydsaeter, Knut and Peter J. Hammond (1995) Mathematics for Economic Analysis. New Delhi: Pearson Education.

3. Simon, Carl P. and Lawrence E. Blume (1994). Mathematics for Economists.  
New York: W. W. Norton & Company.

## **ECN 464: CONTEMPORARY ISSUES IN INDIAN ECONOMY- I**

**Course Code:** ECN 464

**Course Name:** Contemporary Issues in Indian Economy- I

**Credits:** 2

### **Course Objectives:**

- (i) To acquaint with knowledge of the transition of the Indian economy.
- (ii) To understand the various issues pertaining to the Indian economy and its economic environment.
- (iii) To identify social, political and economic factors in the Indian Economy with reference to the global economy.

### **Course Outcomes:**

- (i) Students will be able to understand the nature of the Indian Economy.
- (ii) Students will develop the ability to understand the various issues pertaining to Indian Economy.
- (iii) Students will gain an understanding of the social, political, and economic factors in the Indian Economy with reference to the global economy.

## **COURSE CONTENT**

### **Unit-I: Basic Concepts and Nature of the Indian Economy**

Module/Chapter 1: Nature and Structure of the Indian Economy: Types of Economies  
Growth and Development, Features of the Indian Economy

Module/Chapter 2: Sustainable Development in India: Sustainable Development  
Goals, India's approach for SDGs

### **Unit II: Indian Agriculture**

Module/Chapter 3: Role and Nature of Indian Agriculture: Key crops, Capital  
formation in Indian agriculture, Contribution to GDP and Employment

Module/Chapter 4: Issues in Indian agricultural policy and rural development:  
Reasons for low productivity, Changes in Cropping pattern, and  
Government Policies.

### **Unit III: Indian Monetary System**

Module/Chapter 5: Banking: Evolution of Indian Banking & Banking Sector Reforms:  
Evolution of the banking system, Reforms in the Indian banking system

Module/Chapter 6: RBI, Monetary Policy, and Money Market: RBI: Evolution, Role, and Functions, Different monetary policies, Money market in India

#### **Unit IV: Economic Planning in India**

Module/Chapter 7: Evolution and role of planning: Evolution of Planning Commission, Highlights of the different FYPs

Module/Chapter 8: NITI Aayog, COVID-19 and Indian Economy: Establishment of NITI Aayog: Role and functions, Impact of COVID-19 on the Indian Economy

#### **Unit V: Foreign Trade Policy and Globalization**

Module/Chapter 9: WTO, IMF, and Regional Trade Blocks: WTO: Evolution, role, and functions

Role of IMF, Regional Trade Blocks

Module/Chapter 10: Globalization: Meaning, importance, Impact of Globalization

#### **Prescribed Text Books:**

1. Madhur Mahajan (2020), *Indian Economy*, Pearson Publications.
2. Dhingra, I. C. (2001), *The Indian Economy: Environment and Policy*, Sultan Chand & Sons, New Delhi.
3. Kaushik Basu (ed.) (2004), *India's Emerging Economy: Performance and Prospects in the 1990s and Beyond*, Oxford University Press, New Delhi
4. Misra S.K. & Puri V.K. *Indian Economy*, Himalaya Publishing House, Mumbai
5. Sundharam K.P.M. and Datt Ruddar (2001) *Indian Economy*, S. Chand & Sons, New Delhi

## **ECN 406: BASICS OF MACROECONOMICS**

**Course Code:** ECN 406

**Course Name:** Basics of Macroeconomics

**Credit:** 4

### **Course Objectives:**

- (i) To analyse and establish the functional relationship between economy level/aggregates.
- (ii) To have a proper understanding of macroeconomic theoretical structure
- (iii) To educate the students on different terms and concepts in macroeconomics like national income accounting, Circular flows, consumption function, investment function, and supply and demand for money.

### **Course Outcomes:**

- (i) Students will be able to explain the fundamental principles of macroeconomics;
- (ii) Students will understand the functioning of the macroeconomy;
- (iii) Students will understand the causes and consequences of economic fluctuations, including business cycles and economic crises;
- (iv) Students will develop the ability to apply macroeconomic theories and models to analyze real-world economic issues and policy debates.

## **COURSE CONTENT**

### **Unit I: Introduction and National Income Accounting**

Module/Chapter 1: Nature and Scope of Macroeconomics: Difference between Micro and Macroeconomics, Scope of Macroeconomics, Growth of Macroeconomics, Some concepts used in Macroeconomics

Module/Chapter 2: Circular Flow of Income and Expenditure: Circular Flow in Two Sector Model

Module/Chapter 3: National Income Accounting: Concepts and Measurement

### **Unit II: Theories of Income & Employment**

Module/Chapter 4: Aggregate Demand and Aggregate Supply: Meaning of Aggregate Demand, Components of Aggregate Demand, Meaning of Aggregate Supply, Shape of Aggregate Supply in Short and Long Run

Module/Chapter 5: Simple Theory of Income Determination: Classical and Keynesian Theory



### **Unit III: Money Market**

Module/Chapter 6: Definition and Function of Money: Definition, Kinds, Function and Importance

Module/Chapter 7: Monetary Theory and Policy: Quantity Theory of Money; Demand for Money; Determination of Money, Supply and Demand; Credit Creation; Tools of Monetary Policy

### **Unit IV: Inflation & Unemployment**

Module/Chapter 8: Inflation: Meaning and Types of Inflation, Social and Economic Effects of Inflation, Policy Measures to Control Inflation

Module/Chapter 9: Unemployment: Meaning, Measurement and Types of Unemployment, Philips Curve

### **Unit V: IS-LM Analysis and Aggregate Demand**

Module/Chapter 10: IS-LM Model: Derivations of the IS and LM curves; Derivation of Aggregate Demand, Shifts in IS and LM Curves and the General Equilibrium

### **Prescribed Text Books:**

1. Mankiw, N. G. (2020). Principles of Macroeconomics (9th ed.). Cengage Learning.
2. Dornbusch, R, S. Fischer and S. Richard (2005) *Macroeconomics*, 9<sup>th</sup> Edition, McGraw-Hill Education Private limited, New Delhi.
3. Blanchard, Oliver (2007), *Macroeconomics*, Pearson Education, New Delhi.
4. Shapiro, Edward (1984), *Macroeconomic Analysis*, Galgotia Publication, New Delhi

**MA Semester: I**

**Course Name: Indian Knowledge System**

**Credits: 02**

**Course Code: IKS**

**Paper: IKS**

**Credits Equivalent:** 2 Credits is equivalent to 60 hours of total study (based on 30 hours per credit).

**Course Objectives:** To introduce the students to the Bhartiya knowledge system which encapsulates the ancient/traditional education system and various schools of philosophy and to acquaint them with various technological and scientific endeavours in the Bhartiya *parampara*.

**Course Outcomes:**

- ❖ The course will delve into the antiquity of the Bhartiya civilization.
- ❖ It will make learners help build a deeper appreciation of knowledge attainments of India since earliest times.
- ❖ How the Bhartiya Knowledge System encompassed varied dimensions of human life will be learned.
- ❖ The course will develop an interdisciplinary acumen in the learners as it will deal with Bhartiya sciences, art and architecture.
- ❖ The course will develop the feeling of pride vis a vis the nation as the knowledge provider of the world.

**Evaluation Criteria:**

1. Continuous Internal Assessment (CIA): 30%
2. External End Semester Examination (ESE): 70%

**Unit-I: Development of Indian Knowledge Systems**

**Module/Chapter 1: History and Foundation of IKS**

Definition, Concept, and Scope of IKS, Genesis of the land, Discovery of the Saraswatī River, Rakhigarhi Site

**Module/Chapter 2: Learning Centers and Knowledge Proliferation**

Ancient Education Institutes e.g. Takṣaśilā, Nālandā, Vikramśilā, and Vallabhi, Alumni, Trade Routes and Networks for Knowledge Export from Bhārata.

**Unit-II:**

**Creation of Art and Literature**

**Module/Chapter 3:**

**Art Forms and Literature**

Forms of Arts, Naṭarāja– A Masterpiece of Bhāratīya Art, the Vedas, Up-Vedas, Vedangas, Schools of Philosophy, Vedanta

**Module/Chapter 4:**

**Scholars and Their Works**

Works of Vālmīki, Yājñavalkya-Gārgī Debate, Bodhāyana, Kaṇāda, Patañjali, Āryabhaṭa, Brahmgupta, Bhāskarācārya, and Neelkantha.

**Unit-III:**

**Matter and Astronomy**

**Module/Chapter 5:**

**Nature of Matter**

Kanada Theory of Matter and Concept Gravity, Sage Agastya's Model of Battery, Types of Motion

**Module/Chapter 6:**

**Mathematics and Astronomy**

Decimal System, Vedic Mathematics, Kerala School for Mathematics and Astronomy, History and Culture of Astronomy, Archaeoastronomy, and Calendars.

**Unit-IV:**

**Materials and Technology**

**Module/Chapter 7:**

**Materials and Products**

Juices, Dyes, and Paints, Glass and Pottery, references from the Vedic Age and Post-Vedic Records

**Module/Chapter 8:**

**Stone and Metal Marvels**

Classical Stone Marvels, Metallurgy, Marine Technology, Water Reservoirs.

