Environmental Economics and Policy (ENVECON)

Courses

Expand all course descriptions [+]Collapse all course descriptions [-]

ENVECON C1 Introduction to Environmental Economics and Policy 4 Units
Terms offered: Fall 2020, Spring 2020, Fall 2019
Introduction to microeconomics with emphasis on resource, agricultural, and environmental issues.
Introduction to Environmental Economics and Policy: Read More [+]

Rules & Requirements

Prerequisites: Mathematics 32

Credit Restrictions: Students will receive no credit for ECON C3 after completing ECON 1.

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Summer: 8 weeks - 6 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/Undergraduate

Grading/Final exam status: Letter grade. Final exam required.

Also listed as: ECON C3

Introduction to Environmental Economics and Policy: Read Less [-]

ENVECON 39D Freshman/Sophomore Seminar 1.5 - 4 Units
Terms offered: Fall 2009, Fall 2008
Freshman and sophomore seminars offer lower division students the opportunity to explore an intellectual topic with a faculty member and a group of peers in a small-seminar setting. These seminars are offered in all campus departments; topics vary from department to department and from semester to semester.

Freshman/Sophomore Seminar: Read More [+]

Rules & Requirements

Prerequisites: Priority given to freshmen and sophomores

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1.5-4 hours of seminar per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/Undergraduate

Grading/Final exam status: The grading option will be decided by the instructor when the class is offered. Final exam required.

Freshman/Sophomore Seminar: Read Less [-]

ENVECON 98 Directed Group Studies (for Lower Division Students) 1 - 3 Units
Terms offered: Spring 2001
Group study (or seminar) of a selected topic or topics in Environmental Economics and Policy.

Directed Group Studies (for Lower Division Students): Read More [+]

Rules & Requirements

Prerequisites: Consent of Instructor

Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.

Repeat rules: Course may be repeated for credit without restriction.

Hours & Format

Fall and/or spring: 15 weeks - 1-3 hours of directed group study per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/Undergraduate

Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.

Directed Group Studies (for Lower Division Students): Read Less [-]
ENVECON 100 Microeconomic Theory with Application to Natural Resources 4 Units
Terms offered: Fall 2020, Spring 2020, Fall 2019
Covers the basic microeconomic tools for further study of natural resource problems. Theory of consumption, production, theory of the firm, industrial organization, general equilibrium, public goods and externalities. Applications to agriculture and natural resources.

Rules & Requirements

Prerequisites: C1 or Economics 1 or C3; and Mathematics 16A and 16B or Math 1A and 1B; or consent of instructor

Credit Restrictions: Students will receive no credit for Environmental Economics 100 after completing Economics 100A, Economics 101A, or Undergraduate Business Administration 110.

Enrollment Information

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week
Summer: 8 weeks - 6 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructors: Ligon, Rausser

Microeconomic Theory with Application to Natural Resources: Read Less [-]

ENVECON C101 Environmental Economics 4 Units
Terms offered: Spring 2020, Summer 2019 8 Week Session, Spring 2019, Spring 2018

Rules & Requirements

Prerequisites: 100, Mathematics 16A-16B, or Economics 100A or 101A

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week
Summer: 8 weeks - 6 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Zilberman

Also listed as: ECON C125

Environmental Economics: Read Less [-]

ENVECON C102 Natural Resource Economics 4 Units
Terms offered: Fall 2020, Fall 2019, Fall 2018
Introduction to the economics of natural resources. Land and the concept of economic rent. Models of optimal depletion of nonrenewable resources and optimal use of renewable resources. Application to energy, forests, fisheries, water, and climate change. Resources, growth, and sustainability.

