**All courses with an asterisk as a bullet are sustainability courses for which sustainability is a primary focus of the course; all courses with a standard bullet incorporate sustainability to some degree*

UNDERGRADUATE COURSES THAT INCLUDE SUSTAINABILITY

Biological Sciences

- **BIOLOGICAL FOUNDATIONS** (GL)
  Biological Sciences 120, Credits: 4
  A terminal course designed to introduce basic principles of life, such as structure and function, reproduction, evolution, diversity, and adaptation, leading to a broader understanding of man and his biological environment. Not applicable to biology emphases or minors. Three lectures and two hours of laboratory per week.
- **INTRODUCTORY BIOLOGY II** (GL)
  Biological Sciences 142, Credits: 5
  An introduction to biology emphasizing evolution, animal physiology, ecology, fungal, plant and animal diversity. Dissections are required. Three hours of lecture, one hour of discussion and two hours of laboratory per week. This course is prerequisite to all advanced courses in biology for majors and minors. Offered every term.
* **ECOLOGY AND SOCIETY** (GM)
  Biological Sciences 214, Credits: 3
  A study of basic ecological concepts and their application to the identification, understanding, and abatement of contemporary environmental problems. Special emphasis is given to those problems resulting from man and his activities. This course is accepted as a course in conservation required for teacher licensure in the sciences.
- **INTRODUCTION TO EPIDEMIOLOGY** (GM)
  Biological Sciences 220/Public Health 220, Credits: 3
  Introduction to basic principles of tracking changes in health indicators and problems in modern society. We will cover both current and historical cases to learn techniques of gathering information, analysis, and application. Problems will include infectious diseases, environmental problems, and other areas of concern in population health.
* **INTRODUCTION TO ECOLOGY**
  Biological Sciences 257, Credits: 3
  A survey of ecosystems and animal and plant populations and communities. Topics include review of the Earth's major biomes and the physical factors that influence them, the ecology and evolution of populations, the nature of biotic communities, the structure and function of ecosystems, and the status and protection of biodiversity. Three hours of lecture per week. Optional field trip. Offered every semester.
- **FIELD EXPERIENCE**
  Biological Sciences 258, Credits: 2
  Introduction to regional terrestrial and aquatic biological communities and field techniques for studying these communities. Field work and lectures will emphasize recognition of biotic community types, interpretation of their dynamics, and methods for identifying and surveying organisms. Weekend field trip required. Registration priority given to Ecology/Field majors.
- **MICROBIOLOGY**
  Biological Sciences 311, Credits: 4
  Examination of organisms too small to be seen by the unaided eye, ranging from their molecular organization to their role in global ecology. Primary emphasis will be the study of bacteria and viruses, their beneficial or detrimental impacts on humans, animals, and plants, and their current and potential exploitation. Two lectures and two labs per week. Offered every term.(two lectures cover biofuels and bioremediation)
- **BIOTECHNOLOGY LABORATORY METHODS II**
  Biological Sciences 364, Credits: 2
  Advanced theory, techniques, and practices employed in modern molecular/cell biology labs. Concepts/techniques covered will include advanced lab and instrumentation skills, advanced

microscopy, eukaryotic cell culture, protein analytical methods, and application of bioinformatics methodology. Three hours of laboratory per week.

* **ENVIRONMENTAL TOXICOLOGY**
  Biological Sciences 442, Credits: 3
  This course is an introduction to environmental toxicology that focuses on sources, transport, fate, accumulation, and toxicity of contaminants. Principles of toxicity testing and analysis of effects at different levels of biological organization (molecular to ecosystem) are covered. Information on select classes of contaminants, including emerging contaminants of concern are presented.
- **NATURAL HISTORY OF YELLOWSTONE NP AND THE UPPER GREAT PLAINS**
  Biological Sciences 451, Credits: 3
  This is an introductory, multi-disciplinary, summer field course open to all. It is held at Yellowstone National Park and locations in route. Students will learn field methods, geology, ecology and natural history. It is suitable for biology and geology majors and anyone interested in field science or natural history.
* **GENERAL ECOLOGY**
  Biological Sciences 457, Credits: 4
  A study of biotic populations and communities and natural ecosystems. Contemporary ecological theory and techniques will be emphasized, as well as their applications to the preservation of natural communities. Laboratory exercises will include field studies, laboratory experiments, and computer simulations and analysis. Six hours of lecture or laboratory per week.

