



SRI SATHYA SAI INSTITUTE OF HIGHER LEARNING

(Deemed to be University)

Syllabus for Economics and Statistics in

B.A. (Major), B. A (Hons.) and B.Sc.(Hons.) in Economics

(Effective from the 2019– 20 batch onwards)

Department of Economics

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SRI SATHYA SAI INSTITUTE OF HIGHER LEARNING
(Deemed to be University)

DEPARTMENT OF ECONOMICS

Undergraduate Major/Honours Programme Structure consists of Three Parts.

PART-I: LANGUAGES #

- (a) General English (four papers offered, one each in the first four semesters)
- (b) Another Language (four papers offered, one each in the first four semesters – Any one out of: HINDI / SANSKRIT / TELUGU / ADDITIONAL ENGLISH)

PART-II: CORE SUBJECTS

(Offered in all the six semesters) – Title of the papers are given below in the Scheme of Instruction & Evaluation and the syllabus content are enclosed.

Major Scheme:

Part-II consists of three-subject-combination during the first four semesters, which, each student has to study. Every student has to choose three-subject-combination from ECONOMICS, HISTORY, POLITICAL SCIENCE, PHILOSOPHY, OPTIONAL ENGLISH or OPTIONAL TELUGU during the first four semesters. During the fifth and sixth semesters, one of the subjects in the three-subject-combination will be selected as a major subject and other two as basic subjects. The Scheme of Instruction & Evaluation and the syllabus content for all the subjects in first two years (i.e., first four semesters) and the **major subject** in the third year (i.e., fifth and sixth semesters) are given below.

Honours Scheme:

Part-II consists of three-subject-combination during the first four semesters, which, each student has to study. Three Subject combination that is offered in this Honours Programme is Mathematics/ Economics/Statistics. During the fifth and sixth semesters the students will choose one of the three subjects in the three-subject-combination as subject of exclusive study for Honours. (i.e., either Mathematics or Economics).

PART-III: AWARENESS COURSE and ENVIRONMENTAL COURSE ##

- a) Awareness Courses – (UAWR) (six papers offered, one each in all the six semesters)
- b) Environmental Courses – (UENT) (two papers offered, one each in the first two semesters)

NOTE: The title of the papers and the syllabus contents of Part-I and Part-III are provided separately.

SCHEME OF INSTRUCTION AND EVALUATION
(Effective 2019/20 batch onwards)

PART-I: LANGUAGES

Paper Code	Title of the Paper	Credits	Hours	Mode of Evaluation	Theory / Practicals	Maximum Marks
Semester I						
UGEN-101	General English-I #	5	5	IE1	T	100
	Another Language-I #	4	4	IE1	T	100
Paper Code	Title of the Paper	Credits	Hours	Mode of Evaluation	Theory / Practicals	Maximum Marks
Semester II						
UGEN-201	General English-II #	5	5	IE1	T	100
	Another Language-II #	4	4	IE1	T	100
Semester III						
UGEN-301	General English-III #	5	5	IE1	T	100
	Another Language-III #	4	4	IE1	T	100
Semester IV						
UGEN-401	General English-IV #	5	5	IE1	T	100
	Another Language-IV #	4	4	IE1	T	100
	PART-I TOTAL	36 credits	36 hours			800 marks

PART-III: AWARENESS COURSE and ENVIRONMENTAL COURSES

Paper Code	Title of the Paper	Credits	Hours	Mode of Evaluation	Theory / Practicals	Maximum Marks
Semester I						
UAWR-100	Awareness Course-1 ##	2	2	I	T	50
UENT-101	Environment-I ##	2	2	I	T	75
Semester II						
UAWR-200	Awareness Course-2 ##	2	2	I	T	50
UENT-201	Environment-II ##	2	2	I	T	75
Semester III						
UAWR-300	Awareness Course-3 ##	2	2	I	T	50
Semester IV						
UAWR-400	Awareness Course-4 ##	2	2	I	T	50
Semester V						
UAWR-500	Awareness Course-5 ##	2	2	I	T	50
Semester VI						
UAWR-600	Awareness Course-6 ##	2	2	I	T	50
	SUB TOTAL-3	16 credits	16 hours			450 marks

SUMMARY

for B.A major in Economics

	Credits	Hours	Maximum Marks
PART-I: LANGUAGES			
PART-I TOTAL	36 credits	36 hours	800 marks
PART-II: CORE SUBJECTS			
PART-II TOTAL (Basic Subject-1)	30 credits	30 hours	600 marks
PART-II TOTAL (Basic Subject-2)	30 credits	30 hours	600 marks
PART-II TOTAL (Major in Economics)	42 credits	44 hours	900 marks
PART-III: AWARENESS and ENVIRONMENTAL COURSES			
PART-III TOTAL	16 credits	16 hours	450 marks
GRAND TOTAL (BA major in Economics)	154 credits	156 hours	3350 marks

SUMMARY

for B.A.(Hons.) in Economics

	Credits	Hours	Maximum Marks
PART-I: LANGUAGES			
PART-I TOTAL	36 credits	36 hours	800 marks
PART-II: CORE SUBJECTS			
PART-II TOTAL (Subject-1)	20 credits	20 hours	400 marks
PART-II TOTAL (Subject-2)	20 credits	20 hours	400 marks
PART-II TOTAL (Hons. in Economics)	62 credits	64 hours	1500 marks
PART-III: AWARENESS and ENVIRONMENTAL COURSES			
PART-III TOTAL	16 credits	16 hours	450 marks
GRAND TOTAL (BA (Hons.) in Economics)	154 credits	156 hours	3550 marks

SUMMARY

for B.Sc.(Hons.) in Economics with MES combination

	Credits	Hours	Maximum Marks
PART-I: LANGUAGES			
PART-I TOTAL	36 credits	36 hours	800 marks
PART-II: CORE SUBJECTS			
PART-II TOTAL (Mathematics)	24 credits	24 hours	800 marks
PART-II TOTAL (Honours in Economics)	62 credits	64 hours	1500 marks
PART-II TOTAL (Statistics)	18 credits	18 hours	400 marks
PART-III: AWARENESS and ENVIRONMENTAL COURSES			
PART-III TOTAL	16 credits	16 hours	450 marks
GRAND TOTAL (B.Sc.(Hons.) in Economics)	156 credits	158 hours	3950 marks

Syllabus for B.A.(Major) Economics SCHEME OF INSTRUCTION AND EVALUATION

(Effective 2019/20 batch onwards)

PART-II: CORE SUBJECTS (Major in Economics in BA)

Paper Code	Title of the Paper	Credits	Hours	Mode of Evaluation	Theory / Practicals	Maximum Marks
Semester I						
UECO-101	Economic Analysis - I	5	5	IE1	T	100
Semester II						
UECO-201	Economic Analysis - II	5	5	IE1	T	100
Semester III						
UECO-301	Quantitative Methods for Economics	5	5	IE1	T	100
Semester IV						
UECO-401	Development Economics	5	5	IE1	T	100
Semester V						
UECO-501	Indian Economy: Structure and Development	5	5	IE1	T	100
UECO-502	Intermediate Microeconomic Theory	5	5	IE1	T	100
UECO-503	Introduction to Computer Applications-I	1	2	I	P	50
		11 credits	12 hours			250 marks
Semester VI						
UECO-601	Public Finance and Fiscal Policy	5	5	IE1	T	100
UECO-602	Intermediate Macroeconomic Theory	5	5	IE1	T	100
UECO-603	Introduction to Computer Applications – II	1	2	I	P	50
		11 credits	12 hours			250 marks
PART-II TOTAL-						
	(Major in Economics)	42 credits	44 hours			900 marks

Note: UECO/UMEC 603: Introduction to Computer Applications – II

For this course the mode of evaluation is as follows: There would be two SEs and the Report writing would be considered as ST.

