

**MINISTRY OF DEFENCE OF UKRAINE  
Military Academy (Odesa)**

**EDUCATIONAL PROGRAM OF THE  
PROFESSIONAL MILITARY EDUCATION COURSE**

**BASIC TACTICAL LEVEL COURSE L-1A AND  
THE LOGISTICS FORCES TACTICAL LEVEL PROFESSIONAL COURSE  
(Transport Logistics), L-1B (TrL)**

**in the military speciality** 703500 “Organization of transportation and  
management of road transport”

**APPROVED**

by the Academic Council of the Military  
Academy (Odesa)

(minutes of "\_\_\_\_" \_\_\_\_ 20\_\_ year №\_\_)

Chairman of the Academic Council

Military Academy (Odesa)

Major General

**Andrii KOVALCHUK**

Put into operation

by the effect of the Commandant of the Military  
Academy (Odesa) dated "\_\_\_\_" \_\_\_\_ 20\_\_

№\_\_

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**APPROVAL LETTER**  
**OF THE EDUCATIONAL PROGRAM**  
**OF THE PROFESSIONAL MILITARY EDUCATION COURSE**

**BASIC TACTICAL LEVEL COURSE L-1A AND**  
**THE LOGISTICS FORCES TACTICAL LEVEL PROFESSIONAL COURSE**  
**(Transport Logistics), L-1B (TrL)**

**in the military specialty**      703500      Organisation of Transportation and  
Management of Automobile Transport

APPROVED

Director of the Department of Military  
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of Defence of Ukraine  
Doctor of Technical Sciences,  
Professor

Volodymyr MIRNENKO

" \_\_\_\_\_ " \_\_\_\_\_ 20\_\_ p.

APPROVED

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Ukraine  
Colonel

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APPROVED

Acting Commander of the Logistics Forces  
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**Developed and submitted**

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Anatoliy ZAINCHKOVSKY

" \_\_\_\_\_ " \_\_\_\_\_ 20\_\_ p.

## **FOREWORD**

Developed by the working group of the Logistics Forces Command of the Armed Forces of Ukraine and the Military Academy (Odesa).

Order of the Commander of the Logistics Forces of the Armed Forces of Ukraine dated “ \_\_\_ ” \_\_\_\_\_ 2025 № \_\_\_\_.

### **Head of the working group:**

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### **Members of the working group:**

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Viktor KLYMENKO - Candidate of Technical Sciences, Senior Researcher, Associate Professor of the Department of Repair and Operation of Automotive and Specialized Equipment of the Faculty of Training of Specialists in the Support and Operation of Military Equipment of the Military Academy (Odesa);

### **ACCOUNTED FOR:**

1. Professional standard of the tactical level officer of the Armed Forces of Ukraine "Transport Logistics (VOS 703500).
2. The educational program of the course of professional military education “Basic course of tactical level L-1A” EP 7-00 (341) 345.61.
3. Comments from internal and external stakeholders.
4. Proposals of students and academic staff of the Military Academy (Odesa).
5. Experience in combat operations.

## I. PROFILE OF THE EDUCATIONAL PROGRAM OF THE COURSE OF PROFESSIONAL MILITARY EDUCATION

<b>1 - General information</b>	
<b>Full name of the higher education institution</b>	Military Academy (Odesa)
<b>Title of the document on completion and scope of the educational program of the professional military education course</b>	Certificate of completion of the professional military education course “Basic course of tactical level L-1A and professional course of tactical level Transport Logistics, L-1B (TrL), according to the VOS 703500”. Scope of the educational program: 40 ECTS credits.
<b>Prerequisites</b>	Prerequisites Bachelor's degree in higher education or higher, fitness for military service in the officer's position.
<b>Language(s) of instruction</b>	Ukrainian.
<b>Validity of the educational program of the professional military education course</b>	For the period of martial law.
<b>2 - Objectives of the educational program</b>	
Acquisition of military professional and military specialty competencies for service as tactical level officers in the units of the Armed Forces of Ukraine.	
<b>3 - Characteristics of the educational program</b>	
<b>Subject area</b>	Field of knowledge: “25 Military sciences, national security, state border security”. Specialty: “254 Provision Sp of troops (forces)”. Specialization: “Transport logistics”.
<b>The main focus of the educational program of the professional military education course</b>	Professional military education for military service in typical positions defined in the professional standard of a tactical officer.
<b>Features of the program</b>	<p>Module 1. Basic Tactical Level Course, L-1A is mandatory for the following categories of persons involved in the course</p> <p>servicemen and women called up for military service during mobilization, who are currently undergoing or have already completed the PTC, servicemen and women who are performing military service under contract in military units but do not have combat experience;</p> <p>civilian citizens of Ukraine who have not previously performed military service and do not have combat experience.</p> <p>Module 2. Tactical level professional course Transport Logistics, L-1B (TrL), is applicable to all categories of persons who have completed the Basic Tactical Level Course, L-1A.</p> <p>This educational program has a reduced scope in accordance with the requirements of the Catalog of Professional Military Education Courses approved by the First Deputy Minister of Defense of Ukraine under No. 3409/ud of 06.06.2024 and decisions of the Chief of the General Staff of the Armed Forces of Ukraine dated 11. 08.2024 No. 7257/C/dsk, No. 111812/C/1 of 18.08.2024 and No. 119594/C of 27.08.2024, and also takes into account the educational program of the professional</p>