Rules & Requirements

Prerequisites: 100, or Economics 100A or 100B

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Sunding

Natural Resource Economics: Read Less [-]
**ENVECON 103 Intermediate Microeconomic Theory with Application to Natural Resources**
4 Units
Terms offered: Prior to 2007
Covers intermediate microeconomic theory for further study of economic behavior as it relates to agriculture and natural resource problems. Theory of consumption, production, theory of the firm, industrial organization, general equilibrium, public goods and externalities. Applications to agriculture and natural resources.
Intermediate Microeconomic Theory with Application to Natural Resources: Read More [+]

**Rules & Requirements**

**Prerequisites:** C1 or Economics 1 or C3 and Mathematics 16A or consent of instructor

**Credit Restrictions:** Students will receive no credit for Environmental Economics 103 after completing Environmental Economics 100, Economics 100A, Economics 101A, or Undergraduate Business Administration 110.

**Hours & Format**

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

**Subject/Course Level:** Environmental Economics and Policy/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Ligon

Intermediate Microeconomic Theory with Application to Natural Resources: Read Less [-]

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**ENVECON C115 Modeling and Management of Biological Resources**
4 Units
Terms offered: Fall 2018, Fall 2017, Fall 2015, Fall 2014

Modeling and Management of Biological Resources: Read More [+]

**Rules & Requirements**

**Prerequisites:** A course that includes differential and integral calculus

**Hours & Format**

Fall and/or spring: 15 weeks - 3 hours of lecture and 2 hours of laboratory per week

Summer: 6 weeks - 6.5 hours of lecture and 4 hours of laboratory per week

Additional Details

**Subject/Course Level:** Environmental Economics and Policy/Undergraduate

**Grading/Final exam status:** Letter grade. Final exam required.

**Instructor:** Getz

Also listed as: ESPM C104

Modeling and Management of Biological Resources: Read Less [-]
ENVECON C118 Introductory Applied Econometrics 4 Units
Terms offered: Fall 2020, Summer 2020 8 Week Session, Spring 2020
Formulation of a research hypothesis and definition of an empirical strategy. Regression analysis with cross-sectional and time-series data; econometric methods for the analysis of qualitative information; hypothesis testing. The techniques of statistical and econometric analysis are developed through applications to a set of case studies and real data in the fields of environmental, resource, and international development economics. Students learn the use of a statistical software for economic data analysis.
Introductory Applied Econometrics: Read More [+]

Rules & Requirements

Prerequisites: Statistics 2, 20, 21, or equivalent

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week
Summer: 8 weeks - 6 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Sadoulet
Also listed as: IAS C118

ENVECON 131 Globalization and the Natural Environment 3 Units
Terms offered: Fall 2013, Fall 2012, Fall 2011
An examination of the environmental effects of globalization. How has increased international trade, the integration of factor markets, and the adoption of international agreements affected the environment? Case studies include the environmental impact of GATT/WTO and NAFTA. Multi-disciplinary approach examines the actual laws and institutions and the economic theories of globalization, in addition to the empirical evidence of globalization’s environmental effects.
Globalization and the Natural Environment: Read More [+]

Rules & Requirements

Prerequisites: Intermediate micro-economic theory or consent of instructor

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Karp

Globalization and the Natural Environment: Read Less [-]
ENVECON C132 International Environmental Economics 4 Units
Terms offered: Fall 2020
This course discusses a range of environmental issues, including: climate change; air pollution; water pollution; loss of tropical forests; depletion of fisheries; species extinction; depletion of the atmospheric ozone layer; pollution abatement technologies; green energy; fossil fuel extraction; and others. The course also analyzes a range of ways and concepts describing how countries and regions interact, including: trade; foreign direct investment; multinational ownership; global value chains; outsourcing; globalization; market access; international transportation; international treaties; unilateral environmental policy; and others.
International Environmental Economics: Read More [+]  
Objectives & Outcomes
Course Objectives:
3. Familiarity with economic methods and data used to study these questions
1. Ability to analyze environmental policy in settings where multiple countries or states interact
2. Knowledge of key current environmental, trade, and multinational policy debates

Rules & Requirements
Prerequisites: ENVECON 100, ECON 101a, ECON 100a or or equivalent

