

**OUTCOME BASED EDUCATION
WITH CHOICE BASED CREDIT SYSTEM**

SYLLABI

**M.A APPLIED ECONOMICS
PROGRAMME**

(With effect from the Academic Year 2024-25)

**DEPARTMENT OF APPLIED ECONOMICS
COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY**

CONTENTS

<u>Sl. No.</u>	<u>Titles</u>	<u>Page No.</u>
I.	Preamble – MA Applied Economics Programme	1
II.	Programme Objectives	1
III.	Programme Educational Objectives (PEOs)	2
IV.	Programme Outcomes (POs)	3
V.	Programme Specific Outcomes (PSOs)	4
VI.	Regulations	4

M.A. in Applied Economics, Department of Applied Economics, CUSAT

I. Preamble - M.A Applied Economics Programme

The M.A Applied Economics programme at the Department of Applied Economics, CUSAT has been designed to provide advance theoretical and applied economics education, involving:

- 1. A grounding in the principles of microeconomics,*
- 2. An understanding of different schools of thought in macroeconomic theory and policy,*
- 3. An appreciation of the nature of business and its role within the private enterprise system,*
- 4. The ability to use basic economic principles to analyse decision making within the firm and identify and explain the impact of key governmental policies on business,*
- 5. A familiarity with recent developments in economic approaches to business strategy,*
- 6. A range of transferable skills in task-planning, communication, research, information analysis and interpretation and team-working.*

The current programme is designed in such a way to mould future economists thoroughly conversant with the application of economic theories and policies in this globalised and free economy in order to bring more foreign direct investment, industrialisation, create more employment opportunities, increasing the purchasing power, movement of the people and overall activate the Indian economy to a higher economy growth level. The revised curriculum will meet the current requirement of the economy of India, Kerala economy and the global economy with the objective of implementing the Outcome Based Education (OBE) system along with Choice Based Credit System (CBCS) and Grading System. The new curriculum will enrich the young economists and prepared in accordance with UGC and Ministry of HRD. The National Board of Accreditation in India has started accrediting only the programmes running with OBE. This is the revised version of the OBE curriculum that was adopted since the 2020-2021 academic year. This revised OBE curriculum will come into effect from the 2024-2025 academic year.

II. Programme Objectives

Programme is to educate and prepare students with the right blend of knowledge, perspectives, theoretical and analytical ability, skills to needed to analyse socio economic problems and to help to frame appropriate policy suggestion in a competitive economy in national and international perspective.

1. To familiarize the students with the uses of set quantitative and theoretical understanding to prescribe and take appropriate policy decisions.
2. Students understand factual information on Indian economy.
3. They analyse sectoral performance of the economy.
4. Students use relevant statistics to analyse the implication of various economic policies.
5. They compare and evaluate the growth and development trends of the national as well as regional economies.
6. To understand the theoretical understanding and trade relations India has with various economies of the world.
7. To understand the current position of the Indian economy among world economies.

III. Programme Educational Objectives (PEOs)

PEO1: Applied Problem-Solving Skills: Graduates will demonstrate proficiency in employing economic theories and quantitative methods to analyse and address complex socio-economic challenges, thereby, contributing effectively to tactical decision-making in academic, professional, and policy settings.

PEO2: Innovation in Economic Solutions: Students will cultivate a culture of innovation, applying novel approaches and creative thinking to develop effective solutions to complex economic challenges.

PEO3: Leadership in Economic Research: Students will enhance their research skills and analytical abilities, enabling them to lead impactful research initiatives in diverse fields of economics.

PEO3: International Economic Citizenship: Graduates will develop a global perspective on economic issues, fostering cross-cultural understanding and collaboration to address global economic challenges and promote sustainable development across borders.

PEO5: Professional Excellence and Impact: Graduates will strive for professional excellence, leveraging their expertise to make significant contributions to their chosen fields, be in academia, industry, government, or non-profit organisations.

PEO6: Ethical Decision-Making: Students will internalise ethical principles and values, guiding their decision-making processes as they navigate complex socio-economic environments with integrity and social responsibility.

IV. Programme Outcomes (POs)

PO1: Expertise in Economic Concepts: Graduates will showcase a deep understanding of foundational economic principles and theories and will be well-versed in the fundamental concepts that drive economic systems.

PO2: Proficiency in Quantitative Analysis: Students will acquire advanced skills in both statistical and mathematical methodologies essential for economic analysis, thus enabling them to effectively analyse economic and financial data, construct models, and interpret statistical results across diverse economic scenarios.

PO3: Critical Thinking and Problem-Solving Abilities: Graduates will develop the capacity to critically evaluate economic issues, formulate relevant research questions, and apply appropriate methods to devise innovative solutions and implement suitable policies to real-world economic challenges.

PO4: Specialized Knowledge in Applied Economics: Students will develop expertise in specialised areas of applied fields of economics, such as environment, finance and taxation, gender, labour market, trade, and monetary system through theoretical and practical applications.

PO5: Awareness of Socio-Economic Issues: Graduates will gain insight into the socio-economic dynamics shaping contemporary societies, such as the relationship between economic policies, institutions, and societal outcomes, and promoting decision-making capability.

PO6: Research Competence: Graduates will acquire the necessary skills to conduct social science research, including proficiency in literature review, hypothesis formulation, data collection, quantitative and qualitative analysis, and interpretation of research findings.

PO7: Effective Communication Skills: Students will demonstrate the ability to articulate economic concepts, theories, and empirical findings clearly and persuasively, by way of seminars, assignments, group discussions and debates, thus developing effective communication and such other soft skills.

PO8: Adaptability and Professional Development: Students will cultivate the ability to adapt to evolving economic paradigms, technological advancements, and global trends, fostering a commitment to lifelong learning and professional development in diverse economic environments.

V. Programme-Specific Outcomes (PSOs)

PSO1: Integration of Economic Theory and Policy Analysis: Graduates will demonstrate the capacity to integrate economic theories with empirical evidence to analyse and evaluate policy interventions, and addressing socio-economic challenges, both in the Indian and global contexts.

PSO2: Application of Quantitative Techniques: Students will showcase proficiency in the application of quantitative techniques to analyse real time economic phenomena, including model specification, estimation, hypothesis testing, and causal inference, thus enhancing their ability to provide scientific policy recommendations.

PSO3: Interdisciplinary Perspective: Graduates will develop an interdisciplinary and holistic perspective by integrating insights from related disciplines, such as environmental science, gender, psychology, labour economics, statistics, mathematics, finance and political science, so as to address complex socio-economic issues.

PSO4: Professional Development and Networking: Students will actively engage in professional development activities, including seminars, workshops, internships, and networking events, so as to enhance their career prospects and establish connections within the broader economic community.

VI. Regulations – M.A. Applied Economics Programme

- 1.1 Eligibility : For admission to the M. A. in Applied Economics programme shall be Bachelor Degree in Economics with 55% in Part III (Economics and Subsidiary subjects) or 60% with B.Com, B.B.A, B.B.M with Economics as one of the subjects or B.Sc. Mathematics or Statistics or B.C.A / B.Tech with 65% marks.
- 1.2 Candidates who have appeared in the final year degree examination but awaiting results are permitted to seek provisional admission to the course. Such candidates required to provide evidence of the minimum academic qualification prescribed on or before their enrolment to the first semester M.A. in Applied Economics examination of CUSAT to be held for the same batch of students. If they fail to do so they shall be removed from the rolls.
- 1.3 Admission to the M.A. in Applied Economics shall be based on the scores obtained in the CAT conducted by the University. CAT shall have multiple choice questions from Economics (50%), Mathematics and Statistics (30%) and General awareness (20%).

- 1.4 There shall be 20 seats of which five shall be reserved for foreign candidates recommended by the Government of India. If such candidates are not available the seats can be allotted to NRI who qualify the entrance test and satisfy the other qualifications prescribed for the degree. If NRI candidates not available these seats can be converted to general merit on the basis of the recommendations of the head of the Department.
- 1.5 Reservation rules applicable to nonprofessional courses in Kerala as laid down by the State Government from time are applicable in the case of admission to the degree.
- 1.6 Payment of fees: Fees for the programme must be paid as prescribed by the University.
- 1.7 Re-admission to the programme shall be permitted only if the candidate satisfies the conditions laid down by the University and with the permission of the Registrar.
- 2.1 Course study and Attendance: The course work for the M.A. in Applied Economics degree shall be in accordance with the schemes of examination and syllabus prescribed. The course shall extend over a period of two academic years comprising of four semesters. Each semester shall extend over a period of 16-18 weeks. The minimum attendance required by the candidate shall be 75 percentage of the total number of working days.
- 3.1 Scheme of studies:
- | | |
|--------------|-------------------|
| Semester I | 20 credits |
| Semester II | 20 credits |
| Semester III | 23 credits |
| Semester IV | 19 credits |
| Total | 82 credits |
- 3.2 The Comprehensive Viva Voce examination is based on a presentation made by candidate in the department with an external expert.

M.A. Applied Economics Programme Structure

SEMESTER – I

Course Code	Title of the Paper	Core / Elective	Credits	Hours / Week	CA Marks	SEE Marks	Total Marks
ECO 3101	Microeconomics – I	C	4	4	50	50	100
ECO 3102	Macroeconomics –I	C	4	4	50	50	100
ECO 3103	Mathematical Methods for Economics	C	4	4	50	50	100
ECO 3104	Statistics for Economic Analysis	C	4	4	50	50	100
ECO 3105	Business Finance	C	4	4	50	50	100
Total for the First Semester		5C	20	20	250	250	500

CA – Continuous Assessment SEE – Semester End Examination

SEMESTER – II

Course Code	Title of the Paper	Core / Elective	Credits	Hours / Week	CA Marks	SEE Marks	Total Marks
ECO 3201	Microeconomics – II	C	4	4	50	50	100
ECO 3202	Macroeconomics –II	C	4	4	50	50	100
ECO 3203	Econometrics	C	4	4	50	50	100
ECO 3204	Development Economics	C	4	4	50	50	100
ECO 3205	International Economics	C	4	4	50	50	100
Total for the Second Semester		5C	20	20	250	250	500

CA – Continuous Assessment SEE – Semester End Examination

SEMESTER – III

Course Code	Title of the Paper	Core / Elective	Credits	Hours/Week	CA Marks	SEE Marks	Total Marks
ECO 3301	Environmental Economics	C	4	4	50	50	100
ECO 3302	Public Economics	C	4	4	50	50	100
ECO 3303	Research Methodology	C	4	4	50	50	100
ECO 3304	Financial Economics	C	4	4	50	50	100
ECO 3306	Indian Economy	C	4	4	50	50	100
ECO 3305	Elective – I	E	3	3	50	50	100
Total for the Third Semester		5C+1E	23	23	300	300	600

CA – Continuous Assessment SEE – Semester End Examination

SEMESTER – IV

Course Code	Title of the Paper	Core / Elective	Credits	Hours/Week	CA Marks	SEE Marks	Total Marks
ECO 3401	Elective – II	E	3	3	50	50	100
ECO 3402	Elective – III	E	3	3	50	50	100
ECO 3403	Elective – IV	E	3	3	50	50	100
ECO 3404	Elective – V (MOOC)	E	3	3	--	100	100
ECO 3405	Project	C	4	8	50	50	100
ECO 3406	Comprehensive Viva-Voce	C	3	--	--	100	100
Total for the Fourth Semester		2C+4E	19	20	200	300	500

CA – Continuous Assessment SEE – Semester End Examination

Total Marks 2100 and Total 82 credits (Core 67 credits and Optional 15 credits)

Elective Papers

<u>Sl. No</u>	<u>Course Code</u>	<u>Title of the Elective Course</u>
1.	Eco Ele – 1	Project Planning and Appraisal
2.	Eco Ele – 2	Kerala Economy
3.	Eco Ele – 3	Industrial Economics
4.	Eco Ele – 4	Advanced Econometrics
5.	Eco Ele – 5	Social Exclusion and Inclusive Policy Studies
6.	Eco Ele – 6	International Finance
7.	Eco Ele – 7	Financial Institutions and Markets
8.	Eco Ele – 8	Gender Studies
9.	Eco Ele – 9	Economics of Labour Market
10.	Eco Ele – 10	Behavioral Economics
11.	Eco Ele – 11	Agricultural Economics
12.	Eco Ele – 12	Health Economics
13.	Eco Ele – 13	Optimisation Techniques
14.	Eco Ele – 14	Economic Theory (Inter departmental Elective)
15.	Eco Ele – 15	Environment Management (Inter departmental Elective)

ECO 3101 Microeconomics – I

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
I	ECO 3101	Microeconomics – I	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K5 - Evaluating	Develop a nuanced understanding of recent developments in the theory of consumer behaviour.
CO2	K3– Applying	Equip with varying production and cost functions, its applications and derivations
CO3	K5 – Evaluating	Examine consumer choices involving time and varying attitude towards risk
CO4	K2 – Understanding	Demonstrate proficiency in the fundamentals of game theory and its applications in the real world
CO5	K4 - Analysing	Evaluate the complexities of the oligopoly market structures and its equilibrium analysis

CO-PO Matrix

Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	-	1	1	1	3	1
CO2	2	2	1	1	-	1	-	-
CO3	3	2	1	1	-	-	2	-
CO4	3	-	1	-	1	1	2	1
CO5	3	-	1	-	3	-	3	1

CO-PSO Matrix

Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	3	3	2	-
CO2	3	3	2	2
CO3	3	2	2	1
CO4	3	2	2	1
CO5	3	-	-	2

ECO 3101 Microeconomics - I

Module 1: Recent Development in the Theory of Consumer Behaviour

Modern Theories of Demand – Network Externalities – Lancaster’s Attribute Model – Hicksian and Marshallian Demand Analysis – its Mathematical Derivations – Indirect Utility Function – Expenditure Function. Recent developments in demand – Constant Elasticity Demand Function – Distributed-Lag Models, Dynamic Versions of Demand Functions – Nerlove’s Principle – Houthakker and Taylor’s Principle – Linear Expenditure System. The Cobweb Model.

