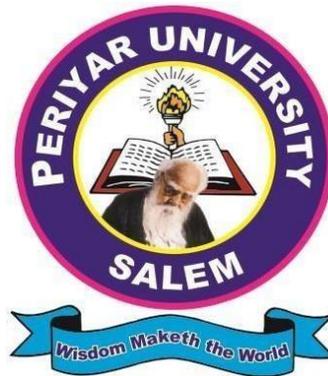


PERIYAR UNIVERSITY

SALEM – 636 011, Tamil Nadu, India

NAAC A Grade - State University-NIRF Rank 73



M.A., IN ECONOMICS CHOICE BASED CREDIT SYSTEM (University Department)

OBE REGULATIONS AND SYLLABUS

(Effective from the Academic Year 2021-22 and thereafter)

OBE REGULATIONS AND SYLLABUS

(With effect from the academic year 2021-2022 onwards)

The following regulations for the M.A., Economics are framed from the academic year 2021 – 22 and thereafter in the Department of Economics of the Periyar University, Salem.

Preamble

To develop the Post Graduates in Economics with skill sets required for academic, research and development units of the industries in the world of change.

General Graduate Attributes

GA1: Apply Economics, Econometrics and Mathematical Knowledge

GA2: Develop economic concepts and policies

GA3: Developing Research Skills

GA4: Understanding of Profession Ethics

GA5: Solutions to the economic issues

GA6: Applying logical knowledge

GA7: Acquiring the latest knowledge and skills related to economics

GA8: Leadership, Initiative and teamwork

GA9: Kindling creativity

GA10: Enhancing knowledge in specialization area

GA11: Persuading intellectual Rigour in learning of Economics

GA12: Communication and social skills for better society

Programme Specific Qualification Attributes

Mention the programme specific qualification attributes achieved through courses in the programme in terms of

Knowledge and understanding level (K1 and K2)

- a. Remember or recognize a term or a basic concept
- b. Select an explanation for a statement related to the question topic
- c. Understand the existing problems

Application level (K3)

- a. Applying to the real world situation and the solutions thereof

Analytical level (K4)

Analyzing the theories, concepts and breaking down them to apply to the existing situation or solutions thereof.

Scientific or synthesis level (K5)

Synthesis of the concepts and integration of economic knowledge

Evaluation capability level (K6)

Determining the degree of effectiveness and economic policies

Assessment Rubric for Economics

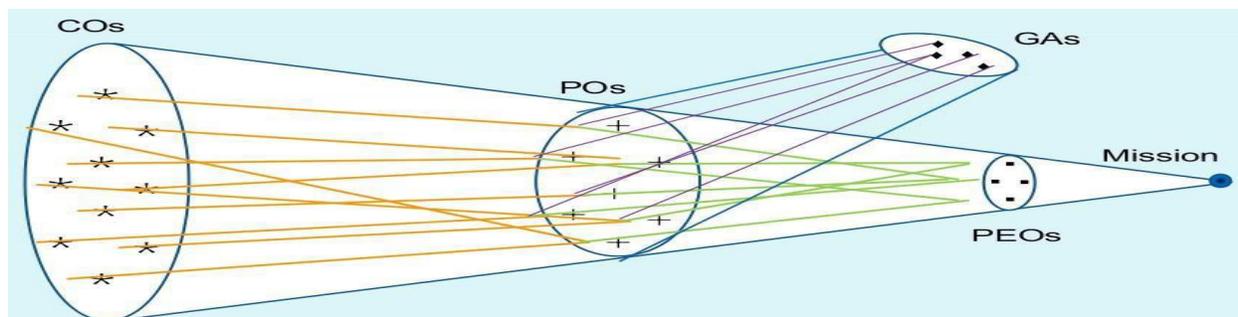
This Rubric will be used to assess student learning outcomes based on learning domain categories using varying levels.

Learning Domain Category (LDC)	Student not present (N/A)	Level 1 Failing	Level 2 Passing	Level 3 Average to Good	Level 4 Very Good to Excellent
Knowledge		No evidence for knowledge	Recalls some economic content and definitions but not always accurately	Identifies most economic definitions, principles, methodologies and theories accurately	Identifies significant economic definitions, principles, methodologies and theories accurately
Understand		No evidence for understanding	Explains/demonstrates economic ideas, concepts and principles with limited accuracy and irrelevant examples	Explains /demonstrates economic ideas, concepts and principles with some accuracy and relevant examples	Explains/demonstrates economic ideas, concepts and principles accurately and relevant examples
Application		No evidence for application	Applies economic knowledge and concepts with little consistency or accuracy	Applies economic knowledge and concepts with some degree of consistency and accuracy	Applies economic knowledge and reasoning with consistently and accuracy
Analysis		No evidence for analysis	Breaks down theories, models, graph, calculations, and arguments into their elements with difficulty	Breaks down theories, models, graphs, calculations, and arguments into their elements with minimal difficulty	Breaks down theories, models, graphs, calculations, and arguments into their elements with accuracy
Synthesis		No evidence for synthesis	Integrates relevant knowledge from diverse economic perspectives with little depth and breadth	Integrates relevant knowledge from economic diverse perspectives with some depth and breadth	Integrates relevant knowledge from diverse economic perspectives with depth and breadth
Evaluation		No evidence for evaluation	Determines with a minimal degree of effectiveness economic choices, polices, or theory in problem solving	Determines with some degree of effectiveness economic choices, polices, or theory in problem solving	Demonstrates ability to assess the effectiveness of economic choices, polices, or theory in problem solving

Vision

Achieving excellence in Economics through Teaching, Research, Extension and Consultancy

In order to achieve the lofty vision the following diagram may be considered for interlinking of the Course outcomes with mission.



Mission is the programme specific objectives, Gas- Graduate attributes (genral)

Programme Objectives and Outcomes

Programme Educational Outcomes (PEOs) for M.A Economics are as follows

PEO1: Analytical and problems solving skills

The students of Economics can easily the complex problems and provide solutions with the available data through the concepts, methods available in different economics courses such as microeconomic and macroeconomic theory, statistical, mathematical and econometric tools

PEO2: Adopt economic bent of mind and critical thinking

Economics students would be in a position to apply the different economic concepts, theories and analysis to the issues faced by the society and the economy. It helps in understating, appreciating, comparing and evaluating with divergent solutions to a pressing issue for policy framework.

PEO3: Quantitative and Qualitative reasoning

Quantitative and Qualitative reasoning is expected to be the core of the programme. The students can collect data, analyze using the appropriate logical, statistical and mathematical techniques interpreting in the right manner.

PEO4: Specialized Knowledge and skill sets

Specialized knowledge will be made available to the students and they will develop the analytical, critical, logical, qualitative and quantitative knowledge using the economic concepts

PEO5: Interdisciplinary and Global Knowledge

This programme would help the student to acquire skills to deal with the issues involving interdisciplinary knowledge. The theories and concepts imparted would enhance the insights of the learners into the world around them.

PEO6: Communication and Leadership

Economics students will be exposed to the set of skills to work as a part of team and leaders. They will be prepared to navigate different audience.

MA Economics Programme Objectives (Common for all courses)

PO1: To impart the basic of advanced knowledge of eco-concepts and theories to the students

PO2: To make the students to understand different economic systems, challenges faced nationally and globally

PO3: To build the research aptitude in economics related issues among the minds of students

PO4: To inculcate the ability of knowledge of policy framing both at micro and macro level

PO5: To make the students build marketing skills within them

PO6: To prepare the students to learn the economic crisis and measures to mitigate it

PO7: A thorough mastery of a specific area of specialization sufficient to present a specialist profile

PO8: The capability building to adapt to professional context; leading to flexibility and capability for continuous and lifelong learning

P10: The ability to work as a team in multi-dimensional economic environment

P11: The ability to apply the concepts learnt in the context of various economies

P12: Ability to use the models and programmes for predicting the future economic activities on various spheres

CONDITIONS FOR ADMISSION

A candidate who has passed B.A., Economics / Cooperation or B.Com. or B.B.M., or B.B.A., or B.Sc., Mathematics or Statistics degree examination of Periyar University or an examination of some other University accepted by the syndicate as equivalent thereto shall be permitted to appear and qualify for the M.A., Economics in the Department of Economics of the Periyar University.

ELIGIBILITY FOR THE AWARD OF DEGREE

A candidate shall be eligible for the award of the degree only if he/she undergone the prescribed course of study in the Department of Economics of the University for a period of not less than two academic years, passed the examination of all the four semesters prescribed by earning minimum 50 percent of marks and fulfilled such conditions as have been prescribed thereafter.

DURATION OF THE PROGRAMME

The degree of Master of Arts programme shall consist of two academic years, with four semesters. The programme of study shall be based on Choice Based Credits System (CBCS) pattern with internal assessment. For this purpose each academic year shall be divided into two semesters. The First and Third Semesters cover the period from July to November and Second and Fourth Semester spread from December to April.

EXAMINATION

There shall be four semester examinations. The First Semester Examination will be held at the middle of the First Academic Year and the Second Semester Examination at the end of the First Academic Year. Similarly examination will be held at the middle and at the end of the second academic year.

Revised MA ECONOMICS PROGRAMME FROM THE ACADEMIC YEAR 2021-22 ONWARDS

Course	Course Code	Category	Number of Credits	Hours per Week	Exam Duration	Marks
Semester I						
Micro Economics - I	21UPECO3C01	Core I	4	4	3 Hrs	100
Macro Economics – I	21UPECO3C02	Core II	4	4	3 Hrs	100
Mathematics for Economics	21UPECO3C03	Core III	4	4	3 Hrs	100
Industrial Economics	21UPECO3C04	Core IV	4	4	3 Hrs	100
Elective I: 1. Indian Economy 2. Resource Economics 3. Economics of Social Issues	21UPECO3E01 21UPECO3E02 21UPECO3E03	Elective	4	4	3 Hrs	100
Semester II						
Micro Economics – II	21UPECO3C05	Core V	4	4	3 Hrs	100
Macro Economics – II	21UPECO3C06	Core VI	4	4	3 Hrs	100
Statistical Techniques	21UPECO3C07	Core VII	4	4	3 Hrs	100
Elective II: 1. Agricultural Economics 2. Rural Development 3. Gender Economics	21UPECO3E04 21UPECO3E05 21UPECO3E06	Elective	4	4	3 Hrs	100
Economics for Business Initiatives (Supportive)	21UPECO3S01	Supportive	3	3	3 Hrs	100
Human rights						
MOOC/Swayam Course /Add on course						
Semester III						
Internship	21UPECO3C08	Core VIII	8			200
Research Methodology	21UPECO3C09	Core IX	4	4	3 Hrs	100
Public Finance- I	21UPECO3C10	Core X	4	4	3 Hrs	100
Development Economics	21UPECO3C11	Core XI	4	4	3 Hrs	100
Econometrics	21UPECO3C12	Core XII	4	4	3 Hrs	100
Monetary Economics	21UPECO3C13	Core XIII	4	4	3 Hrs	100
Economics for competitive Examination (Supportive)	21UPECO3S02	Supportive	3	3	3 Hrs	100
MOOC/Swayam Course /Add on course						
Semester IV						
Environmental Economics	21UPECO3C14	Core XIV	4	4	3 Hrs	100
Public Finance- II	21UPECO3C15	Core XV	4	4	3 Hrs	100
International Economics	21UPECO3C16	Core XVI	4	4	3 Hrs	100
Elective: 1. Computer Applications in Business 2. Economics of Demography 3. Maritime Economics	21UPECO3E07 21UPECO3E08 21UPECO3E09	Elective	4	4	3 Hrs	100
Project	21UPECO3C17	Core XVII	8			200
Total Credits			94			

CREDIT DETAILS

A Master degree programme consists of a number of courses. The term course is used to indicate a logical part of subject matter of the programme. The details of credit are as follows:-

Total Number of Credits		
Course	Number of Courses	Number of Credits
Core	16 X4 = 64 Internship:08 Project:08 2X8 = 16	78
Elective	3X4 = 12	12
Supportive	2X3 = 06	06
Total	23	94

Note:

Add – on credit course: MOOC

However, earning credit in the Add – on course is additional and will not reflect for the award of degree, since the MOOC course are introduced on experimental basis.