	military education course “Basic Course of Tactical Level L-1A” OP 7-00(341)345.61, approved by the Chief of the General Staff of the Armed Forces of Ukraine of 29.06.2024 No. 97672/C.
<b>4 - Opportunities for graduates to find employment and further education</b>	
<b>Employability</b>	Primary positions of junior officers, which are defined in the professional standard of a tactical officer.
<b>Further training</b>	Training under the educational program of the course of professional military education “Command course of the tactical level of the Logistics Forces (military vehicles), L-1C (OJSC)”
<b>5 - Teaching and assessment</b>	
<b>Teaching and learning</b>	The main types of classes used to teach the components of the educational program are: lectures; seminars, group, practical classes, group exercises; tactical (tactical and formation, tactical and special) independent classes, including at the field training base.
<b>Evaluation</b>	<p>Current control during classes, practicing practical tasks and standards.</p> <p>Intermediate control of the result of mastering the disciplines of the basic course of the tactical level L-1A.</p> <p>Final control in the form of an exam or test for each discipline.</p> <p>Evaluation of the learning outcomes of course students includes the full range of control measures provided by the programs of academic disciplines and is carried out on a 100-point scale, ECTS scale and national scale.</p> <p>The result of passing the test on the educational material can be evaluated on a two-level scale: “passed” or “failed”.</p>
<b>6 - Program competencies</b>	
Military professional competencies (MPC)	<p>MPC-1. Ability to perform official duties in good faith and honesty in accordance with the requirements of the Statutes of the Armed Forces of Ukraine, other regulatory legal acts governing official activities, and to demand that subordinates comply with and fulfill them.</p> <p>MPC-2. The ability to plan, organize combat and manage a unit in the main types of combat (tactical actions).</p> <p>MPC-3. The ability to apply in practice the basic provisions of the theory of management and decision-making, algorithms for making managerial decisions, principles and procedures for effective management of the unit (including NATO standards); to conduct historical and retrospective analysis.</p> <p>MPC-4. The ability to analyze and understand the mission; lead personnel to its implementation, demonstrating values, character traits and thinking based on examples of the Warrior</p>

	<p>ethos and outstanding military leadership.</p> <p>MPC-5. Ability to improve professional, methodological and physical skills; to personally conduct combat training classes with personnel (unit); to work with secret documents, store weapons and ammunition, ensure compliance with security measures in classes; to maintain the unit's constant readiness to perform assigned tasks in peacetime and wartime.</p> <p>MPC-6. Ability to organize CBR protection in the unit; use personal protective equipment and overcome contaminated areas in various conditions of the situation in the course of performing assigned tasks.</p> <p>MPC-7. Ability to determine the tactical properties of the terrain in combat operations in various conditions; work with topographic maps and photographic documents; navigate the terrain with a map, without a map and with the help of navigation devices.</p> <p>MPC-8. Ability to perform engineering support tasks in various types of combat.</p> <p>MPC-9. The ability to organize and maintain communication in the unit using standard means of communication.</p> <p>MPC-10. Ability to perform professional activities in conditions of prolonged diverse physical exertion and mental stress; to organize the training of servicemen to ensure their physical readiness to perform assigned tasks; to organize the performance of tactical medicine tasks.</p> <p>MPC-11. The ability to prepare the unit's standard weapons for combat use; effectively use the combat and technical capabilities of weapons (weapons) during combat (combat operations), conducting all types of training with subordinate personnel; the ability to personally master the techniques and methods of accurate fire from standard weapons (weapons) at targets that appear and move, day and night; the ability to control the fire of subordinate units (firearms) during combat missions.</p> <p>MPC-12. Ability to apply disciplinary practice in relation to subordinate personnel; to lead a unit in compliance with international humanitarian law.</p>
<p>Military-specific competencies (MSC)</p>	<p>MSC-1 Ability to use knowledge of the structure, design, principles of operation of units, components, mechanisms, systems, devices of automotive equipment to ensure its proper operation and repair</p>