SCHEME OF INSTRUCTION AND EVALUATION

(Effective 2019/20 batch onwards)

B.A.(Hons) in Economics

PART-II: CORE SUBJECTS (Honours in Economics)

Paper Code	Title of the Paper	Credits	Hours	Mode of Evaluation	Theory / Practicals	Maximum Marks
Semester I						
UECO-101	Economic Analysis - I	5	5	IE1	T	100
Semester II						
UECO-201	Economic Analysis - II	5	5	IE1	T	100
Semester III						
UECO-301	Quantitative Methods for Economics	5	5	IE1	T	100
Semester IV						
UECO-401	Development Economics	5	5	IE1	T	100
Semester V						
UECO-501	Indian Economy: Structure and Development	5	5	IE1	T	100
UECO-502	Intermediate Microeconomic Theory	5	5	IE1	T	100
UECO-503	Introduction to Computer Applications-I	1	2	I	P	50
UECO-504	History of Economic Thought	5	5	IE1	T	100
UECO-505	International Economics	5	5	IE1	T	100
		21 credits	22 hours			450 marks
Semester VI						
UECO-601	Public Finance and Fiscal Policy	5	5	IE1	T	100
UECO-602	Intermediate Macroeconomic Theory	5	5	IE1	T	100
UECO-603	Introduction to Computer Applications – II	1	2	I	P	50
UECO-604	Money, Banking and Financial Institutions	5	5	IE1	T	100
UECO-605	Basic Econometrics	5	5	IE1	T	100
		21 credits	22 hours			450 marks
PART-II TOTAL- (Honours in Economics)		62 credits	64 hours			1300 marks

Note: UECO/UMEC 603: Introduction to Computer Applications – II

For this course the mode of evaluation is as follows: There would be two SEs and the Report writing would be considered as ST.

SCHEME OF INSTRUCTION AND EVALUATION

(Effective 2019/20 batch onwards)

B.Sc. (Hons) in Economics

PART-II: CORE SUBJECTS (Honours in Economics)

Paper Code	Title of the Paper	Credits	Hours	Mode of Evaluation	Theory / Practicals	Maximum Marks
Semester I						
UMEC-101	Economic Analysis - I	5	5	IE1	T	100
Semester II						
UMEC-201	Economic Analysis - II	5	5	IE1	T	100
Semester III						
UMEC-301	Mathematics for Economics	5	5	IE1	T	100
Semester IV						
UMEC-401	Development Economics	5	5	IE1	T	100
Semester V						
UMEC-501	Indian Economy: Structure and Development	5	5	IE1	T	100
UMEC-502	Intermediate Microeconomic Theory	5	5	IE1	T	100
UMEC-503	Introduction to Computer Applications – I	1	2	I	P	50
UMEC-504	History of Economic Thought	5	5	IE1	T	100
UMEC-505	International Economics	5	5	IE1	T	100
		21 credits	22 hours			450 marks
Semester VI						
UMEC-601	Public Finance and Fiscal Policy	5	5	IE1	T	100
UMEC-602	Intermediate Macroeconomic Theory	5	5	IE1	T	100
UMEC-603	Introduction to Computer Applications – II	1	2	I	P	50
UMEC-604	Money, Banking and Financial Institutions	5	5	IE1	T	100
UMEC-605	Basic Econometrics	5	5	IE1	T	100
		21 credits	22 hours			450 marks
PART-II TOTAL- (Honours in Economics)		62 credits	64 hours			1300 marks

Note: UECO/UMEC 603: Introduction to Computer Applications – II

For this course the mode of evaluation is as follows: There would be two SEs and the Report writing would be considered as ST.

SCHEME OF INSTRUCTION AND EVALUATION
(Effective 2019/20 batch onwards)
Statistics offered in B.Sc.(Hons) in Economics

PART-II: CORE SUBJECTS (Statistics)

Paper Code	Title of the Paper	Credits	Hours	Mode of Evaluation	Theory / Practicals	Maximum Marks
Semester I						
USTA-101	Introductory Statistics	4	4	IE1	T	100
Semester II						
USTA-201	Probability Theory and Distributions	5	5	IE1	T	100
Semester III						
USTA-301	Statistical Inference	5	5	IE1	T	100
Semester IV						
USTA-401	Applied Statistics	4	4	IE1	T	100
PART-II TOTAL (Statistics)		18 credits	18 hours			400 marks

Papers that are common in B.A., B.A.(Hons) and B.Sc.(MES) Hons
(Effective 2019/20 batch onwards)

Course No.	Course Title	No. of Credits	Mode of Evaluation	Max Marks
<u>SEMESTER – I</u>				
UECO-101 / UMEC-101:	Economic Analysis - I	5	IE1	100
<u>SEMESTER - II</u>				
UECO-201 / UMEC-201:	Economic Analysis - II	5	IE1	100
<u>SEMESTER – IV</u>				
UECO-401 / UMEC-401:	Development Economics	5	IE1	100
<u>SEMESTER – V</u>				
UECO-501 / UMEC-501:	Indian Economy: Structure and Development	5	IE1	100
UECO-502 / UMEC-502:	Intermediate Microeconomic Theory	5	IE1	100
UECO-503 / UMEC-503:	Introduction to Computer Applications–I	1	I	50
<u>SEMESTER VI</u>				
UECO-601 / UMEC-601:	Public Finance and Fiscal Policy	5	IE1	100
UECO-602 / UMEC-602:	Intermediate Macroeconomic Theory	5	IE1	100
UECO-603 / UMEC-603:	Introduction to Computer Applications–II	1	I	50

Modes of Evaluation

Indicator	Legend
IE1	CIE and ESE ; ESE single evaluation
IE2	CIE and ESE ; ESE double evaluation
I	Continuous Internal Evaluation (CIE) only Note: 'I' does not connote 'Internal Examiner'
E	End Semester Examination (ESE) only Note: 'E' does not connote 'External Examiner'
E1	ESE single evaluation
E2	ESE double evaluation

Continuous Internal Evaluation (CIE) & End Semester Examination (ESE)

Types of Papers

Indicator	Legend
T	Theory
P	Practical
V	Viva voce
PW	Project Work
D	Dissertation

PS: Please refer to guidelines for 'Modes of Evaluation for various types of papers', and 'Viva voce nomenclature & scope and constitution of the Viva voce Boards'.

Note: UECO/UMEC 603: Introduction to Computer Applications – II

For this course the mode of evaluation is as follows: There would be two SEs and the Report writing would be considered as ST.

DEPARTMENT OF ECONOMICS

Programme Specific Outcomes for B.A. / B.Sc (Economics):

1. To understand basic concepts in economics.
2. To equip students to use graphical models, logical arguments, mathematical and statistical tools to explain and analyse economic issues.
3. To bring in the ability analyse historical and the current issues/problems/events in an economic perspective.
4. To provide a strong platform which could allow students to take up higher studies in economics.
5. To be in a position to explain and express real world economic issues in a way that common man would understand.