Chemistry

- **EVERYDAY CHEMISTRY** (GL)
  Chemistry 100, Credits: 4
  A terminal course covering the basic concepts of chemistry and how they relate to our everyday lives. Chemistry concepts are covered at the particulate level and then connected to our macroscopic world. The lab provides deeper exploration and hands-on experiments. This course meets the General Education GL requirement and is designed primarily for non-natural science majors.
- **GENERAL CHEMISTRY I** (GL)
  Chemistry 102, Credits: 5
  An introduction to chemistry including matter and energy, atomic and molecular structure, bonding, reactions and stoichiometry, gas laws, and changes of state. This course is primarily designed for natural science, pre-health, and occupational and environmental safety majors needing two or more semesters of chemistry.
- **GENERAL CHEMISTRY II** (GL)
  Chemistry 104, Credits: 5
  This course, along with CHEM 102, forms the foundation of further chemistry studies. The topics covered include intermolecular forces, solutions, colligative properties, kinetics, equilibrium, acid-base theory and equilibria, thermodynamics, electrochemistry, and nuclear chemistry.
- **CHEMISTRY FOR OCCUPATIONAL AND ENVIRONMENTAL APPLICATIONS**
  Chemistry 112, Credits: 3
  This course will explore the bonding, structure, properties and reactivity of the main classes of organic compounds focusing on acid/base, redox, and radical reactions. The safety concerns of these reactions will be discussed and predicted by using chemical information found in online and text sources.
- **SCIENCE AND TECHNOLOGY IN SOCIETY** (GM)
  Chemistry 150, Credits: 3
  This course examines basic scientific concepts, technological advances, and their impact upon society. Science processes will be examined to illustrate how knowledge is acquired. Advantages

and limitations of the scientific method will be considered. The effect of science and technology on society will be a continuing theme.

- **ORGANIC CHEMISTRY**
  Chemistry 251, Credits: 3
  Introductory chemistry of the compounds of carbon, their structures and reactions. Taken primarily by chemistry majors and pre-professional students. The foundation for understanding organic reactions is established with an emphasis on bonding, functional groups, three dimensional structure of organic molecules, relationship between structure and reactivity, kinetics, and reaction mechanisms. Three hours of lecture per week.
- * **INTRODUCTION TO GREEN CHEMISTRY**
  Chemistry 270, Credits: 3
  A lecture course covering the principles and common methods of green chemistry. Topics will include: atom economy, reduction of amount and toxicity of waste from chemical processes, reduction of energy use in chemical processes, ensuring safety in chemical processes.
- * **GREEN CHEMISTRY LABORATORY**
  Chemistry 271, Credits: 1
  The principles of green chemistry will be illustrated in this lab course. Topics will include atom economy, reduction of quantity and toxicity of waste, alternative solvents, renewable feedstocks, catalysts, and reaction monitoring.

Computer Sciences

- **COMPSCI 180 DATA SCIENCE FOR EVERYONE** (GM) 3 Units
  An introduction to data science and its implementation using the R language, with applications in natural and social science, public health and welfare, and other areas. Students will explore methods of data analysis and visualization and cultivate marketable data-literacy skills. No prior knowledge of statistics or programming is needed.
- **COMPSCI 310 INTERMEDIATE DATA SCIENCE** 3 Units
  This course introduces intermediate data science and its implementation using R and Python, with applications in natural and social science, public health and welfare, and other areas. Students will explore methods of data analysis, cleaning, simulation and visualization and machine learning. Prior knowledge of programming and statistical analysis is assumed.
- **COMPSCI 424 OPERATING SYSTEMS** 3 Units
  This course covers problems encountered by computer operating systems including resource management, memory management, virtual memory, concurrent programming, and distributed systems. Algorithms are presented for deadlock, memory paging, job scheduling, memory allocation, and performance measurement. Operating systems such as WINDOWS, DOS, UNIX, VMS, and MVS are discussed.

Economics

- * **ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS**
  Economics 471
  Markets and the efficient allocation of resources over time. Market failure - property rights, externalities, public goods. Valuation of environmental benefits and costs. Economics of renewable and non-renewable natural resources - land, water, fisheries, forests, energy, minerals. Pollution abatement and environmental protection. Global issues - population, climate change, tropical deforestation, the oceans and atmosphere as global "commons".
- **ECONOMICS OF GLOBALIZATION**
  Economics 431
  The course treats the political economy of trade, foreign investment and multinational

corporations; the economic and social consequences of globalization; governments, markets, and the instruments of international economic and industrial policy; the World Trade Organization and recent issues--environmental and labor standards; intellectual property; services trade; the developing nations.

