

BIOL 1112 - Contemporary Biology (BIOL 1413)	3 hours (3;3) Study of major theories and principles of biology pertaining to cell and molecular biology, form and function of tissue and organ systems, and principles of ecology as they relate to animal and plant diversity and evolution; ethical and social issues relating to humans as components of living systems. Includes laboratory.
BIOL 1122 - Plant Biology (BIOL 1411)	3 hours (3;3) Plant structure and function; plant genetics, reproduction and development; role in ecosystems, agriculture and industry; food resources and human population. Includes laboratory.
BIOL 1132 - Environmental Science (BIOL 2406)	3 hours (3;2) Interdisciplinary approach to understanding basic concepts in environmental science including critical scientific thought, biodiversity, resource management, pollution, global climate change, resource consumption and population growth. Emphasis on how these concepts affect and are affected by human society. Includes laboratory.
BIOL 3150 - Biology and Conservation of Birds	2 hours (1;3) The anatomy, functional and behavioral adaptations and ecology of birds. Laboratory emphasis on field identification, behavior, habitats, migrations, food habits of birds. Population management and conservation practices.
BIOL 3160 - Biological Resource Conservation and Management	3 hours Principles and values relating to natural biological resources; ecological concepts applied to resource management and protection of aquatic organisms, rangelands, forests and wildlife.
BIOL 3170 - Plants and Human Society	3 hours Relationships of plants to the environment and human activities; impact of plants on human social development, history, economics and religion.
BIOL 4005 - Contemporary Topics in Biology	1–3 hours Contemporary topics in biological sciences. Specific titles vary but may include microbiology, molecular biology, physiology/neuroscience, ecology/environmental science, botany and zoology.
BIOL 4053 - Introduction to Subantarctic Biocultural Conservation	3 hours Introduction to the subantarctic ecosystems and cultures of Southern South America (geography, climate, ethnography, environmental philosophy and ecology) and exposure to both the practical and theoretical aspects of biocultural conservation, including its interdisciplinary character integrating the sciences and humanities.
BIOL 4100 - Introduction to Environmental Impact Assessment	3 hours Principles and practices of preparing environmental impact assessments and statements. Addresses how to understand the effects that projects, plans and policies have on the environment and the impact those effects have on specific resources, ecosystems and human communities. Methods for identifying impacts, describing the affected environment, predicting and assessing impacts and selecting the proposed action from a group of alternatives for meeting specified needs are examined.
BIOL 4120 - Environmental Chemistry	3 hours Presents a scientific overview of environmental contaminants; their occurrence, sources and impact on humans and the environment.
BIOL 4130 - Economic Botany	3 hours Distribution, production, history and botany of plants of economic importance.
BIOL 4290 - Marine Biology	3 hours Covers the basics of marine biology with a global approach, using examples from numerous regions and ecosystems worldwide. Highlights interactions of physical and chemical factors and habitat diversity with the biological components of the world's oceans. Environmental topics such as

