



**GALGOTIAS  
UNIVERSITY**

**COURSE BOOK**

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NAME OF SCHOOL: SCHOOL OF LIBERAL EDUCATION \_\_\_\_\_

PROGRAMME: MA ECONOMICS \_\_\_\_\_

YEAR: 2020-21 \_\_\_\_\_



## Curriculum

<b>Semester I</b>									
Sl. No	Course Code	Name of the Course					Assessment Pattern		
			L	T	P	C	IA	MTE	ETE
1	ECO5001	Micro Economics	4	0	0	4	20	30	50
2	ECO5002	Macro Economics	4	0	0	4	20	30	50
3	ECO5003	Statistics	4	0	0	4	20	30	50
4	ECO5004	Mathematical Economics	4	0	0	4	20	30	50
5	MLA02T1011	Indian Economy	4	0	0	4	20	30	50
<b>Semester II</b>									
Sl No	Course Code	Name of the Course					Assessment Pattern		
			L	T	P	C	IA	MTE	ETE
1	MLA02T2021	Growth and Development Economics	4	0	0	4	20	30	50
2	ECO5007	Research Methods for Economics	4	0	0	4	20	30	50
3	ECO5008	Econometrics	4	0	0	4	20	30	50
4	ECO5009	Agricultural Economics	4	0	0	4	20	30	50
5	MLA02T2022	Monetary Economics	4	0	0	4	20	30	50
6	MLA02T2023	Experiential Learning - I	0	0	8	4	50		50
<b>Summer Internship / Project / Seminar</b>									
1	MLA02T2031	Summer Project	0	0	4	2	50		50
2	MLA02T2032	Seminar	0	0	4	2	50		50
<b>Semester III</b>									
Sl No	Course Code	Name of the Course					Assessment Pattern		
			L	T	P	C	IA	MTE	ETE
1	ECO5012	Industrial Economics	4	0	0	4	20	30	50
2	ECO5013	Public Economics	4	0	0	4	20	30	50
3	MLA02T2033	Experiential Learning - I	0	0	8	4	20	30	50
4		Elective 1.1	4	0	0	4	20	30	50
5		Elective 2.1	4	0	0	4	20	30	50
6	MLA02T2034	Thesis Phase - I	0	0	8	4	50		50
<b>Semester IV</b>									
Sl No	Course Code	Name of the Course					Assessment Pattern		
			L	T	P	C	IA	MTE	ETE
1		Elective 1.2	4	0	0	4	20	30	50
2		Elective 2.2	4	0	0	4	20	30	50
3	ECO5015	Thesis	2	0	14	8	50		50

### **ELECTIVE GROUPS:**

Group – A	Environmental Economics	L	T	P	C	IA	MTE	ETE
ECO5021	Environmental Economics	4	0	0	4	20	30	50
ECO5031	Environment and Economic Sustainability	4	0	0	4	20	30	50
MLA02T5041	Economics of Climate Change	4	0	0	4	20	30	50

<b>Group – B</b>	<b>Quantitative Economics</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>IA</b>	<b>MTE</b>	<b>ETE</b>
MLA02T5042	Topics in Econometrics	4	0	0	4	20	30	50
ECO5022	Time Series Econometrics	4	0	0	4	20	30	50
ECO5032	Operations Research in Economics	4	0	0	4	20	30	50
<b>Group – C</b>	<b>Developmental Issues</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>IA</b>	<b>MTE</b>	<b>ETE</b>
MLA02T5023	International Trade and Policy	4	0	0	4	20	30	50
MLA02T5033	Financial Institutions and Market	4	0	0	4	20	30	50
MLA02T5043	Trade and Development	4	0	0	4	20	30	50
<b>Group – D</b>	<b>Economics of Social Sector</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>	<b>IA</b>	<b>MTE</b>	<b>ETE</b>
ECO5024	Economics of Health	4	0	0	4	20	30	50
ECO5034	Economics of Education	4	0	0	4	20	30	50
MLA02T5044	Gender Economics and Development	4	0	0	4	20	30	50
MLA02T5054	Rural Economics	4	0	0	4	20	30	50

<b>Name of The Course</b>	Microeconomics			
<b>Course Code</b>	ECO5001			
<b>Prerequisite</b>				
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

#### Course Objectives:

- To analyse demand and supply functions of microeconomics
- To analyse the production economics of firm
- To understand the perfect and monopoly market
- To analyse the various characteristics of imperfect competition market.
- To study the welfare issues of microeconomics

#### Course Outcomes

After completing this course, students will be able to:

<b>CO1</b>	Able to analyse demand and supply functions of microeconomics
<b>CO2</b>	Able to analyse the production economics of firm
<b>CO3</b>	Able to analyse perfect and monopoly market
<b>CO4</b>	Able to analyse the various characteristics of imperfect competition market
<b>CO5</b>	To familiar with welfare issues of microeconomics
<b>CO6</b>	Able to recent development in Microeconomics

#### Text Book (s)

- Koutsoyiannis, A. (1979), Modern Microeconomics, (2nd Edition), Macmillan Press, London.
- Dominick Salvatore ,Fifth edition, Microeconomics: Theory and Applications, Tata Mac-Graw Hill.
- Varian, H. (2000), Microeconomic Analysis, W.W. Norton, New York..

**Reference Book (s)**

- Baumol, W.J. (1982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.
- Green H.A.G. (1971), Consumer Theory, Penguin, Harmondsworth.

<b>Unit-1 Demand and supply Analysis</b>
Theories of Demand: Utility and indifference curve approaches; Income compensated demand curve; Income and Substitute effects; Slutsky theorem; Revealed preference theory; Consumer surplus. Elasticity (Price, cross, income) of demand; Theory of supply, Elasticity of supply. Revision of Demand theory by Hicks; Indirect utility functions (duality)
<b>Unit-2 Production Function</b>
Production function - Short term and long term period; Law of variable proportions; Returns to scale; Economies of scale; Iso-quants; Least-cost combination; Multi-product firm; Cobb-Douglas, CES production functions and their properties; Euler's theorem; Technical Progress and production function; Theories of costs – traditional and modern; Derivation of cost function from production Function; Derived demand for factors (CD function only).
<b>Unit-3 Perfect competition</b>
Marginal analysis as an approach to price and output determination; Perfect competition – Short and long term equilibrium of the firm and industry.
<b>Unit-4 Monopoly</b>
Monopoly – short run and long run equilibrium; Price discrimination; Welfare aspects. Monopolistic competition – General and Chamberlin's approaches to equilibrium of the firm and the group with product differentiation and selling costs; Criticism of monopolistic competition.
<b>Unit-5 Imperfect competition market</b>
Oligopoly – non-collusive models: Cournot, Bertrand, Edgeworth, Chamberlin, Kinked-demand curve and Stackleberg solution. Collusive models: Cartels and mergers; Price leadership model. Price and output determination under monopsony and bilateral monopoly.
<b>Unit-6 Welfare Economics</b>
The Pareto Optimality criterion of social welfare, Derivation of grand utility possibility frontier. Concept of general equilibrium and partial equilibrium

**Continuous Assessment Pattern**

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Macroeconomics			
<b>Course Code</b>	ECO5002			
<b>Prerequisite</b>				
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

**Course Objectives:**

- To acquire the knowledge of basic concepts in macroeconomics and develop familiarity with the basic terminology and elementary ideas of macroeconomics.

- To make students understand and study the circular flow of income in the economy and role and importance of macroeconomic variables like GDP, National Income etc.
- To make students understand the underlying assumptions of the approach of the major schools of economic thought: Classical Vs Keynes.
- To make students understand the principles and determinants of macroeconomic variables such as aggregate demand, aggregate supply, consumption, saving, investment etc.
- To make students familiar with the major issues relevant to macro economy such as unemployment, inflation and stagflation.

### Course Outcomes

<b>CO1</b>	Acquire the knowledge of basic concepts in macroeconomics and would be familiar with the basic terminology and elementary ideas of macroeconomics.
<b>CO2</b>	Understand the circular flow of income in the economy and role and importance of macroeconomic variables like GDP, National Income etc.
<b>CO3</b>	Understand the underlying assumptions of the approach of the major schools of economic thought: Classical Vs Keynes.
<b>CO4</b>	Understand the principles and determinants of macroeconomic variables such as aggregate demand, aggregate supply, consumption, saving, investment etc.
<b>CO5</b>	Get familiar with the major issues relevant to macro economy such as unemployment, inflation and stagflation.
<b>CO6</b>	Able to get familiar about macroeconomic policies during the economic crisis

### Text Book (s)

- Case Fair and Oster (2012), Principles of Macroeconomics, 10th Edition, Pearson
- Frank & Barnake (2011), Principles of Economics, 3rd Edition, TATA McGrawHil
- N. Gregory Mankiw (2007), Principles of Economics, 4th edition, Cengage learning

### Reference Book (s)

- R. Dornbusch, S. Fischer & R. Startz (2012), Macroeconomics, Tenth Edition, McGrawHill
- D N Dwivedi (2013), Macroeconomics, 3rd Edition, McGrawHill

<b>Unit-1 Macroeconomics Concepts and Measurement of GDP</b>
Meaning of Macroeconomics; Origin of Macroeconomics; Macroeconomics Vs Microeconomics; Circular Flow of Income: two, three and four sector, Two Measures of National Product – Real flow and Nominal flow; National Income Concepts and Aggregates; Methods of Measurement of GDP; Real Vs Nominal GDP; Potential GDP, GDP Gap, GDP Deflator.
<b>Unit-2 Output and Employment Macro-Economic Equilibrium</b>
Classical Models of income and employment determination; Says Law of Market; Keynesian Models of income and employment determination; The Principle of Effective Demand Concepts and Determinants of Aggregate Demand and Aggregate Supply
<b>Unit-3 Inflation and Trade Cycle Consumption</b>
Concept of Inflation; Theories of Demand-pull and Cost-push inflation; Short run trade-off between Inflation and unemployment - Phillips curve Meaning & Definition of Trade Cycle, Phases of Trade Cycle, Theories of Trade Cycle: Samuelson's Multiplier, Accelerator Interactions Model, Hicks Multiplier- Accelerator Interactions Model,
<b>Unit-4 Investment Function</b>
Income-Consumption Relationship; the Absolute Income Hypothesis, the Relative Income Hypothesis, the Permanent Income Hypothesis, Life Cycle-Permanent Income; Investment Multiplier & its Effectiveness in LDCS
<b>Unit-5 Demand and Supply of Money</b>
Quantitative Theory of Money: Fishers Equation; Neo-Classical Theory of Money: Cambridge Equation; Liquidity Preference Theory; Liquidity Trap; Supply of Money, Money Multiplier.