English

- **AMERICAN LITERATURE SURVEY I**
  English 226, Credits: 3
  A survey of American literature from the seventeenth century through the Civil War to acquaint the student with the foremost writers of our literary culture.
- **AMERICAN ENVIRONMENTAL LITERATURE** (GH)
  English 260, Credits: 3
  Explore American environmental literature (creative non-fiction/fiction/poetry) from its origins, with special attention to key authors such as Ralph Waldo Emerson, Henry David Thoreau, Emily Dickinson, John Muir, Teddy Roosevelt, Aldo Leopold, Leslie Silko, Rachel Carlson, Annie Dillard and Bill McKibben.
- **WRITING IN THE SCIENCES**
  English 371, Credits: 3
  Instruction on the nature of writing in the sciences, including features of scientific genres and strategies for producing effective texts.
- **ENGLISH 386 NATURE WRITING** 3 Units
  An intensive writing workshop that provides students with an introduction to the history, theory, techniques, and practice of American nature writing in its many forms.

Environmental Sciences

- **ENVSCI 200 INTRODUCTION TO ENVIRONMENTAL SCIENCE** (GM) 4 Units
  The introductory course for the environmental sciences major introduces students to the complexity of topics included in environmental sciences and is the important first step in the major. A one hour discussion section allows students and instructors to explore current topics and issues that fall within environmental science.
- **ENVSCI 400 ENVIRONMENTAL SCIENCE CAPSTONE** 3 Units
  This course enables students to utilize the wide range of knowledge and skills acquired in other courses to complete an original, interdisciplinary environmental science research project while acquiring and refining crucial skills such as research design, analysis, presentation, and teamwork that will prepare them for a career in environmental sciences.

Finance and Business Law

- **WATER LAW**
  Finance & Business Law 440
  Legal and policy issues related to the allocation and protection of freshwater. The right to surface and ground waters in eastern riparian and western prior appropriation systems, public rights in water, federal and Indian water rights, resolving transboundary water conflicts, and environmental law impacts on water rights. Particular attention is paid to Wisconsin and Great Lakes.

General Education

- **INDIVIDUAL AND SOCIETY**
  General Education 130
  This course critically examines how people influence and are affected by their social worlds from the perspectives of anthropology, psychology, sociology and women's studies. The course focuses on how we experience life as individuals and as members of cultural systems that shape our personalities, behavior, and perceptions of the world. May not be taken on an S/NC grade basis.
- **GLOBAL PERSPECTIVES**
  General Education 140
  This course introduces students to key terms, concepts, issues and relationships in economics, geography and political science. The course investigates how increasing globalization impacts issues such as the authority and competence of the nation-state, population growth and migration, economic development and trade and patterns of international cooperation and conflict. May not be taken on an S/NC grade basis.

Geography

- **INTRODUCTION TO GEOGRAPHY**
  Geography 100, Credits: 1
  Introduction to Geography introduces students to the specialties within geography, outlines the academic tracks within the major and associated requirements, and explores public and private career opportunities in the field of geography. Required of all majors at earliest opportunity.
- **INTRODUCTION TO WEATHER AND CLIMATE** (GL)
  Geography 120, Credits: 4
  This course introduces students to the processes controlling and distinguishing weather and climate. Particular emphasis is on data selection, interpretation, and analysis. The impacts of severe weather and climate change on humans is also emphasized. The labs expose students to the wide range of weather and climate information currently available on the Internet.
- **PHYSICAL GEOGRAPHY** (GL)
  Geography 210, Credits: 5
  A study of selected physical aspects of our geographic environment. Emphasis is given to the origin and characteristic features of topographic, climatic, vegetative and soil regions of the earth and to their interrelationships. The ultimate objective is to provide a foundation upon which to build a better understanding of human interrelationships with the physical environment. Field trips are normally taken.
- **HUMAN GEOGRAPHY** (GS)
  Geography 230, Credits: 3
  A systematic study of human land relationships highlighting the diversity of the elements that make up the cultural landscape in various regions.
- **GEOGRAPHY OF RACE AND ETHNICITY IN THE UNITED STATES** (DV) (GS)
  Geography 232, Credits: 3
  The course takes a geographical approach to the study of ethnic and racial groups in the United States. Native American, African American, Hispanic American, and Asian American groups are studied systematically. Major topics include mobility, culture regions, the cultural landscape created by the various ethnic and racial groups, immigration, segregation, and their associated politics.
- **GENDER AND GEOGRAPHY** (GS)
  Geography 245, Credits: 3
  Human geographies will be studied through the lens of gender along with gender relations at home and abroad. Content is organized according to a variety of spatial scales including the