**Unit-V:**

**Plants, Health and Natural Healing**

**Module/Chapter 9:**

**Plants and Environment**

Life Science in Plants, Agriculture-Archaeological Evidences and Vedic Period, Practices of Ecology and Environment

**Module/Chapter 10:**

**Health and Healing**

Āyurveda, Types of Surgery, and Ashtanga Yoga

### **Suggested Readings**

- D.M. Bose, S.N. Sen and B.V. Subbarayappa (Eds.) 1971. *A Concise History of Science in India*. Indian National Science Academy: New Delhi.
- Debiprasad Chattopadhyaya (Ed.) 1982. *Studies in the History of Science in India (2 Vols.)*. Editorial Enterprises: New Delhi.
- D. Frawley. 1994. "Planets in the Vedic literature", *Indian Journal of History of Science*. 29, 495-506.
- D.P. Agrawal. 2000. *Ancient Metal Technology and Archaeology of South Asia (A Pan-Asian Perspective)*, Aryan Books International: New Delhi.
- H.C. Bhardwaj. 1979. *Aspects of Ancient Indian Technology*, Munshiram Manoharlal: New Delhi.
- Kumar Biswas. 1996. *Minerals and Metals in Ancient India*, D.K. Printworld: New Delhi.
- R. Shrivastava. 2006. *Mining and Metallurgy in Ancient India*, Munshiram Manoharlal: New Delhi.
- O.P. Jaggi. 1977. *Science and Technology in Medieval India*. Atma Ram & Sons: Delhi.
- A.Y. Al-Hasan. 2001. *Science & Technology in Islam*. UNESCO.
- Ranabir Chakravarti. 2008. "Agricultural Technology in Medieval India", *The Medieval History Journal*, Vol. 11, No. 2, July-December.
- D. Kumar. "Patterns of colonial science in India". *Indian Journal of History of Science*, 15 (1), 105-113.
- Deepak Kumar. 1995. *Science & the Raj*, OUP: Delhi.
- S.B. Dikshit. 1931. *Bharatiya Jyotish Shastra*, Poona.
- A.F.R. Hoernle. 1907. *Studies in Medicine of Ancient India*, Oxford.
- Ian Inkstem. 1991. *Science & Technology in History*, London.
- V.V. Krishna and S.S. Bhatnagar. 1993. *Science, Technology and Development*, Delhi.
- A.K. Biswas and K.L. Mukhopadhyaya. 1969. *Science in India*, Kolkata.
- Dhruv Raina. 2003. *Image and Context: Historiography of Science in India*, OUP: Delhi.
- B. C. Chauhan. 2023. *IKS: The Knowledge System of Bharat*, Garuda Prakashan, New Delhi

**MA Semester: I**

**Course Name: Foundation of Indian Culture**

**Credits: 02**

**Course Code: HIS469**

**Paper: IDC**

**Credits Equivalent:** 2 Credits is equivalent to 60 hours of total study ((based on 30 hours per credit).

**Course Objectives:** This course aims to introduce the student to the foundations of Indian culture and traditions, viz. Hindu dharma, *varna* system, epics and art.

**Course Outcomes:**

- ❖ This course introduces the student to the various facets of the history of Indian culture from the earliest times to the present.
- ❖ It will acquaint the students with the vast plethora of texts related to Bhartiya religions and philosophy.
- ❖ The course out would also include the gaining of knowledge about the various strands of socio-religious reform movements.
- ❖ The course will generate curiosity among the learners about the great reformers who had made landmark contributions to the Indian culture.

**Evaluation Criteria:**

1. Continuous Internal Assessment (CIA): 30%
2. External End Semester Examination (ESE): 70%

**Unit-I: Understanding of Heritage**

**Module/Chapter 1: Main Features of Indian Culture and Dharma Systems**

Introduction; Types of Heritage: Traditional festivals and celebrations-Diwali, Holi, Pongal, Eid, Christmas, Rituals and ceremonies; Social Institutions: Family and kinship structures in Indian society, Role of religion and philosophy in shaping Indian Heritage

**Module/Chapter 2: Understanding of Bharatiya Culture**

Introduction, Rock-cut Architecture-Ajanta, Ellora caves;  
Temple Architecture- Nagara, Dravidian, Vesara styles;  
Indo-Islamic Architecture- Qutub Minar, Humayun's Tomb,  
Taj Mahal; Forts and Palaces-Rajasthan Forts, Red Fort,  
Golconda Fort; Importance of Rivers in Indian Civilization-  
Ganga, Yamuna, Godavari, Krishna

**Module/Chapter 3: Rituals, Language and Literature**

Introduction; Rituals Associated with Rivers-Ganga Aarti,  
Kumbh Mela; Classical Languages- Sanskrit, Tamil, Pali,  
Prakrit; Regional Languages and Literary Traditions-Hindi,  
Bengali, Marathi, Telugu, Urdu

**Unit-II: Heritage in Bharatiya Context**

**Module/Chapter 4: Historical Heritage**

Introduction; Ancient Monuments-Temples, Forts, Palaces,  
Stupas, Caves; Archaeological Sites-Indus Valley  
Civilization Site, Vedic Sites; Historical Documents &  
Manuscripts-Vedas, Epics, Inscriptions, Freedom Struggle  
Memorials; Art & Architecture-South Indian, Indo-Islamic,  
Colonial; Performing Arts; Classical & Folk Dance, Music;  
Traditions & Festivals-Diwali, Holi, Pongal, Bihu;  
Languages & Literature-Sanskrit, Tamil, Persian, Bhakti  
Sufi Literature; Religion & Philosophy-Hinduism,  
Buddhism, Jainism, Sikhism, Sufism; Natural Heritage:  
Biodiversity-Western Ghats, Himalayas, Sundarbans,  
Wildlife Sanctuaries & National Parks, Kaziranga, Gir, Jim  
Corbett; Sacred Rivers & Landscapes- Ganga, Yamuna,  
Brahmaputra, Geological Sites, Lonar Lake, Fossil Parks

**Module/Chapter 5: World Heritage Sites in Bharat**

Introduction; Cultural Heritage Sites-Taj Mahal (Agra);  
Hampi Monuments (Karnataka); Sun Temple (Konark),  
Jaipur City (Rajasthan); Natural Heritage Sites- Great  
Himalayan National Park (Himachal Pradesh), Western  
Ghats, Kaziranga National Park (Assam), Sundarbans  
National Park (West Bengal); Mixed Heritage Sites (Both

Cultural & Natural)- Khangchendzonga National Park (Sikkim), Covers glaciers, valleys, and forests in the Eastern Himalayas, Ajanta & Ellora Caves (Maharashtra)

**Unit-III:**

**Historical and Cultural Transcendence**

**Module/Chapter 6:**

**Spread of Religion & Philosophy**

Introduction; Hindu Influence in Southeast Asia –Angkor Wat (Cambodia), Prambanan Temple (Indonesia); Buddhism in East & Central Asia – China (Shaolin Monastery); Japan (Zen Buddhism), Tibet (Dalai Lama’s Teachings); Indian Influence in Ancient Persia & Greece – Philosophical exchanges with Zoroastrians and Hellenistic India; Yoga & Vedanta in the West – Swami Vivekananda’s speech in Chicago (1893), Modern-day Global Adoption of Yoga

**Module/Chapter 7:**

**Indian Trade & Scientific Contributions to the World- I**

Introduction; Indian Ocean Trade Network –Silk Route, Spice Trade with the Middle East, China, and Europe; Ayurveda & Medical Influence – Sushruta & Charaka’s impact on Greek and Arab medicine; Mathematics & Astronomy – The concept of zero (Brahmagupta), Decimal system influencing Arab and European scholars; Major Challenges to Bharat’s Heritage-Economic Challenges: Lack of Funding for Preservation, Commercialization & Over-Tourism Illegal Trade of Artifacts, Smuggling of ancient sculptures and manuscripts to foreign markets; Social Challenges-Neglect of Regional & Tribal Heritage, Loss of Traditional Knowledge, Urbanization & Displacement; Political Challenges-Conflicts over Heritage Ownership – Disputes over religious sites like Ayodhya, Kashi, and Mathura, International Disputes on Stolen Artifacts – Efforts to reclaim artifacts like Kohinoor Diamond and Amaravati Sculptures, Heritage Destruction in Wars & Conflicts – Impact of colonial rule and modern conflicts on temples, forts, and manuscripts.

**Module/Chapter 8: Indian Trade & Scientific Contributions to the World- II**

Commercialization & Over-Tourism Illegal Trade of Artifacts, Smuggling of ancient sculptures and manuscripts to foreign markets; Social Challenges- Neglect of Regional & Tribal Heritage, Loss of Traditional Knowledge, Urbanization & Displacement; Political Challenges-Conflicts over Heritage Ownership – Disputes over religious sites like Ayodhya, Kashi, and Mathura, International Disputes on Stolen Artifacts – Efforts to reclaim artifacts like Kohinoor Diamond and Amaravati Sculptures, Heritage Destruction in Wars & Conflicts – Impact of colonial rule and modern conflicts on temples, forts, and manuscripts

*Suggested Readings*

R.C. Majumdar and Pusalker, *The History and Culture of Indian the Indian People*, Vol. I, II, III, IV, IX, pt. I & II (Chapter on Art, Religion and Literature only).

B.N. Luniya, *Evolution of Indian Culture*.

A.K. Coomaraswamy, *Indian Architecture*, Vol. I & II.

Percy Brown, *Indian Paintings*.

A.S. Altekar, *Education in Ancient India*.

R.K. Mookerjee, *Cultural Heritage of India*, Vol. IV.

A.L. Basham, *The Wonder That was India*.

S. Jaiswal, *History of Vaishnavism*.

Sushmita Pande, *Medieval Bhakti Movement*.

परमेश्वरी लाल गुप्ता, *भारतीय वास्तुकला*.

आर. जी. भण्डारकर, *वैष्णव, शैव और अन्य धार्मिक मत*.

कमलेश भारद्वाज, *भारतीय संस्कृति*.

शिव कुमार गुप्त, *भारतीय संस्कृति के मूलाधार*.



# **SEMESTER II**

## **ECN 402: MACROECONOMIC THEORY**

**Course Code:** ECN 402

**Course Name:** Macroeconomic Theory

**Credit:** 4

### **Course Objectives:**

- (i) To analyse and establish the functional relationship between economy level/aggregates.
- (ii) To have a proper understanding of macroeconomic theoretical structure
- (iii) To educate the students on different terms and concepts in macroeconomics like national income accounting, Circular flows, consumption function, investment function, and supply and demand for money.

