ECON 12 Course Outline as of Fall 2022

CATALOG INFORMATION

Dept and Nbr: ECON 12 Title: INTRO ECON & ENVIRONMENT
Full Title: Introduction to Economics and the Environment
Last Reviewed: 10/11/2021

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00 Total Student Learning Hours: 157.50

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
An introduction to environmental studies emphasizing the interplay of ecology, economics, ethics and their translation and application to public policy. Students will explore topics including macroeconomic design characteristics and market failure as causes of environmental degradation; socio-ecological requirements for a sustainable society; and economic tools of analysis and incentive-based policy prescriptions for resolving problems of resource scarcity and environmental pollution. Includes perspectives from microeconomics, macroeconomics, and ecological economics. Also examines the role of policy in addressing environmental issues at the local, national, and global levels.

Prerequisites/Corequisites:
Course completion of MATH 154, MATH 155, MATH 156, or higher, or MATH 15, or AB705 placement into Math Tier 1 or higher

Recommended Preparation:
Eligibility for ENGL 1A or equivalent

Limits on Enrollment:

Schedule of Classes Information:
Description: An introduction to environmental studies emphasizing the interplay of ecology, economics, ethics and their translation and application to public policy. Students will explore topics including macroeconomic design characteristics and market failure as causes of environmental degradation; socio-ecological requirements for a sustainable society; and economic tools of analysis and incentive-based policy prescriptions for resolving problems of resource scarcity and environmental pollution. Includes perspectives from microeconomics, macroeconomics, and ecological economics. Also examines the role of policy in addressing environmental issues at the local, national, and global levels. (Grade or P/NP)
Prerequisites/Corequisites: Course completion of MATH 154, MATH 155, MATH 156, or higher, or MATH 15, or AB705 placement into Math Tier 1 or higher
Recommended: Eligibility for ENGL 1A or equivalent
Limits on Enrollment:
Transfer Credit: CSU;UC.
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**		Effective:	Inactive:
	D	Social and Behavioral Sciences	Fall 2025	
	H	Global Perspective and Environmental Literacy		
	L4	Social and Behavioral Sciences		
	D	Social and Behavioral Sciences	Fall 2009	Fall 2025
	H	Global Perspective and Environmental Literacy		
CSU GE:	**Transfer Area**		Effective:	Inactive:
	D	Social Science	Fall 2009	
	D2	Economics		
IGETC:	**Transfer Area**		Effective:	Inactive:
	4	Social and Behavioral Science	Fall 2009	
	4B	Economics		

CSU Transfer:	Transferable	Effective:	Fall 2009	Inactive:
UC Transfer:	Transferable	Effective:	Fall 2009	Inactive:

CID:

Certificate/Major Applicable:
Major Applicable Course

COURSE CONTENT

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Explain economy-environment interdependence and examine its implications for transitioning to an environmentally sustainable economy.
2. Identify major environmental issues facing society today and explain how systemic economic drivers contribute to environmental degradation.

3. Identify and assess tools of economic thought and analysis, as well as methods of economic inquiry (drawing from both standard economics and ecological economics) that can be employed to alleviate environmental problems.

Objectives:
At the conclusion of this course, the student should be able to:
1. Define environmental sustainability and explain the ecological imperative underlying it.
2. Differentiate between ecological and economic perspectives, and identify ways in which these two perspectives can be combined to address environmental issues.
3. Describe the relationship between economic growth and the environment, explore the question of planetary limits, and posit a formulation for environmentally sustainable economic development.
4. Outline the shortcomings of current national income accounting measures in terms of their ability to serve as indicators of sustainable development; describe adjustments to these measures that would cause them to better reflect environmental and resource factors; and evaluate whether new, "greener" measures of national well-being are needed.
5. Explain how markets work and why they fail, and evaluate the market's ability to look after the environment as well as the case for government intervention.
6. Compare and contrast command-and-control type policies with incentive-based policies and evaluate their effectiveness in reducing environmental impacts.
7. On the basis of current evidence regarding global climate change, discuss the seriousness of the problem, evaluate the role of economics in creating the problem and appraise economic policy alternatives.
8. Evaluate the perspectives of women and of global and minoritized voices regarding the interface between economics and the environment.

