



Syllabus

Fourth Semester Courses in MA (ECONOMICS)

2024-2025

Contents:

- **Syllabus for Core Courses:**
 - PAECO6504CR1: ECONOMICS OF HOUSING
 - PAECO6505CR1: ENERGY ECONOMICS
 - PAECO6506CR1: ENVIRONMENT ECONOMICS

- **Syllabus for Elective courses:**
 - PAECO6503EL1: INFRASTRUCTURE ECONOMICS
 - PAECO6504EL1: GAME THEORY

- **PAECO6502RP1: Research Project with Dissertation**

- Evaluation and Assessment guidelines

M.A. <u>PART-II ECONOMICS</u>		
Course Title: Economics of Housing		
Course Code: PAECO6504CR1		
Credits 4: Number of lectures = 60 hr		
No.	Course Objectives	
1.	To understand the key concepts and factors influencing housing.	
2.	To illustrate the trajectory of housing from welfare to financialized assets.	
3.	To apply the housing policies in India and issues.	
4.	To classify the issues related to housing	
CO	Course Outcomes On completing the course, the learner will be able to	Bloom's Taxonomy Level (BT level)
1.	Understand Key Concepts and Factors in Housing	Remembering, Understanding, Analyzing
2.	Illustrate the Trajectory of Housing	Remembering, Understanding, Analyzing
3.	Apply Housing Policies in India and Address Issues	Remembering, Understanding, Analyzing
4.	Classify Housing-related Issues	Remembering, Understanding, Analyzing

UNIT I		Key Concepts and Factors influencing Housing	(15)
	1.	Housing vs House, Home, Real estate, Property	
	2.	Land, Construction and technology	
	3.	Finance and Laws, Planning	
	4.	Demand side factors and Indicators for understanding housing situation	
UNIT II		Trajectory of Housing from Welfare to financialized asset	(15)
	1.	Non -commodified housing practices	
	2.	Artisanal Housing and self –provisioning in rural societies	
	3.	Housing conditions in industrialization	
	4.	Public Housing in Vienna, US and other states, Singapore, Mia Casa Mia Vida in Brazil	
	5.	Housing and financialization	
UNIT III		Housing Policies in India	(15)
	1.	Phase of social housing	
	2.	Phase of public housing	
	3.	Phase of market-linked provision	
	4.	Case of ULCRA	
	5.	Rental housing	
	6.	SRA in Mumbai	
	7.	Land titles in Odisha	
UNIT IV		Issues and debates in Housing	(15)
	1.	Housing as a public good	
	2.	Role of government wrt housing	
	3.	Housing as a human right	
	4.	Housing and quality of life	
	5.	Alternate models of housing	

List of Basic Reference Books:

1. Arimah, Ben (2000): Housing Sector performance across countries.
2. Deka Abhay et al (2016): Rural housing in India.
3. IDFC Institute (2018): Making Housing Affordable: A supply-side reform for India.
4. Soumik Lall et al (2009): Urban Land Markets: Improving Urban Land Management.
5. World Bank (1993): Making Land Markets work.

Evaluation (Core Theory): Total marks per course – 100

- I. Formative Assessment ‘for’ Learning (continuous internal assessment - CIA to improve learning).
CIA- 40 marks
CIA 1: Written test -20 marks
CIA 2: Assignment -20 marks
- II. Summative Assessment ‘of’ Learning (focus on outcomes, quantitative data for outcomes of instruction).

End Semester Examination – 60 marks
One question from each unit for 15 marks, with internal choice.

Eg: Template for the Core course End Semester examination in Semester 4

Learning Levels	Remembering	Understanding	Analyzing	Application	Evaluation	Creation
% Weightage	10%	40%	30%	10%	5%	5%

