

ECOLOGY AND ENVIRONMENTAL STUDIES

Title of Study Programme and Code		Type (compulsory/optional)	Cycle	Year of study when the component is delivered (if applicable)
Environment Protection Engineering, 6531EX042		Optional	1 st	1 st
Semester/trimester when the component is delivered	Number of ECTS credits allocated	Language of instruction	Mode of delivery (face-to-face/e-learning/...)	
1 st	4	EN, LT, RU	face-to-face	
Learning outcomes		Study methods	Assessment methods	
After completion of the study subject, a student should be able:		Lecture; An interactive lecture; Practical exercises; Individual work; Work in groups; Individual work in preparation for practical classes; Consultation; Problem-based learning; A case study.	The report and its presentation; Practical work - case study; Individual written work; Self-study; Presentation; Exam.	
LO 1	To know the natural and anthropogenic environmental processes, of the principles of pollution reduction and formation, and concepts of environmental engineering.			
LO 2	To understand the moral responsibility for their activities and their impact on the results of social, economic, cultural development, welfare, the natural and anthropogenic environment			
Prerequisites (these courses must be successfully completed prior to taking this particular course)				
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Course content				
<ol style="list-style-type: none"> 1. Concepts of Ecology, environmental protection, environment, environmental science. Ecology object and tasks. Environmental Science Basics. 2. Earth in the Universe. The earth's crust, its structure. Lithosphere, its composition, rock weathering. 3. Atmosphere and its composition. The importance of solar radiation. Ozone layer. The main atmospheric phenomena. 4. Hydrosphere, its composition. The global water cycle. Water balance. The main processes taking place in hydrosphere.. 5. Biosphere, its structure. Abiotic and biotic environmental factors. 6. Populations, their size, distribution, dynamics, internal structure. Growth of Human population. 7. Communities ecology, their change. Ecological niche. 8. Ecosystem, conception, development, status, stability, succession. 9. Biogeochemical circulation in nature. The main cycles. Water, oxygen, nitrogen, sulfur, phosphorus circulation on Nature. 10. The human impact on the environment, pollutants classification, sources of environmental pollution. Ecological crisis, urbanization. Sustainable development. 11. Atmosferos, water and soil pollution, waste. The main environmental problems. Prevention of Pollution. 12. Human health, food ecology. Sustainable Living Environment. 				

Recommended or required reading and other learning resources/tools

1. Marquita K. Hill. (2001) Understanding Environmentas Pollution.
2. Klavinš M. at all (2010) Environment and sustainable development .
3. Allaby M. (2005) Oxford dictionary of Ecology.
4. G. Tyler Miller, Jr. (2007) Living in the Environment.
5. Ministry of Environment website: www.am.lt
6. VU Faculty of Natural Sciences www.ausis.gf.vu.lt