**Unit-6 Macroeconomic Policy and General Equilibrium**

Equilibrium on product market (IS Curve); Equilibrium in Money Market (LM Curve); IS – LM Model (Simultaneous Equilibrium in Goods Market and Money Market); Monetary Policy and LM Curve; Fiscal Policy and IS Curve, Crowding out Effect; Effectiveness of Monetary and Fiscal policies under different situations in terms of IS-LM framework.

**Continuous Assessment Pattern**

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Statistics			
<b>Course Code</b>	ECO5003			
<b>Prerequisite</b>	Basic knowledge of Quantitative Techniques			
<b>Corequisite</b>				
<b>Antirequisite</b>	Econometrics			
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

**Course Objectives:**

The Objectives of the course are:

- To construct a data set of economic variables.
- To calculate, present, and discuss descriptive statistics.
- To conduct a regression analysis.
- To critically assess the statistical analysis of other researchers.
- To apply some basic range of techniques for data analyses to support decision making
- To present an economic argument in quantitative terms

**Course Outcomes**

On the successful completion of the course, the student would be able to -

<b>CO1</b>	To construct a data set of economic variables.
<b>CO2</b>	To calculate, present, and discuss descriptive statistics.
<b>CO3</b>	To conduct a regression analysis.
<b>CO4</b>	To critically assess the statistical analysis of other researchers.
<b>CO5</b>	Apply some basic range of techniques for data analyses to support decision making
<b>CO6</b>	Present an economic argument in quantitative terms.

**Text Book (s)**

- Jaggia and Kelly (2013), “**Business Statistics: Communicating with Numbers**” McGraw Hill Education, New Delhi.
- Aggarwal, B.M. (2009), “*Statistics for Business and Economics*”, 2<sup>nd</sup> Edition, Ilex Publication, New Delhi.
- Gupta, S.C. and V.K. Kapoor (1993), *Fundamentals of Applied Statistics*, S. Chand and Sons, New Delhi.

**Reference Book (s)**

- Croxton, F.E., D.J. Cowden and S. Klein (1973), *Applied General Statistics*, Prentice Hall, New Delhi.
- Gupta, S.C. and V.K. Kapoor (1993), *Mathematical Statistics*, S. Chand and Sons, New Delhi.

### **Unit-1 Statistical Data and Descriptive Statistics**

Statistics and Data – Classification and Presentation, Frequency Distribution, and Frequency Curve. Descriptive Statistics: Measures of Central Location - Arithmetic Mean, Median and Mode; Quartile, Geometric Mean, Harmonic Mean. Moments and Measures of Skewness and Kurtosis. Measures of Dispersion: Range, Inter-quartile Range, Quartile Deviation, Coefficient of Quartile Deviation, Mean Deviation, Standard Deviation and Coefficient of Variation. Karl Pearson Product Movement Correlation Coefficient, Spearman's Rank Correlation Coefficient.

### **Unit-2 Theory of Probability - 1**

Fundamental Probability Concepts and Rules of Probability: Sample Spaces and Events, Complement, Addition, Conditional Probability, Independent and Dependent Events and Multiplication Rule.

### **Unit-3 Theory of Probability -2**

Discrete Probability Distributions: Random Variables and Discrete Probability, Expected Value and Variance; Binomial and Poisson probability Distribution and its applications. Continuous Probability Distributions: Continuous Random Variables and Uniform Probability Distribution, Normal Distribution and Problem Solving with Normal Distribution

### **Unit-4 Statistical Inferences**

Estimation: Point Estimators and Interval Estimators. Hypothesis Testing of the – Population Mean when  $\sigma$  is known and when  $\sigma$  is unknown, and for Population Proportion. Statistical Inference: One sample t, z and  $\chi^2$  test; Two independent sample t, z and  $\chi^2$  test; Two dependent sample t test; F-test and ANOVA – one way and two way.

### **Unit-5 Regression Analysis**

Regression Analysis: Methods of Estimation, Standard Error of the Estimate, Coefficient of Determination, and Analysis of Variance. Multiple Linear Regression Model: Two Independent Variable Case. Inference with regression Models.

### **Unit-6 Introduction of Statistical Software**

Excel / Systat / R etc: ANY ONE

### **Continuous Assessment Pattern**

<b>Internal Assessment (IA)</b>	<b>Mid Term Test (MTE)</b>	<b>End Term Test (ETE)</b>	<b>Total Marks</b>
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20	30	50	100
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<b>Name of The Course</b>	Mathematical Economics			
<b>Course Code</b>	ECO5004			
<b>Prerequisite</b>	Basic knowledge of Quantitative Techniques			
<b>Corequisite</b>	Statistics			
<b>Antirequisite</b>	Econometrics			
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### Course Objectives:

The Objectives of the course are:

- Facilitate the understanding of different types of functions and provide a fundamental understanding of data and its use.
- Facilitate the understanding of Differentiations along with the various rules of Differentiations.
- Understanding of use Differential Calculus.
- Familiarize the students about Integration and facilitate the various rules of Integration.
- Understanding of use Integration Calculus.
- To be competent with the various mathematical tools and develop the skills necessary to communicate effectively in writing and orally about economic and mathematical issues.

### Course Outcomes

On the successful completion of the course, the student would be able to -

<b>CO1</b>	Understand and differentiate between different types of functions and Do simple and complex data analysis and interpretation.
<b>CO2</b>	Demonstrate analytical and critical thinking skills and to apply and interpret them in a problem solving context.
<b>CO3</b>	Solve elementary operations of matrices and determinants in economic analysis.
<b>CO4</b>	Demonstrate economic and mathematical literacy through analyzing and discussing economic concepts with mathematics and recognize the strengths and shortcomings of mathematical models in economics.
<b>CO5</b>	Able to differentiate the functions and able to find Maxima and minima of given function.
<b>CO6</b>	Understand the use of Calculus in economic decision making process.

### Text Book (s)

- Frank S Budnick (2010), “**Applied Mathematics for Business, Economics and the Social Sciences**” TATA McGraw Hill.
- Sydsaeter, Hammond (2009), “**Mathematics for Economic Analysis**”, Pearson Education.
- Black, J. and J.F. Bradley (1973), *Essential Mathematics for Economists*, John Wiley and Sons.
- Chiang, A.C. (1986), *Fundamental Methods of Mathematical Economics* (3rd Edition), McGraw Hill, New Delhi.

### Reference Book (s)

- Henderson and Quant (1981), “Micro Economic Theory – A Mathematical Approach” TATA McGraw Hill.

- B C Mehta (1987), "Mathematical Economics: Micro Economic Models" S C Chand, Delhi.

**Unit-1 Resume of Mathematics**

**8 hours**

Equations – Linear and Quadratic Equations, Simultaneous Equations, Ratio, Proportion and Variation, Logarithms. Functions and Curve in Economics.

Matrices – Addition, Subtraction, Multiplication, Transpose, Square Matrices, Trace, Idempotent, and Echelon form of Matrices.

Determinants – Properties, Rank, Inverse of a Matrix – Gauss Elimination Method, Co-factor Method.

Application of Matrices and Determinants in Economics.

**Unit-2 Differential Calculus**

Differential Calculus: One Variable Case – Process and Rules of Differentiation, Some Standard Results, its Relation to Marginal Analysis.

Derivatives of Higher Order – Sign of Differential Coefficient, Maxima and Minima of a function. Applications of Simple Derivatives.

**Unit 3- Partial Calculus**

Partial and Total Derivatives – Technique of Partial Differentiation, Partial Derivatives of Second Order, Cross Partial Derivatives, Application of Partial Derivation.

Total Differentiation – Second Order, Maxima and Minima, Alternate Methods for finding Extreme Values if Functions involving Two or More Variables

**Unit-4 Applications of Differentiation - I**

Utility Function: Indifference Curves, Maximisation of Utility – first and second order conditions.

Demand Functions: Ordinary Demand Function, Compensated Demand Function, Demand Curves, and Elasticity of Demand.

Linear Expenditure System, Separable and Additive Utility Functions, Homogeneous and Homothetic Utility Functions, Indirect Utility Functions, Duality Theorems.

The Theory of Revealed Preference and Consumer Surplus.

**Unit-5 Applications of Differentiation – II**

The Production Function, Product Curves, and Isoquants.

Optimizing Behavior, Constrained Output Maximization, Constrained Cost Minimization, Profit Maximization.

Input Demands, Short and Long Run Cost Functions and Profit Maximization.

Homogeneous Production Functions: Properties, Euler's Theorem.

CES Production Functions: Properties, Isoquants, The Equilibrium Condition, Generalized CES Production Function.

**Unit-6 Integration**

Simple Integration – Definition, Constant of Integration, Basic Rules, Some Standard Results, Methods of Integration – Integration by Parts.  
Definite Integrals and Applications.

### Continuous Assessment Pattern

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Indian Economy			
<b>Course Code</b>	MLA02T1011			
<b>Prerequisite</b>				
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### Course Objectives:

- To make the students aware of the experience of economic development pre-independence and post-independence.
- To critically analyze the performance of agriculture development with their structural change.
- To analyze the industrial and service development since independence.
- To analyze the structural change in financial sector and critical analysis of recent development in financial sector.
- To analyse the NPA and black money

### Course Outcomes

After completing this course, students will be able to:

<b>CO1</b>	Understand the development scenario and function of development institutes in India.
<b>CO2</b>	Understand the fundamental problems of agriculture sector.
<b>CO3</b>	Understand the various industrial development models and policies, and its effectiveness in industrial development.
<b>CO4</b>	To understand the recent developments of financial reforms.
<b>CO5</b>	To able to evaluate the Indian economic development in a critical way
<b>CO6</b>	Able to understand economic scenario during COVID 19

### Text Book (s)

- Dhingra I.C (recent edition), “Indian Economy”, Sultan Chand & Co., New Delhi
- Agrawal, A.N. (recent edition), “Indian Economy”, New Age International Ltd., New Delhi. .
- Dutt R and Sundharam KPM (recent edition), “Indian Economy”,S. Chand & Co., New Delhi
- Misra and Puri (recent edition), “Indian Economy”, Himalaya Publishing House, Mumbai

### Reference Book (s)

- Singh, Ramesh (recent edition), “Objectives of Indian Economy and Social Development”, Tata McGraw Hill Publication, New Delhi
- Kapila, Uma (recent edition), “India’s Economic Development since 1947”, AF Publication, New Delhi

**Unit-1 Experiences of Indian Planning and institutions**

Indian Economy during pre-independence Period, Experiences of Indian Planning- Liberalization and economic reforms- Pre and Post Economic Reforms, Experience of Planning institutions- Planning Commission and NITI Ayoge

**Unit-2 Agriculture Industry & Service Sector**

Agriculture sector- Commercialization of Indian agriculture, Land Reforms, Green Revolution, Agricultural Policy, Crisis and Performance of Indian agriculture.  
Industrial sector- Growth and Performance, Industrial Policy (Pre Reform and Post Reform Period), Small Scale Industries and their Issues and Policy (MSME), Informal Sector.  
Service Sector- Trends, Growth and Performance, Structural Change

**Unit-3 Social Sector**

Poverty Inequality and Unemployment, Evaluation of Government's Poverty and Unemployment Alleviation Programs, India's Human Development Report in global perspective, Health and Education Policy.