Keep the grid template for Evaluation, of course for CIA 2

M.A. <u>PART-II ECONOMICS</u>		
Course Title: Energy Economics		
Course Code: PAECO6505CR1		
Credits 4: Number of lectures = 60 hr		
No.	Course Objectives	
1.	To understand the fundamentals of energy economics.	
2.	To learn the basics of energy analytics.	
3.	To illustrate the practical challenges and solutions.	
4.	To interpret the economic application of energy economics.	
CO	Course Outcomes On completing the course, the learner will be able to	Bloom's Taxonomy Level (BT level)
1.	Understand Fundamentals of Energy Economics	Remembering, Understanding, Analyzing
2.	Learn Basics of Energy Analytics	Remembering, Understanding, Analyzing
3.	Illustrate Practical Challenges and Solutions	Remembering, Understanding, Analyzing
4.	Interpret Economic Application of Energy Economics	Remembering, Understanding, Analyzing

UNIT I		Introduction to Energy Economics	(15)
	1.	Meaning and Importance of Energy Economics.	
	2.	Types of Energy resources and commodities.	
	3.	Energy Statistics, Energy Flows	
	4.	Accounting to Energy Balances	
UNIT II		Economic Fundamentals Applied to Energy Sector	(15)
	1.	Energy Demand Analysis, Elasticities Approach, and Determinants of the Demand for energy.	
	2.	Economics of Energy Supply	
	3.	Trend and patterns of energy production	
	4.	Energy and Economic Development	
	5.	Economic and Environmental Effects of Energy Production.	
UNIT III		Energy Analytics	(15)
	1.	Forecasting prices, arbitrage, speculation of Energy Sources	
	2.	Production Cost versus Return of Investment; Empirical Determination of Breakeven (economic) Price – Determination of Optimum Level of Output and attainment of Equilibrium Level of Price of Energy Sources.	
	3.	Empirical Estimation of Economic Growth and Energy Consumption	
	4.	Empirical Demand Projection for Energy Sources – Regression Technique	
UNIT IV		Energy Taxes and Subsidies	(15)
	1.	Principles of Optimal Indirect Taxation, Equity Considerations	
	2.	Issues related to Numerical Consideration of Tax Burden	
	3.	Tax and Subsidy structure in Indian Context	
	4.	Energy Pricing (Coal, Gas, Electricity) and Different Energy Markets	

List of Basic Reference Books:

1. Bhattacharya, Subhes C. (2011). Energy economics: concepts, issues, markets and governance. Springer Energy Economics - Theory and Applications, Zweifel, Peter, Praktijnjo, Aaron, Erdmann, Georg, Springer
© St. Xavier's College (Autonomous), Mumbai, INDIA

2. James M. Griffin Henry B. Steele, Energy Economics and Policy, 2nd Edition,
3. Roy L. Nersesian, Energy Economics: Markets, History, and Policy 1st Edition, Kindle Edition
4. The Energy System: Technology, Economics, Markets, and Policy (The MIT Press)

Evaluation (Core Theory): Total marks per course – 100

- I. Formative Assessment ‘for’ Learning (continuous internal assessment - CIA to improve learning).
CIA- 40 marks
CIA 1: Written test -20 marks
CIA 2: Assignment -20 marks
- II. Summative Assessment ‘of’ Learning (focus on outcomes, quantitative data for outcomes of instruction).
End Semester Examination – 60 marks
One question from each unit for 15 marks, with internal choice.

Eg: Template for the Core course End Semester examination in Semester 4

Learning Levels	Remembering	Understanding	Analyzing	Application	Evaluation	Creation
% Weightage	10%	40%	30%	10%	5%	5%

Keep the grid template for Evaluation, of course for CIA 2

M.A. <u>PART-II ECONOMICS</u>		
Course Title: Environment Economics		
Course Code: PAECO6506CR1		
Credits 4: Number of lectures = 60 hr		
No.	Course Objectives	
1.	To understand the fundamental concepts of environment economics.	
2.	To interpret the importance of pollution control.	
3.	To learn environmental valuation & sustainable development.	
4.	To demonstrate the concept of sustainable development.	
CO	Course Outcomes On completing the course, the learner will be able to	Bloom's Taxonomy Level (BT level)
1.	Grasp Fundamental Environmental Economics Concepts	Remembering, Understanding, Analyzing
2.	Analyze the Significance of Pollution Control	Remembering, Understanding, Analyzing
3.	Explore Environmental Valuation and Sustainable Development	Remembering, Understanding, Analyzing
4.	Apply Sustainable Development Principles	Remembering, Understanding, Analyzing

