

Sustainability Focus

- 1.) BIOL 1012, Ecology and Environmental Biology: This course is designed to familiarize non-major students with the basic structures and functions of populations, communities, and ecosystems. Based on this foundation, emphasis will be placed on ecological assessments of many current and pressing environmental issues that threaten the air, water and soil resources of earth.
- 2.) BIOL 3135, Ecology: This course is designed to familiarize students with the factors controlling the structure and function of populations, communities, and ecosystems. Basic concepts will be synthesized and reinforced by investigating the effects of anthropogenic disturbances on the structure and function of these systems.
- 3.) BIOL 4424/5424, Wildlife Habitat Ecology: This course is designed to familiarize students with the ecology of wildlife habitats. Management practices that affect the structure, function, and sustainability of wildlife habitats will be evaluated for ecosystems in the southeastern United States.
- 4.) BIOL 4985/6985, Conservation Biology: Students in this course learn how to protect Earth's biodiversity from human-caused threats such as invasive species, habitat loss, climate change, and over exploitation.
- 5.) CHEM 4920, Environmental Chemistry: This course is an introduction to the practice of modern environmental chemistry. Topics include pollutants in water, soil, and the atmosphere; equilibria in aqueous systems; experimental methods in environmental analyses; toxicological chemistry; current environmental problems. The laboratory will consist of EPA-approved methods of analyses
- 6.) CHEM 4685, Green Chemistry: Green chemistry is the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances and reduce energy requirement. The objective of the course is to gain fundamental knowledge and understanding of chemistry as a basis to develop a greener and more sustainable society.
- 7.) ECON 3480, Environmental and Natural Resource: This course surveys the issues arising from the interaction of economic and ecological systems, the suitability of the market mechanism to allocate natural and environmental resources, and policy options when markets fail. Applications include energy, climate change, pollution control, land use, fishery management, and water scarcity.
- 8.) ENVS 2202, Environmental Science: This course is an interdisciplinary course integrating principles from biology, chemistry, ecology, geology, and non-science disciplines as related to the interactions of humans and their environment. Issues of local, regional, and global concern will be used to help students explain scientific concepts and analyze practical solutions to complex environmental problems.
- 9.) ENVS 4900, Environmental Science Senior Capstone Course: Students may elect to complete a laboratory or field research project, an academic service-learning project internship or other research relevant to career objectives. The project or work selected by the student must have an environmental focus.
- 10.) GEOG 2505, Human Impacts on the Environment: In this course emphasis is placed on the study of ecosystems, human population growth, energy, pollution, and other environmental issues and key environmental policies.
- 11.) GEOG 4086, Internship Sustainable Agriculture: This internship focused on the practical dimensions of maintaining a sustainable garden/farm for producing food. The internship was based on the campus as a living learning laboratory, making use especially of the campus garden.

12.) GEOL 4083, Environmental Geochemistry: The geochemistry of the earth's lithosphere, biosphere, hydrosphere, and atmosphere and the human modifications to these systems that cause environmental problems. Special topics include acid rain, greenhouse effect, toxic trace elements, landfills, energy usage and radon.

13.) GEOL 3603W, Environmental Geology: The learning objectives for course include: (a) To identify environmental problems and apply geologic principles to address them; (b) To explore relationships between human population growth, the Earth system, hazardous Earth processes, sustainability, and the optimization of resource management in order to maximize environmental benefits for society.

14.) MGNT 3630, Environmental Law: This course provides an introduction to the legal and regulatory aspects of environmental law, its history and sources, its reliance on scientific principles, and its relationship to business management and environmental sustainability.

15.) PLAN 4701/5701, Technology and Sustainable Economic Development: Examines economic development policy at all levels of government and the role technology can play in helping promote sustainable economic development.

16.) PLAN 5785, Topic in Planning - Campus Sustainability: This special topics classThe internship was based on the campus as a living learning laboratory, making use especially of the campus garden.

