

# ENVIRONMENTAL STUDIES (ENVS)

## ENVS 101 Sustainable Living (1)

A practical course that offers an introduction to making sustainable life choices. Topics considered may include food, gardening, electronics, recycling, transportation, renewable energy, home energy efficiency, community-building, spirituality, and more.

## ENVS 102 Outdoor Living (1)

Outdoor Living, a one-credit elective course, is an opportunity for all of us (including the instructors!) to expand our capabilities in outdoor activities, and to expand our capacity to integrate the outdoors into our daily lives. We will learn a variety of outdoor skills and experiment with a variety of ways to be outdoors, including both active and contemplative approaches. No matter what your skill or experience level with being outdoors, you should expect to expand your horizons in a safe and supportive environment in this class. There are three pillars to this course: # The Ten Essentials, which give us guidance on how to be safe outside. # The Leave No Trace Principles, which teach us how to respect the places we go and the plants, animals, soil, air, water, and people there. # The Outdoors Is For Everyone, which reminds us to be mindful of who has historically been able to be outdoors and who has been excluded from the outdoors, and which prompts us to take actions to make outdoor spaces a place for everyone. S/U grading

## ENVS 111 FYS: The Sustainability Project (3)

Cities have been described as humankind's greatest invention. Most of the world's population lives in cities, with predictions for urban populations to more than double in size by 2050. This seminar addresses how cities can face the challenges of climate change, declining biodiversity, and social justice that accompany rapid urban growth. Through the study of best sustainability practices and a series of interactive projects, students develop solutions for cities culminating in the redesign of a real-life community in the South Bend area. Topics include affordable housing, transportation, fire and stormwater management, urban forests and open space, energy conservation, cultural identity, and environmental justice. Students are welcome to reflect on and employ their own experiences of the city and leave the course with the understanding and ability to influence sustainability in their own city.

## ENVS 161 Introduction to Environmental Studies (3)

An interdisciplinary course on the systemic interaction of human beings with their environments. It identifies interests informing environmental decisions and introduces practices of environmental advocacy.

## ENVS 171 Introduction to Environmental Science (3)

An interdisciplinary course that investigates the study of our environment from a scientific perspective. We will focus on principles of the nature of science, matter, energy, water, and life in terms of biology, chemistry, and geology.

## ENVS 190 Special Topics (1-3)

The presentation of selected subjects of special relevance not included in regular departmental offerings. Prerequisites and attributes associated with major/minor concentrations established by the instructor and will vary by course topic. May be repeated with a different topic.

## ENVS 203 Sustainability at Saint Mary's College and in the Holy Cross Charism (3)

This course will address sustainability in the context of the local academic community and its institutions. In conversation with the papal encyclical, *Laudato Si'*, *On Care for Our Common Home*, this course will provide students with interdisciplinary opportunities to explore the challenges of sustainability and develop collaborative strategies for making our common campus homes more sustainable. Students will be invited to examine the course materials in conversation with the mission of the Congregation of Holy Cross through immersion at each of the campuses and encounters with professionals whose work impacts sustainability. This course will also include a community-based / academic experiential learning component, in which Notre Dame and Holy Cross students will volunteer 2 hours per week and Saint Mary's students will volunteer 15 hours during the semester.

## ENVS 213 Cultural Sust and Spirituality (3)

This course situates the learning within the field of cultural and spiritual sustainability and blends diverse concepts emerging from folklore, sociology, geology, and anthropology. To better understand this work, we will explore ways in which spirituality is embedded within a community's worldview and understand how recognition of these connections enhances sustainability efforts while promoting community engagement. We will consider Iceland and learn how her cultural and spiritual values work towards environmental solutions providing sustainable solutions through the harnessing of water, wind, and geothermal energy. Finally, as is with all Study Abroad experiences, we will go deeper in our understanding of the importance of learning beyond our borders as we interact with Icelanders and with other travelers.

## ENVS 217 Environmental Policy (3)

This course introduces the processes by which policy is made at local, state, national, and international levels of government with attention to the special challenges of creating sound environmental policy. It examines the strengths and weaknesses of policies currently in place and prepares students to intervene constructively in the formation of environmental policy.

## ENVS 232 The Shape of the City (3)

The course covers topics in the design and planning of the American metropolis – towns, cities, and suburbs. The fundamentals of urban design are explored at varied scales and within varied contexts of the built environment – from the individual building to the city block to the neighborhood to the community and larger region – in order to establish the basic principles of livable community design and planning. This course surveys the history of urban form and the socioeconomic, cultural, historical, and environmental forces that have shaped the city. Topics include public architecture and art, landscape architecture, open space and parks, multi-modal transportation, community health and safety, land use policy and regulations, real estate, and the impact of climate change. The process of urban design is explored including the role of multiple stakeholders - government, private sector, non-profit organizations, schools, neighborhoods, and the public. The neighborhood as human ecosystem is featured as a fundamental building block of cities and regions. Through the completion of a series of projects, students develop an understanding of urban design principles through engagement with a real-life neighborhood in the South Bend area. Sustainable design including connectivity, density, green infrastructure, and health receives special emphasis.