UNIT I		Fundamental concepts in Environment Economics	(15)
	1.	Environment-economy Relationship	
	2.	Laws of Thermodynamics and Material Balance Model	
	3.	Environmental Kuznets Curve (EKC): Concepts and Genesis. Explanations of inverted-U shaped EKC-empirical evidence- N-shaped EKC	
	4.	Environmental Pollution as a Negative Externality (Pigou)	
	5.	Issue of Property Rights (Coase)	
	6.	Optimal Pollution	
UNIT II		Pollution Control: Command and Control and Alternative Market Based Instruments	(15)
	1.	Command and Control measures; Pigouvian taxes and subsidies	
	2.	Marketable pollution permits and mixed instruments (the charges)	
	3.	Tradable pollution permits and international carbon tax	
	4.	Coase's bargaining solution and collective action	
	5.	Hybrid Instruments- two-part tariff, double dividend hypothesis, illicit dumping	
UNIT III		Environmental Valuation	(15)
	1.	Basic issues of environmental valuation	
	2.	Revealed Preference Approach- household production function, travel cost, Hedonic price	
	3.	Stated Preference Approach-contingent valuation method	
UNIT IV		Applying the Tools for Sustainable Development	(15)
	1.	Transport and the Environment	
	2.	Rainforests, Controlling Water Pollution, Economics of Climate Change	
	3.	Economics of Green Accounting	
	4.	Biodiversity, Resources and Energy	

List of Basic Reference Books:

1. Baumol, W.J. and Oates W.E. (1988): Theory of Environmental Policy, 2nd Edition, Cambridge University Press.
2. Bhattacharyya, R.N. (2001): Environmental Economics: Indian Perspective, Oxford University Press.
3. Freeman III, A.M. (1999): The Measurement of Environmental and Resource Values: Theory and Methods, Resources for the Future, Washington D.C.
4. Hanley,N., Shrogen J.F. and White B. (1997) : Environmental Economics in Theory and Practice,Macmillan.
5. Kolstad, C.D. (2000): Environmental Economics, Oxford University Press. Bromley, D.W. (1995): Handbook of Environmental Economics
6. Pearce,D.W. and Turner,R.K. (1991) : Economics of Natural Resources and the Environment, Hemel Hempstead, Harvester-Wheatsheaf.
7. Perman R., Ma Y., McGilvary, J and Common, M (1999): Natural Resources and EnvironmentalEconomics, 2nd Edition, Prentice Hall.

Evaluation (Core Theory): Total marks per course – 100

- I. Formative Assessment ‘for’ Learning (continuous internal assessment - CIA to improve learning).
 - CIA- 40 marks
 - CIA 1: Written test -20 marks
 - CIA 2: Assignment -20 marks
- II. Summative Assessment ‘of’ Learning (focus on outcomes, quantitative data for outcomes of instruction).
 - End Semester Examination – 60 marks
 - One question from each unit for 15 marks, with internal choice.

Eg: Template for the Core course End Semester examination in Semester 2

Learning Levels	Remembering	Understanding	Analyzing	Application	Evaluation	Creation
% Weightage	10%	40%	30%	10%	5%	5%

Keep the grid template for Evaluation, of course for CIA 2

<u>M.A. PART-II ECONOMICS</u>		
Course Title: Infrastructure Economics		
Course Code: PAECO6503EL1		
Credits 4: Number of lectures = 60 hr		
No.	Course Objectives	
1.	To understand the fundamentals of economics of infrastructure.	
2.	To illustrate the significance of governance and regulation of infrastructure.	
3.	To learn the importance of finance and funding.	
4.	To classify the social infrastructure of India.	
CO	Course Outcomes On completing the course, the learner will be able to	Bloom's Taxonomy Level (BT level)
1.	Grasp the Core Principles of Infrastructure Economics	Understanding, Remembering, Analyzing
2.	Demonstrate the Importance of Governance and Regulation in Infrastructure	Understanding, Remembering, Analyzing
3.	Acquire Knowledge on Finance and Funding in Infrastructure	Understanding, Remembering, Analyzing
4.	Categorize the Social Infrastructure of India	Understanding, Remembering, Analyzing