	fisheries, mariculture, pollution and conservation.
BIOL 4370 - General Toxicology	3 hours Introduction to the basic principles of toxicology. Focus on absorption, distribution, metabolism and elimination of toxicants; target organ toxicity mechanisms of toxic action; carcinogenesis; and risk assessment.
BIOL 4380 - Fundamentals of Aquatic Toxicology	3 hours (2;3) Theory and methodologies used by scientists, regulatory agencies and industry to measure the impact of man's activities on freshwater aquatic ecosystems. The course has its foundations in history, but concentrates on current methodologies and theories.
BIOL 4400 - Wetland Ecology and Management	4 hours (3;4) Ecology and management of various types of wetlands with emphasis on the role of aquatic and wetland plants in determining wetland structure and function. Wetland restoration and creation for wildlife habitat or water quality benefits are reviewed.
BIOL 4440 - Stream Ecology	4 hours (3;4) Ecological principles of how stream dynamics influence the biological and hydrologic patterns and processes occurring in stream ecosystems. Laboratory studies designed to teach techniques and test hypotheses related to environmental assessment.
BIOL 4650 - Environmental Science Field Course	6 hours (3;8) Advanced field course primarily emphasizing the biological, ecological, natural history and philosophical attributes of various habitats or ecoregions. Topics and field experience may vary from desert river systems to alpine limnology to coastal estuaries.
BIOL 4720 - Sediment Toxicology	3 hours Mechanisms of contaminant transport and fate in freshwater marine sediments and pollutant effects at the individual, population and biotic community levels. Sediment contaminant bio-availability and bioaccumulation into food webs and the scientific aspects of legal control and remediation of hazardous sediments.
BIOL 5030 - Foundations of Environmental Science	1 hour Course lays the foundation for graduate studies in environmental science. Introduces graduate students to the faculty, research expertise and resources available in environmental sciences at UNT. Covers topics essential to a successful graduate experience and career in environmental science.
BIOL 5040 - Contemporary Topics in Environmental Science and Ecology	1–3 hours Contemporary topics and issues in environmental science and ecology. Topical themes include global climate change, biodiversity, wetlands, population and aquatic, terrestrial or plant ecology.
BIOL 5053 - Subantarctic Biocultural Conservation	3 hours In-depth study of the relationship between subantarctic ecosystems and cultures of southern South America including geography, climate, ethnography, history and ecology, which exposes students to both the practical and theoretical aspects of biocultural conservation, including its interdisciplinary character integrating the sciences and humanities.
BIOL 5054 - Tracing Darwin's Path	3 hours Annual in-depth field course that explores subantarctic biota, geography, history, cultures and ecosystems of the Cape Horn Biosphere Reserve, integrating ecological science and field environmental ethics approaches to the study and conservation of biocultural diversity.
BIOL 5100 - Introduction to Environmental Impact Assessment	3 hours Principles and practices of preparing environmental impact assessments and statements. Addresses how to understand the effects that projects, plans and policies have on the environment and the impact those effects have on specific resources, ecosystems and human communities.

	Methods for identifying impacts, describing the affected environment, predicting and assessing impacts and selecting the proposed action from a group of alternatives for meeting specific needs will be examined. A detailed review of an environmental assessment and environmental impact statement are required.
BIOL 5120 - Environmental Chemistry	3 hours Presents a scientific overview of environmental contaminants, their occurrence, sources and impact on humans and the environment.
BIOL 5200 - Environmental Health	3 hours Introduction to the environmental determinants of health that focuses on health risks of human-mediated changes to the environment, as well as the regulatory framework that directs decision making on environmental issues. Consideration given to health implications of growing populations, available food quantity and quality, loss of habitat and biodiversity, radiation, toxins in the environment, sanitation, solid and hazardous waste disposal and environmental degradation including noise, air and water pollution.
BIOL 5270 – Limnology	4 hours (2;4;1) Physical, chemical and biological factors that affect productivity in reservoirs, lakes and ponds. Field studies using current limnological methods and instruments. For biologists, chemists, teachers and sanitarians.
BIOL 5290 - Marine Biology	3 hours Covers the basics of marine biology with a global approach, using examples from numerous regions and ecosystems worldwide. Highlights interactions of physical and chemical factors and habitat diversity with the biological components of the world's oceans. Environmental topics such as fisheries, mariculture, pollution and conservation.
BIOL 5300 - Physiological Ecology	3 hours Physiological, behavioral and biochemical adaptations of animals to environmental limiting factors, including temperature, oxygen, water, salinity, light and toxic chemicals.
BIOL 5370 - General Toxicology	3 hours Introduction to the basic principles of toxicology. Focus on absorption, distribution, metabolism and elimination of toxicants; target organ toxicity; mechanisms of toxic action; carcinogenesis; and risk assessment.
BIOL 5380 - Fundamentals of Aquatic Toxicology	3 hours (2;3) Theory and methodologies used by scientists, regulatory agencies and industry to measure the impact of man's activities on freshwater aquatic ecosystems. The course has its foundations in history, but concentrates on current methodologies and theories.
BIOL 5400 - Wetland Ecology and Management	4 hours (3;4) Ecology and management of various types of wetlands with emphasis on the role of aquatic and wetland plants in determining wetland structure and function. Wetland restoration and creation for wildlife habitat or water quality benefits are reviewed.
BIOL 5440 - Stream Ecology	4 hours (3;4) Ecological principles of how stream dynamics influence the biological and hydrologic patterns and processes occurring in stream ecosystems. Laboratory studies designed to teach techniques and to test hypotheses related to environmental assessment.
BIOL 5701 -	3 hours Survey of major advances in biotechnology. Emphasis on the