Module 2: Theory of Production and Costs

Homogenous and Non-Homogenous Production Functions - Empirical Production Functions – Cobb-Douglas – Constant Elasticity of Substitution – Engineering Production – Equilibrium of a Single Product Firm - Equilibrium of a Multiproduct Firm – Economies of Scope. Traditional Theory of Costs (Summary) - Modern Theory of Costs - Derivation of Cost Function from Production Function.

Module 3: Choices involving Time and Uncertainty and Theory of Games

Choices involving Time – Becker’s Time Allocation Model. Choices under Uncertainty – St. Petersburg Paradox and Bernoulli’s Hypothesis – N-M utility index: Attitude towards Risk – Friedman-Savage Hypothesis – Markowitz Hypothesis.

Module 4: Theory of Games

Introduction to Game Theory – Types of Games with examples – Strategies in Game Theory - Nash Equilibrium.

Module 5: Market Structures

Bilateral Monopoly – Price determination – Natural Monopoly – Collusive Oligopoly – Cartels and Price Leadership – Non-Collusive Oligopoly – Cournot Model, Bertrand Model, Chamberlin Model, Sweezy’s Model, Stackelberg Model. Baumol’s Contestable Market. Oligopoly and Game Theory. The Spatial Interpretation of Monopolistic Competition: The Beach-Location Model.

References

1. Baumol, William J. and Blinder, Alan S. (2011), *Economics: Principles and Policy*, 11th Edition, Cengage Learning.
2. Besanko, David and Braeutigam, Ronald R. (2014), *Micro Economics*, 5th Edition, Wiley.
3. Goolsbee, Austan., Levitt, Steven and Syverson, Chad (2016), *Micro Economics*, 2nd Edition, Macmillan Learning.
4. Jehle, Geoffrey A. and Reny, Philip J. (2011), *Advanced Microeconomic Theory*, 3rd Edition, Pearson.
5. Koutsoyiannis, A. (1979), *Modern Microeconomics*, 2nd Edition, Macmillan Press, London.
6. Nicholson, Walter and Snyder, Christopher (2012), *Microeconomic Theory: Basic Principles and Extensions*, Cengage Learning.
7. Pindyck, Robert S. & Rubinfeld, Daniel L. (2018), *Micro Economics*, 9th Edition – Global Edition, Pearson.
8. Varian, Hal R. (2014), *Intermediate Microeconomics: A Modern Approach*, 9th Edition, W.W. Norton and Company, New York and London.

ECO 3102 Macroeconomics – I

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
I	ECO 3102	Macroeconomics – I	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	To outline the Keynesian and classical version of ISLM model.
CO2	K2	To demonstrate the behavioural foundations of macroeconomics.
CO3	K4	To examine the classical and Keynesian approach to demand for and supply of money.
CO4	K5	To assess open macroeconomic models.

CO PO Matrix								
Course outcomes	Program outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	-	2	2	-	-	3	2
CO2	3	1	3	2	1	-	3	3
CO3	3	1	2	2	2	-	3	2
CO4	3	-	2	1	-	1	3	2

CO-PSO Matrix				
Course outcomes	Program specific outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	3	-	1	1
CO2	3	2	2	1
CO3	3	-	1	1
CO4	3	2	2	2

ECO 3102 Macroeconomics I

Module I

Neo-classical and Keynesian Synthesis. ISLM model-Keynesian and classical versions-Extension of ISLM model with government sector-relative effectiveness of monetary and fiscal policies-Extension of the ISLM model with labour market and flexible prices-Unemployment and labour market-Three sectors macro model-Keynesian and neoclassical versions.

Module-2

Behavioural foundations of Macro economics.Sectoral demand functions – consumption demand-Keynesian Psychological law of consumption-Consumption function puzzle -Income consumption relationship-Absolute Income, Relative Income, Life cycle and permanent Income hypothesis.

Module III

Investment demand; Keynesian Approach-post Keynesian Approach-New Keynesian Approach-Neo-classical Approach-Lags in investment demand-Accelerator theory of investment –Interaction of accelerates and multiplies-Financial theory of investment determination-policy measures that affect investment.

Module IV

Demand and Supply of Money. Classical and Keynesian approaches to the demand for and supply of money-post-Keynesian approaches to the demand to the demand or money-Patinkin and Real balance effect- Approaches of Baumal and Tobin – Friedman and the modern Quantity theory –Challenges to Keynesianism and revival of monetarism –Money supply determination in an open economy-High powered money and money multiplies-control of money supply.

Module V

Macroeconomics in an open economy. ISLM analysis for an open economy –Balance of payments and Keynesian analysis –external balance and prices – money capital flows and open economy –Mundell-Fleming Keynesian model-Asset markets expectations and exchange rate-monetary approach to balance of payments.

References

1. Keynes, John Maynard, “The General Theory: Fundamental Concepts and Ideas”. Quarterly Journal of Economics, February, 1937.
2. Branson, W A (2000), “Macro Economic Theory and Policy”, 3rd Edn, Harper and row, New York.
3. Dornbusch R and F Stanley (2000), Macroeconomics, McGraw Hill, New York.
4. Levacic, R and A.Rehman ,Macro Economics, ELBS and Macmillan , 2000.
5. Richard T Froyen (7th Edition), Macroeconomics: Theories and Policy, Pearson, Education, New Delhi., 2003.
6. Dornbusch, Fischer and Startz (2012) Chapter on “International Linkages” and Froyen(2006).
7. G.Mankiw, Principles of Macroeconomics, Thomson Wouthwestern, 2007.
8. Carlin and Soskice, Macroeconomics: Institutions, Instability and the Financial System. OUP (pp 159 to 177). 2015.
9. Dornbusch, Fischer and Startz(2018) Chapter on “Money, Interest and Prices”.
10. Patnaik, Prabhat(2020)Demand-constrained versus Supply-constrained Systems Jan., 2020 (<http://www.networkideas.org/news-analysis/2020/01/demand-constrained-versussupply-constrained-systems/>).

ECO 3103 Mathematical Methods for Economics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
I	ECO 3103	Mathematical Methods for Economics	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2 – Understanding	Understand basic concepts of mathematics such as functions, limits and derivatives and integration.
CO2	K5– Applying	Solve matrices and use matrices in input-output analysis
CO3	K5– Applying	Use mathematical tools for economic-decision making

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1		3	1				2	
CO2		3				1		
CO3	2	1						1

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1			1	
CO2	2	2		
CO3	2	1	1	

ECO 3103 Mathematical Methods for Economics

Module I

Functions-Graphs, Slops, and intercepts-Graphs of non-linear functions-exponential and logarithmic functions. Limits-Continuity-derivative-Rules of differentiation-Higher order derivations-Implicit differentiation-partial derivatives.

Module II

Uses of derivatives in Economics-Increasing and decreasing function-Concavity and convexity-Inflection points-Marginal concepts-price elasticity of demand-relationship among total, marginal. And average concepts-Cobb Douglas production function-Eulers's theorem.

Module III

Maxima and Minima-constrained optimization with long range multipliers-Applications of maxima and minima in Economics-Cost minimization-Profit maximization.

Module IV

Matrices-Addition and subtraction of matrices-Multiplication of matrices-Determinant of matrices-Inverse matrices-Solving Linear equations with the inverse-Cramer's rule for matrix solutions –Application of matrices in input output analysis.

Module V

Integral calculus-Rules of integration-Evaluation of integration-Evaluation of integrals-Economic application of integration-Consumer's Consumer' surplus and Producers surplus.

References

1. Edwad T.Dowling "Introduction to Mathematical Economics" McGraw Hill Ltd., New York
2. Taro Yamme " Mathematics for Economists", Prentice Hall of India Pvt. Ltd., New Delhi.
3. R.G.D.Allen, "Mathematical Analysis for Economists". Macmillan India Ltd.
4. Martin Anthony & Norman Biggs, Mathematics for Economics and Finance, Cambridge University Press, 2000. 5. Alpha.C. Chiang, Mathematics for Economics, TMH, 2000,
5. Chiang, A.C. (2008), Fundamental Methods of Mathematical Economics, McGraw Hill, NewYork.
6. Dowling, E.T.(2007), Introduction to mathematical Economics, Schaum's Series, McGraw Hill.
6. Taro Yamane (2001) Mathematics for Economists : An Elementary Survey: Prentice Hall of India Pvt. Ltd., New Delhi
7. Michael Hoy and L. John (2004), Mathematics for Economics, PHI, New Delhi
8. Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
9. Prasad (2005), Mathematical Method of Input Output Analysis, Mahamaya Publishing, New Delhi
10. Hadley, G (1969), Linear Programming, Addison Wesley Publishing Co., Massachusetts.
11. Taha, H.A.(2008), Operations Research- An introduction, Prentice hall of India, New Delhi.

ECO 3104 Statistics for Economic Analysis

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
I	ECO 3104	Statistics for Economic Analysis	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K3	Apply statistical concepts in economic analysis
CO2	K3	Make use of statistical tests for interpretation of results
CO3	K4	Analyse the data using statistical tools

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	1						1	
CO2		3	2			3		3
CO3		3	3			3		

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	2	1	1	
CO2		3		
CO3	1	2	1	

ECO 2104 Statistics for Economic Analysis

Module I:

Basic Probability Theory- Approached towards probability, Basic theorems of probability, Mathematical expectations- Discrete Random Variables-Continuous Random Variables-Probability distributions. Joint distributions Sampling Distributions. Inference based on a Single Sample-Test of Hypothesis. Process of testing of hypotheses-Inference Based on Two Samples and large samples and small samples: Confidence Intervals and Test of Hypothesis

Module II:

Correlation – Simple, multiple, and partial correlations and rank correlation, Simple Linear Regression- Multiple Regression-Analysis of Variance Residual Analysis.

Module III.

Design Experiments and Analyses, Models and Forecasting Introduction to Multivariate Analysis. Design Experiments and Analysis of Variance.

Module IV:

Parametric and Non Parametric Statistics-Single Population Inferences-Comparing Two Populations-Test for a Completely Randomized Design

Module V:

Chi-Square Test and Analysis of Contingency Tables, Decision Analysis.

Reference

1. McClave James T, P.George Benson and Terry Sincich, 2000, Statistics for Business and Economics, Prentice Hall
2. Murray R Spigel, Probability Theory, Shoum Series, 1990.
3. Lipshutz, Theory Probability, Shaum's Outline Series, 2000.
4. Damodar Gujariti, Econometrics, 2000. 5. Mario. F. Triola, Elementary Statistics, 7th Ed., Addison Wielely, 2000
6. Willaim.G.Kochran, Sampling Techniques, Wiley India, 2007.

ECO 3105 Business Finance

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
I	ECO 3105	Business Finance	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K1	Know the basics of accounting and finance, significance of finance and major finance decisions in business
CO2	K2	Understand the major business finance decisions of a firm and also to learn How these decisions decide their profitability and market competitiveness.
CO3	K3	Learn how to analyse the financial statements of a business concern using tools of financial analysis and hence to learn the basics of financial economics.

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1				3		2		1
CO2			1		3	2		
CO3		1		2		3		

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1		2	
CO2		1		2
CO3		2		1

ECO 3105 Business Finance

Module I: Basics of Accounting and Finance

Accounting – Meaning; types of accounting – Financial Accounting – Internal and External Users of Accounting Information – The Double Entry System – Trail Balance, Profit and Loss Account, Balance Sheet – Analysis of Financial Statements – Traditional and modern concepts of Finance function – Nature, Scope and Importance of finance function – Major financial decisions: Financing, Investment, Working Capital and Dividend policy.

Module II: Financial Planning, Financing for Business and Capital Budgeting

Financial Environment – Financial Planning – Steps in Financial Planning – Capitalization – Over Capitalization and Under Capitalization – Overview of Capitalization Theories – Raising funds for business – Short term and Long term sources – Equity and Debt – Capital Budgeting and its significance – Capital Budgeting methods.

Module III: Capital Structure and Cost of Capital

Leverage; Meaning, Significance and Types of leverage – Capital Structure and Cost of Capital, Theories of Capital Structure, Designing Optimal Capital Structure, EBIT, and EPS Analysis.

