**BIOL-24300 Principles of Sustainability**

This course focuses on the multidisciplinary nature of sustainability needed for effective change. Students will be presented with the concepts and practices of sustainability as a process that meets the needs of the present without compromising the planet for the future. This course will take a holistic approach to develop a firm grounding on the health and integrity of systems that govern sustainability: ecology, climate, energy, society, economy, food, and culture.

This is an undergraduate course and is a direct sustainability course.

# BIOL-37300 Renewable Energy Technologies

Students will take a look at conventional energy systems, peak oil, global warming, global energy issues, and a comprehensive examination of alternative renewable energy resources. Fundamentals of renewable technologies such as bioenergy, hydroelectricity, geothermal, wind, and solar power will be studied. The key goal is to challenge students to consider energy production and distribution with an eye toward long-term, low impact solutions.

This is an undergraduate course and is a direct sustainability course.

# BIOL-36300 Biomimicry and Whole Systems Thinking

Biomimicry is a branch of study which focuses on imitating nature's best ideas as an inspiration to solve problems faced by humans on earth. The course is designed to get students to think ecologically and work with complex whole living systems and apply them to solve human problems. This course is intended to give students the opportunity to explore past, present and future examples of biomimetic solutions and designs to human problems.

This is an undergraduate course and is a direct sustainability course.

# BIOL-39300 Green Building & LEED Rating Systems

The built environment focuses on community growth, local economic opportunity, and the protection of public health and the environment while creating and enhancing the places where people live. How and where development occurs can effect ecosystem quality and services, habitat protection, water resources, energy consumption, and indoor and outdoor air quality. Students will integrate these concepts related the built environment with emphasis on the Leadership in Energy and Environmental Design (LEED) Green Building Rating System.

This is an undergraduate course and is a direct sustainability course.

# BIOL-41600 Conservation Biology

This course is an introduction to conservation biology emphasizing ecological relationships between populations, biological communities and local and regional ecosystems. Stressors to biological diversity (exotic species invasions, habitat modification, etc.) will be discussed along with emerging solutions varying from structural (protected areas and reserve design), lifestyle (attitudes and environmental economics), to legislation.

This is an undergraduate course and is a direct sustainability course.

# BIOL-41700 Conservation Biology Lab

Laboratory course emphasizing the use emerging technology of conservation biology (Vortex software, population modeling, and other tools) and examining primary literature in this area. This course will also include field trips to see conservation biology in action (Brookfield Zoo, Midewin Tallgrass Prairie, Chicago Botanic Garden, etc.).

This is an undergraduate course and is a direct sustainability course.