COURSE DETAIL

APPLIED ECOSYSTEM ECOLOGY
Country Denmark
Host Institution University of Copenhagen
Program(s) University of Copenhagen
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Environmental Studies
UCEAP Course Number 106
UCEAP Course Suffix
UCEAP Official Title APPLIED ECOSYSTEM ECOLOGY
UCEAP Transcript Title APPL ECOSYS ECOLOGY
UCEAP Quarter Units 6.00
UCEAP Semester Units 4.00

Course Description

The central idea of the course is to study the mechanisms and processes that control ecosystem functioning via interactions between organisms, the environment, and human activities. With a focus on quantitative analyses in lectures and exercises, it analyzes systems from the global scale through the ecosystem to the scale of the soil microenvironment in order to understand the background of fundamental services that ecosystems provide. The course analyzes the influence and impact of human activities including different land uses, pollution, and climate change, as well as potential climate change mitigation strategies including bioenergy production. The course focuses on exercises with quantitative analyses where students learn how to apply the knowledge obtained during the course, such as evaluating various environmental footprints of human activities and assessing the sustainability of climate change mitigation strategies. The course concludes with a course “conference” where students present and discuss the concepts of planetary boundaries and the sustainable use of global resources. The core elements of the course are: the functioning of the Globe and the three spheres (atmosphere, hydrosphere, geosphere); characteristics and differences of the global cycles of major elements (C, N, and P) and their interactions; the triangle of interactions between organisms, processes, and the environment; succession, diversity, and ecosystem functioning and how this affects stability, resistance, and resilience of ecosystems; evaluation of impacts of human activities through the assessment of the flow of energy and matter through ecosystems.

Language(s) of Instruction
English

Host Institution Course Number
NIGK16000U

Host Institution Course Title
APPLIED ECOSYSTEM ECOLOGY

Host Institution Course Details

https://kurser.ku.dk/course/nigk16000u/2024-2025

Host Institution Campus

Host Institution Faculty
Science

Host Institution Degree
Master

Host Institution Department
Geoscience and Natural Resource Management

Course Last Reviewed
2024-2025

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