	<p>MSC-2 Ability to ensure the efficiency, reliability, durability of engines, to find out the essence of the processes occurring in their systems and main mechanisms</p> <p>MSC-3 Ability to use knowledge of the structure and principles of operation of electronic and microprocessor equipment, electrical and electronic systems (devices)</p> <p>MSC-5 Ability to identify and classify hazardous factors in the operation of motor vehicles, use knowledge of traffic rules to resolve traffic situations in various road conditions and situations, the procedure and rules for military road transportation.</p> <p>MSC-6 Ability to control the technical condition, use, safe and trouble-free operation of equipment, possession of knowledge to determine the areas of beneficial use of natural resources, energy and materials during operation.</p> <p>MSC-7 Ability to master technologies and forms of organization of diagnostics, maintenance and repair of equipment, ability to analyze advanced scientific and technical experience and trends in the development of technology for the operation of technical means for various purposes</p> <p>MSC-8 Knowledge of the structure of the system of technical support of combat operations of the Armed Forces of Ukraine, the role, place, tasks and basic principles of automotive support of transport logistics units.</p> <p>MSC-9 Ability to systematically analyze information, technical data, indicators and performance results in order to model transport logistics processes and ensure optimal performance</p> <p>MSC-10 Ability to use knowledge to ensure safe and trouble-free transportation of dangerous and special cargo.</p> <p>MSC-11 Ability to perform the duties of a platoon commander of logistics supply, commander of a logistics company</p>
<b>7 - Program learning outcomes</b>	
<b>Professional training</b>	<p>PLO-1. Apply the requirements of the Statutes of the Armed Forces of Ukraine in organizing service activities in the unit, internal and guard service, maintaining military discipline and ensuring the unit's coherence.</p> <p>RNvp-2. Prepare the unit for combat (tactical actions), manage the actions of the unit during combat (tactical actions).</p> <p>PLO-3. To know and understand the principles and procedures for managing a unit according to NATO standards and be able</p>

to use them to achieve service and combat objectives; make informed decisions on the actions of the unit in a combat situation using the principles and procedures of NATO standards; be able to conduct historical and retrospective analysis of actions.

**PLO-4.** To know and understand the peculiarities of the officer's profession, the basics of military leadership, values, character traits and types of thinking of outstanding military leaders on the examples of their military professional activities and the ethos of the Warrior.

**PLO-5.** Know the methods of improving their professional and methodological skills, personally conduct combat training classes with personnel (unit); be able to work with secret documents; securely store weapons and ammunition, unit property, manage the unit's company economy; ensure compliance with safety measures during classes, firing (flights, campaigns), exercises (training), readiness checks.

**LO-7.** Determine the tactical properties of the terrain when conducting combat operations in various conditions; work with topographic maps and photographic documents; navigate unfamiliar terrain with a map, without a map and with the help of navigation devices, day and night, in any weather and season.

**LO-8.** Formulate instructions for engineering support to the platoon in various types of combat, using an understanding of basic engineering support measures; carry out practical equipment and camouflage of platoon support elements; organise measures to remove and clear single mines and minefields using standard equipment.

**LO 9.** To use standard communications equipment in service with the unit to organise communications; to organise measures to protect against enemy electronic warfare during preparation and conduct of combat.

**LO-10.** Apply knowledge to meet the needs of the serviceman during actions in autonomous conditions at the expense of natural resources; protection from the effects of physical and geographical conditions using natural and improvised means; be able to organise the implementation of tactical medicine tasks.