REQUIREMENT FOR PROCEEDING TO SUBSEQUENT SEMESTER

1. Candidates shall register their names for the First Semester examination after the admission in the PG programme
2. Candidates shall be permitted to proceed from the First Semester up to Final Semester irrespective of their failure in any of the Semester Examinations subject to the condition that the candidates should register for all arrear subjects of earlier semesters along with current (subsequent) semester subjects.
3. Candidates shall be eligible to go to subsequent semester, only if they earn sufficient attendance (75 %) as prescribed by the syndicate of the Periyar University from time to time. If the candidate earns attendance between 74 and 60 they are allowed to write exam by paying condonation fee prescribed by the university

In case of candidate earning less than 60 percent of attendance in any one of the semesters due to any extraordinary circumstances such as medical grounds, such

candidates who shall produce Medical Certificate issued by the Authorized Medical Attendant (AMA), duly certified, shall be permitted to proceed to the next semester and to complete the course of study. Such candidate shall have to repeat the missed semester by rejoining after completion of final semester of the course, after paying the fee for the break of study as prescribed by the Periyar University from time to time.

PASSING MINIMUM

A candidate shall be declared to have passed in each paper wherever prescribed if he/she obtains NOT LESS THAN 50 percent OF MARKS prescribed for the examination. He/She shall be declared to have passed the whole examination, if he/she passes in all the papers wherever prescribed/as per scheme of examinations earning 90 credits.

CLASSIFICATION OF SUCCESSFUL CANDIDATE

Candidates who obtained 75% of the marks in aggregate shall be deemed to have passed the examination in **FIRST CLASS WITH DISTINCTION**, provided they passed all the examinations prescribed for the course in the first appearance.

Candidates who secured not less than 60% of aggregate marks in the whole examination shall be declared to have passed the examination with **FIRST CLASS**. All other successful candidates shall be declared to have passed with **SECOND CLASS**.

RANKING

Candidate who passed all the examinations prescribed for the course in the **FIRST ATTEMPT ONLY** is eligible for Classification/Ranking/Distinction.

EVALUATION OF EXTERNAL EXAMINATIONS – QUESTION PAPER PATTERN

Time duration: 3 Hours

Max. Marks: 75

PART- A: 20 x1 = 20

Answer all the questions

(Objective type four questions from each unit)

PART- B: 3 x 5 = 15

Answer any three questions out of five questions

(Questions must be of analytical type)

PART- C: 5x8 = 40

Answer all the questions (Either or type for each unit)

The Passing minimum shall be 50% out of 75 marks (38 marks)

ANNEXURE I: Dissertation model

Format of the title page

TITLE OF THE DISSERTATION

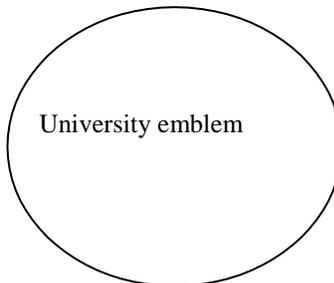
A Dissertation submitted in partial fulfillment of the requirements for the
degree of

Master of Arts in Economics
to the Periyar University, Salem - 11

By

STUDENT NAME

REG. NO.



DEPARTMENT NAME

PERIYAR UNIVERSITY
PLACE with Pin Code

MONTH – YEAR

SEMESTER I

21UPECO3C01 MICRO ECONOMICS – I 4 credits

Objectives

1. Understand the core principles of microeconomics
2. Considering the operation of a market economy and the allocation of society's scarce resources
3. Enhancing analytical skills related to consumption, production and cost theories
4. Developing adequate skills regarding market structure and examine the public policies related to market

UNIT- I: Theory of Demand

Theory of Consumer Behavior – The Market Demand - Determinants of Demand –Recent Development in the Theory of Market Demand: - The Demand for the product of Firm

UNIT- II: Theory of Production

The Production Function for a single product – Law of Production – Technological Progress and the Production Function – Equilibrium of the Firm: Choice of Optimal Combination of Factors of Production – Single Decision of the Firm – Choice of optimal Expansion Path Graphical Derivation of cost curves from a production function –The Production Possibility Curve of the Firm – The ISO revenue curve of the Multiproduct Firm – Equilibrium of the Multiproduct Firm

UNIT- III: Theory of Costs

The Traditional Theory of Cost – Modern Theory of Cost – Engineering Cost Curves –The Analysis of Economies of Scale – Empirical Evidence of the Shape of Costs – Statistical cost studies- studies based Questionnaires – Engineering Cost Studies – Statistical Production Functions – The Survivor Technique -The Relevance of the Shape of Costs in Decision making.

UNIT – IV: Theory of the Firm - I

Perfect Competition – Assumption – Short run Equilibrium – Long run Equilibrium – Dynamic Changes and Industry Equilibrium – Monopoly – Demand and Revenue- Costs – Equilibrium of the Monopolist - Comparison of Pure Competition and Monopoly - The Multiplant Firm – Bilateral Monopoly -Price Discrimination – Monopolistic Competition.

UNIT- V: Theory of the Firm - II

Classical Oligopoly – Non Collusive Oligopoly: Cournot’s Duopoly Model – Bertrand’s Duopoly Model – Chamberlin’s Oligopoly – The Kinked Demand Model – Stackelberg’s Duopoly Model – Collusive Oligopoly: Cartels – Price Leadership – The Basing Point System – A critique of the Neoclassical Theory of the Firm

Text Book

A.Koutsyiannis, (1982) Modern Microeconomics, Macmillan Education Ltd, London.

Reference

- 1 Richard Varian – (1982) Intermediary Micro Economics, Affiliated East West Press.
2. Robert Pindyck and Daniel L.Rubinfeld– (2003) Micro Economics, Macmillan.
3. E.K.Browning and J.M.Browning (1991) Micro Economics – Theory and Applications

CO Number	CO Statement	Knowledge Level	Order
CO1	Understand the core principles of microeconomics, considering the operation of a market economy and the allocation of society’s scarce resources	K1, K2	LO
CO2	Enhancing the analytical skills related to production and costs	K3	IO
CO3	Examine the public policies related to market and economy	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	P11	P12
CO1	L	L	L	L	L	L	L	L	L	L	L	L
CO2	M	M	M	M		M	M	M	-	M	-	M
CO3	S	S	S	S	S	M	S	M	S	S	S	S

Objectives

1. To enable the students to learn national income and establish the functional relationship between large aggregates
2. To introduce the macro economic theories and its relevance to the real world
3. To provide insights into the post Keynesian and supply side economics

Unit – I: National Income and Social Accounting

Introduction – Need for a Separate Study of Macro Economics - National Income – Circular Flow of Income – National Income and National product – Measurement of National Income – Difficulties in the Measurement of National Income –National Income and Measure of Welfare- Social Accounting – concept and importance-Statics-Dynamics.

Unit – II: Macro Economic Theories – I

The Classical Theory of Employment – Say’s Law of Markets – Aggregate Demand and Supply (Two, Three and Four Sector Model) – The influence of monetary and fiscal policy on aggregate demand - The Consumption Function- Keynes Psychological Law of Consumption – The Marginal Efficiency of Investment (MEI) – Income Determination in Closed and Open Economy – General prepositions of Keynesian Macroeconomics- The Keynesian Theory of Income, Output and Employment.

Unit – III: Macro Economic Theories – II

Savings and Investment Equality (The Classical and Keynes criticism of the view) – Aggregate supply hypothesis- policy implications of classical approach-Investment – Lags in Investment – Koyek’s Approach – Financial Theories of Investment –Multiplier, Accelerator and Super Multiplier- Multiplier in underdeveloped countries.

Unit – IV: Post-Keynesian Developments in Macro Economics

General Equilibrium and IS-LM Curve Model – The Derivation of the IS Curve – Shift in the IS Curve – The LM Curve – Shift in the LM Curve – Intersection of the IS and LM Curves – Phillips Curve – Long-run Phillips Curve and Rational Expectations Theory - Numerical Problems of IS curve – Two and three sector model – Derivative of LM curve – Determination of Income and Interest Under IS Curve- Relative effectiveness of monetary and fiscal policies - The great recession and revival of Keynesian Macro economics.

Unit – V: Supply Side Economics

Supply Side Economics – Laffer curve – Supply side vs demand side economics - Taxation and Labour Supply- Supply Side Economics during Reagan Administration -Reducing the Burden of Government Regulations –Effectiveness of supply side economics.

Text Book

Mankiw. N. Gregory (2019) Macro Economics (Worth Publishers, New York)

References

1. Rudiger Dornbusch, Stanley Fischer and Richard Startz (2017), “Macro Economics”, *Tata McGraw – Hill Publishing Company Limited*, New Delhi.
2. Dornbusch, Rudiger, Stanley Fischer, and Richard Startz (2000). Macro economics, Tata McGraw – Hill Publishing Company, New Delhi.
3. Roger E.A. Farmer (2002), Macro economics, Thompson Asia Pvt.Ltd., Singapore
4. Jha, Raghendra (1991). Contemporary Macroeconomics Theories and policy, Wiley Eastern Limited, New Delhi.

CO Number	CO Statement	Knowledge Level	Order
CO1	Understand the concepts and theories of macro economics	K1, K2	LO
CO2	Gain the causes and effects of pressing issues in the economy: employment, consumption and post Keynesian developments	K3	IO
CO3	Considering the supply side economics and the government regulations in maintaining the economy	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	P11	P12
CO1	L	L	L	L	L	L	L	-	L	L	-	L
CO2	M	M	M	M		M	M	M	-	M	-	M
CO3	S	S	S	-	S	-	S	-	S	S	S	S

Objectives

- Helps to perform quantifiable experiments
- To create models for predicting future economic growth
- To make quantitative methods for fundamental aspect of economics

UNIT – I: INTRODUCTION AND REVIEW

Introduction and importance of mathematics for economics - Review of the number system - Elementary co-ordinate geometry - Theory of sets, relations and functions: Solution of linear and quadratic equations - Theory of graphs and limit of a function at a point – Applications in Economics

UNIT – II: MATRIX ALGEBRA

Matrix Algebra – Determinants and Properties – Types of Determinants - Operations – Addition and Subtraction of Matrix – Multiplication – Transpose and Inverse of Matrix. Solutions for Simultaneous Equations – Grammer’s Rule. Some applications in economics (SAE) partial equilibrium market model, national income model

UNIT – III: APPLICATIONS OF DIFFERENTIATION & INTEGRATION

Derivatives and their Interpretation – Techniques – Relationship among Total, Average and Marginal Revenue and Cost, Elasticity of Functions – Functions of Two Variable – Partial Derivatives and their Applications in Economics – Integration – Difference & Differentials equations – Rules and Economic Applications – Differentials equations: rules and Applications.

UNIT – IV: THEORY OF THE FIRM

Optimization Problems Involving One or Two Variables – Applications in Economics – Homogeneous Function and their Properties – Euler’s Theorem – Application of Cobb-Douglas, C.E.S. and Frontier Production Function and their Properties.

UNIT – V: INPUT-OUTPUT ANALYSIS AND GAME THEORY

Static and dynamic Input-Output Analysis, Open and closed models - Concept of game, pay-off matrix, pure and mixed strategies, Two person Zero-sum game- saddle point solution, Non-constant-sum game, Cooperative and non-cooperative games, Nash equilibrium.

References

1. Agarwal D.R (2001), “Mathematics for Economists”, Vrinda Publications Pvt Ltd. Delhi.
2. Allen R.G.D (2008), “Mathematical Analysis for Economists”, A.I.T.B.S. Publishers, India, Delhi.
3. Bradley, Teresa & Patton, Paul (2002), “Essential Mathematics for Economics and Business”, Wiley India Private Lid., New Delhi.
4. Renshaw, Geoff (2009), Maths for Economics (2nd Edition), Oxford University Press, New York
5. Edward T. Dowling (2012), “Theory and Problems to Introduction to Mathematical Economics”, Tata McGraw-Hill Publishing, New Delhi.
6. Geoff Renshaw (2009), “Maths for Economics (4nd Edition)”, Oxford University Press, New York.
7. Taroyamane (2003) “Mathematics for Economist – An Elementary Survey”, Prentice Hall of India, New Delhi.
8. Weber, E. Jean (1982), “Mathematical Analysis Business and Economic Applications (4th Edition)”, Harper & Row, Publishers, New York.
9. Alpha C. Chinag (2017), “Fundamental Methods of Mathematical Economics”, McGraw Hill, New York.

