



First year syllabus under Auto  
First year syllabus under Auto



Shri Vile Parle Kelavani Mandal's

**MITHIBAI COLLEGE OF ARTS, CHAUHAN INSTITUTE OF SCIENCE  
& AMRUTBEN JIVANLAL COLLEGE OF COMMERCE AND  
ECONOMICS  
(AUTONOMOUS)**

NAAC Reaccredited "A" grade, CGPA: 3.57,  
Granted under FIST-DST & Star College Scheme of DBT, Government of India  
Best College, University of Mumbai 2016-17

Affiliated to the  
**UNIVERSITY OF MUMBAI**

Program : B.A.

Course : ECONOMICS

**Credit Based Semester and Grading System (CBSGS) with effect from  
the academic year 2019-20**

COURSE CODES for the Three Year INTEGRATED BA ECONOMICS programme

Course Code	Class	Semester	Paper No	Paper Title	Credits
UAMAECO101	FYBA	I	I	MICROECONOMICS - I	3
UAMAECO201	FYBA	II	I	MACROECONOMICS - I	3
UAMAECO302	SYBA	III	II	MICROECONOMICS - II	3
UAMAECO303	SYBA	III	III	ELEMENTARY MATHEMATICAL AND STATISTICAL TOOLS FOR ECONOMIC ANALYSIS - I	3
UAMAECO402	SYBA	IV	II	MACROECONOMICS - II	3
UAMAECO403	SYBA	IV	III	ELEMENTARY MATHEMATICAL AND STATISTICAL TOOLS FOR ECONOMIC ANALYSIS - II	3
UAMAECO504	TYBA	V	IV	MICROECONOMICS - III	4
UAMAECO505	TYBA	V	V	ECONOMICS OF DEVELOPMENT	4
UAMAECO506	TYBA	V	VI	INDUSTRIAL AND LABOUR ECONOMICS	3.5
UAMAECO507	TYBA	V	VII	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS	4
UAMAECO508	TYBA	V	VIII	INTRODUCTION TO ECONOMETRICS	4
UAMAECO509	TYBA	V	IX	PROJECT	3.5
UAMAECO604	TYBA	VI	IV	MACROECONOMICS - III	4
UAMAECO605	TYBA	VI	V	INTERNATIONAL ECONOMICS	4
UAMAECO606	TYBA	VI	VI	INDIAN FINANCIAL SYSTEM	3.5
UAMAECO607	TYBA	VI	VII	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS	4
UAMAECO608	TYBA	VI	VIII	INTRODUCTION TO ECONOMETRICS	4
UAMAECO609	TYBA	VI	IX	PROJECT	3.5



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**UNIVERSITY OF MUMBAI**

Program : F.Y.B.A.

Course : ECONOMICS PAPER I

**Credit Based Semester and Grading System (CBSGS) with effect from the  
academic year 2019-20**

## F.Y.B.A COURSE STRUCTURE

F.Y.B.A Paper – I (SEMESTER - I)

### MICROECONOMICS – I

Course Code	UNIT	TOPICS	Credits	Lectures/ week
UAMAECO101	I	Introduction to Microeconomics – Concepts and Methods	3	4 L
	II	Tools for Microeconomic Analysis		
	III	Market Analysis		
	IV	Cost and Pricing		

F.Y.B.A Paper – I (SEMESTER - II)

### MACROECONOMICS – I

Course Code	UNIT	TOPICS	Credits	Lectures/ week
UAMAECO201	I	Introduction to Macroeconomics – Principles and Concepts	3	4 L
	II	Measuring Economic Activity		
	III	Theory of Income Determination		
	IV	Determination of Income in 3 and 4 Sector Models		

F.Y.B.A Paper – I (SEMESTER - I)

## MICROECONOMICS – I

### Preamble

This course is designed to introduce the students to elementary concepts in microeconomics. The student should be able to use these concepts to understand the relevance of microeconomics to the real world. The student should be able to build on these concepts in the future to develop a deeper understanding of the economy.

### Learning Objectives

- To introduce the students to the fundamental concepts in microeconomics.
- To understand the relevance of microeconomic phenomena in the real world.
- To develop an understanding of the application of mathematical tools for microeconomic analysis.

Course Code	Title	Credits
UAMAECO101	Economics - I (Microeconomics - I)	3

Syllabus content	No. of Lectures
<p><b>Module – I : Introduction to Microeconomics – Concepts and Methods</b></p> <ul style="list-style-type: none"><li>• How People make decisions (4 Principles)</li><li>• How People interact (3 Principles)</li><li>• The Economist as Scientist</li><li>• Role of assumptions</li><li>• Economist as Policy Advisor</li><li>• Why Economists disagree ?</li><li>• Circular Flow Model</li><li>• Production Possibility Frontier</li></ul>	15

<b>Module –II : Tools for Microeconomic Analysis</b> <ul style="list-style-type: none"> <li>• Basics of Graphs (Slope, Intercept)</li> <li>• Linear Functions and it's economic applications (Demand, Supply, Equilibrium, Revenue, Cost, Break-even point)</li> </ul>	15
<b>Module – III : Market Analysis</b> <ul style="list-style-type: none"> <li>• Demand Schedule</li> <li>• Supply Schedule</li> <li>• Equilibrium</li> <li>• Price Elasticity of Demand and Supply</li> <li>• Applications to Major Economic Issues ( The Economics of aggregates, Impact of Tax on Price and Quantity, Minimum Floors and Maximum Ceilings, Minimum Wage Controversy, Energy Price Controls, Rationing by the Queues, Coupons, Purse)</li> </ul>	15
<b>Module IV : Cost and Pricing</b> <ul style="list-style-type: none"> <li>• Cost Analysis ( Concepts and behaviour of costs)</li> <li>• Revenue Analysis</li> <li>• Break Even Analysis</li> <li>• Pricing Practices and Strategies (Cost Plus Pricing, Marginal Cost Pricing, Multiple Product Pricing, Transfer Pricing, Average Cost Pricing, Ramsey Pricing, Peak- Load Pricing)</li> </ul>	15

**Basic Reference :**

1. N. Gregory Mankiw, Principles of Microeconomics, 7<sup>th</sup> edition, Cengage Learning, 2015, Ch 1 and 2, Mod I and II.