**LO 11.** Apply knowledge of the material part of small arms, rules of fire, operation and maintenance of small arms, methods of organising and conducting classes to train unit personnel, prepare weapons for firing in marching (combat) handling and in the performance of combat missions; apply knowledge and skills in fire control of the unit in combat.

**LO-12.** Understand the procedure for military service, bringing servicemen to criminal, administrative and material responsibility; social and legal protection of servicemen and their families; know the procedure for conducting an internal investigation in the Armed Forces of Ukraine; apply knowledge of international humanitarian law.

	<p><b>LOmpt 1</b> Acquire the knowledge and understanding necessary to analyse the processes occurring in military vehicles, identify breakdowns, malfunctions, and, if necessary, carry out technological actions to ensure proper operation.</p> <p><b>LOmpt -2</b> Understand the requirements for internal combustion engines in terms of ensuring their efficiency, reliability, durability, and is able to determine the nature of malfunctions, breakdowns that lead to failures in their operation.</p> <p><b>LOmpt 3</b> Apply the acquired knowledge and understanding to analyse and evaluate the processes occurring in the electrical circuits and electronic devices of military vehicles and is able to use a variety of devices to diagnose and troubleshoot them in a timely manner.</p> <p><b>LOmpt -4</b> Apply the acquired knowledge and understanding of the basic principles of operation of military vehicles, able to direct their activities to their implementation. Able to evaluate, analyse, systematise, find the right solution to the implementation of measures related to the operation of military vehicles in different conditions.</p> <p><b>LOmpt -5</b> Apply the acquired knowledge in assessing the state of road safety based on the operation of military vehicles and organise accident-free operation.</p> <p>Apply the acquired basic knowledge to assess the capability of military road transport, organise planning and management of transport.</p> <p><b>LOmpt -6</b> Organise and monitor the technical condition, use, safe and trouble-free operation of military vehicles and, during operation, carry out repair and maintenance of units, systems and elements for various purposes.</p> <p><b>LOmpt -7</b> Analyse the necessary information, technical data, indicators and results of operation of components and assemblies of automotive equipment, model technical support processes</p> <p><b>LOmpt -8</b> Know the structure of the system of technical support of combat operations of the Armed Forces of Ukraine, the role, place, tasks and basic principles of motor transport logistics units. To plan and organise motor transport support of combat operations and manage motor transport support forces and means in the positions of platoon leader, company commander</p> <p><b>LOmpt -9</b> When modelling supply processes, search for information, analyse, systematise, summarise, conduct experimental and theoretical research, draw reasonable conclusions on transport issues and in solving military logistics problems.</p> <p><b>LOmpt -10</b> Organise safe and accident-free transport of dangerous and special cargoes. To transport special, explosive and fire hazardous cargoes in compliance with safety rules and sanitary and hygienic requirements.</p> <p><b>LOmpt -11</b> Organise the work of a logistics platoon (company) as a commander of a logistics platoon (company)</p>
<b>8 - Resource support for the program implementation</b>	
<b>Personnel support</b>	The academic staff involved in the educational program are full-time employees of the Military Academy, some of whom

	<p>have academic degrees and academic titles.</p> <p>The practice-oriented nature of the educational program provides for the wide participation of practitioners who correspond to the program area, which enhances the synergistic relationship between theoretical and practical training.</p> <p>The head and members of the working group on the development of the program, as well as the teaching staff that ensures the implementation of the educational program meet the requirements set by the Ministry of Defense of Ukraine.</p>
<b>Material and technical support</b>	<p>The material and technical base of the Military Academy (Odesa) and the Center for the Educational Process of the Military Academy is used to implement the competencies and learning outcomes specified in the educational program. The material and technical support meets the requirements for the provision of educational services and is sufficient to ensure the quality of the educational process, in particular: classrooms; computer classes (laboratories); specialized laboratories; gyms, sports grounds; library, reading room; multimedia equipment; premises for research and teaching staff; barracks premises; dining room, etc.</p>
<b>Information and educational support</b>	<p>The teaching and methodological support is developed in accordance with the current regulatory and legislative documents of the Ministry of Education and Science of Ukraine and orders of the Ministry of Defense of Ukraine, and consists of the following materials:</p> <p>instructional and methodological materials for practical classes;</p> <p>teaching and methodological materials for all types of classes;</p> <p>methodological instructions for organizing independent work; diagnostic tools.</p> <p>The library fund is used in the training, including teaching materials, teaching and methodological developments of pedagogical staff.</p> <p>To implement the program, the virtual learning environment of the Military Academy (Odesa), author's developments, textbooks and manuals, and other teaching and methodological materials are used.</p> <p>The official website of the Academy (<a href="http://vaodesa.mil.gov.ua/">http://vaodesa.mil.gov.ua/</a>) contains information on educational, scientific and educational activities, structural units, admission rules, contacts, and users have the opportunity to use all available library resources. There is technological and logistical support for the educational process. The system of bringing combat experience gained during the Russian-Ukrainian war is organized.</p>