**Unit-4 Macroeconomic concepts of Indian Economy**

Macroeconomic Stabilisation- Trade, Fiscal and Monetary Policy, Issues, Financial Sector Reforms, Impact of Demonetization- Current and future prospective,

**Unit-5 NPA and Black Money**

NPA, Black money and parallel economy in India, Consequences and Remedies.

**Unit-6 Recent development on Indian economy (COVID 19)**

Impact on growth scenario, Inter-state migration of labours, employability, Government packages, government policies after COVID-19, Assessment of COVID-19 on Indian economy

**Continuous Assessment Pattern**

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Growth and Development Economics			
<b>Course Code</b>	MLA02T2021			
<b>Prerequisite</b>				
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

**Course Objectives:**

- The goal of this course is to provide students with the essential tools and concepts of development economics.
- To critically analyze how the theory of development economics impacts upon practical implementation macro development policies in varying local and global contexts.
- To describe various economic growth theories and their policy recommendations.
- To explain the role of international trade for economic growth.
- To analyse the interaction of technology, and economic growth and welfare.

## Course Outcomes

After completing this course, students will be able to:

<b>CO1</b>	Students will be understand the historical patterns of development in the Western world, and how the development of other countries has deviated from those paths.
<b>CO2</b>	They can understand both classical and modern theories of growth and development to analyze the problems of the developing world.
<b>CO3</b>	Able to understand the roles of population growth and human capital in the development problem.
<b>CO4</b>	Students will able to critically analyse the significance of employment, migration, human capital development, rural development, international trade, and foreign aid and investment on sustainable economic development.
<b>CO5</b>	Able to analyze macroeconomic policies aimed at facilitating development and their implications.
<b>CO6</b>	Able to analyse government welfare incentives for development

## Text Book (s)

- Meir, G. M. and Rauch, J. E. (2000): Leading Issues in Economic Development. Oxford University Press. New York.
- Thirwal, A. P. (1999): Growth and Development. Macmillan. U.K
- Gills, M., Perkins, Romer M., Snodgrass, Donald R. (2001): Economics of Development. W.W. Norton and Company, New York.
- Meier, Gerald M. and James E. Raunch (2003): Leading Issues in Economic Development, Oxford University Press, New York.

## Reference Book (s)

- Adelman, I. (1961), Theories of Economic Growth and Development, Stanford University Press, Stanford.
- Barro, R. and X. Salai- Martin, Economic Growth, McGraw Hill, New York.

### Unit-1 The Concept of Development and Growth

Meaning of Development and Growth, Measurement of Development, Sustainable Development, Human Development index and quality of life indices, Perpetuation of underdevelopment – vicious circle of poverty, circular causation structural view of underdevelopment.

### Unit-2 Theories of Economic Development

Classical through of development, Lewis model of development. Renis – Fei Model, dependency theory of development. Balanced and unbalanced growth, critical minimum efforts, big push, low income equilibrium trap.

### Unit-3 Theories of economic growth

John Robinson and Kaldor theory of growth, Harrod – Domar model, instability of equilibrium, Neo-classical growth Solow's model, steady state growth.

### Unit-4 India's contemporary issues in Development

Poverty – Measurement & Identification issue, poverty and under-nutrition, Functional Effects Unemployment – Measurement, Types, alternative theories, linkage between unemployment and poverty. Informal Sector-Determinants of its size, linkage with rest of economy, Urbanisation and Rural – Urban migration – theories and empirical evidence, Rural – Urban linkages. Social Network as an institution- Social Capital, Globalisation and Climate Change

**Unit-5 Global Development issues**

Implementing the Sustainable Development Goals, Cooperation to end poverty, Coordination to tackle conflict and crises, technological change and the future of jobs, The Slowdown in Productivity Growth, Low growth with limited policy options, Income convergence, Multidimensional Poverty

**Unit-6 Recent development on Growth and Development economics**

Economic and psychological effects of health insurance and cash transfers, Poverty impacts of alternative transfer-based approaches, Expressways, GDP, and the environment

**Continuous Assessment Pattern**

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Research Methods for Economics			
<b>Course Code</b>	ECO5007			
<b>Prerequisite</b>	Statistics			
<b>Corequisite</b>				
<b>Antirequisite</b>	Econometrics			
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

**Course Objectives:**

The Objectives of the course are:

- To develop understanding of the research framework and concepts.
- Describe different methods to research
- To develop an understanding of various statistical tools and techniques.
- To understand the various sources and methods of data collection.
- To developed the skill of data analysis through statistical software
- Appreciate the components of scholarly writing and evaluate its quality.

**Course Outcomes**

On the successful completion of the course, the student would be able to -

<b>CO1</b>	Able to understand the systematic way of research.
<b>CO2</b>	Able to identify research problem and know how to review literature.
<b>CO3</b>	Design a research study and Create hypotheses
<b>CO4</b>	Select and apply appropriate data analysis methods
<b>CO5</b>	Skilled with SPSS to estimate and make relation among the variables
<b>CO6</b>	Write a quality and effective research report

**Text Book (s)**

- Malhotra and Das (2011); Marketing Research – An Applied Orientation, Pearson.
- Stewart, F. (1979); Reasoning and Method in Economics, McGraw-Hill Book Co., London.
- Cooper, Donald R and Schindle, Pamela S (2006), “Business Research Methods”, McGraw-Hill Book Education Pvt. Ltd. New Delhi
- Zikmond, W.G, Babin B.J, Carr, J.C, Adhikari, A and Griffin M (2013), “Business Research Methods”, CENGAGE Learning Publication
- Carver, R.H and Nash, J.G (2009), “Data Analysis with SPSS”, CENGAGE Learning Publication

**Reference Book (s)**

- Kothari, C.R. and Garg, Gaurav (2015), “*Research Methodology*”, New Age Publications.
- Bell, J. (1993) “*Doing your research project: a guide for first-time researchers in Education and Social Science*”, Buckingham, UK: The Open University.

**Unit-1 Concepts of Research Methodology**

Research Methodology: Social Research Strategies, Research Design, Research Approaches, Methods and Methodology, Formulation, Criteria in Social Research, Defining a Problem, Developing a Research Plan, Formulating Research Questions, Reviewing the Literature, Quantitative and Qualitative Research.

**Unit-2 Methods of data collection**

Methods of Sampling and Sampling Design: Sampling Design, Types of Sampling, Criteria and Characteristics of a Good Sample, Sampling Techniques, Content Analysis, Methods of Data Collection: Primary and Secondary Data, Case Study Method, Participating Rural Appraisal/ Focus Group Discussion, Formulation and Testing of inferences.

**Unit-3 Research Methods with SPSS - I**

An introduction to SPSS-Data coding and data dictionaries, Importing data to SPSS from Excel, Data manipulation, checking and editing in SPSS, Descriptive, statistics, Tabulating and graphing of data, Data management and archiving

**Unit-4 Research Methods with SPSS - II**

Hypothesis testing, statistical significance and confidence intervals, Statistical tests for two groups, multivariate hypothesis testing, and regression models.

**Unit-5 Research Methods with SPSS – III**

Econometric Analysis: Simple and Multiple Regression with various functional forms.  
Testing of Assumptions, Limited dependent Models, and Time Series Analysis

### Continuous Assessment Pattern

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Econometrics			
<b>Course Code</b>	ECO5008			
<b>Prerequisite</b>	Statistics, Mathematical Economics, and Research Methodology in Economics			
<b>Corequisite</b>				
<b>Antirequisite</b>	Topics in Econometrics			
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### Course Objectives:

The Objectives of the course are:

- To understand basic econometric concepts and apply these concepts to economic research problems.
- Understand necessary assumptions, hypothesis tests, basic problems encountered using linear regression model; and learn how to estimate regression models using a regression statistical package.
- To provide many useful intakes for relaxing the assumptions in classical regression model.
- To improve ability to estimate the regression model underlying the violation of various assumptions.
- To master intermediate econometric concepts and apply these concepts to economic research problems.
- To provide the tools necessary to solve "real world" problems relates to time series.

### Course Outcomes

On the successful completion of the course, the student would be able to -

<b>CO1</b>	Explain how to estimate simple and multiple regressions and explain how to interpret regression estimates and test significance of them,
<b>CO2</b>	Explain and diagnose the assumptions of the Least Square Method,
<b>CO3</b>	Estimate and interpretation of dummy variables regression model and qualitative response regression model.
<b>CO4</b>	Able to solve "real world" problems those are frequently encountered by firms, governments, and policy makers.
<b>CO5</b>	Deal with the violation of assumptions in classical regression model and estimate the regression model underlying the violation of various assumptions.

<b>CO6</b>	Perform intermediate econometric concepts and apply these concepts to economic research problems.
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**Text Book (s)**

- D. N. Gujarati, D.C. Porter and Gunasekar, *Basic Econometrics*, McGraw Hill, 5<sup>th</sup> edition, 2012.

**Reference Book (s)**

- Christopher Dougherty, *Introduction to Econometrics*, Oxford University Press, 4<sup>th</sup> edition, Indian Edition, 2011.
- Jeffrey M Wooldridge, *Introductory Econometrics: Modern Approach*, Cengage learning, 4<sup>th</sup> edition, 2009.