**Additional References :**

2. Budnick S. Frank, Applied Mathematics for Business, Economics and The Social Sciences, 4<sup>th</sup> ed, Tata McGraw Hill, Ch 2 and 5 , Mod II.
3. Mehta – Madnani, Mathematics for Economists, S Chand Publishers, Mod II.
4. Nordhaus and Samuelson, Economics, 19<sup>th</sup> ed, Tata McGraw Hill, Part II, Ch 7, Mod III and IV.
5. Dr. H.L.Ahuja, Managerial Economics , 8<sup>th</sup> ed, S Chand Publishers, Mod IV.
6. Dwivedi,D.N., Microeconomics :Theory and Applications; Pearson Education (Singapore) Pvt. Ltd, Delhi, Mod III
7. Sen Anindya (2007), Microeconomics: Theory and Applications, Oxford University Press, New Delhi
8. Salvatore D. (2003), Microeconomics: Theory and Applications, Oxford University Press, New Delhi.

**MACROECONOMICS – I**

**Preamble**

This course is designed to introduce the student to the basic building blocks of macroeconomics. Using an open economy framework, the course develops an understanding of the constituents of the open economy. The student should be able to build on these constituents in the later years so as to be able to analyze macroeconomic policies.

**Learning Objectives**

- To introduce the student to the basic concepts of macroeconomics.
- To develop an understanding of the constituents of an open economy.
- To build their ability for analysis of macroeconomic policy framework.

Course Code	Title	Credits
UAMAECO201	Economics - I (Macroeconomics - I)	3

<b>Syllabus content</b>	<b>No. of Lectures</b>
<b>Module – I : Introduction to Macroeconomics – Principles and Concepts</b> <ul style="list-style-type: none"><li>• How the Economy as a whole works (3 Principles)</li><li>• What is Macroeconomics about</li><li>• What do Macroeconomists do</li><li>• Why Macroeconomists disagree</li></ul>	15
<b>Module –II : Measuring Economic Activity</b> <ul style="list-style-type: none"><li>• The Economy’s Income and Expenditure</li><li>• The measurement of GDP</li><li>• The components of GDP</li><li>• Real v/s Nominal GDP</li><li>• Is GDP a good measure of economic well-being</li><li>• The Consumer Price Index</li><li>• Correcting economic variables for effects of inflation</li></ul>	15

<p><b>Module – III : Theory of Income Determination</b></p> <ul style="list-style-type: none"> <li>• Say’s Law : The Foundation of Classical Macroeconomics</li> <li>• Keynesian Basic 2 – Sector Model</li> <li>• Consumption Function</li> <li>• Investment Function</li> <li>• A Simple Model of Investment Multiplier</li> </ul>	15
<p><b>Module IV : Determination of Income in 3 and 4 Sector Models</b></p> <ul style="list-style-type: none"> <li>• 3 – Sector Model ( Government Expenditure and National Income)</li> <li>• Government Expenditure, Budget Deficit and Capital Markets</li> <li>• Lumpsum Tax and Transfer Payments</li> <li>• 4 – Sector Model ( Foreign Trade and National Income)</li> <li>• Trade Balance and International Capital Flows</li> </ul>	15

**Basic Reference :**

1. Abel, A. B., B. S. Bernanke and D. Croushore (2011), Macroeconomics, Pearson, New Delhi, Part 1, Ch 1, Mod I.

**Additional References :**

1. Nordhaus and Samuelson, Economics, 19<sup>th</sup> ed, Tata McGraw Hill, Part 5, Ch 20, Mod II.
2. Dr. H.L.Ahuja, Managerial Economics , 8<sup>th</sup> ed, S Chand Publishers, Ch 3 and 4, Mod III and IV.
3. N. Gregory Mankiw, Principles of Macroeconomics, 7<sup>th</sup> edition, Cengage Learning, 2015, Ch 1, Mod I.
4. Mankiw N Gregory, Economic Principles and Applications, 2007 ed, Cengage Learning, Part 8, Ch 2 and 3, Mod II.
5. Dwiwedi D N, Macroeconomics, Theory and Policy, 3<sup>rd</sup> ed, Tata McGraw Hill, Part 2, Ch 6, Mod III.
6. Dwiwedi D N, Principles of Economics, Vikas Publishing House, New Delhi.
7. Sikdar, S. (2006), Principles of Macroeconomics, Oxford University Press, New Delhi.



### Scheme of Examination:

The performance of the learners shall be evaluated into two parts. The learner's performance shall be assessed through Internal Assessment with 25 % marks in the first part and by conducting the Semester End Examinations with 75 % marks in the second part.



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Program : S.Y.B.A.

Course : ECONOMICS Paper – II and III

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## S.Y.B.A. COURSE STRUCTURE

S.Y.B.A Paper – II (SEMESTER - III)

### MICROECONOMICS – II

Course Code	UNIT	TOPICS	Credits	Lectures/ week
UAMAECO302	I	Utility Analysis	3	3 L
	II	Production Analysis		
	III	Competitive Markets		
	IV	Monopoly		

S.Y.B.A Paper – II (SEMESTER - IV)

### MACROECONOMICS – II

Course Code	UNIT	TOPICS	Credits	Lectures/ week
UAMAECO402	I	Money Supply	3	3 L
	II	Money, Unemployment and Inflation		
	III	IS – LM Model		
	IV	AD – AS Model		

S.Y.B.A Paper – III (SEMESTER - III)

**Elementary Mathematical and Statistical Tools for Economic Analysis - I**

Course Code	UNIT	TOPICS	Credits	Lectures/ week
UAMAECO303	I	Economic Applications of Equations	3	3 L
	II	Basic Calculus		
	III	Collection, Tabulation and Representation of data		
	IV	Measures of Central Tendency		

S.Y.B.A Paper – III (SEMESTER - IV)

**Elementary Mathematical and Statistical Tools for Economic Analysis - II**

Course Code	UNIT	TOPICS	Credits	Lectures/ week
UAMAECO403	I	Integration	3	3 L
	II	Matrix Algebra		
	III	Measures of Dispersion		
	IV	Index Numbers		

## Learning Objectives

- To introduce the students to the fundamental concepts in microeconomics and understand the relevance of microeconomic phenomena in the real world.
- To introduce the students to the fundamental concepts in macroeconomics and understand the relevance of macroeconomic phenomena in the real world.
- To teach the learner how to collect data and present it in various forms for economic interpretation.
- To introduce the learner to the basic mathematical and statistical tools of economic analyses.