## 2. LIST OF COMPONENTS OF THE CURRICULUM OF THE PROFESSIONAL MILITARY EDUCATION COURSE AND THE CORRESPONDENCE OF PROGRAM COMPETENCIES AND LEARNING OUTCOMES TO THE COMPONENTS OF THE CURRICULUM

### 2.1. List of components of the OP

Code. n/a.	Components of the educational program (academic disciplines/modules)	Number of credits	Form of final control
Module 1: Basic tactical course, L-1A			
MP 1.1	History of wars and military art	0,5	Credit
MP 1.2	Fundamentals of military leadership	1	Credit
MP 1.3	General tactics	5	Examination
MP 1.4	Fundamentals of military management (including Troop Leading Procedures)	2	Credit
MP 1.5	Manage the day-to-day operations of the divisions	1	Credit
MP 1.6	Radiation, chemical, biological protection of units (including ecology)	0,5	Credit
MP 1.7	Military topography	1	Credit
MP 1.8	Engineering training	1	Credit
MP 1.9	Organisation of military communications	0,5	Credit
MP 1.10	Combat system for survival of soldiers (including tactical medicine)	2	Credit
MP 1.11	Statutes of the Armed Forces of Ukraine and their practical application (including drill training)	0,5	Credit
MP 1.12	Small arms and firearms training	3	Credit
MP 1.13	Fundamentals of military law and international humanitarian law	0,5	Credit
MP 1.14	Intelligence training	0,5	Credit
MP 1.15	Fundamentals of organising and conducting warfare in the electromagnetic environment and cyberspace	0,5	Credit
MP 1.16	Basics of using tactical-grade unmanned systems	0,5	Credit
<b>Total per module</b>		<b>20</b>	
Module 2. Professional course at the tactical level of logistics forces Transport logistics, L-1B (TRL)			
MS 1	Organisation of transport and transportation in the Armed Forces of Ukraine	6,0	Credit
MS 2	Organisation of operation military automotive of technology.	2,0	Credit
MS 3	Organising the repair of military vehicles.	2,0	Credit
MS 4	Cars	2,0	Credit
MS 5	Engines	1,0	Credit
MS 6	Electrical and electronic equipment	1,0	Credit
MS 7	Automotive support	2,5	Credit
MS 8	Organising the transport of fuel and lubricants.	2,0	Credit
MS 9	Organising the transport of missiles and ammunition	1,5	Credit
<b>Total per module</b>		<b>20,0</b>	
<b>Total under the loan program</b>		<b>40,0</b>	

## 2.2 Correspondence of program competences to the components of the educational program

	MP 1	MP 2	MP 3	MP 4	MP 5	MP 6	MP 7	MP 8	MP 9	MP 10	MP 11	MP 12	MP 13	MP 14	MP 15	MP 16	MS 1	MS 2	MS 3	MS 4	MS 5	MS 6	MS 7	MS 8	MS 9
MPC-1											+														
MPC-2			+	+												+									
MPC-3	+			+																					
MPC-4		+																							
MPC-5					+																				
MPC-6						+																			
MPC-7							+																		
MPC-8								+																	
MPC-9									+						+										
MPC-10										+															
MPC-11												+													
MPC-12													+												
MSC-1																			+		+				
MSC-2																			+	+	+				
MSC-3																			+	+	+				
MSC-4																			+	+	+				
MSC-5																	+	+	+	+					
MSC-6																		+	+	+	+				
MSC-7																		+	+	+	+				
MSC-8																		+					+		
MSC-9																		+							
MSC-10																		+					+	+	+
MSC-11																		+					+	+	+