**Unit-1 Simple Linear Regression Model - I**

Introduction of Econometrics, Estimation by Ordinary Least Square, Assumptions Underlying OLS, Estimation of Parameters.

**Unit-2 Simple Linear Regression Model - II**

Properties of Good Estimator - BLUE, Test of Significance and Goodness of Fit, Hypothesis Testing and Forecasting.

**Unit-3 Multiple Linear Regression Model**

Extensions of the Simple Linear Regression Model: Various types of Regression Models, Multiple Regression Analysis: The Problem of Estimation and Inference, Functional Forms.

**Unit-4 Dummy Variable Regression Models**

Nature of Dummy Variables, ANOVA Models, Regression with a mixture of Quantitative and Qualitative Variables, Dummy Variables as an alternative of Chow Test, Interaction Effects using Dummy Variables, Seasonal Analysis, and Panel Data Regression Models.

**Unit-5 Relaxing the Assumptions of Classical Models**

Consequences, Detection and Remedies: Multicollinearity, Heteroscedasticity, and Autocorrelation, Model Specification and Diagnostic Testing.

**Continuous Assessment Pattern**

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Agricultural Economics
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<b>Course Code</b>	ECO5009			
<b>Prerequisite</b>				
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### Course Objectives:

- To make students aware of the significance of the agriculture and rural sector to the growth of national income and employment, income distribution and poverty.
- To provide students with a policy framework for rejuvenation and sustainability of the agricultural sector
- To understand the impact of negligence of the agriculture and rural sector in the process of growth and development strategy.
- To understand the technical importance of policy impact analysis on this sector and its linkage with the non-agricultural sector.
- To understand the future growth and importance of supply chain management in development of agriculture and rural economy.

### Course Outcomes

After completing this course, students will be able to:

<b>CO1</b>	Able to analyze the current issues of agricultural markets in Indian agriculture.
<b>CO2</b>	Able to Analyze and understand the agricultural theories.
<b>CO3</b>	Able to analyse agriculture development model.
<b>CO4</b>	Analyze the difference between commodity demand and agricultural demand
<b>CO5</b>	Able to analyse supply responds for agricultural development.
<b>CO6</b>	Able to analyse the fundamental problems and policy lack ness of Indian agriculture

### Text Book (s)

- Singh, Amarjit and Sadhu, A.N (2018), Fundamentals of Agricultural Economics” Himalaya Publishing House (pp. 329-463)
- Kaushik Basu, (2005) Collected Papers in Theoretical Economics: Development, Markets, and Institutions, Oxford University Press, New Delhi.

<b>Unit-1 Introduction to Agriculture and agricultural marketing</b>	<b>8</b>
Meaning, Nature and Scope of Agriculture economics, Place of Agriculture in Indian Economy. Nature and Problems of Agricultural Commodity Markets –Types; Group, Global, Corporate & Forward – agricultural marketing and price system in India – Marketing Margins and Marketing Margin.	
<b>Unit-2 Theories of Agriculture</b>	
Shultz’s theory of Agricultural Transformation, Mellor’s Model of Agricultural Development, Boserup’s theory of Agricultural Development, Arthus Lewis theory of Unlimited Supplies	
<b>Unit-3 Agriculture Model</b>	
Models of Agricultural Development – Induced Innovation Model – policy option for sustainable agricultural development	
<b>Unit-4 Demand for Farm Products</b>	
Characteristics of demand for farm products – Concept and measurement of own price. Cross Price and income elasticities of demand and their interrelationship with Quantity and quality components	

of demand for food – Growth in demand for food in developing and developed countries –  
Forecasting of demand for food products -

#### **Unit-5 Supply of Farm Products**

Characteristics of supply of farm products – Issues relating to specification of supply response function (Distributed lags, acreage vs. production response etc.) –  
Rigidities in farm supply response .Supply response in Indian agriculture – Price vs. non-price factors in inducing aggregate supply growth

#### **Unit- 6 Recent development on Agricultural Economics**

Effectiveness of Corporate farming, One nation one market, effectiveness of DBT fund transfer schema, COVID-19 and agriculture

#### **Continuous Assessment Pattern**

<b>Internal Assessment (IA)</b>	<b>Mid Term Test (MTE)</b>	<b>End Term Test (ETE)</b>	<b>Total Marks</b>
20	30	50	100

<b>Name of The Course</b>	Monetary economics			
<b>Course Code</b>	MSL22T2022			
<b>Prerequisite</b>	Basic understanding of money and banking			
<b>Corequisite</b>	Money and Banking			
<b>Antirequisite</b>	NA			
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

#### **Course Objectives:**

- To improve ability to analyse the implications of monetary policy.
- To understand the significance of monetary-fiscal coordination.
- To understand the time-inconsistency problem in monetary policy.
- To improve ability to link the interest rate and investment
- Understand Significance, Opportunities and Challenges- The IMF

#### **Course Outcomes**

After completing this course, students will be able to:

<b>CO1</b>	Explain the implications of monetary policy
<b>CO2</b>	Explain interest rates and its impact on various variables
<b>CO3</b>	Explain and diagnose the theories of inflation – Demand Pull and Cost-Push
<b>CO4</b>	Able to understand “real world” opportunities and challenges of IMF
<b>CO5</b>	Able to communicate the efficiency, limitations and Fiscal-Monetary Coordination.
<b>CO6</b>	Able to understand current crisis in Indian banking sector

#### **Text Book (s)**

- Suraj B. Gupta (2004) Monetary Economics; Institutions, Theory and Policy, S. Chand & Company Limited, New Delhi.
- Shubik Martin “The Theory of Money and Financial Institutions” (1999), Volume I and II Cambridge, the MIT Press.

#### **Reference Book (s)**

- Stiglitz, Joseph E and Bruce E. Greenwald (2003), Towards a New Paradigm in Monetary Economics, Cambridge, the Cambridge University Press
- Hajala T.N. (1998) Monetary Economics, Kanark Publishers Pvt. Limited, New Delhi.

<b>Unit-1 Introduction to Money</b>
Money: Functions of money, Approaches to the definition of money-empirical definition of money, Monetary standards-gold and paper, Value of Money-measurement of value of money, measurement of money supply.
<b>Unit-2 Demand for Money and Supply of Money</b>
Money Supply and Money Demand-Classical, Keynesian, Monetarist and Post-Keynesian views Emergence of Monetarism-Monetarist- Analytical Framework-Transmission Mechanism Liquidity Approach to Monetary Theory-Gurley-Shaw Thesis Implications for monetary policy.
<b>Unit-3 Money, Interest and Income</b>
Heterogeneity of Interest Rate Determination- Neo-Classical, Keynesian and IS-LM Curve Approach – Rate of interest and investment, Income and output- Administered Interest Rates and Market Determined Interest Rates- Interest rates and Demand for Money – Implications for Monetary Management
<b>Unit-4 Money and Prices</b>
Interrelationship between money and Prices- Classical, Keynesian, Monetarist- and New Classical Approach: Demand Pull Theory of Inflation – Social Costs of Inflation- Inflationary Expectations – The Phillips Curve and Other factors Monetary factors and Economic Fluctuations Monetary Theories of Business Cycles.
<b>Unit-5 Monetary Policy</b>
Introduction – Goals – Targets – Indicators and Instruments – Limitations of Monetary Policy – The Time Lags in the Monetary Policy – Efficiency of Monetary Policy – Monetary Policy with informal Financial Markets – Monetary – Fiscal Co-ordination; IS-LM Curve Approach; Significance, Opportunities and Challenges- The IMF, A World Central Bank
<b>Unit 6 Recent Development</b>
RBI measures during Covid-19

#### Continuous Assessment Pattern

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

#### Detailed Syllabus

<b>Name of The Course</b>	Industrial Economics			
<b>Course Code</b>	ECO5012			
<b>Prerequisite</b>	Knowledge of Micro			
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

#### Course Objectives:

The objectives of the course are:

- To improve the understanding of Industry classification & linkages.
- To understand the pricing of industrial products.
- To understand the integration & merger of Industrial Units.

- To understand the various sources of finance

### Course Outcomes

After completing this course, students will be able to:

<b>CO1</b>	Explain the industrial organization and structure
<b>CO2</b>	Explain the various theories of location
<b>CO3</b>	Explain the sources of finance and pricing policies in india
<b>CO4</b>	Able to understand the industrial competitiveness of Indian Industry
<b>CO5</b>	Able to understand the employment issues
<b>CO6</b>	Students will be able to evaluate the impact of pandemic like covid 19 on various segments of industrial economics

### Text Book (s)

- Barthwal, R.R. (1992), Industrial Economics : An Introductory Text Book, Wiley Eastern Ltd., New Delhi.
- Tirole, J.: The Theory of Industrial Organization, MIT Press (1988)
- Cahuc, P.; Carcillo, S. and Zylberberg, A. (2014): Labor Economics, MIT Press
- Borjas, G. J. (2010): Labor Economics, McGraw-Hill/Irwin, Boston MA (5<sup>th</sup> edition).

### Reference Book (s)

- World Health Organisation (2013). The economics of the social determinants of health and health inequalities: A resource book. World Health Organisation.
- Articles from journals and working papers.

<b>Unit-1 Introduction</b>	<b>8 hours</b>
Industrial revolution and Structural Shift in GDP. Asian Tigers and Industrialisation. Industrial Growth. SCP Paradigm. Market Power, Barriers to Entry and Market Structure.	
<b>Unit-2 Industrial Development</b>	
Porter's Theory of Competitive Advantage. Characteristics and Boundaries of Firms. Transaction Cost Theory of Firms. Horizontal Diversification. Robin Marris Model. Globalisation of SMEs (Global Value Chain). Networking. Merger – Types, theories and Determinants. Theories of Industrial Location. Corporate Social Responsibility.	
<b>Unit-3 Industrial Classification</b>	
Success Stories – Indian IT Industry, Textile Industry, Pharmaceutical Industry, Automobile Industry and SMEs. Some Successful Industrial Clusters in India. Unsuccessful Story of Indian Mobile Industry.	
<b>Unit-4 Employment Issue</b>	

Labour Supply: Choice between Consumption and Leisure; Incorporating Household Production and Decisions. Labour Demand and Equilibrium: Labour Demand Function, Competitive Equilibrium, Compensating Wage Differentials and Hedonic Theory of Wages.

