

Educational Component Syllabus  
(a conditional indication EC in Education Program (EP))

LOGICS

Discipline	Logics
Higher Education Level	The first one (educational and scientific)
Moodle course page	<a href="https://dl2022.khadi-kh.com/course/view.php?idh=3383">https://dl2022.khadi-kh.com/course/view.php?idh=3383</a>
Educational Component Volume	3 credits (90 hours)
Final Control Form	Test
Consultations	According to the schedule
Department	Department of Philosophy and Pedagogy of Professional Training
Language of teaching	English
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**Educational Component Summary:**

**The purpose is** the formation of correct thinking skills and the ability to apply them for further successful mastering professional disciplines in practical activities with the aim of preventing erroneous judgments and conclusions.

**The subject of the study is** laws and forms of mental activity of people, principles and means of building correct judgments and reasoning about objects and phenomena of the objective world, the methods of formalization of knowledge as a result of the cognitive process.

**The main tasks of the academic discipline are to:**

- logically and competently build your reasoning and find errors in the reasoning of your opponents;
- avoid logical errors when drafting official documents;
- construct a correct argumentation;
- recognize manipulation techniques on the part of the interlocutor and resist it;
- apply logical laws in professional and practical activities;
- apply logics methods to research scientific problems.

**Prerequisites for studying the educational component:** Philosophy

**Competencies acquired by the applicant:**

**General competencies:** skills of correct thinking and the ability to apply them for further successful mastering of professional disciplines and in practical activities in order to prevent erroneous judgments and conclusions.

**Special (professional) competencies:**

- ability to learn and master modern knowledge;
- ability to abstract thinking, analysis and synthesis;
- ability to act on the basis of ethical considerations;
- ability to make informed decisions

**Training results according to the educational program:**

- be able to think abstractly, apply analysis and synthesis to identify the key characteristics of systems of different levels, as well as the peculiarities of the behavior of their subjects;
- use professional argumentation to convey information, ideas, problems and ways to solve them to specialists and non-specialists in the field of professional activity;
- demonstrate basic skills of creative and critical thinking in research and professional communication;

- show the skills of independent work, demonstrate creative, self-critical thinking.

### Thematic plan

Theme, №	Theme (L, LW, PW, SEW)	Hours	
		full-time training	part-time training
1	L 1 Logics as a science of laws and forms of correct thinking.	2	2
	LW, PW Logics as a science, functions of logics	2	-
	SEW Historical stages of the development of logics	8	10
2	L 2. Concept as the main form of thinking.	4	-
	LW, PW Scope of the concept. Types of concepts. Relationships between concepts.	2	-
	SEW Operations with scopes of concepts. Euler's circles	8	14
3	L 3 General characteristics of judgments	4	-
	LW, PW Types of judgments. Logical square.	2	-
	SEW Truth Tables of Complex Judgments.	8	14
4	L 4 Condition as a form of thinking.	4	-
	LW, PW Deductive reasoning. Figures and modes of syllogism.	2	-
	SEW Inductive reasoning and reasoning by analogy.	8	14
5	L 5 Basic laws of logics	2	-
	LW, PW Laws of logics	2	-
	SEW Basic requirements of the laws of logics and their practical implementation.	8	12
6	L 6 Basics of the theory of argumentation	2	-
	LW, PW Types of argumentation. Argument and dispute.	2	-
	SEW Logics and my future profession.	10	14
7	L 7	-	-
	LW, PW Rules and fallacies in argumentation.	2	-
	SEW Rules and Fallacies in Argumentation.	8	10
8	L 8	-	-
	LW, PW Defense of individual tasks, final lesson.	-	2
	SEW	-	-
<b>In total</b>	<b>L</b>	16	2
	<b>PW (LW)</b>	16	2
	<b>SEW</b>	58	86

### Teaching methods:

- 1) verbal: 1.1 traditional: lectures, explanations, stories, etc.;
- 1.2 interactive (non-traditional) problem lectures, discussions, etc.;
- 2) visual: illustration method, demonstration method
- 3) practical: 3.1 traditional: practical classes, seminars;
- 3.2 interactive (non-traditional): business and role-playing games, trainings, discussion seminars, round tables, brainstorming method.

### Evaluation system and requirements:

### Ongoing achievement

1. The applicants' ongoing achievement in the performance of the both educational activities and self-education work while training is evaluated using a four-point scale with the further conversion into the 100-point scale. While evaluating all kinds of works provided by the

educational program are taken into account.

1.1 Lectures are evaluated by determining the quality of specific tasks performance.

1.2 Practical classes are evaluated by the quality of performance of the tests or individual tasks, execution and design of practical works.