## 2.3 Correspondence of learning outcomes to the components of the educational program

	VP 1	VP 2	VP 3	VP 4	VP 5	VP 6	VP 7	VP 8	VP 9	VP 10	VP 11	VP 12	VP 13	VP 14	VP 15	VP 16	BC 1	BC 2	BC 3	BC 4	BC 5	BC 6	BC 7	BC 8	BC 9
LOmp-1											+														
RNvp-2			+	+										+		+									
RNvp-3	+			+																					
RNvp-4		+																							
RNvp-5					+																				
RNvp-6						+																			
RNvp-7							+																		
RNvp-8								+																	
RNvp-9									+							+									
RNvp-10										+															
RNvp-11												+													
RNvp-12													+												
RNvs-1																			+		+				
RNvs-2																			+	+	+				
RNVS-3																			+	+	+				
RNVS-4																			+	+	+				
RNVS-5																	+	+	+	+	+				
RNVS-6																		+	+	+	+				
RNVS-7																			+	+	+				
RNVS-8																		+					+		
RNVS-9																		+							
RNVS-10																		+					+	+	+
RNVS-11																		+					+	+	+

### 3. DISTRIBUTION OF STUDY PROGRAM COMPONENTS BY COURSES AND SEMESTERS OF STUDY

No. s/n	Academic discipline code	Name of the discipline	Final reporting (breakdown by semester)		Number of ECTS credits	Total number of hours	Audit hours (under the guidance of the SPP, instructors)				Control measure	Independent work	Distribution of classroom hours								
			examinations	credits			in total	including					Months								
								lectures	group, seminars	practical and other			1	2	3	4	5	6			
			Number of weeks in a month						4	4			4	4	4	4					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19			
<b>Module 1: Basic tactical course, L-1A</b>																					
1	WP 1.1	History of wars and military art	-	1	0,5	15	10	6	4	-	2	3	-	-		-	-	-			
2	WP 1.2	Fundamentals of military leadership	-	1	1	30	24	-	22	2	2	4			-	-	-	-			
3	WP 1.3	General tactics	1	-	5	150	94	8	34	52	6	50	-			-	-	-			
4	OP 1.4	Fundamentals of military management (including Troop Leading Procedures)	-	1	2	60	56	30	14	12	2	2	-		-	-	-	-			
5	VP 1.5	Manage the day-to-day operations of the divisions	-	1	1	30	28	14	8	6	2	-			-	-	-	-			
6	VP 1.6	Radiation, chemical, biological protection of units (including ecology)	-	1	0,5	15	12	4	2	6	2	1			-	-	-	-			
7	VP 1.7	Military topography	-	1	1	30	18	-	12	6	2	10			-	-	-	-			
8	VP 1.8	Engineering training	-	1	1	30	18	2	12	4	2	10	-	-		-	-	-			
9	VP 1.9	Organisation of military communications	-	1	0,5	15	10	-	6	4	2	3			-	-	-	-			

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
10	GP 1.10	Combat system of warrior survival (including tactical medicine)	-	1	2	60	38	3	17	18	2	20	-	-	-	-	-	
11	GP 1.11	Statutes of the Armed Forces of Ukraine and their practical application (including drill training)	-	1	0,5	15	12	6	-	6	2	1	-	-	-	-	-	
12	GP 1.12	Small arms and firearms training	-	1	3	90	64	2	26	36	4	22	-	-	-	-	-	
13	GP 1.13	Fundamentals of military law and international humanitarian law	-	1	0,5	15	10	4	4	2	2	3	-	-	-	-	-	
14	GP 1.14	Intelligence training	-	1	0,5	15	8	2	6	-	2	5	-	-	-	-	-	
15	GP 1.15	Fundamentals of organising and conducting warfare in the electromagnetic environment and cyberspace	-	1	0,5	15	12	6	4	2	2	1	-	-	-	-	-	
16	GP 1.16	Basics of using tactical-grade unmanned systems	-	1	0,5	15	10	4	4	2	2	3	-	-	-	-	-	
Total per module			1	15	20,0	600	424	91	175	158	38	138	-	-	-	-	-	
Module 2. Tactical level professional course Transport logistics, L-1B (TRL)																		
16	BC 1	Organisation of transport and transportation in the Armed Forces of Ukraine		1	6,0	180	126	18	84	20	4	54	-	-	-			
17	BC 2	Organisation of operation military automotive technology.		1	2,0	64	52	0	22	26	2	14	-	-	-			
18	BC 3	Organising the repair of military vehicles.		1	2,0	56	40	4	18	16	2	16	-	-	-			
19	BC 4	Cars		1	2,0	60	40	20	16	2	2	20	-	-	-			
20	BC 5	Engines		1	1,0	30	22	2	12	6	2	8	-	-	-			
21	BC 6	Electrical and electronic equipment		1	1,0	30	20	4	8	6	2	8	-	-	-			