## Scheme of Examination:

The performance of the learners shall be evaluated into two parts. The learner's performance shall be assessed through Internal Assessment with 25 % marks in the first part and by conducting the Semester End Examinations with 75 % marks in the second part.

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SYBA Paper – II (Semester - III)

UAMAECO302 **Microeconomics – II**

(3 credits)

**Preamble :** The Course is designed to develop the students' understanding of basic tools of microeconomic analysis. It builds on the material covered in semester I and is designed to help the student apply microeconomics to the real world.

**Module I. Utility Analysis**

- Consumer preferences (strong ordering-weak ordering-completeness-transitivity-rational preferences)
- Indifference Curve Analysis
- Consumer's Equilibrium
- Income – Substitution – Price Effect
- Derivation of Demand Curve

**Module II. Production Analysis**

- Meaning and Types of Production function (Two Factor Analysis)
- Isoquants and their properties
- Least Cost Factor Combination
- Derivation of factor demand curves
- Returns to scale

**Module III. Competitive Markets**

- Features of Perfect Competition
- Derivation of Short Run Supply Curve
- Short Run Equilibrium of Firm and Industry
- Long Run Equilibrium of Firm and Industry
- Economic Efficiency of Perfect Competition

**Module IV. Monopoly**

- Definition and Sources of Monopoly
- Profit Maximisation (Short Run and Long Run)
- Price Discrimination
- Dumping
- Lerner's measure of monopoly power

**Basic Reference :**

1. Salvatore D. 2003, Microeconomics: Theory and Applications, OUP, New Delhi, Ch 3 & 4 Mod I, Ch 7 & 8 Mod II, Ch 9 Mod III, Ch10 Mod IV

**Additional References :**

2. Dr. H.L.Ahuja, Advanced Economic Theory, S Chand Publishers, Mod I,II,III,IV
3. Dr. H.L.Ahuja, Managerial Economics, 8<sup>th</sup> ed, S Chand Publishers, Mod IV
4. N. Gregory Mankiw, Principles of Microeconomics, 7<sup>th</sup> edition, Cengage Learning

SYBA Paper – II (Semester - IV)

UAMAECO402 **Macroeconomics - II**

(3 credits)

**Preamble :** This paper is designed to build on the understanding of basic macroeconomic identity introduced in semester II. The objective of this paper is to enable the student to understand how interest rates and income levels are determined in a closed economy. This paper will also introduce concepts of inflation and unemployment and enable the student to understand determination of aggregate price level in a closed economy framework.

### **Module I. Money Supply**

- Meaning, Functions of Money
- Meaning, Constituents of Money supply
- Determinants of Money Supply (High powered money, Money Multiplier)
- Quantity theory of Money (Fisher, Marshall, Robertson, Pigou and Keynes)
- RBI's Approach to measurement of Money Supply

### **Module II. Money, Unemployment and Inflation**

- Motives for Holding Money – Demand for Money
- Unemployment : Meaning and types
- Inflation – Meaning, types (Demand-Pull, Cost-Push)
- Causes, Effects and Measures to control Inflation

### **Module III. IS – LM Model**

- Goods market equilibrium ; Derivation of IS curve
- Money Market equilibrium : Derivation of LM curve
- Shifts in IS and LM
- Simultaneous equilibrium between Goods and Money Market.

### **Module IV. AD – AS Model**

- Derivation of Aggregate demand
- Aggregate Supply Curve
- Equilibrium between Aggregate Demand and Aggregate Supply
- Shifts in AS curve and Stagflation
- Inflation and Unemployment : Phillips Curve

**Basic Reference :**

1. Abel, A. B., B. S. Bernanke and D Croushore (2011), Macroeconomics, Pearson, New Delhi, Mod I
2. Ahuja H.L., Macroeconomics : Theory and Policy, S Chand Publ., New Delhi, Mod II,III, IV

**Additional References :**

1. Sikdar, S. (2006), Principles of Macroeconomics, OUP, New Delhi, Ch 1 & 2 Mod II & III, Ch 8 & 9 Mod IV
2. N. Gregory Mankiw, Principles of Macroeconomics, 7<sup>th</sup> edition, Cengage Learning
3. Salvatore D. 2003, Macroeconomics: Theory and Applications, OUP, New Delhi
4. Errol D'Souza, Macroeconomics, Pearsons, New Delhi

- ❖ The department faculty and students will undertake a visit to RBI with the aim of understanding RBI's monetary policy and role in banking system.

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SYBA Paper – III (Semester – III)

**UAMAECO303 Elementary Mathematical and Statistical Tools for Economic Analysis – I** (3 credits)

**Preamble :** The Course is designed to develop the students' understanding of basic quantitative tools of economic analysis. It introduces the student to basic mathematical and statistical techniques of collecting, tabulating and representing economic data. It equips the student with the knowledge of basic calculus for univariate and multivariate functions and measures of central tendency.

**Module I. Economic Applications of Equations**

- Polynomials ( Linear and Quadratic )
- Simultaneous Equations
- Indifference Curves and Iso cost Lines
- Income determination Models
- IS-LM Analysis

**Module II. Basic Calculus**

- Derivatives
- Rules of Differentiation
- Mutivariate Functions and Partial Derivatives (only basic rules)

**Module III. Collection, Tabulation and Representation of data**

- Collection of Data : Primary and Secondary data
- Classification and Tabulation of Data
- Frequency Distribution (Grouped and Ungrouped frequency distributions)
- Diagrammatic Presentation (Bar diagrams, Pie diagrams and Histograms)

**Module IV. Measures of Central Tendency**

- Characteristics of a good Average
- Arithmetic Mean (Mathematical Properties, Calculation, Merits and Demerits)
- Median (Calculation, Graphical method, Merits and Demerits)
- Mode (Calculation, Graphical method, Merits and Demerits)

**Basic Reference :**

1. Dowling Edward T., Introduction to Mathematical Economics, Schaum's Outlines 3<sup>rd</sup> Ed, Tata Mcgraw Hill, New Delhi.

**Additional References :**

2. Dowling Edward T., Theory and Problems of Mathematical Methods for Business and Economics, McGraw –Hill, 1993
3. Gupta S.P., Statistical Methods, S. Chand, New Delhi, Vol I

4. Sancheti D.C. and V.K. Kapoor, Statistics-Theory, Methods and Applications, S. Chand, New Delhi



SYBA Paper – III (Semester – IV)

UAMAECO403 **Elementary Mathematical and Statistical Tools for Economic**

**Analysis – II**

(3 credits)

**Preamble :** The Course is designed to develop the students' understanding of basic quantitative tools of economic analysis such as integration and matrix algebra. It introduces the student to basic statistical techniques of finding and interpreting measures of dispersion and index numbers.