17.) POLS 4209/5209, Environmental Policy: This course emphasizes the national and state policy making process, focusing on the dynamics of pluralist change, policy implementation and current environmental status.

18.) SOCI 5981, Society and the Environment: Directed reading focusing on the intersection of society and the environment.

Sustainability Component:

1.) ANTH 1100, Faces of Culture: In this applied anthropology course there is a component that deals with how .archaeologists are contributing to sustainability.

2.) ANTH 4181, Cultural Resources Management: Cultural Resource Management (CRM) is defined as anthropological and archaeological research carried out to document and preserve significant places, properties, and objects of cultural heritage. CRM often intersects and complements environmental protection and preservation under NEPA and other federal legislation. In this course, our students use an anthropological perspective to incorporate environmental sustainability into comprehensive cultural resource management plans.

3.) BIOL 1010, Fundamentals of Biology: This course addresses the causes of climate change and possible solutions. Students also measure their carbon footprint and identify easy ways to reduce it. We also cover other environmental issues (acid rain, GMOs, etc.), health issues (cancer, nutrition, etc.) and conservation biology.

4.) BIOL 1107, Principles of Biology I: This courses addresses many aspects of ecosystems (energy flow, nutrient recycling, predator-prey relationships, etc.). It also provides an introduction to current environmental issues such as freshwater shortages and global climate change, and their implications for ecosystems.

5.) BIOL 1107L, Principles of Biology I Lab: The laboratory component for BIOL 1107. Lecture and lab must be taken in the same term.

6.) BIOL 1108, Principles of Biology II: This course addresses conservation biology as a unit. It also uses health and environmental issues throughout the course as interesting examples and applications.

- 7.) BIOL 1108L, Principles of Biology II Lab: The laboratory component for BIOL 1108. Lecture and lab must be taken in the same term.
- 8.) BIOL 2107, Principles of Biology I for Biology Majors: This course addresses many aspects of ecosystems (energy flow, nutrient recycling, predator-prey relationships, etc.). It also provides an introduction to current environmental issues such as freshwater shortages and global climate change, and their implications for ecosystems.
- 9.) BIOL 2107L, Principles of Biology II Lab: The laboratory component for BIOL 2107. Lecture and lab must be taken in the same term.
- 10.) BIOL 2108, Prin of Biology I for Biology Majors: This course addresses conservation biology as a unit. It also uses health and environmental issues throughout the course as interesting examples and applications.
- 11.) BIOL 2108L, Principles of Biology II Lab: The laboratory component for BIOL 2108. Lecture and lab must be taken in the same term.
- 12.) BIOL 3135, Ecology: This course is designed to familiarize Biology majors with the factors controlling the structure and function of populations, communities, and ecosystems. The role of evolutionary processes in the structure and function of these systems will also be explored. Basic concepts will be synthesized and reinforced by investigating the dynamics of the aquatic life zones and terrestrial biomes on earth.
- 13.) BIOL 4450/ BIOL 5450, Terrestrial Ecology: This course provides an in-dept study of the processes controlling the structure and function of terrestrial ecosystems. Basic concepts will be synthesized and applied comparing and contrasting the dynamics of terrestrial ecosystems in the Coastal Plain, Piedmont, and Mountain Regions of the Southeastern United States.
- 14.) BIOL 4985, Water Resource Management: Special topics course focused on the theory and practice of sound water resource management.
- 15.) BIOL 4440/BIOL 5440, Aquatic Ecology: A study of biological, chemical, and physical components and interactions in freshwater systems. Field labs include a study of reservoirs and streams in west Georgia. A three-day field trip to the Georgia coast or the Okefenokee Swamp is required.
- 16.) BIOL 6982, Behavioral Ecology: Directed reading course focused on the study of the evolutionary basis for animal behavior due to ecological pressures.
- 17.) CHEM 4985, Special Topic – Materials Chemistry: Students build dye-sensitized nano-crystalline solar cells and test their efficiency under a variety of conditions. Solar cells are discussed in the context of alternate energy sources.
- 18.) CHEM 4913L, Advanced Synthesis Lab: Students examine the recyclability of a catalyst of an olefin metathesis reaction using a room temperature ionic liquid as a solvent. Students will critically assess the "greenness" of this method compared to the conventional use of volatile organic solvents, which can cause health and environmental problems, and the expensive catalyst cannot be recycled.
- 19.) GEOG 1111, Physical Geography: This course is an introduction to topics related to the environment, including population growth, water quality, the history of agriculture, and forestry.