### **Course Outcomes:**

- (i) Students will be able to explain the fundamental principles of macroeconomics;
- (ii) Students will understand the functioning of the macroeconomy;
- (iii) Students will understand the causes and consequences of economic fluctuations, including business cycles and economic crises;
- (iv) Students will develop the ability to apply macroeconomic theories and models to analyze real-world economic issues and policy debates.

## **COURSE CONTENT**

### **Unit-I: Introduction and National Income Accounting**

Module/Chapter 1: Introduction to Macroeconomics: Microeconomics versus Macroeconomics; Growth of Macroeconomics; Need to study Macroeconomics; Some concepts used in Macroeconomics

Module/Chapter 2: Circular Flow Models of Economy: Circular flow of Income and Expenditure: Two, Three and Four Sector Models

Module/Chapter 3: National Income Accounting: National Income and Related Concepts; Nominal and Real GNP; GNP Deflator and its Application; Methods of Measuring National Income

### **Unit-II: Growth, Aggregate Supply and Demand and Inflation**

Module/Chapter 4: Growth Theories: Growth and Accumulation: Growth Theory: The Neoclassical Model; Growth Theory: Endogenous Growth

Module/Chapter 5: Aggregate Supply and Demand: Aggregate Supply Curve: Price Adjustment Mechanism, Aggregate Demand Curve, Concept of Multiplier, Supply-Side Economics

Module/Chapter 6: Inflation and Unemployment: Inflation: Theories of Inflation; Unemployment: Meaning, Measurement and Kinds of Unemployment; Philips Curve; Rational Expectations Revolution

### **Unit-III: Income and Spending**

Module/Chapter 7: The Classical and Keynesian Theory of Output and Employment Determination: Classical Theory of Output and Employment; Keynesian Theory of Income Determination; Aggregate Demand and Investment Multiplier

Module/Chapter 8: The Goods Market and Money Market: Goods Market and IS Curve; The Money Market and LM Curve; Equilibrium in Goods and Money Markets; Mathematical Version of the IS-LM Model; Dynamics of Adjustment from Disequilibrium to Equilibrium; Shift in IS and LM Curves and the General Equilibrium

Module/Chapter 9: Monetary and Fiscal Policy: Meaning and Scope of Monetary Policy; Instruments of Monetary Policy; Transmission Mechanism of Monetary Policy; Meaning and Scope of Fiscal Policy; Crowding-out Effect of Fiscal Policy

### **Unit-IV: Theories of Consumption and Investment**

Module/Chapter 10: Theories of Consumption: Consumption Function, Keynesian Theory of Consumption, Relative Income Theory of Consumption, Permanent Income Theory of Consumption, Life Cycle Theory of Consumption; Consumption under Uncertainty: The Modern Approach; Consumption and the Stock Market; Barro-Recardo Problem

Module/Chapter 11: Theories of Investment: Marginal Efficiency of Capital, Marginal Efficiency of Investment, Accelerator Theory of Investment; Stock Demand for Capital and the Flow of Investment; Investment Subsectors—Business Fixed, Residential, and Inventory

**Unit-V: Money Market**

Module/Chapter 12: Demand for Money: Definition of Money; Functions of Money; Theories of Demand for Money: Classical, Keynesian, Post-Keynesian Theories of Money

Module/Chapter 13: Supply of Money: Sources of Money Supply, Theory of Money Supply, Monetary Expansion and Money Multiplier; Currency Drain and Deposit Multiplier

**Prescribed Text Books:**

1. Dornbusch, R, S. Fischer and S. Richard (2005) *Macroeconomics*, 9<sup>th</sup> Edition, McGraw-Hill Education Private limited, New Delhi.
2. Blanchard, Oliver (2007), *Macroeconomics*, Pearson Education, New Delhi.
3. Branson, W.H., (2005), *Macro-Economic Theory and Policy*, East-West Press Private Limited, New Delhi.
4. Shapiro, Edward (1984), *Macroeconomic Analysis*, Galgotia Publication, New Delhi

## **ECN 453: DEVELOPMENT ECONOMICS**

**Course Code:** ECN 453

**Course Name:** Development Economics

**Credits:** 4

### **Course Objectives:**

- (i) Examining the factors that drive economic growth and development with special reference to India
- (ii) Analyzing the causes and consequences of poverty and inequality, and exploring strategies to address these issues
- (iii) Studying the relationship between population growth and economic development
- (iv) Analyzing the linkage between rural and urban sectors and the role of migration in the process of development

### **Course Outcomes:**

- (i) Students will be able to identify and discuss key factors that drive economic growth and development in India
- (ii) Students will be able to critically analyze the root causes and consequences of poverty and inequality.
- (iii) Students will understand the complex relationship between population growth and economic development.
- (iv) Students will be able to assess how demographic changes impact economic growth and development strategies.
- (v) Students will be able to analyze the interconnectedness of rural and urban sectors and the role of migration in economic development
- (vi) Students will understand the impact of migration on both rural and urban economies and propose policies to manage its effects

## **COURSE CONTENT**

### **Unit-1 Introduction of Development Economics**

Module/Chapter 1: Scope of Development Economics & Less developed countries (LDCs): Scope and Definitions of Development Economics, Criteria used by international organizations like the United Nations to classify countries as LDCs, Economic Characteristics of LDCs: Low levels of

income, productivity, and industrialization, Social Characteristics: High levels of poverty, inequality, and illiteracy

Module/Chapter 2: Growth and development: Difference between growth and development, Sen's capability approach to development, core values of development, Difference between measures and growth and development

Module/Chapter 3: Human Development Index (HDI), Multidimensional poverty Index (MPI) and Sustainable Development Goals (SDGs): Components of the HDI (income, education, and health) and how it is calculated? Components of MPI and how it is calculated, 17 Sustainable development goals SDGs in the context of development

## **Unit-II: Theories of Economic Growth**

Module/Chapter 4: Harrod-Domar Model of growth: Basic Assumptions, Mechanics of the Model, The Warranted Growth Rate, The Natural Growth Rate, Instability and Growth, Limitations and criticisms of the Harrod-Domar model, Applications of the model

Module/Chapter 5: Neo-classical growth theories: The Solow Model: Basic Assumptions, Production Function, Steady State, Role of Technology, Convergence Hypothesis, Limitations and criticisms of the Solow model, Empirical Evidence

Module/Chapter 6: Convergence and Divergence Hypotheses: Absolute Convergence, Conditional Convergence, Empirical Testing, Factors Influencing Convergence, Divergence Hypothesis, Evidence of Divergence, Policy Implications.

Module/Chapter 7: The New Growth Theories: Overview of new/endogenous growth theories

## **Unit-III: Poverty and Inequality**

Module/Chapter 8: Economic Inequality: Definitions and Concepts, Measurement of Inequality, Causes of Inequality, Consequences of Inequality

Module/Chapter 9: Interconnections between inequality and development: Theoretical Perspectives, Role of Institutions, Inequality and Economic Growth

Module/Chapter 10: Poverty measures and empirical trends of poverty in India:  
Defining Poverty, Measuring Poverty, Poverty Trends in India, Regional  
Disparities, Causes of Poverty

#### **Unit-IV: Population Growth and Economic Development**

Module/Chapter 11: Basic concepts of population: Definition of Population, Population  
Size and Density, Population Distribution, Age Structure, Gender Ratio,  
Fertility Rates, Mortality Rates, Migration, Population Policies

Module/Chapter 12: The Demographic Transition: Stages of Demographic Transition,  
Factors Driving Transition, Implications of Demographic Transition,  
Population Pyramids

#### **Unit-V: Urbanization and Development**

Module/Chapter 13: Rural-urban interaction: The Lewis model

Module/Chapter 14: The rural-urban migration: The Harris-Todaro Model

#### **Prescribed Text Books**

1. Ray, Debraj (2011), "Development Economics", Oxford University Press.
2. Thirlwall, A.P. (2014), "Economics of Development", Ninth Edition, Palgrave Macmillan.
3. Todaro, M. P. & Smith, S.C. (2014), "Economic Development", Tenth Edition, Pearson.
4. Ghatak, Subrata (2007), "Introduction to Development Economics", 4th Edition, Routledge Taylor & Francis Group

#### **Supplementary Readings**

1. "Development as Freedom" by Amartya Sen
2. "Poor Economics: A Radical Rethinking of the Way to Fight Global Poverty" by Abhijit V. Banerjee and Esther Duflo
3. "The Bottom Billion: Why the Poorest Countries are Failing and What Can Be Done About It" by Paul Collier
4. The Wealth and Poverty of Nations: Why Some Are So Rich and Some So Poor" by David S. Landes

## **ECN: 423 INTERNATIONAL ECONOMICS**

**Course Code:** ECN 423

**Course Name:** International Economics

**Credits:** 4

### **Course Objectives:**

- (i) Familiarize students with basic concepts of international economics.
- (ii) Enable students understand different principles and theories of international trade.
- (iii) Enable students understand the impact of different trade policies and their implications towards economic growth.
- (iv) Enable students analyse issues related to Indian trade both in goods and services.

### **Course Outcomes:**

- (i) Students will be able to explain and critically evaluate major theories of international trade.
- (ii) Students will develop the ability to analyze the impact of various international economic policies.
- (iii) Students will gain a comprehensive understanding of how exchange rates are determined and how they affect international trade and investment.
- (iv) Students will be able to apply economic models to real-world scenarios, predicting the outcomes of international economic events and policy changes.

## **COURSE CONTENT**

### **UNIT -I: Theories of International Trade**

Module/Chapter 1: Theory of Absolute Advantage: Absolute Advantage, Illustration of Absolute Advantage.