**Module I. Integration**

- Rules of Integration
- Indefinite Integrals
- Definite Integrals
- Area under a curve

**Module II. Matrix Algebra**

- Definitions and terms
- Addition and subtraction of Matrices
- Multiplication of Matrices
- Commutative, distributive and associative Laws of Matrices
- Determinants

**Module III. Measures of Dispersion**

- Characteristics of an ideal measure
- Absolute and Relative Measures
- Range and Quartile deviation
- Mean deviation
- Standard deviation

**Module IV. Index Numbers**

- Characteristics of index numbers
- Simple and Composite index numbers
- Laspeyre's and Paasche's Index numbers
- Fischer's index number
- Cost of living and deflating index numbers

**Basic Reference :**

1. Dowling Edward T., Introduction to Mathematical Economics, Schaum's Outlines 3<sup>rd</sup> Ed, Tata Mcgraw Hill, New Delhi.

**Additional References :**

2. Dowling Edward T., Theory and Problems of Mathematical Methods for Business and Economics, McGraw –Hill, 1993
3. Gupta S.P., Statistical Methods, S. Chand, New Delhi, Vol I
4. Sancheti D.C. and V.K. Kapoor, Statistics-Theory, Methods and Applications, S. Chand, New Delhi

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Program : T.Y.B.A.

Course : ECONOMICS All Papers

**Credit Based Semester and Grading System (CBSGS) with effect from  
the academic year 2019-20**

## TYBA COURSE STRUCTURE

TYBA Semester V					
Course Code	Paper No.	Name of the Paper	Credits	Marks	Lectures/ week
UAMAECO504	IV	MICROECONOMICS - III	4	100	4
UAMAECO505	V	ECONOMICS OF DEVELOPMENT	4	100	4
UAMAECO506	VI	INDUSTRIAL AND LABOUR ECONOMICS	3.5	100	3
UAMAECO507	VII	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS	4	100	4
UAMAECO508	VIII	INTRODUCTION TO ECONOMETRICS	4	100	4
UAMAECO509	IX	PROJECT	3.5	100	3

TYBA Semester VI					
Course Code	Paper No.	Name of the Paper	Credits	Marks	Lectures/ week
UAMAECO604	IV	MACROECONOMICS - III	4	100	4
UAMAECO605	V	INTERNATIONAL ECONOMICS	4	100	4
UAMAECO606	VI	INDIAN FINANCIAL SYSTEM	3.5	100	3
UAMAECO607	VII	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS	4	100	4
UAMAECO608	VIII	INTRODUCTION TO ECONOMETRICS	4	100	4
UAMAECO609	IX	PROJECT	3.5	100	3

**Preamble :** The TYBA Syllabus will be revised to enable students to understand the current trends in the discipline of Economics. All papers will be revised from the academic year 2019-20 to be taught under Autonomy to cater to the specific needs of our learners. A broad overview of the structure followed by the detailed syllabi of individual papers is given below.

## Learning Objectives

- To understand the relevance of microeconomic and macroeconomic phenomena in the real world.
- To introduce concepts, theories and policies regarding growth and development as it has evolved over the years.
- To develop a systematic exposition of models that explains the composition, direction, and consequences of international trade and the determinants and effects of trade policy.
- To equip the students with the knowledge about the fundamentals of Industrial Economics and also the latest policies relating to the Indian Industry.
- To acquaint students with various components of the Indian financial system, its working and trends in recent years.
- To develop an understanding of the application of mathematical, statistical and econometric tools for economic analysis and forecasting.
- The main objective of this paper is to strengthen a student's critical thinking and reasoning ability at planning and conducting economic research and to enable them to communicate the outcomes of their research effectively.

## Scheme of Examination:

The performance of the learners shall be evaluated into two parts. The learner's performance shall be assessed through Internal Assessment with 25 % marks in the first part and by conducting the Semester End Examinations with 75 % marks in the second part.

## MICROECONOMICS III: PAPER IV

### **Preamble:**

The course is designed to provide sound training in microeconomic theory. Since students have already studied the perfect competition and monopoly, the focus of this course is on the study of imperfect competition, general equilibrium theory, welfare economics and game theory.

### SEMESTER – V

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO504	IV	MICROECONOMICS - III	4	100

### **Module I: Monopolistic Competition and Oligopoly**

- Monopolistic competition – Features and equilibrium
- Oligopoly – Kinked demand hypothesis
- Cournot model and Bertrand model
- Collusion, Cartels and Price Leadership

### **Module II: Game Theory**

- Basics of Game Theory
- Prisoner's Dilemma
- Dominant strategy equilibrium
- Nash Equilibrium
- Ultimatum Game

### **Module III: General Equilibrium and Welfare Economics**

- Interdependence in the Economy
- Pareto Optimality criterion of Social Welfare
- Marginal Conditions of Pareto Optimal Resource Allocation
- Kaldor – Hicks Compensation Criterion
- Arrow's Impossibility Theorem

### **Module IV: Market Failure**

- Missing Markets
- Asymmetric Information: The Market for Lemons
- Adverse selection & Market Signalling: Insurance markets
- The Problem of Moral Hazard
- The Principal - Agent Problem: Efficiency Wage Theory
- Coase Theorem
- Tragedy of Commons

**Basic Reference :**

1. Salvatore, D; Microeconomics: Theory and Applications, Oxford University Press, New Delhi 2006, Ch 11 & 12 Mod I, Ch 12 Mod II, Ch 17 Mod III ,Ch 18 & 19 Mod IV

**Additional References :**

2. Koutsoyiannis, Modern Microeconomics, Macmillan Press Ltd., London
3. Mankiw, N. Gregory, Principles of Microeconomics, 7<sup>th</sup> edition, Cengage Learning 2015
4. Mansfield, Edwin, Microeconomics: Theory and Applications, 5<sup>th</sup> Edition, W. W. Norton & Company, New York 1985
5. Sen, Anindya (2007), Microeconomics: Theory and Applications, Second Edition Oxford University Press, New Delhi, 2007
6. R. Gibbons (1992), A Primer in Game Theory, Harvester Wheatsheaf



SWKVM



## ECONOMICS OF DEVELOPMENT: PAPER V

**Preamble:** The paper aims to introduce concepts, theories and policies regarding growth and development as it has evolved over the years. The contemporary as well as the classical theories of growth and development are explained. Issues related to population, poverty and human resources are taken up for discussion to cover all the important areas of development Economics.