body, home, city, and world. Cases investigated at the global scale include gendered livelihoods and migration, nationalism and war, and environmental issues.

* **GLOBAL ENVIRONMENTAL CHALLENGES** (GS)
  Geography 252, Credits: 3
  An introduction to environmental problems and their complexities. Attention is given to alternative solutions to such problems and the implications these alternatives have for the total environment. The course emphasizes the evaluation of the interrelationships between the environmental resource demands of people and the actual resource base of the earth.

- **GEOGRAPHY OF CANADA AND THE UNITED STATES OF AMERICA** (GS)
  Geography 261, Credits: 3
  A regional survey of the United States and Canada. Special attention is given to the physical, cultural and economic geography of the two countries.
- **GIS I: INTRODUCTION TO GIS AND MAPPING**
  Geography 270, Credits: 3
  An introduction to the quantitative and qualitative mapping techniques applicable to the physical and social sciences. Included are the skills required to create clear, concise and aesthetically pleasing maps, as well as how to derive information from them. Both graphic and cartographic software packages will be utilized to create and evaluate maps. Field trips are normally taken.
- **SOIL SCIENCE**
  Geography 300, Credits: 3
  Soil science deals with the systematic description, analysis, and understanding of soils and how they interact with and drive environmental processes and ecosystems. This course will examine the properties, formation, classification, and distribution of soil, stressing the connections between environmental controls on their formation and distribution. Field trips required.
- **METEOROLOGY AND CLIMATE**
  Geography 320, Credits: 3
  Begins with fundamental relationships among earth, sun and air. Common myths concerning weather phenomena are dispelled through in-depth explanation in everyday language of the physical laws that govern atmospheric functioning. The course terminates with a survey of world climate regions.
- **WATER RESOURCES**
  Geography 323, Credits: 3
  Class will investigate the pathways and processes of water transfer and storage in the many reservoirs on earth, along with the impact of human activities on water quality and fluxes. Detail is given to shallow groundwater monitoring and soil indicators of saturation for wetland delineation, anthropogenic effects on streams, and land use issues related to water quality. Field trips normally taken.
- **BIOGEOGRAPHY**
  Geography 330, Credits: 3
  This course provides an introduction to biogeography, the study of distributions of organisms. This course will combine both historical and ecological perspectives in analyzing plant and animal distributions. Human impacts on biotic distributions will also be discussed in some detail.
- **POLITICAL GEOGRAPHY**
  Geography 332, Credits: 3
  A geographical study of international conflicts and relations, geopolitical strategies and processes, and the variation of political phenomena from place to place in relation to changing economic and cultural environments in the national as well as global contexts.
- **GEOHAZARDS**
  Geography 352, Credits: 3
  The course will focus on the physical processes that create environmental hazards (e.g. earthquakes, volcanoes, severe weather), the primary controls on their frequency and intensity, and how human decision-making can influence the magnitude of impact that they have when they inevitably occur. Comparisons are made between impacts of hazards on developing versus developed countries.
- **GEOGRAPHY OF LATIN AMERICA**

Geography 365, Credits: 3
A study of the activities of the peoples of Mexico, Central America, South America and the West Indies, including means of addressing historical and contemporary issues of economic, social, cultural and political development across the Americas.