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Shapiro
Also listed as: ECON C184
International Environmental Economics: Read Less [-]

ENVECON 140AC Economics of Race, Agriculture, and the Environment 3 Units
Terms offered: Fall 2012, Fall 2011, Fall 2010
This course examines whether and how economic processes explain shifting formations of race and differential experiences among racial groups in U.S. agricultural and environmental systems. It approaches economic processes as organizing dynamics of racial differentiation and integration, and uses comparative experience among different racial and ethnic groups as sources of evidence against which economic theories of differentiation and integration can be tested.
Economics of Race, Agriculture, and the Environment: Read More [+]  
Rules & Requirements
Prerequisites: 1, or one lower division course in a social science, or consent of instructor
Requirements this course satisfies: Satisfies the American Cultures requirement

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture and 1 hour of discussion per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Romm
Economics of Race, Agriculture, and the Environment: Read Less [-]
ENVECON 141 Agricultural and Environmental Policy 4 Units
Terms offered: Fall 2019, Summer 2019 8 Week Session, Fall 2018
This course considers the formation, implementation, and impact of public policies affecting agriculture and the environment. Economic approaches to public lawmaking, including theories of legislation, interest group activity, and congressional control of bureaucracies. Case studies include water allocation, endangered species protection, water quality, food safety, drainage, wetlands, pesticides, and farmworker safety. Emphasis on examples from California.
Agricultural and Environmental Policy: Read More [+]

Rules & Requirements

Prerequisites: 100 or Economics 100A or 101A

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week
Summer: 8 weeks - 6 hours of lecture and 2 hours of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Agricultural and Environmental Policy: Read Less [-]

ENVECON 142 Industrial Organization with Applications to Agriculture and Natural Resources 4 Units
Terms offered: Spring 2015, Spring 2014, Spring 2013
Organization and performance of agricultural and resource markets. Conduct of firms within those markets, such as price competition, product differentiation, predatory pricing, vertical integration, dealer networks and advertising. The role of public policy in the markets. Case studies include oil cartel OPEC, agricultural cooperatives, vertical integration of food processors and franchising of fast-food chains. Discussion sections cover empirical applications of theory presented during lectures for current environmental and agricultural policies.
Industrial Organization with Applications to Agriculture and Natural Resources: Read More [+]

Rules & Requirements

Prerequisites: Environmental Economics and Policy 100 or Economics 100A or 101A

Hours & Format

Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details

Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Villas-Boas
Industrial Organization with Applications to Agriculture and Natural Resources: Read Less [-]
ENVECON 143 Economics of Innovation and Intellectual Property 4 Units
Terms offered: Fall 2020, Fall 2019, Spring 2019
This course addresses the economics of research and incentives for innovation including intellectual property rights. Topics include the standard modern economics of invention; modern intellectual property rights; innovation examples from the agriculture, energy, pharmaceuticals, software, and electronics; the roles of the public and private sectors; innovation and market structure; the needs of the poor; and global intellectual property negotiations.

ENVECON 145 Health and Environmental Economic Policy 4 Units
Terms offered: Fall 2019, Fall 2016, Fall 2015
This course introduces students to key issues and findings in the field of health and environmental economics. The first half of the course focuses on the theoretical and statistical frameworks used to analyze instances of market failure in the provision of health and environmental goods. The second half focuses on policy-relevant empirical findings in the field.

ENVECON 147 Regulation of Energy and the Environment 4 Units
Terms offered: Spring 2020, Spring 2019, Spring 2017
This is an applied economics course on government regulation of energy with an emphasis on policies that seek to mitigate the impact of energy production and consumption on the environment. The course is designed to help students make connections between economic concepts and real-world regulatory policy questions and issues.

ENVECON C151 Development Economics 4 Units
Terms offered: Fall 2020, Summer 2020 8 Week Session, Spring 2020, Fall 2019
This course covers theory and empirical evidence on the determinants of economic development and the global fight against poverty. The course aims to introduce students to modern empirical research methods that are being used to inform policy making in developing countries. Students also learn how to implement these tools themselves using real-world data sets and widely used statistical software for impact evaluation.