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Analyse new theories, models and methods	K1, K2	LO
CO2	Develop testable hypotheses based on the application of conceptual models	K3	IO
CO3	Collect, organize and analyze data using quantitative and qualitative methods and qualitative reasoning	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	L	-	L	L	L	L
CO2	M	M	M	-	M	-	M	M	M	-	M	M
CO3	S	S	S	S	S	S	-	S	S	S	-	S

21UPECO3C04

INDUSTRIAL ECONOMICS

4 credits

Objectives

1. To understand the role of industry in and Economy
2. To explore the different organizations and pricing policy
3. To learn the issues of the Indian industrial sector

Unit-I: Basic Concepts, Theory of Firm and Pricing

Concepts: Firm, Industrial Combination-Causes-conglomerate, cartel, pattern of industrialization-Economies of scale – Market structure-Objectives of the firm – Growth of firms – Marginal cost pricing vs. full cost pricing – Depreciation – Administered prices.

Unit –II: Industrial Organization

Industrial Organization -Structure and change- Relevance of industry studies for public policy- Monopoly and concentration: Concepts – Measures of monopoly – Control of monopoly-Industrial monopoly legislation- The Indian MRTP Act, 1969.

Unit–III: Theories of Industrial Location and Regional Development Industrial location

Factors affecting industrial location - Measures of localization – Weber and Sargent Florence - Regional growth of industry in India- Need for balance regional development of Industries- Industrial policy on backward areas.

Unit –IV: Industrial Productivity and Finance

Industrial Productivity-Measures –factors affecting productivity- and efficiency- Financial statements: Ratio analysis and interpretation-Industrial finance-sources of finance- Industrial Development Bank of India– IFC-Objectives and functioning – Impact of these institutions.

Unit –V: Issues in Indian Industry

Public sector: Rationale-organization – Pricing policies – The question of efficiency – Performance of public sector in India – The concept of joint sector- Industrial problems: Industrial sickness, Evaluation of Industrial reform measures- Industrial policy since 1991-Foreign capital and role of MMNC in India.

Text Book

1. Divine, P.J. et al., (1979), An Introduction to Industrial Economics 3e [George Allen and Unwin, London], e book, 17 January 2018, <https://doi.org/10.4324/9781351244633>

References

1. K.V.Sivayya and V.B.M.Das, “Indian Industrial Economy”, S.Chand & Company Ltd., New Delhi, 2004.
2. R.R.Barthwal, “Industrial Economics”, New Age International Pvt Ltd. Publishers, New Delhi, 2003.
3. Francis Cherunilam, “Industrial Economics”, Himalaya Publishing House, New Delhi, 2004.
4. P.G. Gadgil & P.L.Gadgil, “Industrial Economy of India”, Eurasia Publishing House Pvt Ltd, New Delhi, 2002.
5. S.C.Kuchhal, “The Industrial Economy of India”, Chaitanya Publishing House, Allahabad, 1989.
6. S.K.Misra and V.K.Puri, “Industrial Economy of India”, Himalaya Publishing House, New Delhi, 2000.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Understand the issues involving industries in India and they can know the modern issues affecting the Industrial development	K1, K2	LO
CO2	Applying concepts and theories of industrial location and industrial organization	K3	IO
CO3	Provide original and innovative solutions to industrial issues in Indian Economy	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	-	-	L	L	L	-
CO2	M	M	M	M	M	M	M	-	M	-	M	-
CO3	-	-	S	S	S	-	S	S	S	-	S	S

1. To acquaint the students with the strategy of economic development of the Indian economy in different periods.
2. To create awareness among the students regarding the contemporary issues pertaining to various sectors of the Indian economy
3. To provide insights into the Indian economy in the global context

Unit I: Growth and Employment

Indian Economy at Independence- Underdevelopment: Meaning and Indicators- India as a developing economy- Transition to market oriented policy- Role of NITI Aayog- Growth and Structural Changes: Savings and Investment - Regional Dimension of Growth and Employment.

Unit II: Natural and Human Resources

Natural Resources: Land, Forest, Water, Fisheries and Minerals. - Demographic Constraints: Population Change and Economic Development- India's Demographic Transition and Its Consequences for Development- Assessment of the Growth Experience: Poverty-measuring poverty- Unemployment- Gender gap and Inflation-Employment and Growth- impact of growth on poverty- Inequality.

Unit III: Agriculture

Indian Agriculture: Developments, Issues and Policies- Factors determining agricultural growth- Reforms in Land System in Post- Independent in India- Growth Crisis in Agriculture - Food and Nutrition Security –Food inflation- Food Policy in India- Farm budget- Case of Tamil Nadu farm budget.

Unit IV: Industry

Industrial Development and Policies since Independence- Industrial Growth and Diversification- Industrial Policy and issues in the Performance of public sector enterprises - Public versus Private Sector- industrial growth before and after reforms

Unit V: Services and External Sector

Services in India's Growth Process- Infrastructure and Economic Development- Trade and economic growth- India's External Sector: Policies, Developments and Issues- Foreign Investment- Foreign Direct Investment: Trends and Issues- India and the WTO- MNCs- Recent trends in international trade – COVID and Indian Economy.

Text Book

1. Uma Kapila (2019), “Indian Economy since Independence-A comprehensive and critical analysis of India’s economy, 1947-2018”, 28th Edition, Academic Foundation New Delhi.

References

1. Misra S. K. and Puri V. K. (2021), “Indian Economy- Its Development Experience”, 39th Revised and Updated Edition, Himalayan Publishing House, Mumbai.
2. Ruddardutt& Sundaram K.P.M. (2017), “Indian Economy”, S.Chand & Co. New Delhi.
3. Jalan, B. (2002), “The Indian Economy- Problems and Prospects” Viking, New Delhi
4. Annual Economic Survey (Different issues), GoI, New Delhi

CO Number	CO Statement	Knowledge Level	Order
CO1	The students will get the knowledge and strategies of economic development of India in different periods, understand the basics of various sectors, employment and growth of Indian Economy	K1, K2	LO
CO2	Gain awareness among them regarding the contemporary issues pertaining to various sectors of India	K3	IO
CO3	Explore the issues and different strategies for the development of Indian economy	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	L	M	L	S	L	L
CO2	S	M	S	M	M	M	M	M	M	L	L	M
CO3	L	S	L	S	S	S	M	S	S	S	M	S

Objectives

1. To study the natural resources and its uses
2. To find ways to maintain the non-renewable resource
3. To adopt for the non-renewable resources
4. To understand the economics of biodiversity and valuation of it

Unit-I - Natural Resources in the History of Economic Thought

Economic definition of natural resources- Historical perspective Classical Approach to natural resources - Adam Smith, Thomas Malthus, David Ricardo- Transition to modern analysis- J.S.Mill, W.S.Jevons, Alfred Marshall- Natural resources and entropy law (Georgescu-Rogen)- Limits to Growth model: implications and limitations.

Unit-II - Management of Renewable Resources

Definition of renewable resources- Management of Rainforests- Local , regional and global benefits of rain forests- Economic theories of deforestation-Frontier model- Immiserization model- Sustainable forestry- Forest management for timber value- Forest management for non-timber value - Optimal rainforest area at the national level-State of forests and forestry management in India- Management of the fishery-The biological approach : Maximum sustainable yield- Static efficient sustained yield- Dynamic -efficient sustained yield: the discount rate and renewable resource use- Property rights and management of renewable resources: resource management regimes State ownership- Privatization- Community management- Open access.

Unit-III - Management of Non-renewable Resources

Definition of Non-renewable resources-Categorization of nonrenewable resources: McKelvey classification- Resource extraction Hotelling rule, Resource extraction under monopoly, Efficient intertemporal allocations -Under constant marginal extraction cost , without substitute and with substitute-With increasing marginal extraction cost-Exploration and technological Progress- Scarcity of resources- The economic interpretation of scarcity -Types of resource scarcity -Measuring resource scarcity - The “mineralogical threshold” - Resource lifetime - Unit cost measures - Real prices- Economic rent Optimal resource recycling model.

Unit-IV - Economics of Bio Diversity

Meaning of “biodiversity”: Genetic diversity-Species diversity Ecosystem diversity- Importance of bio diversity- Direct use value Ecosystem service value-Non-use value- The causes of bio diversity loss- Global conversion process- Local market failure- Global market or appropriation- Failure- Government or intervention failure Population growth - Making choices between species for preservation Measures to protect bio diversity-CITES-Bio diversity Bill.

Unit-V- Valuation of Benefits of Environmental Resources

The need for valuation- Classification of economic value- Use values Non-use values - Approaches to valuation-Demand curve approaches Non-demand curve approaches - Techniques of Environmental valuation -Production function approach- Discrete choice valuation Contingent valuation-Travel cost method -Opportunity cost approach.

References

1. Hanley, Nick, Jason F.Shogren and Ben White (2001), Introduction to Environmental Economics (Oxford:Oxford University Press, New Delhi).
2. Karpagam, M (2006), Environmental Economics: A Textbook (New Delhi: Sterling).

- Pearce, David and Dominic Moran(1994), The Economic Value of Biodiversity (London: Earthscan) Chapters 1-6.
- Barbier, Edward B (1989): Economics, Natural-Resource Scarcity and Development: Conventional and Alternate Views (London:Earthscan) chapter-1.
- Randall, Alan (1991),“The Value of Biodiversity”, Ambio:Special Issue on Environmental Economics, April 1991, 64-68.
- Tobias, Dave and Robert Mendelsohn (1991), Valuing Ecotourism in a Tropical Rain-Forest Reserve” Ambio:Special Issue on Environmental Economics, April 1991, 91-93.

Course outcomes

CO Number	CO Statement	Knowledge Level	Order
CO1	Ideas and concepts on the resource economics	K1, K2	LO
CO2	Management of renewable and non-renewable energy resources	K3	IO
CO3	Apply the resource economic knowledge to bio diversity and valuing of benefits of environmental resources	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	L	-	L	L	L	L
CO2	M	M	M	S	M	M		M	M	M	L	M
CO3	S	S	S	S	M	L	S	S	S	S	L	S

21UPECO3E03

ECONOMICS OF SOCIAL ISSUES

4 credits

Objectives

- To understand the social economics
- To have indepth knowledge on issues concerning the economy
- To provide solutions for the economics of social issues

Unit I Introduction of Social Economics

Definition –Scope –Equality in Human Societies –Principles of Social Doctrines – Gandhi –Karl Marx – Max Weber – Voltaire – Rosseau – Gandhi.

Unit II Poverty and Unemployment

Global Poverty (an assessment) - Causes and Consequences of Poverty – Sustainable Development - Role of Poverty Social Security –Social Banking –Migration related poverty issues – Slums – Remedial Measures.

Meaning – Types – Causes – Employment in organized and unorganized sectors – Work Participation rates – Wages – Standard of living – Unemployment and Social unrest.

Unit III Human Capital

Components of Human Capital –Issues related to Secondary and Higher Education –Health and Health related issues in Development –Human Development Index –Gender Development Index

Unit IV Economics of Black Economy and Crime

Black money: Definition – Sources – Corruption - Parallel Economy.