- **GIS II: SPATIAL DATA AND ANALYSIS**
  Geography 370, Credits: 3
  The basic principles and operations of geographic information systems (GIS) are presented, including the capture, storage, management, analysis and display of geographic referenced data and their attributes. Laboratory exercises provide extensive hands-on experiences with a number of GIS software packages, including both raster and vector systems. Field trips are normally taken.
- **REMOTE SENSING OF THE ENVIRONMENT**
  Geography 377, Credits: 3
  An introduction to the images, sensors and techniques used to gather and process data on the Earth and other planets, including aerial photography, electro-optical scanners and radar systems. The course will focus on the fundamentals of utilizing remotely sensed data in studying both natural and human induced processes impacting the Earth's surface. Computer applications will be extensively utilized. Field trips are normally taken.
* **HUMAN AND CLIMATE INTERACTIONS**
  Geography 420, Credits: 3
  The course objective is to distinguish between natural climate change and change induced by human activities. Topics covered include human modifications to cloud cover, global warming, and ozone problems. Another emphasis is to better understand the impacts of severe weather on human activities and the potential threats of future climate change. At least one field trip is usually taken.
- **RIVERS AND FLOODS**
  Geography 423, Credits: 3
  Streams and rivers are nested into a hierarchy that is organized by landscape characteristics. This course addresses how watersheds and stream processes influence channel form, the linkages among geomorphology and ecology, and flood magnitude and river management. Inferences are made using spatial and temporal scales.
- **URBAN LAND USE PLANNING**
  Geography 444, Credits: 3
  A study of the historical, social and political framework of the urban land planning process with primary emphasis on the United States. Exposure to professional planning approaches and techniques and a critical analysis of plans and planners are stressed. Field trips are normally taken.
* **CULTURAL ECOLOGY AND SUSTAINABLE DEVELOPMENT**
  Geography 452, Credits: 3
  This course will discuss the history of the subdiscipline of cultural ecology within geography and teach about indigenous and traditional societies' knowledge systems from a variety of world cultures. It will use ancient and modern examples of indigenous methods of natural resource management and show how these are being applied internationally to present day environmental problems and to sustainable development approaches.
- **GIS IN WATER RESOURCES**
  Geography 460, Credits: 3
  The course focuses on the use of GIS to develop solutions to problems associated with water resources. Practical applications will include using GIS to spatially and temporally examine the relationship of watershed characteristics on soil erosion, wetlands, water quality, streamflow, and in-stream habitat. The course combines traditional lectures with computer time in labs equipped with the latest GIS software. Grading is heavily based on completion of projects/technical reports and the quality of GIS outputs.
- **APPLIED ENVIRONMENTAL AND NATURAL RESOURCE GIS**
  Geography 470, Credits: 3
  This course will provide the knowledge and skills necessary to utilize GIS for solving applied

environmental analysis problems. Specifically, the course is designed to 1) identify and resolve environmental and natural resource problems in terms of spatial analysis, 2) explore a conceptual understanding of GIS, 3) provide students with technical instruction in current GIS software.

Geology

- **PRINCIPLES OF OCEANOGRAPHY (**GM)
  Geology 300, Credits: 3
  A study of the physical, chemical, geological and biological aspects of the major water masses of the world and human dependency on these water masses. One field trip to observe shoreline processes is required. A special fee will be assessed to students electing to participate in an optional field trip to cover the transportation costs.
- **ENVIRONMENTAL GEOLOGY** (GM)
  Geology 301, Credits: 3
  A study of geological phenomena such as earthquakes, volcanism, mass movements, river processes, coastal processes etc. and their impacts on society and environment. Special emphasis will be placed on examining remedial measures against geological hazards and how human actions influence natural geological processes. Three lecture hours per week.
- **ROCKS AND MINERALS**
  Geology 310, Credits: 4
  This course will study the formation processes of common rocks and minerals, their physical properties and their various uses will be covered in detail. Rock and mineral identification techniques will be especially emphasized during the laboratory sessions. Students will be expected to devote significant amounts of time towards the lab assignments.
- **GEOHAZARDS**
  Geology 352, Credits: 3
  The course will focus on the physical processes that create environmental hazards (e.g. earthquakes, volcanoes, severe weather), the primary controls on their frequency and intensity, and how human decision-making can influence the magnitude of impact that they have when they inevitably occur. Comparisons are made between impacts of hazards on developing versus developed countries.

Health, Physical Education, Recreation, and Coaching

- **OUTDOOR RECREATION LEADERSHIP**
  Recreation 391
  This course provides the fundamental knowledge, skills, and experience necessary to lead people in outdoor recreational activities. The course includes topics on trip planning, safety procedures, equipment and food logistics, leadership methods and expedition behavior for a variety of outdoor trip activities. The course also includes a 3 day outdoor trip experience.

