

**MINISTRY OF INTERNAL AFFAIRS OF UKRAINE
DNIPROPETROVSK STATE UNIVERSITY OF INTERNAL AFFAIRS**

FACULTY OF LAW

SOCIAL AND HUMANITIES DEPARTMENT

APPROVED

Rector of Dnipropetrovsk State
University of Internal Affairs
Colonel of the Police
ANDRII FOMENKO

**SYLLABUS OF THE ACADEMIC DISCIPLINE
LOGIC**

Academic level bachelor
Specialty 073 Management
Educational program "Financial and economic security and risk management"
Status of the academic discipline: obligatory
Language of instruction English

Dnipro – 2020

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AUTHOR(S): Eleonora SKIBA - a professor at the Social and Humanities Department.

REVIEWERS:

1. Petro GHNATENKO – Doctor of Philosophical Sciences, Chief Researcher of the Institute of Social and Political Psychology of the National Academy of Pedagogical Sciences of Ukraine.

2. Vadim PALAGUTA - Doctor of Philosophical Sciences, Head of the Department of Engineering Pedagogy of National Metallurgical Academy of Ukraine.

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The goal of studying the academic discipline «Logic» is to provide training on formalization, schematization and systematization of correct methods of reasoning and statements, as rational forms of linguistic expression of the results of mental activity, and the identification of laws and rules that govern such reasoning.

Preliminaries of studying the academic discipline: «Sociology», «Political Science».

The results of the study of the discipline «Logic».

Study outcomes for studying the academic discipline «Logic».

In accordance to the requirements of the educational program students must

know:

1) at the conceptual level: the role and place of Logic in higher educational institutions of Ukraine, general and special tasks of Logic as the correct methods of reasoning and statements, the main task of Logic in higher educational institutions of Ukraine;

2) at the fundamental level: the general foundations of the theory and methods of Logic, the basic forms of organization and construction of Logic argumentations;

3) at the practical and creative level: rational forms of linguistic expression of the results of mental activity.

be able to:

1) at the reproductive level: to penetrate into the essence of the phenomena and processes of the real world, to consciously use scientific knowledge in cognitive and professional activities. Analyze your own rational forms to demonstrate the ability to prove;

2) at the algorithmic level: to protect the interests of the state, to combine public, collective, and individual interests to conduct self-analysis, self-knowledge, self-education and self-improvement.

3) at the heuristic level: not only the degree of achievement by applicants of external set results, but also "creative deviation" from them is checked. The main parameter for assessing personal educational outcomes is the degree of comprehensive educational growth of applicants, which includes both standard and individual parameters.

4) at the creative level: to use the basic principles of Logic in everyday life and extreme conditions.

Scope of the discipline: 90 hours / 3 ECTS credits/

Syllabus of the academic program

TOPIC 1. SUBJECT AND MEANING OF LOGIC. LOGIC AND LANGUAGE.

The concept of Logic physical. Purpose, tasks and functions of Logic.

Logic as a philosophical science. Nature and varieties of Logic. Logic as the tool to investigate and classify the structure of statements and arguments.

TOPIC 2. CONCEPT AS A FORM OF THINKING. LOGICAL OPERATIONS WITH CONCEPTS

A brief history of concept. General characteristics of the concept. Logical methods of education concepts. Concept and word. Scope and content of the concept. Types of concepts. Relationships between concepts.

TOPIC 3. JUDGMENT AS A FORM OF THINKING. THE LOGIC OF QUESTIONS AND ANSWERS

Judgment as a form of thinking. Judgment and Suggestion. Connection and difference. Classification of judgments by composition and complexity.

Judgments are expressed in declarative sentences, in them certain information is fixed, affirming or denying something and characterized by truth or falsity.

TOPIC 4. BASIC LAWS OF LOGIC

Three fundamental laws upon which logic and rational thinking are based. These three laws are thought to have originated with Aristotle. The laws are necessary conditions for rational thinking to occur. The three laws are the law of identity, law of non-contradiction, and law of the excluded middle. Let's examine each of the three laws of logic in more detail.

TOPIC 5. INFERENCE AS A FORM OF THINKING

What is inference in critical thinking. Why is inference important in critical thinking. What is inference in psychology. What are the three types of inference?