Module/Chapter 2: Comparative Advantage and Opportunity Costs: The Law of Comparative Advantage, Exceptions of the Law of Comparative Advantage, Comparative Advantage with Money Opportunity Cost Theory

Module/Chapter 3: The Heckscher-Ohlin Theory and Factor Price Equalization: Assumptions, Factor Intensity, Factor Abundance, Factor Abundance and the Shape of the Production Frontier, Heckscher Ohlin Theorem



**Unit-II: Competition and Trade**

Module/Chapter 4: The Theory of Dumping: Definitions of Dumping, Kinds of Dumping, Necessary Conditions for Successful Dumping, The Theory of Dumping Price, Anti-Dumping Measures

Module/Chapter 5: The Theory of External Economies and International Trade: External Economies, Advantages of External Economies in International Trade

Module/Chapter 6: Terms of Trade: Concepts and Measurement of terms of trade, Various Terms of Trade, Net Barter Terms of Trade, Gross Barter Terms of Trade, Viner's Terms of Trade

Module/Chapter 7: The Effects of the Terms of Trade on a Nation's welfare: Factors Affecting terms of trade of a Country, Effects of Shifts in Demand on the Terms of Trade, Effects of Tariffs on Terms of Trade, Effects of Devaluation on the Terms of Trade

**Unit-III: Balance Payments**

Module/Chapter 8: Balance of Payments: Definitions of Balance of Payments, Components of Balance of Payments  
Trade Deficit, Savings and Investment

Module/Chapter 9: Disequilibrium in the Balance of Payments: Causes of Disequilibrium in the Balance of Payments, The Implications of Disequilibrium in the balance of payments, Types of Disequilibrium in the balance of payments

Module/Chapter 10: Theory of Tariffs: Effects of tariffs on balance of payments, Definitions of Tariffs, Types of Tariffs, Basics of Tariffs and Trade Barriers

**Unit-IV: International Monetary Systems**

Module/Chapter 11: Problems of International Monetary System: Introduction, Problems of International Monetary System

Module/Chapter 12: International Monetary Fund (IMF): Introduction, Standard Drawing Rights (SDR), Problems Before IMF, Purpose of IMF, Mechanism of IMF

## **Unit-V: International Trade Agreements**

Module/Chapter 13: World Trade Organization (WTO): Introduction, GATT, International Trade Centre (ITC), World Trade Organization functions

Module/Chapter 14: The Group of G-20 Countries: Introduction, Membership and Quotas

### **Prescribed Text Books**

1. Paul, R. Krugman & Maurice Obstfeld (2009), *International Economics: Theory and Policy* (8<sup>th</sup> ed.), Addison-Wesley, Longman, Pearson Education.
2. Sodersten, B.O. and Geoffrey Reed (3<sup>rd</sup> ed.) (1999), *International Economics*, The Macmillan Press Ltd. London.
3. Salvatore, D. (1996), *International Economics*, Prentice Hall, New York

### **Supplementary Readings**

5. Bhagwati, J. (Ed.) (1981), *International Trade*, Selected Readings, Cambridge, University Press, Massachusetts.
6. Carbough, R. J. (1999), *International Economics*, International Thompson Publishing, New York.
7. Chacholiades, M. (1990), *International Trade: Theory and Policy*, McGraw Hill, Kogakusha, Japan

## **ECN 465: CONTEMPORARY ISSUES IN INDIAN ECONOMY-II**

**Course Code:** ECN 465

**Course Name:** Contemporary Issues in Indian Economy-II

**Credits:** 2

### **Course Objectives:**

- (i) To acquaint with knowledge of the transition of the Indian economy.
- (ii) To understand the various issues pertaining to the Indian economy and its economic environment.
- (iii) To identify social, political and economic factors in the Indian Economy with reference to the global economy.

### **Course Outcomes:**

- (i) Students will be able to understand the nature of the Indian Economy.
- (ii) Students will develop the ability to understand the various issues pertaining to Indian Economy.
- (i) Students will gain an understanding of the social, political, and economic factors in the Indian Economy with reference to the global economy.

## **COURSE CONTENT**

### **Unit-I: Human Development & Poverty**

Module/Chapter 1: Poverty, HDI, Gender Development Index: HDI; Meaning and importance

Poverty in India and measurement, GDI; Meaning and importance

Module/Chapter 2: Multidimensional Poverty in India: Meaning, Components, India's performance in the world

### **Unit II: Inequality and Unemployment in India**

Module/Chapter 3: Basic Income and Inequality and measures of inequality: Income inequality in India

Different measures of the government to reduce inequality

Module/Chapter 4: Unemployment: Meaning, Trends, and Contribution of different sectors

### **Unit III:        Agriculture Prices and Food Security**

Module/Chapter 5: Price Policy and its objectives and instruments: Need of the Price Policy, Objectives, Different Instruments of Agricultural Price Policy

Module/Chapter 6: Food Security and Public Distribution: RBI: Food Security in India, Public Distribution System, Government Policies

### **Unit IV:        Industrial Development and Policies**

Module/Chapter 7: Journey of Indian Industries: Journey of Indian Industries during pre and post-reform periods Industrial Policy

Module/Chapter 8: Manufacturing Sector and Make in India: Performance of the Manufacturing sector  
Make in India initiative and its importance

### **Unit V:        Black Money and Demonetization**

Module/Chapter 9: Impact of Black Money, Government Policies: Meaning, Impact of Black Money  
Government Policies to Curb Black Money

Module/Chapter 10: Demonetization: Meaning, Demonetization in India, and Its effect

### **Prescribed Text Books:**

1. Madhur Mahajan (2020), *Indian Economy*, Pearson Publications.
2. Dhingra, I. C. (2001), *The Indian Economy: Environment and Policy*, Sultan Chand & Sons, New Delhi.
3. Kaushik Basu (ed.) (2004), *India's Emerging Economy: Performance and Prospects in the 1990s and Beyond*, Oxford University Press, New Delhi
4. Economic Survey 2023-24 (2024), Government of India, Ministry of Finance, Department of Economic Affairs, Economic Division, New Delhi
5. Sundharam K.P.M. and Datt Ruddar (2001) *Indian Economy*, S. Chand & Sons, New Delhi

## **ECN 459: INDIAN ECONOMIC THOUGHT**

**Course Code:** ECN 459

**Course Name:** Indian Economic Thought

**Credit:** 2

### **Course Objectives:**

- (i) To understand the historical evolution of Indian economic thought.
- (ii) To study the major schools of economic thought in India.

### **Course outcomes:**

- (i) Students will learn the contribution of Indian economic thinkers.
- (ii) Students shall develop an understanding of contemporary economic policies and practices better by familiarizing themselves with the works and economic ideas of these great thinkers from India

## **COURSE CONTENT**

### **Unit- I        Economic Thoughts in Vedas**

Module/Chapter 1: Foundations of Vedic Economic Thought: Desires, Wealth, Price, Taxes and Charity

Module/Chapter 2: Economic Policies and Governance in Vedic Thought: State Policies, Guilds and Eminent Domain

### **Unit- II        Kautilya's Economic Thought**

Module/Chapter 3: Taxation and Pricing policy: Economic functions of the State; Principles of Taxation in Arthashastra; Pricing Policy in Kautilya's Economic Thought

Module/Chapter 4: Kautilya's view on the Treasury and Public finance of the State: Importance of Treasury (Kosha) in Arthashastra; Public Finance and State Revenue

### **Unit-III        Buddhist Economic Thought**

Module/Chapter 5: Buddhism and the Economic Enterprise: Work and Wealth in Buddhism; Buddhist Perspective on Business and Trade

Module/Chapter 6: Prices and Taxation: Pricing Principles in Buddhist Thought; Taxation in Buddhist Economics

#### **Unit-IV      Ambedkar's Economic Thought**

Module/Chapter 7: Ambedkar's Economic Vision: Currency, Land Reforms, and Labor Policies: Currency System & Financial Reforms; Land Reforms & Agricultural Economy; Labor Rights & Industrial Policies

Module/Chapter 8: Ambedkar's Economic Policies: Taxation, State Intervention, and Market Reforms: Taxation Policy & Economic Equity; State Socialism & Nationalization; Financial Decentralization & Economic Planning; Free Market & Economic Stability; Population Control & Economic Management

#### **Unit- V      Gandhian Economic Thought**

Module/Chapter 9: Principles of Gandhian Economics: Swadeshi and Self-Sufficiency; Trusteeship Theory; Decentralized Economic System

Module/Chapter 10: Gandhian Approach to Economic Development and Social Justice: Rural Economy and Agriculture; Small-Scale and Cottage Industries; Labor Rights and Economic Justice; Sarvodaya

#### **Prescribed Text Books**

- 1) Dasgupta, A.K. (1993), A History of Indian Economic Thought, Routledge
- 2) Ratan Lal Basu and Raj Kumar Sen (2008) Ancient Indian Economic Thought Relevance for Today, Rawat publications
- 3) Kautilya. (2000). *The Arthashastra*, Penguin India.

## **ECN 463: INTRODUCTORY ECONOMETRICS**

**Course Code:** ECN 463

**Course Name:** Introductory Econometrics

**Credit:** 2

### **Course Objectives:**

- (i) Helps the students to understand the introductory econometrics theory.
- (ii) Enable the students to use statistical software for the estimation of econometric models.
- (iii) Enable the student to apply econometrics tools to estimate micro and macro-economic models.
- (iv) Make the student familiar with the application of econometric tools in applied research.

### **Course Outcomes:**

- (i) Students will understand the regression analysis to bring the relevant results from economic data.
- (ii) Enhancement in understanding regression and hypothesis testing, including the ability to identify the relevant and irrelevant variables.
- (iii) Students will also be able to solve practical economic problems.
- (iv) Students will be able to convert economic theory into mathematical equations and verify the theories using appropriate statistical tools.

## **COURSE CONTENT**

### **Unit-1: Nature and Scope of Econometrics**

Module/Chapter-1: What is econometrics?: Why a separate discipline? Methodology of econometrics. Types of econometrics.

### **Unit-II: Statistical Inference**

Module/Chapter-2: Distributions: Normal distribution; chi-sq, t- and F-distributions; Estimation of parameters; Testing of hypotheses; Defining statistical hypotheses; Distributions of test statistics

Module/Chapter-3: Hypothesis Testing-Population Parameter: Testing hypotheses related to population parameters; Type-I and Type-II errors; Power of a test; Tests for comparing parameters from two samples.