Biotechnology and Society	development of the technology, underlying biological principles, historical context, current practices and societal implication.
BIOL 5720 - Sediment Toxicology	3 hours Mechanisms of contaminant transport and fate in freshwater and marine sediments and pollutant effects at the individual, population and biotic community levels. Sediment contaminant bioavailability and bioaccumulation into food webs and the scientific aspects of legal control and remediation of hazardous sediments.
BIOL 5880 - Environmental Sciences Seminar Series	1 hour Weekly seminar series covering a broad range of environmental research topics. Invited speakers are prominent local, regional or national researchers.
BIOL 6341 - Advanced Environmental Impact Assessment	3 hours Advanced topics in preparing environmental impact assessments and statements by examining deficiencies and inadequacies of environmental assessments and impact statements (i.e., was the analysis adequate), as defined by U.S. District, Appeals and Supreme Court decisions.
BIOL 6360 - Environmental Engineering	4 hours (3;3) Water, land and air pollution control technologies are presented. Engineering approaches to pollution problems are demonstrated by considering technical feasibility and economic constraints. Laboratory exercises provide instruction for quantitative analysis of water and waste water; field trips to various pollution-control facilities.
BIOL 6390 - Techniques in Environmental Analysis	4 hours (3;3) Theory and application of advanced analytical chemistry techniques for metals and organics in environmental and biological samples. Introduces methods for trace metals analysis and identification, and organics separation and identification techniques. Laboratory teaches state-of-the-art spectroscopic and chromatographic techniques.
BIOL 6400 - Ecological Risk Assessment	3 hours Detailed treatment of aquatic and terrestrial methods and procedures used to assess the ecological hazard of chemicals in the environment. Emphasizes quantitative methods in testing site assessment, monitoring procedures, regulatory requirements and field and laboratory techniques useful to assess damage to aquatic, terrestrial and avian resources.

ACCT 4420 - International Accounting

3 hours Integrates the functional areas of accounting and demonstrates how accounting relates to the disciplines in the College of Business core. Cross-functional and global approaches to organizational issues are emphasized. Enhances the ability of students to think critically, and to develop knowledge, skills, and attitudes necessary to compete effectively in the global business world. Topics covered include: multinational strategy, global perspectives in accounting, environmental, social and political influences on accounting, accounting information systems in a multinational enterprise, performance evaluation in a multinational enterprise, and the exploration of timely topical issues such as NAFTA, the European Union, and the globalization of securities markets.

ANTH 4400 - Environmental Anthropology

3 hours Focuses on major environmental questions, theories, problems, issues and possible solutions illustrated by case studies from different parts of the world. Examines environmental issues pertaining to land, sea and natural resources; food production systems; deforestation; population problems;

poverty and environmental justice; natural hazards and risks; resource conflicts and warfare; over-fishing; economic development; mineral and oil extraction; landscapes; and biodiversity conservation.

ANTH 5400 - Environmental Anthropology

3 hours Emphasis on theory, major environmental questions, problems, issues, and possible solutions illustrated by case studies from different parts of the world. Examination of environmental issues pertaining to land/sea and natural resources, food production systems, deforestation, population problems, poverty and environmental justice, natural hazards and risks, resource conflicts and warfare, over-fishing, economic development, globalization and transnationalism, mineral and oil extraction, landscapes, biodiversity conservation, the commons, ecofeminism, and valuation of nature. Course goals are to provide a global sample of the literature in environmental anthropology; a survey of concepts, issues, theories, methods and practices in environmental anthropology; and an in-depth acquaintance with a particular topic in environmental anthropology through an individual research project.

CHEM 1360 - Context of Chemistry

3 hours (3;2) Fundamentals of chemistry for students who are not science majors. Applications of chemistry to its role in the world. Topics include historical and philosophical development of modern chemistry, the environment, energy, industrial and economic development, modern materials, popular perspectives of chemistry. Includes laboratory.