**ENVS 235 Give Me Shelter (3)**

This course surveys the design of human shelter, the house, and housing in history with particular focus on the influence of the environment on housing and, vice versa, the influence of housing on the environment. The house is explored from multiple perspectives – as an artifact of art and design, a home, human ecosystem, commodity, value statement, and a basic human right. Housing types, patterns, and designs throughout history and global geography are presented as are factors – climate, construction technology, materials, codes, socio-cultural, public policy, and economics - that shape housing. Various typologies of housing in North America will be examined from single-family dwelling to multifamily combinations. Special emphasis is placed on design and construction of housing for environmental sustainability. Through examination of case studies, field trips, and a house design project of their own, students are asked to reflect on their own experience of house and home and the changing nature of housing needs that come as one passes through life's generational stages. Students will learn how issues of race or ethnicity, age, class, family status, geography, and other characteristics affect availability of housing in urban America. Housing affordability and access is presented as an essential tenet of environmental sustainability.

**ENVS 290 Special Topics (3)**

The presentation of selected subjects of special relevance not included in regular departmental offerings. Prerequisites and attributes associated with major/minor concentrations established by the instructor and will vary by course topic. May be repeated with a different topic.

**ENVS 315 Introduction to Geographic Information Systems (3)**

Visual representation of our world is a powerful tool for change. This course introduces students to Geographic Information Systems (GIS) as one such tool. GIS enables the user to integrate social and environmental data in a single map, yielding powerful graphics for analysis of the world's problems and potential solutions. GIS has become an important tool in a wide array of fields including public policy, environmental sciences, business, justice studies, humanities, public health, urban planning, and many others. Given its diverse applicability, this course is meant to provide a foundational understanding and capacity from which to begin developing fluency in applying spatial analysis techniques in your field of interest.

**ENVS 321 Women, Leadership, and the Environment (3)**

The course explores significant women who changed the way we design, plan, think about, and live in cities. Drawing upon the experience of women from a diverse set of socioeconomic, ethnic, professional, and personal backgrounds, this course features the unique contributions of each to shaping our cities through design and planning for environmental sustainability - from the individual building to the city block to the neighborhood to the community and larger region. Special emphasis is placed on the leadership qualities and competencies each woman possessed that led to their positive impact on the quality of life in our cities. Saint Mary's College alumnae who are leaders in design, environmental sustainability, and cities will also be featured. The course examines key leadership concepts and how successful women have navigated power and authority, applied knowledge and experience, and met challenges. The course validates the role of women leaders in design and the environment as essential for solving major challenges of climate change, environmental justice, and livable communities.

**ENVS 331 Human Ecology and Spirituality (3)**

An examination of the relationship of spirituality and ecology within several religious traditions. Particular attention is given to Christianity so that we may study at least one tradition in some depth. The course considers both how human spiritual experience is shaped by its context within particular ecosystems and how religious traditions shape humans' relation to the biosphere. Prerequisite: RLST 101. ENVS 161 or ENVS 171 highly recommended.

**ENVS 333 Sustainable Food Systems (3)**

Over the past 150 years, food systems have been transformed by developments in society, technology, science, and policy. At the same time that many of these changes have improved the human condition, they have also created new challenges. For instance, new technologies in farming equipment and synthetic fertilizers vastly increased the per acre output of farms, but also contributed to the collapse of rural communities and the eutrophication of water ways. We will examine the relationship between society, food and the environment with special attention to the intertwining forces of industrialization, urbanization, globalization, geopolitical conflict, and climate change.

**ENVS 385 Interdisciplinary Environmental Research (3)**

This course provides an introduction to a suite of important methods of analysis in environmental studies. Within a framework of interdisciplinary problem solving, students will learn to define questions for investigation, and they will gain experience using quantitative, qualitative, and textual research tools to address environmental issues. We will discuss the ethics and politics of research and strategies for using environmental research to support environmental advocacy and action. Prerequisite: ENVS 161, ENVS 171.

**ENVS 386 Current Issues in Environmental Studies (1)**

This reading seminar surveys recent articles in the scholarly and popular presses on significant current environmental issues. Weekly readings for discussion are selected by faculty and by students. Discussions will analyze the methods and the rhetoric used in the articles in addition to examining the implications of the issues addressed and how interdisciplinary problem solving could be applied to each issue. Prerequisite: ENVS 161, ENVS 171.

**ENVS 390 Special Topics (1-3)**

The presentation of selected subjects of special relevance not included in regular departmental offerings. Prerequisites and attributes associated with major/minor concentrations established by the instructor and will vary by course topic. May be repeated with a different topic.

**ENVS 395 Environmental Studies Capstone Seminar (1)**

This capstone experience allows students to develop projects centered on a particular environmental issue of interest to the group. Prerequisite: Junior standing, ENVS 161, ENVS 171, and an additional course approved for the ENVS minor (may be taken concurrently).

**ENVS 399 Internship (1-3)****ENVS 490 Special Topics (1-3)**

The presentation of selected subjects of special relevance not included in regular departmental offerings. Prerequisites and attributes associated with major/minor concentrations established by the instructor and will vary by course topic. May be repeated with a different topic.

**ENVS 495 Comprehensive Project Seminar (3)**

A collaborative research seminar that provides structure for students' work on their comprehensive projects for Environmental Studies. Prerequisite: ENVS 385 and ENVS 386.

**ENVS 497 Independent Study (1-3)**

May be repeated.

**ENVS 499 Internship (1-3)**

May be repeated.