### **Unit-III: Simple Linear Regression Model: Two Variable Case**

Module/Chapter -4: Method of Ordinary Least Squares: Estimation of model by method of ordinary least squares; Properties of estimators; Goodness of fit;

Module/Chapter -5: Testing of Hypotheses- Inference: Scaling and units of measurement; Confidence intervals; Gauss Markov Theorem; Forecasting

### **Unit-IV: Multiple Linear Regression Model**

Module/Chapter -6: Model Estimation: Estimation of parameters; Properties of OLS estimators; Goodness of fit-  $R^2$  and Adjusted  $R^2$  Partial regression coefficients

Module/Chapter -7: Testing Hypotheses: Individual and Joint; Functional Forms of Regression Models; Qualitative (dummy) independent variables

### **Unit-V: Violations of Classical Assumptions: Consequences, Detection and Remedies**

Module/Chapter -8: Multicollinearity: Consequences, Detection and Remedies

Module/Chapter -9: Heteroscedasticity: Consequences, Detection and Remedies

Module/Chapter -10: Serial Correlation: Consequences, Detection and Remedies

### **Prescribed Text Books**

1. D. N. Gujarati and D.C.Porter, Essentials of Econometrics, 4th Edition, McGraw Hill International Edition, 2010.
2. Christopher Dougherty, Introduction to Econometrics, 4th edition, OUP, Indian edition, 2011.

### **Supplementary Readings**

1. Maddala, G.S and Kajal Lahiri, Introduction to Econometrics, 4th edition, Wiley publication, 2009.
2. Jan Kmenta, Elements of Econometrics, Indian Reprint, Khosla Publishing House, 2008.



**MA Semester: II**

**Course Name: Cultural Heritage of Bharat**

**Credits: 02**

**Course Code: HIS473**

**Paper: IDC**

**Credits Equivalent:** 2 Credits is equivalent to 60 hours of total study (based on 30 hours per credit).

**Course Objectives:** This course aims to introduce the student to the historical and cultural heritage of Bharat and its various types and components.

**Course Outcomes:** After the completion of the course, the student will be able to:

- ❖ Understand the historical and cultural significance of various traditions of the land.
- ❖ Know the regional and global extent of the rich cultural heritage of the land.
- ❖ Know about the components and types of Bhartiya cultural heritage and the need for their conservation.
- ❖ Analyze and demonstrate the ability to construct, analyze and evaluate the trends concerning the traditional heritage of the land.

**Evaluation Criteria:**

1. Continuous Internal Assessment (CIA): 30%
2. External End Semester Examination (ESE): 70%

**Unit-I: Main Features of Indian Culture and Dharma Systems**

**Module/Chapter 1: Main Features of Indian Culture and Dharma Systems**

Introduction, Characteristics of Indian Culture-Unity in Diversity, Spirituality, Tolerance, Adaptability; Overview of Major Religious Traditions; Religious Traditions- Hindu Dharma: Dharma, Karma & Moksha, Jaina Dharma: Ahimsa & Satya, Bauddha Dharma: Four Noble Truth & Eight-Fold Path; Vedic and Puranic Dharama-Rituals & Hymns, Vedas Sacred texts: Rigveda, Yajurveda, Samaveda, and Atharvaveda.

**Module/Chapter 2: Main Features of Dharma Systems**

Introduction; Vedic and Puranic tradition-Mythology (epic), Moral Brahmanical authority; Varna and Ashram System, Social order and Jati, Individual spiritual growth and responsibilities

## **Unit-II: The Role of Tradition in Learning**

### **Module/Chapter 3: Samskaras and Education in Ancient India**

Introduction; Samskaras and Purusharthas-The life-cycle rituals in Hindu tradition, Overview of 16 Samskaras (sacraments) and their educational significance, Purusharthas: Dharma, Artha, Kama, and Moksha – their role in shaping Education; Centres of Ancient Indian Education, Overview of ancient learning centers - Nalanda: Structure, Subjects taught, Takshashila: Curriculum and notable scholars, Vikramshila, Vallabhi, and other educational institutions

### **Module/Chapter 4: Religious Scriptures and Sant Parampara- I**

Introduction; Introduction to Ramayana – Author (Valmiki), Historical Context, Importance- Key Characters – Rama, Sita, Lakshmana, Hanuman, Ravana, etc, Moral & Ethical Lessons – Dharma, righteousness, devotion Comparative Studies: Valmiki Ramayana vs. Tulsidas' Ramcharitmanas. Regional versions (Kamba Ramayanam, Krittivasi Ramayan), Philosophical Themes: Dharma, Bhakti, Karma. Role of women, kingship, and justice

### **Module/ Chapter 5: Religious Scriptures and Sant Parampara- II**

Introduction to Mahabharata – Sage Vyasa, historical importance; Key Characters – Pandavas, Kauravas, Krishna, Bhishma, Draupadi, Historical & Cultural Perspectives: Influence on Indian society, politics, and traditions; Literary Analysis: Poetic style, metaphors, symbolism; Religious and Ethical Studies: How the epics define Hindu beliefs; Contributions of Kalidasa: Shakuntala, Meghaduta, and their impact; Works of Bhasa, Bharavi, and other literary figures; Tulsidas and his contributions to spiritual education; The Sant Parampara: Teachings of Kabir, Mirabai, and their influence on education.

## **Unit-III: Indian Culture**

### **Module/Chapter 6: Mauryan, Gandhara, and Gupta Art**

Introduction; Mauryan Art- Pillars – Ashokan pillars with inscriptions and animal capitals (e.g., Lion Capital of Sarnath), Stupas – Early Buddhist Stupas like Sanchi and Bharhut, Sculptures – Yaksha-Yakshi figures, stone carvings, and royal

representations; Gandhara and Mathura Schools of Art- Gandhara School – Greco-Buddhist influence, depiction of Buddha with wavy hair and drapery, Mathura School – Indigenous style, red sandstone sculptures, life-size Buddha images; Gupta Period's Contribution to Art and Sculpture- Temple Architecture – Development of Nagara style, famous temples (e.g., Dashavatara Temple, Deogarh), Sculptural Excellence – Graceful Buddha images, refined deity sculptures (e.g., Sarnath Buddha). Medieval Architecture

### **Module/Chapter 7: South Indian Architecture and Bhakti Movement**

Introduction; Chola Style: Temple Structures – Brihadeshwara Temple, Gangaikonda Cholapuram., Bronze Sculptures – Nataraja, Shiva-Parvati images, Pallava Style: Rock-Cut Temples – Mahabalipuram (Shore Temple, Rathas). Structural Temples – Kailasanatha Temple at Kanchipuram, Vijayanagara Style : Dravidian Influence – Tall gopurams (Virupaksha Temple); Monolithic Sculptures – Ugra Narasimha, Ganesha statues in Hampi; Bhakti Movement-Key Saints and Their Contributions: Alvars and Nayanars – Tamil Vaishnavite and Shaivite saints, North Indian Bhakti Saints – Kabir, Tulsidas, Mirabai, Guru Nanak, Cultural and Artistic Impact of the Movement: Temple Construction and Art – Bhakti-inspired temple murals, devotional sculptures, Literature and Music – Bhajans, kirtans, and literary works like Ramcharitmanas.

### **Module/Chapter 8: Introduction to Socio-Religious Reform Movements**

Introduction -Causes of socio-religious reforms, Role of education and modern ideas in reform movements, Brahmo Samaj, Ideals: Monotheism, social reforms, rejection of idol worship, Arya Samaj, Vedic revivalism and opposition to idol worship, Social reforms: Education, widow remarriage, women's rights, Shuddhi Movement (reconversion to Hinduism); Swami Vivekananda and Key ideas: Practical Vedanta, Universal Religion, Spiritual Nationalism-Role in Indian nationalism and youth empowerment, Establishment of Ramakrishna Mission and its impact, Abindranath Tagore and His Vision, Views on nationalism and humanism, Literary and artistic contributions, Influence on Indian culture and society Sri Aurobindo – The Mystic Revolutionary, Spiritual philosophy and Integral Yoga, Concept of Divine Life and Supermind, Contributions to education and social transformation

### **Suggested Readings**

1. Basham, A.L. *The Wonder That Was India*. Picador Indian Edition, 2004.
2. Singhanian, Nitin. *Indian Art and Culture*. Tata Mc Graw Hill: New Delhi, 2017.

3. [www.heritageintach.org](http://www.heritageintach.org)
4. Biswas, S.S. *Protecting the Cultural Heritage (National Legislations and International Conventions)*. New Delhi: INTACH, 1999.
5. Lahiri, N. *Marshaling the Past - Ancient India and its Modern Histories*. Ranikhet: Permanent Black. 2012, (Chapters 4 and 5).
6. Mathur, Anurag. *Indian Culture and Heritage*. Vol. I. Create Space Independent Publishers, 2017.
7. Vatsayayan, Kapila. *The Cultural Heritage of India*. Vedanta Publishers, 2006
8. [www.asi.nic.in](http://www.asi.nic.in)
9. [www.unesco.org](http://www.unesco.org)

# **SEMESTER III**

## **ECN 408: Public Economics**

**Course Code:** ECN 408

**Course Name:** Public Economics

**Credit:** 4

### **Course Objectives:**

- (i) Familiarize students with fundamental concepts of public economics.
- (ii) Develop an understanding of various principles and theories in public economics.
- (iii) Analyze the evolving patterns of government revenue and expenditure.
- (iv) Examine the shifting role of government in response to changing economic conditions.

### **Course Outcomes:**

- (i) Describe the significance of public policy, with a focus on fiscal functions.
- (ii) Evaluate the fundamental aspects of the tax structure and the economic implications of policy decisions.
- (iii) Interpret budget documents and assess their impact on the overall economy.