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
22	BC 4	Automotive support		1	2,5	75	60	0	56	0	2	15	-	-	-			
23	BC 5	Organising the transport of fuel and lubricants.		1	2,0	60	40	8	20	12	2	20	-	-	-			
24	BC 6	Organising the transport of missiles and ammunition		1	1,5	45	30	2	26	0	2	15	-	-	-			
Total per module				<b>9</b>	<b>20</b>	<b>600</b>	<b>430</b>	<b>58</b>	<b>262</b>	<b>90</b>	<b>20</b>	<b>170</b>	-	-	-			
<b>Total number of</b>			<b>1</b>	<b>24</b>	<b>40</b>	<b>1200</b>	<b>854</b>	<b>149</b>	<b>437</b>	<b>90</b>	<b>420</b>	<b>308</b>						
Number of hours per week																		
Number of exams:													-		-	-	-	
Number of credits:																		

## 4. PROGRAMES OF THE EDUCATIONAL PROGRAM COMPONENTS

### 4.1. eP 1.1 "History of wars and military art"

*The general objective of the educational program component:*

*Training of servicemen who have a sufficient level of understanding of the forms and methods of using troops in major battles, wars and armed conflicts; the role of man and technology in the development of methods of armed struggle.*

*As a result of studying the discipline, cadets (students) should:*

*know:*

*the most important wars and military conflicts in historical retrospect;*

*the characteristics and features of the development of military art in the wars of the past;*

*the interdependence of tactics of action on the development of weapons and military equipment;*

*promising areas of development of armed struggle of our time;*

*be able to:*

*determine the characteristics of armed confrontations of our time;*

*be able to:*

*identify the characteristics of armed confrontations of our time;*

*make informed decisions, predicting possible developments in the course of hostilities;*

*Conduct retrospective analysis, summarise and draw conclusions when making decisions and setting tasks.*

### **Organisational and methodological guidelines**

The discipline is designed to teach to understand the present by analyzing the past, to master the basics of historical research methods, to teach future military specialists a system of historical knowledge and skills, and the ability to think creatively.

The material of the discipline will enrich the knowledge of students with historical examples of the practical application of the branches of the armed forces in combat operations, focusing on the main forms of armed struggle, and will form the basis for independent forecasting of their development in the future.

The topics and the logical sequence of their gradual study focus on modern wars and conflicts (the second half of the twentieth and early twenty-first century) with a brief excursion into ancient and modern history. Emphasis is placed on the practice of implementing the acquired knowledge in the professional activities of the officer.

The educational material provided for studying during independent work is submitted for final control together with the educational material that is worked out in class under the guidance of a scientific and pedagogical employee.

During all forms of classes, individual, group and frontal methods of knowledge control and active learning methods are used. Current control is carried out in the form of an oral survey or written express control during training sessions.

Classrooms, computer labs, multimedia equipment, visual teaching aids, and writing utensils are used for all types of classes.

### **Information and methodological support:**

1. White Paper of the Anti-Terrorist Operation in Eastern Ukraine (2014-2016) / Edited by I. Rusnak - Kyiv: NUOU, 2017.
2. Conduct of hostilities in special conditions (historical examples): Study guide / P. Tkachuk, O. Kutska, C. Rogovskyi et al. Lviv: NASV, 2020.
3. Military art in local wars and armed conflicts of the 50-80s of the twentieth century: a textbook / I. Furman, S. Sydorov, R. Pylyavets and others - K.: CP "Komprint", 2019.
4. Military art in local wars and armed conflicts of the 90s of the twentieth - early twenty-first century: a textbook / I. Furman, S. Sydorov, R. Pylyavets and others - K.: Komprint, 2019.
5. Military and historical description of the Russian-Ukrainian war (monthly publication since March 2022) / MoD, General Staff of the Armed Forces, Central Military Intelligence Department of the Armed Forces.