Module IV: Working Capital Management

Concepts, Needs and Nature of working Capital - Methods of determining Working Capital, Requirement, Financing and Control of Working Capital

Module V: Earnings, Dividend Policy and Management of Long-Term Finance

Management of Earnings, Retained Earnings, and Dividend Policies – Dividend Practice and Dividend Models – Management of long term funds – Sources of Long term Finance, Financial Institutions and Term Lending

References

1. Van Horne & Dhamija, S., *Financial Management and Policy*, 12 Ed., Pearson India Education.
2. Jae Shim & Joel Siegel, Schaum's Outline Series, *Financial Management*, Tata McGrw Hill, New Delhi.
3. Brealey, R. & S.C. Myers, *Principles of corporate finance*, New York, McGraw Hill.
4. T P Ghosh, *Accounting for Management*, Tax Mann Publications, New Delhi.
5. Gupta & Gupta, *Principles of Accounting*, Sultan Chand Publications, Delhi
6. M. Y Khan & P. K Jain, *Financial Management*, Tata Mc Graw Hillll, New Delhi
7. Prasanna Chandra, *Financial Management*, Tata Mc Graw Hill, New Delhi
8. S. N Maheswari, *Management Accounting and Financial Control*, Sultan Chand, Delhi.

ECO 3201 Microeconomics – II

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
II	ECO 3201	Microeconomics – II	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2-Understanding	Understand various macro theories of distribution put forward by various economists
CO2	K3 - Applying	Examine the issues of arising from asymmetric information in the real world and how it leads to market failure
CO3	K4 - Analyzing	Identify the alternative theories of the firms and their other goals along with profit maximization
CO4	K4 - Analyzing	Compare the various criteria for evaluating social welfare and arriving at a social choice and to understand the general and partial equilibrium analysis
CO5	K2-Understanding	Understand fundamental labour market economics

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	1	-	1	-	-	-	-
CO2	3	1	3	2	1	1	1	2
CO3	3	1	2	2	2	1	2	2
CO4	3	2	2	2	1	1	2	2
CO5	3	-	-	3	-	-	1	1

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	-	-	1	1
CO2	3	2	3	2
CO3	2	1	3	2
CO4	3	2	3	2
CO5	1	-	1	1

ECO 3201 Microeconomics – II

Module 1: Macro Theories of Distribution

Concept of Distribution – Types of Distribution - Marginal Productivity Theory – Product Exhaustion Problem - Euler’s Theorem. Macro Theories of Distribution – Ricardo, Marx, Kalecki and Kaldor.

Module 2: Economics of Information

Efficiency in Competitive Markets: Why Markets Fail - Externalities, Tragedy of the Commons - Common Property Resources - Property Rights and the Coase Theorem. Asymmetric Information – the Principal-Agent Problem – Market for Lemons – Second-hand Car Market– Market Signalling – Adverse Selection and Moral Hazard – Adverse Selection in Labour Market and Insurance market.

Module 3: Alternative Theories of the Firm

Basic Assumptions of Neo-Classical Theory – its Criticisms: the ‘Marginalist Controversy’ – Global and Bounded Rationality - Baumol’s Sales Maximization - Williamson’s Model of Managerial Discretion – Marris’s Model of Managerial Enterprise – Average and Full-cost Pricing Principle - Cyert and March Model - Bain’s Limit Pricing.

Module 4: Welfare Economics

Introduction to Welfare Economics – Social Welfare Criteria – GNP Criterion, Bentham’s Criterion, Cardinalist Criterion, Pareto Optimality Criterion, Kaldor-Hicks Compensation Criterion – Bergson-Samuelson Criterion. General Equilibrium - $2 \times 2 \times 2$ Model, Theory of Second Best, Arrow’s Impossibility Theory, Rawl’s Theory of Justice, Easterlin Paradox.

Module 5: Introduction to Labour Market

Derived Demand – Basic Work-Leisure Model - Indifference Curves and Utility Maximization - Monopsony in the Labour Market – Efficiency Wage Models

References

1. Ahuja, H.L. (2012), *Modern Microeconomics*, 18th Edition, S. Chand and Company.
2. Besanko, David and Braeutigam, Ronald R. (2014), *Micro Economics*, 5th Edition, Wiley.
3. Borjas, George J. (2010), *Labor Economics*, 6th Edition, McGraw-Hill Irwin.
4. Harris, Jonathan and Roach, Brian (2022), *Environmental and Natural Resource Economics*, Routledge, 5th edition.
5. Koutsoyiannis, A. (1979), *Modern Microeconomics*, 2nd Edition, Macmillan Press, London.
6. Nicholson, Walter and Snyder, Christopher (2012), *Microeconomic Theory: Basic Principles and Extensions*, Cengage Learning.
7. Pindyck, Robert S. & Rubinfeld, Daniel L. (2018), *Micro Economics*, 9th Edition – Global Edition, Pearson.

ECO 3202 Macroeconomics – II

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
II	ECO 3202	Macroeconomics – II	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K5	To evaluate the current controversies in Macroeconomics
CO2	K4	To analyze the trade-off between inflation and unemployment
CO3	K4	To Understand the macroeconomic theory and policies
CO4	K2	To explain trade cycles and different theories of economic growth and development

CO-PO Matrix								
Course outcomes	Program outcomes							
	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	2	2	2	-	1	3	1
CO2	3	3	2	2	2	2	3	2
CO3	3	2	2	2	2	1	3	1
CO4	3	2	2	2	2	1	2	1

CO-PSO Matrix				
Course outcomes	Program specific outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	3	2	2	2
CO2	3	3	2	1
CO3	3	1	3	2
CO4	3	2	2	2

ECO 2202 Macro Economics II

Module I

Walrasian and Keynesian Adjustment mechanisms – Walrasian equilibrium – Walrasian and the neoclassical – Keynesian synthesis –post Keynesian economics. Neo Keynesian quantity constrained models. Policy implications.

Module II

The New Classical Macroeconomics - The new classical critique of Keynesian micro foundations – The new classical approach, Criticisms, empirical evidence.

Module III

Inflation. Types- Theories approach to inflation in a closed economy. International monetarism - structuralist theories of inflation - Empirical evidence on the determinants of inflation – The cost and benefits of inflation-policies to reduce inflation. Inflation-unemployment trade-off. The Phillips curve and the orthodox Keynesian economics, Expectations augmented Phillips curve analysis. Algebraic derivation of the AS curve from the Phillips curve to be done - unemployment, sacrifice ratio and the Okun’s Law. Natural rate of unemployment.

Module IV

Economic Policy - Policy analysis when asset stocks adjust – The theory of economic Policy – Macro economic theories and Policies.

Module V

Trade cycle. Phases of trade cycle Classical, Keynesian, Hicks & Samuelson. Exogenous and Endogenous Growth Theories. Endogenous growth and endogenous technological progress. Relationship between exponential growth and logs. Schumpeterian growth: the Aghion-Howitt model of Creative destruction and competition and business cycle fluctuations. Great Divergence.

Reference

1. Branson, W A (2000),“Macro Economic Theory and Policy”, 3rd Edn, Harper and row, New York
2. Dornbusch R and F Stanley (2000), Macroeconomics, McGraw Hill, New York.
3. Levacic, R and A.Rehman ,Macro Economics, ELBS and Macmillan , 2000.
4. Richard T Froyen (7th Edition), Macroeconomics: Theories and Policy, Pearson, Education, New Delhi. 2003.
5. G.Mankiw, Principles of Macroeconomics, Thomson Wouthwestern, 2007.
6. Carlin, Wendy and Soskice, David, Macroeconomics: Institutions, Instability and the Financial System. OUP (Growth, Fluctuations and Innovations Chapter 8),2015.
7. Das, Mausami, Nobel laureate Paul Romer’s contribution to endogenous growth theory, 2018.<https://www.ideasforindia.in/topics/governance/nobel-laureate-paul-romer-s-contribution-toendogenous-growth-theory.html>.
8. Dornbusch, Fischer and Startz, Macroeconomics. Twelfth Edition (Chapters titled “Aggregate Supply and the Phillips Curve” & “Unemployment”), 2018.
9. Gordon, Robert J,Friedman and Phelps on the Phillips curve viewed from a half century’s perspective. Review of Keynesian Economics, Vol. 6 No. 4, Winter 2018, pp. 425– 436, 2018.

ECO 3203 Econometrics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
II	ECO 3203	Econometrics	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K4	Analyse Econometric models and interpret the results.
CO2	K3	Identify the consequences of the violation of CLRM Assumptions and its remedies
CO3	K2	Understand the application of dummy variables and instrumental variables.
CO4	K2	Discuss simultaneous equation models and the method of 2SLS and 3SLS method of estimation

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2							
CO2						1	2	
CO3		2	1			1		
CO4		3	1					

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1	3		
CO2			1	
CO3	1	2	2	
CO4	1	1		

ECO 2203 Econometrics

Module I

Econometric Modeling-Traditional Econometric Methodology-Alternative Econometric Methodology

Module II

Single Equation Regression Models-Two-Variable Regression Models-Estimation and Inference-Multivariable Analysis-Multivariate Normal Distribution-Multiple Regression Analysis-problems of Estimation: Multicollinearity-Autocorrelation and Heteroscedasticity.

Module III

Single equation problem –Dummy variables – Errors in variables – Instrument variables - Regression with Lagged Dependent Variables-Distributed Lag Models.

Module IV

Regression using limited Dependent and Qualitative variables: Linear Probability Model (LPM), Logit and Probit models – Multinomial logit – Tobit model

Module V

Simultaneous Equation Models-Problems of Identification-Methods of Two stage and Three Stage Least Squares.

References

1. Gujariti, Damodar. N., Porter, Dawn. C. and Gunasekar, Sangeetha., 2012, Basic Econometrics, McGraw Hill Education.
2. Wooldridge, Jeffrey M., 2013, Introductory Econometrics: A Modern Approach, Fifth Edition, Cengage Learning.
3. Studenmund, A. H., 2017, A practical guide to Using Econometrics, Seventh Edition, Pearson education
4. Dougherty Christopher, 1995, Introduction to Econometrics, Oxford University Press, London.
5. Walter Enders, 2004. Applied Econometrics, John Wiley & Sons.
6. William.H.Greene, 2003, Econometric Analysis, Pearson.
7. Koutsoyiannis.A, 2004, Theory of Econometrics, Palgrave.
8. Madalla, G.S. 1994, Econometrics, McGraw Hills

ECO 3204 Development Economics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
II	ECO 3204	Development Economics	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K5	Analyse and critique various theories of economic growth and development
CO2	K4	Evaluate the role of technical progress, human capital, and institutional factors in economic development
CO3	K4	Assess the complexities of development and underdevelopment

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	-	3	3	2	-	2	3
CO2	1	3	2	3	2	2	2	3
CO3	1	-	2	3	3	3	2	2

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	3	2	3	2
CO2	2	3	3	2
CO3	3	3	3	2

ECO 3204 Development Economics

Module I

Economic Growth – Economic Growth and development – Factors affecting Economic growth: capital labour and technology; growth models – Harrod and Domar, instability of equilibrium: Neo classical growth models – Solow and Meade, Mrs. Joan Robinson's growth model; Cambridge criticism of Neo classical analysis of growth, The Capital Controversy.

Module II

Technical Progress – Embodied technical progress; Hicks, Harrod: learning by doing, Production function approach to the economic growth; Total factor productivity and growth accounting; Growth models of Kaldor and Passinetti, Endogenous growth; Intellectual Capital; role of learning, education and research.

Module III

Development and under development; perpetuation of under development; Poverty- Absolute and Relative; Measuring development and development gap – Per capita income, inequality of income, Human development index and other indices of development and quality of life food security, education, health and nutrition; Human resources development, Population as limits to growth and as ultimate source. Population, Poverty and environment; Economic development and institutions-markets and market failure, state and state failure, issues of good governance.

Module IV

Theories of Development – Classical theory of development – contributions of Adam Smith, Ricardo, Malthus and James Mill; Karl Marx and development of Capitalistic economy –theory of social change, surplus value and profit; crisis in capitalism – Schumpeter and capitalistic development; innovation – role of credit, profit and degeneration of capitalism; structural analysis of development; Imperfect market paradigm. Partial theories of growth and Development – vicious circle of poverty, circular causation, unlimited supply of labour, big push, balanced growth, critical minimum effort thesis, low income equilibrium trap, Dualism –Technical, behavioral and Social; Ranis and Fei model. Dixit and Margin model, Kelly et al model; Dependency theory of Development, Structural view of development.

Module V

Sectoral aspects of development; Efficiency and Productivity in agriculture, New technology and Sustainable agriculture; Globalisation and agriculture growth; rationale and pattern of organized organization in developing countries; Choice of technology, appropriate technology; Terms of trade between agriculture and industry; Infrastructure and its importance; Factor markets and their working in developing countries.

Reference:

1. Adelman, I, Theories of Growth and Development, Stanford University Press, Stanford, 1961.
2. Debraj Ray, Economics of Development, Oxford University Press, New Delhi 2001.
3. Thirlwall. A.P., Growth and Development with Special Reference to Development Economics., Palgrave, 2003.
4. Michael. P. Todaro & Stephen C. Smith. Economic Development, 8th Edition, 2004.
5. David de La, Croix & Phillippe Michael, A theory of Economy Growth: Dynamics and Policy in Overlapping Generations. Cambridge University Press, 2002.
6. Barro & Xavier Sala –I Martin, Economic Growth, Prentice Hall, 2004.