ECONOMIC ANALYSIS – I

UECO / UMEC-101

5 Credits

Course Objectives: As a foundation course in microeconomics, the course is designed to understand the behaviour of an economic agent, namely, a consumer, a producer and the factor owner. The modules incorporated in this paper deal with the nature and scope of economics, the theory of consumer behaviour, analysis of production, cost and the price formation in different market structures.

Course Outcomes: The student at the end of the course is supposed to learn fundamentals of microeconomics and rudimentary aspects of consumer behavior, production, cost, revenue and markets. The student should also be able to relate the theory to real world scenario.

I. Introduction (9 hours)

Need and Definitions of Economics – Micro and Macro Economics – Scope of Economics – Central Economic Problems – Production Possibility Curve – Opportunity Cost– Economic Systems – Positive and Normative Economics.

II Consumer Behaviour (22 hours)

Utility Analysis – Cardinal Approach; Law of Diminishing Marginal Utility; Law of Equi– Marginal Utility; Consumer's Equilibrium – Ordinal approach; Indifference Curve; Marginal Rate of Substitution; Price Line/Budget Line; Consumer's Equilibrium– Price and Income Effect – Demand Analysis; Law of Demand; Determinants; Price Elasticity; Measurement of Price Elasticity – Income and Cross elasticity– Consumer Surplus – Paradox of Value.

III. Supply and Production (15 hours)

Supply Analysis; Law of Supply; Determinants; Elasticity of supply; Shift vs Movement along supply curve; Market supply – Production Concepts; Meaning of Production; Production Function – Law of Variable Proportions – Law of Returns to Scale.

IV. Cost and Revenue Concepts (12 hours)

Types of Costs ; Short run and Long run Cost; Behaviour of Cost Curves – Relationship between AC and MC Curves – Long Run Average Cost (LAC) Curve; Deriving LAC Curve from SAC Curves – Revenue Concepts; Total Revenue; Average Revenue; Marginal Revenue – Elasticity and Revenue – Factor Pricing Theory.

V. Alternative Market Structures (12 hours)

Market Forms – (Perfect Competition, Monopoly, Monopolistic Competition and Oligopoly) Market Equilibrium, Perfect Competition – Features, demand curve, Short Run and Long Run Equilibrium, Shut Down Point – The Break Even Point – Monopoly Features, Demand Curve – Short Run and Long Run Equilibrium.

Readings:

N. Gregory Mankiw, Principles of Microeconomics, Cengage India, 2012, Sixth Edition.

Karl E. Case, Ray C. Fair and Sharon M. Oster, Principles of Microeconomics, Pearson, 2016, Twelfth Edition.

Deepashree, Principles of Microeconomics, Ane Books Pvt Ltd, 2011, Third Edition.

H.S Agarwal, Text Book of Economic Analysis, Ane Books Pvt Ltd, 2009, Ninth Edition.

Misra and Puri, Advanced Microeconomic Theory, Himalaya Publishing House, 2001, First Edition.

INTRODUCTORY STATISTICS

USTA-101

4 Credits

Course Objectives: In order to understand and quantify economic problems, the knowledge of quantitative techniques in the area of statistics is very essential. This course is designed to provide an introduction into elementary concepts of statistics. These include topics on data, measures of central tendency, dispersion, techniques of simple correlation and regression and analysis of attributes.

Course Outcomes: The focus is on to give introductory exposure of statistics. By the end of the course, students should be able to appreciate fundamental concepts of statistics like measures of central tendency and dispersion, regression and correlation and moreover students will be well equipped with simple tools and techniques in data collection, presentation, analysis and drawing inferences.

I. Presentation of data (10 Hours)

Introduction – primary and secondary data – Techniques of data collection – Presentation of data – Presentation of data by tables and diagrams – Frequency distributions for discrete and continuous variables – Graphical representation of frequency distributions – histograms, polygons and ogive curves.

II. Analysis of data (16 Hours)

Measures of central tendency, Measures of dispersion, moments, measures of skewness and kurtosis – computational methods for unclassified and classified data.

III. Least squares and curve fitting (10 Hours)

Fitting a straight line, Parabola, n^{th} degree polynomial, exponential and power curves.

IV. Correlation and Regression (10 Hours)

Scatter diagram – Correlation – types of correlation – Pearson's coefficient of correlation – Spearman's rank correlation – Linear regression – Properties of regression lines.

V. Analysis of attributes (10 Hours)

Attributes, classes and class frequencies, consistency of data – Independence of attributes, association of attributes.

Readings:

S.C. Gupta and V.K. Kapoor, Fundamentals of Mathematical Statistics, Sultan Chand & Sons, 2014

A.M. Goon, M.K. Gupta and B Dasgupta, Fundamentals of Statistics, Vol.1, World Press (P) Ltd., 2016

R. Johnson and G. Bhattacharya, Statistics: Principles and methods, John Wiley and Sons, 2014, seventh edition

Spiegel M.R, Theory and Problems and Statistics, Schaum Outline Series, 1989, second edition.

ECONOMIC ANALYSIS – II

UECO / UMEC-201

5 Credits

Course objectives: The objective of the course is to introduce students to fundamental concepts in macroeconomics that deal with aggregate measures. These include topics related to national income, money, banking, inflation, labour productivity, output, employment and the external sector.

Course outcomes: Upon successful completion of the course, the student should be able to demonstrate a basic understanding of key concepts in macroeconomics. Having the basics covered, the students should also be able to relate theoretical aspects to real world problems like GDP growth, inflation, interest rates, exchange rates etc.

I. Measurement of Economic Activity (15 Hours)

Circular flow of income output and Spending – National income accounts – saving and capital formation – private and public expenditure – closed and open economy – Price level and inflation – Real and nominal interest rates.

II. Money and Banking (20 Hours)

The evolution of money – Functions of Money – Cost of holding money – Demand for money – Quantity theory and Liquidity preference theory – Evolution of Banking – Functions of commercial Banks – the process of credit creation – Electronic money – Functions of central bank.

III. International Trade (10 Hours)

The nature of international trade – International Vs Domestic trade – Sources of International Trade in goods and services. Comparative advantage among nations: The principle of comparative advantage – the Economic gains from trade – Free trade Versus Protection – Multinational trade negotiations – Terms of Trade.

IV. Economic Policies (10 Hours)

Need for economic policies with respect to monetary policy and fiscal policy– Monetary policy – aims and objectives – quantitative and qualitative tools – Fiscal policy – need for fiscal policy – instruments of fiscal policy – government expenditure – revenue – deficit.

V. Theory of Income and Employment (15 Hours)

Classical theory of Full employment – Basic assumptions – role of money – Saving and investment – Say's law of markets – Pigou's reformulation – Keynes' criticisms. Keynesian approach – theory of employment – Effective demand – Law of consumption – Level of investment – Role of Government – investment – multiplier – Keynesian cross – Evaluation.

Readings:

D N Dwivedi, Macroeconomics: Theory and Policy, McGraw Hill Education (India) Pvt Ltd, 2017, fourth edition.