### SEMESTER V

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO505	V	ECONOMICS OF DEVELOPMENT	4	100

#### **Module I: Principles and Concepts**

- Traditional Economic Models
- The new economic view of development
- Sen's Capabilities Approach
- HDI, GDI
- Sustainable Development

#### **Module II: Theories of Development : Classical and Contemporary**

- Rostow's Stages of Growth
- The Harrod – Domar Growth Model
- The Lewis theory of Development
- Solow's Neoclassical Growth Model
- Romer's Endogenous Growth Model

#### **Module III: Poverty, Inequality and Development**

- Measuring Poverty – (Absolute, Relative, Poverty Gap, HPI)
- Measuring Income Inequality – (Size distribution, Lorenz Curve, Gini Coefficient)
- Kuznets' Inverted-U Hypothesis
- Thomas Piketty's Income Inequality theory
- Policy Options (for reducing poverty and excessive income inequalities)

#### **Module IV: Population Growth and Economic Development**

- Basic Issues: Population Growth and the Quality of Life
- Theory of Demographic Transition
- Causes of High Fertility in Developing Countries: The Malthusian, Gary Becker's Theory of Fertility
- The Consequences of High Fertility: Some Conflicting Opinions
- Policy Approaches (w.r.t. Population programmes in developing countries)

**Basic Reference :**

1. Todaro, Michael P. and Stephen C. Smith., Economic Development, 8e. Delhi: Pearson Education, 2003.,Ch 1 Mod I, Ch 4 Mod II, Ch 6 Mod III, Ch 7 Mod IV

**Additional References :**

2. Thirlwall, A.P., Growth and Development, 8e. New York: Palgrave MacMillan, 2005
3. Meier, Gerald M. and James E. Rauch., Leading Issues in Economic Development, 8e. New Delhi: Oxford Univ. Press, 2006
4. Misra & Puri, Growth and Development, Himalaya Publishers, Mumbai, 2005
5. Jhingan M.L. , The Economics of Development and Planning, Vrinda Publications, 2005
6. Piketty Thomas, The Economics of Inequality, Harvard University Press, 2015.

## **INDUSTRIAL AND LABOUR ECONOMICS: PAPER VI**

### **Preamble:**

There has been a paradigm shift in the structure of the Indian industrial sector and the policies governing it ever since the new era of globalization and liberalization has ushered in. This paper intends to equip the students with the knowledge about the fundamentals of Industrial Economics and also the latest policies relating to the Indian Industry. This paper also introduces the student to the Indian Labour market.

### SEMESTER V

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO506	VI	INDUSTRIAL AND LABOUR ECONOMICS	3.5	100

### **Module I: Introduction to Industrial Economics**

- Meaning and Scope of Industrial Economics
- Industrial Profile
  - Private Sector – Performance and Problems
  - Cooperatives – Features, types, merits and demerits
  - Public Sector – Role, Performance and Problems
- Motives for Mergers and Acquisition
- Digital Network Business Models – Facebook, GOOGLE, Airbnb, Amazon etc.

### **Module II: Industrial Location and Problem of Regional Imbalance**

- Determinants of Industrial Location
- Theories of Industrial Location
  - Weber's and Sargent Florence's Theories
- Dispersion of Industries and the problem of Regional Imbalance
- Global Value Chains (GVCs) : concept, impact and implications

### **Module III: Industrial Productivity and Industrial Sickness**

- Concept and Measurement of Industrial Productivity
- Factors Affecting Industrial Productivity
- Industrial Sickness – Causes, Effects and Remedial Measures
- Rationalisation – Concept, Aspects and Impact

### **Module IV: Introduction to Indian Labour Market**

- Characteristics of the Indian Labour Market
- Child Labour and Female Labour – Problems and Measures
- Globalisation and Indian Labour Market
- Labour Market Reforms
- Causes of Industrial Disputes and their Settlement Mechanism

### **Basic References :**

- Cherunilam, F. (1994), Industrial Economics : Indian Perspective, Himalaya
- Singh J.K., Labour Economics – Principles, Problems and Practices, Deep Publications Pvt. Ltd., New Delhi

### **Additional References :**

- Agrawal A.N. (2011), Indian Economy, New Age International Publishers, New Delhi
- Barthwal R.R. (2007), Industrial Economics, New Age International Publishers, New Delhi, Ch 1,2 & 8 Mod I, Ch 16 Mod II
- Publishing House, Mumbai, Ch 19 Mod II, Ch 17 & 18 Mod III
- Mishra S.K. and Puri V.K.(2008), Indian Economy, Himalaya Publishing House, Mumbai, Ch 30 & 31 Mod I, Ch 31 & 33 Mod III, Ch 29 & 40 Mod IV
- Datt R. and Sundaram K.P.M. (2009), Indian Economy, S.Chand & Co., New Delhi
- Desai S.S.M. and Bhalerao N (2008), Industrial Economy of India, Himalaya Publishing House, Mumbai
- Ranjana Seth (2010), Industrial Economics , Ane Books Pvt. Ltd., New Delhi
- Reasons Behind Mergers
- Sinha V.C., Sinha P. and Sinha V. (2001), Industrial Economics, Lokbharati Publication, 15 - A, Mahatma Gandhi Marg, Elahabad
- Raykhelkar A.R. and Damji B.H. (2011), Industrial Economics, Vidya Books Publication, Aurangabad, Maharashtra

- ❖ The department faculty and students will undertake an industrial visit with the aim of understanding industrial practises and operations.

SVKM'S

**MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC  
ANALYSIS: PAPER VII**

**Preamble:**

A plethora of data has emerged at an exponential rate and it is the description, interpretation and understanding of these data and drawing of accurate conclusions that is imperative for a student of Economics. The aim of this paper is to provide students with the mathematical and statistical skills and understanding needed for ‘knowing why’ and ‘when’ to apply these techniques.