Rules & Requirements
Prerequisites: ENVECON 100 or ECON 100A or ECON 101A with minimum grade of C+
Prerequisites: Intermediate microeconomics, 100, Economics 100 or 101A, and some statistics

Rules & Requirements
Prerequisites: Intermediate microeconomics, 100, Economics 100 or 101A, and some statistics

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Wright

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Anderson

Health and Environmental Economic Policy: Read Less [-]
Health and Environmental Economic Policy: Read Less [-]
Development Economics: Read Less [-]
ENVECON N151 Economic Development 4 Units
Terms offered: Not yet offered
Problems of underdevelopment and poverty, policy issues, and development strategy.
Economic Development: Read More [+]

Rules & Requirements
Prerequisites: Envecon 100, Economics 100A or Economics 100B
Credit Restrictions: Students will receive no credit for ENVECON N151 after completing ECON N171, ENVECON C151, or ECON C171. A deficient grade in ENVECON N151 may be removed by taking ECON N171, ENVECON C151, or ECON C171.

Hours & Format
Summer:
6 weeks - 8 hours of lecture and 2 hours of discussion per week
8 weeks - 6 hours of lecture and 2 hours of discussion per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Economic Development: Read Less [-]

ENVECON 152 Advanced Topics in Development and International Trade 3 Units
Terms offered: Spring 2020, Spring 2018, Fall 2016
This course discusses recent efforts to understand behavior and institutions in village economies, with particular attention paid to the importance of risk. Economic analysis of savings, consumption, insurance, production, trade, welfare distribution and institutions of villages in developing countries. Roughly equal parts of theory, evidence, and policy.
Advanced Topics in Development and International Trade: Read More [+]

Rules & Requirements
Prerequisites: 100 or Economics 100A

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture and 1 hour of discussion per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Magruder
Advanced Topics in Development and International Trade: Read Less [-]

ENVECON 153 Population, Environment, and Development 3 Units
Terms offered: Spring 2020, Spring 2019, Spring 2014
This course takes a quantitative, hands-on approach to understanding the challenges of feeding the human population of the planet Earth. We'll discuss topics of nutrition, subsistence food consumption, and consumer demand for food to develop our understanding of the current situation. We'll then develop both theories and computer models of population dynamics taking into account people's decisions about childbearing, changes in mortality, and changes in food supply in order to learn something about the future of food. Focus throughout the course will be on developing practical tools to work with real-world data.
Population, Environment, and Development: Read More [+]

Rules & Requirements
Prerequisites: ENVECON 100 or ECON 100A or ECON 101A, and STAT C8 or INFO C8 or COMPSCI C8, and MATH 54 RECOMMENDED

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture and 2 hours of laboratory per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Boettiger
Population, Environment, and Development: Read Less [-]

ENVECON 154 Economics of Poverty and Technology 3 Units
Terms offered: Spring 2014, Spring 2013, Spring 2012
Introduction to the economic framework underlying the use of technology to address rural poverty in developing countries. Analyzes the path of technology development from innovation and design to the adoption and use of technology in rural economies. Focuses on technologies related to agricultural production, processing, market access, value chains, and climate change.
Economics of Poverty and Technology: Read More [+]

Rules & Requirements
Prerequisites: Intermediate microeconomics

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructor: Boettiger
Economics of Poverty and Technology: Read Less [-]
ENVECON 161 Advanced Topics in Environmental and Resource Economics 4 Units
Terms offered: Fall 2013, Fall 2012, Fall 2011
The roots of environmental and resource economics. Theories of land and resource rent. Models of optimal use of renewable and nonrenewable resources with applications to energy and timber. Balancing environmental and extractive values. Resources, growth, and sustainability. Special topic: the problem of global climate change. Advanced Topics in Environmental and Resource Economics: Read More [+]

Rules & Requirements
Prerequisites: 100 or Economics 100A or Economics 101A; 101 recommended

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/ Undergraduate
Grading/Final exam status: Letter grade. Final exam required.

