

ENVIRONMENTAL STUDIES (TRI-CO)

haverford.edu/environmental-studies

Haverford, Bryn Mawr, and Swarthmore offer an interdisciplinary Tri-College (Tri-Co) Environmental Studies (ES) Minor, involving departments and faculty on all three campuses from the natural sciences, engineering, mathematics, the humanities, and the arts. The Tri-Co ES Minor brings together students and faculty to explore interactions among earth systems, human societies, and local and global environments.

The Tri-Co ES Minor cultivates in students the capacity to identify and confront key environmental issues through a blend of multiple disciplines, encompassing historical, cultural, economic, political, scientific, and ethical modes of inquiry. Acknowledging the reciprocal dimensions of materiality and culture in the historical formations of environments, this program is broadly framed by a series of interlocking dialogues: between the “natural” and the “built,” the local and the global, and the human and the nonhuman.

To declare the minor, students should contact the Environmental Studies director at their home campus.

LEARNING GOALS

- Students will be able to identify and confront key environmental issues through a blend of multiple disciplines, including historical, cultural, economic, political, scientific and ethical modes of inquiry.
- Students will develop good communication skills with particular aptitude for dialogue across and between multiple disciplines.
- Students will collaborate on interdisciplinary group projects that relate to environmental issues and that reflect creativity and tangible research design and inquiry.

CURRICULUM

Students may complete an ES Minor in conjunction with any major at Haverford, Bryn Mawr or Swarthmore, pending approval of the student’s coursework plan by the home department and the home-campus ES director.

MINOR REQUIREMENTS

The Tri-Co ES Minor consists of six courses, including an introductory course and capstone course. Students may complete the courses at any of the three campuses (or any combination thereof). The six required courses are:

- A required introductory course to be taken prior to the senior year. This may be ENVS 101 at Haverford or Bryn Mawr or the parallel course at Swarthmore (ENVS 001). Any one of these courses satisfies the requirement, and students may take no more than one such course for credit toward the minor.
- Four elective course credits from approved lists of core and cognate courses, including two credits in each of the following two categories. Students may use no more than one cognate course credit for each category. (See the ES website for course lists and more about core and cognate courses.) For Haverford students, no more than one of these four course credits may be in the student’s major.
 - **Environmental Science, Engineering, and Math:** courses that build understanding and knowledge of scientific methods and theories, and explore how these can be applied in identifying and addressing environmental challenges. At least one of the courses in this category must have a laboratory component.
 - **Environmental Social Sciences, Humanities, and Arts:** courses that build understanding and knowledge of social and political structures as well as ethical considerations, and how these inform our individual and collective responses to environmental challenges.
- A senior seminar (case-based), with culminating work that reflects tangible research design and inquiry, but might materialize in any number of project forms. Haverford and Bryn Mawr’s ENVS 397 (Senior Seminar in Environmental Studies) and Swarthmore’s ENVS 091 (Environmental Studies Capstone Seminar) satisfy the requirement.

Haverford students interested in the ES Minor should plan their course schedule with the

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Haverford Director of Environmental Studies in consultation with their major advisor. In choosing electives, we encourage students to reach beyond their major, and to include mostly intermediate or advanced courses.

AFFILIATED PROGRAMS

For information about faculty and courses in Environmental Studies at Bryn Mawr and Swarthmore, visit the websites of those programs.

CONCENTRATIONS AND INTERDISCIPLINARY MINORS

Environmental Studies contributes to the following concentrations and interdisciplinary minors at Haverford:

- Health Studies
- Peace, Justice, and Human Rights
- Visual Studies

STUDY ABROAD

Students are encouraged to study abroad and receive ES credit by participation in programs in Australia, Denmark, Ecuador, Germany, Ireland, Scotland and South Africa. Other study abroad programs can receive ES credit by arrangement with the ES Director.