ECO 3205 International Economics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
II	ECO 3205	International Economics	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	To understand the theoretical basis of the structure of real trade dealing with factors affecting real trade within the classical, neoclassical, and modern framework of analysis.
CO2	K4	To analyze the principles of commercial policy and its effect on income distribution and welfare.
CO3	K2	To outline the meaning of trade creation, trade diversion, and dynamic benefits of economic integration.
CO4	K5	To evaluate the relationship between international trade and economic development and the role of international financial institutions with special reference to developing countries.

CO-PO Matrix								
Course outcomes	Program outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	2	-	1	3	1
CO2	3	2	2	1	2	-	3	2
CO3	3	2	2	1	1	-	3	1
CO4	3	-	2	2	2	1	3	2

CO-PSO Matrix				
Course outcomes	Program specific outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	3	2	2	1
CO2	3	2	1	2
CO3	3	2	1	1
CO4	3	-	2	2

ECO 3205 International Economics

Module I

Pure Theory of International Trade – Mercantilist view on Trade-Theories of Absolute Advantage and comparative Advantage – Opportunity cost approach – specific factor model – specific factors and income distribution – H.O.Model –Factor price 12rganized12iz theorem_Rybczynski Theorem – Empirical Testing of H.O Theorem –Leontief Paradox – Factor intensity reversal – Theory of immiserising growth – Demand and Supply of Capital - offer curves – Terms of Trade. Balance of payments-disequilibrium in balance of payments –current account deficit - and corrective measures

Module II

Monopolistic Competition and international trade. Technology differences and trade. Technology differences and trade – trade based on product differentiation – Intra industry trade –limitation gap and product cycle models – Empirical test of intra industry trade.

Module III

The case of free trade and protection – Trade restriction –Protective methods-Tariff and non-trade barriers – effects of tariff –partial Equilibrium Analysis – Effective Rate of Protection – General Equilibrium Analysis – Small Country and large country cases – Optimum Tariff – Tariff and real reward for factors – Stolper Samuelson Theorem – Metzler paradox, Lerner symmetry theorem.

Module IV

Forms of economic integration –FTA. Common market – Economic union, trade creating and trade diverting Customs Unions – Customs union and conditions for increasing welfare – higher forms of economic integration – Economic blocks in practice and International debt.

Module V

Trade as an engine of growth – Export promotion Vs import substitution strategies – problems facing developing economies – Developing Country borrowing and debt problems – MNCs and direct investment-international capital movements. Globalization – BRICS, ASEAN, EU, GATT agreement, WTO, Asia Pacific Economic Cooperation and World Trade System, UNCTAD, Distortions in Trade – International Labour migration – International Banking and global Capitalmarkets – Financial crisis in emerging economies – Lessons from developing countries. Foreign Direct Investment (FDI) – international financial institutions

References

1. Paul R Krugman & Maurice Obstfeld, International Economics, Theory and Practice- Pearson Education, Singapore2003.
2. Bo Sodersten and Geoffrey Reed, International Economics, Macmillan, London 2003 3.Dominic Salvatore, International Economics, John Wilkey& Sons, New York, 2003
4. Francis Cherunilam, International Economics, TMH, 2000.
5. Sugata Margit, International Trade and Economic Development, Oxford UniversityPress,2008.

ECO 3301 Environmental Economics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
III	ECO 3301	Environmental Economics	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2-Understanding	Demonstrate a comprehensive understanding of the fundamental principles and concepts of environmental economics
CO2	K2-Understanding	Analyse welfare economics in the context of environmental issues
CO3	K6 - Creating	Application of various techniques of environmental valuation
CO4	K5 - Evaluating	Evaluate international environmental frameworks and agreements and understand India's role in climate change action and its participation in international efforts to combat environmental degradation
CO5	K5 - Evaluating	Understanding environmental pollution problems and policies in India and Kerala

CO-PO Matrix

Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	-	1	1	1	1	3	1
CO2	3	3	3	2	3	2	3	2
CO3	3	3	2	1	3	3	1	2
CO4	2	-	3	1	3	1	3	3
CO5	3	-	3	1	3	1	3	3

CO-PSO Matrix

Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1	-	1	1
CO2	3	1	2	1
CO3	3	3	2	-
CO4	3	-	3	1
CO5	3	-	3	2

ECO 3301 Environmental Economics

Module I: Fundamentals of Environmental Economics

Economy and the Environment – Environmental and Ecological Economics – Core Principles – Environmental Kuznets Hypothesis, Utilitarianism - Brundtland Report - Sustainable Development – Strong and Weak Sustainability - inter-generational and intra-generational equity, Sustainability from an Economist’s Perspective - Ethics and the Environment - Limits to Growth– Material Balance Model.

Module II: Welfare Economics and Environment

Welfare Economics - Efficiency and Optimality - The Efficient and Optimal Use of Environmental Resources - Renewable Resource Economics - Optimal Resource Extraction: Non-Renewable and Renewable Resources - Economics of Exhaustible Resources. Common Property Resources – Tragedy of the Commons. Market Failure, Externalities and Property Rights Polluter-Pay- Principle - Pigovian Tax – Subsidies – The Coase Theorem – Pareto Optimality Criterion.

Module III: Environmental Valuation

The Economic Concept of Value - Total Economic value - Use and Non-Use Values - Techniques of Valuation: Market Valuation - Cost of Illness Method - Replacement Cost Methods - Revealed Preference Methods - Stated Preference Methods - Life cycle analysis – Cost-benefit Analysis. Pollution control - Targets and Instruments: Command and Control Regulation, Market-based Instruments, Information and Voluntary Approaches, Technological Solutions, Restorative Actions – Irreversibility, Risk, and Uncertainty. Eco-labelling.

Module IV: Environmental Policy Frameworks

International Environmental Problems – Intergovernmental Panel for Climate Change (IPCC) - United Nations Framework Convention on Climate Change (UNFCCC) – Kyoto Protocol – Paris Agreement – Conference of Parties (COP) – Sustainable Development Goals (SDGs) – United Nations Environment Programme – Green Climate Fund - India’s Role in Climate Change Action.

Module V: Environmental Pollution and Its Mitigation

Pollution Scenario in India and Kerala – Air, Water, Sound, Land, Ocean – Marine resources, Outer Space Pollution, Radiation, Indoor Pollution, Urbanisation and Pollution, Effects of Pollution on Environment and Human Health. A Survey of Pollution Control Policies in India and Kerala. Pollution, Shadow Economy and Corruption. Waste Management - Central Pollution Control Board’s and Kerala State Pollution Control Board’s Guidelines for Environmentally Sound Management of Solid Waste, Plastic Waste and Electronic-Waste.

References

1. Harris, Jonathan and Roach, Brian (2022), *Environmental and Natural Resource Economics*, Routledge, 5th edition.
2. Kolstad, C.D. (2007), *Environmental Economics*, New Delhi.
3. Karpagam (2008), *Environmental Economics*, Sterling Publishers. New Delhi
4. Katar Singh and Shishodia (2007), *Environmental Economics – Theory and Application*, Sage Publication, New Delhi.
5. Nick Hanley et al (2007), *Environmental Economics: Theory and Practice*, Palgrave Macmillan.
6. Perman, Roger, Ma, Yue, McGilvray James and Common, Michael (2003), *Natural Resource and Environmental Economics*, 3rd Edition, Pearson.
7. U. Sankar (2000), *Environmental Economics*, Oxford University Press, New Delhi.

ECO 3302 Public Economics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
III	ECO 3302	Public Economics	4	C	50	50

Course Outcome	Cognitive Level	Course Outcomes
CO1	K2	To examine the foundations and rationales of public economics with the emphasis on the theory on government intervention
CO2	K3	To identify the different aspects of taxation, public expenditure and public debt
CO3	K5	To evaluate the trends in Indian public finance.
CO4	K3	To analyze India's tax system, structure and reforms.

CO-PO Matrix

Course outcomes	Program outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	-	2	2	3	1	3	2
CO2	3	-	3	3	2	-	3	2
CO3	3	-	2	3	3	-	3	1
CO4	3	-	3	2	2	-	3	1

CO-PSO Matrix

Course outcomes	Program specific outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	3	-	2	2
CO2	3	-	3	2
CO3	3	-	3	1
CO4	3	-	2	1

ECO 3302 Public Economics

Module I: Role of Government in an organized society, allocation, distribution and stabilization functions; changing role of government. Public Goods, Private goods and merit goods; market failure – imperfections, decreasing costs, externalities, public goods; uncertainty and non-existence of future markets; Informational asymmetry – Theory of second best.

Module II: Public choice. Private and public mechanism for allocating resources; Problems for allocating resources; problems for preference revelation and aggregation of preferences; voting system. Arrow's impossibility theorem; Economic theory of democracy.

Module III: Public Expenditure and Taxation – Wagner's law, Wiseman – Peacock hypothesis; pure theory of public expenditure; structure and growth of public expenditure, Criteria for public investment; Social cost-benefit analysis – project evaluation, Estimation of costs. Theory of incidence; Alternative concepts of incidence and effects of taxation – allocative and equity aspects of individual taxes; Benefit and ability to pay approaches, taxable capacity; Theory of optimal taxation; Excess burden of taxes. Trade between equity and efficiency, measurement of deadweight losses, the problem of double taxation.

Module IV: Classical view of public debt. Compensatory aspect of debt policy; burden of public debt, sources of public debt, debt through created money; public borrowings and price level; crowding out of private investment and activity; debt management and repayment.

Module V: Fiscal policy. Objectives and functions, interdependence between fiscal and monetary policy; Fiscal policy and stabilization. Budget, functions, components, formulation, zero based budgeting, Balanced budget multiplier. Fiscal federalism, Sources and sharing of revenue. Theory of grants, Resource transfer from Union to states and to local bodies. Finance commissions, functions, objectives and role. Local finance. Decentralisation of local self- governments, functions and problems. Trends in Indian public finance, Fiscal reforms. India's tax system - structure and reforms, form of Goods and Services Tax (GST) adopted in India, criticisms and limitations of GST.

Reference

1. Dietmar Wellisch, "Theory of Public Finance in a Federal State", Cambridge University Press, 2000.
2. Stiglitz, Joseph E. 2000, "Economics of the Public Sector", W.W. Norton & Company, New York
3. Suddipto Mundle, Public Finance, 2000.
4. R.A Musgrave & P.B.V Musgrave, Public Finance in theory and Practice, TMH, Tokyo, 2002
5. Sury.M.M, Finance Commissions of India, New Century, 2005.
6. S.A. Alam, "GST and the States: Sharing Tax Administrations", Economic and Political Weekly, Vol. 51, No. 31 (July 30, 2016).
7. M. Govinda Rao and Sudhanshu Kumar, "Envisioning Tax Policy for Accelerated Development in India", Working Paper No. 190, National Institute of Public Finance and Policy (NIPFP), 2017.
8. Das Surajit, "Some concerns regarding Goods and Service Tax", Economic and Political Weekly, Vol. 52(9), 04 March, 2017.
9. V. Bhaskar, "Challenges Before the Fifteenth Finance Commission", Economic and Political Weekly, Vol. LIII, No, 10, March 10, 2018.
10. G. R. Reddy, "Upholding Fiscal Federalism - Terms of Reference of the Fifteenth Finance Commission", Vol. LIII, No, 10, March 10, 2018.
11. GOI (2019), "Report for the year 2020-21 - XV Fifteenth Finance Commission", 2019.
12. GOI (2019). Goods and Services Tax – Concept and Status - As On 01st June, 2019, Central Board of Indirect Taxes and Customs (CBIC), Dept. of Revenue, Ministry of Finance Govt. of India, 2019.

ECO 3303 Research Methodology

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
III	ECO 3303	Research Methodology	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	Explain the basic concepts of the methodology used for social science research
CO2	K5	Compare the data collection methods used in economic research
CO3	K4	Distinguish between the scaling tools used for research purposes
CO4	K2	Explain the importance and requirements needed for a quality research report

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1			1		1		2	
CO2		1				2		
CO3		1				3		
CO4			1			2		

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	2		2	
CO2	3		2	
CO3	1	1		
CO4	1	1	1	3

ECO 3303 Research Methodology

Module I

Meaning of Research- various types of research-process of research- statement of objectives- research in Social science. Selection and formulation of research problem and how social scienceresearch is different from natural sciences-Research design.

Module II

Approaches to research problems - inductive and deductive methods- historical and dialectical methods- Scientific method. Hypothesis formulation and testing- how to formulae hypotheses-level of significance- stages of testing of hypotheses-type I error and type II error.

Module III

Data collection, different sources of data- primary and secondary data – advantages and disadvantages of primary and secondary data-published and unpublished data-Time series andcross section data – Sample survey – different sampling methods- random, stratified random, cluster sampling , multistage sampling Methods - interview methods-questionnaire methods – Construction of questionnaire. Data Analysis – tables, figures, trend lines, pie diagrams and bardigrams.