## **COURSE CONTENT**

Unit-I: Introduction to Public Economics

Module/Chapter 1: Nature and Scope of Public Economics: Nature, scope and importance; Theory of maximum social advantage; Private goods, public goods and merit goods.

Module/Chapter 2: Overview of different roles of government: Allocation, stabilization and distribution.

Module/Chapter 3: Tools of positive analysis: Causation vs correlation, experimental studies, observational studies, quasi-experimental studies; Tools of normative analysis: welfare economics, two fundamental theorems of welfare economics

Unit-II: Externalities and Public Goods

Module/Chapter 4: Externality Theory: Economics of negative production externalities, Negative consumption externalities, positive externalities; Private sector solution to negative externalities:

Coase solution and problems with Coasian solutions; Public sector remedies for externalities: Corrective taxation, subsidies, regulation

Module/Chapter 5: Externalities in Action: Environmental and Health Externalities

Module/Chapter 6: Public Goods: Definition of public goods; Optimal provision of private goods; Optimal provision of public goods; Private provision of public goods: Private-Sector under provision, free rider problem; Public provision of public goods: private responses to public provision

Unit-III: Cost-Benefit Analysis and Political Economy

Module/Chapter 7: Cost-Benefit Analysis: measuring the costs of public projects; Measuring the benefits of public projects

Module/Chapter 8: Political Economy: Lindahl pricing, mechanisms for aggregating individual preferences, representative democracy.

Unit-IV: Public Expenditure and Taxation

Module/Chapter 9: Public Expenditure: Rationale for the growth of public expenditure; Wagner's law of increasing state activities; Peacock-Wiseman hypothesis; Canons of Public Expenditure

Module/Chapter 10: Taxation: Tax incidence, partial equilibrium and general equilibrium modes; Efficient and equitable taxation: Optimal commodity taxation, optimal user fees; measuring the fairness of tax system

Unit-V: Public Debt and Fiscal Federalism

Module/Chapter 11: Theory of Public Debt; Sources of Public Debt; Management of Public Debt

Module/Chapter 12: Fiscal Federalism in India: Fiscal imbalances and intergovernmental transfers; Fiscal reforms: Fiscal Responsibility and Budget Management Act, 2003; Finance Commission

**Prescribed Text Books:**

1. Gruber, Jonathan (2010) *Public Finance and Public Policy*, New York: Worth Publisher.
2. Atkinson, A. and Stiglitz, J. (1980): *Lectures in Public Economics*, McGraw Hill, London



## **ECN 455: Research Methodology for Social Sciences**

**Course Code:** ECN 455

**Course Name:** Research Methodology for Social Sciences

**Credit:** 4

### **Course Objectives:**

- (i) To develop a theoretical understanding of research methodology
- (ii) To acquire the skills for social science research
- (iii) To acquire the skills for data analysis and research writing

### **Course Outcomes:**

- (i) Enable the students to understand theories and all the steps of social science research.
- (ii) Provide the students will all the skills so that they can undertake a primary survey based research in the next semester.
- (iii) Develop the students to undertake research related to economics by collecting primary data, analysing the data, and interpreting and drawing conclusions from the analysis

## **COURSE CONTENT**

### **Unit-I**

Module/Chapter 1: Science and Social Research (Introduction, Foundations of Social Science, Some Dialectics of Social Research;

Module/Chapter 2: Scientific Research (Characteristics, Types, and Methods);

Module/Chapter 3: Concepts, Constructs, Variables, and Types of Measurement Scale

### **Unit-II**

Module/Chapter 4: Formulation of Research Problem (Reviewing Literature, Identification of Research Gap, Research Problem);

Module/Chapter 5: Hypothesis (Types, Characteristics, Sources, Functions, Testing, and Criticisms); Logic of Inquiry

### **Unit-III**

Module/Chapter 6: Selection of Research Topic (Sources, Focus, Operationalizing Concepts, and Formulating Research Questions);

Module/Chapter 7: Research Design (Meaning, Goals, Phases, and Types);

Module/Chapter 8: Research Proposal; Sampling (Meaning, Purpose, and Types)

#### Unit-III

Module/Chapter 9: Selection of Research Topic (Sources, Focus, Operationalizing Concepts, and Formulating Research Questions);

Module/Chapter 10: Research Design (Meaning, Goals, Phases, and Types);

Module/Chapter 11: Research Proposal; Sampling (Meaning, Purpose, and Types)

#### Unit-IV

Module/Chapter 12: Techniques of Data Collection (Questionnaire, Interview Schedule, Interview, Observation, Module XIII: Case Study, Content Analysis, and Projective Techniques)

#### Unit-V

Module/Chapter 13: Data Processing; Tabulation; Diagrammatic Representation and Analysis;

Module/Chapter 14: Measurement and Scaling Techniques;

Module/Chapter 15: Theory Building (Models, Paradigms and Theories); Statistical Techniques.

#### **Prescribed Text Books:**

1. Ahuja, Ram (2001). Research Methods, Rawat Publications, Jaipur.
2. Babbie, Earl (2014). The Practice of Social Research, 13th Edition. Rawat Publications, Jaipur.
3. Kumar, Ranjit (2014). Research Methodology: Step-by-Step Guide for Beginners. Sage Publication India Pvt Ltd.

## **ECN 466: Econometrics with Statistical Software - I**

**Course Code:** ECN 466

**Course Name:** Econometrics with Statistical Software - I

**Credit:** 4

### **Course Objectives:**

- (i) Help students to understand the econometrics theory.
- (ii) Enable the students to use statistical software for estimation of econometric models.
- (iii) Enable the student to apply econometrics tools to estimate micro and macro-economic models.
- (iv) Make the student familiar with the application of econometric tools in applied research.

### **Course Outcomes:**

- (i) Students will understand the regression analysis to bring the relevant results from economic data.
- (ii) Enhancement in understanding model estimation and validation
- (iii) Students will also be able to solve practical economic problems.
- (iv) Students will be able to convert economic theory into mathematical equations and finally able to verify the theories with statistical tools by using statistical software.

## **COURSE CONTENT**

### **Unit-1: Introduction to Qualitative data**

Module/Chapter 1 Definition and concept of dummy variables, Dummy Variable Trap, Interaction Dummy, and Introduction to binary response regression model; linear probability model (LPM); applications of LPM & Instrumental Variable

### **Unit-II: Advanced Binary and Multivariate Regression Models**

Module/Chapter -2 Simple and Multinomial Logit models, and Simple and Bivariate Probit Models: Assumptions, Estimation (grouped and un-grouped models), diagnostic checking, interpretations and applications;

Module/Chapter -3 Multivariate Probit Model & Tobit model: Assumptions, Estimation, diagnostic checking interpretations and applications.

### **Unit-III: Time Series Econometrics-I**

Module/Chapter -4 Introduction to basic concept of Time series analysis; Stochastic processes, Stationarity processes, purely random processes, Integrated

variables, Random Walk models Cointegration, Deterministic and stochastic trends,  
Unit root tests

Module/Chapter -5: Cointegration, Engle Granger Test, and Granger Causality

#### **Unit-IV: Forecasting**

Module/Chapter-6 Forecasting: AR, MA and ARIMA processes, Box Jenking  
Methodology.

Module/Chapter -7 Vector Auto Regression (VAR) Model, Introduction, Formulation  
and Estimation.

#### **Unit-V: Time Series Econometrics II**

Module/Chapter -8 Impulse Response function, Variance Decomposition

Module/Chapter -9 Vector Error Correction Models (VECM)

Module/Chapter -10 Volatility modelling: ARCH and GARCH models.

#### **Prescribed Text Books**

1. D. N. Gujarati and D.C.Porter, Essentials of Econometrics, 4th Edition, McGraw Hill International Edition, 2010.
2. Christopher Dougherty, Introduction to Econometrics, 4th edition, OUP, Indian edition, 2011.

#### **Supplementary Readings**

1. Maddala, G.S and Kajal Lahiri, Introduction to Econometrics, 4th edition, Wiley publication, 2009.
2. Jan Kmenta , Elements of Econometrics, Indian Reprint, Khosla Publishing House, 2008.

## **ECN 468: Review of Literature & Research Proposal Writing (Theory)**

**Course Code:** ECN 468

**Course Name:** Review of Literature & Research Proposal Writing (Theory)

**Credit:** 4

### **Course Objectives:**

- (i) To enable students to systematically identify, evaluate, and synthesize existing economic literature relevant to their research area, distinguishing between theoretical and empirical contributions.
- (ii) To equip students with the ability to design a coherent and feasible research proposal, including problem identification, research questions, theoretical framework, methodology, and expected contributions.
- (iii) To train students in structuring scholarly arguments, citing sources appropriately, and adhering to ethical guidelines in economic research.

### **Course Outcomes:**

- (i) Students will be able to critically analyze, summarize, and synthesize existing economic literature, identifying research gaps and theoretical debates in their chosen field.
- (ii) Students will demonstrate the ability to formulate a well-structured research proposal, including clear research questions, a theoretical framework, appropriate methodology, and a justification for the study's significance.
- (iii) Students will develop skills in scholarly writing, proper citation practices, and adherence to ethical standards in economic research, ensuring originality and academic integrity in their work.