FACULTY AT HAVERFORD

Joshua Moses

Assistant Professor of Anthropology and Environmental Studies

Helen White

Associate Professor of Chemistry and Environmental Studies

Jonathan Wilson

Assistant Professor of Biology and Environmental Studies, Environmental Studies Director at Haverford

Affiliated Faculty at Haverford:

Kimberly Benston

President of the College and Francis B. Gummere Professor of English

Craig Borowiak

Associate Professor of Political Science

C. Stephen Finley

Professor of English

Andrew Friedman

Associate Professor of History

Darin Hayton

Associate Professor of History

Benjamin Le

Professor of Psychology

Robert Scarrow

Professor of Chemistry

Erin Schoneveld

Assistant Professor of East Asian Languages & Cultures

FACULTY AT BRYN MAWR

Don Barber

Associate Professor of Geology on the Harold Alderfer Chair in Environmental Studies; Co-Director of Environmental Studies at Bryn Mawr

Victor Donnay

Professor of Mathematics on the William R. Kenan, Jr. Chair; Co-Director of Environmental Studies at Bryn Mawr

Affiliated Faculty at Bryn Mawr:

Jody Cohen

Term Professor in the Bryn Mawr/Haverford Education Program

Selby Cull-Hearth (*on leave Spring 2018*)

Assistant Professor of Geology

Robert Dostal

Rufus M. Jones Professor and Chair of Philosophy

Jonas Goldsmith

Associate Professor of Chemistry

Karen Greif

Professor of Biology

Carol Hager

Professor of Political Science on the Clowes Professorship in Science and Public Policy and Director of the Center for Social Sciences

Yonglin Jiang

Co-Chair and Associate Professor of East Asian Studies

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Gary McDonogh

Helen Herrmann Chair and Professor of Growth and Structure of Cities

Pedro Marengo

Associate Professor of Geology

Tom Mozdzer

Assistant Professor of Biology

Kalala Ngalamulume

Associate Professor of Africana Studies and History, Co-Director of International Studies and Co-Director of Health Studies

Sydne Record

Assistant Professor of Biology

Michael Rock

Samuel and Etta Wexler Professor of Economic History

David Ross

Associate Professor of Economics

Nathan Wright

Associate Professor of Sociology

FACULTY AT SWARTHMORE

Giovanna DiChiro

Environmental Studies

Christopher Graves

Chemistry and Environmental Studies

Gustavo Oliveira

Environmental Studies

Jennifer Peck

Economics and Environmental Studies

Jennifer Pfluger

Environmental Studies

Affiliated Faculty at Swarthmore:

Elizabeth Bolton

English Literature

Timothy Burke

History

Erich Carr Everbach

Engineering

Eric Jensen

Physics & Astronomy (Faculty Coordinator)

José-Luis Machado

Biology

Arthur McGarity

Engineering

Rachel Merz

Biology

Carol Nackenoff

Political Science

Elizabeth Nichols

Biology

Christine Schuetze

Sociology & Anthropology

Mark Wallace

Religion

COURSES AT HAVERFORD

ENVS H101 CASE STUDIES IN ENVIRONMENTAL ISSUES: CONCEPTS, CONTEXTS, & CONUNDRUMS

Jonathan Wilson, Helen White

The course offers a cross-disciplinary introduction to environmental studies. Tracing an arc from historical analysis to practical engagement, distinctive approaches to key categories of environmental inquiry are presented: political ecology, earth science, energy, economics, public health, ecological design, sustainability, policy, and environmental ethics. Basic concepts, such as thermodynamics, biodiversity, cost-benefit analysis, scale, modernization, enclosure, the commons, and situational ethics, are variously defined and employed within specific explorations of environmental challenges in the modern world. No divisional credit will be awarded for this course. (Offered every Fall; *ENVS B101 offered Fall 2017 at Bryn Mawr by Don Barber*)

ENVS H118 PLANTS AND PEOPLE

Jonathan Wilson

Natural Science (NA)

A multidisciplinary approach to the co-evolution and co-domestication of plants and humans. Topics will include the biology, physiology, evolution, and cultivation of key plants, embedded within their social history and

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environmental effects. Intended for non-majors and meets in parallel with BIOL 318. Crosslisted: Biology, Environmental Studies (Offered Spring 2018)

ENVS H206 INTRODUCTION TO PERMACULTURE

Rafter Ferguson

Social Science (SO)

An introduction to permaculture, a design system aimed at meeting human needs while increasing ecosystem health, with attention to ethics, principles, design process, and techniques for application across a wide range of contexts.