ENVECON 162 Economics of Water Resources 3 Units
Terms offered: Spring 2020, Spring 2019, Spring 2018
Urban demand for water; water supply and economic growth; water utility economics; irrigation demand; large water projects; economic impacts of surface water law and institutions; economics of salinity and drainage; economics of groundwater management. Economics of Water Resources: Read More [+]

Rules & Requirements
Prerequisites: 100 or Economics 100A or 101A; 101 recommended

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture and 1 hour of discussion per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/ Undergraduate
Grading/Final exam status: Letter grade. Final exam required.

ENVECON C175 The Economics of Climate Change 4 Units
Terms offered: Spring 2016, Fall 2015, Fall 2014, Fall 2013
The course will start with a brief introduction and evaluation of the scientific aspects behind climate change. Economic models will be developed to analyze the impacts of climate change and provide and critique existing and proposed policy tools. Specific topics studied are impacts on water resources and agriculture, economic evaluation of impacts, optimal control of greenhouse gases, benefit cost analysis, international treaty formation, discounting, uncertainty, irreversibility, and extreme events. Economics of Climate Change: Read More [+]

Rules & Requirements
Prerequisites: 106, 107, Economics 1, or equivalent

Hours & Format
Fall and/or spring: 15 weeks - 3 hours of lecture and 1 hour of discussion per week
Summer: 6 weeks - 7.5 hours of lecture and 2.5 hours of discussion per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/ Undergraduate
Grading/Final exam status: Letter grade. Final exam required.
Instructors: Aufhammer, Fisher
Also listed as: IAS C175
The Economics of Climate Change: Read Less [-]
ENVECON C176 Climate Change Economics 4 Units
Terms offered: Fall 2020, Summer 2020 8 Week Session, Fall 2019
This course is a self-contained introduction to the economics of climate change. Climate change is caused by a large variety of economic activities, and many of its impacts will have economic consequences. Economists have studied climate change for more than two decades, and economic arguments are often powerful in policy decisions. The course will familiarize students with these arguments and equip them with the tools to participate in discussions of climate change policy through an economic lens.

Course Objectives: The course will start with a brief review of the science of climate change, discuss scenarios of economic growth and the greenhouse gas emissions caused by economic activities and investigate various emission reduction opportunities and their economic costs. A significant amount of time will be spent on studying the impacts of climate change, their economic evaluation and how adaptation can lower the costs of climate damages.

We will then study various theoretical frameworks economists have developed that answer the question how estimates about the costs and benefits of climate policy can be combined to find “good” climate policies. We then study three more specialized topics that turn out to be of great importance when analyzing climate change policy: first, how do we compare costs and benefits of generations that live many centuries apart? Second, how do we design climate policy when our projections of both the costs and the benefits of climate policy are highly uncertain? And third, how can equity considerations be accounted for in an economic assessment of climate change policy? The course will close with a look at international cooperation on climate policy and why it has been so difficult to agree on effective treaties that implement climate change policy.

Student Learning Outcomes: Students will also have gained insight into the practical aspects of modeling the economics of climate change by building a simple integrated assessment model in Excel. They will be able to use that model to do simple analysis of climate change policy themselves. Students will be familiar with the tools economists use to analyze climate change policy. They will have studied empirical estimates of the costs and benefits of climate policy and have an understanding of the analytical issues that drive research on the economics of climate change.

ENVECON C181 International Trade 4 Units
Terms offered: Fall 2020, Spring 2020, Fall 2019
The theory of international trade and its applications to tariff protection. This course is equivalent to UGBA 118; students will not receive credit for both courses.

Course Objectives: The course will familiarize students with the tools economists use to analyze climate change policy through an economic lens.