TOPIC 6. DEDUCTIVE INFERENCES FROM COMPLEX STATEMENTS. INDUCTIVE REASONING

The concept of deductive inference. The necessary nature of logical consequence in deductive reasoning. Various forms of deductive reasoning and concept withdrawal rules. Types of deductive inference: conclusions based on logical

connections between judgments (conclusions of the logic of statements); conclusions depending on the subject-predicate structures of judgments.

Inductive reasoning. The concept of inductive inference. Connection of induction with experienced generalizations. Types of inductive inference: complete and incomplete induction.

TOPIC 7. LOGICAL FOUNDATIONS OF ARGUMENTATION. EVIDENCE-BASED REASONING

Argumentation and proof. The composition of the argumentation: subjects and structure. Ways of argumentation: justification and criticism.

Argumentation. The goal of knowledge in science and practice is to achieve reliable, objectively true knowledge for active influence on the world around.

Establishing objective truth is an important task of a justice. Reliable knowledge ensures the correct application of the law, serves a guarantee of fair decisions.

Form of the assessment of the learning success

Final control is a test of the level of acquisition of knowledge, skills, abilities and other competencies for the academic semester.

For academic discipline «Logic» is required:

- for full-time studies – credit.

Criteria for the assessment of the learning success.

Current control			TEST
Classwork	Independent work	Individual work	
≤ 30	≤ 15	≤ 15	
≤ 60			≤ 40
Final grade = Current control + Test ≤ 100			

The general rating of the applicant's competence consists of ratings on educational work (classroom, independent, individual) and final control (credit).

Thus the maximum rating on educational work makes 60, and final control - 40 points.

The overall rating of the applicant's competence is thus assessed on a 100-point scale.

Individual applicants for active participation in projects or scientific work, according to the decision of the department, can be awarded, within 100 points, additional points, but not more than 20.

If the applicant has not scored the minimum number of points for academic work (40) or his overall rating of competence was less than 60 points, he\she is considered to have an academic debt.

Assessment of competence in classroom and independent work of the applicant consists of assessment of the level of theoretical knowledge or practical skills, which is carried out within the boundary control on each topic defined by the thematic plan for the relevant period of study (semester, academic year).

Grading is not required for the applicant for each lesson. Empty cells are not used.

Absence from class is determined by the letter "B" and must be completed by the applicant.

A grade of "1" is required.

To obtain points for independent and individual work, the applicant must perform tasks on each topic: abstracts, tests, presentations.

Assessment on a particular topic (task) is carried out on the following scale: "excellent" - 5 points, "good" - 4 points, "satisfactory" - 3 points, "unsatisfactory" -2 points.

Point	Explanation
5	Theoretical issues submitted for consideration have been mastered in full; the necessary practical skills and abilities are formed at a high level; all educational tasks provided by the lesson plan are performed in full. During the lesson, stable activity and initiative were demonstrated. Answers to theoretical questions (for example, the concepts of logic, purpose, tasks and functions of logic, extracurricular activities, features of the organization of the project work on logic, organization and content of scientific work of the Social and Humanities Department, the place and importance of logic in the system of higher education, the history of logic in different countries, solving practical cases on logic, expressing one's own opinion on controversial issues is based on a deep knowledge of the theory and methods of logic. Tasks of practical logic classes (for example, special logic cases solving) are performed in full without errors with understanding and comprehension. Logic cases for the development of mental qualities are skillfully and actively performed. The applicant understands the importance of learning and uses it in their own logic methods, has an interest in their own mental and logic development, success and the level of responsibility for their own mental and logic condition. The applicant follows the requirements of learning process.

4	Theoretical issues submitted for consideration have been mastered in full; mainly the necessary practical skills and abilities are formed; all tasks provided by the lesson plan are performed in full with insignificant inaccuracies. Initiative was demonstrated during the lesson. Answers to theoretical questions, solving practical problems, expressing one's own opinion on debatable questions are mainly based on knowledge of theoretical material. Tasks of logic classes are not completed in full (80%). For example, the applicant solves the logic way in a proper way, but he\she does not overcome a small part of the case or has mastered the understanding the methods of logic in a theoretical way, but not fully mastered the technique of performing the logic case completely.
3	Theoretical issues submitted for consideration are generally mastered; practical skills and abilities are superficial, need further development and consolidation; educational tasks provided by the lesson plan are performed, some types of tasks are performed with errors. Tasks of practical physical education classes are not completed in full (50%).
2	Theoretical issues submitted for consideration, partially mastered, gaps in knowledge are not significant; practical skills and abilities of logic cases are insufficiently formed; most of the learning tasks are completed, some of the completed tasks contain significant errors that need further elimination. For example, the applicant is present in a practical logic class, but the applicant does not perform the task of the class for a good reason.
1	The applicant is not ready for the lesson; he\she does not know most of the program material, does not have the appropriate skills and abilities necessary to solve professional problems. For example, the applicant is present in a practical logic class, but the applicant does not perform the task of the class without a good reason.
0	Absence at class room