## **COURSE CONTENT**

### **Unit-1 Foundations of Research and Proposal Writing in Economics**

Module/Chapter 1: Understanding Research and Proposal Development: Meaning of Research, Need for the Research Proposal, Structure of a Research Proposal

Module/Chapter 2: Defining the Research Problem and Objectives: Selection of Research Topic, Meaning of Research Background, Research Aim and Objectives

Module/Chapter 3: Research Methodology and Execution: Research Methodology (Overview), Types of Research Methods (Brief Introduction), Data Collection and Analysis (Basic Concepts)

## **Unit-II: Literature Review Fundamentals: From Topic Selection to Critical Writing**

Module/Chapter 4: Introduction to Academic Literature Reviews: Purpose and importance of literature reviews in research, Key components of a literature review, Types of literature reviews (narrative, systematic, meta-analysis), Common challenges and pitfalls in writing literature reviews

Module/Chapter 5: Selecting and Refining a Review Topic: Strategies for identifying a research gap, Criteria for selecting a feasible and impactful topic, Narrowing down broad topics into focused research questions, Tools and resources for topic exploration (databases, keywords, citation tracking)

## **Unit-III: Advanced Research Literature Analysis: Techniques and Applications**

Module/Chapter 6: Foundations of Deep Literature Analysis: Purpose and steps of in-depth article analysis, Critical reading vs. critical writing: Key distinctions, Identifying arguments, methodologies, and gaps in research articles, Tools for organizing and synthesizing literature (matrices, annotated bibliographies)

Module/Chapter 7: Analysing Quantitative Research Literature: Key components of quantitative studies, Evaluating research design, sampling, and statistical validity, Interpreting tables, figures, and effect sizes in quantitative studies, Common pitfalls and biases in quantitative research

Module/Chapter 8: Analyzing Qualitative Research Literature: Key components of qualitative studies, Assessing methodological rigor, Analyzing themes, narratives, and case studies, Comparing qualitative and quantitative approaches: Strengths and limitations

## **Unit-IV: Writing Effective Literature Reviews: From Drafting to Coherent Synthesis**

Module/Chapter 9: Crafting the First Draft of a Literature Review: Purpose and key objectives of a literature review draft, Step-by-step guidelines for writing the first draft, Structuring content: Introduction, thematic

organization, and conclusion, Common challenges in drafting and strategies to overcome them

Module/Chapter 10: Developing a Coherent and Polished Literature Review: Principles of coherence and flow in academic writing, Techniques for synthesizing sources and maintaining logical progression, Revising and refining: Ensuring clarity, consistency, and academic tone, Peer review and feedback: Strategies for improving the final draft

**Unit-V: Mastering Academic References: From Preparation to Formatting**

Module/Chapter 11: Fundamentals of Reference List Preparation: Importance and purpose of proper referencing in academic work, Key components of a reference list, Different citation styles overview (APA, MLA, Chicago), Organizing and managing sources during research, Common mistakes in reference list preparation

Module/Chapter 12: Advanced Reference Formatting and Management: Style-specific formatting guidelines (focus on department-preferred style), Using reference management tools (Zotero, Mendeley, EndNote), Handling special cases in references (multiple authors, online sources, unpublished works), Cross-checking references with in-text citations

**Prescribed Text Books:**

1. Galvan, J. L., & Galvan, M. C. (2017). Writing Literature Reviews : A Guide for Students of the Social and Behavioral Sciences. In Writing Literature Reviews (7th ed.). Routledge.
2. Abdulai, R. T., & Owusu-Ansah, A. (2014). Essential ingredients of a good research proposal for undergraduate and postgraduate students in the social sciences. SAGE Open, 4(3), 1–15.

## **ECN 469: Review of Literature & Research Proposal Writing (Practical)**

**Course Code:** ECN 469

**Course Name:** Review of Literature & Research Proposal Writing (Practical)

**Credit:** 4

### **Course Objectives:**

- (i) To enable students to find out researchable issues, write review of literature & develop researchable objectives.

### **Course Outcomes:**

- (i) On completion of the course, the students will be able to independently write a review of the literature and prepare a research proposal.

## **Guidelines for Review of Literature & Research Proposal Writing (Practical)**

1. Engagement of guides for Review of Literature & Research Proposal Writing:
  - 1.1. Each student may select a guide of their choice for the proposal writing.
  - 1.2. The guide must hold a PhD in Economics.
  - 1.3. The guide should be a regular faculty of a public or private educational or research institute.
  - 1.4. The student must submit the name of their chosen supervisor to the course coordinator for approval. The proposal must be completed under the guidance of the approved supervisor, and formal approval must be obtained before proceeding with the research.
  - 1.5. The guide will provide academic support, review drafts, and ensure the research meets scholarly standards.
2. Evaluation
  - 2.1 The student shall submit the complete research proposal on or before the due date to the course coordinator.
  - 2.2 The research proposal must include the context and relevance of the study, a review of literature, research gaps, objectives, and data & methodology.
  - 2.3 The word count of the proposal should be between 5000 to 7000 words.
3. It is a mandatory requirement to submit the proposal with **a Similarity Report of Plagiarism Detection Software generated using** reliable software as approved by the University. The total similarity in the proposal (excluding title page, declaration, certificate, content list, references and survey schedule) at the time of submission must not exceed 10%.



# **SEMESTER IV**

## **ECN 411: Agricultural Economics**

**Course Code:** ECN 411

**Course Name:** Agricultural Economics

**Credit:** 4

### **Course Objectives:**

- (i) To familiarize students with theoretical and conceptual issues in agricultural economics
- (ii) To familiarize students with issues that are relevant to Indian agriculture
- (iii) To enable students to understand and analyse problems of Indian agriculture
- (iv) To understand the various policy decisions implemented by the government to address challenges in the farming sector

### **Course Outcomes:**

- (i) Students will gain knowledge of key theoretical and conceptual frameworks in agricultural economics, enabling them to analyze the economic principles governing the agricultural sector.
- (ii) Students will acquire insights into the various policy decisions taken by the government to address agricultural challenges, including subsidies, minimum support prices, irrigation policies, and agrarian reforms.
- (iii) Students will be able to apply economic concepts to real agricultural challenges, facilitating data-driven decision-making and policy analysis.

## **COURSE CONTENT**

### **Unit-I: Basic concepts of Agricultural Economics**

Module/Chapter 1: Agricultural Economics: Meaning, scope and role in economics development; Agricultural Production Economics; Objectives, basic concepts in production economics;

Module/Chapter 2: Features of agricultural production; Laws of returns. Farm Management; Meaning, scope, farm management decisions.

### **Unit –II: Production Relationships in Agriculture**

Module/Chapter 3: Factor-Product Relationships; Factor-Product Relationship; stages of production function, determinants of optimum level of output, Production costs and their relationships

Module/Chapter 4: Factor-Factor relationship: Iso-quant, types of factor substitution, Iso-cost line, least cost combination; Isoclines, Ridge lines, Expansion path.

Module/Chapter 5: Product-Product Relationship; Production possibility curve, relationship among the products, MRPS. Return to scale.

### **Unit – III: Agricultural Marketing and Price Policy**

Module/Chapter 6: Agricultural Marketing: scope, classification, producer's surplus marketing functions, process of agricultural marketing, marketing channels

Module/Chapter 7: Agricultural price policy, recommendations on agricultural price policy, administered prices: CACP; Its objectives, functions; Farm costs; Cost concepts (CACP), estimation of cost of cultivation and production:

Module/Chapter 8: Agricultural prices, functions of prices, instability in prices and measurement of instability; Role of Government in Agricultural Marketing

### **Unit – IV: Role of agriculture in Indian economy**

Module/Chapter 9: Nature of India's agriculture, cropping pattern in India: Agricultural growth in India since 1950-51.

Module/Chapter 10: Agricultural Inputs (Seeds, Fertilizers, Irrigation), land reforms in India, Progress of Green revolution in India and its impact on production.

Unit –V: Agricultural Development and Policy Reforms in India

Module/Chapter 11: Capital Formation in Indian Agriculture, Policies for agriculture and rural development; Agriculture: Trends in investment

Module/Chapter 12: WTO and Indian agriculture: Challenges and priorities in the global economy; Agricultural growth concerns; Trends in Agricultural Trade in the context of the reforms.

### **Prescribed Text Books:**

1. Heady, E. O.(1952) Economics of Agricultural Production and Resource Use, Prentice-Hall of India Pvt. Ltd, New Delhi.
2. Schultz, T. W.(1969), Transforming Traditional Agriculture, Lyall Book Depot, Ludhiana.

3. Himmat Singh (2001), Green Revolution Reconsidered, Oxford University Press, New Delhi
4. Raju, V. T and Rao, S. V. (1990), Economics of Farm Production and Management, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi
5. Rao, C. H. Hanumantha (2005), Agriculture, Food Security, Poverty and Environment, Oxford University Press, New Delhi
6. L. S. Subba Reddy, P. Raghu Ram, T. V. Neelakanta Sastry and I Bhavani Devi (2004), Agricultural Economics, Oxford and IBH Publishing Co. Pvt. Ltd., New Delhi
7. Bhalla, G S & Gurmail Singh (2001), Indian Agriculture: Four Decades of Development, Sage Publication, New Delhi

## **ECN 467: Econometrics with Statistical Software - II**

**Course Code:** ECN 467

**Course Name:** Econometrics with Statistical Software - II

**Credit:** 4

### **Course Objectives:**

- (i) Helps the students to understand the econometrics theory.
- (ii) Enable the students to use statistical software for estimation of econometric models.
- (iii) Enable the student to apply econometrics tools to estimate micro and macro-economic models.
- (iv) Make the student familiar with the application of econometric tools in applied research.

### **Course Outcomes:**

- (i) Students will understand the regression analysis to bring the relevant results from economic data.
- (ii) Enhancement in understanding model estimation and validation
- (iii) Students also will be able to solve the practical economic problems.
- (iv) Students will be able to convert economic theory in to mathematical equations and finally able to verify the theories with statistical tools by using statistical software.

## **COURSE CONTENT**

Unit-1: Introduction to Panel Data Analysis

Module/Chapter -I Basic Concept of Panel data, Structure of Panel Data, Types of Panel Data, Instrumental Variable, and Advantages of Panel Data.

Unit-II: Diagnostic Tests in Panel Data Analysis

Module/Chapter -2 Estimation of Serial Correlation Tests, Heteroskedasticity Test, Cross-Sectional Dependence Test, Panel Unit root tests, Cointegration Test.

Module/Chapter -3 Estimation of panel data regression models: Pooled regression method, fixed effect Approach, Random effect models; Hausman Test: Fixed Effects vs. Random Effects

Unit-III: Dynamic Panel data modelling

Module/Chapter -4 Estimation of Panel co-integration, Panel Vector Autoregression (VAR) and Panel Vector Error Correction Models (VECM).