1.3 The laboratory classes are evaluated by the quality of the laboratory work report performance.

1.4 Seminars are assessed by the quality of individual task/abstract performance.

2. The evaluation of the ongoing achievement of higher education applicants is carried out at each practical class (laboratory class or seminar) using a four-point scale ("5", "4", "3", "2") and are recorded in the journal of academic achievement.

– "excellent": the applicant masters the theoretical material in a perfect way, shows deep knowledge on the given theme or academic discipline, basic issues;

– "good": the applicant masters the theoretical material well, knows the main issues of the original sources and recommended references, and sets it out reasonably; has practical skills, gives his/her ideas on certain problems, but certain inaccuracies and errors in logics of the theoretical content or practical analysis are assumed;

– "satisfactory": the applicant basically masters the theoretical knowledge of the educational themes or disciplines, is aware of the original sources and recommended references but answers incomprehensibly, confuses the concept, gives uncertain answers to additional questions, does not have steady knowledge; answering the practical questions, reveals inaccuracy in knowledge, cannot make evaluation of facts and phenomena and connect them with the future profession;

– "unsatisfactory": the applicant does not master the educational material of the theme (disciplines), does not know scientific facts, definitions, is hardly aware of the original sources and recommended references, has a lack of scientific thinking, practical skills are not developed.

3 Final score for the current activity is determined as the average arithmetic sum of points for each class, for individual work, current tests according to the formula:

$$K^{nomoy} = \frac{K1 + K2 + \dots + Kn}{n},$$

Where  $K^{nomoy}$  – achievement final score under the results of ongoing control;

$K1, K2, \dots, Kn$  – achievement score of  $n$  - ongoing control;

$n$  – number of ongoing controls.

Evaluation scores are converted into points according to the conversion scale (Table 1).

**Table 1** – Conversion of average evaluation score for the current activity in a multi-point scale

4- point scale	100- point scale	4- point scale	100- point scale	4- point scale	100- point scale	4- point scale	100- point 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	Between 1,78 and 2,99	Between 35 and 59
						Retake test	
4,55	91	4,00	80	3,45	69	Between 0 and 1,77	Between 0 and 34
4,5	90	3,95	79	3,4	68	Thesecondstudy	

## Final score

1. The higher education applicant gets a score for the test at the last class according to the results of the current assessment. The average score for current activity is converted into a 100-point scale, according to the conversion table (Table 1).

Higher education applicants who have an average current score lower than "3" (60 points) can increase it at the last class by taking tests.

The applicants' knowledge evaluation is carried out by testing according to the following scale:

- "Excellent" is not less than 90% of correct answers;
- "Very good" ranges from 82% to 89% of correct answers;
- "Good" varies from 74% to 81% correct answers;
- "Satisfactory" extends from 67% to 73% of correct answers;
- "Satisfactory enough" is from 60% to 66% of correct answers;
- "Unsatisfactory" is under 60% of correct answers.

2. The conditions for obtaining the test are as follows:

- retake the missed classes;
- the average discipline current score is not less than "3" (60 points).

3. Extra-points are awarded to the applicants for performing individual self-education work and participation in scientific events.

3.1 Extra-points are added to the achieved sum of points by the higher education applicant for the current educational activity (for disciplines where the final form of control is test), or for the discipline where the final form of control is an exam.

3.2 The number of extra-points awarded for different types of individual tasks depends on their volume and importance:

- discipline prize-winning places on the at the international / all-Ukrainian competition of scientific students' works – 20 points;
- discipline prize-winning places at all-Ukrainian olympiads – 20 points;
- participation in the international / all-Ukrainian competition of scientific students' works – 15 points
- participation in international / all-Ukrainian scientific conferences of students and young scientists – 12 points;
- participation in all-Ukrainian discipline competitions – 10 points
- participation in KhNAHU discipline competitions and scientific conferences – 5 points;

– implementation of individual scientific and research (educational and research) tasks of increased complexity – 5 points.

3.3 The number of extra points might not exceed 20 points.

4. The result of the study is evaluated (select the relevant):

- on a two-point scale (passed/failed) according to table 2;
- on a 100-point scale (for differentiated test) according to table 3.

The total score comprising the extra-points might not exceed 100 points.

**Table 2** – Conversion of the score into the national evaluation system

According to the 100- point scale	According to the national scale
between 60 scores and 100 scores	Passed
Less than 60 scores	Failed

Table 3 – Applicants' evaluation scores scale according to the final control of the academic discipline.