Module IV

Scaling technique-Problems and Techniques -Paired Comparison. Rank Order-Constant Sum-Q-Sort Scaling- Continuous Rating Scales- Itemized Rating Scale- levels of measurements: nominal, ordinal, interval, and ratio

Module V

Research report writing-characteristics of good research report-scientific methods of report writing – writing a good research proposal - writing of a good research article- scientific way ofquoting references

References

1. William J Goode & Paul K Hatt, Methods in Social Research, McGraw Hill Book Co.1985.
2. Pauline V. Young, Scientif Social Surveys and Research, Printice Hall India, New Delhi,1984.
3. C.R. Kothari, Research Methodology Methods and Techniques, Wiley Eastern Ltd.,NewDelhi 2000.
4. William .M.K.Traochim, Research Methods, 2nd Edn., Biztantra, 2003.
5. Ellen.R.Griden, Evaluating Research Articles, SAGE, 2001.
6. Bridget Somekth & Cathy Liwin (Ed) Research Methods in Social Sciences, Vistar, 2005.
7. John Adams, Research Methods for Graduate Business & Social Science Students, Response, 2007.

ECO 3304 Financial Economics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
III	ECO 3304	Financial Economics	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K1	Know the basics of capital markets, investments and time value of money and remember these aspects for enabling prudent investment decisions.
CO2	K2	Understand the theory behind uncertainty and risk-return trade-off and also the index models, CAPM, APT and allied concepts.
CO3	K3	Analysing the diverse kinds of securities, their features, risk and return, and the basics of hedging and portfolio theory; including the basics of valuation.
CO4	K4	Evaluate various securities as well as portfolios of securities and make prudent investment decisions through scientific use of investment theories and models.

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1				3	1	2		
CO2			1	2		3		
CO3		1		2		3		
CO4		3				2	1	

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1		2	
CO2		1		2
CO3		2	1	
CO4		3	2	1

ECO 3304 Financial Economics

1. Introduction to Financial Markets

Capital markets, consumption and investments with and without capital markets, market places and transaction costs and the breakdown of separation theorem; the agency problem; maximization of shareholder's wealth. Investment objectives, characteristics & policies—Risk return relationship Measures of risk & return—Time value of money—determinants of required return—Financial market instruments—Money and Capital market instruments—Mutual funds.

2. Theory of Uncertainty

Axioms of choice under uncertainty, utility functions; expected utility theorem; certainty equivalence, measures of risk-absolute and relative risk aversions, stochastic dominance-first order, second order and third order, measures of investment risk-variance of return, semi-variance of return, shortfall probabilities.

3. Fixed Income Securities

Bond prices, spot prices, discount factors, and arbitrage, forward rates and yield-to-maturity, price sensitivity, Hedging. Portfolio creation using bonds.

4. Valuation of Equities

Estimation of income—Economy, industry company analysis—valuation models—Divident discount models. P/E Ratio, Capital Asset Pricing Model. Markowitz Model, Sharp Index Model, Arbitrage Pricing Theory, technical Analysis- Charting- Dow theory and wave principles – patterns & indicators – Moving averages – Trends – Efficient market Hypothesis & Anomalies.

5. Mean Variance Portfolio Theory and Index Models, CAPM and APT

Measuring portfolio return and risks, effect of diversification, minimum variance portfolio, perfectly correlated assets, minimum variance opportunity set, optimal portfolio choice, mean variance frontier of risky and risk-free asset, portfolio weights. Models of asset returns, multi index models, single index model, systematic and specific risk, equilibrium models- capital asset pricing model, capital market line, security market line, estimation of beta, arbitrage pricing theory.

References

1. Francis, Jack Clark, Management of Investments, McGraw Hill International Edition
2. Sharpe, William F etc. Investments, New Delhi, Prentice Hall of India
3. Fisher, Donald E and Jordan, Ronald J Security Analysis and Portfolio Management, New Delhi, Prentice Hall of India.
4. Prasanna Chandra, Investment Analysis, TMH, New Delhi 2007.
5. Copeland T E and J.F. Weston, Financial Theory and Corporate Policy, AddisonWesley, 1992.
6. Brealey, R and S.Myres, Principles of Corporate Finance, Fifth Edn., New York, McGraw Hill 1997.

ECO 3306 Indian Economy

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
III	ECO 3306	Indian Economy	4	C	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2 –Understanding	Analyse the growth and structural changes in the Indian economy since independence
CO2	K2- Understanding	Discuss poverty, unemployment, and agricultural performance in India to understand changing trends, characteristics, and policy interventions
CO3	K5 - Evaluating	Assess the impact of economic reforms on various sectors of the Indian economy
CO4	K5 - Evaluating	Critically analyse and interpret the latest economic surveys, reviews, and annual reports from institutions such as the RBI and NITI Aayog.

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	3	2	3	1	2	1
CO2	3	3	3	3	3	2	3	2
CO3	3	2	3	3	3	2	3	2
CO4	3	3	3	2	3	3	3	3

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1	2	-	2
CO2	2	3	2	2
CO3	2	3	-	2
CO4	3	3	1	3

ECO 3306 Indian Economy

Module I: Growth and structural Change in the Indian Economy- Changes during the post independence period- Analysis of the pattern, determinants and outcomes- The State as an autonomous actor-Role of Government- The changing relative shares of the three sectors: Falling agriculture, Stagnancy in industry and Growing Services – Need for correcting the imbalance in the growth rates of the three sectors – Latest developments.

Module II: Poverty and unemployment – concept of poverty – Sen, Dandekar and Rath, Bardhan- changing trends and characteristics of poverty in India. Unemployment NSS estimates of unemployment –Changing trends and magnitude of unemployment-An assessment of poverty alleviation and employment generation programmes – Latest developments in respect of MGNREGS, SHG movement, microfinance, PMJDY and allied schemes.

Module III: Contribution of agriculture to economic development interrelationship between agriculture and industry-Agricultural performance of India since independence-growth, changing cropping pattern. Food problem and policy Review of agriculture policy prior to 1990. New agriculture policy –Issues in subsidy. Agricultural Bills of 2020 – Latest developments relating to agricultural production and food security in India.

Module IV: Industrial performance in India since independence-Industrial policy prior to 1990. New Industrial Policy Impact of New Industrial Policy. Informal labour markets – Need for enhancing the share of industry in view of the industrial stagnancy in India – Make in India – Review of the latest developments.

Module V: Economic Reforms- The Economic crisis of 1980s-An over view of Macro Economic Management since 1991 – Major changes in the banking sector – Consolidation process – Role of non-banking financial companies – Emergence of Small Finance Banks (SFBs) and Payment Banks – Significance of financial inclusion – Monetary policy under changing financial and macroeconomic environment, improving monetary Policy Transmission. Trade policies and problems of India – Trade Reforms since 1991 – New Trade policy of India – WTO – Recent changes in the composition of Indian trade and Balance of Payments – Latest developments – Review of Kerala economy and Kerala’s economic problems using the latest *Economic Review*, Govt. of Kerala.

References

1. Kunal Sen and Rejendra R.Vaidya, The process of Financial Liberalisation in India, Oxford University Press, 1997
2. Vinay Joshi and I.M.D. Little, Indian Economic Reforms, 1991-2001, Oxford University Press 1997
3. Veeramani.A, Indian Economic Growth, Oxford University Press, 2000
4. Panigrahi.A, Indian Economic Growth, Columbia University, 2004.
5. Pushpundagan & N.Santha, Dynamics of Competition: India's Manufacturing Sector, Oxford University Press. New Delhi 2009.
6. Prakash.B.A, Indian Economy since 1991, Pearson Education, New Delhi. 2009.
7. Viral V. Acharya. Quest for Restoring Financial Stability in India, Sage, New Delhi 2020.
8. Nilanjan Banik, The Indian Economy, A Macro Economic Perspective, Sage, New Delhi. 2015
9. Swapnil Soni, M.H.Balasubrahmya, Growth and Structural Change in the Indian Economy, *Economic and political Weekly*, Vol.LV No.26 &27. 2020
10. The NCAER 2019–20, Review of the India Economy, New Delhi 2020
11. Indian Development Reports, Oxford University Press, Various Issues.
12. Govt. of India. *Economic Survey*. Ministry of Finance. Dept. of Economic Affairs. (Latest). (www.indiabudget.gov.in/economicsurvey).
13. Govt. of Kerala. *Economic Review*. Kerala State Planning Board. (Latest).(www.spb.kerala.gov.in)
14. Reserve Bank of India. Annual Report and other Banking Publications (Latest) (www.rbi.org.in).
15. Niti Aayog. Annual Report and other Publications (Latest). (www.niti.gov.in/annual-reports).

ELECTIVE PAPERS

ECO Ele-1 Project Planning and Appraisal

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele 1	Project Planning and Appraisal	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	To understand the basic concepts and terms related to project analysis.
CO2	K3	To identify project appraisal and different criteria
CO3	K3	To interview the different types, measures and analysis of risk
CO4	K3	To develop conceptual foundations of Cost Benefit Accounting

CO-PO Matrix								
Course outcomes	Program outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	1	3	3	1	3	2	3
CO2	3	2	2	3	-	3	1	2
CO3	3	2	2	2	-	3	-	2
CO4	3	2	3	2	1	3	1	3

CO-PSO Matrix				
Course outcomes	Program specific outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	3	1	3	3
CO2	3	2	3	2
CO3	3	2	2	2
CO4	3	2	2	3

ECO Ele- 1 Project Planning and Appraisal

Module I

Concepts, Scope and Uses of Project Evaluation- Project Evaluation & Project Cycles. Resources Allocation Frame work. Generation and Screening of project ideas

Module II

Analysis – Market and Demand analysis, Technical analysis – Financial analysis. Project Cash flows, Cost of Capital, Appraisal Criteria.

Module III

Analysis of risk: Types, Measures, Sensitivity Analysis, Scenario analysis, Monte-Carlo Simulation, Decision Tree analysis, selection of a project, Risk Analysis in practice. Empirical Testing

Module IV

Elements of Cost-Benefits Accounting-Classes of Project Costs and Benefits-Indicators of Cost Benefit Comparison-Traditional Cost-Benefit Analysis. Valuation of Unmarketable Item-Effects of Induced Price Changes.

Module V

The New Methodologies-Value-Added Method-Uncertainty: Sensitivity and Risk Analysis-An Integrative Framework of Project Evaluation.

Reference

1. Sang Mend-Rang, 1999, Project Evaluation: Techniques and Practices for Developing Countries, Avebury, and Aldershot.
2. Prasanna Chandra, Projects Planning Analysis Implementation & Review, TMH, New Delhi 2007.
3. Doug de Cario, Extreme Project Management, Wiley, 2007
4. Gido & Clemens, Successful Project Management, Thompson, 2003.
5. Anita Rosen, Effective IT Project Management, Prentice Hall, New Delhi, 2008.

ECO Ele – 2 Kerala Economy

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 2	Kerala Economy	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	Discuss the developmental trajectory of the Kerala economy and critically evaluate the efficacy of the Kerala Model
CO2	K5	Examine demographic transitions in Kerala since 1956, urbanization issues, and evaluate the impact of international migration
CO3	K4	Compare the agricultural and industrial sectors, including growth performance, productivity trends, and infrastructural issues

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	-	-	1	3	-	3	-
CO2	2	-	-	1	3	-	3	-
CO3	2	-	-	1	3	-	3	-

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1	1	-	3
CO2	1	1	-	3
CO3	1	2	-	3

ECO Ele – 2 Kerala Economy

Module I

Development Experiences of Kerala economy. Growth and structural change, Kerala Model and other hypothesis. Economic reforms and development since 1991. Limits to Growth.

Module II

Demographic transition in Kerala since 1956. Urbanisation Issues. International Migration and its impact.

Module III

Agriculture and Industry. Agriculture growth performance, land use pattern, cropping pattern, Productivity trends. Current problems. Structure of Industry, Industrial backwardness. Issues in Infrastructure and its development

Module IV

Unemployment and Poverty. Nature and magnitude – Rural and urban. Educated and female unemployment. Nature and magnitude of Poverty – Trends in Poverty during the post liberalization period. Review of Public distribution system.

Module V

State finance. Structure revenue and expenditure – fiscal crisis – causes and consequences. Growth of local self-governments – Peoples Planning.