**SEMESTER V**

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO507	VII	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS	4	100

**Module I: Derivatives and their applications in various areas of economic analysis**

- Higher order derivatives
- Increasing and Decreasing functions: Concavity and Convexity
- Extreme Values: Maxima and Minima
- Optimisation of Economic functions

**Module II: Linear Algebra**

- Rank and Inverse of a matrix
- Cramer’s rule
- Matrix Inversion Method
- Input-Output Analysis
- Linear Programming Problems (Formulation of the problem and it’s Dual)

**Module III: Correlation and Regression**

- Karl Pearson’s Coefficient of Correlation
- Spearman’s Rank Correlation
- Simple Regression Analysis – Method of Least Squares
- Regression Coefficients

**Module IV: Elementary Probability Theory**

- Sample space and events
- Mutually exclusive, exhaustive and complimentary events
- Conditional probability
- Binomial probability distribution

- Nature and Properties of the Normal Probability Distribution; Standard Scores and the Normal Curve; The Standard Normal Curve (Finding Areas when the Score is Known, Finding Scores when the Area is Known)

### **Basic References :**

1. Dowling Edward T., Introduction to Mathematical Economics, Schaum's Outline Series in Economics, Tata McGraw Hill, New Delhi, 2004, Ch 3 & 4 Mod I, Ch 10 Mod II
2. Sancheti D.C. and V.K. Kapoor, Statistics-Theory, Methods and Applications, S. Chand, New Delhi, Vol II Ch 8 & 9 Mod III, Ch 14 Mod IV

### **Additional References :**

3. Dowling Edward T., Theory and Problems of Mathematical Methods for Business and Economics, McGraw –Hill, 1993
4. Gupta S.P., Statistical Methods, S. Chand, New Delhi, Vol I Mod III and IV
5. Lerner Joel J and P. Zima, Theory and Problems of Business Mathematics, McGraw Hill, New York, 1986
6. Pfitzner Barry C., Mathematical Fundamentals of Microeconomics, Biztantra, New Delhi, 2003
7. V. K. Kapoor and S. C. Gupta, Fundamentals of Mathematical Statistics, Sultan Chand & Sons, New Delhi
8. Wisniewski Mik, Mathematics for Economics-An integrated approach, Palgrave Macmillan, 2013
9. Tokunaga Howard. T., Fundamental Statistics for the Social and Behavioural Sciences, Sage Publications, 2015, Mod IV

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## INTRODUCTION TO ECONOMETRICS: PAPER VIII

### **Preamble:**

The objective of this course is to impart a basic understanding of econometrics. The student will be able to appreciate the theoretical basis of the subject. At the same time, it will enhance the student's ability to apply the theoretical techniques to the problems of the real world. Topics like forecasting have been introduced to impart this practical orientation.

### SEMESTER V

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO508	VIII	INTRODUCTION TO ECONOMETRICS	4	100

### **Module I: Idea of a random variable**

- Concept of a random variable: Discrete and Continuous
- Expected values of a random variable
- Variance of a random variable
- Discrete random variables: Bernoulli, Binomial, Poisson
- Continuous random variables: The Normal distribution

### **Module II: Jointly distributed Random variables**

- Joint and Marginal distributions for bivariate random variables
- Conditional Probability
- Conditional Mean and Variance
- Covariance
- Central Limit Theorem

### **Module III: Statistical Inference**

- Concepts and steps in Hypothesis Testing (Population, Sample, Population Parameter, Sample Statistic, Null and Alternative Hypothesis, Test of significance, Critical Region, One-tail and Two-tail tests, Type I and II Errors)
- Basic Statistical Methods for Hypothesis testing –
  - The Standard Normal distribution (significance testing for mean when the population variance is known)
  - The t distribution (hypothesis testing when population variance is unknown)
  - The Chi – square distribution (testing for sample variance with known population variance)
  - The F distribution (hypothesis testing for comparing sample variance)

## Module IV: Regression Analysis

- Two variable regression model (Hypothetical Example)
- The concept of the PRF and SRF
- Classical assumptions of regression
- Derivation of the OLS estimators and their variance
- Tests of Hypothesis, Confidence Intervals for OLS estimators
- Measures of Goodness of Fit: R square and adjusted R square

### Basic Reference :

1. Gujarati Damodar, Basic Econometrics, Ch 1 Mod I, Ch 5 & 6 Mod IV

### Additional References :

2. Gujarati Damodar, Econometrics by Example, McGraw Hill, New York
3. Hatekar Neeraj (2009), Econometrics: The First Principles A Friendly Introduction
4. Kapoor V. K. (2011), Operations Research Problems & Solutions, Sultan Chand & sons
5. Lipschutz (Schaum Series), Theory and Problems of Statistics
6. Gupta S.P., Statistical Methods, S. Chand, New Delhi, Vol II Ch 1 & 2 Mod I & II, Vol II Ch 3 Mod III
7. Tokunaga Howard. T., Fundamental Statistics for the Social and Behavioural Sciences, Sage Publications, 2015, Mod III and IV

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## **PROJECT : PAPER IX**

**Preamble :** The main objective of this paper is to strengthen a student's critical thinking and reasoning ability at planning and conducting economic research and to enable them to communicate the outcomes of their research effectively. The students will be assigned broad areas of research interests in Economics and will be guided to conduct research using a wide variety of qualitative and quantitative tools. Modules on structure of research, theory, types and methodology of research will be instructed. The learner is then expected to undertake the practice by carrying out a research assignment and presenting it in the form of a research report.

### SEMESTER – V

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO509	IX	PROJECT	3.5	100

- ❖ A RESEARCH METHODOLOGY WORKSHOP of three hours will be conducted for students in Semester V to enable understanding and inculcate skills required for their research project. The topics covered in the sessions will include
  - Introduction to Research Methodology
  - Research Problem and Design
  - Sample Surveys and Statistical Methods
  - Data Analysis using Excel –
    - I. Pivot tables and Charts
    - II. Measures of Central Tendency and Dispersion

## MACROECONOMICS - III: PAPER IV

### **Preamble:**

This course introduces the students to formal modelling of a macroeconomic theory with analytical tools. It discusses determination of exchange rates and the benefits and costs of fixed and flexible exchange rate and also takes a student through the history of evolution of exchange rates and crises.