ECON 5440 - Economics of Natural Resources and Environment	3 hour Natural resource management and use: problems of renewable and non-renewable resources, including scarcity and market responses, role of property rights, externalities, benefit-cost analysis and energy policy with emphasis on Texas. Analysis of environmental problems and policy formulation.
EENG 5330 - Environmental Systems	3 hours (2;2) Includes foundations and practice of modeling and simulation of ecological and environmental systems; temporal and spatial analysis; dynamical systems; and applications of engineering to environmental problems.
ENGL 5730 - Literature and the Environment	3 hours Explores a variety of philosophical, aesthetic and cultural traditions of representing the natural world and its relation to human societies. In addition to literature, readings may extend into natural science, environmental philosophy, cultural criticism and artistic theory.
GEOG 5150 - Water Resources Seminar	3 hours Topics will be considered from ecology, ground water hydrology and fluvial geomorphology. Special consideration is given to energy flows within the watershed, and the economic, political, legal and ecological consequences of ground water depletion.
GEOG 5170 - Map-Air Photo Analysis and Remote Sensing	3 hours Evaluation and interpretation of aerial photography and satellite images. Extraction of quantitative information. Introduction to photographic and computer image processing techniques. Applications in the environmental sciences.
GEOG 5400 - Environmental Modeling	3 hours (2;2) Modeling of environmental processes and human impacts on the environment to include topics on sensitivity, calibration and evaluation, watersheds, non-point source pollution, hydrological models, GIS, water and air quality models, pollutant transport and fate, and ecotoxicology.
GEOG 5420 -	3 hours Designed to encourage an awareness of the need for wise use and

Conservation of Resources	proper management of the natural resources on which human welfare depends; resources management operates in the framework of laws and policies, technical resource knowledge, education, and economics. Requires completion of a graduate research project.
GEOG 5600 - Seminar in Environmental Policy	3 hours Analysis and evaluation of environmental policy, including spatial, historical, economic, ecological and institutional dimensions of contemporary resource management issues.
GEOG 5650 - Environmental Geology	3 hours Geologic aspects of land-use planning; earthquakes, landslides, coastal processes, streams and flooding, soils, groundwater, and waste disposal; planning for the future. Requires investigating and reporting on a case study in environmental geology.
GEOG 5750 - Fluvial Geomorphology	3 hours Introduction to rivers, fluvial system, empirical and theoretical approaches for studying fluvial geomorphology; watershed delineation, drainage network analysis, hillslope processes, channel initiation, network evolution; catchment hydrology and denudation; mechanics of flow, threshold of erosion, sediment transportation and deposition; adjustment of channel form; fluvial response to climatic change and impact of human activity on fluvial systems. Requires completion of an individual research project on a topic in fluvial geomorphology.
GEOG 5850 - Introduction to Groundwater Hydrology	3 hours Topics include principles of groundwater flow; aquifer properties and characteristics; geology of groundwater occurrence; groundwater development and methods of assessing and remediating ground water contamination. Students independently acquire, evaluate and interpret hydrogeological data and report the results in a research paper.
MTSE 5580 - Materials for a Sustainable Environment	3 hours Properties of renewable and nonrenewable, sustainable and non-sustainable materials; effects of product application and needs on material choices for a sustainable environment; degradation mechanisms and influence of the environment on mechanisms.
MEEN 5110 - Alternative Energy	3 hours Introduction to the physics, systems and methods of energy conversion from non-conventional energy sources, such as solar, geothermal, ocean-thermal, biomass, tidal, hydroelectric, wind and wave energy. Advantages and disadvantages of alternative energy sources and engineering challenges for the harnessing of such forms of energy; energy storage; fuel cells.
MEEN 5210 - Solar Energy.	3 hours Fundamentals of radiation processes, blackbody and gray-body; and gray-body radiation; solar radiation flat-plate and parabolic collectors; concentration optics and practical solar concentration devices; central receivers, solar ponds, power cycles of solar plants; thermal storage subsystems and system design.
PHIL 5000 - Environmental Ethics	3 hours Examines the philosophical origins of environmental philosophy and the basic positions in the field of environmental ethics. Key authors in environmental philosophy are surveyed, as well as topical considerations with an emphasis on theories of environmental value, legal and moral rights for nature, animal liberation, and Western philosophical and religious traditions.
PHIL 5700 - Seminar in Environmental Ethics	3 hours Intensive analysis of new positions in environmental ethics with special emphasis on their theoretical value as a contribution to