Reference

1. Centre for development studies, Poverty Development and Unemployment Policy, Orient Longman, Bombay, 1977.
2. B.A.Prakash, 50 years of Kerala's Development, Performance and Problems, Department of Economics, University of Kerala, 2006.
3. D.Rajesanan & Gerald de Grout, Kerala Economy – Trajectories, Challenges and Implications, Directorate of Publications and Public Relations, CUSAT, 2005.
4. B.A.Prakash, Kerala's Economic Development: Performance and Problems in the post liberalization period, SAGE, 2004.
5. B.A.Prakash, Kerala's Development: Issues in the New Millennium, Serial Publications, 2008.
6. M.Meerabai, Kerala Economy: Slumber to Performance, Serials, 2009.
7. K. Rajan, Kerala Economy, Friends during post liberalization period, Serial, 2009.
8. B.A.Prakash and Jerry Alwin, Kerala's Economic Development, Emerging Issues, Sage, New Delhi 2018.
9. Working papers relating to Kerala Economy from Centre for Development Studies, Trivandrum

ECO Ele - 3 Industrial Economics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 3	Industrial Economics	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K3	To apply the basic concepts and terms of economic theory in studies related to industries
CO2	K2	To understand the concept of industrial location and regional development
CO3	K2	To understand the concept of industrial labor and its structure
CO4	K4	To analyze Indian industrial growth and the role of industrial finance

CO-PO Matrix								
Course outcomes	Program outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	-	3	3	2	-	3	2
CO2	3	-	2	2	2	-	3	1
CO3	3	-	2	3	3	-	3	2
CO4	3	-	3	2	2	1	3	2

CO-PSO Matrix				
Course outcomes	Program specific outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	3	-	3	2
CO2	3	-	2	1
CO3	3	-	3	2
CO4	3	-	2	2

ECO Ele – 3 Industrial Economics

Module I:

Nature and scope – Plant, Industrial structure, Market, Market structure, market power, Market conduct, Market performance – Concept and organization of a firm – Ownership, control and objectives – Pricing decisions – Investment decisions – Project appraisal – risk and uncertainty – OECD and UNIDO approaches to investment decisions.

Module II

Location and Regional Development. Industrial location – determinants - Theories of industrial location – Weber and sergeant Florence – Factors affecting location – Regional growth – regional imbalances.

Module III

Industrial finance. Mode of Finance – owned, external and other components funds – Institutional finance – IDBI, IFCI, SFCS, SIDC, Commercial Banks, Share Market, Insurance companies, pension funds, non-banking source and FDI – role of foreign capital for direct and portfolio investment

Module IV

Industrial Labour. Structure of industrial labour – Employment dimensions of Indian industry-Industrial legislation, industrial relations, exit policy and social security – wages and problems of bonus – Labour market reforms – problems – policies and reforms in India.

Module V

Indian Industrial Growth and Pattern. Classification of Industries – Industrial policy in India-Role of public sector – Public sector reforms - Development of small scale and cottage industries.

Reference

1. Ahulwalia.I.J, Industrial Growth in India OUP, New Delhi 1985.
2. Barthwal.R, Industrial Economics, Wiley Easter Ltd, New Delhi 1985.
3. Government of India, Economic Survey for various years.
4. Krishna.K.L. and Uma Kapila, Readings in Indian Agriculture and Industry, Academic Foundations, 2009.
5. Rajasen.D, & Gerard de Groot Eds, Industrial Economy of Kerala: Nodes and Linkages, Directorate of Publications and Public Relations, CUSAT, 2006.
6. Deepak Nayyar, Industrial Growth and Stagnation, Oxford University Press, 2004,
7. Deepak Nayyar, Trade and Industrialization, Oxford University Press, 2004.
8. Dileep Mukherjee, Indian Industry, Oxford University Press, 2000.

ECO Ele – 4 Advanced Econometrics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 4	Advanced Econometrics	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K3	Utilise the basis of time series models in forecasting.
CO2	K4	Analyse the advanced time series econometric models such as VAR, Vector Error Correction model, ARCH and GARCH.
CO3	K4	Analyse regression using panel data.

CO-PO Matrix

Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1		3	2					
CO2		3		1				1
CO3		3		1				2

CO-PSO Matrix

Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1	3		
CO2	2	3		
CO3	1	2		

Eco Ele – 4 Advanced Econometrics

Module 1

Dummy variable technique – Use of dummy variables, regression with dummy variables. Logit, probit and Tobit models.

Module II

Univariate Time-series Models Introduction to stationary processes, autocovariance functions, autocorrelation and partial autocorrelation, autoregressive and moving average models, conditions for stationary and invertible process, Box-Jenkins approach, forecasting.

Module III

Multivariate and Multiple Equation Models Motivation for multivariate model, Autoregressive Distributive Lag Models, Simultaneity and motivation for Vector autoregressive (VAR) models, testing for order of VAR models, Block significance and tests for causality including Granger causality, Forecasting, Impulse response function, Variance decomposition.

Module IV

Modelling Non-Stationary Time-series processes Deterministic and stochastic trends, Integrated process and random walk, random walk with drift, Unit root and tests for unit root- Dickey-Fuller and Augmented Dickey Fuller tests, Phillips-Perron Test and KPSS test, Unit Roots and Structural Breaks, Unit roots in regression residuals and spurious regression, Cointegration and its testing using Engel-Granger method, Lead-lag and Long Run relationships, Characteristic Root, Rank and Cointegration, Testing for and estimating cointegrating systems using the Johansen method based on VARs, Vector Error Correction Models.

Module V

Modelling volatility clustering Volatility-Meaning and measurement, Volatility clustering, Econometric models of volatility, Conditional heteroscedasticity in ARMA models, Estimation and Testing for ARCH and GARCH models for volatility clustering in economic time-series, multivariate regression models and conditional heteroscedasticity, Asymmetric GARCH models-GJR model and EGARCH.

References

1. Baltagi, Badi. *Econometric Analysis of Panel Data*, 5th Edition, Wiley, 2013.
2. Brooks, C., *Introductory Econometrics for Finance*, 3rd Edition, Cambridge University Press, 2014.
3. K.L Krishna, *Econometric Applications in India*, OUP, New Delhi 1999.
4. Walter Enders, *Applied Econometric Time Series*, 2 nd Edn., Wiley, 2008.
5. Hamilton, J. D., *Time Series Analysis*, Princeton University Press, 1994.
6. Pesaran, H.M. *Time Series and Panel Data Econometrics*, Oxford University Press, 2015
7. Kerry Patterson, *An Introduction to Applied Econometrics: A time series Approach*, Macmillan Press, London 2000.
8. Robert. S.Pindyck & Daniel Rubinfeld, *Econometric Models and Economic Forecasts*, MacGraw Hill, 1998.
9. K.L Krishna, *Econometric Applications in India*, OUP, New Delhi 1999.
10. Walter Enders, *Applied Econometric Time Series*, 2 nd Edn., Wiley, 2008.

ECO Ele – 5 Social Exclusion and Inclusive Policy

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 5	Social Exclusion and Inclusive Policy	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	Classify the dimensions of social exclusion prevailing in the society
CO2	K2	Explain the theories and concepts in social exclusion
CO3	K3	Develop social inclusion measures to combat with social exclusion

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1				2			1	
CO2		2			1			
CO3				3	3	1		2

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	2		3	
CO2	1		1	
CO3	3		2	2

ECO Ele – 5 Social Exclusion and Inclusive Policy

Module I: Social Exclusion Concept, Meaning, Scope; Different forms of exclusion: Economic, Political, social; Sociological foundations of social exclusion; Economics understanding of social exclusion; Structural context of exclusion; The nature and dynamics of exclusion: The forms and dynamics of market discrimination (in land, capital, employment, product, input, and consumer markets) and Non-market discrimination (in the provision of social services and in public institutions and political bodies).

Module II: Social Exclusion, Poverty and human development Marginalization and social exclusion; Relation between the concept of social exclusion and other concepts such as deviation, poverty, marginalization, inequality. Delimiting of the concept of social exclusion: Situations of exclusion: intervening factors. The concept of human development; Social exclusion and human development.

Module III: Social Stratification of Indian society: Social Differentiation – Social Stratification: Theories of social stratification; Functional and Conflict theories – Dimensions of Social Stratification; Class, Caste, Power and Gender. Varna and Jati - Definition, features and functions of Caste system; Changing trends in caste system. Caste and Class; Class in India: Agrarian and Non Agrarian classes, Emergence of middle class-

Module IV: Other dimensions of social exclusion: Gender and social exclusion, Tribes and social exclusion, Disability and social exclusion, other minorities and social exclusion; Exclusion associated with caste, ethnicity, religion, color, and other forms of group identity; the effects of such forms of discrimination on economic growth and governance; Social exclusion and health: Social determinant approach to health.

Module V: Combating social exclusion: Remedies against discrimination and deprivation; Strategies for combating social exclusion; The role social policy; Prevention of atrocities, Act, Forest Bill, Minority Rights Bill; ICTs and Exclusion.

Reference

- 1) B S Baviskar and George Mathew “Inclusion and exclusion in local governance fieldstudies from rural India, Sage Publication
- 2) Byrne, David “Social exclusion”, Routledge Publishers, 2005 Edition
- 3) Estivill, Jordi “Concepts and strategies for combating social exclusion: An overview” International Labour Organisation 2005
- 4) Haan, Arjan de, “ Reclaiming Social Policy : Globalization, Social Exclusion and New Poverty Reduction Strategies”, Palgrave Macmillan, August 2007
- 5) M.N. Srinivsa : “Indian Social Structure” Hindustan Public Corporation (India) , Delhi
- 6) Marmot, Michael and Wilkinson G Richard (2006) “Social determinants of health” Oxford University Press, Oxford New York.
- 7) Nussbaum, Martha C. (2000) Women and Human Development: The Capabilities Approach (Cambridge University Press, Cambridge).
- 8) Pierson, John. “Tackling social exclusion” Routledge, 2004
- 9) Sen, A. (1998), ‘Social Exclusion: A Critical Assessment of the Concept and Its Relevance’ Paper presented at the Asian Development Bank.
- 10) Sen, Amartya K “Social exclusion: concept, application, and scrutiny” Critical Quest, 2004.
- 11) Silver, H. and Wilkinson, F. (1995), ‘Policies to Combat Social Exclusion, A French-British Comparison’, ILS Discussion Papers No.83. Geneva: ILO.Thorat, Sukhadeo. Ed. B. R. Ambedkar perspectives on social exclusion and inclusive policies. --New Delhi:Oxford University Press, 2008`
- 12) Human Development Report of Kerala, Oxford University Press, 2008.

ECO Ele – 6 International Finance

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 6	International Finance.	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	To understand the International monetary system and recent developments
CO2	K4	To analyse the anatomy of Balance of Payments
CO3	K2	To understand foreign exchange market , it's functions, types of exchange rate and exchange rate determination
CO4	K2	To understand the derivatives market

CO-PO Matrix								
Course outcomes	Program outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	-	2	2	2	-	3	1
CO2	3	1	2	1	1	-	3	1
CO3	3	2	3	2	1	-	3	2
CO4	3	2	3	2	1	-	3	3

CO-PSO Matrix				
Course outcome	Program specific outcome			
	PSO1	PSO2	PSO3	PSO4
CO1	3	-	2	1
CO2	3	1	1	1
CO3	3	2	2	2
CO4	3	2	2	3

ECO Ele – 6 International Finance

Module I

International Monetary System: The gold standard - Bretton woods conference and afterwards: European monetary systems – Role and functions of IMF- Present International Monetary system – Present Exchange Rate arrangements, optimum currency areas – European Monetary Union – Euro.

Module II

Anatomy of Balance of payments – Functions of foreign Exchange Markets – Hedging, speculation, interest arbitrage, Exchange rate determination – Purchasing Power parity Theory- Fiscal and flexible Exchange rates – Exchange rate overshooting. BOP disequilibrium – Adjustment mechanism – Automatic mechanism – Price and income adjustments under fixed and flexible Exchange Rate system. Policy measures – devaluation – Revaluation – elasticity approach – J curve effect – Absorption approach – Monetary approach and devaluation.

Module III

Foreign Exchange Market, Meaning, Features, Participants, Rate of Exchange, Types of Exchange Rates, Spot Market, Forward Market, Market for Currency Features and options. Foreign Exchange Exposure Management: Meaning of Exposure – Types of Exposure – Hedging Operations.

Module IV

Exchange Rate determination. Purchasing power parity and floating exchange rate. Monetary Models of Exchange rate determination. Portfolio Balance Model. Fixed, flexible and managed exchange rates.

Module V

Currency derivatives: Futures, Options and Swaps. The growth of derivative markets, the pricing of futures, the pricing of currency options. Distinguishing characteristics of swap market from the forward and futures markets.

References

1. Paul R Krugman and Maurice Obstfeld, *International Economics Theory and Practice*, Pearson Education, Singapore. 2003
2. Bo Sodersten and Geoffrey Reed, *International Economics*, Macmillan, London 2003
3. Govt of India, Economic Survey for various years.
4. Keith Pilbeam, *International Finance*, Mac Millan, 4th Edn., 2000.
5. P.K.Jain, Josette Peyrard, Surendra S.Yadav, *International Financial Management*, MacMillan, 2007.
6. Thomas.A. Pugel, *International Economics*, TMH, 2004.

ECO Ele – 7 Financial Institutions and Markets

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 7	Financial Institutions and Markets	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	Understanding the concept of financial markets and the players in the market
CO2	K3	Applying the economics background of the students to gain better insights into the role played by the financial institutions in fostering economic development.
CO3	K4	Analysing how the macro level policies of the central bank and the Govt. are going to influence the investment by the public, their earnings and savings.
CO4	K5	Evaluating the developments in the financial markets and their implications on the macro economy of the nation and also to develop broad policy suggestions.