Evaluation score in points	Evaluation score according to national scale		ECTS grades	
			Grade	Criteria
	Exam	test		

Evaluation score in points	Evaluation score according to national scale		ECTS grades	
			Grade	Criteria
	Exam	test		
90-100	Excellent	passed	A	The theoretical content of the course is mastered completely, without gaps, the necessary practical skills to work over the mastered material are developed, all the training tasks provided by the program are accomplished, the quality of their performance is estimated by the number of points close to the maximum
80-89	Very good	passed	B	The theoretical content of the course is mastered completely, without gaps, the necessary practical skills to work over the mastered material are basically developed, all the training tasks provided by the program are accomplished, the quality of performance of most of them is estimated by the number of points close to the maximum.
75-79			C	The theoretical content of the course is mastered completely, without gaps, some practical skills to work with the mastered material are not developed sufficiently, all the training tasks provided by the program are accomplished, the quality of performance of none of them is estimated by the minimum number of points, some tasks can have mistakes
67-74	D		The theoretical content of the course is partially mastered, but the gaps are not significant, the necessary practical skills to work over the mastered material are basically developed, most of the training tasks provided by the program are accomplished, some of the completed tasks may contain mistakes	
60-66				E
35-59	Unsatisfactory		Failed	FX

Evaluation score in points	Evaluation score according to national scale		ECTS grades	
			Grade	Criteria
	Exam	test		
<b>0–34</b>	<b>Failed</b>		<b>F</b>	The theoretical content of the course is not mastered, the necessary practical skills to work over the mastered material are not developed, all the completed educational tasks contain serious errors, additional self-education work according to the course doesn't have any significant quality improvement in educational tasks performance (due to mandatory second study)

### Course policy:

- the course involves working in the team where the environment is friendly, creative, open to constructive criticism;
- grasping the discipline requires mandatory attendance of lectures and practical classes, as well as self-education work;
- self-education work involves studying certain discipline themes, which are submitted in accordance with the program for self-education work, or have been considered briefly;
- all the tasks provided by the program must be completed within the prescribed time-frame;
- if the higher education applicant is absent for valid reasons, he/she passes the completed tasks during the self-education work and consultations provided by the teacher;
- while studying the course, higher education applicants should follow the rules of academic integrity set out in such documents: «Rules of academic integrity of participants of the KhNAHU Education process» ([https://www.khadi.kharkov.ua/fileadmin/P\\_Standart/pologeniya/stvnz\\_67\\_01\\_dobroch\\_1.pdf](https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_dobroch_1.pdf)), «Academic integrity. The text check of academic, scientific and qualification works for the plagiarism» ([https://www.khadi.kharkov.ua/fileadmin/P\\_Standart/pologeniya/stvnz\\_85\\_1\\_01.pdf](https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_85_1_01.pdf)), «Moral and ethical code of participants of the KhNAHU educational process» ([https://www.khadi.kharkov.ua/fileadmin/P\\_Standart/pologeniya/stvnz\\_67\\_01\\_MEK\\_1.pdf](https://www.khadi.kharkov.ua/fileadmin/P_Standart/pologeniya/stvnz_67_01_MEK_1.pdf)).
- in case of detecting the plagiarism, the applicant receives 0 points for the task and must retake the tasks provided in the syllabus;
- cheating during control works and examinations is prohibited (including mobile devices). Mobile devices are only allowed to be used during online testing.

### Reference:

1. Хоменко І. Логіка. Теорія та практика — К.: Центр навчальної літератури, 2019. — 400 с.
2. Ряшко Василь. Логіка. Навчальний посібник. – ЦУЛ, 2021. – 328с.
3. Конверський А.Є. Логіка. Підручник для студентів юридичних факультетів. – ЦУЛ, 2020. – 424с.

### Extra-reference:

1. Філософія (нормативний курс) : навчальний посібник. – 2-е вид., допов. і переробл. / О.К. Чаплигін, І.І. Чхейло, Л.В. Філіпенко, Т.В. Ярмук; за заг. ред. доц. І.І. Чхейло. – Харків: ХНАДУ, 2019. – 200 с.
2. Логіка, Етика, Естетика: конспект лекцій / А.С. Дорошкевич, І.І. Чхейло, Т.В. Ярмук. – Харків: ХНАДУ, 2015. – 103 с. (Рекомендовано для студентів ХНАДУ, механічного факультету).

### Information resources:

- Про вищу освіту : Закон України 1556-VII від 01.07.2014. URL:  
<https://zakon.rada.gov.ua/laws/show/1556-18>
- Про освіту: Закон України 2145-VIII від 25.09.2017. URL:  
<https://zakon.rada.gov.ua/laws/show/2145-19>
- Про повну загальну середню освіту : Закон України 463-IX від 16.01.2020 URL:  
<https://zakon.rada.gov.ua/laws/show/463-20#Text>
- <http://files.khadi.kharkov.ua/transportnikh-sistem/filosofiji-i-politologiji/itemlist/category/820-kff.html>
- <https://uk.wikipedia.org/wiki/Філософія>
- [www.filosof.com.ua/](http://www.filosof.com.ua/)
- <https://tureligious.com.ua/>
- [arhe.com.ua](http://arhe.com.ua)

Syllabus developer (developers )



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