UNIT I		Understanding Infrastructure	(15)
	1.	Definition & Types (Economic and Social infrastructure)	
	2.	Significance of transport viz. Road, Water and Airways modes	
	3.	Telecommunication and digital infrastructure	
UNIT II		Governance and Regulation of Infrastructure	(15)
	1.	Understanding the functioning of various Governing bodies & authorities	
	2.	MMRD, MSRDC, METRO, Ministry of Surface Transport, Inland Waterways Authority of India (IWAI), Airport Authority of India, Mumbai Metro Railway Corporation Limited etc	
	3.	Permission & approval procedure and legalities	
	4.	Public-Private Partnership (PPP)	(15)
UNIT III		Finance and Funding	
	1.	Project finance	
	2.	Risk analysis & Capital budgeting	
	3.	Financial sustainability of project	
UNIT IV		Social Infrastructure	(15)
	1.	Health Services: Medical Facilities; State and Provision of Health; Drinking Water and Sanitation	
	2.	Centrally Sponsored Schemes in Health, Drinking Water and Sanitation; Issues in Privatization of Health Services	
	3.	Education: Concept and Scope of Human Resource Development; Education and Economic Growth: Progress on Universalization of Primary Education;	
	4.	Performance of Secondary, Technical, Professional and Higher Education; Right to Education and Discrimination	

List of Basic Reference Book:

1. K. Narindar Jetli, Vishal Sethi, (2007) Infrastructure Development in India: Post-liberalization Initiatives and Challenges, New Century Publications.
2. L. N. Dash, (2007) Economics of Infrastructure: Growth and Development, Regal Publications.
3. Pradeepta Kumar Samanta, Ashok Kumar Mohanty, (2005) Port Infrastructure and

Economic Development, Kalpaz Publ.

4. Vivek Date, (2012) Industry and Infrastructure Development in India Since 1947 New Century Publications, 2009 Road Infrastructure: Issues and Implications, ICFAI University Press

Evaluation (Elective Course): Total marks per course – 100

- I. Formative Assessment ‘for’ Learning (continuous internal assessment - CIA to improve learning).
 - CIA- 40 marks
 - CIA 1: Written test -20 marks
 - CIA 2: Assignment -20 marks
- II. Summative Assessment ‘of’ Learning (focus on outcomes, quantitative data for outcomes of instruction).
 - End Semester Examination – 60 marks
 - One question from each unit for 15 marks, with internal choice.

Template for the Elective course End Semester examination in Semester 4

Learning Levels	Remembering	Understanding	Analyzing	Application	Evaluation	Creation
% Weightage	10%	40%	30%	10%	5%	5%

<u>M.A. PART-II ECONOMICS</u>		
Course Title: Game Theory		
Course Code: PAECO6504EL1		
Credits 4: Number of lectures = 60 hr		
No.	Course Objectives	
1.	To understand the fundamentals of Game Theory	
2.	To illustrate the difference between static and dynamic games with complete information.	
3.	To classify the difference between static and dynamic games with incomplete information.	
4.	To learn the practical usage of the theory	
CO	Course Outcomes On completing the course, the learner will be able to	Bloom's Taxonomy Level (BT level)
1.	Grasp the Core Principles of Game Theory	Remembering, Understanding, Applying
2.	Illustrate the Distinction Between Static and Dynamic Games with Complete Information	Remembering, Understanding, Applying
3.	Categorize the Distinction Between Static and Dynamic Games with Incomplete Information	Remembering, Understanding, Applying
4.	Learn Practical Applications of Game Theory	Remembering, Understanding,

	Applying
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UNIT I	Static Games with Complete Information	(15)
	1. Strategic Form	
	2. Nash Equilibrium	
	3. Rationalizability and Correlated Equilibrium	
UNIT II	Dynamic Games with Complete Information	(15)
	1. Extensive form games	
	2. Backward Induction and Subgame Perfection	
	3. Multi-stage games with observed actions	
UNIT III	Static Games with Incomplete Information	(15)
	1. Bayesian games and Bayesian Equilibrium	
	2. Bayesian games and Mechanism Design	
	3. Correlated types, risk aversion, Informed Principal	
UNIT IV	Dynamic Games with Incomplete Information	(15)
	1. Equilibrium refinements	
	2. Reputation Effects	
	3. Sequential Bargaining	