Crosslisted: Environmental Studies, Independent College Programs; Prerequisite(s): Sophomore standing (at time taking course), or instructor consent. (Offered Fall 2017)

ENVS H230 POSTWAR JAPANESE CINEMA

Erin Schoneveld

Humanities (HU)

This course provides an introduction to Japanese cinema from the immediate Postwar period of 1945 to the present day. Focusing on films by influential directors including Ozu Yasujiro, Kurosawa Akira, and Mizoguchi Kenji among others we will consider how Japanese filmmakers use cinema to investigate issues of truth, beauty, identity, and nationhood in an attempt to answer fundamental questions regarding life and death in Japan's Postwar period. Crosslisted: East Asian Languages & Cultures, Environmental Studies, Visual Studies (Offered Spring 2018)

ENVS H263 CARBON FARMING

Rafter Ferguson

Social Science (SO)

An exploration of the range of carbon-sequestering agriculture practices and their potential to provide solutions to a range of social and environmental problems from climate justice to land degradation. Crosslisted: Environmental Studies, Independent College Programs; Prerequisite(s): One course in Environmental Studies or one course in Natural Science, or instructor consent. (Offered Spring 2018)

ENVS H281 NATURE/ CULTURE: AN INTRODUCTION TO ENVIRONMENTAL ANTHROPOLOGY

Joshua Moses

Social Science (SO)

This course will introduce students to the emerging field of environmental anthropology that focuses on the interrelationship between human cultures and natural environments. Environmental anthropology studies the various ways in which our biological survival and our social structures are influenced by environmental factors around us, while at the same time analyzing how our actions shape these environmental factors in turn. The course will engage with some of the key themes of the major sub-disciplines of environmental anthropology, viz. ecological anthropology, ethnoecology, political ecology, environmental justice, and sustainability studies. Topics covered will include human adaptation, traditional environmental knowledge, food justice, race/ class and access to safe environment, etc. Prerequisite(s): ANTH 103 or ENVS 101 or instructor consent. (Offered Fall 2017)

ENVS H305 ART AND THE ENVIRONMENT IN EAST ASIA

Erin Schoneveld

Humanities (HU)

This course examines the relationship between environment and the arts in China and Japan. In particular, how artists engage with and respond to nature through varied modes of artistic production and exhibition. Crosslisted: East Asian Languages & Cultures, Environmental Studies, Visual Studies (Offered Fall 2017)

ENVS H309 PLACE, PEOPLE, AND COLLABORATIVE RESEARCH IN THE URBAN ENVIRONMENT

Joshua Moses

Social Science (SO)

This transdisciplinary course focuses on anthropology's contributions (and potential contributions) to engaging critical environmental issues in urban settings. Collaborative environmental work with urban communities is inherently interdisciplinary, drawing on anthropology, urban planning, public health, ecology, and geography. Through a study of Philadelphia's current struggles to redefine itself as a green city, students will gain grounding in anthropological theory and practice and urban ecology. Themes will include the intersections of race, class, and gender; environmental justice; urban farming/gardening; brownfields; grassroots organizing; action research; and ideas of place, home and nature. The course will focus on the ethics and practice of community

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collaboration and community-based research in environmental work in urban settings. It will require significant time working with a community group in Philadelphia. Crosslisted: Anthropology, Environmental Studies
Prerequisite(s): Students will be selected based on instructor evaluation of written applications. To access the application: pre-register for the course, view your class schedule in the Student Center in Bionic (Main Menu > Self-Service > Student Center > Class Schedule), and click on the URL icon (Offered Spring 2018)

ENVS H311 GREEN LATIN AMERICA: CULTURE AND THE ENVIRONMENT

Graciela Michelotti

Humanities (HU)

An ecocritical approach to the study of the Latin American human and non-human environment, and the cultural practices that address this interdependence in the context of its economic, political and social realities. This course is conducted in Spanish. Crosslisted: Spanish, Comparative Literature, Environmental Studies; Prerequisite(s): 200-level course or consent of instructor. (Offered Fall 2017)

ENVS H316 BIOCHEMICAL ADAPTATIONS

Kristen Whalen

Natural Science (NA)

This course will cover the diversity of physiological mechanisms and biochemical strategies that help organisms, from microbes to mammals, adapt to various environmental conditions. Emphasis put on biochemical evolution in response to changing environmental conditions. Crosslisted: Biology, Environmental Studies; Prerequisite(s): BIOL H200A and B with a grade of 2.0 or above or instructor consent. (Offered Fall 2017)

ENVS H318 ECONOMIC BOTANY

Jonathan Wilson

Natural Science (NA)

