Syllabus
of the educational component

Environmental audit

Назва дисципліни:	**Environmental audit**
Рівень вищої освіти:	**first (bachelor)**
Сторінка курсу в Moodle:	https://dl.khadi.kharkov.ua/course/view.php?id=1440
Обсяг освітнього компоненту	**3 credits (90 hours)**
Форма підсумкового контролю	**Test**
Консультації:	**on schedule**
Назва кафедри:	**Department of Ecology**
Мова викладання:	**English**
Керівник курсу:	**Nataliia Vnukova, Dr. Sci. (Engin.), Professor**
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Brief content of the educational component:
The goal providing the future specialist with knowledge and skills in carrying out works on environmental auditing of various objects - from the technological scheme of the enterprise to territorial objects.
Subject: theoretical foundations and methodical provisions regarding the implementation of the environmental audit procedure as a guarantee of ensuring environmental safety at all levels.
The main tasks of studying an academic discipline are:
- study of international and domestic legislative frameworks regarding the implementation of eco-auditing activities;
- study of provisions and regulations regarding the implementation of practical environmental audit activities;
- acquisition of practical skills in conducting an environmental audit procedure and drawing up an environmental audit conclusion;
- formation of skills regarding the development of environmental audit plans and programs.

Prerequisites for studying the educational component:
Disciplines of humanitarian and socio-economic training

Competencies acquired by the acquirer:
- The ability to solve complex specialized tasks and solve practical problems in the field of ecology, environmental protection and balanced nature use, or in the learning process, which involves the application of basic theories and methods of environmental sciences, and are characterized by the complexity and uncertainty of conditions.
- Ability to use basic principles and components of environmental management.

Learning outcomes in accordance with the educational program:
- Use management principles on which the environmental safety system is based.
- Demonstrate skills in assessing unpredictable environmental problems and thoughtfully choosing ways to solve them.
- To be aware of the responsibility for the effectiveness and consequences of the implementation of complex environmental protection measures.

Thematic plan

№ of theme	Name of topics (LC, PW, IW)	Quantity of hours	
		full-time	full-time
1	LC The history of the formation and establishment of environmental audit	2	1
	PW Assessment of the territory of the region where the man-made facility is located	2	1
	IR Evaluation of the expediency of taking into account the man-made impact that has developed on the territory	7	10
2	LC System of environmental management and audit (SEMA).	2	1
	PW Assessment of the territory of the region where the man-made facility is located	2	-
	IR Evaluation of the expediency of taking into account the man-made impact that has developed on the territory	7	10
3	LC General methodological principles of environmental audit	2	1
	PW Production risk assessment	2	1
	IR Assessment of potential environmental risks of enterprise operation	7	10
4	LC Parties to audit relations. Legal principles and responsibility	2	1
	PW Production risk assessment	2	-
	IR Assessment of potential environmental risks of enterprise operation	7	10
5	LC The procedure for conducting an environmental audit and drawing up a conclusion	2	1
	PW Enterprise activity as a potential source of technogenic danger to the environment	2	1
	IR Justification of classifying the enterprise as potentially environmentally hazardous	7	10
6	LC Environmental audit of an industrial enterprise	2	1
	PW Enterprise activity as a potential source of technogenic danger to the environment	2	1
	IR Justification of classifying the enterprise as potentially environmentally hazardous	7	10
7	LC Audit of the facility's environmental passport	2	-
	PW Environmental certification of the object of increased danger	2	-
	IR Determining the degree of compliance of the object with the requirements of safe operation	8	10
8	LC Audit of waste minimization at the enterprise	2	-
	PW Environmental certification of the object of increased danger	2	-
	IR Determining the degree of compliance of the object with the requirements of safe operation	8	10
Total	LC	16	6
	PW	16	4
	IR	58	80

Individual educational and research task (if available): none

Teaching methods:
1) verbal: 1.1 traditional: lectures, explanations, stories, etc.;
1.2 interactive (non-traditional): problem lectures, discussions, etc.;
2) visual: method of illustrations, method of demonstrations
3) practical: 3.1 traditional: practical classes, seminars;
3.2 interactive (non-traditional): business and role-playing games, trainings, seminars-discussions, «round table», brainstorming method.

Evaluation system and requirements:

Current performance
1 The current success of applicants for the performance of educational types of work in training sessions and for the performance of independent work tasks is evaluated using a four-point rating scale with subsequent transfer to a 100-point scale. During the evaluation of the current academic performance, all types of work provided by the educational program are taken into account.
1.1 Lecture classes are evaluated by determining the quality of performance of specified tasks.
2 Evaluation of the current academic performance of students of higher education is carried out after each lecture on a four-point scale ("5", "4", "Z", "2") and is entered in the journal of academic performance.
– “excellent”: the winner mastered the theoretical material flawlessly, demonstrates deep knowledge of the relevant topic or academic discipline, the main provisions;
- "good": the applicant has mastered the theoretical material well, has the main aspects from primary sources and recommended literature, presents it in a reasoned manner; has practical skills, expresses his thoughts on certain problems, but certain inaccuracies and errors are assumed in the logic of the presentation of theoretical content or in the analysis of practical ones;
- "satisfactory": the applicant has basically mastered the theoretical knowledge of the educational topic or discipline, orients himself in primary sources and recommended literature, but answers unconvincingly, confuses concepts, answers additional questions uncertainly, does not have stable knowledge; when answering questions of a practical nature, reveals inaccuracy in knowledge, does not know how to evaluate facts and phenomena, connect them with the future profession;
- "unsatisfactory": the applicant has not mastered the educational material of the topic (discipline), does not know scientific facts, definitions, hardly orients himself in primary sources and recommended literature, lacks scientific thinking, practical skills are not formed.
3 The final score for the current activity is recognized as the arithmetic mean sum of points for each lesson, for individual work, current control works according to the formula:

$$K^{current} = \frac{K1+K2+\ldots+Kn}{n},$$

де $K^{current}$– final assessment of success based on the results of current control;
$K1, K2, \ldots, Kn$ – assessment of the success of the current control measure;
n – number of ongoing control measures.
Estimates are converted into points according to the calculation scale (table 1).