### Unit -5 Labour and Wages Issue

Discrimination Theories of Discrimination, Measuring Discrimination, Affirmative Action. Labour Market Institutions and Policies Collective Bargaining and Labour Unions, Minimum Wage and Employment, Unemployment Insurance, Job security regulations. Incentives, Agency and Efficiency Wages. Migration.

### Unit-6 Recent Development

Indian industries and their performance during and after pandemic; Reverse migration; labour crisis; wages of informal labour

### Continuous Assessment Pattern

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Public Finance			
<b>Course Code</b>	ECO5013			
<b>Prerequisite</b>	Basic understanding of financial concepts			
<b>Corequisite</b>				
<b>Antirequisite</b>	NA			
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### Course Objectives:

- To provide basic concepts of public policies.
- To improve ability to analyse theories of public good.
- To understand basic concepts of public expenditure and taxation.
- To provide information related to fiscal policies and income redistribution policies.
- To improve ability to analyse investment projects.

### Course Outcomes

After completing this course, students will be able to:

<b>CO1</b>	Apply basis of government activity and evaluation of public economic policies
<b>CO2</b>	Use different types of externalities and their impact
<b>CO3</b>	Correlate theories of Public Goods, Public Expenditures and Taxation to real world problem
<b>CO4</b>	Able to solve “real world” problems those are frequently encountered by governments, and policy makers.
<b>CO5</b>	Compare Budgeting Fiscal Policies and Income Redistribution polices and their impact on human beings
<b>CO6</b>	Able to understand the current public policies of India

### Text Book (s)

- Stiglitz, J.E. (1986): Economics of Public Sector, Norton, NY.
- Bowers, P.F. (1974): Private Choice and Public Welfare, Dryden Press, NY.

- Buitter, W.H. (1990): Principles of Budget and Fiscal Policy, MIT Press.
- Microeconomics of Market Failure – Bernard Salanie
- Economics of Taxation – Bernard Salanie

**Reference Book (s)**

- Musgrave, Richard A. (1959): The Theory of Public Finance, Tata McGraw Hill, N.Y.
- Mishra, B. (2006): Economics of Taxation: Theory and Application, Akansha Publishing House, ND.

<b>Unit-1 Public Economic Policies</b>	<b>8 hours</b>
Introduction: Equity, efficiency and role of the state, Externalities and Government policy: Market failures, Externalities and Efficiency, Public Policies to Internalize the Externalities, Public Economic Policies: Allocation, Distribution and Stabilization, Policies.	
<b>Unit-2 Theories of Public Goods</b>	
The Theory of Public Goods: Provision of Private Goods and Public Goods: Markets and Government, The Demand for a pure Public good, Efficient output of a pure public good- Partial and General Equilibrium Analysis, Local Public Goods, Voting Models of Public Goods.	
<b>Unit-3 Public Expenditures and Taxation</b>	
The Theory of Public Expenditure: Pure Theories of Public Expenditures: Tiebout, Samuelson and Buchanan’s Contributions. Theories of Taxation: Tax Neutrality, Direct versus Indirect Taxes and Equity, Buoyancy and Elasticity Estimates of Taxation, The impact of taxes on Market prices and Efficiency.	
<b>Unit-4 Budgeting Fiscal Policies and Income Redistribution</b>	
Program Budgeting: It’s Application, Zero-Based Budgeting, and Budgeting Policies; Theory of Fiscal Policy: Fiscal Policy with Special Reference to Under-developed Countries, Federal-Fiscal Relation in India. Income Redistribution: Taxes, Government Expenditures and the distribution of Income.	
<b>Unit-5 Evaluation of Public Investment Projects</b>	
Public Utilities and Project Evaluation: Cost-Benefit Analysis, Measuring Costs, Measuring Benefits, Market Price, Shadow Prices, Choosing a Discount Rate; Problem of Government Failure.	
<b>Unit 6 Recent Development</b>	
Public Policies during Covid-19	

**Continuous Assessment Pattern**

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Environmental Economics			
<b>Course Code</b>	ECO5021			
<b>Prerequisite</b>				
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

**Course Objectives:**

- To explore the introduction of environmental economics
- To analyse the theory of environmental protection
- To analyze the concept of property rights
- To understand Environmental Regulation and Assessment in the Indian Context
- To understand the basic concepts of sustainable development

### Course Outcomes

<b>CO1</b>	Able to understand introduction of ecology and environment
<b>CO2</b>	Explore the legal framework of use of natural resources
<b>CO3</b>	Understand the global environmental issues
<b>CO4</b>	To educate about regulation and assessment related to environment
<b>CO5</b>	Understand the concept and objective of sustainable development
<b>CO6</b>	Understand the price mechanism of environmental goods

### Text Book (s)

- Barry C Field and Martha K Field (2006), “Environmental Economics: An Introduction”, McGraw-Hill Publication
- Kolstad, C (2010), “Intermediate Environmental Economics”, Oxford University Press, 2<sup>nd</sup> edition
- Stavins, Robert N. (2005), “Economics of the Environment: Selected Readings”, W.W. Norton, 5<sup>th</sup> edition.

### Reference Book (s)

- Hanley, N., Shogren, J. F., & White, B. (2016). Environmental economics: in theory and practice. Macmillan International Higher Education.

<b>Unit-1 Introduction to Environmental and Ecological Economics</b>	<b>8</b>
<b>hours</b>	
Definition concept and Scope; Economy – ecology and environment inter – linkages; Property rights and externalities, Market failures and environmental problems,	
<b>Unit-2 Ecological footprint</b>	
Ecological footprint – global and regional trends; ethics and ecology – intergenerational issues; green economic policy.	
<b>Unit-3 Economic incentives for environmental protection</b>	
Price rationing and quantity rationing; Liability rules; Pollution taxes for efficient control of pollution; Coase Theorem; Theory of Commons; Basic theory and issues in tradable pollution permits.	
<b>Unit-4 International Environmental issues</b>	
Transboundary pollution problems, International environmental treaties and Institutions; Climate Change and policies; Environmental Regulation and Assessment in the Indian Context.	
<b>Unit-5 Sustainable Development</b>	
Current issues in Sustainable Development; Goals and Indicators; Green Economy; Green Manufacturing, Green Finance and Green Tourism; Investing in natural capital, Agriculture, Fisheries, Water, Forests, Renewable Energy.	
<b>Unit- 6 Recent development on Environmental Economics</b>	
Tying enforcement to prices in emissions markets, Price of innovation: An analysis of the marginal cost of green buildings, Price perceptions in water demand	

### Continuous Assessment Pattern

<b>Internal Assessment (IA)</b>	<b>Mid Term Test (MTE)</b>	<b>End Term Test (ETE)</b>	<b>Total Marks</b>
20	30	50	100

<b>Name of The Course</b>	Environment and Economic Sustainability
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<b>Course Code</b>	ECO5031			
<b>Prerequisite</b>				
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### Course Objectives:

- To understand the human evolution and environmental history –our roots, our current moment, and visions of the future in evolutionary context;
- To analyse the Millennium and Sustainability Development Goals: assess how well we do when we set our minds on a common global goal;
- To become familiar with and apply concepts relating to the developing discipline of sustainability studies.
- To understand Quantifying sustainability for improved decision making
- To understand the Understand the concept of best Practice for the Twenty First Century

### Course Outcomes

<b>CO1</b>	Able to identify and describe the principal elements of the understanding of an ecosystem in relation to a challenge to sustainability
<b>CO2</b>	Able to identify different stakeholders in a challenge to sustainability, and analyze the economic structures that connect them.
<b>CO3</b>	Able to analyze debates over challenges to sustainability in terms of different value systems, differing appropriations of scientific findings and different background commitments in economics
<b>CO4</b>	Able to propose a solution to a particular challenge to sustainability and create a appropriate proposal that advocates this solution.
<b>CO5</b>	Able to developed a greater appreciation both of the complex challenges we face in moving toward a more sustainable world but also of the possibility of crafting creative and effective responses to those challenges.
<b>CO6</b>	Able to understand the economics of water.

### Reference Book (s)

- Hardisty, Paul E (2010), “Environment and Economic Sustainability”, CRC Press, Taylor & Francis Group, Boca Raton

<b>Unit-1 Introduction of Sustainability in the Twenty-First Centaury</b>
Exponential era, regulations with power, industry awakens, the fight to save the ozone, strong versus weak sustainability, an overview of global trends, our changing relationship with the Planet, The matrices of sustainability, Food and poverty, why sustainability has not worked
<b>Unit-2 Quantifying sustainability for improved decision making</b>
Balancing environment, society and economy, the environmental and economic sustainability assessment, Socio-environmental economic analysis, Valuing the environment and society, Full environmental, social and economic life-cycle modelling
<b>Unit-3 Water and Energy nexus</b>
Water management and groundwater resources, Water resource development and costing, Sustainability and Energy- Energy Security,
<b>Unit-4 Greenhouse and climate change</b>
Carbon trading, carbon cost reduction Carbon Mitigation Risk, Adaptation Risk, Climate change
<b>Unit-5 Best Practice for the Twenty First Century</b>
Management and decision making, the necessary evolution of the environmental impact assessment, regulatory capacity development, Into the future- now is the right time, from remediation to prevention, future value trends, towards a new matric of success
<b>Unit-6 Recent Development on Environment and Economic Sustainability</b>

Economic sustainability: reality or myth, Global assessment of environment, health and economic impact of the novel coronavirus (COVID-19)

### Continuous Assessment Pattern

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Economics of climate Change			
<b>Course Code</b>	MLA02T5041			
<b>Prerequisite</b>				
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### Course Objectives:

- To analyse the scientific modelling of global warming
- To analyse the economic benefit of climate protection
- To analyse cost-benefit analyse of climate change
- To analyse the Economic modelling of global climate change
- To analyse the role of energy prices on climate change

### Course Outcomes

After completing this course, students will be able to:

<b>CO1</b>	Able to get the scientific modelling of global warming
<b>CO2</b>	Able to analyse the economic benefit of climate protection
<b>CO3</b>	Able to analyse cost-benefit analyse of climate change
<b>CO4</b>	Able to analyse the Economic modelling of global climate change
<b>CO5</b>	Able to analyse the role of energy prices on climate change
<b>CO6</b>	Students will able to get familiar about economic modelling in climate change

### Text Book (s)

- Leal Filho, W. (Ed.). (2010). The economic, social and political elements of climate change. Springer Science & Business Media
- Stern, N., & Stern, N. H. (2007). The economics of climate change: the Stern review. 25ambridge University press.