	contemporary philosophy and their practical value with regard to environmental policy and decision making.
PHIL 6710 - Ecofeminism: Women's Studies and Environmental Ethics	3 hours Examines the merger of feminism with environmental ethics and its subsequent evolution. Subject matter includes the analysis of patriarchy, gender issues and multicultural perspectives within the larger framework of ethical and philosophical responses to ecocrises.
PHIL 6720 - Comparative Environmental Ethics	3 hours Exploration of resources for environmental philosophy in non-Western traditions, focusing on South and East Asian traditions.
PHIL 6730 - Western Religion and the Environment	3 hours Historic and contemporary overview of Euro-American religious thought concerning the environment, including investigation of the ancient Western religions, Judaism, Christianity and Native American religions.
PHIL 6740 - Environmental Ethics and Public Policy	3 hours Investigates the policy turn in environmental philosophy, exploring ways to make environmental ethics and environmental philosophy more relevant to decision-makers, public agencies and stakeholders groups.
PHIL 6750 - Environmental Justice	3 hours Examination of the histories, concepts, philosophical implications, and the struggles of people in shaping the environmental justice movement. Examines the underlying notions of environmental goods and harms, the perspectives of environmental law and policy, and the politics of environmental identities.
PHIL 6760 - Topics in Environmental Philosophy	3 hours Focused examination of the perennial or emerging topics in environmental philosophy, such as the intrinsic value of nature, monism versus pluralism, ecophenomenology, holism versus individualism, and non-Western explorations of environmental ethics and philosophy.
PHIL 6780 - Subantarctic Biocultural Conservation	3 hours In-depth study of the relationship between subantarctic ecosystems and cultures of southern South America including geography, climate, ethnography, history and ecology, which exposes students to both the practical and theoretical aspects of biocultural conservation, including its interdisciplinary character integrating the sciences and humanities.
PADM 5615 - Environmental Planning and Hazards	3 hours Introduction to environmental planning and policy at the federal, state and local government levels. Designed to help students develop a working knowledge of basic planning and policy concepts, methods, institutions and issues. Emphasis is given to the linkage between environmental degradation and vulnerability to hazards.
PADM 6615 - Environmental Planning and Hazards	3 hours Explores the natural disasters and strategies public officials can apply to cope with their impacts on the built environment. Natural disasters of geologic, atmospheric, hydrologic, and biologic origin are considered. An environmental planning focus is taken where an emphasis is placed on human-environment interactions as they are related to environmental extremes. Alternative public policy strategies for coping with natural hazards are considered from the perspectives of preparedness, response, recovery and mitigation activities.
JOUR 5290 - Science and Environmental Reporting	3 hours Explores science and environmental reporting as a valuable newsroom specialty blending science, politics, public health and business to encourage public discussion, to educate and to contribute to a public understanding of these challenging problems. Discusses aspects of television, radio and print reporting. Emphasis is on content and storytelling, not basic newswriting.

PHIL 5010 - Seminar in the Philosophy of Ecology	3 hours Traces the evolution of ecology from its roots in 19th-century natural history to the present with an emphasis on the prominent paradigms and conceptual trends, such as organicism, community ecology, ecosystem ecology, disturbance and flux. Also explores the sociocultural contexts in which ecology emerged and now exists, including the so-called second scientific revolution and the two-culture split.
PHIL 6650 - Philosophy of Water	3 hours Philosophical examination of water and water issues at the interface of science, policy, art and culture. Topics include aesthetics and ontology of water, water conflicts, and local and global governance theories.

ECON 4440 - Economics of Natural Resources and Environment	3 hours Natural resource management and use: problems of renewable and non-renewable resources, including scarcity and market responses, role of property rights, externalities, benefit-cost analysis and energy policy with emphasis on Texas, analysis of environmental problems and policy formulation.
ENGL 4650 - Literature and the Environment	3 hours Explores a variety of philosophical, aesthetic and cultural traditions of representing the natural world and its relation to human societies. In addition to literature, readings may extend into natural science, environmental philosophy, cultural criticism, and artistic theory.
GEOG 1170 - Culture, Environment and Society (GEOG 1302)	3 hours Exploration of the dynamic relations between culture and environment addressing ethnic diversity and conflict, development and underdevelopment, settlement patterns, movement of commodities and people (including refugees), and environmental degradation
GEOG 1500 - Geography of the DFW Metroplex	3 hours Introduces students to the field of geography by examining geographical dimensions of environmental, social and economic issues in the DFW Metroplex. Blends traditional lectures with interactive web-based learning exercises using Geographic Information Systems (GIS) software to analyze a variety of datasets.
GEOG 3010 - Economic Geography	3 hours Geographic principles applied to understanding regional specialization of economic activity. National and international variations in agriculture, energy, manufacturing, service activities and commodity flows.
GEOL 4850 - Introduction to Groundwater Hydrology	3 hours Topics to include principles of groundwater flow; aquifer properties and characteristics; geology of groundwater occurrence; groundwater development and methods for assessing and remediating groundwater contamination. Emphasis on application of basic principles.
HLTH 1570 - Environmental Health and Safety	3 hours Role and function of the health educator in maintaining a safe, healthy environment; safety procedures in the school and community; psychology of accident prevention. Environmental pollution problems and methods of control.
HLTH 4350 - Environmental Community Health	3 hours The nature and complexity of environmental health issues including specific health problems associated with environmental health. The role of the health educator in an environmental health program.
HNRS 1100 - The Good Society	3 hours Human beings form social groups to meet their common needs, such as order and infrastructure. For thousands of years, thoughtful people have asked questions about the nature of these human societies. This course explores questions of ongoing interest and importance, including how good societies deal with poverty, illness, education, environmental issues and