P A Samuelson and W. D Nordhaus, Economics, Tata McGraw– Hill, 2010, nineteenth edition

R. Dornbusch, S. Fischer and R. Startz, Macroeconomics, Tata Mc Graw Hill, 2017, eleventh edition.

PROBABILITY THEORY AND DISTRIBUTIONS

USTA-201

5 Credits

Course Objectives: The main objective of this course is to provide students with the foundations of probabilistic and statistical analysis. The topic covered will include probability theory, random variable and limit theory. The course also focuses on the understanding of discrete and continuous distributions with major emphasis on Bernoulli, Binomial, Poisson, Geometric distributions, Uniform, Cauchy, Normal, Exponential, Gamma distributions.

Course outcomes: The major outcome from this paper is that the students will be able to explore the basic concepts of probability theory and its applications for decision-making in economics, business, and other fields of social sciences. In addition, the course is oriented towards the formulation of mathematical concepts on probability and probability distributions and densities with practical applications. This enables the students to develop problem-solving techniques needed to accurately calculate probabilities, apply problem-solving techniques to solving real-world events and apply selected probability distributions to solve problems.

I. Probability (14 Hours)

Random phenomena – Basic concepts of Probability – Classical Probability – Empirical Probability – Axiomatic approach to Probability – conditional probability – marginal probability – Independence of events – Baye's theorem.

II. Random Variables (16 Hours)

Events and random variables – Discrete and continuous random variables – Probability distribution – Distribution function – Mathematical expectation – variance – Moment generating and characteristic functions.

III. Discrete Distributions (12 Hours)

Bernoulli, Binomial, Poisson, Geometric distributions, Properties and applications.

IV. Continuous Distributions (18 Hours)

Uniform, Cauchy, Normal, Exponential, Gamma distributions – Properties and applications.

V. Limit theorems (10 Hours)

Types of convergence, Chebychev's inequality, Weak and strong laws of large numbers – De – moivre's – Laplace central Limit Theorem.

Readings:

S.C. Gupta and V.K. Kapoor, Fundamentals of Mathematical Statistics, Sultan Chand & Sons, 2014.
J. E. Freund, Mathematical Statistics, Prentice Hall of India., 2013, eighth edition.
Ross S, A First Course in Probability, Pearson Education., 2013, ninth edition
J.L. Devore, Probability and Statistics for Engineering and Sciences, Brookes / Cole Publishing Co., 2017, ninth edition.

QUANTITATIVE METHODS FOR ECONOMICS

UECO-301

5 Credits

Course Objectives: The foundation of economic theory is based on mathematical and statistical models. Thus, a clear understanding of the mathematical and statistical concepts are necessary for a thorough understanding of the economic theories. This course introduces students to mathematical and statistical techniques that are used in Economics. The techniques discussed in this course will play an important role in learning and understanding theories discussed in advanced courses.

Course Outcomes: Students should be able to understand the mathematical and statistical methods that are most widely used in economics. These include sets and relations, functions, differential calculus, matrices etc. They would know how to read and understand mathematical proofs and appreciate their role in the derivation of economic theories. Students will be equipped with the skills in describing, analyzing and interpreting economic data using statistical methods. They will be able to relate and apply statistical methodology like correlation, regression, probability and index numbers to economic analysis.

I. Sets, Relations and Functions (10 Hours)

Concept of a set – Types of sets – Elementary operations on sets – Ordered pairs – Cartesian product – Relations – Functions – Value of a function at a point – Algebraic functions – Logarithmic and exponential functions – Economic illustration (Production, demand, supply and cost functions)

II. Differential Calculus (18 Hours)

Functions of one variable – Concept of a limit – Limits and continuity of functions – Differentiation – Rules of differentiation – Economic application of derivatives – Elasticity and Propensities – Maxima and Minima of functions of one variable – Functions of two variables – Partial differentiation with economic application.

III. Matrices (10 Hours)

Matrix: Definition and notation – Types of matrices – Elementary operations on matrices – Determinants – Inverse of a matrix – Equations with one unknown – Linear and quadratic equations – Simultaneous Linear equations in two unknowns – Cramer's rule.

IV. Descriptive Statistics (18 Hours)

Measures of central tendency – Mean, Median, Mode, Geometric Mean and Harmonic Mean – Measures of Dispersion – Range, Variance and standard deviation – Scatter diagram – Types of correlation – Karl Pearson's coefficient of correlation – Spearman's rank correlation – Linear regression in two variables

V. Index Numbers (14 Hours)

Introduction – Types of Index numbers – Methods of constructing unweighted and weighted index numbers – Laspyere, Paasche and Fisher ideal index numbers – Consumer price index – Aggregate expenditure method and family budget method – Base shifting, Splicing and Deflation of Index numbers

Readings:

A. C. Chiang, Fundamental Methods of Mathematical Economics, McGraw– Hill, 2017, fourth edition.
K. Sydsaeter and P.J. Hammond, Mathematics for Economic Analysis, Pearson education, 2012, fourth edition.

B.L. Agarwal, Basic Statistics, New Age International Private Limited, 2013, sixth edition.

David S. Moore, William I Notz and Michael A Flinger, The Basic Practice of Statistics, W.H. Freeman and Co., 2015, seventh edition.

MATHEMATICS FOR ECONOMICS

UMEC-301

5 Credits

Course Objectives: Objective of this paper is to train the students to use the techniques of mathematical tools which are commonly applied to understand and analyse economic problems. The emphasis is on understanding economic concepts with the help of mathematical methods rather than learning mathematics itself. Hence, in this paper a student will be initiated into various economic concepts, like optimizing behavior of consumer and firms etc.

Course Outcomes: On successful completion of this course, students will understand the economic concepts and theories, which use mathematical tools and techniques to refine the verbal logic. They will know calculus that helps in formulation of economic problems in multivariable model and yield valuable insight about optimizing human behaviour. Students will be familiar with matrix theory, input– output analysis and optimising behaviour of economic agents.

I. Matrix Theory (10 Hours)

Simultaneous linear equation – Homogeneous and non–homogeneous – Cramer’s rule – Characteristics Roots and Vectors – Linear dependence, Rank of a matrix – Quadratic forms – Definiteness – Quadratic forms with linear constraints – Input output Model.

II. Function of Several Variables (18 Hours)

Partial derivatives and differentials – Gradient, Hessian and Jacobean – Convex and Concave functions – Homogeneous function – **Constrained** and Unconstrained Optimization

III. Theory of Consumer Behaviour and Firm (18 Hours)

Consumer Preference and Ordinal Utility functions – Budget Constraints – Maximization of utility and optimum commodity combination – Minimization of expenditure – Production function – Maximization of output and profit – Minimization of cost of production.

IV. Game theory approach in Economics (10 Hours)

Introduction to game theory– Sequential and simultaneous games, dominant strategies and elimination of dominated strategies– the formulation of two– person, Zero– Sum Games– Solving simple games: a prototype example– Games with mixed strategies – Prisoners’ Dilemma – Nash equilibrium.

V. Economic Dynamics (14 Hours)

Definite and indefinite integrals, applications – measuring consumer and producer surplus, continuous interest – discount calculations, Linear difference and differential equations of first and second order with constant coefficients, Dynamic equilibrium, Cobweb model, Harrod– Domar model and Solow model.

