

Course name: Protection of biodiversity, soils and geological heritage

COURSE NAME (capital letters) PROTECTION OF BIODIVERSITY, SOILS AND GEOLOGICAL HERITAGE

ECTS	6
Course status	complementary - obligatory
Course final assesement/evaluation of outcomes	exam, evaluation of student presentations, written report from field classes
Prerequisites	none

Main field of study: Environmental protection

field of study name (capital letters) ENVIRONMENTAL PROTECTION

Profile of study	General-academic
The code of studies (education level)	SI/SM (bachelor/master)
Semester of studies	summer
Language of instruction	English

Course offered by:

Name of faculty offering the course	Faculty of Agriculture and Economics
Name of department offering the course	Department of Soil Science and Agrophysics
Course coordinator	Krystyna Ciarkowska, Tomasz Zaleski

Learning outcomes of the course:

Symbol of outcome	Description of learning outcome	Reference to	
		main field of study outcomes	discipline#

KNOWLEDGE – student knows and/or understands:

PBSGH_W1	environmental phenomena and the chemistry of the lithosphere, hydrosphere and atmosphere	OŚ1_W05	RR
PBSGH_W2	environmental soil services and how to protect soils against the degradation	OŚ1_W10	RR
PBSGH_W3	anthropogenic soil threats, reclamation methods	OŚ1_W11	RR
PBSGH_W4	basic regulations regarding environment management	OŚ1_W23	RR

SKILLS – student is able to:

PBSGH_U1	use the basic laboratory technique useful in environmental protection	OŚ1_U08	RR
PBSGH_U2	interpret the phenomena occurring in nature	OŚ1_U09	RR
PBSGH_U3	use terminology and interpret basic legal acts regarding environmental protection	OŚ1_U25	RR

SOCIAL COMPETENCE- student is ready to:

PBSGH_K1	is sensitive to the conservation of environmental resources and understands the need to	OŚ1_K01	RR
PBSGH_K2	training and self-improvement in the field of the profession and understands the need for lifelong learning	OŚ1_K04	RR
PBSGH_K3	thinking and acting in the entrepreneurial way	OŚ1_K06	RR

Teaching contents:

Lectures		26	hours
Topics of the lectures	1. Multifunctional role of soils in the environment. Basic definitions related to soil protection and conservation 2. Soil erosion 3. Physical deterioration of soils. Geotechnical deformation. 4. Soil chemical degradation - acidification and pollution with organic and inorganic pollutants 5. Biological degradation - organic matter decline 6. Definition of the biological diversity. Main resolutions of the Biodiversity Convention 7. Threats and protection of species: red lists and books, protection <i>in situ</i> and <i>ex situ</i> of the threatened species 8. Biodiversity protection on the ecosystems level 9. Protection of seminatural plant communities 10. Importance of the territorial protection in the preservation of the ecosystem diversity 11. State and protection strategy of biodiversity in Poland 12. Nature reservation and national parks in Poland. Landscape parks, protected landscape areas in Poland 13. Monuments of nature, ecological lands, nature landscape complexes in Poland 14. Geological heritage and proposals of the European Geoparks on the area of Poland		
Accomplished learning outcomes	<i>OŚ1_W05, OŚ1_W10, OŚ1_W11, OŚ1_W23</i>		
Verification methods, rules and criteria of outcome assessment	<i>Written exam, to pass the exam one must answer at least 60% of questions correctly. In the overall assessment 66.6% is the assessment of the lectures</i>		
Classes		32	hours
Topics of the seminars	Realization of the protection idea in particular countries Properties of soils with different resistance against degradation: determination of pH values, texture and organic carbon content Buffer capacities determination Cation exchange capacities determination Analyses of results and summary Trip to Ojcow or Nida Basin to examine geological heritage, biodiversity and nature protection Trip to Pieniny National Park to examine geological heritage and semi-natural grasslands protection		
Accomplished learning outcomes	<i>OŚ1_U08, OŚ1_U09, OŚ1_U25, OŚ1_K01, OŚ1_K04, OŚ1_K06</i>		
Verification methods, rules and criteria of outcome assessment	<i>to have a positive mark, it is necessary to make a presentation and a report from the field part. A share of classes in the overall assessment is 33.4%</i>		
Seminars			hours
Topics of the seminars			
Accomplished learning outcomes	<i>symbol of learning outcomes of the seminars</i>		

Verification methods, rules and criteria of outcome assessment	
References:	
Basic	1. Louka E. <i>Biodiversity and human rights. The international rules for the protection of biodiversity.</i> 2002, 2. Troeh SE. <i>Soil and water conservation-productivity and environmental protection.</i> New Jersey 1999. 3. Haan F., Reynweld M.I.V. <i>Soil pollution and soil protection.</i> International Book Distributing Co 2004
Supplementary	1. Pullin A.S. <i>Conservation biology.</i> Cambridge University Press 2002. 2. Mirsall A. <i>Soil pollution: origin, monitoring and remediation.</i> Springer Verlag 2009.

Structure of learning outcomes:

Discipline: # RR	6	ECTS**
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Structure of student activities:

Contact hours	66	hours	2,6	ECTS**
including:				
lectures	26	hours		
classes and seminars	32	hours		
consultations	6	hours		
participation in research	0	hours		
mandatory traineeships	0	hours		
participation in examinations	2	hours		
e-learning	...	hours	...	ECTS**
student own work	85	hours	3,4	ECTS**

Syllabus valid from the academic year 2021/2022

* where 10 hours of classes = 1 ECTS (in case of 15 h → 2 ECTS)

** stated with an accuracy to 0.1 ECTS, where 1 ECTS = 25 - 30 hours of classes

academic discipline code: RR - agriculture and horticulture