Economic Issues –Causes and Consequences-Remedies-Consumerism –Cipher Crime – Crime against Women and Children - Human Rights Violation –Dimension of Terrorism

Unit V Self Help Groups

Nature, Structure and objectives of Self Help Groups –SHG and Worker’s Empowerment –SHG in India

Books for references:

1. Culyer A.J(1973) The Economics of Social Policy, Martin Robertson and Co Ltd ,London
2. Dreze Jean and Amartya K Sen (1989) Hunger and Public Action, Clevedon Press, Oxford
3. Harbinson Frederick and Charles A. Meyers (1964) Education Man Power and Economic Growth: Strategies of HRM, McGraw Hill Book & Co, Newyork
4. Legrand Julian and Ray Robinson (1976) The Economics of Social Problems, The MacMilan Press & Ltd ,London
5. Lutz Mark and Kenneth Lux (1979) The Challenge of Humanistic Economics, The Benjamin /Cummings Publishing Co, California

Course outcomes

CO Number	CO Statement	Knowledge Level	Order
CO1	Understand and analyze the concepts related to social economics	K1, K2	LO
CO2	Knowledge on poverty and unemployment	K3	IO
CO3	Apply the economic knowledge to the prevailing issues in the economy	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	L	-	L	L	L	S
CO2	M	M	M	S	M	M		M	M	M	L	M
CO3	S	S	S	S	L	L	S	M	S	S	L	S

SEMESTER II

21UPECO3C05 MICRO ECONOMICS – II 4 credits

Objectives

1. Providing Knowledge on basic Economic Principles
2. Understanding the skills to enable the students to gain decision making ability
3. Information about the pricing and distribution, firms and the economy
4. Insights into the welfare economics

UNIT- I: Theories of the Firm

Baumol's Theory of Sales Revenue Maximization – Marris's Model of the Managerial Enterprise – Williamson's Model of Managerial Discretion – The Behavioral Model of Cyert and March- Full Cost Pricing Rule – Bains limits pricing theory – Sylos – Labini Model

UNIT- II: Theory of Games Linear Programming

Theory of Games – Some Definitions – Two Person Zero Sum Game: Certainty Model – Uncertainty Model – Non Zero Sum Game –Linear Programming: General Notes – Statement of Linear programming Problems – Graphical Solution: Graphical Determination of the Region of Feasible Solutions - Graphical Determination of the Objective Function – Determination of the Optimal Solution– The Simplex Method: The Iterative Procedure – The Dual Problem and Shadow Prices- Linear programming application in decision making.

UNIT- III: Pricing of Factor of Production and Income Distribution

Factor Pricing -Factor Pricing in Perfectly Competitive Markets – Factor Pricing in Imperfectly Competitive Markets – Elasticity of Factor Substitution, Technological Progress and Income Distribution- Modern theory of Distribution- Role of trade unions and collective bargaining.

UNIT- IV: General Equilibrium Theory

Interdependence in the Economy – The Walrasian System – Existence Uniqueness and Stability of an equilibrium – A Graphical Treatment of the Two Factor, Two Commodity, Two Consumer General Equilibrium - A Graphical Illustration of the Path to General Equilibrium.

UNIT- V: Welfare Economics

Criteria of Social Welfare – Pareto, Kaldor-Hicks and Bergson Criterion Maximization of Social Welfare –Determination of the Welfare maximizing Output Mix, Commodity Distribution and Resource Allocation - Welfare Maximization and Perfect Competition – Critique and Extensions.

Text Book

A.Koutsoyiannis, (2015), Modern Microeconomics, Macmillan Education Ltd, London

References

1. Robert Pindyck and Daniel L. Rubinfeld – (2003) Micro Economics, Macmillan.
2. E K Browning and J M Browning Micro Economics – Theory and Applications
3. Ahuja H.L (2004), Advanced Economic Theory (Sultan Chand Co., New Delhi).
4. Hal R. Varian (2004), Intermediate Micro Economics (East-West Press: New Delhi)
5. Jhingan. M.L (2004), Micro Economic Theory, (Vrinda Publications, Delhi).

CO Number	CO Statement	Knowledge Level	Order
CO1	Understand and analyze the theories micro economic theories and concepts relevant to the business	K1, K2	LO
CO2	Knowledge on general equilibrium and welfare economic ideas	K3	IO
CO3	Apply the pricing knowledge and micro economics to the contemporary issues	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	L	-	L	L	L	L
CO2	M	M	M	S	M	M		M	M	M	L	M
CO3	S	S	S	S	M	L	S	S	S	S	L	S

Objectives

1. Provides ideas on macro economics, macro economic theory and techniques of economic analysis
2. It enables students to analyze macroeconomic issues and provide solutions to complex economic issues
3. Give Insights into the models related with current policies.

Unit – I: Theories of Business Cycle

Sun Spot Theory – Hawtrey Theory – Keynes’s Theory of Business Cycles-Samuelsson’s Model – Business Cycle Theories – Real business cycle theory- Fluctuations in the open Economy– Wage and Price Rigidity- Sticky wage Model – Sticky price Model –Model Trade off – Policy implications – Dynamic Disequilibrium.

Unit – II: Theories of Economic Growth

Population, Human Capital and Infrastructure – Technological Progress and change-Hicks and Harrod model – Classical approach-the Neoclassical approach- the modern approach- the Solow growth model-Endogenous Growth Model - Role of Education, Research and Knowledge- Austrian Economic theory- basic principles- Policy implications of Austrian theory.

Unit – III: Government and Macro Economy

Role of State – Effects of Public Expenditure – Mobilization of Resources for Capital Formation – Equitable Distribution – Measures to Reduce Fiscal Deficit - Fiscal Deficit and Economic Growth.

Unit – IV: Inflation and Unemployment

Inflation – Causes- Theories –Demand – pull and cost--push inflation-Structural and Monetarist Approaches to Inflation –Monetary Policy- Fiscal Policy-Unemployment- The Natural Rate of Unemployment Hypothesis - Modifications in Phillips Curve – Stabilization Policy and unemployment- Policy Dilemma - Inflation in India

Unit – V: Open Economy Macroeconomics

Meaning – Concepts – Identities – Mundell- Fleming Model – Minsky’s Financial Instability Hypothesis- Balance of Payments and Exchange Rate Regimes – The small open economy under flexible exchange rates--Effectiveness of monetary and fiscal policies under fixed and flexible exchange rate- Simultaneous Equation – Automatic Adjustment and Adjustment Policies – Policy implications and critique. Interest – rate & exchange rate interdependence-

Text Book

Rudiger Dornbusch and Stanley Fischer (2012) “**Macro Economics**”, *Tata McGraw-Hill Publishing Company Limited*, New Delhi.

References

1. Shapiro, E. 2005. *Macro Economic Analysis* (5th Edition). Galgotia Publications. New Delhi.
2. Ahuja. H.L (2006), “*Macro Economics Theory and Policy Advanced Analysis*”, S.Chand and Company, New Delhi.
3. William H. Branson (2004), “*Macro Economic Theory and Policy*”, All India Traveler Book Sellers (Regd), Delhi
4. Mankiw, N. G. 2006. *Macroeconomics*, (5th Edition), Worth Publications. New York.
5. Roger E.A.Farmer (2002), *Macroeconomics*, Thompson Asia Pvt. Ltd., Singapore
6. Jhingan M.L, *Advanced Economic Theory*, Vrinda Publications (P) Ltd.,

CO Number	CO Statement	Knowledge Level	Order
CO1	understand the theories associated with the business cycles and apply it to the real world, the population and technological growth and its implications	K1, K2	LO
CO2	To make the students to have in-depth analytical skills about the fiscal deficit and economic growth	K3	IO
CO3	Examine the inflation and unemployment, policy dilemma and inflation in India, the open economy macroeconomics, balance of payments and adjustment policies	K4, K5,K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	L	-	L	L	-	L
CO2	M	M	M	M	-	M	-	M	M	-	-	M
CO3	S	S	S	S	S	S	-	S	S	S	-	S

Objectives

- Able to effectively conduct any physical and social science research
- To develop critical thinking and analytic skills

UNIT – I: DESCRIPTIVE STATISTICS

Descriptive Statistics- Measures Of Central Tendency, Dispersion; Movement, Skewness, Kurtosis - Range : Inter quartile, Quartile deviation, Mean, Standard Deviation, Combined series, Variance, Co-efficient of Variation, Relation between various measures of dispersion – Lorenz curve .

UNIT – II: PROBABILITY DISTRIBUTIONS

Probability – Theorems – Addition- Multiplication-Conditional Probability – Bayes Theorem - Mathematical Expectation-Theoretical Distribution– Normal-Binomial and Poisson

UNIT – III: STATISTICAL INFERENCES

Hypothesis Testing, Standard Error – Large Sample Test for Two Means and Two Standard Deviations – Two Proportion and Confidence Interval Small Sample Test – ‘t’ Test – Paired ‘t’ Test-Chi Square Test - F Test- ANOVA One Way - Two Way - Type 1 and Type 2 errors.

UNIT – IV: CORRELATION AND REGRESSION

Correlation and regression analysis and their properties; Concept of the least squares and the lines of regression and applications.

UNIT – V: INDEX NUMBERS

Problems & methods of construction of various indices : Laspeyers, Pasche’s& Fisher – Time reversal, Factor reversal and Circular tests, Chain base indices – Costs of Living Index , Consumer Price Index.

REFERENCES

1. Aggarwal Y.P (2002), Statistics methods – Concepts Application and Computation, Sterling Publishers Private Ltd, New Delhi
2. Davis, Glyn & Pecar, Branko (2010) Business Statistics – Using Excel, Oxford University Press New York.
3. Gupta .S.P.(1993) Fundamentals of Applied Statistics, S.Chand& Sons, New Delhi.
4. Speigal M.R.(1992) Theory and Problems of Statistics, McGraw Hill Book.
5. Whigham David (2008) Business Data Analysis Using Excel, Oxford University Press.
6. Wonnacott H. Thomas & Wonnacott J.Ronald (1969) Introductory Statistics.

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Know the meaning and definitions of the basic theories in statistics coupled with economics	K1, K2	LO
CO2	Obtain statistical model and describe the behavior of rare events, test the validity of assumptions and draw inferences for decision making	K3, K4	IO
CO3	Deal with uncertainty in decision-making, handle both primary and secondary data and find out economic and social attributes association	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	P11	P12
CO1	L	L	L	L	L	L	L	-	L	L	L	L
CO2	M	M	M	M	M	M	M	-	M	M	M	-
CO3	S	S	S	S	S	S	S	-	S	-	S	-

ELECTIVE

21UPECO3EO4

AGRICULTURAL ECONOMICS

4 Credits

Objectives

1. To understand the basic concepts of Agricultural Economics
2. To prepare the students to understand the causes and devising the appropriate solutions for Agricultural Sector
3. To equip the students with the tools and techniques for analytical go through

Outcome: The students are expected to have a sound grasp of agricultural issues involving in India and they can know the modern issues affecting the agricultural sector.

Unit-I: Nature and Scope

Scope and Significance of Agriculture- Characteristics of Agriculture- Food Security-Agriculture and Industry – A Comparison- Role of Agriculture in India's Development- Inter-Sectoral Linkage - An Overview.

Unit-II: Agricultural Production and Productivity

Production Function Analysis - Relevance to Farm Production Economics-Productivity Trends; Low production and Productivity: Causes,Consequences and Measures- Farm Size - Efficiency relations in Indianagriculture - A.K. Sen's Hypothesis- Role of Technology in Agriculture - Structural Changes in Agriculture.

Unit-III: Agricultural Labour

Agricultural Labour: Types – Supply of Labour – Problems- RuralUnemployment: Types, consequences and remedial measures- Minimumwages for agricultural workers - An evaluation- Poverty Eradicationprogrammes – Recent Wage and Self-Employment Programmes.

Unit-IV: Agricultural Finance and Capital

Agricultural Finance: Meaning, Nature, Types, Sources and Problems ofAgricultural Finance- Co-operatives in Rural Finance- Role of CommercialBanks and NABARD in Rural Finance- Farm Capital - Meaning, Types, andMarginal Efficiency of Farm Capital and Capital formation in agriculture.

Unit-V: Agricultural Policy

Agricultural Price policy - Objectives, instruments and impact- EconomicReforms and Agricultural policy – WTO and Agriculture- AgriculturalTaxation and its relevance.

