

Discipline Specific Elective



University of Kerala

Discipline	ECONOMICS				
Course Code	UK4DSEECO200				
Course Title	Environmental Economics				
Type of Course	DSE				
Semester	IV				
Academic Level	200-299				
Course Details	Credit	Lecture per week	Tutorial per week	Practical per week	Total Hours/Week
	4	4 hours	-	-	4
Pre-requisites	Basic understanding of Economics.				
Course Summary	<p>understand the basic concepts of Environmental Economics and Climate change issues and analyze their impact.</p> <p>Evaluate the importance of sustainable development and mitigation policies for climate change.</p>				



Detailed Syllabus:

Module	Unit	Content	Hrs
I	Fundamentals of Environmental Economics		10
	1	Environmental Economics: Definition, Nature and Scope	
	2	Interlinkages between Environment, Ecology and Economy	
	3	Law of Entropy, Material Balance Theory, Limits to Growth	
	4	Environment Development Trade-off	
	5	Environmental Kuznets Curve	
II	Environmental Externalities		12
	5	Environmental Externalities	
	6	Corrective Measures: Quantity-Based Instruments, Market-Based Instruments, Non-Market Instruments, Mixed Instruments	
	7	Tragedy of the Commons, Coase Theorem	
	8	Civil Society and Collective Action	
	9	Environmental Policies and Legislation in India	
	III	Environmental Valuation	
10		Environmental Valuation, Use Values, Non-use Values, Option Values	
11		Direct Methods of Valuation- Contingent Valuation Methods	
12		Indirect Valuation Methods- Revealed Preference Methods- Hedonic Property Pricing and Travel Cost	
13		Cost Benefit Analysis	
14		Environmental Impact Assessment	
IV		Climate Change and Sustainable Development	
	16	Climate Change: Concept, Causes and Impact	
	17	Climate Change: Agreements and Institutions	
	18	Sustainable Development: Concept, Components, Indicators and Measures	
	19	Sustainable development goals:17 Goals and the current status	
V	FIELD SURVEY		8
	20	To conduct a recent survey and make a report regarding environmental issues of the locality in association with Block/Village Disaster Management Committees	

References

1. William Cunningham, Mary Cunningham and Catherine O'Reilly, 2021, Principles of Environmental Science: Inquiry & Applications, McGraw Hill Education

Draft #4 of File 28325/Ac A V (A)/2025/UOK Approved by DEPUTY REGISTRAR on 03-Jul-2025 01:32 PM - Page 173



2. Hussain, M, Ahmed. 2000. Principles of Environmental Economics, Routledge, London and New York
3. Anil Shishodia and Katar Singh, 2007, Environmental Economics: Theory and Applications, Sage Publications
4. Charles Kolstad, Intermediate Environmental Economics, Oxford University Press, 2nd edition
5. Rabindra N Bhattacharya (ed) 2002, Environmental Economics: An Indian Perspective, Oxford University Press.

Additional Readings

1. Jonathan M Harris, 2006, Environmental and Natural Resource Economics: A Contemporary approach, Houghton Mifflin
2. Joy A. Palmer, 1998, Environmental Education in 21st century, Routledge, London.
3. Ramprasad Sengupta, 2002, ECOLOGY AND ECONOMICS (OIP): An Approach To Sustainable Development, OUP India
4. Mahesh Rangarajan, 2009, ENVIRONMENTAL ISSUES IN INDIA: A READER, Pearson Education India
5. Shagoon Tabin, 2008, Global Warming: The Effect Of Ozone Depletion, APH Publishing
6. Climate Change – An Indian Perspective, Sushil Kumar Dash, Cambridge University Press India Pvt. Ltd, 2007
7. William Nordhaus, 2015, The Climate Casino: Risk, Uncertainty, and Economics for a Warming World, Yale University Press. ISBN: 978-0300212648
8. Encyclopedia of Global Warming and Climate Change By George Philander, SAGE Publications Inc; First edition, 2008.
9. Global Warming: The Complete Briefing By John Houghton, Cambridge University Press; 4th edition 2009.
10. Gupta Anil K, Sreeja S. Nair. 2011 Environmental Knowledge for Disaster Risk Management, NIDM, New Delhi
11. Kapur, Anu & others, 2005: Disasters in India Studies of grim reality, Rawat Publishers, Jaipur

Course Outcomes

No.	Upon completion of the course the graduate will be able to	Cognitive Level	PSO addressed
CO-1	Understand the interlinkages between environment, ecology, and economy	R, U	PSO-1
CO-2	Describe the concept of externalities and its corrective measures	R, U, Ap, An	PSO-2
CO-3	Design and propose integrated economic-environmental policy models with the support of ecological principles and environmental valuation techniques to address real-world environmental externalities and sustainability challenges.	R, U, Ap, An, E, C	PSO-4



CO-4	Evaluate the relevance of sustainable development in the context of climate change	R, U, Ap, An, E	PSO-3,4
CO-5	Students should evaluate and create a report based on a survey	R, U, Ap, An, E, C	PSO-6

R-Remember, U-Understand, Ap-Apply, An-Analyse, E-Evaluate, C-Create

Note: 1 or 2 COs/module

Name of the Course: Credits: 4:0:0 (Lecture: Tutorial: Practical)

CO No.	CO	PO/PSO	Cognitive Level	Knowledge Category	Lecture (L)/ Tutorial (T)	Practical (P)
CO-1	Understand the interlinkages between environment, ecology, and economy	PO-1, PSO-1	R, U	C,F	L	-
CO-2	Describe the concept of externalities and its corrective measures	PO-2, PSO-2	R, U, Ap, An	P, M	L	-
CO-3	Design and propose integrated economic-environmental policy models with the support of ecological principles and environmental valuation techniques to address real-world environmental externalities and sustainability challenges.	PO-3, PSO-4	R, U, Ap, An, E, C	P	L	-
CO-4	Evaluate the relevance of sustainable development in the context of climate change	PO-1,2,7 PSO-3,4	R, U, Ap, An, E	P, M	L	-
CO-5	Students should evaluate and create a report based on a survey	PO-3 PSO-6	R, U, Ap, An, E, C	P,M	L	

F-Factual, C- Conceptual, P-Procedural, M-Metacognitive



Mapping of COs with PSOs and POs :

CO No.	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	Average
CO-1	3	-	-	-	-	-	3	2	-	-	-	1	-	-	2.25
CO-2	-	3	-	-	-	-	2	3	-	-	-	2	-	-	2.5
CO-3	-	2	-	3	-	-	2	2	3	2	-	2	2	1	2.11
CO-4	-	1	3	3	-	1	2	3	2	-	-	2	3	1	2.1
CO-5	-	-	2	-	-	3	2	2	3	1	-	2	2	2	2.11
Average	0	2	2.5	3	0	2	2	2.5	2.67	1.5	0	2	2.33	1.33	

Correlation Levels:

Level	Correlation
-	Nil
1	Slightly / Low
2	Moderate / Medium
3	Substantial / High

Assessment Rubrics:

- Quiz / Assignment/ Quiz/ Discussion / Seminar
- Midterm Exam
- ProgrammingAssignments
- Final Exam

Mapping of COs to Assessment Rubrics :

CO No.	Internal Exam	Assignment	Project Evaluation	End Semester Exam
CO-1	✓	-	-	✓
CO-2	✓	✓	-	✓
CO-3	✓	✓	✓	✓
CO-4	✓	✓	-	✓
CO-5	-	✓	✓	✓

