



COURSE SYLLABUS
«Standardization of anthropogenic load on the environment»

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
Contact information of the
lecturer (e-mail)
Course page on eLearn

Ass. Prof. Rubezhniak Iryna

rubezhnyak60@nubip.edu.ua

<https://elearn.nubip.edu.ua/course/view.php?id=2339>

COURSE DESCRIPTION

Goal of the course to obtain a knowledge of the theoretical knowledge and analytical skills about anthropogenic load normalization, rules and regulation, to apply the require ecological normative documents. Learning objectives are water, soil, air, food contamination normative documents.

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.

K19. Ability to use the basic principles and components of environmental management.

K22. Ability to participate in the development of the management and waste management system

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.

PRN06. Have modern conceptual knowledge and a high methodological level in the field of ecology and on 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.

COURSE STRUCTURE

Topic	Hours (lecture/laboratory, practical, seminar)	Learning outcomes	Tasks	Assessment
Semester 1				
Module 1				
Topic 1 Standardization of anthropogenic load on the environment. Introduction	2/2	Know the concept of standartization, maximum allowable concentration, MAL, MPE, MPD and etc.	Submitting practical work	5
Topic 2 Standardization of quality of air	2/2	Know the definition of MAC of air and standards of air pollution	Submitting practical work	5
Topic 3 Standardization of impact on air quality	2/2	Know the definition of MPE of air and norms of air pollution, be able to calculate the index of air pollution	Submitting practical work Completing independent work (including in eLearn)	10
Topic 4 Norms of anthropogenic load on the water objects	2/2	Know MAC of water and standards of water pollution Understand the principles of selection of water bodies for drinking water supply	Submitting practical work	10
Topic 5 Evaluation methods of water quality	2/2	Know MPD of water in water body, be able to calculate the index of water pollution	Submitting practical work Completing independent work (including in eLearn)	10
Topic 6 Microflora and indicative bacteria of water. The methods of studying	2/2	Know microflora and indicative bacteria of water quality, the methods of studying	Submitting practical work	10
Topic 7 Standardization of soil contamination	2/2	Know the classification of soil pollution, the definition of MAC of soil and standards of soil pollution Determine the category of danger	Submitting practical work	10

		for the population based on the total soil pollution index		
Topic 8 Microflora and sanitary-indicative bacteria of the soil. The methods of studying	2/2	Know microflora and indicative bacteria of soil quality, the methods of studying	Submitting practical work Taking tests, writing essays.	10
Tests				30
Total for Module 1				100
Module 2				
Topic 9 Noise pollution	2/2	Know MAL of noise and standards of noise, impact of human body	Submitting practical work	10
Topic10 Ultrasound pollution of the environment	2/2	Know sources of pollution and MAL of ultrasound and standards of ultrasound, impact of human body	Submitting practical work Completing independent work (including in eLearn)	10
Topic 11 Infrasound and its impact on the environment	2/2	Know MAL of infrasound and standards of infrasound, impact of human body	Submitting practical work	10
Topic 12 Electromagnetic pollution of the environment		Know sources of electromagnetic pollution and MAL of electromagnetic pollution, standards of electromagnetic pollution, impact of human body		10
Topic 13 Electric pollution	2/2	Know sources of electric pollution and MAL of electric pollution, standards of electric pollution, impact of human body	Submitting practical work	10
Topic 14 Food contamination. Part I	2/2	Know sources of food contamination, MAL, standards of food pollution, sources of food pollution	Submitting practical work	10
Topic 15 Food	2/2	Know classification	Submitting	10

contamination. Part II		of contaminants of food	practical work Taking tests, writing essays.	
Tests				30
Total for Module 1I				100
Total for 1 semester				70
Exam				30
Total for course				100

ASSESSMENT POLICY

<i>Policy regarding deadlines and resits:</i>	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).
<i>Academic honesty policy:</i>	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.
<i>Attendance policy:</i>	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. Rubezhnyak I.G. Workbook to self-study training under supervision of discipline “Standardization of environmental protection” for students of higher education institute of III - IV accreditations levels for direction 0401 “Ecology, environmental protection and environmental management”. - Kiev. -2010.- 72p

2. Методичні вказівки з дисципліни: «Нормування антропогенного навантаження на природне середовище» з практичних робіт для студентів вищих навчальних закладів освіти III-IV рівнів акредитації з напрямку підготовки 6.040106 “Екологія, охорона навколишнього середовища та збалансоване природокористування». – Київ, 2012. – 45с.

3. “Popular commentary on the Law of Ukraine "On Environmental Impact Assessment" / E. Alekseeva [edited by O. Kravchenko] - Publishing House "Company "Manuscript" - Lviv, 2018. - 60 p.

4. Strategic environmental assessment: opportunities for the public (manual) / C. Shutyak [edited by O. Kravchenko] - Publishing House "Company "Manuscript" - Lviv, 2017. - 28 p.

5. Law of Ukraine On Environmental Expertise
[https://zakon.rada.gov.ua/laws/show/45/95- %D0%B2%D1%80#Text](https://zakon.rada.gov.ua/laws/show/45/95-%D0%B2%D1%80#Text).

6. Problematic issues of the EIA procedure: analysis and proposals / O. Tarasova, O. Bondarenko, V. Sharavara, G. Protsiv, R. Gavrylyuk, D. Gulevets, I. Timchenko, S. Savchenko, O. Gusev, K. Zhurbas – Kyiv: NECU, 2018. – 16 p.

7. Alekseeva E. Environmental Impact Assessment: International standards, experience of other countries and prerequisites for the introduction of a new model of environmental impact assessment in Ukraine and its main elements / S. Vykhrist, E. Yendroshka, N. Mikulich, D. Skrylnikov, M. Shymkus. – Kyiv 2018.