Text Book

Heady EO. Economics of Agricultural Production and Resources Use. Prentice-Hall

References

1. Ashok Rudra (1982), Indian Agricultural Economics: Myths and Realities(Allied publishers, New Delhi).
2. Dantwala M.L (ed) (1991), Indian Agricultural Development sinceIndependence(Oxford and IBH Publishing company private limited, NewDelhi).
3. Vasant Desai B.P (1996), Agricultural Economics, Rural development(Jai Prakash North, Meerut).
4. HanumanthaRao C.H. (1975), Technological changes and distribution ofgrains in India agriculture (Macmillan, New Delhi).
5. RuddarDatt and K.P.M. Sundharam (2001), Indian Economy [S.ChandandLtd.,RamNagar, NewDelhi].
6. S. Subba Reddy, P.Raghu Ram, T.V.Neelakanta Sastry, I. Bhavani Devi, “Agricultural Economics”, Oxford & IBH Publishing Co.Pvt. Ltd, New Delhi, 2005.
7. O.S.Shrivastava, “Theories and Policy Issues of Agricultural Economics”, Anmol Publications Pvt. Ltd, New Delhi, 2010.

8. S.S.Acharya & N.L.Agarwal, “Agricultural Marketing in India”, Oxford & IBH Publishing Co.Pvt. Ltd, New Delhi, 2005.
9. H.Evan Drummond & John W. Goodwin, “Agricultural Economics”, Pearson Education, 2006.
10. B.P. Tyagi, “Agricultural Economics and Rural Development”, Jai Prakash Nath & Co. Meerut(U.P), 1990
11. A.K.Shrivastava, “Agriculture and Food”, APH Publishing Co.Pvt. Ltd, New Delhi, 2003.

CO Number	CO Statement	Knowledge Level	Order
CO1	Know the fundamentals of Agricultural Economics and the growth and contribution of agriculture to economy	K1, K2	IO
CO2	Application of theory of agricultural economics to the real world	K3	LO
CO3	Knowledge about national and international agricultural scenario	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	-	L	L	L	L	-	-	L
CO2	M	-	M	M	M	-	M	-	M	M	-	M
CO3	S	-	S	S	S	S	S		S	-	-	S

21UPECO3E05

RURAL DEVELOPMENT

4 credits

Objectives

1. Provide ideas on rural development and related issues
2. Have insights into the rural economy and rural industrialization
3. Learn administration, rural credit and the development of the rural areas

Unit-I -Introduction

Meaning, Definition and concept of Rural Development- Concepts, Pattern of Development - Pattern of Planning- Indicators of rural development- Features of the rural economy and scope of rural development

Unit-II – Issues in Rural Development

Unemployment in rural areas- reasons and measures to solve unemployment problems- Poverty, inequality, unemployment and Regional Disparities- Land Reform measures – Size of land holding, better utilization of inputs- Economic reforms- Rural Health care

Unit-III – Rural Industrialization and Institutional Changes

Rural industries – role of rural industrialization- - Small scale and Cottage industries- Handicrafts- Institutions for rural development: Panchyat Raj and Co-operatives- NGO's and People participation – Micro Finance-Self Help Groups- Social and Welfare Organisation – Technology Development policy – Recent issues in building rural infrastructure

Unit-IV - Administration and Rural Development

Development of Administrative set up – DRDA - SIRD – BDO Development of adequate Community leadership- Rural Development- Programmes Implementation, Monitoring and Evaluation – Planning- Conservation and preservation of integrated development

Unit-V – Rural Debt and Credit

Rural Debt- Causes and consequences- Institutional and non-institutional credit- NABARD- Commercial banks – Cooperative Banks- rural insurance- Role of rural credit in the development of the rural economy

Text Book

1. Sundaram, Satya, I, Rural Development Himalaya Publishing House

References

1. Desai Vasant: Rural Development – Programmes and Strategies, Himalaya Publishing House, Mumbai
2. Reddy, Venkata.K.: Agriculture and Rural Development (A Gandhian Perspective), Himalaya Publishing House
3. R.P Misra and K.V Sundaram (1999), Rural Area Development: Perspective and Approaches, S.Chand and Co., New Delhi
4. Katar Singh (2000), Rural Development Principles, Policies and Management Sage Publications, New Delhi.
5. ShriramMaheswari(2000), Rural Development in India, Sage Publications, New Delhi.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Remember and understand the rural development in India	K1, K2	LO
CO2	Analyze the issues in rural industrialization, administration, rural credit and debt	K3	IO
CO3	Critically evaluate the key issues with rural economy and give solutions to issues related to rural development	K4,K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	S	L	L	L	L	L	L	L	L	L	S	L
CO2	S	M	M	L	M	L	S	M	L	M	S	M
CO3	S	M	S	S	L	S	M	L	S	S	S	S

L – Low; M – Medium; S- Strong

21UPECO3E06 **GENDER ECONOMICS** 4 credits

Objective

- To provide a critical overview of economic theories, methods and economic policy-debates from a gender perspective.
- Designed to cover major debates in gender economics relevant to different countries.
- To explore alternative feminist economic theory and apply these different theoretical understandings to concrete examples in the real world.

UNIT – I: Gender and Development

GE: Subject, methods, Statistics – Gender issues in economic theory – Gender Budget and auditing – Women and economic development: Contribution to national income, Gender related development indices – Feminisation of Poverty

UNIT – II: Gender and demography

Demographic – changes and gender status: causes and shift – Sex preference and reproductive behaviour – Socioeconomic differences is mortality – Gender super mortality: Problem of measurement.

UNIT – III: Gender in equality

Inequality is labour market, investment Human capital – Inequality and discrimination. Gender factors is household economics – Distribution of resources and decision-making mechanisms in household – Women empowerment is agriculture, inequality and services.

UNIT – IV: Gender Policy

Regional, National and International policies and programmes – Poverty alleviation programmes – Entrepreneurial policies – Political participation of women in India – National, State and Local bodies.

UNIT – V: Gender and Social issues

Social issues: Girl child, Sex ratio of child marriage, Dowry of property Rights – Violence: Domestic of Economic – Female households – Problems against marginalised women.

References

1. Culyer A.J (1973), “The Economics of Social Policy”, Martin Robertson & Co., Ltd., London

2. Dreze Jean & Sen A K (1989), “Hunger and Public Action”, Clevedon Press, Oxford
3. Joyce P. Jacobsen (1994), “The economics of gender”, -----
4. Lourdes Beneria (2003), “Gender, development, and globalization”, (e-book)
5. Mukesh Eswaran (2014), “Why Gender Matters in Economics?”-----
6. Joyce P. Jacobsen (2020), “Advanced Introduction to Feminist Economics” ----

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Demonstrate a general understanding of the theoretical debates surrounding the construction of gender and gender relations in the discipline of economics	K1,K2	LO
CO2	Articulate connections between global, regional, and local issues, and their relationship to women’s experiences and to human rights, with an awareness of the importance of context	K3	IO
CO3	Understand alternative and gendered economic theory, propose alternative policies that address gender-inequalities in different economic spheres	K4, K5,K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	P11	P12
CO1	L	L	L	-	M	L	-	L	L	S	-	-
CO2	M	M	M	-	L	M	M	-	M	-	M	-
CO3	L		S	S	-	-	S		S	-	-	S

Supportive 21UPECO3S01 **ECONOMICS FOR BUSINESS INITIATIVES** 3 credits
Objectives

1. Focus on basic knowledge of terms and concepts related to Economics, allocation of resources and utilizing it
2. Enables to understand the working of the economy at the micro & macro level.
3. Critically analyze the alternative economic policies required to develop suitable solutions to various economic problems of their society and economy.

UNIT - I : Scope of Economics

Concepts and definition of economics- Importance, Nature and Methods of Economics- Positive vs Normative - Differences of Micro and Macro Economics- Scope of Economics- Demand- Law of Demand- Exceptions to Law of Demand - Demand forecasting-Economic wants and satisfaction-Law of Marginal Utility- Consumer's Surplus- Indifference Curve Analysis.

UNIT - II : Location and Size of Business

Factors of Production- Land, Labour, Capital and Organization- Division of labour- Localizations of Industries – The Law of Variable Proportions- Returns to scale- Cost concepts- Cost output relationship - Break Even Analysis

UNIT – III : Market Structure and Pricing

Concepts- Types, Characteristics of Market Structure- Price and Output Determination under Perfect competition and imperfect competition-Monopoly, monopolistic competition, oligopoly

UNIT – IV National Income, Trade cycle and Inflation

Concepts and Measurement of National Income- Classical and Keynesian Theory of Employment- Inflation and Deflation- Trade Cycles- Causes of Trade cycle- Types of Trade cycle- Theories of trade cycle -Sun spot theory-Hawtrey theory-.Contra cyclical policy

UNIT –V : Government and the Economy

The Government and the Economy- Fiscal tools- Principles of Taxation- Fiscal vs Monetary Policies- International trade- WTO- Multinational Corporations- FDI.-Start ups : Meaning, start ups and the economy- the role of government in developing start ups.

Text book

Gregory Mankiw N (2017), **“Principles of Economics”** 8th Edition, south western Cengage Learning, USA.

References

1. Prem J.Bhutani, Taxmann's **Principles of Economics**, 4th Edition, Reprint 2021
2. Sundaram K.V (2002), **“Principles of Economics”**, High mount Publishing House, Madras- 600014.
3. Richard Varian, Intermediary Micro Economics, Affiliated East West Press.
4. Alfred Marshall (1890), **“Principles of Economics”** (8th Ed.).
5. Hirschey, M., & Pappas, J. L. (1996). **“Managerial Economics”**, (8th Ed.). Fort Worth, TX: The Dryden Press.
6. Samuelson, W. F., & Marks, S. G. (2010), **“Managerial Economics”**, (6th Ed.), Hoboken, NJ: John Wiley & Sons.

7. Shugart, W. F., II, Chappell, W. F., & Cottle, R. L. (1994), “**Modern Managerial Economics: Economic Theory for Business Decisions**”, Cincinnati, OH: South-Western Publishing Company.

CO Number	CO Statement	Knowledge Level	Order
CO1	The students can gain basic concepts and definition about economics	K1, K2	LO
CO2	Apply and analyze the market structure, national income and functioning of the economy at the micro and macro levels	K3	IO
CO3	Develop the critical thinking capacity about the actual working of the economy and evaluate the concepts	K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	-	L	L	L	-	-	L	L	-	L
CO2	M	-	M	-	M	M	-	M	M	-	M	-
CO3	S	S	S	S	-	-	-	S	S	-	S	S

SEMESTER III

21UPECO3C08 **INTERNSHIP** 8 Credits

SEMESTER III

21UPECO3C09 **RESEARCH METHODOLOGY** 4 credits

Objectives

1. Learn the basics of research, to formulate and identify the research problem
- 2., Develop adequate knowledge on measurement and scaling techniques, quantitative data analysis
3. Enhance interpretation skills and solve the problem

Outcome: The students could understand the basic research concepts and could carry out the research work in a scientific manner.

Unit – I: Research Methods in Economics

Nature of Social Science Research – Research Methods in Social Science –Formulating the problem- Types and Sources of Hypothesis –Characteristics of a Good hypothesis- Components

and types of research design – Collection of data – sources and methods.- Presentation of results – Format of a Report.

Unit – II: Sampling and Data Collection

Sampling; Need, types, Probability sampling, random, systematic, stratified, multistage or cluster sampling, Non Probability sampling; Purposive Judgment, quota and snowball sampling- Data collection; Primary and Secondary data; NSS and census data Methods of data collection- Tools of data collection; schedule and questionnaire.

Unit – III: Data Processing and Presentation

Processing and analysis of data: Editing, coding and tabulation; use of computers in social science research- Diagrammatic and graphic representation of data- Interpretation of results and Report writing –Preparation of Project Proposals.

Unit – IV: Statistical Inferences

Census Versus sampling -Random and Non-Random sampling Techniques-Estimation – Point and interval estimation – Statistics and Parameter –Standard Error – Confidence interval- Null and Alternative hypothesis – Type I Error and Type II Error, Level of Significance – Critical region – Steps in Testing of Hypothesis.

Unit – V: Large and small Sample Tests

Properties and uses of Normal Distribution – Standard normal ‘Z’ Statistic-Z-Test of Significance of proportions, means and Correlation- ‘t’ Test for sample mean and Equality of mean – Paired ‘t’ Test- Chi-Square Test for Association of Attributes

Text Book

C.R. Kothari (2002), Research Methodology Vikas publishing House, New Delhi.