Course Objectives: The course will start with a brief review of the science of climate change, discuss scenarios of economic growth and the greenhouse gas emissions caused by economic activities and investigate various emission reduction opportunities and their economic costs. A significant amount of time will be spent on studying the impacts of climate change, their economic evaluation and how adaptation can lower the costs of climate damages.

We will then study various theoretical frameworks economists have developed that answer the question how estimates about the costs and benefits of climate policy can be combined to find “good” climate policies. We then study three more specialized topics that turn out to be of great importance when analyzing climate change policy: first, how do we compare costs and benefits of generations that live many centuries apart? Second, how do we design climate policy when our projections of both the costs and the benefits of climate policy are highly uncertain? And third, how can equity considerations be accounted for in an economic assessment of climate change policy? The course will close with a look at international cooperation on climate policy and why it has been so difficult to agree on effective treaties that implement climate change policy.

Student Learning Outcomes: Students will also have gained insight into the practical aspects of modeling the economics of climate change by building a simple integrated assessment model in Excel. They will be able to use that model to do simple analysis of climate change policy themselves. Students will be familiar with the tools economists use to analyze climate change policy. They will have studied empirical estimates of the costs and benefits of climate policy and have an understanding of the analytical issues that drive research on the economics of climate change.

ENVECON C183 Forest Ecosystem Management 4 Units
Terms offered: Spring 2016, Spring 2015, Spring 2014
Introduces students to concepts and quantitative tools needed for the sustainable management of multi-use forest ecosystems. Topics covered include: estimation of ecological, economic, and social values: construction of dynamic forest models, methods for optimal decision-making, and development of forest management plans. Application to current issues in temperate and tropical forest management are discussed. Quantitative, analytical, and communication skills are emphasized. Oral presentation required.

Course Objectives: The course will familiarize students with the tools economists use to analyze climate change policy. They will have studied empirical estimates of the costs and benefits of climate policy and have an understanding of the analytical issues that drive research on the economics of climate change.

Course Objectives: The course will start with a brief review of the science of climate change, discuss scenarios of economic growth and the greenhouse gas emissions caused by economic activities and investigate various emission reduction opportunities and their economic costs. A significant amount of time will be spent on studying the impacts of climate change, their economic evaluation and how adaptation can lower the costs of climate damages.

We will then study various theoretical frameworks economists have developed that answer the question how estimates about the costs and benefits of climate policy can be combined to find “good” climate policies. We then study three more specialized topics that turn out to be of great importance when analyzing climate change policy: first, how do we compare costs and benefits of generations that live many centuries apart? Second, how do we design climate policy when our projections of both the costs and the benefits of climate policy are highly uncertain? And third, how can equity considerations be accounted for in an economic assessment of climate change policy? The course will close with a look at international cooperation on climate policy and why it has been so difficult to agree on effective treaties that implement climate change policy.

Student Learning Outcomes: Students will also have gained insight into the practical aspects of modeling the economics of climate change by building a simple integrated assessment model in Excel. They will be able to use that model to do simple analysis of climate change policy themselves. Students will be familiar with the tools economists use to analyze climate change policy. They will have studied empirical estimates of the costs and benefits of climate policy and have an understanding of the analytical issues that drive research on the economics of climate change.

ENVECON C176 Climate Change Economics 4 Units
Terms offered: Fall 2020, Summer 2020 8 Week Session, Fall 2019
This course is a self-contained introduction to the economics of climate change. Climate change is caused by a large variety of economic activities, and many of its impacts will have economic consequences. Economists have studied climate change for more than two decades, and economic arguments are often powerful in policy decisions. The course will familiarize students with these arguments and equip them with the tools to participate in discussions of climate change policy through an economic lens.

Course Objectives: The course will start with a brief review of the science of climate change, discuss scenarios of economic growth and the greenhouse gas emissions caused by economic activities and investigate various emission reduction opportunities and their economic costs. A significant amount of time will be spent on studying the impacts of climate change, their economic evaluation and how adaptation can lower the costs of climate damages.