The average score is determined by the formula.

$$\Sigma/N = \mu$$

N – the number of assessed classes in the discipline per semester

Σ – sum of grades for all classes (from 1 to 5)

μ – average grade

μ (average grade)	AP (scores)
5.0 – 4.5	30-25
4.4 – 4.0	24-20
3.9 – 3.5	19-15
3.4 – 3.0	14-10
< 3,0	< 10

Scores, if any, in the overall score of tenths or hundredths are rounded up.

The rating of competence for the applicant's academic work is determined in each semester in the following order: - the average score for the semester is calculated - the sum of boundary marks for all topics is divided by the number of topics (rounding to ten).

If the rating of competence in academic work is less than 40 points, the applicant is not allowed to the final control, as one that has academic debt.

The applicant can receive additional points for regular attendance at logic sections - 1-15 points.

Points based on the results of the applicant's participation in and scientific work are calculated according to the system given in table. 1.

Table 1.

Results of scientific work	Points
Participation in projects of the university's level Abstracts in the university student collection. Report at the university scientific conference	4-5-7
Article in the university student collection. Participation in the regional conference.	8-10-12
Article in the all-Ukrainian, interuniversity collection. Report at the All-Ukrainian scientific conference, conferences of the Ministry of Education and Science or the Ministry of Internal Affairs.	13-14-15

Assessment scale: national and ECTS

The sum of points for all types of educational activities	ECTS assessment	Score on a national scale	
		for exam, course project (work), practice	for offset
90-100	A	Perfectly	Credited
83-89	B	Fine	
75-82	C		
68-74	D	Satisfactorily	
60-67	E		
35-59	FX	not credited with the possibility of re-assembly	not credited with the possibility of re-assembly
0-34	F	not credited with compulsory re-study of the discipline	not credited with compulsory re-study of the discipline

For the discipline "Logic" special means of diagnosing the knowledge of learning success are the delivery of control standards.

In the case of restrictive quarantine measures for the study of the discipline "Logic", the final control measures are compiled remotely, using the system "Moodle".

Credit in the discipline "Logic" can be conducted in the form of tests. Test tasks consist of 40 questions on the topics provided by the Work program of the discipline "Logic" for the academic year. Each test question contains 4 answer options, from which you must choose one. For all test questions, the correct answer is one. One correct answer is evaluated in one point.

To successfully pass the test / exam and get a positive assessment, the applicant must score a minimum number of points - 20. The maximum number of points for the test - 40.

Applicants who have completed all the tasks posted in the "Moodle" system and the results of their evaluation by the teacher in the same system received at least 40 points (total for classroom - 10-30 points, independent and individual work - 10 each) will have the right to take the test -15 points).

Examination control of the group's applicants will be carried out on the day determined by the schedule of the credit-examination session, from 9.00 o'clock. until 17.00 The total number of questions to be addressed - 40 (with topics that were worked out during the semester).

80 minutes are allotted for testing (credit / exam), after which access to testing will be closed.

The obtained points are added to those set by the teacher for classroom, independent and individual work.

An applicant who has received at least 20 points for his / her answers is considered to have passed the test / exam.

Those applicants who did not receive the required number of points as a result of passing the test / exam, will be given the opportunity to re-pass. The day of re-assembly is determined by the dean's office of the faculty, the information about it will be reported by the methodologist.

Tools, equipment and software used by the discipline

Multimedia presentations, videos.