References

1. Goode W. J and Hatt(1952), Methods in Social Research, Mcgraw Hill Book Co, Tokyo.
2. Kenneth. D, and Bailey (1962), Methods of Social Research, Longman’s Green Co, New York.
3. Enhance. D.N(1973), Fundamentals of Statistics), KitabMahal, Allahabad.
4. Gupta. C.B (1998), An Introduction to Statistical Methods, Vikas publishing House, New Delhi.
5. C.R.Kothari, “Research Methodology: Methods and Techniques”, New Age International Publishers, New Delhi, 2011.

6. Philip Kotler, “Marketing Management – Analysis, Planning, Implementation and Control”, Prentice Hall, New Delhi, 2005.
7. Raymond Kent, “Data Construction and Data Analysis for Survey Research”, MacMillan, London, 2000.
8. C.T. Kurien, “Research Methodology in Economics”, Madras Sangam Publishers, Chennai, 1973.
9. V Young Pauline, “ Scientific Social Science and Research, 3 rd Edition, Prentice Hall, New York, 1960.
10. Ram Nath Sharma & Rajendra K Sharma, “Research Methods in Social Science”, Media Promoters & Publishers, Bombay, 1983.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Formulation of the research problem and research concepts	K1, K2	LO
CO2	Explains the process of carry out research and the techniques of presentation of research report.	K3	IO
CO3	Using sample tests in research	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	M	L	S	L	L	L	L	L
CO2	M	S	M	L	M	M	M	L	M	L	M	L
CO3	S	L	S	S	S	L	S	M	S	L	S	S

Objectives

1. Public Finance provides a strong foundation for understanding the fiscal activities of Government.
2. The public finance assumes greater significance in the market based economic system.
3. Outlines the conceptual framework, theoretical dimensions and policy underpinnings.

Unit – I: Fiscal Functions and Public Good

Fiscal Economics –Different Economic Systems - Need and growth of public sector – Price policy of public enterprises (Marginal Cost, Average cost, Peak-load Pricing, Administered Price) – Major fiscal functions – Externality-Private, Public, Mixed goods and Social goods-market failure-externalities

Unit - II: Public Revenue

Sources of revenue: Taxes, loans, grants-in-aid-meaning and types, canons of taxation, problem of justice in taxes, Sources to the centre and the states- Recent Trends – Tax and Non-Revenues – Role of direct taxes – Different types of direct taxes – VAT- merits and demerits - GST

Unit – III: Taxation

Direct and Indirect taxation –Canons of taxation- Theory of optimal taxation- Taxable capacity- Incidence – Measuring incidence – Shifting and elasticity of demand – Incidence of tax – Perfect, Monopoly and Monopolistic competition – Brown – Rolph approach – Economic effects of Taxation, Dead Weight Loss and Distortion, Optimal Taxation

Unit - IV: Budget

Budget- Types of budget- Economic and Functional Classification of budget -Budgetary procedure in India – Techniques – Budgetary Theory – Classical and Modern Approach – Recent concepts on Budgets – performance budgeting – Planning – Programming Budgeting, Zero budgeting – Critical analysis of the recent budget

Unit - V: Indian Public Finance and Fiscal Deficit

Financial Autonomy in India- Tax Reform proposals of Kelkar Committee- Tax structure and Working of Fiscal federalism in India- Fiscal Deficit-Problems of increasing deficit to governments- Deficit Finance: meaning, effects and advantages and advantages of Deficit Financing- Issues –Measures to reduce poverty- Fiscal consolidation in India since 2001-2002-

Financial relation between central and state- Fiscal Responsibility and Budget Management Act,2003- Fiscal policy and Economic downturn :Fiscal correction versus additional Stimulus.

Text Book

Rosen, Harvey (2013), Public Finance, McGraw Hill, New York

References

1. Holley H.Ulbrich (2003), Public Finance in Theory and Practice, Thompson South-Western, Singapore
2. David N. Hyman (2005), Public Finance: A Contemporary Application of Theory to Policy, 8th Edition, Cengage Learning
3. Musgrave, R.A. and Musgrave P.B.(2017), Public Finance in Theory and Practice,5th Edition, McGraw Hill, Kogakusha, Tokyo
4. Brown, C.V & Jackson P.M., Public Sector Economics, Blackwell Publishers Inc., Massachusetts, USA

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Have conceptual clarity in Public Finance	K1,K2	LO
CO2	Apply the tax policies on different economic situation	K3	IO
CO3	Comprehend and analyse various types of goods and its real world application along with budgetary policies	K4,K5,K6	HO

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	-	L	L	L	-	-	L	L	-
CO2	M	M	-	-	M	M	M	M	M	-	M	-
CO3	-	S	S	S	-	-	S	S	-	-	S	S

L – Low; M – Medium; S- Strong

Objectives

1. Studying the theories of growth and development, social and institutional aspects of development
2. Importance of agriculture, and the rationale and pattern of industrialization in developing countries.

Unit- I: Concepts and Issues

Social and institutional aspects of Development: Meaning of Growth and Development, criteria of development & growth, Poverty-absolute and relative; Human development index and other indices of development and quality of life. Human resource development; Human capital: Education and health in economic development. Population problem and growth pattern of population -theory of demographic transition Factors of development: (a) Capital accumulation (b) Labour (c) Natural resources (d) Technological Progress (e) Social institutions cultural values and entrepreneurial ability.

Unit- II: Economics of Development

Harrod-Domar Model, Technical Change and growth Model, Strategy of Economic Development – Inducement to invest – Nurksian, Singer's and Hirschman's doctrine- Mahalanobis Strategy - Human capital approach Education and Development (a) social and private benefits of education- (b) education, inequality and poverty (c) Women's education and development Health system in development (a) health and productivity (b) financing health system in developing economics (c) Gender perspective in health care.

Unit- III : Theories of Growth and Development

Modern Theories of Development: The Neo –classical growth model with and without technical progress - Kaldor's Model of Distribution - Mirrlees, Solow, Denison Abramovitz and Kendrick – partial theories- Rostein Roden – Nelson – Rostow – Dual theory – surplus – Lewis- Ranis Fei – Jorgenson – Dixit Margin - Dependency Theory, Structuralist's View Point - Endogenous Growth Theory: New growth Theory: Income Convergence/ Divergence, Market Friendly Approach.

Unit – IV: Planning and Development

Concept – Types of planning – Policy models – Projection models – Development planning models – The Wage Good model – Input-output analysis – Linear programming.

Unit – V: Policies and Development

U turn and LPG model – PURA – Pricing policy – Labour and wage policy – Agriculture and industrial policy – Foreign trade policy – Fiscal and monetary policy – Inclusive and Sustainable growth

Text Book

Michael P.Todaro and Stephen C.Smith (2004), Economic Development, Pearson Education, Singapore, Cha-2, 6, 7, 8

References

1. Yujiro Hayami (2003), Development Economics: New Delhi Oxford University Press
2. Debraj Ray (2009) Development Economics: New Delhi Oxford University Press.
3. Jomo K.S. and Ben Fifth (Eds:) (2005), “The Development Economics; London Zes Books and New Delhi, Tulika Books
4. Meir, G.M. (1995). Leading Issues in Economic Development, (6th Edition). Oxford University Press, New Delhi.
5. Thirwall, A.P. (1996). Growth and Development, (6th Edition). Macmillan U.K.
6. World Development Reports, (The World Bank1998,2005,2007,and 2019)

21UPECO3C12

ECONOMETRICS

4 credits

Objectives

- To convert economic theories into quantifiable metrics
- Used by governments to set economic policy and by private business to aid decisions on prices, inventory, and production
- To measure economic behavior, economic outcomes and the impact of economic policies

UNIT – I: BASICS IN ECONOMETRICS

Model& model building in economics –Structure, Types of Equations. Exogenous-Endogenous Variables, Econometric methodology - Assumptions of OLS - Regression Analysis: Linear and Non-linear – Econometric Applications – Applications of Social Science Package.

UNIT – II: SINGLE EQUATION MODEL

Properties of OLS Estimates – Markov Theorem – Co-efficient of Determination – R Square – adjusted R^{-2} , Standard Error – ANOVA – Testing of Significance of parameters – Functional forms.

UNIT - III: VIOLATIONS OF ASSUMPTIONS & DUMMY VARIABLES

Auto-correlation, Multicollinear and Heteroscedasticity: Causes, Consequences and Remedies - Dummy Variables: Dependent and Independent – Distributed Lag Model – Need, Limitations and Interpretation in Economics.

UNIT – IV: TIME SERIES AND FORECASTING

Stationary and non – stationary – Transforming non – stationary: Forecasting – Economic Applications - Purely random process – MA process – AR process – ARMA Process – ARIMA.

Vector auto regression – DF Test – Co-Integration – Error Correction models – Box Jenkins Approach – Forecasting using BJ method.

UNIT – V: SIMULTANEOUS EQUATION MODEL

Structural and reduced forms – Endogenous and Structural Variables – Identification problems and conditions – Methods of Identification, Just and over Identification - Instrumental variables.

References

1. Dongherty C (1992), “Introduction to Econometrics”, Oxford University Press, New York.
2. Koutsoyiannis A (1999), ‘Theory of Econometrics’, *Palgrave Publishers Ltd*, New York.
3. Maddala G S (2002), ‘Introduction to Econometrics’, *John Wiley & Sons Ltd*, New York.
4. Theil H (1981), “Introduction to Econometrics”, Prentice Hall of India, New Delhi
5. Gujarati D.N &Sangeetha (2011), “Basic Econometrics (5th Edition),” Tata McGraw-Hill Publishing Company.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Understand and construct different models with regard to various methodology	K1, K2	LO
CO2	Apply and critique theories and empirical evidences	K3	IO
CO3	Examine the problems encountered and find the relationships, impact of any socio-economic variables, forecast economic behavior of a nation with the econometric tools	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	-	-	L	L	L	L
CO2	M	-	M	-	M	M	M	M	M	-	-	M
CO3	S	S	-	S	-	S	-	S	S	-	S	S

L – Low; M – Medium; S- Strong

Objectives

1. Imparting the principles and theories governing monetary forces and various dimensions
2. Interpreting the models associated with the money and finance
3. Application of monetary policy to combat inflation and deflation
4. Understanding the financial markets

Unit – I: Monetary theories

Monetary theories –Quantity Theory of Money- Fisher and Cambridge- The restatement of quantity theory of money – The classical and Keynesian Theory – Milton Friedman’s quantity theory – Don Patinkin’s Integration Theory-Tobin’s portfolio analysis – Baumol’s inventory approach – Gurley and Shaw Thesis – Radcliffe Committee – Sayer’s thesis

Unit – II: Money Supply and Banking

Money supply Components (M1, M2, M3,M4) and determinants of money supply – High powered money – Riefler and Burgess hypothesis on money supply – Non-Bank Financial Intermediaries- Effects of Financial Intermediaries- Credit Creation by Commercial Banks – Role of Commercial Banks –Central Banks- Functions- Central Bank and credit control –Monetary Transmission- Narashimam Committee Recommendations- Raghuram Committee Report.

Unit – III: Theories of Interest

Classical and neoclassical theory of interest –Keynes- Hicks-Hansen- Modigliani stock Vs flow analysis – structure of rate of interest – segmented market theory, liquidity premium, Portfolio Behavior Theory –Yield curve -Expectation hypothesis and segmentation hypothesis

Unit – IV: Money Market and Capital Market

Features of capital and money market – Characteristics of undeveloped and developed money market – Functions of Money Market- Indian money market – Treasury bills – Repo (Repurchase), capital market: primary and secondary market – capital Asset pricing model, William Sharpe – Markowitz model on Risk and Return – Alpa and Beta securities – Stock Exchange – SEBI – Derivatives and hedging

Unit – V: Monetary Policy

Meaning and Definition of Monetary Policy- Objectives and Instruments of Monetary Policy- Role of monetary policy in Developing economy – Lags in monetary policy – Monetary Vs Fiscal policy –Limitations of Monetary Policy - Inflation – Inflationary Gap – stagflation – Inflation as

taxation– Philips curve- steepness of the Philips curve and interest rates- Samuelson and Solow model –Monetarism and Keynesianism - Impact of financial sector reforms in India.