Table 1 – Recalculation of the average grade for the current activity into a multi-point scale

4- score scale	100-score scale	4- score scale	100-score scale	4- score scale	100-score scale	4- score scale	100- score scale
5	100	4,45	89	3,90	78	3,35	67
4,95	99	4,4	88	3,85	77	3,3	66
4,9	98	4,35	87	3,80	76	3,25	65
4,85	97	4,3	86	3,75	75	3,2	64
4,8	96	4,25	85	3,7	74	3,15	63
4,75	95	4,20	84	3,65	73	3,1	62
4,7	94	4,15	83	3,60	72	3,05	61
4,65	93	4,10	82	3,55	71	3	60
4,6	92	4,05	81	3,5	70	from 1,78 to 2,99	from 35 to 59
						reassembly	
4,55	91	4,00	80	3,45	69	from 0 to 1,77	from 0 to 34
4,5	90	3,95	79	3,4	68	reassembly	

Final assessment

1 A student of higher education receives a credit in the last lesson in the discipline based on the results of the current assessment. The average score for the current activity is converted into points on a 100-point scale, according to the conversion table (table 1). Applicants for higher education who have a current grade point average in the discipline lower than "3" (60 points) can increase their current grade by taking tests in the discipline in the last session.

Assessment of the knowledge of applicants through testing is carried out according to the following scale:

– "Excellent": at least 90% of correct answers;
– "Very good": from 82% to 89% of correct answers;
– "Good": from 74% to 81% of correct answers;
– "Satisfactory": from 67% to 73% of correct answers;
– "Satisfactory enough": from 60% to 66% of correct answers;
– "Unsatisfactory": less than 60% of correct answers.

2 The condition for obtaining credit is:

- making up for all missed classes;
– the average current grade in the discipline is not lower than "3" (60 points).

4 The learning result is evaluated (select is required):

– on a two-point scale (passed/failed) according to table 2;

Table 2 – Scale for transferring points to the national evaluation system

On a 100-point scale	**On a national scale**
from 60 points to 100 points	counted
less than 60 points	not counted

Course policy:

– the course involves working in a team, the environment in the classroom is friendly, creative, open to constructive criticism;

- mastering the discipline involves mandatory attendance of lectures, as well as independent work;

- independent work involves the study of individual topics of the academic discipline, which are presented in accordance with the program for independent study, or were considered briefly;

– all tasks provided by the program must be completed within the set time;

- if the student of higher education is absent from classes for a good reason, he presents the completed tasks during independent preparation and consultation of the teacher;

- while studying the course, students of higher education must adhere to the rules of academic integrity set forth in the following documents: "Rules of academic integrity of participants in the educational process of the Khnadu" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_dobroch_1.pdf), "Academic integrity. Checking the text of academic, scientific and qualification papers for plagiarism" (https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_85_1_01.pdf), "Moral and ethical code of participants in the educational process of the Khnadu (https://www .khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_MEK_1.pdf).

- in case of detection of plagiarism, the applicant receives 0 points for the task and must repeat the tasks provided for in the syllabus;

- writing off during tests and exams is prohibited (including using mobile devices). Mobile devices are allowed to be used only during online testing.

Recommended Books:

1. Хом'як О.А. «Екологічний менеджмент і аудит підприємств аграрного сектору»: навчальний посібник для студентів екологічного факультету за кредитно-трансферною накопичувальною системою організації освітнього процесу / О.А. Хом'як, Н.Є. Гриневич, Н.М. Присяжнюк, Ю.В. Куновський, О.Р. Михальський. – Біла Церква, 2018. – 88 с.

2. Пономаренко Є. Г. Екологічний менеджмент і аудит : конспект лекцій для студентів денної та заочної форм навчання освітнього рівня «магістр» спеціальності 101 – Екологія / Є. Г. Пономаренко, О. С. Ломакіна ; Харків. нац. унт міськ. госп-ва ім. О. М. Бекетова. – Харків : ХНУМГ ім. О. М. Бекетова, 2017. – 64 с.

3. Галушкіна Т. П., Грановська Л. М., Кисельова Р. А. Екологічний менеджмент та аудит: навчальний посібник. Херсон: Олді-Плюс, 2019. 455 с.

4. Екологічне управління бізнесом в умовах євроінтеграції: навчальний посібник / П. Д. Дудкін та ін. Тернопіль: ФОП Паляниця В. А., 2018. – 200 с.

Additional sources:

1. distance course:https://dl.khadi.kharkov.ua/course/view.php?id=1440
2. http://www.menr.gov.ua/

Developer(s)
the syllabus of the academic discipline,

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