ECOLOGY AND NATURE CONSERVATION

MSc Master of Science, Earth Science

2018/19 I. semester

COURSE COMMUNICATION FOLDER

University of Miskolc
Faculty of Earth Science and Engineering
Institute of Environmental Management

Content

1. Course description, responsible instructor, number of contact hours, credits

Course Title: Ecology and nature conservation	**Credits: 3**
Type of course: compulsory	Neptun code: MFKHT710009
Type (lec. / sem. / lab. / consult.) and Number of Contact Hours per Week: **3. sem.**	
Type of Assessment (exam. / pr. mark. / other): **pr. mark** **Assessment and grading:** **Signature:** Participation in lessons and field trips. **Grade:** Field trip report (written submission), nature conservation system of the student's home country (oral presentation). **Grading limits:** >80%: excellent, 70–79%: good, 60–69%: medium, 50–59%: satisfactory, <50%: unsatisfactory.	
Position in Curriculum (which semester): **1st**	
Pre-requisites *(if any)*: –	
Course Description:	
Scope and objective of subject: To introduce the basics of ecology as a biology discipline, and nature conservation. To present the process of knowing the nature conservation situation of an area. To make students sensitive for the topics of nature conservation. To introduce consequences of human activities, focusing on engineering work and land use. To introduce methods of information gathering and documentation of any modification in nature which impact living and nonliving nature elements. **Thematic description of subject:** Concept and subject of ecology. Ecological environment, biotic and abiotic ecological factors, niche, biotope, species and population, community. Anthropogenic impacts. Biodiversity, native and non-native (introduced, invasive) species. Environmental protection and nature conservation. Natural value. Potential natural status. Degree of naturalness. Local, regional and global problems. Fragmentation, edge effect, biocorridor, stepping stones. Authorities, formal and informal nature conservation. Monitoring, research, education, popularization, friendly nature conservation.	
The 3–5 most important compulsory, or recommended **literature** (textbook, book) **resources**:	
• Michael Begon, John L. Harper, Colin R. Townsend: ECOLOGY. Individuals, Populations and Communities. Second Edition. Blackwell Scientific Publications, 1990. • Scott Ferson and Mark Burgman (Eds.): Quantitative Methods for Conservation Biology. Springer, 2002, 322 p. • Malcolm Hunter and James Gibbs: Fundamentals of Conservation Biology – 3rd Edition. Blackwell Publishers, 2006, 497 p. • Richard B Primack: Essentials of Conservation Biology – 6th edition. Sinauer Associates, 2014, 603 p. • Stephen B Glass, Evelyn A Howell and John A Harrington: Introduction to Restoration Ecology. Island Press, USA, 2011, 464 p.	
Competencies to evolve: T1 – The environmental engineer knows, and apply the scientific and technical theory, and practice. T9 – The environmental engineer knows the publicizes, and opinion leader methods related to environmental engineer activity. K6 – The environmental engineer is able to plan, implement, and maintain engineering interventions, occured on the field of soil-, geological formation-, water-, air-, vibration-, and noise-protection, wildlife-protection, remediation, and waste management. Active professional English language skills.	
Responsible Instructor (*name, position, scientific degree):* **Teofil Fülep Dr., invited lecturer, PhD**	
Other Faculty Member(s) Involved in Teaching, if any (*name, position, scientific degree*):	

2. Course topics (per lectures)

Ecology and nature conservation.
Course topics (schedule)
Actual school year: autumn semester
Master of Science, Earth Science MSc, 1. semester, main course

Week	Seminar
1.	Introduction of course material, syllabus
2.	Discussion of the field trips in the Bükk Mountains, Bükk National Park
3.	Field trip 1: water extraction, special caves, archaeology and palaeontology, landscape construction, tourist attractions, scientific research, traditional and forest crafts, lakes, meandering and vegetation of streams, fishes, native and introduced species
4.	Field trip 2: geomorphology, vegetation and forests, tourism, transport system and problems focusing on cars, strictly protected area, caves, springs, streams and water system, introduced species, land use, landraces; evening programme: light pollution and starry sky park, karst plateau, non-forested vegetation, biodiversity, tourist centres and winter sports, soft tourism vs. hard tourism, outdoor sports, ecotourism
5.	Nature Conservation and Ecology: main terms, history in brief, mankind and nature, natural values, ecology, ecosystem services, biodiversity
6.	Nature Conservation: why to protect, harmony between nature and people, study cases of nature and mankind, introduced species, biological invasions, conserving species, hated animals, top predators
7.	Nature Conservation: nature and engineering, natural rules, water regulations, technology, eco-architecture, ecological network, help wildlife
8.	Nature Conservation: tourism history and types, motor vehicles in the nature, ways end levels of nature conservation
9.	Consultation about presentations
10.	Miner Sports Day (educational break)
11.	Oral presentations about nature conservation system of the student’s home country
12.	Oral presentations about nature conservation system of the student’s home country
13.	Oral presentations about nature conservation system of the student’s home country
14.	Secondary oral presentations

3. Presentations

1. Field trip report (written submission)

Report about the Bükk field trips: Positive and negative experiences, individual thoughts about the observed nature conservation.

Size: 3–5 A4 pages

Format: not specified

Extension: pdf file

Deadline: the 14th lecture

Oral presentation: NOT

2. Nature conservation system of the student's home country (oral presentation)

Summary about nature conservation system of the home country:

- Introduce the natural values in your own, home country.
- Introduce the main authorities, formal and informal associations for nature conservation.
- Introduce the most important problems and challenges of nature conservation.
- Introduce the most significant goals and results of your nature conservation.
- Own opinion, predictions.

Size: minimum 25 pages (slides), 5–10 minutes

Format: not specified

Extension: ppt or pdf file

Deadline: the 14th lecture