Readings:

A. C. Chiang, Fundamental Methods of Mathematical Economics, McGraw– Hill, 2017, fourth edition.

K. Sydsaeter and P.J. Hammond, Mathematics for Economic Analysis, Pearson education, 2012, fourth edition.

J. M Henderson and E. R Quandt, Micro Economic Theory (A Mathematical Approach), Tata McGraw Hill, 2003, third edition.

Walter Nicholson, Christopher Snyder, Microeconomic Theory: Basic Principles and Extensions, Cengage Learning, 2014, eleventh edition

STATISTICAL INFERENCE

USTA-301

5 Credits

Course objectives: In this paper student is expected to learn to make inferences about populations by analyzing data gathered from samples (smaller subsets of the entire group), and also to make them understand the methods that enable a conclusion to be drawn from these data. This paper starts with the concept of Sampling distribution where Chi– square, t and F distributions are explained in details. Two broad group of statistical inference namely estimation and hypothesis testing are also discussed in the course.

Course outcome: The major outcome from this paper is that the students will be able to understand the fundamental concepts of the process of using inferential statistics. In addition, this paper enables students to draw conclusions about the entire population, based on the investigation of a sample applying statistical tests, with the aim to reach a decision, on a probabilistic basis, on observed data.

I. Sampling Distributions (14 Hours)

Concepts of a parameter, statistic, sampling distribution – standard error – Chi– square, student’s ‘t’– Snedecor’s F distributions. The distribution of (\bar{X}, s^2) in sampling from a normal population.

II. Theory of Estimation (18 Hours)

Introduction, Properties of estimators– the method of moments– Maximum likelihood estimation– Cramer– Rao inequality– Interval estimation.

III. Testing of Hypothesis (14 Hours)

Null and alternative hypotheses Simple and Composite hypotheses – Type I, and Type II errors – critical region – power function – MP and UMP Tests – Neyman – Pearson Lemma.

IV. Sample Tests (16 Hours)

Tests of significance for proportions and means – Small sample tests – Tests of significance based on chi– square (χ^2) – student’s ‘t’ and Snedecor’s F distributions.

V. Non– Parametric Tests (8 Hours)

The sign test – Run test – Kolmogorov– Smirnov Goodness of fit tests.

Readings:

J. E. Freund, Mathematical Statistics, Prentice Hall of India., 2013, eighth edition.

S.C. Gupta and V.K. Kapoor, Fundamentals of Mathematical Statistics, Sultan Chand & Sons, 2014.

A.M. Mathai and P.N. Rathie, Probability and Statistics, Macmillan, 1994.

Hoel P G, Introduction to Mathematical Statistics, Asia Publishing house, 1971.

DEVELOPMENT ECONOMICS

UECO / UMEC–401

5 Credits

Course Objectives: Economic growth is mainly the prime objective for all economies. It is very important to know about the factors that contributes to growth of an economy. The main objective of this paper is to enable the students to know about theories of growth and development, sectoral aspects of development, allocation of resources, human development, and rural development.

Course Outcomes: The focus is on to give exposure of various theories related to growth and development. The successful completion of this course will enable students to understand the determinants of growth and indicators of development. Moreover, they will be in a position to understand how each of these concepts are treated differently in the economic literature. Apart from this, students are also expected to have grip on issues relating to human development.

I. Economic Growth and Economic Development (15 Hours)

Characteristics of underdeveloped countries, Growth vs. Development – The concept of development – Growth – Distribution Trade off – Obstacles to Economic Development – Indicators of economic development – characteristics and determinants of modern economic growth

II. Theories of Economic Development (25 Hours)

Classical theories of growth and development – Adam Smith, Ricardo, Malthus, Karl Marx; Schumpeter theory; Keynesian theory; Rostow stages of growth, Lewis unlimited supply of labor, Balanced and Unbalanced growth theory, critical minimum effort.

III. Human Development (10 Hours)

Human Development – Definition and Need, Human Development Index, Basic Need Approach, Amartya Sen's approach to Human Development – Capability Approach, Human Resource Development

IV. Rural Development and Planning (10 Hours)

Rural Development – objectives and approaches, Employment Generation Programme, Features, Impact and problems in implementing IRDP; Essentials for planning, types of planning – Democratic, Decentralized, Perspective Planning, Regional Planning.

V. Development as part of the goal of life (10 Hours)

Human Development and human values – Concepts of Ideal village – Views of Mahatma Gandhi and Bhagawan Sri Sathya Sai Baba

Readings:

Michael P.Todaro, Stephen C.Smith, Economic Development, Pearson, 2014, twelfth edition.

A.P.Thirlwall, Growth and Development, Palgrave Macmillan, 2011, ninth edition.

V. K. Puri and S. K. Mishra, Economics of Development and Planning, Himalaya Publishing House, 2016, sixteenth edition.

Bhagawan Sri Sathya Sai Baba: Man Management (Ch. 1 and 2), SSSIHL, 2005.

INDIAN ECONOMY: STRUCTURE AND DEVELOPMENT

UECO / UMEC-501

5 Credits

Course objectives: The objective is to introduce and discuss about major trends in economic indicators and policy debates relating to India in the post– Independence period. After a basic introduction to characteristics of Indian economy, the course covers sector– specific policies with reference to its features, implementation and impact.

Course outcomes: The student should be able to have a thorough understanding on the structure, trends and policies with respect to Indian economy. In particular, they should be able to understand, analyze and express their views on economic issues in the context of India's economic growth and development.

I. Structure of the Indian Economy (18 Hours)

Characteristic of Indian Economy – Trends in India's National Income Structure of growth – India's natural resources – Utilization and Development – Policy and measures – Population growth: Composition and trends: Occupational structure and growth.

II. Agriculture, Industrial and Tertiary Sectors (28 Hours)

Agricultural inputs – Size of farms and productive efficiency – Agricultural finance – Institutional credit – Agricultural price policy – New agricultural strategy – Indian Industry at independence – Industrial Policy – The latest trends – Large Scale Industries: an overview – the role of small scale industries and policy measures– Agriculture and industry Linkages – Growth of services: Trade and balance of payments – Banking and finance.

III. Role of government (14Hours)

Economic planning and regulation – five year's plan– Objectives and achievements – New Economic Policy – Liberalization, Globalization and Privatization – Disinvestment policy – Issues of poverty and Unemployment – Inequality.

IV. Indian Ethos and Economic Development (6 Hours)

Material Progress in a wider setting – Views of Mahatma Gandhi and Bhagawan Sri Sathya Sai Baba.

V. Regional Perspective (4 Hours)

Reasons for regional disparity among Indian states– Andhra Pradesh Economy

Readings:

Gaurav Datt & Ashwani Mahajan, Indian Economy, S. Chand & Co., 2016, seventy-second edition,
Mishra, S. K and V. K. Puri, Indian Economy, Himalayan Publishing House, 2018, thirty-sixth edition
Mahatma Gandhi, Hind Swaraj, Rajpal Publishing, 2015 edition.
Bhagawan Sri Sathya Sai Baba: Man Management, SSSIHL, 2005.

INTERMEDIATE MICROECONOMIC THEORY

UECO / UMEC-502

5 Credits

Course Objectives: This paper analyses the economic behaviour of individuals, firms and markets. It is mainly concerned with the objective of equipping the students in a rigorous and comprehensive manner with the various aspects of consumer behaviour and demand analysis, production theory and behaviour of costs, the theory of traditional markets and equilibrium of firm. It also deals with some aspects of welfare economics and general equilibrium.