History

- **INTRODUCTION TO AMERICAN INDIAN STUDIES (**DV)(GH)
  History 102, Credits: 3
  An interdisciplinary introduction to the history, literature, art, and religion of Native Americans designed for students seeking a basic understanding of American Indians. Emphasis will be given to the contemporary scene.

* **NORTH AMERICAN ENVIRONMENTAL HISTORY** (GH)
  History 190, Credits: 3
  This course will examine human interaction with the natural environment in North America between roughly 1400 and the present. Special attention will be paid to the twentieth century. It will also explore the ways in which people have historically defined, used, and modified nature to suit their needs and interests.
- **RECENT AMERICA, 1945 TO THE PRESENT** (GH)
  History 307, Credits: 3
  A study of American society, diplomacy, economics, and politics from the end of World War II to the present.
- **WOMEN, SCIENCE AND SOCIETY**
  History 365, Credits: 3
  Historical survey of women's contributions to science; case studies of modern women scientists; feminism and scientific knowledge.

Integrated Science and Business

- **INTRO TO INTEGRATED SCIENCE AND BUSINESS**
  Integrated Science-Business 185
  An introduction to the ISB program, career tracks and career opportunities. This course will feature a program overview plus seminars and readings on different senior level projects integrating science and business. Professional skills, identification of career tracks, and scientific and business communication will be emphasized. One hour lecture per week.

Management

* **SUSTAINABILITY MANAGEMENT**
  Management 364
  This course provides concepts and methodologies to help businesses manage their operations so that results are sustainable, economically, for people and for the environment. Topics include sustainability goals and controversies inherent to sustainability efforts, organizational and institutional responses, stakeholder analysis, realigning supply chains, and measuring sustainability.
- **SOCIAL RESPONSIBILITY**
  Management 366
  This course will provide students with an understanding of the relationship of organizations with their stakeholders (e.g., customers, employees, society, etc.) and provide both an exposure to and an understanding of both ethical and unethical behavior. By investigating organizations and their linkages with various environmental entities, students will have a better appreciation of what produces socially responsible behavior so as to expedite socially responsible actions and prevent irresponsible ones.

Mathematics

- **MATHEMATICAL MODELING AND SIMULATION**
  Mathematics 381, Credits: 3
  Modeling involving formulation of deterministic, stochastic and rule-based models and computer simulation in order to make predictions. Topics may include unconstrained and constrained growth models, equilibrium and stability, force and motion, predator-prey model, enzyme kinetics,

data-driven models, probability distributions, Monte Carlo simulations, random walk, diffusion, cellular automaton simulations, and high performance computing.

Occupational and Environmental Safety and Health

* **PRINCIPLES OF ENVIRONMENTAL MANAGEMENT**
  Safety 420, Credits: 3
  This course addresses the U.S. Environmental Protection Agency regulations and the related responsibilities of the safety professional to insure compliance. Areas to be covered are: Safe Drinking Water Act, Storm Water Discharges, Hazardous Waste Disposal, Environmental Audits, Clean Air Act, etc.
* **FUNDAMENTALS OF ENVIRONMENTAL LAW**
  Safety 453, Credits: 3
  An examination of federal and state laws with judicial and regulatory interpretations having application to the management of the occupational and environmental safety & health responsibilities of private sector firms in the United States.
- **HAZARDOUS MATERIALS MANAGEMENT**
  Safety 489, Credits: 3
  This course provides a framework for understanding the nature of hazardous materials and how the risks from such materials may be reduced. The focus is on the properties and characteristics of hazardous materials and the life cycle of hazardous materials (manufacturing/importing, use, storage, transportation, disposal and remediation); emphasizing hazardous material minimization and the best practices of using and handling hazardous materials based on their properties and characteristics.