We will then study various theoretical frameworks economists have developed that answer the question how estimates about the costs and benefits of climate policy can be combined to find “good” climate policies. We then study three more specialized topics that turn out to be of great importance when analyzing climate change policy: first, how do we compare costs and benefits of generations that live many centuries apart? Second, how do we design climate policy when our projections of both the costs and the benefits of climate policy are highly uncertain? And third, how can equity considerations be accounted for in an economic assessment of climate change policy? The course will close with a look at international cooperation on climate policy and why it has been so difficult to agree on effective treaties that implement climate change policy.

Student Learning Outcomes: Students will also have gained insight into the practical aspects of modeling the economics of climate change by building a simple integrated assessment model in Excel. They will be able to use that model to do simple analysis of climate change policy themselves. Students will be familiar with the tools economists use to analyze climate change policy. They will have studied empirical estimates of the costs and benefits of climate policy and have an understanding of the analytical issues that drive research on the economics of climate change.

ENVECON C181 International Trade 4 Units
Terms offered: Fall 2020, Spring 2020, Fall 2019
The theory of international trade and its applications to tariff protection. This course is equivalent to UGBA 118; students will not receive credit for both courses.

Course Objectives: The course will familiarize students with the tools economists use to analyze climate change policy through an economic lens.

Course Objectives: The course will start with a brief review of the science of climate change, discuss scenarios of economic growth and the greenhouse gas emissions caused by economic activities and investigate various emission reduction opportunities and their economic costs. A significant amount of time will be spent on studying the impacts of climate change, their economic evaluation and how adaptation can lower the costs of climate damages.

We will then study various theoretical frameworks economists have developed that answer the question how estimates about the costs and benefits of climate policy can be combined to find “good” climate policies. We then study three more specialized topics that turn out to be of great importance when analyzing climate change policy: first, how do we compare costs and benefits of generations that live many centuries apart? Second, how do we design climate policy when our projections of both the costs and the benefits of climate policy are highly uncertain? And third, how can equity considerations be accounted for in an economic assessment of climate change policy? The course will close with a look at international cooperation on climate policy and why it has been so difficult to agree on effective treaties that implement climate change policy.

Student Learning Outcomes: Students will also have gained insight into the practical aspects of modeling the economics of climate change by building a simple integrated assessment model in Excel. They will be able to use that model to do simple analysis of climate change policy themselves. Students will be familiar with the tools economists use to analyze climate change policy. They will have studied empirical estimates of the costs and benefits of climate policy and have an understanding of the analytical issues that drive research on the economics of climate change.
ENVECON 185 The Production and Business of Beer, Wine, and Spirits 2 Units
Terms offered: Fall 2020
Raw materials, process flow, production methodology and quality control will be introduced in the first half of the class for the first half of the semester. Students will also be introduced to basic chemistry and microbiology of fermentation and distilling. The second half of the semester will be an introduction to finance, cost accounting, sales and marketing for the alcoholic beverage industry. The goal will be to enable the students to write a business plan by the end of the semester.
The Production and Business of Beer, Wine, and Spirits: Read More [+]
Objectives & Outcomes
Course Objectives:
1. Cite detail of raw materials and production processes for beer, wine, and spirits.
2. Describe and differentiate the majority of beer styles, wine varietals and various distilled spirits.
3. Write a realistic business plan for a beverage production company.