### Reference Book (s)

- Hanley, N., & Owen, A. D. (2004). The economics of climate change (Vol. 3). Routledge.

### Unit-1 Global warming: scientific modelling and its relationship to the economic dimensions of policy

The science of global warming – a concise guide, Scientific models of the enhanced greenhouse effect, Global warming: scenarios, potential impacts, policies and the economic debate,

### Unit-2 Climate protection: what insight can economics offer?

Defining market failure, confronting costs and benefits, identifying risk reduction strategies, creating economic incentives, rationalizing international architecture, clarifying political economics

### Unit-3 Cost-Benefit Analysis and climate change

The welfare economic foundations of Cost-Benefit Analysis, Stages of a CBA, Applications of CBA to climate change and climate change policy, Applying CBA to climate change: what are the key problems?

**Unit-4 Economic modelling of global climate change**

The role of economic models in the greenhouse debate, An overview of the G-Cubed multi-country model, Results from a range of models on the cost of the Kyoto Protocol

**Unit-5 The role of energy prices in global climate change**

Carbon taxes, Fossil fuel subsidies

**Unit-6 Recent development on Economics of climate change**

Accounting of Climate change in GDP, Climate change and health, micro level analysis of climate change, Climate policy, stranded assets, and investors' expectations

**Continuous Assessment Pattern**

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Topics in Econometrics			
<b>Course Code</b>	MLA02T5042			
<b>Prerequisite</b>	Econometrics			
<b>Corequisite</b>				
<b>Antirequisite</b>	Time Series Econometrics			
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

**Course Objectives:**

The Objectives of the course are:

- To understand basic Non Linear Regression Models and apply these concepts for further knowledge gain
- To estimate various Qualitative Regression Model for forecasting and learn how to estimate regression models using a regression statistical package.
- To provide the evidences that they are able to perform Panel Data Regression Models.
- To improve ability to design and estimate the Simultaneous Equation Models
- To use and implement the concepts of Problem of Identification to Develop econometric models for empirical verification.

**Course Outcomes**

On the successful completion of the course, the student would be able to –

<b>CO1</b>	Deal with the Non Linear Regression and related measures
<b>CO2</b>	Estimate various Qualitative Regression Model for empirical findings
<b>CO3</b>	Perform Panel Data Regression Models
<b>CO4</b>	Provide the Simultaneous Equation Models
<b>CO5</b>	Develop the models which are corrected for the Problem of Identification
<b>CO6</b>	Apply the tools to understand Macroeconomic modelling

**Text Book (s)**

- D. N. Gujarati, D.C. Porter and Gunasekar, *Basic Econometrics*, McGraw Hill, 5<sup>th</sup> edition, 2012.

**Reference Book (s)**

- Christopher Dougherty, *Introduction to Econometrics*, Oxford University Press, 4<sup>th</sup> edition, Indian Edition, 2011.
- Jeffrey M Wooldridge, *Introductory Econometrics: Modern Approach*, Cengage learning, 4<sup>th</sup> edition, 2009.

**Unit-1 Non Linear Regression**

Intrinsically Linear and Non Linear Model, Estimation of Non Linear Model, Estimating with Trial and Error Method, Approaches to Estimating Non Linear Model.

**Unit-2 Qualitative Response Models**

Linear Probability Models, Applications and alternatives – Logit, Probit and Tobit, Poisson Regression Model, and Further topics in Qualitative response models.

**Unit-3 Panel Data Regression Model**

Introduction, Pooled OLS Regression Model, Fixed Effect Least Square Dummy Variable Model, Fixed Effect within group Estimator, Random Effect Model and importance of Panel Data Regression.

**Unit-4 Simultaneous Equation Models**

Nature, Examples, Bias – Inconsistency with numerical illustration. Approaches to Estimation and inference.

**Unit-5 The Identification Problem**

Notation and Definitions, Problems and Rules of Identification, Test of Simultaneity, Test for Exogeneity.

**Continuous Assessment Pattern**

<b>Internal Assessment (IA)</b>	<b>Mid Term Test (MTE)</b>	<b>End Term Test (ETE)</b>	<b>Total Marks</b>
20	30	50	100

<b>Name of The Course</b>	Time Series Econometrics			
<b>Course Code</b>	ECO5022			
<b>Prerequisite</b>	Econometrics			
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### Course Objectives:

The Objectives of the course are:

- To understand basic time series econometric concepts and apply these concepts for further knowledge gain
- To estimate various time series regression model for forecasting and learn how to estimate regression models using a regression statistical package.
- To provide the evidences that enable them to perform univariate time series econometric models related to unit root and cointegration.
- To improve ability to estimate the multivariate time series econometric models
- To master intermediate econometric concepts and apply these concepts to Develop econometric models for empirical verification.

### Course Outcomes

On the successful completion of the course, the student would be able to –

<b>CO1</b>	Deal with the Time Series Process and related measures
<b>CO2</b>	Estimate various time series regression model for forecasting
<b>CO3</b>	Perform univariate time series econometric models
<b>CO4</b>	Provide the multivariate time series econometric models
<b>CO5</b>	Develop econometric models for empirical verification
<b>CO6</b>	Use econometric model for real world applications and theories

### Text Book (s)

- Kerry Patterson, An Introduction to Applied Econometrics, A Time Series Approach, Palgrave
- Harris Richard and Robert Sollis, Applied Time Series Modelling and Forecasting, John Wiley

### Reference Book (s)

- Harvey A C, The Econometric Analysis of Time Series, MIT Press
- Hamilton J D, Time Series Analysis, Princeton University Press
- Maddala G S and Kim in-Moo, Unit Root, Cointegration and Structural Change, Cambridge University Press
- Mills T C, Time Series Techniques for Economists, Cambridge University Press

**Unit-1 Preliminaries**

Time Series Process, Stationary Process, Autocovariance and Autocorrelation Functions, Lag Operator, Distributed Lag Model, Nonstationary Process and white Noise.

**Unit-2 Time Series Process and Forecasting**

AR, MA, ARMA, ARIMA, ARCH, GARCH Models and Forecasting.

**Unit-3 Univariate Time Series Models**

Nondeterministic Time Series – Random Walk, Random Walk with Drift, Unit Root, Difference Stationary and Trend Stationary Series, Cointegration versus Spurious Regression, and Error Correction Model.

**Unit-4 Multivariate Time Series Models**

Multivariate Models and Cointegration, Vector Autoregressive Model – Stability and Stationarity, Simple Multivariate (vector) Error Correction Model, and Testing for Cointegration.

**Unit-5 Applications of Time Series Econometrics**

Model Development (for example Exchange Rate and Purchasing Power Parity, The Demand for Money etc) and its estimation with the help of any one econometrical software like Microfit / Eview etc.

**Continuous Assessment Pattern**

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Operation Research in Economics			
<b>Course Code</b>	ECO5032			
<b>Prerequisite</b>	Mathematical Economics			
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

**Course Objectives:**

The Objectives of the course are:

- To understand basic of Linear Programming and apply these concepts for further knowledge gain
- To be able to use Linear Programming Model for various applications.
- To provide the evidences that they are able to perform and find the solutions of Linear Programming Models through simplex method and software.

- To show the ability to design and estimate the solution related to Transportation and Assignment problems
- To use and implement the concepts of Game Theory to develop various models.

### Course Outcomes

On the successful completion of the course, the student would be able to –

<b>CO1</b>	Understand Linear Programming and related measures
<b>CO2</b>	Identify various applications of Linear Programming
<b>CO3</b>	Perform and find the solutions of Linear Programming Models
<b>CO4</b>	Provide the solution related to Transportation and Assignment problems
<b>CO5</b>	Develop the models which are related to Game Theory
<b>CO6</b>	Use of OR techniques in real life economic problems

### Text Book (s)

- Hiller, Lieberman, Nag and Basu, “Introduction to Operations Research”, McGraw Hill
- Vohra, “Quantitative Techniques in Management”, McGraw Hill

### Reference Book (s)

- Anderson, Willium and Swani, “Quantitative Theory and Operations Analysis”, Cengage

#### **Unit-1 Linear Programming: An Introduction**

Linear Programming: Introduction, Structural Constraints and Non-Negativity Constraints.  
Graphical Solution: The Graphics of Linear Inequalities, Systems of Linear Inequalities, Region of Feasible Solutions, Incorporating the Objective Function, Corner Point Solutions, No Feasible Solution and Unbounded Solutions.

#### **Unit-2 Applications Linear Programming**

Application of Linear Programming: Diet Mix Models, Capital Budgeting Models and Blending Models.

#### **Unit-3 Linear Programming: The Simplex**

Simplex Preliminaries: Overview, Requirement and Basic Feasible Solution.  
The Simplex Method: Solution by Enumeration, The Algebra of the Simplex Method, Incorporating the Objective Function, Summary of Simplex Procedure, Maximisation Problem with Mixed Constraints and Minimisation Problems.  
Special Phenomena: Alternative Optimal Solution, No Feasible Solution, Unbounded Solution and Condensed Tableaus.

#### **Unit-4 Linear Programming: Computer Solution Methods**

Computer Solution Methods: An Illustration of an LP Package, Shadow Prices and Sensitivity Analysis.

The Dual Problem: Formulation of the Dual, Primal Dual Solutions and Epilogue.

#### **Unit-5 Linear Programming: Transportation and Assignment Models**

The Transportation Model: General form and Assumptions.

Solutions of Transportation Models: Initial (Starting) Solutions, and The Stepping Stone Algorithm.

The assignment Model and Methods of Solutions: General form and Assumptions, Solution Methods, and The Hungarian Methods.

#### **Unit-6 Game Theory**

Basic Concept of Game Theory: Classification and Description of Games, Payoff Matrix, and Saddle Point Solutions (Strictly Determined Games).

Mixed Strategy –The case of No Saddle Point, and Dominated Strategy.