A multidisciplinary approach to the coevolution and co-domestication of plants and humans. Topics will include the biology, physiology, evolution, and cultivation of key plants, embedded within their social history and environmental effects, and explored at an advanced level. Meets in parallel with BIOL 118. Crosslisted: Biology, Environmental Studies; Prerequisite(s): 200-level course in anthropology,

biology, chemistry, or geology or ENVS 101 and instructor consent. (Offered Spring 2018)

ENVS H356 ADVANCED TOPICS IN BIOLOGY OF MARINE LIFE

Kristen Whalen

Natural Science (NA)

Exploration of marine metazoan evolution through the lens of behavioral, morphological, biochemical, and physiological adaptations to various ocean regimes. Readings from primary literature will cover physio-chemical properties of seawater, abiotic/biotic organismal interactions, symbiosis, energy production, human impacts, and phylogenetic relationships. Crosslisted: Biology, Environmental Studies; Prerequisite(s): BIOL H300A and B with a grade of 2.0 or above or instructor consent. (Offered Fall 2017)

ENVS H358 TOPICS IN ENVIRONMENTAL CHEMISTRY

Staff

Natural Science (NA)

Three lectures for one-half semester (one-half course credit). This course will examine chemical processes that occur in natural waters, soils and the atmosphere. Specific topics will be chosen with input from enrolled students, who will be expected to share in discussion leadership. CHEM 358 may be repeated once for credit as long as the topical themes differ. Crosslisted: Chemistry, Environmental Studies; Prerequisite(s): CHEM 304 or equivalent, or instructor consent. (Not offered 2017-18)

ENVS H397 SENIOR SEMINAR IN ENVIRONMENTAL STUDIES

Joshua Moses

This capstone Environmental Studies course is designed to allow Environmental Studies seniors to actively engage in environmental problem solving by bringing the perspectives and skills gained from their majors and applying them to collaborative, interdisciplinary projects. (Offered every year; *ENVS B397 offered Spring 2018 at Bryn Mawr by Don Barber*)

ANTH H112 THE ANTHROPOLOGY OF ARCHITECTURE

Jacob Culbertson

Social Science (SO)

A survey of anthropological approaches to architecture, with a particular interest in how architecture expresses senses of place. Readings will cover indigenous and vernacular architecture,

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the modernist movement, ecological design, and forms of housing. (Offered Fall 2017)

ANTH H217 METHODS IN DESIGN ANTHROPOLOGY

Jacob Culbertson

Social Science (SO)

An introduction to research methods in Design Anthropology. Readings are drawn from Anthropology, Design, and Science and Technology Studies (STS), and the course will introduce fundamental concepts and methods in STS. Each student will conduct ethnographic research into a design practice of their choice. Prerequisite(s): An introductory course in anthropology, sociology, or art history, or instructor consent. (Offered Fall 2017)

investigates them within the context of early modern Europe to understand them as rational practices. How did people defend magic and what evidence did they invoke? Why did people accuse each other of practicing witchcraft? How were arguments for and against occult practices related to religious, political, and geographic contexts? What role did ideas about gender and social roles play in ideas about witches, necromancers, and sorcerers? Equally important for this class: If we no longer accept these practices as valid, why do we still care today? (Typically offered every other year)

ANTH H302 OIL, CULTURE, POWER

Zainab Saleh

Social Science (SO)

This course will examine the political, social, and cultural history of oil. As the single most important commodity in the world, the story of control over this highly prized resource is a complex and violent one. It will discuss the ways in which oil has defined the fates empires and nation-states, the rise and fall of local political movements, violence, neoliberal governmentality, and knowledge production. Prerequisite(s): One 100-level course in anthropology, political science, sociology, or history, or instructor consent. (Offered occasionally)

ENGL H356 STUDIES IN AMERICAN ENVIRONMENT AND PLACE

C. Stephen Finley

Humanities (HU)

Texts mostly 19th and 20th-c. American, but beginning earlier, with colonial New England; then Thoreau, Maclean, Snyder, Dillard, Least Heat Moon, Ammons, Mary Oliver, E. O. Wilson. Topics: cultural production of landscape (rural and urban), environmental history, place studies, landscape painting, ecology. Prerequisite(s): Two 200-level HU courses or instructor consent. (Typically offered every other year)

HIST H237 GEOGRAPHIES OF WITCHCRAFT AND THE OCCULT IN EARLY MODERN EUROPE

Darin Hayton

Social Science (SO)

Rather than dismiss witchcraft and the occult sciences as irrational beliefs, this course