Text Book

Keith Bain and Peter Howelss (2009): Monetary Economics: Policy and its Theoretical Basis, London, Palgrave

References

1. Jhingan, M.L. (2005), Monetary Economics[Konark Publication, NewDelhi].
2. Campbell R McConnell and Harish C Gupta (1987), “Introduction to Macroeconomics”, Tata McGraw Hill Publishing Company Limited, New Delhi.
3. Dewett K.K (2005), “Modern Economic Theory”, S. Chand Company Pvt., Ltd., New Delhi.
4. Hajela T.N (1998), “Monetary Economics”, Konark Publishers Private Ltd., New Delhi.
5. Rudiger Dorn Busch (2012), “Macro Economics”, Tata McGraw Hill Publishing Company Limited, New Delhi.
6. Lewis, M.K and P.D. Mizen Monetary Economics, Oxford, New York: Oxford University Press, 2000
7. Arvil Robert (2004), “Money Banking and International Trade”, Vrinda Publications Pvt., Ltd., New Delhi.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	understand the different theories associated with the monetary economics, Knowledge about the different money supply components, credit creation and control measures	K1, K2	LO
CO2	Analyze the theories of interest, money and capital markets, its applicability and working of the economy	K3	IO
CO3	Evaluating the efficacy of the monetary and fiscal policies to counter the inflation and deflation, impact of financial reforms	K4, K5 ,K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	M	M	L	L	L	L	L	L	L	L
CO2	M	M	M	S	M	M	M	L	M	M	L	M
CO3	S	S	S	S	L	S	M	S	S	S	S	S

L – Low; M – Medium; S- Strong

21UPECO3S02 **ECONOMICS FOR COMPETITIVE EXAMINATION (SUPPORTIVE)** 3 credits

Objectives

1. To introduce the economics concepts to non-economics students.
2. To learn the different sectors of the economy and their contribution to economic development.
3. to make the students to have a clear idea of the economics essential for competitive examinations.

Unit – I: Structure of the Indian Economy

Characteristics of Indian Economy-National Income – Methods of Calculating National Income – Difficulties in the estimation of national income – Trends in National Income in India – Sectoral Contribution – National Income and Social welfare- Social accounting - Population Growth and Economic Development.

Unit – II: Economic Planning and Policy

Objectives of Planning – Types of Planning – Planning in India – Niti Aayog- Review and assessment of New Economic Policy and Liberalization, Privatization and Globalization- impact of reforms

Unit – III: Agriculture and Industrial Development

Agriculture- Factors determining agricultural development- Agricultural Development under Five Year Plans- Structural Change- Impact of New Economic Policy (1991) – Industrial Development under Five Year Plans – New Industrial Policy (1991)- Doubling of farmers income and the recent changes

Unit – IV: Banking and Fiscal Policy

Indian Banking System –Central Bank- Functions of RBI – Commercial Bank, Development Bank – Co-operative Bank –Merger of Nationalized banks- reasons and impact- Stock Exchanges – Monetary Policy- India's Fiscal Policy – Tax reform – Introduction of GST- GST council..

Unit – V: India and the World

India's Foreign Trade- Balance of Trade- Balance of Payment – Problems of balance of payments- Measures to solve balance of payments- Exchange Rate Policy – Foreign Capital and Foreign Aid – Meaning of MNC – FEMA- India and WTO- COVID and its impact on the world economy.

Text Book

Rudder Datt and Sundharam K.P.M. (2014), “**Indian Economy**”, *S.Chand and Company Ltd*, New Delhi

References

1. Puri V.K & S.K.Misra, Indian Economy, Himalayan Publishing House, 39 Edition,
2. “Economic Survey of India”, Economic Division, Ministry of Finance, Government of India Various Issues.
3. “Statistics and Abstract”, Various Issues, Government of India.
4. Rudder Datt and Sundharam K.P.M. (2014), “Indian Economy”, S.Chand and Company Ltd, New Delhi.
5. Ishwar Dhingra (2017), March of the Indian Economy, 4th Edition, Heed Publications Ltd
6. Gupta. K.R (2005), Studies in Indian Economy, Atlantic Publishers
7. Gupta. K.R & Gupta (2004) J.R. “Indian Economy”, Atlantic Publishers, New Delhi.

CO Number	CO Statement	Knowledge Level	Order
CO1	knowledge and strategies followed in various sectors for economic development of India in different periods and understand the situation of external sector viz., BOP, BOT	K1, K2	LO
CO2	Analyze the contemporary issues pertaining to various sectors of Indian Economy	K3	IO
CO3	Articulate about policies and programmes of India and its role towards development	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	L	-	L	L	-	L
CO2	M	M	M	H	M	M		M	M	-	-	M
CO3	S	S	S	S	-	S	-	S	-	S	-	S

SEMESTER IV

21UPECO3C14 ENVIRONMENTAL ECONOMICS 4 credits

Course Objectives

1. Understanding the various environmental issues, environmental protection policy of the Government of India and the importance of environmental protection for the attainment of sustainable development.
2. Demonstrating an active understanding of the following elements of economic theory as it relates to natural resource and environmental economics.
3. Knowledge about the key concepts of environmental economics and their relevance in the business settings.
4. Design regulation this corrects market failures, deal the various economic valuation methods for analyze the environmental quality and policy responses to environmental problems.

Unit – I: Introduction

Environment – Eco-system – Principle of material balance –Trade off between economic growth and Sustainable Development – Limits to growth — Environmental issues in different economic systems.

Unit – II: Environmental Analysis

Environmental pollution – Sources and Causes of pollution - Types of pollution – Climate Change - Pareto Optimality – problem of second best – Private Vs Social Cost - Environmental Impact Analysis – Cost Effective Analysis - Cost-Benefit Analysis – Environmental Costs of Economic Growth.

Unit – III: Externalities and Environmental Monitoring

Environmental externalities – Common Property Resources - Command and Control Strategy - Pigouvian taxes and subsidies, pollution permits and mixed instruments (The Charges and Standards Approach), Coase bargaining solution and collective action; Informal regulation and the new model of pollution control, monitoring and enforcement of environmental regulations- - Political Theories and Environmental Conflict.

Unit – IV: Methods of Valuation

Environmental Valuation methods -User values and non-use values (direct value, indirect value, option value, bequest value and existence value) – Direct methods – contingent valuation method

– methods based on response to hypothetical markets – Indirect method. Hedonic Approach - Methods based on observed market behavior, household production function approach – Travel Cost Method.

Unit – V: Environment Policy

Policy measures: Basic approaches to environmental policy – Regulation and Effluent Fees – A comparison – Distributive effects of environmental policy – International environmental policy – India’s environmental policy – Law on environmental protection and pollution control in India.

Text Book

Shankar U (2001) “Environmental Economics”, Oxford University Press, New Delhi

References

1. Karpagam M: Environmental Economics Sterling Publishers 2000
2. Bhattacharya : Environmental Economics – OUP, 2002 .
3. Karpagam M and R Geetha: Green Management _ Theory and Practice, and Book House, 2010.
4. Tan Hodge,(1995): Environmental Economics Macmillan Press.
5. Sankar U (2000)” Environmental Economics”, Oxford University Press.

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Understand the subject of environmental economics and the theoretical frameworks	K1, K2	LO
CO2	Apply economic theories in to the environmental problems to solve the social issues and economics of climate change	K3	IO
CO3	Analyze the various economic valuation methods and environmental problems Evaluate and critically assess economic support documents for policy decisions	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	L	-	L	L	-	-
CO2	-	M	M	-	M	-	M	-	M	M	M	M
CO3	S	S	S	S	S	S	-	S	-	S	S	S

L – Low; M – Medium; S- Strong

Course Objective

1. Providing theoretical and practical knowledge about the public finance
- 2 Understanding the theories and applying concepts in the Indian Context
3. Analyzing and preparing the policy measures for effective functioning of the economy

Unit – I: Principles of Public Expenditure

Pure Theory of Public Expenditure – Pigou and Ability-to-pay Theory – Benefit Principles (a) Lindhal’s Voluntary Exchange Theory (b) Samuelson’s Pure Theory, (c) Public Choice Theory (d) Players of political game, Arrow’s Impossibility Theorem – Musgrave- Wagner-Peacock Wiseman- Mechanisms of Public Choice – Collective Decision Making.

Unit – II: Evaluation of Public Expenditure

Growth of public expenditure-Canons and evaluation of public expenditure-Welfare Foundations and Social Cost Benefit Analysis –Long term projects and discounting – Effects of public expenditure- Reforms in expenditure budgeting –zero base budgeting

Unit – III: Public Debt and Fiscal Federalism

Public debt – canons of public debt- Methods of raising public debt – Effects of Public debt – Public debt Management – Theories of public debt- classical and modern theories-burden of public debt- Compensatory aspects of public debt policy-Fiscal federalism –Role of Finance commission-Principles – Recommendations of 15th Finance Commission – Transfer of resources from Union and States and States to Local bodies- Fiscal policy and price stability.

Unit – IV: Public Enterprises

Public Enterprises - Role of public enterprises in Indian economy -Growth of Public sector undertaking in India - Problems of public sector undertakings – Measures to solve the problem - Pricing policy for public enterprises- Disinvestment

Unit – V: Fiscal Policy

Fiscal Policy- objectives- Instruments of Fiscal Policy- Budgetary Deficit - Problem of increasing deficit at the Central and State levels – Fiscal Policy for stabilization- Fiscal Crisis and Fiscal Sector Reforms in India

Text Book

Gruber Jonathan (2018), Public Finance and Public Policy, Fifth Edition, New York: Worth Publications

References

1.Musgrave, R.A. and Musgrave P.B.(2017), Public Finance in Theory and Practice,5th Edition, McGraw Hill, Kogakusha, Tokyo

2. Amers Bagchi (2005), Readings in Public Finance, Oxford University Press, New Delhi
3. Rao, M. Govinda and Nivakar Singh (2005), the Political Economy of Federalism in India, Oxford University Press, New Delhi
4. Government of India, Economic survey (Annual issues), Ministry of Finance, New Delhi
5. Articles from Economic and Political Weekly

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Gain theoretical knowledge on fiscal measures	K1, K2	LO
CO2	Understand the financial position of a country	K3	IO
CO3	Identify appropriate measures to solve fiscal crisis	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	L	L	L	-	L	L	L	L
CO2	M	-	M	-	M	M	M	-	M	M	-	M
CO3	S	S	S	S	-	S	-	S	-	S	S	S

L – Low; M – Medium; S- Strong

21UPECO3C16

INTERNATIONAL ECONOMICS

4 credits

Course Objectives

1. Providing a framework for consistent reasoning about the international flows of goods, factors of production and financial assets
2. Focusing towards the need and importance of International Trade for each and every country and understanding the trade policy and monetary policy in open economy, causes of trade, gains from trade and trade pattern
3. Insights into the economic integration, multinational corporations and multi-lateral institutions involved in trade
4. Know about international trade and the benefits of this subject will be fully utilized by the stakeholders in getting job and taking up trade activity as career

Outcome: This subject imparts the knowledge to the students to know about international trade and the benefits of this subject will be fully utilized by the stakeholders in getting job and taking up trade activity as a career.

Unit – I: Pure Theory of International Trade

Comparative Cost Theory - Refinements of Comparative Cost Theory-Modern Theory of Factor Endowments – Leontief Paradox- Factor price equalization theorem – Factors Intensity Reversal: The Stolper-Samuelson Theorem and the Rybczynski Theorem.

Unit-II: Recent Theories of International Trade

Karvi's Theory of Availability – Lindar's Theory of Volume of Trade and demand pattern- Posner's Technological Gap Theory – Vernon's Product Cycle Theory - Kenen's Human capital theory- Intra- Industry Trade – Theory of Imperfect Competition - Strategic Theory – External Economies and International Trade.

Unit-III: Balance of Payments Policies

BOP Disequilibrium – Adjustment Mechanism: Elasticity Approach, Absorption approach and Monetary Approach- Expenditure changing monetary and fiscal policy – Monetary and Fiscal policies for internal and external balance: The Swan Model and Mundallian Model- Expenditure Switching Policies and Expenditure Reducing Policies – Foreign Trade Multiplier.

