Додаток 3
до наказу від 23.03.2023 р. № 244

COURSE SYLLABUS
«Environmental safety»

Degree of higher education - Bachelor
Specialization 101 "Ecology"

Educational programme «Ecology »
Academic year _2_____, semester 4_
Form of study _full-time
Number of ECTS credits__4_____
Language of instruction __English_____

Lecturer of the course	**___Ass. Prof. Rubezhniak Iryna**
Contact information of the lecturer (e-mail)	**___rubezhnyak60@nubip.edu.ua**
Course page on eLearn	**https://elearn.nubip.edu.ua/course/view.php?id=2339**

COURSE DESCRIPTION

Environmental safety is the practice of policies and procedures that ensure that a surrounding environment, including work areas, laboratories or facilities, is free of angers that could cause harm to a person working in those areas. A safe place to work is the key element of environmental safety. The practice works will focus on observation of identify the environmental, health and safety (EHS) regulations and donor requirements and create a compliance plan that includes required steps, a timeline for completing tasks, and the resources and staff necessary to fulfill those requirements. Ecological risk is constantly increasing by reason of obsolete equipment and a low technological level. In educational course "Ecological safety" will be studied questions how to define and predict environmental threats, disaster and how to manage emergency situations.

Competencies of the educational programme:

Integrative competency (IC): Ability to solve complex specialized problems and solve practical problems in the field of ecology

General competencies (GC)_____

K01. Knowledge and understanding of the subject area and professional activity

K07. The ability to act socially responsibly and consciously

K08. Ability to conduct research at an appropriate level

Professional (special) competencies (PC):_____

K18. Ability to assess the impact of technogenesis processes on the state of the environment and identify environmental risks associated with production activities.

K26. Ability to participate in the management of environmental actions and/or environmental projects.

Professional (special) competencies (PC): PRN01. Understand the main concepts, theoretical and practical problems, the history of development and the current state of scientific knowledge in ecology, environmental protection and nature management; formulate and test hypotheses, use appropriate evidence (results of theoretical analysis, experimental studies, and mathematical and computer modeling) to substantiate conclusions in order to solve significant scientific and scientific-applied problems of ecology.

PRN06. Have up-to-date conceptual knowledge and a high methodological level in the field of ecology and at the border of subject areas, as well as research skills sufficient to conduct scientific and applied research at the level of the latest world achievements.

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COURSE STRUCTURE

Topic	Hours (lecture/laboratory, practical, seminar)	Learning outcomes	Tasks	Assessment
Semester 1				
Module 1				
Topic 1 Characteristic of environmental security	1/5	Know causes of hazards, indicators of the ecological safety, types of ecological safety	Submitting practical work	**25**
Topic 2 Natural factors of the emergence of dangerous processes	1/5	Know the definition of natural disasters and classification. Tectonic processes: earthquake, volcanic eruption. Topological processes: landslip, mud flow (torrent), avalanche, snow slip, flood. Meteorological disasters: blizzards, cyclonic storms, droughts, hailstorms, hurricane, tornado. Prevention of natural disasters	Submitting practical work	**25**
Topic 3 Anthropogenic factors of the emergence of dangerous processes	1/5	Know classification of anthropogenic factors of environmental safety. Changes in the environment and their classification. Physical, chemical and biological pollution. Consequences	Submitting practical work Completing independent work (including in eLearn) Taking tests	**20**
Tests				**30**
Total for Module 1				**100**
Module 2				
Topic 4 Conception and methodology of risk identification	3/3	Know definitions of hazard. Risk and classification. Adverse health effect of hazard. Types of hazards. The difference between a 'hazard' and a 'risk'	Submitting practical work	**10**
Topic 5 Management of environmental risks	3/3	A hazard assessment. Steps of a hazard assessment. Levels of a Risk Matrix	Submitting practical work Completing independent work (including in eLearn)	**10**

Topic 6 State system of management of environmental security	3/3	Know what is Risk Management, who uses risk management, how is risk management used	Submitting practical work Completing independent work	**20**
Topic 7 Risk management	2/3	Know environmental risk assessment, human health risk assessment, ecological risk assessment.	Submitting practical work	**20**
Topic 8 Abnormally dangerous ecological situation	1/3	Know potentially hazardous objects and territories, basic terms, requirements to the procedure do not apply directly, process of identification. carrying out identification. determination of the number of potentially dangerous objects, determination of the total mass of individual harmful substances for the identification of high-risk objects, determination of categories and groups of hazardous substances for identification of high-risk objects, determination of potentially dangerous objects	Submitting practical work Taking tests	**10**
Tests				**30**
Total for Module 1I				**100**
Total for 1 semester				**70**
Exam				**30**
Total for course				**100**

ASSESSMENT POLICY

Policy regarding deadlines and resits:	Assignments submitted after the deadline without valid reasons will be graded lower. Resitting of modules will be allowed with the permission from the lecturer and in the presence of valid reasons (e.g. medical reasons).
Academic honesty policy:	Cheating during tests and exams is strictly prohibited (including the use of mobile devices). Coursework and research papers must contain correct citations for all sources used.
Attendance policy:	Class attendance is mandatory. In case of objective reasons (such as illness or international internships), individual learning may be allowed (in online format by the approval of the dean of the faculty).

SCALE OF ASSESSMENT OF STUDENT KNOWLEDGE

Student rating, points	National grade based on exam results	
	exams	credits
90-100	excellent	passed
74-89	good	
60-73	satisfactory	
0-59	unsatisfactory	not passed

RECOMMENDED SOURCES OF INFORMATION

1. Environmental Protection and Management/ Marlon White (Editor).- Larsen and Keller Education, 2017.-300 p.
2. Екологічна безпека України: Навчальний посібник / М. І. Хилько. – К., 2017. -265 р.
3. Екологічна безпека: конспект лекцій/ Кузьмина В. А.- : Одеський державний екологічний університет, 2020.- 124 с.
4. Environmental safety. Lecture notes. / Rubezhniak I.- NULES,2021. -108 p.