	criminal behavior. Human rights, biodiversity and war are also considered. Takes an interdisciplinary approach to the study of these topics, and seeks to provoke critical thought rather than offer answers.
HMG 2800 - Foundations of International Travel and Tourism	3 hours Travel and tourism examined from global, industry and developmental perspectives. Topics include historical, contemporary and future effects of travel and tourism as related to social, economic, cultural and environmental issues.
KINE 3350 - Advanced Scuba Diving, Marine Conservation and Environmental Crime	3 hours (2;1) Provides students with advanced scuba diving skills, while developing an understanding of the complex ecosystems found in the marine environment. Various underwater tasks broaden student awareness of marine conservation, the environment, and their capabilities as divers.
LSCM 4560 - Business Transportation Management	3 hours Principles of transportation covering the role of transportation systems; environmental and economic impacts; modal components; managerial and economic aspects of the various modes, with applications to both domestic and international operations.
MTSE 4580 - Materials for a Sustainable Environment	3 hours Properties of renewable and nonrenewable, sustainable and non-sustainable materials, effects of product application and needs on material choices for a sustainable environment; degradation mechanisms; and influence of the environment on mechanisms.
MEEN 4110 - Alternative Energy Sources	3 hours Introduction to the physics, systems and methods of energy conversion from non-conventional energy sources, such as solar, geothermal, ocean-thermal, biomass, tidal, hydroelectric, wind and wave energy. Advantages and disadvantages of alternative energy sources and engineering challenges for the harnessing of such forms of energy. Energy storage. Fuel cells.
PHIL 1400 - Contemporary Moral Issues (PHIL 2306)	3 hours Survey of basic ethical theories and exploration of such issues as abortion, euthanasia, national security and civil liberties, affirmative action, the death penalty, extramarital sex, pornography, animal rights, world hunger, and the environment.
PHIL 2500 - Introduction to Contemporary Environmental Issues	3 hours Explores ethical, ecological and political dimensions of such international environmental issues as atmospheric and water pollution, global climate change, industrial agriculture, deforestation, biodiversity loss, and the relationship between environmental issues and social and political concerns.
PHIL 3700 - Science, Technology and Society	3 hours Examination of the interconnections among science, technology and society and the ways they mutually shape one another to the benefit and detriment of social life and the environment. Topics include the social values of science and technology; technology and social progress; expertise and democracy; colonialism; and environmental justice.
PHIL 4053 - Introduction to Subantarctic Biocultural Conservation	3 hours Introduction to the subantarctic ecosystems and culture of southern South America (geography, climate, ethnography, environmental philosophy and ecology) and exposure to both the practical and theoretical aspects of biocultural conservation, including its interdisciplinary character integrating the sciences and humanities. Same as BIOL 4053.
PHIL 4450 - Philosophy of Ecology	3 hours Traces the development of ecology from its roots in 19th-century natural history through general ecology, restoration ecology, deep ecology and social ecology. Examines the central philosophical concepts of biological and cultural diversity; the relations between societies and their environments; environmental and social problems determined by losses in biocultural