Course Outcomes: Demonstrate a broad understanding of intermediate microeconomic theory. Critically analyse and explain consumers, firms and market behaviour using mathematical tools and diagrams. Assess the microeconomic theories and models in terms of their policy implications, advantages and limitations.

I. Basic Concepts (8 Hours)

Introduction – Nature of Economic Theory or Laws; Application and use of Economic Theories; Methods of Economic Theories; Deductive and Inductive – Role of assumptions – Economic Models; Endogenous and Exogenous – Partial and General equilibrium – Economic Static and Dynamic.

II. Consumer Behaviour (24 Hours)

Cardinal and Ordinal Utility – Preferences; Assumptions; Types of Preferences; Well – Behaved Preferences – Marginal Rate of Substitution – Budget Constraint; Properties of Budget Set – Impact of Taxes, Subsidies and Rationing – Consumer Choice; Tangency Condition – Demand Functions for Perfect Substitutes and Perfect Complements – Engel Curves and Demand Curves – Marshallian, Hicksian and Slutsky's Demand Functions; Income and Substitution effects – Inferior and Giffen goods – Compensating and Equivalent Variation of Income.

III. Theory of Production and Cost (14 Hours)

Introduction – Production with Two Variable Inputs; MRTS; Economic Region of Production; Fixed Proportions, Perfect Substitutes; Cobb – Douglas Production Functions – Analysis of Costs in the Short – Run and Long – Run; Modern Developments in Cost Theories– Relationship between Product Curves and Cost Curves; Least – Cost Input Combination; Expansion Path; Learning Curve – Elasticity of Substitution – Economies of Scale and Scope.

IV. Perfectly Competitive Markets (10 Hours)

Introduction – Price Determination Short – run and Long – run Equilibrium; Efficiency Implications; Constant, Increasing and Decreasing Cost Industries, Consumer and Producer Surplus; Deadweight Loss of an Excise Tax and Subsidy – General Equilibrium of Exchange and Production; Edgeworth Box Diagram; Pareto Optimality.

V. Imperfect Competition (14 Hours)

Monopoly; Definition and Sources of Monopoly; Short run and Long run Equilibrium of Price and Output; Efficiency Implications; Deadweight Loss; Price Discrimination – Monopolistic Competition; Chamberlin's model; Short run and Long run – Oligopoly; Cournot and Kinked Demand Curve Models; Collusion; Cartels and Price and Quantity Leadership.

Readings:

Hal. R. Varian, Intermediate Microeconomics, Springer (India) Pvt. Ltd., 2010, Eighth edition.

D. Salvatore, Principles of Microeconomics, Oxford University Press, 2012, Fifth edition.

R. S. Pindyck and D. L. Rubinfeld, Microeconomics, Prentice– Hall, Eighth edition, 2017.

H.L Ahuja, Advanced Economic Theory: Microeconomic Analysis, S Chand Publishing, 2017, 21st edition.

INTRODUCTION TO COMPUTER APPLICATIONS – I

UECO / UMEC–503

1 Credit

Course Objectives: The growth and spread of computer applications in economics has grown multifold in the recent past. The objective of this course is to provide basic introduction into analysis and presentation of economic data using Microsoft office products.

Course Outcomes: At end of the course, students are expected to be proficient in analyzing data and presenting their results using basic functions in excel and PowerPoint. The students are also expected to demonstrate usage of functions of MS excel in solving problems from microeconomics.

I. MS Word (2 Hours)

Introduction into Microsoft Word – Learn the Toolbar – Formatting Text – Inserting Table, Picture, Page Numbers and Date/Time – Spelling and Grammar Checking – Inserting Equation Editor.

II. MS Power Point (2 Hours)

Introduction into Microsoft PowerPoint – Learn the Toolbar – Create Slides – Design of slides – Insert and format text – Insert Headers and Footers – Move and resize text boxes and objects – Insert Clip Art, Photographs, video clips, and sound – Slide Animation – Creating Charts (Graphs).

III. MS Excel (12 Hours)

Introduction to Excel, – Cell Reference – Entering Data – Formatting – Editing Data – Using Formulas – Filters – Sorting– Data Analysis – Pivot Tables – Mathematical and Statistical Functions – Creating Charts.

IV. MS Access (12 Hours)

Introduction into Microsoft Access – Creating New and Opening Existing Databases – Creating a database – Tables – Primary Keys – Switching Views – Entering Data – Manipulating Data – Advanced Table Feature – Creating Forms – Creating Report – Creating Mail Merge Labels.

HISTORY OF ECONOMIC THOUGHT

UECO/UMEC-504

5 Credits

Course Objectives: The proposed course aims to understand how economic thought has evolved over time, introducing students to the most advanced themes of analysis such as the critical comparison of the contributions of the main schools of economists. This is expected to help students to understand the context of the original formulation of some fundamental analytical methods and theoretical concepts used by modern economists. Apart from the standard content, the course also brings in the contribution of Indian ideas in the field of economics.

Course Outcomes: Upon successful completion of the course, the students are expected to have a clear understanding of the evolution of economic thought in relation to how the ideas developed with the changing economic scenario. Moreover, the students should also be in a position to understand how economic ideas of the past are related to current debates and discussions on the unfolding events of the present.

I. Early Period (10 Hours)

Economic thought of Plato and Aristotle, Doctrines of Just cost and Just price, Mercantilism: main characteristics; Thomas Mun – Physiocracy: natural order, primacy of agriculture, social classes, Tableau Economique (economic table), taxation, Turgot – Economic ideas of Petty, Locke and Hume.

II. The Classical Period (18 Hours)

Adam Smith – division of labour, theory of value, capital accumulation, distribution, views on trade, economic progress; David Ricardo – value, theory of rent, distribution, ideas on economic development and international trade; Thomas R. Malthus – theory of population, theory of gluts; German romantics and socialists – Sismondi, Karl Marx – dynamics of social change, theory of value, surplus value, profit, and crisis of capitalism; Economic ideas of J.B. Say, J.S. Mill; Historical school

III. Marginalists (14 Hours)

The precursors of marginalism – Cournot, Thunen, Gossen – The marginalist revolution: Jevons, Walras and Menger – Bohm – Bawark, Wicksell and Fisher: the rate of interest – Wicksteed and Weiser: Distribution – Marshall as a great synthesizer: role of time in price determination, economic methods, ideas on consumer's surplus, elasticities, prime and supplementary costs, representative firm, external and internal economies, quasi – rent, organization as a factor of production, nature of profits; Pigou: Welfare economics; Schumpeter: role of entrepreneur and innovations.

IV. Keynesian Ideas (14 Hours)

The aggregate economy, Liquidity Preference Theory and Liquidity trap, Marginal Efficiency of Capital and Marginal Efficiency of Investment, wage rigidities, underemployment equilibrium, role of fiscal policy: deficit spending and public works, multiplier principle, cyclical behaviour of the economy, uncertainty and role of expectations, impetus to economic modelling.

V. Indian Economic Thought (14 Hours)

Early economic ideas: Kautilya, Valluvar; Modern economic ideas: Naoroji, Ranade, R.C. Dutt and M.N. Roy; Economic ideas of Gandhi: Village, Swadeshi, place of machine and labour, cottage industries, trusteeship; Early approaches to planning (The national planning committee); Gadgil: co – operation as a way of life and strategy of development; J.K. Mehta: Wantlessness.