- 20.) GEOG 3900, Ecological Climatology: Explores the interactions between weather, climate, and life, including human life.
- 21.) GEOG 1013, World Geography: An introduction survey of world geography with attention given to demographic, political, cultural, economic, and environmental characteristics of regions of the world. Attention is given to the challenges of population growth, affluence, and limited resources.
- 22.) GEOG 1112, Weather and Climate: An introduction to weather and climate including influences on the biosphere ecosystems and biomes. This course looks at local, regional, and global geographic relationships among atmospheric and biospheric systems, including an introduction to climate change.
- 23.) GEOG 1112L, Weather and Climate Lab: The laboratory component for GEOG 1112.
- 24.) GEOG 1113, Landform Geography: This course covers the lithosphere, hydrosphere, and biosphere and the human influence in those.
- 25.) GEOG 1113L, Landform Geography Lab: The laboratory component for GEOG 1113.
- 26.) GEOG 3800, Biogeography: This course addresses disturbance ecology, invasive species, environmental stewardship, climate change, and field methods.
- 27.) GEOG 3643, Urban Geography: Includes a section on environmental challenged in cities and sustainable cities.
- 28.) GEOG 4082, Tree Mapping with GIS: Directed problems with focus on hands on project mapping trees on UWG campus.
- 29.) GEOG 4253, Geography of Money: Includes a consideration of the exponential growth requirements in capitalist systems and the subsequent challenged to economic and environmental sustainability.
- 30.) GEOL 1121, Intro to Geosciences: Acquaints students with geological concepts, processes, and earth materials and their effects on mankind and the environment.
- 31.) GEOL 2503, Intro to Oceanography: The course addresses the issue of the ocean as a source of food, energy, mineral resources, as well as environmental issues affecting the sea.
- 32.) GEOL 2553, Geology of the National Parks: This class is taught online during the Summer semester. As part of this course, students are expected to develop a greater appreciation for our natural world, natural resources, human impacts on the environment, and the need for management and stewardship to preserve the parks for future generations.
- 33.) GEOL 4084, Hydrogeology: Examines the physical aspects of groundwater occurrence and movement, and provides an introduction to contaminant transport and chemical hydrogeology.
- 34.) GEOL 4093, Risk Assessment: A major focus will be on social science issue of planning, politics, economics and their control on management of high hazard areas, vulnerability assessments, and mitigation.
- 35.) GEOL 4985, Coastal Hazards Assessment: Selected topics offering focusing in on a hands on project assessing coastal hazards, particularly relevant with regard to global warming.

- 36.) ISCI 2002, Physical Science: Course covering energy conservation and the impact of wind farms and solar energy.
- 37.) MGNT 3625, Social Corporate Responsibility: Course that addresses the intersection of corporate management and social sustainability.
- 38.) MGNT 6681, Strategic, Ethical, and Global Management: The triple bottom line is addressed - social, environmental (or ecological) and financial considerations in management.
- 39.) PLAN/POLS 3701, Intro to Urban and Regional Planning: Introduction to fundamental concepts, including physical planning, transportation, housing, land use, urban development, and preservation.
- 40.) PLAN/POLS 3702, Land use Planning: Methods of state regulation of land uses and growth management techniques are considered from a sustainability perspective in mind.
- 41.) PLAN 6702, Land use Planning: Methods of state regulation of land uses and growth management techniques are considered from a sustainability perspective in mind.
- 42.) PSYC 5085, Ecopsychology: A study of the relationship between human beings and the natural world through ecological and psychological principles.