Module/Chapter -5 Fully Modified Ordinary Least Square (FMOLS) regression, Dynamic OLS models, GLS, GMM estimations and ARDL and CS-ARDL Models estimation.

Unit-IV: Impact Assessments approaches

Module/Chapter -6 Introduction to basic concept of impact evaluation; Why Evaluate, Causal Inference and Counterfactuals, and Randomized Assignment.

Module/Chapter -7 Treatment effect estimation; regression adjustment and Inverse-probability weighting

Unit-V: Advanced Approaches to Impact Evaluation

Module/Chapter -8 Regression Discontinuity Design

Module/Chapter -9 Difference-in-Differences regression

Module/Chapter -10 Propensity Score Matching

### **Prescribed Text Books**

1. D. N. Gujarati and D.C.Porter, Essentials of Econometrics, 4th Edition, McGraw Hill International Edition, 2010.
2. Christopher Dougherty, Introduction to Econometrics, 4th edition, OUP, Indian edition, 2011.
3. Paul J. Gertler, Sebastian Martinez, Patrick Premand, Laura B. Rawlings, and Christel M. J. Vermeersch. Impact Evaluation in Practice Second Edition. International Bank for Reconstruction and Development / The World Bank. 1818 H Street NW, Washington, DC 20433

### **Supplementary Readings**

1. Maddala, G.S and Kajal Lahiri, Introduction to Econometrics, 4th edition, Wiley publication, 2009.
2. Jan Kmenta , Elements of Econometrics, Indian Reprint, Khosla Publishing House, 2008.

## **ECN 470: Academic Writing for Economics (Theory)**

**Course Code:** ECN 470

**Course Name:** Academic Writing for Economics (Theory)

**Credit:** 2

### **Course Objectives:**

- (i) Enable students to articulate complex economic theories, empirical findings, and policy analyses in clear, structured, and academically rigorous written formats.
- (ii) Train students to adhere to economics-specific writing norms, including data presentation (tables, graphs), literature synthesis, and formal argumentation, while following style guidelines (APA, Chicago, or journal-specific formats).
- (iii) Cultivate the ability to critically evaluate sources, avoid plagiarism through proper citation practices, and uphold ethical standards in economic research and writing.

### **Course Outcomes:**

- (i) Students will be able to construct well-organized economic essays, research papers, and policy briefs using discipline-appropriate formats with coherent arguments and evidence.
- (ii) Students will demonstrate mastery of economics writing norms tailored to academic or policy audiences.
- (iii) Students will critically assess scholarly sources, synthesize existing research into literature reviews, and ethically integrate sources to avoid plagiarism while supporting original arguments.

## **COURSE CONTENT**

UNIT-1 Foundations of Academic Writing in Economics

Module/Chapter 1: The Writing Process & Structure: Writing Process, Writing a Paper

Module/Chapter 2: Principles of Effective Academic Writing : Six Principles of Academic Writing

UNIT-2: Research and Argumentation in Economic Writing

Module/Chapter 3: Researching Economic Topics & Secondary Literature: Researching Economic Topics, Secondary Literature Review

Module/Chapter 4: Constructing Economic Arguments: Making Economic Arguments, Writing Mechanics for Arguments

### UNIT-3: Genres of Economic Writing

Module/Chapter 5: Theoretical & Historical Economic Papers: Theoretical Papers, Economic History Papers, History of Economic Thought Papers

Module/Chapter 6: Literature Reviews in Economics: Systematic Literature Reviews, Meta-Analysis Techniques, Critical Review Writing

Module/Chapter 7: Professional Writing Genres: Academic Book Reviews, Policy Briefs and White Papers, Conference Papers and Presentations

### UNIT-4: Writing Empirical Economics Research

Module/Chapter 8: Foundations of Empirical Economics Papers: Structure of Empirical Papers, Research Design & Methodology, Data Presentation Standards

Module/Chapter 9: Writing & Refining Empirical Analysis: Results Interpretation, Policy Implications Section, Revision & Peer Review Process

### UNIT-5: Advanced Elements of Economic Writing

Module/Chapter 10: Core Components of Economic Papers: Writing Effective Introductions, Crafting Conclusions, Abstract Writing, Writing About Numbers

Module/Chapter 11: Specialized Economic Writing Tasks: Designing Tables & Figures, Advanced Literature Review Techniques, Writing Economic Reviews, History of Economic Thought Papers

### Prescribed Text Books:

1. Dudenhefer, Paul (2014), *A Guide to Writing in Economics*, [A+Guide+to+Writing+in+Economics.pdf \(squarespace.com\)](https://www.squarespace.com/A+Guide+to+Writing+in+Economics.pdf).
2. Neugeboren, Robert and Jacobson, Mireille (2001), *Writing Economics*, [WritingEconomics.doc \(harvard.edu\)](https://www.harvard.edu/WritingEconomics.doc)



## **ECN 471: Academic Writing for Economics (Viva-Voce)**

**Course Code:** ECN 471 A

**Course Name:** Academic Writing for Economics (Viva-Voce)

**Credit:** 2

### **Course Objectives:**

- (iv) To equip students with skills to write a research article.
- (v) To enable students to acquire skills for presenting research findings in a seminar/conference.

### **Course Outcomes:**

- (iv) On completion of the course, the students will be able to write a research paper and present its findings in a seminar/conference.

## **Guidelines for Academic Writing for Economics (Viva-Voce)**

- The viva-voce will assess the student's understanding of the principles of academic writing.
- The student shall be able to explain the genres of academic writings in economics.
- The viva-voce examination will be conducted by an External Examiner.
- Key focus areas on basis of which the learners will be evaluated during the viva-voce examination shall include the knowledge, understanding and application ability of the learners with regard to the following:
  - i. Principles of academic writing
  - ii. Economic writing
  - iii. Economic research
  - iv. Economic argument
  - v. Critical Analysis & Interpretation
  - vi. Communication & Presentation Skills

**ECN 499: Dissertation (M.A.)**

**Course Code:** ECN 499

**Course Name:** Dissertation (M.A.)

**Credit:** 4

**Course Objectives:**

- (i) To make them aware about the various steps in carrying out the dissertation work.
- (ii) To enable students to find out researchable issues & develop objectives for the same.
- (iii) To equip students with basics skills of data collection and data analysis.
- (iv) To develop the analytical and report writing skills of the students

**Course Outcomes:**

- (i) On completion of the course, the students will be able to independently conduct their own research.

**Evaluation Criteria**

- **Project/Dissertation** – (04 Credits / 200 Marks)

**Guidelines for Dissertation**

- The project/dissertation will be based on themes from the programme syllabus/ discipline.
- The student will identify/select the topic in consultation/intimation with the concerned course coordinator.
- The concerned course coordinator will accord approval to the selected topic through email/online mode.
- The student will carry out the research work at his/her own level for completion of the Dissertation/Project work.
- The concerned student may seek the advice of the concerned course coordinator or of other faculty members on need basis.
- The project/dissertation must be completed within the department's specified timeline.
- The research work should involve primary, secondary, and tertiary sources of data.
- It should be thematic, interpretative, and of fundamental nature.

- No financial support will be provided by the department; students can seek external funding.
- An External Examiner will evaluate the dissertation on the basis of following parameters:
  - Topic Selection and Relevance
  - Research Methodology
  - Structure and Organization
  - Analysis and Interpretation
  - Use of Sources and Citations
  - Contribution to Knowledge
  - Contribution to existing practices
- The standard format for writing the dissertation/ project may include the following segments. However, there may be variations in it depending on the nature of the research work embodied in the dissertation/project.
  - Title Page
  - Undertaking by the Student
  - Certificate from the Supervisor
  - Acknowledgment
  - Abstract
  - Content/Index
  - List of Tables, Figures, Abbreviations
  - **Chapters 1 to 5:** Introduction, Review of Literature, Data Collection and Methodology, Results and Discussion, Summary and Conclusion
  - References
  - Annexure (including the first three pages of the similarity report)

### **UGC Plagiarism Guidelines**

As per UGC (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations, 2018, plagiarism is strictly prohibited.

### Plagiarism Levels & Penalties

Similarity Percentage	Consequences
Up to 10%	No penalty
10% – 40%	Revision required within a stipulated time
40% – 60%	Resubmission after a 6-month cooling period
Above 60%	Cancellation of dissertation and disciplinary action

### Formatting Guidelines

- **Font:** Arial
- **Font Size:**
  - **Main Headings** – 14 pt, Bold
  - **Subheadings** – 12 pt, Bold
  - **Body Text** – 12 pt
- **Line Spacing:** 1.5
- **Alignment:** Justified
- **Headings:** Bold and Numbered (if required)
- **Citation Style:** APA/MLA format should be used for all references, following the guidelines set by the Modern Language Association (MLA).
- **Footnotes:** Should follow proper citation format

## **ECN 499A: Viva-Voce**

**Course Code:** ECN 499A

**Course Name:** Viva-Voce

**Credit:** 4

### **Course Objectives:**

- (i) To develop critical thinking and presentation skills among students.

### **Course Outcomes:**

- (i) It will enable students to present the findings of their dissertation & defend their research in viva voce examination.
- (ii) It will help students to be independent researchers and present their research in a coherent manner.

### **Evaluation Criteria**

- **Viva-Voce** – (04 Credits / 200 Marks)

### **Guidelines for Viva-Voce**

- The viva-voce will assess the student's understanding of the dissertation work.
- The student shall be able to explain their research process and findings clearly.
- The viva-voce examination will be conducted by an External Examiner.
- Key focus areas on basis of which the learners will be evaluated during the viva-voce examination (of dissertation) shall include the knowledge and understanding of the learners with regard to the following aspects of the dissertation/ research work:
  - i. Understanding of the Topic
  - ii. Research Methodology
  - iii. Critical Analysis & Interpretation
  - iv. Communication & Presentation Skills
  - v. Practical Relevance of the Study