COURSE DETAIL

ECOOGY AND NATURE CONSERVATION
Country Italy
Host Institution University of Bologna
Program(s) University of Bologna
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Environmental Studies
UCEAP Course Number 159
UCEAP Course Suffix
UCEAP Official Title ECOOGY AND NATURE CONSERVATION
UCEAP Transcript Title ECOLOGY&CONSERVATN
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

The course focuses on the integration between environment and living organisms, and how these shape biological communities as well as the dynamics involved. Attention is placed on the complexity of factors involved in the sustainable management of human interventions. Students gain an overall understanding of the state of the environment, its resources and biodiversity, and the problems stemming from human impact. In addition, students acquire notions regarding the conservation of species and ecosystems at risk. Topics covered: 1) the cultural roots of ecology, the aims of ecology, the levels of ecological organization, temporal and spatial scales, ecology as a science, ecological methods and tools; 2) abiotic environment, climate, aquatic environment, and terrestrial environment; 3) interactions between organisms and the environment, principles of evolutionary ecology, adaptations of organisms to the environment, and life histories 4) ecology of populations, population growth, the study of demography, exponential and logistic growth models, carrying capacity and intraspecific competition, the concept of metapopulation; 5) biotic interactions, competition, predation, facilitation and other positive interactions, direct and indirect interactions; 6) ecological communities, community structure, the concept of biodiversity and diversity indices, ecological successions, disturbance and patch dynamics, factors in maintaining diversity, the role of competition, disturbance and environmental heterogeneity; 7) ecology of ecosystems, the ecosystem concept, flows of energy in ecosystems, chains and food webs, decomposition, biogeochemical cycles, biodiversity and functioning, ecosystem functions and services; 8) introduction to conservation biology, identifying and estimating the value of ecosystem services; 9) threats to biological diversity, habitat fragmentation and loss, habitat degradation and pollution, overexploitation of natural resources, invasive species, urbanization and homogenization; 10) vulnerability and conservation of populations, species vulnerability and conservation status, biodiversity hotspots, minimum viable population, reintroduction of populations, conservation in situ and ex situ, successful conservation stories; 11) vulnerability and conservation of habitats, habitat vulnerability and conservation status, parks and protected areas, habitat restoration and novel habitats, spatial planning and sustainable development, successful conservation stories. Assessment is based on a written exam. International

students may elect to take the oral examination in English.

Language(s) of Instruction
Italian

Host Institution Course Number
59020

Host Institution Course Title
ECOLOGIA E CONSERVAZIONE DELLA NATURA

Host Institution Course Details

Host Institution Campus
SCIENZE

Host Institution Faculty

Host Institution Degree

Host Institution Department
Scienze naturali

Course Last Reviewed

Print