Philosophy and Religious Studies

* **ENVIRONMENTAL ETHICS** (GH)
  Philosophy 248, Credits: 3
  A critical examination of ethical issues and problems arising from human interaction with non-human animals and the natural environment. Topics, such as the moral status of non-human animals, the moral bases of an environmental ethics, biodiversity, and sustainable development, will be considered by examining the writing of philosophers representing various perspectives.
- **PHILOSOPHY OF THE NATURAL AND SOCIAL SCIENCES** (GH)
  Philosophy 291, Credits: 3
  A critical examination of the methods, presuppositions, and concepts of the natural and social sciences. This course examines key concepts in the sciences such as time, space, explanation, verification, model construction, etc.
- **SOCIAL PHILOSOPHY** (GH)
  Philosophy 281, Credits: 3
  A discussion of ideas which are basic to thinking about society, its purposes, and its structure. Such ideas as justice, equality, rights, obligations and freedom are examined.
- **BIOETHICS** (GH)
  Philosophy 247, Credits: 3
  This course introduces key ethical approaches as Kantian ethics, utilitarianism, and feminist ethics and addresses their application to issues in health care practice. Ethical issues to be addressed may include: end-of-life decisions, family planning, genetic technology, access to health care, and the role of health care professionals.

Physics

- **ENERGY (GM)**
  Physics 100, Credits: 3
  An examination of energy; its nature, the forms in which it appears, its transformation, current and future sources, and energy issues faced by an informed electorate. Three one-hour lectures per week.

Political Science

* **INTRODUCTION TO PEACE AND SOCIAL JUSTICE**
  Political Science 200/Sociology 200, Credits: 3
  Introduction to Peace and Social Justice teaches an interdisciplinary approach to understanding peace -- as more than the absence of war. It explores multiple ways to create the conditions where social justice can flourish from global to local levels. Themes: non-violence, conflict resolution, human rights, environmental sustainability, and social inequality.
- **POLITICS OF URBAN INEQUALITY IN THE U.S.**
  Political Science 280, Credits: 3
  The course offers a sophisticated depiction of systemic urban inequality that constrains the lives of the urban poor. The readings will feature academic books and research articles that describe and analyze the politics and life experiences in inner-city neighborhoods.
- **SCIENCE POLICY AND HUMAN HEALTH**
  Political Science 342, Credits: 3
  This course will explore the intersections between science, public policy, and human health. A number of controversial scientific issues that have the potential to affect human health will be reviewed, which may include climate change, medical marijuana, genetic engineering and childhood vaccination.
* **US ENVIRONMENTAL POLITICS AND POLICY**
  Political Science 343, Credits: 3
  This course will explore opportunities and constraints in the development of environmental policy in the United States.
- **CONTEMPORARY POLITICAL THOUGHT**
  Political Science 412, Credits: 3
  A study in depth of certain selected topics of contemporary importance, such as the resolution of power conflicts, the theory and practice of nonviolence, and the existentialist dilemma.

Sociology, Criminology, and Anthropology

- **SOCIAL PROBLEMS** (GS)
  Sociology 250, Credits: 3
  This course examines various theoretical explanations of contemporary social problems such as crime, drug use, poverty, discrimination and environmental pollution. The impact of social problems on different groups in society and the role of social movements, government, and social policy are considered.
* **SOCIOLGY 319 ENVIRONMENTAL SOCIOLOGY** 3 Units
  This course examines the economic and political structures that have induced natural environmental degradation throughout the world and highlights the impact of collective social actors mobilizing to influence the process of environmental policy formation in order to address environmental and technological risks.
- **SOCIOLGY 321 SOCIOLOGY OF NATURAL DISASTERS** 3 Units
  This course examines the impact of natural events from a sociological perspective, including

hurricanes and earthquakes in which a relatively self-sufficient community undergoes severe physical destruction and incurs in financial loses and the loss of community. Agency and governmental response to disaster emergencies will also be considered.

- **SOCIAL MOVEMENTS AND COLLECTIVE BEHAVIOR**
  Sociology 340, Credits: 3
  An examination of the causes and consequences of social movements and collective behavior, including such phenomena as riots; fads; panic; trade unions; reform, revolutionary, and liberation movements; utopian communities.
- **SOCIOLOGY OF GLOBALIZATION**
  Sociology 385, Credits: 3
  A survey course designed to critically examine the sociological theories of change. Also examines contemporary empirical developments and their relevance for social policy. Illustrations will be drawn from work done in the developing countries.

Women's and Gender Studies

- **GENDER AND GEOGRAPHY** (GS)
  Women's Studies 245, Credits: 3
  Human geographies will be studied through the lens of gender along with gender relations at home and abroad. Content is organized according to a variety of spatial scales including the body, home, city, and world. Cases investigated at the global scale include gendered livelihoods and migration, nationalism and war, and environmental issues.
- **GENDER, ETHNICITY, AND THE ENVIRONMENT (DV)**
  Women's Studies 481, Credits: 3
  An examination of the ways that sexism, racism, ethnic/class exploitation and environmental destruction are interrelated. Considers social and cultural forces that lead to limited and/or gendered concepts of nature, and explores alternative theoretical and activist perspectives (deep ecology, bioregionalism, ecofeminism, environmental justice, etc.) and responses to the environmental crisis.