Unit-IV: Foreign Aid and MNCs.

Foreign Aid - Types of Foreign aid – Advantages and Disadvantages – Factors determining foreign aid - Foreign Investment – Foreign Direct investment – Types of FDI – FDI Policy of India- Multinational Corporations – Features of Multinational Corporations - Advantages and Limitations of MNCs – MNCs and International Trade.

Unit-V: Managing Foreign Exchange Risk

Foreign exchange risk - Sources of foreign exchange risk – types of exchange rate risk - Transaction risk, Translation risk, Economic risk- Measurement of Exchange Rate Risk - value-at-risk (VAR) model. Methods of managing foreign exchange risk - internal and external techniques- Forward contracts, Money market hedges, Currency futures, Currency Options, Currency swaps.

Text Book

Krugman, Paul R. and Obstfeld, Maurice. (2015) international Economics: theory and policy (10th Edition, Pearson

References

1. Francis Cherunillam (2004), International Economics (Tata McGraw Hill, New Delhi).
2. Paul Krugman and Maurice (2013), International Economics: Theory and Policy Obstfeld (New Delhi: Pearson) .
3. J.N. Bhagwati (2003), Free Trade Today (Oxford University Press, New Delhi).
4. Jeff Madura (2011), International Financial Management (Mason, Ohio: Southwestern Cengage Learning).
5. Sarno, Lucio; Mark P. Taylor & Jeffrey A. (2002), The Economics of Exchange Rates (Cambridge University Press, Frankel).

6. Carbaugh, “International Economics (11 th Ed) Thomson South – Western, New Delhi. 2008.
7. Sodersten, Bo and Geoffrey, Reed, “International Economics” (3th Edition). Macmillan, 1994.
8. H.G. Mannur, “International Economics”, Vikas Publishing House; Second edition (1 January2018), New Delhi.
9. M.C. Vaish & Sudama Singh, “International Economics”, Oxford & IBH Publishing Co Pvt.Ltd; 9th edition (30 July 2018), New Delhi

Course Outcomes

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Outline the development of trade theory and concepts, understand trade relations internally and externally	K1, K2	LO
CO2	Analyze the trade policy, measures and implications	K3	IO
CO3	Critically evaluate the key issues with multinational corporations, multilateral institutions and foreign exchange risks	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	P11	P12
CO1	L	L	L	L	-	L	L	L	L	L	-	-
CO2	-	M	M	-	M	-	M	-	M	M	M	M
CO3	S	S	S	S	-	S	-	S	S	S	S	S

L – Low; M – Medium; S- Strong

Elective

21UPECO3E07 **COMPUTER APPLICATIONS IN ECONOMICS** 4 credits

Unit–I - Text Management with MS-WORD

Creating new Documents –Document template – Typing Text – Editing Text – Insert Text – Go to, Find, and Replace text or word - Formatting of Text – Format painter – Cut and Paste utility - Copying Document/text in the same or Different file or Document – Drag and drop of typed text- creating tables – using auto correct, dictionary thesaurus.

Unit–II - Managing Data Base

EXCEL: The typical worksheet or spread sheet – cell and their properties – formatting cell – text, numbers, currency, accounting, date, time, percentage, scientific – formats- Formula: using arithmetic and relational operators in a worksheet -Advanced Formulas: sum, count, Average, Max, Min, Product -Using auto format.

Unit-III - Graphs and Charts

Bar diagrams, pie charts, Area- Building Line Diagrams, Histograms, Scatterplots- Frequency Graphs, Ogive, Lorenz curve- Time Series.

Unit– IV - Data Analysis-I

Naming variables - Coding and Recoding of data - Arithmetic calculations with in variables- Descriptive Statistics: Frequencies, Descriptive, Explore, Cross Tabulation - Compare Means: One sample T- test, Independent Sample T – test, paired sample T test, One way ANOVA- Correlation: Bivariate, Partial- Regression: Linear, Curve Estimation, Multiple Regression.

Unit-V - Data Analysis–II

Classification: K-means cluster, Hierarchical cluster, Discriminant function - Non-parametric Test: Chi-square, Bi-nominal- Time Series – Exponential Smoothing, Auto regression, Seasonal Decomposition

References

1. Lipschultz M.M. and S. Lipschultz (1982), Theory and problems of Dataprocessing :Schaum’s Outline Series, (McGraw Hill, New York).
2. Corey Sandler, Tom Badgett, Jan Weingarten (1997),Office 97 for Windows(BPB Publications, New Delhi).
3. Andy Field (2000), Discovering Statistics Using SPSS for Windows –

Advanced Techniques for the Beginner [Sage Publications, New Delhi].

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Understand the concepts of computers used in economics	K1,K2	LO
CO2	Study and manage the database	K3	IO
CO3	Acquire the knowledge of different statistical skills	K4, K5,K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	P11	P12
CO1	L	L	M	-	L	L	-	L	S	L	-	-
CO2	S	M	M	-	M	L	M	-	M	-	M	-
CO3	S		L	S	-	-	S		M	-	-	S

21UPECO3E08 **ECONOMICS OF DEMOGRAPHY** 4 credits

Objectives

- To introduce the subject of demography to the student of economics
- To have knowledge on basic concepts, data sources in demography, and development of the economy due to increase in population

UNIT – I: INTRODUCTION

Demography: Meaning, Concepts, Significance, Techniques of demographic analysis – Population pyramid — Population growth and size – Population trap – Demographic measurements: Composition, Density of population ratio, BR, DR, IMR, Under five IMR, Life expectancy & HDI.

UNIT – II: THEORIES OF DEMOGRAPHY

Malthus, Optimum Theory of Population – Social theories: Dumont, Brento, Henry George – Theory of Demographic Transition.

UNIT – III: MIGRATION & URBANIZATION

Concepts & types of migration – Effect on population growth & pattern – Factors affecting migration – Theories.

Urbanisation – Growth & distribution of rural & urban population in developed & developing countries.

UNIT – IV: DEMOGRAPHIC DATA BASE IN INDIA

Census of India – Nature, Methodology & Characteristics of Census (1971 – 2011) – NFHS (different surveys).

UNIT – V: DEMOGRAPHY & ECONOMIC DEVELOPMENT

Population & economic development: Trends & distribution – Population control measures in India – Population Policy in India – Current population scenario. Economic determinants of population change: Household behavior, New home economic approach to fertility, Marriage, Divorce and Household structure, Change economic roles and fertility.

References

1. Bogue D J (1971), “Principles of Demography”, John Wiley, New Delhi
2. Gulati S C., (1988), “Fertility in India: An Econometric Study of a Metropolis”, Sage Publications, New Delhi
3. Chenery H & Srinivasan T N (Eds.), (1989), “Hand Book of Development of Economic”, Vol. 1 & 2, Elsevier, Amsterdam
4. Srinivasan K (1998), “Basic Demographic Techniques and Applications”, Sage Pub., New Delhi
5. Raj Hans (), “Fundamentals of Demography: Population Studies (With special reference to India)”, Surjeet Publications, New Delhi
6. Majumdar M K (2013), “India's Demography: Changing Demographic Scenario in India”, Rawat Pub., New Delhi
7. Jennifer Hicke Lundquist, Amherst Douglas L. Anderton & David Yaukey (2015), “Demography: The Study of Human Population”, (4ed.), Waveland Press, Inc.
8. Census of India – Various year
9. NFHS – Various surveys

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Apply demographic concepts and population theories to explain past and present population characteristics; and evaluate the use of demographic concepts and population theories to understand contemporary socio-economic issues and current affairs	K1, K2	LO
CO2	Study established theories of population, to explore various aspects of the population policy and to study its impact on socio economic issues.	K3	IO
CO3	Acquire the knowledge of sources of population data; impart knowledge on Census ; discuss the development of Vital Registration System (VRS); gain knowledge on secondary sources and describe the different demographic surveys	K4, K5, K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	P11	P12
CO1	L	L	M	-	L	L	-	L	S	L	-	-
CO2	S	M	M	-	M	L	M	-	M	-	M	-
CO3	S		L	S	-	-	S		M	-	-	S

Elective 21UPECO3E09 MARITIME ECONOMICS 4 credits

Objectives

1. Imparting the students on the return nature, functions, and management of shipping operations.
2. Educating the students on the structure, functions and operations of shipping industry.
3. Motivating students to learn and assess the relevance of various international trade.

Outcome

1. Students are in a position to appraise of the role played by international freight forwarders.
2. Acquired the skills needed to either prepare business models or work in the port infrastructure and related industries.
3. The students could appropriately utilize the theories and concepts for gainful employment and development of the port and shipping industry.

Unit I - Introduction to Shipping

Maritime Economics - Meaning and Definition - Importance of Maritime Economics - Sea Transport and the Global Economy – origins of sea trade – container, bulk and air transport- maritime industry- sea transport system- the cost of sea transport- the role of ports in the transport system- The economic role of shipping Industry - International transport system - Demand for and supply of sea transport the role of government in shipping.

Unit 2 - Shipping Market Economics

Shipping Market Cycles – Characteristics of shipping market cycles – prediction of shipping cycles- Supply, Demand and Freight Rates- key

influences on supply and demand- The freight rate mechanism- shipping markets- The cost of running ships- the capital cost of the ship- International Freight Forwarding - Logistics Service Providers - Project Cargo Forwarding - infrastructure in ports and terminals - Port Pricing

Unit 3- Financing Ships and Shipping Companies

Ship finance and shipping economics- The world financial system and types of finance- Analyzing risk in ship finance-The performance of shipping investments- The shipping company investment model- Pricing shipping risk.

Unit 4- Seaborne Trade and Transport Systems

The Geography of Maritime Trade- The value added by seaborne transport- the Maritime trading network- The building blocks of sea trade- theory of maritime trade- theory of absolute advantage- comparative advantage- trade due to differences in natural resources- Heckscher-Ohlin Theory-the trade development cycle- Monopoly Environment and Role of Competition.

Unit 5- The Merchant Fleet and Maritime Forecasting

Types of Ships – The role of the merchant shipbuilding and scrapping industries- Shipbuilding costs and competitiveness- the ship recycling industry- Major and non major Seaports in India - Port management - Development of Indian ports-Maritime Forecasting and Market Research- approaches to maritime forecasting- Key elements of the forecast-market forecasting methodologies

Text Book

Martin Stopford, (2013). Maritime Economics, 2nd Edition, Routledge Taylor & Francis Group, London and New York.

References

1. Karakitsos, E., Varnavides, L (2014), Maritime Economics A Macroeconomic Approach, Palgrave Macmillan, UK.
2. Wilson, John (2010), Carriage of goods by sea, Longman, 7th edition.
3. Allan E Branch (2017), Elements of Shipping, Routledge, 8th Edition.
4. Martin Stopford (2009), Maritime Economics, Routledge, Taylor & Francis Group, Third Edition.
5. James, C. (2017). Financing the Merchant Shipping Industry, J. Business of the University of Chicago. 2: 204-216.
6. Tongzon, J. L., and S.-Y. Lee. (2015) The Formulating an Implementing Strategy for an ASEAN Single Shipping Market. Final Report for ASEAN Secretariat. Jakarta: Korea-ASEAN

7. Frittelli, J. (2014) “Harbor Maintenance Finance and Funding.” In CRS Report for Congress R43222. Washington, DC: Congressional Research Service

On the successful completion of the course, students will be able to

CO Number	CO Statement	Knowledge Level	Order
CO1	Understand and apply concepts of ports and shipping to the real world	K1,K2	LO
CO2	Study shipping market economics and financing ships	K3	IO
CO3	Acquire the knowledge of sea borne trade, shipbuilding and forecasting	K4, K5,K6	HO

Mapping of course outcomes with programme objectives

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	P11	P12
CO1	L	L	M	-	L	L	-	L	S	L	-	-
CO2	S	M	M	-	M	L	M	-	M	-	M	-
CO3	S		L	S	-	-	S		M	-	-	S

21UPECO3C17

PROJECT

8 credits

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