#### **Continuous Assessment Pattern**

<b>Internal Assessment (IA)</b>	<b>Mid Term Test (MTE)</b>	<b>End Term Test (ETE)</b>	<b>Total Marks</b>
20	30	50	100

<b>Name of The Course</b>	International Trade and Policy			
<b>Course Code</b>	MLA02T5023			
<b>Prerequisite</b>	Knowledge of Micro and Macro			
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

#### **Course Objectives:**

The objectives of the course are:

- To understand existing patterns of international trade
- To Examine trade is beneficial for individual economies and the wider international community and if there are winners and losers from trade
- To study the conduct of trade policy, its objectives and impacts
- To gain familiarity with the world trading system.
- To recognize the cause of trade, sources of the gains from trade and the domestic and international distribution of those gains.

#### **Course Outcomes**

After completing this course, students will be able to:

<b>CO1</b>	Apply different theories of international trade for problem solving situation
<b>CO2</b>	Interpret the effects of international trade on different trading economies
<b>CO3</b>	Predict the effects of different trade restriction policies of trade

<b>CO4</b>	Correlate international trade and economic growth of economy
<b>CO5</b>	Use different policies for BOP adjustment
<b>CO6</b>	Able to get familiar about cause of trade, sources of the gains from trade and the domestic and international distribution of those gains

**Text Book (s)**

- Salvatore, D., *International Economics*, 8th Edition, Wiley India, New Delhi, 2004.
- Krugman P. R. and Obsfeld M., *International Economics- Theory and Policy*, 5<sup>th</sup> Edition, Addison Wesley, New Delhi, 2000.

**Reference Book (s)**

- Soderston, B. and Reed G., *International Economics*, Current Edition, McMillan Press Ltd., London, 1994.

**Unit-1 Theories of International Trade**

Theory of Absolute Advantage, Theory of Comparative Advantage, Factor endowments and Heckscher-Ohlin theorem, Factor price equalization Theorem: Empirical verifications of Heckscher-Ohlin Theory - Leontief Paradox. Factor Intensity Reversal; Stolper-Samuelson Theorem

**Unit-2 Effects of Growth on Trade**

Theory of tariffs, Partial effects and General effects on income distribution, Stolper-Samuelson Theorem, Optimum tariff , Quotas and other quantitative restrictions.

**Unit-3 Gains from Trade and Trade Policy**

Theories of Custom Union: The Viner Model, The Lipsey Model and some customs union in the Asian region (EU, EFTA, NAFTA), Trade as a engine of growth, Trends, Volume and Direction of India's Trade, Trade Policy during the last 10 years

**Unit-4 Foreign Exchange Market**

Internal and External Balance with Expenditure changing and Switching policies; Equilibrium in Goods market, money market and Balance of payments, Fiscal and Monetary Policies for Internal and External Balance with Fixed Exchange Rate; Fiscal and Monetary Policies with Perfect Capital Mobility; IS-LM-BP with Flexible exchange rates; Policy mix

**Unit-5 BOP Adjustments Mechanism**

Fiscal and Monetary Policies for Internal and External Balance with Fixed Exchange Rate; Fiscal and Monetary Policies with Perfect Capital Mobility; IS-LM-BP with Flexible exchange rates; Policy mix

### Unit-6 Current issues

Challenges for globalisation during pandemic situations, International policies and union in the time of pandemic.

### Continuous Assessment Pattern

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Financial Institutions and Markets			
<b>Course Code</b>	MLA02T5033			
<b>Prerequisite</b>	Knowledge of Micro and Macro			
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### Course Objectives:

The objectives of the course are:

- Develop an understanding of functions and theories of money supply
- Apply their understanding of the role of financial institutions markets and institutions
- Understand interest rates, monetary management and instruments of monetary control
- Understand the current monetary policy of India.
- An understanding of the banking sector reforms.

### Course Outcomes

After completing this course, students will be able to:

<b>CO1</b>	Able to understand functions and theories of money supply
<b>CO2</b>	Analyse the role of financial institutions markets and institutions
<b>CO3</b>	Analyze interest rates, monetary management and instruments of monetary control
<b>CO4</b>	Analyze the current monetary policy of India
<b>CO5</b>	Develop an understanding of the banking sector reforms
<b>CO6</b>	Able to understand institutional change in banking sector

### Text Book (s)

- F. S. Mishkin and S. G. Eakins, Financial Markets and Institutions, Pearson Education, 6<sup>th</sup> edition, 2009.
- L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5<sup>th</sup> edition, 2011.

**Reference Book (s)**

- M. Y. Khan, Indian Financial System, Tata McGraw Hill, 7<sup>th</sup> edition, 2011

<b>Unit-1 Introduction</b>
Money: Introduction. Functions of Money. Measurement of Money. Theories of Money supply. Financial Markets and Economic Development. Meaning and Types of Debt Instruments.
<b>Unit-2 Primary and Secondary market</b>
Money Market and Capital Market. Asymmetric Information: Moral Hazard and Adverse Selection. Financial Crises. Financial Derivatives. Government Securities Market. Commercial and Development Banks. Mutual Funds. NBFIs.
<b>Unit-3 Interest</b>
Theories of term structure of interest of interest rates. Goals, targets, indicators and instruments of monetary. Monetary management in an open economy. Current monetary policy of India.
<b>Unit-4 Foreign Exchange Market</b>
Changing role and structure; banking sector reforms. Balance sheet and portfolio management. Exchange Rate-Portfolio Balance Model;
<b>Unit-5: BOP Adjustments Mechanism</b>
Monetary Model; Dornbusch Model of Overshooting Exchange Rates; Asian Financial Crisis; Global Financial Crisis.
<b>Unit-6: Current Issues</b>
Stock market in the time of Pandemic, Foreign exchange and current economic environment

**Continuous Assessment Pattern**

<b>Internal Assessment (IA)</b>	<b>Mid Term Test (MTE)</b>	<b>End Term Test (ETE)</b>	<b>Total Marks</b>
20	30	50	100

<b>Name of The Course</b>	Trade and Development			
<b>Course Code</b>	MLA02T5043			
<b>Prerequisite</b>	Knowledge of Micro and Macro			
<b>Corequisite</b>				
<b>Antirequisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### Course Objectives:

The objectives of the course are:

- To application of the existing trade theories and policies on the emerging debates in relation to the growth and Development.
- To understand the impact of trade policies on welfare gains, employment.
- To understand the impact of trade policies on pro-poor growth.
- To understand the impact of trade policies on inequality and environment.

### Course Outcomes

<b>CO1</b>	The students will be exposed to standard empirical tools applied for estimating welfare gains from trade, gravity modelling, productivity analysis and pro-poor growth.
<b>CO2</b>	It will update the understand the effects of tariffs and subsidies on trade patterns and the welfare of trading nations
<b>CO3</b>	Explain how international negotiations and agreements have promoted world trade
<b>CO4</b>	Identify and measure the sources of economic growth using conventional and advanced methods
<b>CO5</b>	Students will able to understand the importance of trade in economic development.
<b>CO6</b>	Able to understand policies issues

### Text Book (s)

- Krugman P. R. and Obsfeild M., *International Economics- Theory and Policy*, 5<sup>th</sup> Edition, Addison Wesley, New Delhi, 2000.

### Reference Articles and Handbooks:

- Bagwell, K. and Staiger, R.W. (2018): Handbook of Commercial Policy, Vol 1A and 1B, North-Holland: Elsevier.
- Irwin, Douglas (2015): Free Trade Under Fire, Princeton University Press.
- Feenstra, Robert C. (1992): "How Costly is Protectionism?" The Journal of Economic Perspectives 6(3): 159-78.
- Baldwin, Robert E. (1989): "The Political Economy of Trade Policy." The Journal of Economic Perspectives 3(4) : 119-35.

- Krugman, Paul R.(1987): "Is Free Trade PassAl'?" ~ The Journal of Economic Perspectives 1(2): 131-44.
- Costinot A., and A. Rodriguez-Clare (2013): "Trade Theory with Numbers: Quantifying the Consequences of Globalization." NBER Working Paper no. 18896
- Anderson, James E, and Van Wincoop (2004): "Trade Costs." Journal of Economic Literature 42 : 691-751.
- Grossman,G. and Helpman, E. (1994): "Protection for Sale"American Economic Review 84(4): 833-50.
- Bagwell, Kyle, and Staiger, R. W. (1999): "An Economic Theory of GATT." American Economic Review 89(1) : 215-48.
- Grossman, G., and E. Helpman. (1995): "Trade Wars and Trade Talks." Journal of Political Economy 103, 675-708. (NBER Working Paper no. 4280)
- Maggi, G., and A. Rodra~ guez-Clare (1998): "The Value of Trade Agreements in the Presence of Political Pressures." Journal of Political Economy 106(3) : 574-601.
- Horn, Henrik, G. Maggi, et al. (2010): "Trade Agreements as Endogenously Incomplete Contracts." American Economic Review 100(1) : 394-419.
- Feenstra, Robert C. (2015): Advanced International Trade: Theory and Evidence. Princeton University Press.
- Falkner, Robert (ed.) (2016): The Handbook of Global Climate and Environment Policy, Cheltenham: John Wiley and Sons.

#### **Unit-1 Effects of Growth on Trade**

Effects of growth on trade; Rybczynski Theorem, Concept and policy implications of Immiserising growth, Technical progress and economic growth, Causes of emergence and Measurement of Intra-Industry Trade and its impact on Developing Economies

#### **Unit-2 Trade Policies and Its Implications**

Trade policies (tariff and non-tariff barriers) and implications. Analytical Approaches to Global Institutions (Public and Private) and Trade Policy. Trade creation and diversion and gravity modelling

#### **Unit-3 Political Economy of Trade**

Political economy of trade agreements and role of WTO. Issues in Trade, Welfare and Growth – Trade – gains and methods – Trade, FDI and growth (spillovers, competition effects) –

#### **Unit-4 Trade inequality**

Trade, inequality, distributive conflict, pro-poor growth. Fair trade and industrial policy – labor standards, environment.

**Unit-5 Global Production Issues**

Emigration, trade and development. Global production and issues

**Unit-6 Current Issue**

FDI distribution after COVID-19. Possibilities of shifting of MNEs from China to India, Emigration during or after the pandemic

**Continuous Assessment Pattern**

Internal Assessment (IA)	Mid Term Test (MTE)	End Term Test (ETE)	Total Marks
20	30	50	100

<b>Name of The Course</b>	Economics of Health				
<b>Course Code</b>	ECO5024				
<b>Prerequisite</b>	Knowledge of Micro and Macro economics				
<b>Corequisite</b>					
<b>Anti-requisite</b>					
		<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
		4	0	0	4

**Course Description**

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

**Course Objectives**

The Objectives of the course is to acquaint the student with the basic theory and application of econometrics.