### SEMESTER – VI

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO604	IV	MACROECONOMICS - III	4	100

### **Module I: Open Economy**

- The Balance of Payments and Balance of Trade
- Exchange rate Concepts (Fixed, Flexible, Real and Nominal)
- The Foreign Exchange Market: Players and Functions
- Factors affecting Exchange Rate: BOP theory
- Purchasing power Parity theories

### **Module II: Monetary Approach to the Balance of Payments**

- Introduction
- Automatic Adjustments
- The Monetary Approach under Fixed Exchange Rates
- The Monetary Approach under Flexible Exchange Rates
- Exchange Rate Overshooting

### **Module III: The Mundell Fleming Model**

- Swan Diagram
- IS – LM – BP Model with Fixed Exchange Rates
- IS – LM – BP Model with Flexible Exchange Rates
- The Policy Mix

### **Module IV: International Monetary History**

- The Gold Standard
- The key issues debated at Bretton Woods
- The collapse of the Bretton Woods system and fixing of the Dollar Standard
- The European Monetary Union and emergence of Euro
- The Global Financial Crisis
- The Euro Crisis

**Basic Reference :**

1. Froyen, R. T.; Macroeconomics : Theory and Policy, Pearson Education Asia, Delhi 2001, Ch 14 & 15 Mod II & III

**Additional References :**

1. Ahuja H.L., Macroeconomics : Theory and Policy, S Chand & Co. Pvt. Ltd., New Delhi
2. Dornbusch R S, Fischer and R Startz, Macroeconomics, 8<sup>th</sup> Ed, Tata McGraw Hill, New Delhi, 2004
3. Dwivedi D N, Macroeconomics : Theory and Policy, 3e Tata McGraw Hill, New Delhi 2010, Ch 26 & 27 Mod I
4. Blanchard, Oliver Macroeconomics (4th edition, 9th edition), Pearson education, New Delhi, India
5. Sikdar, S. (2006), Principles of Macroeconomics, OUP, New Delhi, Ch 7 Mod II and III
6. Mankiw, Gregory; Macroeconomics, 6e, Worth Publishers, New York, 2003
7. Salvatore, D.; International Economics, Prentice Hall, New York, 1997, Ch 21 Mod IV
8. Robert Feenstra & Alan Taylor, International Macroeconomics, 2nd ed.
9. Yannis Varoufakis, The Global Minotaur

## INTERNATIONAL ECONOMICS: PAPER V

### **Preamble:**

This course develops a systematic exposition of models that try to explain the composition, direction, and consequences of international trade, and the determinants and effects of trade policy. It then builds on the models of open economy macroeconomics, focusing on national policies as well as international monetary systems. It concludes with an analytical account of the causes and consequences of the rapid expansion of international financial flows in recent years. Although the course is based on abstract theoretical models, students will also be exposed to real-world examples and case studies.

### SEMESTER – VI

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO605	V	INTERNATIONAL ECONOMICS	4	100

### **Module I : International Factor Movement**

- Meaning, Nature and Scope of International Economics
- Factors determining labour mobility
  - A One-Good Model – Wage Convergence
  - Lee's Theory of International Migration
- Factors determining capital mobility
- Classification of International capital flows -(ECBs, short term borrowings and lending, FDI, FPI)

### **Module II : Theories of International Trade**

- Absolute Advantage
- Comparative Cost Advantage
- The Heckscher–Ohlin Theory
- Linder's Theory of Volume of Trade and Demand Pattern
- Vernon's Product Cycle Theory

### **Module III : Trade Policy**

- Instruments of Trade Policy (Tariff and Non-Tariff Barriers)
- Forms of Economic Integration (SAARC & ASEAN)
- From GATT to WTO
- Controversies in Trade Policy (with respect to Environment, Labour Standards, and Culture)

### **Module IV : Balance of Payments**

- Meaning and Structure of BOP
- BOP always balances
- BOP disequilibrium – Types and Causes
- Measures to correct BOP disequilibrium – Monetary and Non Monetary

### **Basic References :**

1. Cherunilam Francis, *International Economics*, 2009, 5<sup>th</sup> Edition, Tata McGraw-Hill Education Private Limited, New Delhi
2. Dominick Salvatore, International Economics: Trade and Finance, John Wiley International Student Edition, 10th edition, 2011, Ch 2 & 5 Mod II, Ch 13 Mod IV

### **Additional References :**

3. Paul Krugman, Maurice Obstfeld, and Marc Melitz, International Economics: Theory and Policy, Addison-Wesley (Pearson Education Indian Edition), 9th edition, 2012, Ch 1 Mod I
4. Jhingan M L, International Economics, 6e Vrinda Publications, Delhi, Ch 13 Mod II, Ch 55 & 56 Mod III
5. Gordon Hanson, 'The Rise of Middle Kingdoms: Emerging Economies in Global Trade', Journal of Economic Perspectives, Spring 2012
6. Melitz M. and Trefler D., 'Gains from Trade When Firms Matter', Journal of Economic Perspectives, Spring 2012

## INDIAN FINANCIAL SYSTEM: PAPER VI

### **Preamble:**

The basic purpose of this paper is to acquaint students with various components of the Indian financial system, its working and the trends and turns that have taken place over the years especially since financial sector reforms.

### SEMESTER – VI

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO606	VI	INDIAN FINANCIAL SYSTEM	3.5	100

### **Module I: Indian Financial System: Structure**

- Meaning and components of the Financial System
- Financial System and Economic Development
- Indicators of Financial Development: FR, FIR, NIR and IR
- Overview of financial sector reforms since 1990s

### **Module II: Banking in India since 1990s**

- Developments in Commercial banking sector since 1990s
- Management of Non-Performing Assets (NPAs)
- Capital Adequacy Norms - Basel Accord III
- Monetary policy of the RBI
- Transmission Channels of Monetary policy.

### **Module III: Money and Capital Markets in India**

- Money Market: Features and Components
- Reforms in the money market
- Capital Market: Structure of the Indian Capital Market
- Recent Developments in the Capital Market
- Interlink between Money Market and Capital Market
- Overview of Debt Market in India.

### **Module IV: Non-Banking sector of the Financial System**

- Non-Bank Finance Companies (NBFCs) in India and their progress
- Developments in India's Insurance sector
- Progress of Mutual Funds industry in India
- Credit Rating Agencies in India.