Readings

Blackhouse, R., *A History of Modern Economic Analysis*, Blackwell, 1991

Ganguli, B.N., *Indian Economic Thought: A 19th Century Perspective*, Tata McGraw Hill, 1977.

Gide, C. and G. Rist, *A History of Economic Doctrines*, George Harrop & co., 1961, second edition.

Seshadri, G.B. *Economic Doctrines*, B.R. Publishing Corporation, Delhi, 1997.

INTERNATIONAL ECONOMICS

UECO/UMEC-505

5 Credits

Course Objectives:

This course provides the students a thorough understanding and deep knowledge about the basic principles that tend to govern the free flow of trade in goods and services at the global level. The contents of the course stress both on theory and applied nature of the subject that have registered rapid changes during the last decade.

Course Outcomes:

The major outcome of this course is to get an exposure to international economics. The students would have understood the trade theories based on perfect and imperfect markets, to understand the impact of free trade and tariffs on the different sectors of the economy. To understand the issues relating to balance of payments and exchange rates. The last topic would make them to get an overview of the International Monetary System.

I. International trade theory (24 Hours)

Introduction to international Economics – Labour productivity and comparative advantage – Empirical evidences on the Ricardian model – Heckscher – Ohlin model – Leontief paradox – Imperfect competition and international trade – The gains from trade and terms of trade – Trade Policy: Free trade Vs protection.

II. Economic integration (4 Hours)

Economic integration – Its Stages – Trade Creation and Trade Diversion –European union.

III. Balance of Payments (18 Hours)

Macroeconomics of open economy – Balance of trade – Balance of payments – Balance of payments accounting principles – current and capital account. – Correcting the adverse balance of payments – International capital flows – A case study of India's BOP crisis in 1991– 92.

IV. Exchange rates and Foreign exchange markets (10 Hours)

Exchange rate – Fixed vs flexible exchange rate systems – Foreign exchange market – its Functions – Foreign Exchange rates – spot and forward rates– Foreign exchange risk – Hedging – its instruments.

V. International monetary system (14 Hours)

Evolution of IMS – Breton wood system – IMF, World Bank and GATT– WTO.

Readings:

Kurgman, Obstfeld and Melitz, International Economics: Theory and Policy, Pearson Higher Education, 2017, tenth edition

Salvatore, International Economics, John Wiley and sons, 2014, eleventh edition,

Sawyer and Sprinkle, International Economics, Prentice hall of India, 2008, third edition.

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PUBLIC FINANCE AND FISCAL POLICY

UECO / UMEC-601

5 credits

Course Objectives: Role and functions of the Government in an economy have been changing with the passage of time. The term 'Public Finance' has traditionally been applied to the package of those policies and operations, which involve the use of tax and expenditure measures. On the other hand, there are vast array of fiscal institutions – tax systems, expenditure programmes, budgetary procedures, stabilization instruments, debt and deficit issues, etc., which raise a spectrum of issues arising from the operation of these institutions. This paper combines a thorough understanding of fiscal institutions with a careful analysis of the issues that underline budgetary policies in general and Indian experience in particular.

Course Outcomes: End of the course the student should have comprehensive understanding on both theoretical and practical aspects about the tools of fiscal policy viz., taxation, expenditure, deficit and debt. The students are also expected to understand the functioning of fiscal institutions, aspects of fiscal policy and fiscal consolidation in general and in particular with respect to India.

I. Public Finance (9 hours)

Meaning; Scope; Importance and Functions of Public Finance – Public finance vs Private Finance – Principle of Maximum Social Advantage – Principle of Opportunity Cost in Public Finance.

II. Taxation (24 hours)

Introduction, Tax Base, Buoyancy and Elasticity of Tax – Characteristics of a Good Tax System– Canons of Taxation– Classification of Taxes; Kinds of Taxes – Single and Multiple Taxation – Double Taxation, Principles of Taxation – Taxable capacity – Shifting and Incidence of Taxes; Musgrave's views on Incidence– Value Added Tax ; GST – Direct Tax code, Issues and Reforms in Taxation.

III. Public Expenditure (14 hours)

Meaning; Role and Objectives of Public Expenditure – Theories of Expenditure – Private and Public Expenditure – Classification – Canons of Public Expenditure – Economic Effects, Issues and Reforms in Public Expenditure.

IV. Debt and Deficit Financing (9 hours)

Meaning of Debt; Classification and Effects of Public Debt; Sustainability of Debt; Debt and Growth – Types of Deficit; Meaning of Deficit Financing; Effects of Deficit Financing.

V. Fiscal policy, Budget and Fiscal Institutions (14 hours)

Meaning and Objectives of Fiscal Policy – Techniques of Budgeting; Canons of Budgeting; Characteristics of a Good Budget– Federal Finance; Latest Finance Commission Recommendations – NITI Aayog – FRBM and Fiscal Consolidation Process.

Readings:

B.P Tyagi and H.P Singh, Public Finance, Jai Prakash Nath & Co, 2016, Sixth edition.
H.L Bhatia, Public Finance, Vikas Publishing House Pvt Ltd, 2018, Twenty-Ninth edition.
D.K Srivastava, Issues in Indian Public Finance, New Century Publications, 2005.
M. M. Sury, Fiscal Policy Developments in India: 1947 to 2007, New Century Publications, 2007.
Various Government Publications and Reports, Reserve Bank of India Publications and Journal Papers.

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INTERMEDIATE MACROECONOMIC THEORY

UECO / UMEC–602

5 Credits

Course Objectives:

On account of the growing influence and involvement of the State in economic fields, macroeconomics has become a major area of economic analysis in terms of theoretical, empirical as well as policy-making issues. Macroeconomics has an extensive, substantive as well as methodological content. It deals with the functioning of the economy as a whole, including how the economy's total output of goods and services and employment of resources is determined and what causes these totals to fluctuate. The canvas of the study is the whole rather than the part because what is true of parts is not necessarily true of the whole.

Course Outcomes:

This course is designed to make an undergraduate student aware of the basic theoretical framework underlying the field of macroeconomics. By the end of this course, the student should have been able to understand the basic concept of macroeconomics, various schools explaining the functioning of the economy such as the classical and Keynesian and the IS–LM framework. The two important building blocks, consumption and investment are to be understood. The course makes the students to understand various theories relating to consumption and investment.

I. Introduction (10 Hours)

Macroeconomics – Central parameters in macroeconomic analysis – Measurement of macroeconomic Variables: National income accounts – GDP – National Income – Personal Disposable Income – National income Identities – Measuring price changes – Broad Macroeconomic Aggregates for the Indian Economy.

II. Classical theory of Employment (14 Hours)

Equilibrium – Output and employment – Production – Equilibrium and its determinants. Money, Prices and interest – Quantity theory of money – Classical theory of interest – policy implications and major shortcomings.

III. Simple Income – Expenditure Model (14 Hours)

The role of aggregate Demand: The problem of unemployment – The simple Keynesian model: Conditions for equilibrium – output – Components of aggregate demand – Determination of equilibrium income – Government expenditure.