	diversity; agriculture, land ethics and conservation; non-Western conceptions of nature and society.
PHIL 4700 - Environmental Ethics	3 hours Examination of appropriate human interventions in the natural world. Topics include the history of ideas behind environmental thought, the legal and moral standing of nature, animal rights and welfare, deep ecology, social ecology, environmental justice.
PHIL 4750 - Philosophy and Public Policy	3 hours Explores how recent developments in moral theory, political philosophy, and philosophy of science and technology can clarify issues in public policy. Topics include the nature of government, the justification and limitations of collective action, the instruments of public policy, democracy and the economy, social costs and benefits, science and technology policy, computers and information policy, food and water policy, and environmental and development policy.
PSYC 3700 - Ecological Psychology	3 hours Effects of changing ecological conditions, such as the increased use of chemicals, the processing of foods, and the contamination of water and air on human behavior.
RECR 2550 - Leisure: Human Diversity and the Environment	3 hours Comprehensive overview of the role of leisure in contemporary society. Sociological, economic, psychological and environmental implications of leisure are explored with diverse groups. Societal and lifestyle changes are discussed with a multicultural focus and in relation to their impact on the future of leisure. Personal leisure lifestyles are reviewed and discussed.
GEOG 4420 - Conservation and Resource Management	3 hours Addresses issues associated with conservation and management of natural resources. Includes case studies in a variety of geographical scales: global, regional and especially local. Explores sustainability and its role in fostering responsible conservation and resource management.
GEOG 3500 - Introduction to Geographic Information Systems	3 hours (1;0;2*) Introduces the concepts and applications of computer-based spatial data handling, known as geographic information systems (GIS) technology. Illustrates the essential methods of GIS and its applications in fields including geography, business, administration, planning and environmental science. Students gain application skills via a series of practical exercises illustrating problem-solving strategies using up-to-date GIS software packages

SMHM 5520 - Global Tourism Systems	3 hours In-depth analysis of the global travel and tourism industries from a systems perspective. Models of tourism system used as methodological tools to understand this complex global industry. Topics include historical, contemporary and future effects of travel and tourism as related to social, economic, cultural and environmental issues.
SMHM 5530 - International Sustainable Tourism	3 hours Examines the philosophy, concepts and attitudes prevalent in practices of sustainable tourism in global destinations. Emphasizes the social/cultural, environmental and economic elements of sustainable tourism development. The

	variety of ways sustainable tourism activities are organized internationally and best practices are explored.
SMHM 5531 - Sustainable Natural Resource Management	3 hours Examines the fundamental changes affecting the world that impact institutions and attitudes toward more sustainable natural resource management. Problems with the depletion of the ozone layer, global warming, deforestation, species decimation, coastal erosion, wetlands protection, acid rain, water pollution, solid and hazardous waste disposal, toxic air emissions, and other environmental problems of similar magnitude require changes in industry. Case study analysis and problem solving.
SMHM 5532 - Context and Challenges of Applied Sustainable Tourism Development	3 hours Explores the environment's dilutive capacity and its importance to sustainable tourism. Examines factors critical to the sustainable tourism industry such as concentration of visitors, rising affluence, technological change, and increased expectations. Social responsibility, cultural assessment, and community participation principles for applied sustainable tourism development are considered in case studies and field excursions. Intervention strategies for sustainable tourism development are presented as a compelling case for an effective private-public partnership for development of sustainable tourism.
SMHM 5533 - Environmental Policies in a Changing World	3 hours Comprehensive overview of the theory and application of environmental policy. Policy instruments for environmental and natural resource management are explored in an industry-based context. Explores Costa Rica's national strategy for sustainable development and its policy implications for the sustainable tourism industry. Focuses on the selection and design of policy instruments for preserving the environment and/or reducing impact from tourism projects and programs.
SMHM 5534 - Seminars in Sustainable Tourism: Experiences of Successful Practitioners in Costa Rica	3 hours Examines the complexity of evaluating sustainability and the need for evaluation from various perspectives. Outlines the dilemmas that may be present in sustainable tourism projects, represented as competing values from the practitioner's point of view. Experiences of successful and not-so-successful practitioners of sustainable tourism are analyzed for the best practices in operational management, customer satisfaction, business planning, and promotion-marketing. Recognizes the importance of scale

	when evaluating sustainability. Covers both small- and large-scale tourism projects.
SMHM 5535 - Quantitative and Qualitative Analyses in Sustainable Tourism	3 hours Provides the tools and methods required for collecting, interpreting, analyzing and reporting quantitative and qualitative data. Uses quantitative and qualitative tools with a wide range of applications in the fields of sustainable tourism and environmental science. Focuses on research in rural communities.
SMHM 5650 - Global Merchandising	3 hours Critical analysis of merchandising principles and practices in a global context with emphasis on economic, political, environmental, cultural and social issues; geographic distribution; trade theory; trade data; and technological developments. Contrast the global dominance of textile, apparel and home furnishings industries on world trade and on consumer-driven markets by country and geo-political regions.