List of Reference Books

1. D. Fudenberg and J. Tirole, (1991) Game Theory, MIT Press
2. Haim Shapira, Gladiators, Pirates and Games of Trust How Game Theory, Strategy and Probability Rule Our Lives
3. J Von Neumann (Author), (1992) Theory of Games and Economic Behavior (Paper) Paperback
4. Martin Osborne, (2003) An Introduction to Game Theory, Oxford University Press
5. Robert Duncan Luce (Author), Howard Raiffa, (1989) Games and Decisions (Dover Books on Mathematics) Paperback

Evaluation (Elective Course): Total marks per course – 100

- I. Formative Assessment ‘for’ Learning (continuous internal assessment - CIA to improve learning).
 - CIA- 40 marks
 - CIA 1: Written test -20 marks
 - CIA 2: Assignment -20 marks

- II. Summative Assessment ‘of’ Learning (focus on outcomes, quantitative data for outcomes of instruction).
 - End Semester Examination – 60 marks
 - One question from each unit for 15 marks, with internal choice.

Template for the Elective course End Semester examination in Semester 4

Learning Levels	Remembering	Understanding	Analyzing	Application	Evaluation	Creation
% Weightage	10%	40%	30%	10%	5%	5%

<u>PART-II ECONOMICS</u>		
Course Title: Research Project with Dissertation		
Course Code: PAECO6502RP1		
Credits 6: 180 hours		
Total Marks: 150		
No.	Course Objectives	
1.	The dissertation aims to equip students with the necessary skills to gather primary data through surveys, interviews, or experiments to ensure relevance and specificity to the research topic.	
2.	The dissertation allows students to employ a diverse range of statistical tests, such as regression analysis, hypothesis testing, and correlation analysis, to explore relationships and patterns within the collected data, utilize advanced statistical software packages like SPSS, R, or STATA to conduct rigorous analysis and ensure accuracy in interpretation.	
3.	It enables students to interpret statistical findings within the context of economic theories, frameworks, and real-world implications, establishing meaningful connections between data analysis and economic phenomena	
CO	Course Outcomes On completing the course, the learner will be able to	Bloom's Taxonomy Level (BT level)
1.	Ensure data collection methods adhere to ethical standards and are systematically organized for effective analysis.	Evaluating
2.	Apply appropriate statistical techniques based on the nature of the data and research objectives to derive meaningful insights.	Applying, Analyzing

3.	Validate the assumptions underlying statistical analyses to ensure the robustness and accuracy of conclusions drawn from the data.	Analyzing
4.	Identify key trends, patterns, and relationships uncovered through statistical analysis and relate them to economic theories or principles, providing insights into market dynamics, consumer behavior, or policy implications	Evaluating
5.	Offer actionable recommendations or policy implications based on the economic insights derived from the analyzed data, addressing pertinent issues or challenges identified in the research.	Analyzing, creating
6.	Synthesize findings from the data analysis with existing literature and theoretical frameworks to construct a coherent narrative that advances understanding within the field of economics.	Analyzing
7.	Reflect on the research objectives and methodology employed, critically evaluating the strengths, limitations, and implications of the study.	Evaluating
8.	Conclude by highlighting the significance of the research contributions, outlining avenues for future research, and emphasizing the broader implications for theory, practice, or policy in the field of economics.	Applying, Analyzing

Description

- Continuation of Research Project/ Dissertation from Semester 3, over 6 months period.
- Distribution of Bloom's Taxonomy levels for the course assessment:

Units	Remembering	Understanding	Analyzing	Application	Evaluation	Creation
*Percentage	N/A	20	20	20	20	20

Evaluation: Total Marks100

Marks: 100

Credits: 6

Marks distribution as follows:

- Data collection: 20 marks
- Empirical Analysis: 20 marks
- Inferences: 20 marks
- Recommendations: 20 marks
- Viva Voce: 20 marks