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of lecture per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Alternative to final exam.
Instructor: Perloff

ENVECON 195 Senior Thesis 4 Units
Terms offered: Summer 2019, Fall 2017, Fall 2016
Writing of a thesis under the direction of member(s) of the faculty. Subject must be approved by faculty sponsor.
Senior Thesis: Read More [+]

Rules & Requirements
Prerequisites: Student must be a senior with at least a 3.6 GPA in the Environmental Economics and Policy major

Hours & Format
Fall and/or spring: 15 weeks - 2 hours of seminar per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam not required.
Instructor: Fisher

ENVECON 196 Senior Research Seminar 4 Units
Terms offered: Spring 2011
This course is intended as a capstone experience for undergraduates in the major coordinated by one faculty member with participation by others. Following presentations by faculty on researchable topics in their areas of expertise, students will develop ideas for a research paper and discuss in subsequent seminar sessions. Approximately the last five weeks of the semester will be devoted to student presentations of papers either already completed or in progress, and discussion by seminar participants and faculty.
Senior Research Seminar: Read More [+]

Rules & Requirements
Prerequisites: Upper division standing. Eligibility restrictions related to GPA and unit accumulation. Open only to Environmental Economics and Policy majors in the College of Natural Resources
Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 4 hours of independent study per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam not required.
Instructor: Fisher

ENVECON H196 Honors Research 4 Units
Terms offered: Fall 2016, Spring 2016, Fall 2015
Supervised independent honors research specific to aspects of environmental economics and policy, followed by a oral presentation and a written report.
Honors Research: Read More [+]

Rules & Requirements
Prerequisites: Upper division standing. Eligibility restrictions related to GPA and unit accumulation. Open only to Environmental Economics and Policy majors in the College of Natural Resources
Repeat rules: Course may be repeated for credit without restriction.

Hours & Format
Fall and/or spring: 15 weeks - 4 hours of independent study per week

Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate
Grading/Final exam status: Letter grade. Final exam not required.
ENVECON 197 Field Study in Environmental Economics and Policy 1 - 4 Units
Terms offered: Fall 2016, Summer 2016 10 Week Session, Spring 2016
Supervised experience in off-campus organizations relevant to specific aspects of environmental economics and policy. Regular individual meetings with faculty sponsor and written reports required.
Field Study in Environmental Economics and Policy: Read More [+]  
Rules & Requirements
Prerequisites: Consent of instructor  
Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.  
Repeat rules: Course may be repeated for credit without restriction.  
Hours & Format
Fall and/or spring: 15 weeks - 1-4 hours of independent study per week  
Summer: 6 weeks - 1-9 hours of independent study per week  
8 weeks - 1-7 hours of independent study per week  
Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate  
Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.
Field Study in Environmental Economics and Policy: Read Less [-]

ENVECON 198 Directed Group Studies for Advanced Undergraduates 1 - 3 Units
Terms offered: Spring 2016, Fall 2015, Spring 2015
Group study of selected topic or topics in Environmental Economics and Policy.
Directed Group Studies for Advanced Undergraduates: Read More [+]
Rules & Requirements
Prerequisites: Consent of instructor  
Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.  
Repeat rules: Course may be repeated for credit without restriction.  
Hours & Format
Fall and/or spring: 15 weeks - 1-3 hours of directed group study per week  
Summer: 8 weeks - 1.5-5.5 hours of directed group study per week  
Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate  
Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.
Directed Group Studies for Advanced Undergraduates: Read Less [-]

ENVECON 199 Supervised Independent Study and Research 1 - 4 Units
Terms offered: Fall 2020, Spring 2020, Fall 2019
Enrollment restrictions apply. Open to qualified upper division students wishing to pursue special study and directed research under the direction of a member of the staff.
Supervised Independent Study and Research: Read More [+]
Rules & Requirements
Prerequisites: Upper division standing and consent of instructor  
Credit Restrictions: Enrollment is restricted; see the Introduction to Courses and Curricula section of this catalog.  
Repeat rules: Course may be repeated for credit without restriction.  
Hours & Format
Fall and/or spring: 15 weeks - 0 hours of independent study per week  
Summer: 8 weeks - 1-4 hours of independent study per week  
Additional Details
Subject/Course Level: Environmental Economics and Policy/Undergraduate  
Grading/Final exam status: Offered for pass/not pass grade only. Final exam not required.
Supervised Independent Study and Research: Read Less [-]