_____ 2020

VOLUME OF THE ACADEMIC DISCIPLINE
"LOGIC"

Academic level Bachelor Specialty 073 Management

for academic year 2020/2021

Form of study FULL-TIME Volume 3_ ECTS credits (90 academic hours)

Year of study 1 Academic groups B-M-041IN

№ of the topic according to the syllabus	Title of the topic (according to the syllabus)	Total volume, hours	In-class activity				Independent and individual assignments
			Total	Lectures	Seminars	Practical classes	
1	2	3	4	5	6	7	8
1.	Subject and meaning of logic. Logic and language.	14	4	2	2		10
2.	Concept as a form of thinking. Logical operations with concepts.	14	4	2	2		10
3.	Judgment as a form of thinking. The logic of questions and answers.	14	4	2		2	10
4.	Basic laws of logic.	16	6	2	2	2	10
5.	Inference as a form of thinking.	14	4	2		2	10
6.	Deductive inferences from complex statements.	9	4	2		2	5

	Inductive reasoning.						
7.	Logical foundations of argumentation. Evidence-based reasoning	9	4	2		2	5
	Semester, total	90	30	14	6	10	60
	<i>Form of final control</i>	<i>credit</i>					

Presented and approved at the meeting of the Social and Humanities department
20.05.2020, minutes № 19.

Head of the Social and Humanities department

Vladislav HALAPSIS

INFORMATIONAL AND METHODOLOGICAL SUPPORT OF THE ACADEMIC DISCIPLINE LOGIC

Academic level Bachelor Specialty 073 Management

for academic year 2020/2021

Principal legal regulatory documents:

1. Конституція України;
- закони:
 1. Закон про освіту від 05.09.2017 № 2145-VIII
 2. Закон України “Про фізичну культуру і спорт” Державної програми розвитку фізичної культури і спорту в Україні, затвердженої Указом Президента України від 22.06.1994 р. № 334/94.
 3. Указ Президента України, Цільова комплексна програма “Фізичне виховання – здоров’я нації” від 01.09.98 р. № 563/98.
- підзаконні акти:
 1. Указ Президента України «Про національну стратегію з оздоровчої активності в Україні на період до 2025 року «Рухова активність – здоровий спосіб життя-здорова нація» від 09.02.2016р. №42/2016
 2. Постанова кабінету міністрів «Про затвердження Державної

цільової соціальної програми розвитку фізичної культури і спорту на період до 2020 року» від 01.03.2017 р. № 115.

3. Наказ Міністерства освіти і науки України від 30.12.2005 року № 774 «Про впровадження кредит-но-модульної системи у вищих навчальних закладів III-IV рівня акредитації».

4. Наказ Міністерства освіти і науки України «Про затвердження заходів, спрямованих на реформування системи фізичного виховання учнів та студентської молоді у навчальних закладах України» - від 27.11.2008 № 1078.

5. Наказ Міністерства освіти і науки України «Про організацію занять з дисципліни "Фізичне виховання" у ВНЗ України» - від 31.08.2009 лист № 1/9-582

Textbooks:

1. Colin Allen. Logic Primer. Bradford Books. 2021.
2. Ludwig Wittgenstein Tractatus Logico-Philosophicus .Routledge. 2014.
3. Sainsbury R. Paradoxes. 2015.
4. Patrick J. Hurley A Concise Introduction to Logic. 2020.
5. Lori Watson (Author) A Concise Introduction to Logic. 2021.
6. Jason Lisle Introduction to Logic Paperback. 2018.
7. Anthony Weston. A Rulebook for Arguments Fifth Edition, 2012.
8. Siu-Fan Lee Logic: A Complete Introduction. 2017.
9. Socratic Logic: A Logic Text using Socratic Method, Platonic Questions.
10. Peter Kreeft. Aristotelian Principles. 2010.
11. Scott M. Sullivan. An Introduction To Traditional Logic: Classical Reasoning For Contemporary Minds Paperback. 2005.

Other sources:

1. <http://www.mon.gov>. – Офіційний сайт Міністерства освіти та науки України
2. <http://www.osvita.com> - Єдине освітнє інформаційне вікно України
3. <http://www.eu-edu.org> - Європейський освітній портал
4. <http://www.osvita.org.ua> - Освітній портал
5. <http://zakon.rada.gov.ua/cgi-bin/laws> - Законодавство про освіту
<http://zakon2.rada.gov.ua/laws/show/3808-12/page3>

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Head of the Social and Humanities department

Vladislav HALAPSIS