**Basic Reference :**

1. Pathak, Bharati (2008): The Indian Financial System –Markets, Institutions, and Services, (2<sup>nd</sup> Edition), Pearson Education, New Delhi, Ch 1 Mod I, Ch 13 & 14 Mod II, Ch 4,5,6,8,10 Mod III, Ch 13,15,16,19 Mod IV

**Additional References :**

2. Bhole, L. M. (2008): Financial Institutions and Markets, Growth and Innovation, Tata McGraw Hill, New Delhi, Ch 6 Mod II
  3. Khan, M.Y. (2007): Financial Services, Tata McGraw Hill, New Delhi
  4. Reserve Bank of India (various issues) Report on Currency and Finance, RBI, Mumbai
  5. Rakesh Mohan & Partha Ray (2017), Indian Financial Sector: Structure, Trends & Turns; IMF Working Paper (WP/17/7). (<https://www.imf.org> > Issues > 2017/01/20)
- ❖ The department faculty and students will undertake a study visit to NSE / BSE / Mutual Fund / Insurance Company / Broking firm with the aim of understanding financial markets.

**MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC  
ANALYSIS : PAPER VII**

**Preamble:**

A plethora of data has emerged at an exponential rate and it is the description, interpretation and understanding of these data and drawing of accurate conclusions that is imperative for a student of Economics. The aim of this paper is to provide students with the mathematical and statistical skills and understanding needed for 'knowing why' and 'when' to apply these techniques.

**SEMESTER – VI**

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO607	VII	MATHEMATICAL AND STATISTICAL TECHNIQUES FOR ECONOMIC ANALYSIS	4	100

**Module I : Partial derivatives**

- Second order partial derivatives
- Optimisation of multivariable functions
- Constrained optimisation with Lagrange multiplier
- Marginal productivity, Income and Price elasticity of demand
- Homogenous production functions (Cobb-Douglas)

**Module II : Integral Calculus**

- Economic applications
- Present value of Cash Flows (present value of a sum to be received in future and present value of a stream of future income)
- Consumer's and Producer's Surplus
- Learning curve
- Gini Coefficient

**Module III : Times Series Analysis**

- Components of Time Series
- Methods of Estimating Trend
  - Graphical Method
  - Least Squares Method
  - Moving Averages Method (3,4 and 5 yearly)
- Measurement of seasonal variations by the Method of Simple Averages



## Module IV : Vital Statistics

- Definition and Uses
- Methods of Collection
- Fertility Rates (Total Fertility Rate, General Reproduction Rate and Net Reproduction Rate)
- Mortality Rates (Crude Death Rate, Specific Death Rate, Infant Mortality Rate and Maternal Mortality Rate)

### Basic References :

1. Dowling Edward T; Introduction to Mathematical Economics, Schaum's Outline Series in Economics, Tata McGraw Hill, New Delhi, 2004, Ch 5 & 6 Mod I, Ch 14 & 15 Mod II
2. Sancheti D. C. and V. K. Kapoor; Statistics-Theory, Methods and Applications, S. Chand, New Delhi, Ch 11 Mod III, Ch 23 Mod IV

### Additional References :

3. Lerner Joel J and P. Zima; Theory and Problems of Business Mathematics, McGraw Hill, New York, 1986
4. Dowling Edward T; Theory and Problems of Mathematical methods for Business and Economics, McGraw –Hill, 1993
5. Gupta S.P.; Statistical Methods, S. Chand, New Delhi, Mod III and Mod IV
6. Tokunaga Howard. T., Fundamental Statistics for the Social and Behavioural Sciences, Sage Publications, 2015

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## INTRODUCTION TO ECONOMETRICS: PAPER VIII

### **Preamble:**

The objective of this course is to impart a basic understanding of econometrics. The student will be able to appreciate the theoretical basis of the subject. At the same time, it will enhance the student's ability to apply the theoretical techniques to the problems of the real world. Topics like forecasting have been introduced to impart this practical orientation.

### SEMESTER – VI

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO608	VIII	INTRODUCTION TO ECONOMETRICS	4	100

### **Module I : Econometric Model Specification**

- Identification: Structural and reduced form
- Omitted Variables Bias
- Ramsey's RESET
- Errors in Measurement
- Endogeneity and Bias

### **Module II : Failure of Classical Assumptions**

- Multi-collinearity : Meaning, Implications and Detection
- Auto-correlation : Meaning, Consequences and Durbin-Watson test
- Heteroskedasticity : Meaning, Consequences and the Goldfeld - Quandt test

### **Module III: Forecasting**

- Forecasting with a) moving averages b) linear trend c) exponential trend- CAGR
- Forecasting with linear regression
- Measures of forecast performance: Mean Square Error and Root Mean Square Error
- Limitations of Econometric forecasts

### **Module IV : Linear Programming**

- Linear programming problem
- Graphical Solution to LPP
- Simplex method: (Initial Basic Solution only)
- Transportation Problem (North West Corner Rule and Vogel's Approximation Methods only)

**Basic Reference :**

1. Gujarati Damodar, Basic Econometrics, Ch 13 Mod I, Ch 10,11,12 Mod II, Ch 22 Mod III

**Additional References :**

2. Gujarati Damodar, Econometrics by Example, McGraw Hill, New York
3. Hatakhar Neeraj (2009), Econometrics: The First Principles A Friendly Introduction, Mod I
4. Kapoor V. K. (2011), Operations Research Problems & Solutions, Sultan Chand & sons, Ch 1,2,3,4,5 Mod IV
5. Lipschutz (Schaum Series), Theory and Problems of Statistics, Mod IV
6. Jeffrey M. Woolridge, Econometrics, Cengage Learning India Edition, 2009, Mod II
7. Studenmund A.H., Using Econometrics : A Practical Guide, 7<sup>th</sup> Ed. Pearson

SVKM

## **PROJECT : PAPER IX**

**Preamble** : The main objective of this paper is to strengthen a student's critical thinking and reasoning ability at planning economic research and to enable them to communicate the outcomes of their research effectively, The students will be assigned broad areas of research interests in Economics and will be guided to conduct research using a wide variety of qualitative and quantitative tools. Modules on structure of research, theory, types and methodology of research will be instructed. The learner is then expected to undertake the practice by carrying out a research assignment and presenting it in the form of a research report.

### SEMESTER – VI

Course Code	Paper No.	Name of the Paper	Credits	Marks
UAMAECO609	IX	PROJECT	3.5	100

- ❖ A RESEARCH METHODOLOGY WORKSHOP of three hours will be conducted for students in Semester VI to enable understanding and inculcate skills required for their research project. The topics covered in the sessions will include
- Data Collection and Preparation
  - Statistical Inference
  - Data Analysis using Excel –
    - I. Correlation
    - II. Hypothesis Testing
    - III. Linear Regression

## **I.**