GRADUATE COURSES THAT INCLUDE SUSTAINABILITY

Accounting

- **ACCOUNT 787 SUSTAINABILITY AND ENVIRONMENTAL REPORTING 3 Units**
  This course provides a comprehensive exploration of (a) environmental issues at multiple levels and (b) the effects of these issues on business, communities, and consumers. In addition, this course will provide student with an (c) introduction and practical understanding of the broad paradigm of sustainability and provide an (d) in-depth analysis of accounting for the natural environment; e.g., water and other natural resources.

Biological Sciences

- **BIOLOGY 651 NATURAL HISTORY OF YELLOWSTONE NP AND THE UPPER GREAT PLAINS 3 units**
  This is an introductory, multi-disciplinary, summer field course open to all. It is held at Yellowstone National Park and locations in route. Students will learn field methods, geology,

ecology and natural history. It is suitable for biology and geology majors and anyone interested in field science or natural history.

Environmental Safety and Health

- **SAFETY 753 ENVIRONMENTAL SAFETY & HEALTH LAW** 3 Units
  An examination of federal and state laws with legal interpretations having application to safety professionals and industries will be emphasized. Federal acts, such as OSHA, CPSA and others will be dealt with in respect to their involvement with the industry. Liability to individuals and to the public will be stressed.
- **SAFETY 712 DISASTER PLANNING AND RESPONSE** 3 Units
  This course provides an overview of the organizational processes of preparing for and responding to disasters, both natural and technological. The course will begin with emergency response planning and preparation, then move into emergency operations and incident management, and conclude with a module on incident investigation and root cause analysis.
- **SAFETY 783 ENVIRONMENTAL AND SAFETY MANAGEMENT** 3 Units
  This course is designed for Occupational Safety majors, prior to fieldwork experience. Attention will be given to the environmental safety management structures and Risk Management and loss control functions within multi-facility corporate structures. Emphasis will be placed on developing multi-facility risk management and loss control programs.

Health, Physical Education, Recreation, and Coaching

- **HEALTHED 670 FACILITATING HEALTH BEHAVIOR** 3 Units
  This course is designed as a capstone experience for non-teaching health minor students who have had at least 12 credits of work in the health minor. This course offers opportunities to gain the skills necessary for helping others with health behavior changes, while creating healthier environments in the home, workplace and community.
- **RECREATN 591 OUTDOOR RECREATION LEADERSHIP 3 Units**
  This course provides the fundamental knowledge, skills, and experience necessary to lead people in outdoor recreational activities. The course includes topics on trip planning, safety procedures, equipment and food logistics, leadership methods and expedition behavior for a variety of outdoor trip activities. The course also includes a 3 day outdoor trip experience.

Management

- **MANGEMNT 759 SOCIAL RESPONSIBILITY OF BUSINESS** 3 Units
  The course analyzes (1) a broad spectrum of social, political, ethical, and legal frameworks within which organizations must function, and (2) social trends and their underlying causes as they can affect businesses.
- **MANGEMNT 764 SUSTAINABLE MANAGEMENT** 3 units
  This course focuses on proving concept and methodologies relevant to ensuring businesses can sustainably manage their operations. Topics include an introduction to sustainable management, organizational response, redefining business models, product design, realigning supply chains, social sustainability, and the role of Non-Governmental Organizations (NGOs). Specifically, the course will examine issue related to managing and implementing green and developmental projects.

Social Work

- **SOCWORK 511 Human Behavior and the Social Environment** [4 credits]
  This course is designed to provide students with an understanding of the processes of bio-psycho and socio-cultural development from infancy to older age. Material is also presented on the social systems (families, groups, organizations, and communities) in which individuals live.
- **SOCWORK 573 Social Work Practice 3** [3 credits]
  This course is designed to further develop and fine tune generalist social work skills at all levels of intervention (including individuals, families, organizations, and communities). Course content will focus on difficult situations in micro practice, understanding and working with families, and working in and with organizations and communities. Advocacy, striving for social and economic justice, and macro level change will be stressed.