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1				3	2			1
CO2			2	1	3			
CO3		2	3			1		
CO4			1		2	3		

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1		3	
CO2		1		2
CO3		1	2	
CO4		2		3

ECO Ele – 7 Financial Institutions and Markets

Module I

Nature and Role of Financial System – Structure, financial system and Economic Development, Theories of the Impact of Financial Development, Financial sector and Economic Development, Criteria to evaluate financial system.

Module II

Overview of Indian financial system- Indicators of financial Development, Structure of financial Institutions, Financial sector reforms. Regulatory and Promotional Institutions – RBI and SEBI, NABARD, IRDA- Role of Commercial Bank during post liberalization period, Growth of New Generation Banks – Banking Sector Reforms.

Module III

Non-Banking Financial Intermediaries – Insurance Companies, Mutual funds, Miscellaneous Non-Banking financial intermediaries – Structure and Growth – Hire Purchase, Lease Finance, Housing finance, Venture Capital, Credit rating agencies, Depository and Custodial Services.

Module IV

Markets – Call Money Market, treasury Bills Market, Commercial Bills Market, Industrial Securities Market. Markets for Futures, Options and other financial derivatives.

Module V

Security markets in India – Money and capital market in India – New Issue market – Methods of Issue – Secondary market – Stock exchange – Role & Functions – Listing – Trading procedures and settlement – Regulatory and supplementary organizations and regulatory measures.

References

2. L.M.Bhole, Financial Institutions and Markets, TMH, New Delhi, 2007
3. Prasanna Chandra, Managing Investment, TMH, New Delhi, 2007
4. Sriram Khanna, Financial Markets in India & Protection of Investors, New Century Publications, 2004.
5. Mark Grinblatt & Sheridan Titman, Financial Markets and Corporate Strategy, TMH, 2003.
6. Frank .J.Fabozzi et al Foundations of Financial Markets and Institutions, Pearson, 2002.

ECO Ele – 8 Gender Studies

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 8	Gender Studies	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	Analyse the social construction of gender, including its implications on gender identity, roles and inequalities
CO2	K5	Evaluate various perspectives on gender development and feminist theories to understand the complexity of gender dynamics
CO3	K4	Assess gender issues in India, including women's work, pay disparities, access to resources and political participation

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	-	1	2	3	1	2	3
CO2	2	-	1	2	3	-	2	3
CO3	2	-	2	3	3	1	3	3

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1	-	3	1
CO2	2	-	3	1
CO3	3	2	3	1

ECO Ele – 8 Gender Studies

1. **Introduction to Gender Studies:** Social Construction of Gender -Sex and Gender, Gender Socialization and Gender Roles, GenderIdentity, Gender gaps. Social structure and Gender Inequality-Patriarchy – Matriarchy Ideologies, Equality Vs Difference, Nature Vs Culture, Sexual division of labour, Eco-feminism Conceptualizing discrimination- Family- girl child in the family- gender roles, gender discrimination , gender as a structural link between marriage and kinship. Education - learning, drop outs, access to higher education. .Indicators of women’s status: Demographic, Social, Economic and Political. Status of women in Contemporary India with particular reference to women in Kerala.
2. **Perspectives on Gender:** Social theories of Gender Development: Psycho-analytic theory, Structural-Functional Analysis,Cognitive Development Theory, Social Learning Theory. Feminist Theories: Liberal Feminism,Socialist Feminism, Radical Feminism, Postmodern Feminism, Multicultural/Global Feminism.
3. **Women's Work and Pay:** Concept and analysis of women’s work: Valuation of productive and unproductive work; visible and invisible work; paid and unpaid work; economically productive and socially productive work – Women’s labour force participation; Economic model of women’s labour force participation – Effect of changes in wages, income and household productivity- The gendergap in earnings-Occupational segregation – gender differences in education – economic analysisof gender gap in earnings
4. **Gender Issues in India:** Issues in Family: Son Preference, Sex Ratios and Related Indicators. Issues at Work- gender stereotyping, Feminization of work, Glass Ceiling, Work-Life Balance.. Access to Resources -Wealth, Education, Health Care, Space outside the Home. Women in Organized & Unorganized Sector, Working women & their problems. Women in Indian Politics: Political Participations of women, Political empowerment of women, suffragemovement. Women’s Organizations & Movements in India. Women’s movements in contemporary India: Issues
5. **Women's Work and Pay:** Concept and analysis of women’s work: Valuation of productive and unproductive work; visible and invisible work; paid and unpaid work; economically productive and socially productive work – Women’s labour force participation; Economic model of women’s labour force participation – Effect of changes in wages, income and household productivity- The gendergap in earnings-Occupational segregation – gender differences in education – economic analysisof gender gap in earnings.

References

- 1 Desai, Neera and M. Krishnaraj. 1987 Women and society in India. Delhi
- 2 Ananta. Desai, Neera and M. Krishnaraj. 1987. Women and society in India.
- 3 Dube, Leela et. al. (eds.) 1986. Visibility and Power. Essays on Women in Society andDevelopment. New Delhi : OUP.
- 4 Dube, Leela et. al. (eds.) 1986. Visibility and Power. Essays on Women in Society andDevelopment. New Delhi : OUP.
- 5 Myers, Kristen Anderson et. al. (eds.) 1998. Feminist Foundations: Towards Transforming Sociology. New Delhi: Sage. 6 Oakley, Ann. 1972. Sex, Gender and Society. New York : Harperand Row.
6. Macionis, John J: 2006,Sociology; Pearson Prentice Hall. 15. Forbes, G. 1998. Women inModern India. New Delhi, Cambridge UniversityPress..
7. Ghadially, Rehana (ed.) 1988. Women in India Society. New Delhi. Sage.
8. M. L. Narasaiah : “Gender Inequality and Poverty,”2004 : DiscoveryPublishing House, NewDelhi. 18.G. B. Reddy : 1997 : Women and The Law : K.C. Gogla : Gogla LawPublications, Hyderabad,
9. Pramila Joshi : 2001 : Women’s Law : Rajesh Publication Pune.
10. Ram Ahuja , “ Society In India” concepts. Theories and recent trends,Rawat publicationJaipur,2005.
11. Hoffman and Averett (2007), Women and the Economy: Family, Work and Pay, PrenticeHall Publications
12. Thorat and Newman (2009), Blocked by Caste: Economic Discrimination in Modern India, Oxford University Press.

Eco Ele – 9 Economics of Labour Market

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele- 9	Economics of Labour Market	3	E	50	50

Course Outcomes:

CO1	K2 - Understanding	Demonstrate a comprehensive understanding of the fundamental theories and models governing the supply of labour
CO2	K4 - Analysing	Analyse the dynamics of labour demand in both the short-run and long-run contexts
CO3	K3 - Applying	Evaluate the mechanisms of wage determination in labour markets, distinguishing between competitive and monopsony markets
CO4	K3 - Applying	Investigate the various types of unemployment, their measurement methodologies, and the underlying theories of job search behaviour
CO5	K2 - Understanding	Examine the role of trade unions and collective bargaining in shaping labour market dynamics

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	1	2	2	2	1	1	2
CO2	3	1	2	2	2	1	-	1
CO3	3	1	2	3	3	1	1	2
CO4	2	3	3	3	3	3	3	3
CO5	1	-	3	2	3	1	3	3

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	3	1	2	1
CO2	2	1	2	-
CO3	3	2	3	1
CO4	3	3	3	3
CO5	3	1	2	3

Eco Ele – 9 Economics of Labour Market

Module 1: Supply of Labour

The Basic Work-Leisure Model – Utility Maximisation – Wage Rate Changes: Substitution and Income effects – Backward-bending Labour Supply - Wage Elasticity of Labour Supply – Time Allocation in Labour Supply: Household Model of Labour Supply – Participation Rate: Added Worker Effect and Discouraged Worker Effect, Bargaining Model of Family Labour Supply (Household Choices) - Effects of Social Programs on Labour Supply: Cash Grants – Women, Child Care and Labour Supply.

Module 2: Demand for Labour

Labour demand in the short-run and long run – Long-run employment equilibrium with isocosts and isoquants - The Marginal Productivity Theory of Labour Demand - The Elasticity of Demand for Labour - Hicks-Marshall Laws of Derived Demand - Consumer expenditure patterns and Technological Change affecting labour demand; Labour Market Equilibrium: Single Competitive market – competitive equilibrium across labour markets. The Cobweb model in labour market.

Module 3: Wage Determination in Labour Markets

Wage determination in competitive markets; Wage determination in monopsony market; Minimum wages - Effect on wage and employment determination in competitive and monopsony markets; Segmentation and Dual Labour Market Theory; Wage Differential: Human Capital: On-the-job training - Theory of Compensating Wage Differentials. Employment Contracts – Motivation – Compensation Plans: Productivity and the Basis of Yearly Pay--Productivity and the Level of Pay --Productivity and the Sequencing of Pay. Fringe Benefits.

Module 4: Unemployment

Types of Unemployment - Measurement of unemployment in the Indian context; Basic Theory of Job search – Strategies: Sequential and Non-Sequential - Stigler Model, McCall Model – Downward Rigid wages - Efficiency Wage Models. Asymmetric Information in Labour Market, Worker Status and Social Norms - Implicit Contracts – Insider-Outsider Theory.

Module 5: Trade Unions and Collective Bargaining

Demand for and supply of union membership - Equilibrium level of union membership – Structural Change Hypothesis – Managerial Opposition Hypothesis. Strikes and the bargaining process: Forms and method of collective bargaining – Unions and Fringe benefits – Exit-Voice Hypothesis - The Economic Impact of Unions: Spill-over Effect, Threat Effect and Other Effects - Measures imparting Flexibility in Labour Markets.

References

1. Borjas, George J. (2013), *Labor Economics*, 6th Edition, McGraw-Hill.
2. McConnell, Campbell R., Brue, Stanley L. and Macpherson, David A. (2017), *Contemporary Labor Economics*, 11th Edition, McGraw-Hill.
3. Ehrenberg, Ronald G. and Smith, Robert S. (), *Modern Labor Economics: Theory and Public Policy*, 11th edition, Prentice Hall.
4. Smith, Stephen (2003), *Labour Economics*, 2nd Edition, Routledge.

Eco Ele – 10 Behavioral Economics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 11	Behavioral Economics	4	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K3	Explain behavioural concepts in individual decision-making
CO2	K4	Compare the behavioural model and analyse how these models explain human behaviour
CO3	K5	Decide on experiments that will help in understating the human behaviour

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2			3				
CO2	1		1	2				
CO3		1	3		1	2		1

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1		1	
CO2	2		2	
CO3		1		2

Eco Ele – 10 Behavioral Economics

1. Introduction to Behavioral Economics

Nature of Behavioral economics -Methodological approach: Theory and evidence -Origins of behavioral economics- Neo-classical and behavioral approaches to studying economics- Relationship with other disciplines- Application: Case studies on Loss aversion, Money Illusion,Altruism.

2. Foundations of Behavioral Economics

Values, Preferences and Choices: The standard model- Axioms, assumptions and definitions- The neuroscientific basis of utility- Application: Case studies on Abstention, Environmental Protection and Drug Addiction. Beliefs, Heuristics and Biases: The standard model- Probability estimation- Self-evaluation bias- Projection bias- Causes of irrationality- Application: Case studies on Fakes and Honesty, Celebrity contagion and imitative magic. Decision making underrisk and uncertainty: Prospect theory- Reference points- Loss Aversion- Shape of utility function- Decision weighting- Application: Case studies on Endowment Effect and Loss Aversion.

Mental accounting: Nature and components of mental accounting- Framing and editing- Budgeting and fungibility- Choice bracketing and dynamics-Policy implications- Application:Case studies on Equity Premium Puzzle, Consumer spending and housing wealth.

3. Intertemporal Choice

The Discounted Utility Model: Origin and features of Discounted Utility Model (DUM)- Methodology- Anomalies in DUM- Alternative Intertemporal Choice Models: Time preference-Time inconsistent preferences- Hyperbolic discounting- Application: Case study on the savings problem and Desire for rising consumption profiles.

4. Behavioral game theory

Nature of behavioral game theory- Mixed strategies- Bargaining- Iterated games- Signaling- Learning- Application: Case studies on Market entry in Monopoly and Impasses in bargainingand self-serving bias.

5. Social Preferences

The standard model- Nature of social preferences- Factors affecting social preferences- Modeling social preferences- Inequality aversion models- Reciprocity models- Application: Casestudies on Public goods and free riding.