IV. Money and Goods market – Joint Equilibrium (18 Hours)

Money interest and income: Keynesian theory of liquidity preference – equilibrium in the money market – LM curve and shifts in it – IS curve and shifts in it – Equilibrium in the IS LM model – Policy effects in the IS LM model: Factors that affect equilibrium income and the interest rate –Relative effectiveness of monetary and fiscal policy – Aggregate supply schedule when money wage is fixed – Shifts in aggregate supply schedule.

V. Consumption and Investment (14 Hours)

Keynesian consumption function – Permanent income hypothesis – Relative income hypothesis – Life cycle hypothesis – Capital and investment: decision to invest – MEC and MEI schedules – The accelerator theory.

Readings:

R. Dornbusch, S. Fischer and R. Startz, *Macroeconomics*, Tata Mc Graw Hill, 2017, eleventh edition.
Froyen, *Macroeconomics*, Pearson Education, 2013, tenth edition.
Gardner Ackley, *Macroeconomics: Theory and Policy*, Macmillan, 1978.
Reserve Bank of India, *Handbook of Statistics on Indian Economy* (Latest Edition)

INTRODUCTION TO COMPUTER APPLICATIONS IN ECONOMICS – II

UECO / UMEC-603

1 Credit

Course Objectives: Knowing the importance of computer application in economics this course is in continuation of previous course in computer application. This course deals more rigorously with excel and economic data sets.

Course Outcomes: End of the course the student should be able to learn in depth different aspects of excel like data analysis, graphs, pivot tables organizing data, different functions and learn different economic data sets. The student would choose a problem relating to Indian Economy and write a report using some descriptive analysis based on the secondary data.

I. Application of Excel to Microeconomics (5 Hours)

Demand – Supply – Equilibrium– Consumer Behaviour – Elasticities – Production– Cost – Revenue – Markets

II. Application of Excel to Macroeconomics (5 Hours)

Types of data and data sets – Economic Data bases: RBI, NSSO, CSO, IMF and World Bank – Data transformations – Splicing– Calculate GDP deflator, Sectoral GDP, per capita income, year on year growth rates, savings and investment rate, trade and fiscal deficit, Inflation, Multipliers – Graphical presentation of the data.

III. Report Writing (18 Hours)

Writing a report on any economic issue using the techniques that are learnt in this semester.

MONEY, BANKING AND FINANCIAL INSTITUTIONS

UECO / UMEC-604

5 credits

Course Objectives: A clear understanding of the operations of money, banking and their interaction with the rest of the economy is essential to realize how monetary forces operate through a multitude of channels like market and non– market institutions. Accordingly, the Paper on ‘Money and Banking’ is an optimal integration of monetary theory and banking institutions that combines with itself a systematic discussion of the theory, institutions and policy with special reference to India.

Course Outcomes: Upon successful completion of this course, students will be able to understand key theories and concepts of monetary economics and banking theory. Moreover, the students are expected to have a clear understanding of the theory and its relevance to current events and concepts of monetary economics and banking theory.

I. Introduction (10 hours)

Money; Meaning, Functions and Classification; Evolution of money – Gresham’s law – Role of Money in Economy – Monetary Standards; Gold Standard and its abandonment – Cost of holding Money.

II. Inflation, Interest rate and Demand for Money (18 hours)

Meaning, Types and Effects – Theories of Inflation and Control measures; Inflation and Unemployment – Quantity theory of money and Liquidity preference theory; Post Keynesian theories of demand for money – Interest Rates; Determination – Theories of Interest rates – Interest rates structure in India – Appropriate interest rate policy – International interest rates.

III. Banking and Non – Banking Institutions (14 Hours)

Institutional structure in India: Commercial, Cooperative banks and Private sector banks – Non – Bank Financial Intermediaries (Development Banks) – Finance Companies – Mutual Funds – Lease finance – Housing Finance – Venture Capital funds – Money Market Mutual Funds – Hedge Funds – Insurance companies – Infrastructure Finance Companies.

IV. Commercial Banks (14 hours)

Evolution of banking; Assets and Liabilities – Credit Creation; Money Multiplier; Deposit multiplier; Credit multiplier– Banker and Customer – Deposit Accounts – Cheques – Loans and Advances– Banking Reforms.

V. Central Banking (14 hours)

Role and Functions; Balance Sheet; Goals and Instruments of Monetary Policy; Effectiveness and Limitations of Monetary Policy with special reference to India – Government Bonds and Securities – Measures of Money Supply.

Readings:

F S Mishkin, The Economics of Money, Banking, and Financial Markets, Pearson, 2015, eleventh edition
Suraj B Gupta, Monetary Economics, S Chand & Co Ltd, 2010.

D N Dwivedi, Macroeconomics: Theory and Policy, McGraw Hill Education (India) Pvt Ltd, 2017, fourth edition.

B.N Ghosh and Rama Ghosh, Fundamentals of Monetary Economics, Himalaya Publishing House, 2000.
Bharati V. Pathak, The Indian Financial System: Markets, Institutions and Services, Pearson, 2018, fifth edition.

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BASIC ECONOMETRICS

UECO / UMEC–605

5 Credits

Course objectives: The objective is to provide a thorough overview of the statistical inference leading to basic level introduction to the theory of econometrics. While sampling, hypothesis testing and estimation is covered under statistical inference; the topics in basic econometrics relates to problem of estimation, testing and properties of a simple ordinary regression model. The course also provides some insights into alternative functional forms of regression.

Course outcomes: By the end of the course, students will be able to specify assumptions, formulate and estimate simple linear regression models, interpret the results and test their statistical significance.

I. Probability and Sampling Distributions (20 Hours)

Introduction to probability: Definition of probability – Addition and multiplication rules– Conditional and Independence of events – Bayes’ theorem (Without proof) – Expectation, Variance and Covariance of a random variable – Bernoulli, Binomial and Poisson distributions (simple problems) – Normal distribution: Importance and properties of Normal distribution (without proofs) – Statement of Central Limit Theorem (CLT).

II. Statistical Inferences (20 Hours)

Introduction to sampling distributions – The distribution of sample mean – Chi– Square t and F distributions – Properties of estimators: Unbiasedness, Efficiency, Consistency, Sufficiency – Methods of estimation: Method of moments, Least Square method, The method of maximum likelihood – Hypothesis testing: Testing a statistical hypothesis – Formulation of null/alternative hypothesis – Type I and Type II errors – Level of significance – Power of the test – steps in testing of hypothesis.

III. Introduction to econometric analysis (5 Hours)

Introduction to regression analysis – meaning of econometrics – need of econometrics and regression in economic analysis – methodology of econometrics – types of econometrics – significance of error terms in the regression model.

IV. The Problem of Estimation (15 Hours)

Two variable regression model – assumptions – estimation of regression parameters – Gauss Markov theorem – Maximum likelihood estimation – Need and significance of alternative regression forms: economic significance, Log transformation, semi log and double log models and interpretation.

V. Testing of Hypothesis (10 Hours)

Interval estimation – Testing of hypothesis in regression model – testing significance of individual parameters – testing the overall significance of the model – measure of goodness of fit – interpretation of model with simple economic applications.

Readings:

Christopher Dougherty, Introduction to Econometrics, Oxford University Press, 2016, fifth edition.

Damodar N. Gujarati, Dawn Porter, Sangeetha Gunasekar, Basic Econometrics, McGraw Hill Education, 2017, fifth edition.

Maddala G S and Lahiri K, Introduction to Econometrics, Wiley, 2012, fourth edition.

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