



Course title: ECOLOGY AND ENVIRONMENTAL PROTECTION

ECTS credit allocation (and other scores): 3.5 ECTS

Semester: spring

Level of study: ISCED-6 - first-cycle programmes (EQF-6)

Branch of science: Natural sciences

Language: English

Number of hours per semester: 30/15

Course coordinator/ Department and e-mail: dr hab. Mirosław Grzybowski, prof. UWM; grzybomi@uwm.edu.pl

Type of classes: classes and lectures

Substantive content

CLASSES: Plant population density - squares method - field study simulation, calculation of population density and frequency of vegetation. Population size of animals - re-method catches, calculating the animal population. Species diversity - biocenosis analysis – indexes species diversity and uniformity index. Bioenergetics of individuals and animal populations. Principles of ecological certificates in tourism. Presentations of papers on issues common for ecology and tourism: environmental protection in the touristic centers of the World, animals and their behavior related to touristic movement.

LECTURES: The scope of ecology. Living environment - the universe, the origins of the Earth, atmosphere, temperature, radiation, water, soil, Earth's natural resources, climate. Thermodynamics and balance in nature. Autecology and synecology. Ecosystems - functioning, types. Biomes. Dynamics of biocenosis. Population ecology. Competition, predation, parasitism, mutualism. Agroecology, human ecology, landscape ecology, urban ecology, tourism ecology. Environmental Protection - basic concepts. Air, water and soil protection. Soil and water degradation – their reclamation. Air pollution - prevention methods. Waste and sewage in the environment.

Learning purpose: The aim of education is to understand by the student the relationship between living organisms and the environment.

On completion of the study programme the graduate will gain:

Knowledge: Has knowledge of the basics of ecology and protection of the environment and its threats as well sustainable use.

Skills: Uses at a basic level the available sources of information in the field of ecology and environmental protection.

Social Competencies: Is aware of the impact of tourism on various areas of human life and is ready to assesses them.

Basic literature: MacKenzie A., Ball A.S., Virdee S.R., 2001, Instant Notes. Ecology. Routledge, London.

Supplementary literature: Krebs J.C. 2008. Ecology. Pearson International Edition, New York.

The allocated number of ECTS points consists of:

Contact hours with an academic teacher: 1.96

Student's independent work: 1.54