Topics and Scope:

I. An Introduction to Economics and the Environment
  A. Two methods of inquiry
    1. The traditional economics approach
    2. The ecological economics approach
  B. Brief history of environment and economics
    1. Perspectives of women
    2. Perspectives of global and minoritized voices
  C. Science and ethics
  D. Sustainability and sustainable development
II. The Environment; Biophysical Constraints
  A. Energy
  B. Ecology
III. Humans in the Environment - Some History
  A. History and human numbers
  B. Human environmental impact
IV. The Economy in the Environment - a Conceptual Framework
  A. The big picture: circular flow model with economy-environment interdependence
  B. Stocks and flows
  C. Natural capital
  D. Implications of the laws of thermodynamics
  E. Threats to sustainability
V. Macroeconomics and the Environment
  A. Economic growth and human well-being
  B. Economic growth and the environment

1. Kenneth Boulding: "The Spaceship Earth"
2. Donella Meadows: "The Limits to Growth" and "Beyond the Limits"
3. Herman Daly: "Beyond Growth"
4. Tim Jackson: "Prosperity without Growth"

C. Issues of macroeconomic scale
D. National income accounting conventions (such as GDP)
E. National income accounting and the environment
F. Greening the National Income Accounts
1. Index for Sustainable Economic Welfare (ISEW) and Genuine Progress Indicator (GPI)
2. Other alternative measures of economic progress
3. Environmental asset accounts

VI. Microeconomics and the Environment
A. How markets work
B. Limits to markets
1. Market failure
a. Externalities
b. Public goods
c. Common-property resources
2. Correcting market failure. Markets and sustainability: The case for government intervention

VII. Governance and the Economics of a Sustainable Society
A. Determining policy objectives
B. Operationalizing sustainability
1. Weak and strong sustainability
2. Precautionary principle
C. Environmental policy instruments
1. Moral suasion
2. Command and control
3. Creation of property rights (including Coase Theorem, common assets)
4. Taxation (Pigouvian taxes)
5. Quotas, caps and tradable permits
6. Others, may include: least cost theorem, environmental performance bonds, subsidies
D. General policy design principles: An ecological economics approach
1. Sustainable scale
2. Just distribution
3. Efficient allocation

VIII. Applications: Pollution (Topics may include some, not all, listed below)
A. Pollution: impacts and policy responses
B. Global climate change
C. Industrial ecology
D. Environmental justice considerations

IX. Applications: Energy and Resources (Topics may include some, not all, listed below)
A. Non-renewable resources
B. Energy: the great transition
C. Renewable resources
D. Ecosystem management/ biodiversity

X. Environment, Trade and Development
A. World trade and the environment
B. Institutions for sustainable development
1. Muhammed Yunus and the Grameen Bank
2. Vandana Shiva and Navdanya
C. Climate change

D. Biodiversity loss

Assignment:

1. Regular weekly reading assignments from course texts and supplementary materials. Typical reading assignments are 25 - 50 pages.
2. Ten to twelve take-home assignments and practice quizzes covering assigned readings and discussion topics. Practice quizzes may be multiple choice or short answer.
3. One to two midterm examination(s) and a final exam: will include written essays, multiple choice and or short answers.
4. Additional written assignments such as critical analysis and personal response papers (500-1500 words) regarding topics from assigned readings, an additional book from a selected bibliography, SRJC Environmental Forum presentations, and relevant news articles.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Additional written assignments	Writing 10 - 20%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Take-home assignments and practice quizzes	Problem solving 20 - 40%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None	Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Midterm examination(s) and final exam: essay exams, multiple-choice exams, short answer	Exams 50 - 70%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
An Introduction to Ecological Economics. 2nd ed. Costanza, Robert and Cumberland, John and Daly, Herman and Goodland, Robert. CRC Press. 2015 (classic)

Economics and the Environment. 9th ed. Goodstein, Eban and Polasky, Stephen. John Wiley and Sons, Inc. 2020

Environmental and Natural Resource Economics a Contemporary Approach. 4th ed. Harris, Jonathan M. and Roach, Brian. Routledge. 2018

Environmental Economics. 8th ed. Field, Barry; Field, Martha K. McGraw-Hill. 2020

State of the World 2008: Innovations for a Sustainable Economy. The Worldwatch Institute. W. W. Norton and Company. 2008 (classic)

State of the World 2013: Is Sustainability Still Possible? The Worldwatch Institute. W.W. Norton and Company. 2013 (classic)