1. Understand how to use empirical evidence to evaluate an economic argument.
  2. show a high degree of independence in setting up problems and analyse health economics issues
  3. be able to account relevant scientific and policy aspects; - be able to critically make assessments of different ways of communication between health economic researchers and policy-makers
  4. be able to demonstrate insight into the potential and limitations of science, its role in society and organizations and people responsibility for how it is used.
  5. have the ability to make a reflective use of the scientific literature, identifying strengths and weaknesses in theoretical and empirical work.
2. be able to integrate knowledge and understanding of health economic theory and methods for independent analysis of different problems of how health care is financing and organised, including the role of third-party payers, the central government, public and private providers

## Course Outcomes

After completing this course, students will be able to:

<b>CO1</b>	Able to show a high degree of independence in setting up problems and analyse health economics issues.
<b>CO2</b>	Able to account relevant scientific and policy aspects
<b>CO3</b>	Able to critically make assessments of different ways of communication between health economic researchers and policy-makers
<b>CO4</b>	Able to solve "real world" problems those are frequently encountered by firms, governments, and policy makers.
<b>CO5</b>	Understand how the health care market works and under what conditions health care can be efficiently produced and allocated through markets, regulations and planned system
<b>CO6</b>	Able to understand the implications of market and government failures in the context of health care, and understand how many institutions and regulatory arrangements observed in the sector

## Prescribed Texts

- William, Jack, Principles of Health Economics for Developing Countries, World 24 Bank Institute Development Studies, 1999.
- World Development Report, Investing in Health, The World Bank, 1993.
- Ronald G., Ehrenberg and Robert S., Smith, Modern Labor Economics: Theory and Public Policy, Addison Wesley, 2005.

## Additional References

- Christopher Dougherty, *Introduction to Econometrics*, Oxford University Press, 4<sup>th</sup> edition, Indian Edition, 2011.
- Jeffrey M Wooldridge, *Introductory Econometrics: Modern Approach*, Cengagelearning, 4<sup>th</sup> edition, 2009.

### **Unit:1 The economic way of thinking about health**

Role of health care sector in Human Development Importance in poverty alleviation; health and education outcomes and their relationship with macroeconomic performance.

### **Unit:2 Microeconomic Foundations of Health Economics Demand for health**

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

**Unit:3 Evaluation of Health Programs Costing, cost effectiveness and cost-benefit analysis**

Health Sector in India: An Overview Health outcomes; health systems; health financing.  
burden of disease

**Unit:4 Preventive Health care sector**

Sanitation  
Drinking Water  
Sludge management

**Unit:-5 Health expenditure pattern of COVID 19**

Methods to collect funds for COVID-19, economics impacts due to collection of funds for COVID 19

**Unit:-6 Impact of COVID 19 on health infrastructure**

Macro-economic variables, development in health infrastructure, impact on health products industries

**Evaluation Scheme**

Description	Weight age (Percentage)
• Internal Assessment	20%
• CAT 1 *	15%
• CAT 2	15%
• End Term Exam (3 hours)	50%

\*continuous Assessment Test

<b>Name of The Course</b>	Economics of Education			
<b>Course Code</b>	ECO5028			
<b>Prerequisite</b>	Knowledge of Statistics – I and II, Mathematics for Economics – I and II.			
<b>Corequisite</b>				
<b>Anti-requisite</b>				
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

### **1Course Description**

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

### **Course Objectives**

The Objectives of the course is to acquaint the student with the basic theory and application of econometrics.

- To provide an insight of economics of education;
- Differentiate between ordinary economics and economics of education;
- Identify the fundamental problem of economics of education;
- Explain what an economist of education can do to solve the fundamental problem in the educational system
- To improve ability to governments, and policy makers.
- Understand the importance of economics of education for development of economy.

### **4Course Outcomes**

After completing this course, students will be able to:

<b>CO1</b>	Explain how to estimate cost and benefits of developing Education sector in the economy
<b>CO2</b>	Explain how to interpret regression estimates and test significance of them
<b>CO3</b>	Explain and diagnose the assumptions of the cost benefit analysis for education
<b>CO4</b>	Develop an understanding of planning, financing and cost of education.
<b>CO5</b>	Develop and understanding of the link between the educational system and economic development.
<b>CO6</b>	Develop an understanding of educational problems in the context of economic concepts. Theories and techniques.

### **Prescribed Texts**

- Saxena S. , Educational Planning in India New Delhi Sterling Publishers Pvt. Ltd. sjeehan J. Economics of Education London George Allen and Unwin Ltd.
- Majumdar, T, Investment in Education and social Choice, Cambridge, Cambridge University Press.
- Blaug. M , an Introduction to the Economics of Education London: Penguin
- Garg V. P. The Cost Analysis in higher Education New Delhio, Metropolitan Book Co. Pvt Ltd.
- Goel S. C. Education and Economics Growth in India Delhi. Macmillan,

### **5.1 Additional References**

1. O'Donohue. M (1971) Economics Dimensions in Education Chicago: Aldine Alterton
2. Padmanabhan C. B. (1971) Economics of Educational Planning in India New Delhi. Arya Book Depot.

### **Pedagogy**

The pedagogical approach used in the course will be a combination of lectures, chalk & talk, problem solving exercises, and computational exercises.

### **Detailed Outlines of Course**

#### **SESSION WISE INSTRUCTION PLAN**

#### **Unit:-1 Education: Investment in Human Capital Rate of return to education And Cost of Education**

private and social; quality of education; signaling or human capital; theories of discrimination; gender and caste discrimination in India. a. Concept of Cost of Education. Types of Educational costs: Direct cost, Indirect cost, Private cost, Social cost and Opportunity cost. b. Unit cost of Education: Its estimation. Its applications to different levels, modes and types of education. External and Internal Efficiency of Education.

**Unit:-2 Education Sector in India**

An Overview Literacy rates, school participation, school quality measures.

Sources of finance for education: private, public, fees, donations, Endowments and grants. Grant-in-aid principles and practices with special reference to higher education. Government's role in financing education at different levels with special reference to higher education.

**Unit:-3 Conceptual Issues in economics of Education**

Meaning, definition, scope and importance of Economics of Education. The relationship between education and the economic system.

**Unit:- 4 Educational finance**

financing of education, absorbing the educated manpower, education as an industry, education as consumption and Education as individual, social and national investment., Spill-over and inter-generational effects of education.

**Unit:-5 Education, Equity and Income Distribution** Equal opportunity criterion, the cost – benefit criterion, and the ability to pay criterion. Education as a determinant of income variance, and the relevant contribution of different levels of education.

**Unit 6:- Vocational Education**

Importance of vocational education, current government policies and vocational education, vocal for local

**Evaluation Scheme**

Description	Weight age (Percentage)
• Internal Assessment	20%
• CAT 1 *	15%
• CAT 2	15%
• End Term Exam (3 hours)	50%

\*continuous Assessment Test

### DETAILED SYLLABUS

<b>Name of The Course</b>	Gender Economics and Development			
<b>Course Code</b>	MSL22T5044			
<b>Prerequisite</b>	Basic understanding of development economics			
<b>Corequisite</b>				
<b>Antirequisite</b>	NA			
	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	4	0	0	4

#### Course Objectives:

- To improve ability to analyse the functioning of patriarchy in developed and LDCs.
- To understand the significance of female population.
- To understand the economic status of women and its effect on work-participation rate, income level, health, and education in developing countries.
- To improve ability to understand the paradigm shifts from women's well-being to women's empowerment

#### Course Outcomes

After completing this course, students will be able to:

<b>CO1</b>	Explain Gender and development indices
<b>CO2</b>	Explain Economic status of women and its effect on work-participation rate, income level, health, and education
<b>CO3</b>	Explain Theories and measurement of fertility and its control
<b>CO4</b>	Explain the difference in the status of Women in patriarchal and matriarchal societies and structures, patrilineal and matrilineal systems
<b>CO5</b>	Able to understand the economic status of women and its effect on work-participation rate
<b>CO6</b>	Able to understand the importance of gender in HDI

#### Text Book (s)

- Boserup E. (1970), Women's Role in Economic Development, George Allen and Unwin, London.
- Desai, N. and M.K. Raj. (Eds.) (1979), Women and Society in India, Research Centre for Women Studies, SNDT University, Bombay.
- Government of India (1974), Towards Equality — Report of the Committee on the Status of Women in India, Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi.

#### Reference Book (s)

- Krishnaraj, M., R.M. Sudarshan and A. Shariff (1999), Gender, Population and Development, Oxford University Press, New Delhi.
- Seth, M. (2000), Women and Development: The Indian Experience, Sage Publications, New Delhi.

#### **Unit-1 Introduction to Gender Studies**

Importance and concepts of women studies — Women in patriarchal and matriarchal societies and structures, patrilineal and matrilineal systems Economic basis and functioning of patriarchy in developed and LDCs, particularly India; Gender bias in the theories of value, distribution, and population.

#### **Unit-2 Introduction to Demographic Aspects**

Demography of female population: Age structure, mortality rates, and sex ratio — Causes of declining sex ratios and fertility rates in LDCs and particularly India — Theories and measurement of fertility and its control; Women and their access to nutrition, health, education, and social and community resources, and their impact on female mortality and fertility.

**Unit-3 Women in Decision Making**

Factors affecting decision making by women; property rights, access to and control over economic resources, assets; Power of decision making at household, class, community level; Economic status of women and its effect on work-participation rate, income level, health, and education in developing countries and India.

**Unit-4 Women and Labour Markets**

Factors affecting female entry in labour market; Supply and demand for female labour in developed and developing countries, particularly India; Studies of female work participation in different sectors of economy; Wage differentials in female activities; Determinants of wage differentials.

**Unit-5 Gender Planning, Development Policies and Governance**

Gender and development indices; Mainstreaming gender into development policies; Gender planning techniques; Gender sensitive governance; Paradigm shifts from women's wellbeing to women's empowerment.

**Unit 6 Recent Development**

Recent Demographical changes in census 2021

**Continuous Assessment Pattern**

<b>Internal Assessment (IA)</b>	<b>Mid Term Test (MTE)</b>	<b>End Term Test (ETE)</b>	<b>Total Marks</b>
20	30	50	100