References

1. Nick Wilkinson and Matthias Hales, An Introduction to Behavioral Economics, 2nd Edition, Palgrave Macmillan 2012.
2. Edward Cartwright, Behavioural Economics, Routledge 2011.
3. Erik Angner, A Course in Behavioral Economics, Palgrave Macmillan 2012.
4. Dan Ariely, “Predictably Irrational: The Hidden Forces that Shape Our Decisions”, Harper Collins 2009.
5. Richard Thaler and Carl Sunstein, “Nudge: Improving Decisions about Health, Wealth and Happiness”, Penguin UK 2009

Eco Ele – 11 Agricultural Economics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 11	Agricultural Economics	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	Apply economic principles to analyse production processes and farm management
CO2	K5	Demonstrate proficiency in estimating production functions, optimizing farm resources
CO3	K4	Evaluate risk and uncertainty in agriculture, employing decision theory and risk management techniques to address variations in farm efficiency

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	-	-	2	-	-	1	-
CO2	3	1	-	1	-	1	1	2
CO3	2	2	-	1	1	2	-	1

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	1	-	1	-
CO2	2	3	3	-
CO3	1	3	3	-

Eco Ele – 11 Agricultural Economics

1. Production Economics and Farm Management Production Process; Economic principles of Farm Management; Resource management and allocation; basic concepts-marginal returns, yieldgap, returns to scale, economics of scale, technology and input use; law of comparative advantages
2. Farm Resources and Optimization Factor-product, product-product relations; Estimation of different forms of production functions using farm level data; Estimation of iso-quant and leastcost combinations of crops; production in dynamic setting policy impact on production - cost concepts, cost of cultivation of principal crops
3. Risk and Uncertainty in Agriculture Decision theory and elements of risk and uncertainty in agriculture; measurement of risk, adjustment to risk; types of risk - estimation of risk - management response to risk – linear programming and risk programming models. 4. Farm Efficiency and Total Factor Productivity and Agricultural growth Farm efficiency – economic, allocative and technical efficiency measures; Concept of total factor productivity, variations in technical efficiency and total factor productivity and implications to production growth in India. Factor Market inter linkages.
5. Economics of Natural Resources and Sustainability Natural resources: Renewable and non- renewable - land use pattern - land degradation land use planning - optimal management of land, water, forests and fisheries – energy management - common property resources , development dynamics of resource use planning for economic growth and sustainability - resource mapping: GIS and remote sensing data

References

1. Heady, Earl O., and John L. Dillon, "Agricultural Production Functions" (Ames: Iowa State University Press), 1961 and Heady, Earl O., "Economics of Agricultural Production and Use" (Prentice Hall), 1952.
2. Beattie, Bruce R. and C. Robert Taylor, "The Economics of Production", (New York: John Wiley and Sons), 1985
3. Soni, R.N., "Leading Issues in Agricultural Economics" (Vishal Publishing House), 2008.
4. Doll, John P. and Frank Orazem, "Production Economics - Theory and Applications", (New York: John Wiley and Sons), 1978.
5. Manjunatha, A. V., et al. "Impact of land fragmentation, farm size, land ownership and crop diversity on profit and efficiency of irrigated farms in India." *Land Use Policy* 31(2013): 397-405.
6. Ramesh Chand and Pradumna Kumar, "Total factor productivity and contribution of Research investment to agricultural growth in India" National Council for agricultural Economics and policy Research (NCAEP) policy paper 25, 2011.
7. Ashok Rudra, "Indian Agriculture: Myth and Realities", Allied Publications, New Delhi, 1984
8. H Hanumantha Rao, "Agricultural Growth, Rural Poverty and Environmental Degradation", OUP, New Delhi 2000.
9. Krishna, K.L. and Uma Kapila, "Readings in Indian Agriculture and Industry", Academic Foundations, 2009.
10. Y.K. Alagh, "An Overview of the State of Indian Farmer: A Millennium Study (Vol.I)", Academic Foundations, 2004.
11. Badhuri, A. et al, "The Dual Role of Terms of Trade: The Indian Experience Agriculture, Industrial Interaction", University of East Anglia, 2004.
12. G.S. Bhalla, "Globalisation and Indian Agriculture", Vol. 19: State of Indian Farmer, A Millennium Study, Academic Foundation, 2004.

Eco Ele – 12 Health Economics

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 12	Health Economics	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K2	Discuss market failures in healthcare and their implications
CO2	K2	Evaluate the production of health, environmental effects on health, and market failures in the provision of healthcare
CO3	K4	Analyse health and environmental policy inter-linkages and economic effects of environmental disturbances

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	-	2	1	-	-	-	-
CO2	2	-	1	1	1	1	1	-
CO3	1	-	-	1	1	-	-	-

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	-	-	1	-
CO2	-	-	1	-
CO3	1	-	1	-

Eco Ele – 12 Health Economics

1. Review of market failures; statistical value of life and health – empirical estimates of statistical value of life; disability adjusted life years.
2. Environmental Effects on Health. Health production function; exposure, dose and response; indoor and outdoor air pollution; effects of air pollution on children, adults; effects of climate variability and climate change on mortality and morbidity; environmental toxicology; environmental carcinogenesis; water-borne diseases; municipal, industrial and hazardous waste – health implications.
3. Medical Production of Health Individual as producer of health; characteristics of health services and production; design of health-related insurances; role of the physician as a producer of health; healthcare organisation and funding; effects of health care expenditure on health; market for pharmaceuticals.
4. Market Failure in the Provision of Health Care Adverse selection in insurance markets; moral hazards, externalities, and other market failures in health care; problems of risk and uncertainty; unequal information; imperfect competition; equality in health care.
5. Health and Environmental Policy – Inter-linkages Global policy initiatives: national environmental and health action plans; Health impacts from Air and water pollution; Variations in the weather and impact on mortality; disease incidence; Economic and health effects of weather related disturbances, Environmental health; global changes in environment and the third world.

References

1. Zweifel, Peter, Friedrich Breyer, and Mathias Kifmann. Health economics. Springer Science & Business Media, 2009.
2. Duflo, E., Greenstone, M. and R. Hanna. 2008. Indoor Air Pollution, Health, and Economic Well-Being, Surveys and Perspectives Integrating Environment and Society
3. Gilbreath, J. 2007. The Economics of Better Environmental Health, Environmental Health Perspectives, 2007
4. Hubbell, B. J. 2006. Implementing QALYs in the Analysis of Air Pollution Regulations, Environmental and Resource Economics, 34(3), 34:365–384
5. Prüss-Üstün A., C. Mathers, C. Corvalán and A. Woodward. 2003. Introduction and Methods: Assessing the Environmental burden of disease at national and local levels, WHO.
6. Yassi, A., T. Kiellstrom, T. de Kok, and T.L. Guidotti, Basic Environmental Health, Oxford University Press, 2001
7. Confalonieri, U., B. Menne, R. Akhtar, K.L. Ebi, M. Hauengue, R.S. Kovats, B. Revich and A. Woodward, 2007: Human health. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change,
8. M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press.
9. Clasen, T. F. and L. Haller. 2008. Water Quality Interventions to Prevent Diarrhoea: Cost and Cost-Effectiveness, Public Health and the Environment, World Health Organization, Phelps, C. Health Economics, 4th edition, Pearson Education, 2009.
10. Nadakavukaren, A. Our Global Environment: A Health Perspective, Waveland Press, 2005.

Eco Ele – 13 Optimisation Techniques

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele 13	Optimisation Techniques	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Abilities	Course Outcomes
CO1	K3	Utilise the concept of Linear programming for minimization and maximization of linear function
CO2	K3	Interpret transportation and assignment problem solutions for effective decision making.
CO3	K3	Apply inventory models and queuing theory for business decision making.
CO4	K3	Compute the duration of projects using network models

CO-PO Matrix

Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1		3					1	
CO2		2	2				1	
CO3		1	3					
CO4			1					1

CO-PSO Matrix

Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1		3		
CO2	1	1		
CO3	2	2		
CO4	1	1		

Eco Ele 13 Optimisation Techniques

Module I

Methodology of Optimisation Techniques – Linear Economics -Linear Programming-Simplex Method-Sensitivity Analysis

Module II

Transportation and Assignment Problems.

Module III

Integer Programming-Nonlinear Programming Dynamic Programming.

Module IV

Deterministic Economic Ordering Quantity.

Module V

Inventory Models-Network Models-PERT/CPM and Markowitz chains-elements of queuing Theory
Element of Simulation.

Reference:

1. Winston, Wayne L, 1994, Operations Research: Applications and Algorithms, Duxbury Press, California.
2. Hamdy.A, Taha, Operation Research & Introduction, 8th Edn. Pearson, 2007,
3. Raveendran, Phillips & Solberg, Operations Research Principles and Practice, Wiley, 2005.
4. Natarajan.A.M., Balasubraniam.P. & Tamil Arasi.A. – Operations Research, Pearson, 2005.
5. Ajay.S.Gaur & Sanjay.S.Gaur – Statistical Methods for Practice and Research, Response Books, 2009.

Eco Ele – 14 Economic Theory

Semester	Course Code	Course Title	Credit	C/E	Marks	
					Internal	External
IV	Eco Ele – 14	Economic Theory	3	E	50	50

Course Outcomes

Course Outcome	Cognitive Level	Course Outcomes
CO1	K2	To understand the foundational theoretical framework of economics
CO2	K2	To understand the key concepts in Macroeconomics
CO3	K2	To understand the basic concepts and terms in International economic s
CO4	K4	To understand the basic concepts and theories in public economics.
CO5	K5	To understand the foundational principles and theories of development economics

CO-PO Matrix								
Course outcome	Program outcome							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	1	3	3	2	3	3	2
CO2	3	1	3	2	2	2	3	1
CO3	3	-	3	2	2	2	3	1
CO4	3	-	3	2	2	2	3	2
CO5	3	-	3	2	2	2	3	1

CO-PSO Matrix				
Course outcomes	Program specific outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	3	1	3	2
CO2	3	-	2	1
CO3	3	-	2	1
CO4	3	-	2	2
CO5	3	-	2	1

Eco Ele – 14 Economic Theory

- I. Economics. Definition, scope, Basic problems in resource allocation. Application of economics. Micro Economics. Theory of Demand – measurement, Approaches, Demand forecasting – Methods. Production. Production function – Short term and long term. Markets. Structure, forms - price determination, equilibrium of the firm and industry. Introduction to welfare Economics. Information Asymmetry. Econometrics – Methodology of Econometrics.
- II. Macro Economics. Circular flow, national income and its estimation. Classical and Keynesian economics. Theories of consumption. Investment – Multiplier, Accelerator. Trade cycles. Monetary policy. Functions of commercial and Central banks.
- III. International Economics. Theories of trade, Trade Barriers – Tariff and Quotas. Free trade. Balance of payments – disequilibrium, methods of correcting disequilibrium. Exchange rate – determination. International financial Institutions, WTO.
- IV. Public Economics – Taxes – Types, Principles. Public Expenditure – determinants. Budget, deficit financing. Fiscal policy.
- V. Development Economics. Growth and Development, theories of development. Indian economy during the post liberalisation period – agriculture, industry, foreign trade. Globalization.

Reference Books

1. Koutsayanis .A, Modern Micro Economics, Macmillan India , New Delhi, 2005.
2. Robert .S.Pindy Dasnniel Rubinfeld and Prem .L.Metha , Micro Economics, Pearson India ,2017
3. D, Souza. E, Macro Economics, Pearson India , New Delhi, 2012
4. Bo Sodesten and Geoffry Reed, International Economics, Macmillan, 2010
5. Debraj Ray, Development Economics, oxford university press, 2010.
5. A.C. Fernando, Indian Economy, Pearson India, New Delhi, 2015.
6. R.K. Lekhi and Joginder Singh, Public finance, Kalyani Publications, New Delhi, 2015.
7. Damodar Gujarati, Basic Econometrics, Tata McGraw hill, New Delhi 2008.

Eco Ele – 15 Environment Management

Semester	Course Code	Paper Title	Credit	Core/Elective
III	Eco Ele – 15	Environment Management	3	Elective

Course Outcomes

CO1	K2	Discuss the principles of environmental economics and externalities
CO2	K3	Examine natural resource economics and sustainable development
CO3	K3	Assess policy instruments for environmental management and pollution control

CO-PO Matrix								
Course Outcomes	Programme Outcomes							
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	-	-	1	1	-	-	-
CO2	2	-	-	1	1	-	-	-
CO3	2	-	1	1	1	-	1	-

CO-PSO Matrix				
Course Outcomes	Programme Specific Outcomes			
	PSO1	PSO2	PSO3	PSO4
CO1	2	-	2	1
CO2	2	-	2	1
CO3	2	-	2	1

Eco Ele – 15 Environment Management

Module I: Introduction to Environmental Economics

Environmental Economics – Principles – Environment-Economy interactions - Market failure – Externalities – Positive and negative externalities – Environment as a public good - Government failure.

Module II: Natural Resource Economics

Renewable and Non-renewable resources – Common Property Resource – Tragedy of the Commons – Community management – Building a Solar Economy - Energy Efficiency: Alternate Forms of Energy

Module III: Sustainable Development

Sustainable Development – Definition – Sustainable Development Goals - Population Projections and Resource Constraints - Redesigning Cities for People

Module IV: Policy Instruments

Types of Pollution - Control of Pollution - Taxes and Subsidies – Polluter-Pay-Principle – Pigovian tax – Subsidies: Tax credits

Module V: Global Environmental Issues and Concerns

Climate Change and Global Warming - Causes of Environmental Degradation - environmental governance and movements in the Indian context.

References

1. Kolstad, C.D. (2007), Environmental Economics, New Delhi.
2. Karpagam (2008), Environmental Economics, Sterling Publishers. New Delhi
3. Katar Singh and Shishodia (2007), Environmental Economics – Theory and Application, Sage Publication, New Delhi.
4. Nick Hanley et al (2007), Environmental Economics: Theory and Practice, Palgrave Macmillan.