## Titles of topics and distribution of training time by type of training session

№ s/n	Types of training sessions and tests events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Introduction to military history. Wars and the development of military art from the Ancient World to the end of World War II.</b>					
1	Lecture	2	2		<b>Lesson 1: Factors that influenced the evolution of martial arts.</b> 1. The place of war history and military art in the system of military science knowledge. 2. Development of means of armed struggle from the Ancient World to the end of the Second World War. 3. Wars and the development of military art before the First World War.
2	Group Session	3	2	1	<b>Lesson 2. Development of military art in the First and Second World Wars.</b> 1. Causes, main battles and results of the First World War (1914-1918). 2. Causes, main battles and results of the Second World War (1939-1945). 3. Weapons and equipment that influenced the course of hostilities in the two world wars. <i>Independent work:</i> The development of military art of the leading countries of the world in the interwar period and in the Second World War. 1. Development of military art of the leading countries of the world in the interwar period. 2. The military and political situation in the world on the eve of the Second World War. 3. The development of the military art of Germany and the USSR in the Second World War.
<b>Total for the topic</b>		<b>5</b>	<b>4</b>	<b>1</b>	

<b>Theme 2. The development of martial arts in wars and armed conflicts of the second half of the twentieth century</b>					
4	Lecture	2	2	<p><b>Lesson 1: Wars and armed conflicts of the second half of the twentieth century.</b></p> <p>1. Development of new means of armed struggle and armed forces of the leading countries of the world after the Second World War.</p> <p>2. The development of military art of the leading countries of the world in local wars of the second half of the twentieth century.</p> <p>3. Causes, main operations and results of the Russian-Chechen wars.</p>	
<b>Total for the topic</b>		<b>2</b>	<b>2</b>		
<b>Topic 3: Military art and characteristics of wars of the early twenty-first century.</b>					
5	Lecture	3	2	1	<p><b>Lesson 1: The fight against terrorism on the example of the wars of the early twenty-first century.</b></p> <p>1. The development of the military art of the leading countries of the world in local wars of the early twenty-first century.</p> <p>2. Causes, course and results of wars in the post-Soviet space in the 21st century.</p> <p>3. Hybrid warfare: origin and development.</p> <p><i>Independent work:</i> Development of new means of armed struggle.</p> <p>1. The role and importance of precision weapons in modern warfare.</p> <p>2. Features of the use of robotics in modern wars.</p>
<b>Total for the topic</b>		<b>3</b>	<b>2</b>	<b>1</b>	
<b>Topic 4. Formation and development of the Armed Forces of Ukraine.</b>					
7	Group Session	3	2	1	<p><b>Lesson 1: Military history of Ukraine from Kyivan Rus to the present.</b></p> <p>1. The military art of the princely army of the times of Kyivan Rus and the Ukrainian Cossack army.</p> <p>2. Ukrainian armed formations during the First and Second World Wars.</p> <p>3. Causes, course and development of military art during the Russian-Ukrainian war (since 2014).</p> <p><i>Independent work:</i> Examples of heroic actions of the Ukrainian defence forces.</p> <p>1. Western partners' military assistance to Ukraine during its confrontation with Russia after the full-scale invasion.</p> <p>2. Examples of heroic actions of the Ukrainian Defence Forces.</p>
<b>Total for the topic</b>		<b>3</b>	<b>2</b>	<b>1</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>15</b>	<b>12</b>	<b>3</b>	

## 4.2. EP 1.2 "Fundamentals of Military Leadership"

### **General objective of the educational program component:**

Providing basic conceptual knowledge of the theory and practice of military leadership, developing cadets' (students') leadership competencies and skills of effective interaction in military organisational structures.

As a result of studying the discipline, students (trainees) should:

*to know:*

the essence of an officer's professional activity;

concepts and categories of military leadership;

the main provisions of the Military Leadership Doctrine;

common features and differences between management and leadership;

Levels of military leadership and their manifestations in the activities of an officer;

the essence of the mission, goals and objectives of a military leader;

leadership values and principles;

key concepts and structure of the Warrior ethos;

the Cossack code of honour; officers of the UPR, UPA, and modern officers of the Armed Forces of Ukraine;

basic requirements for a military leader;

profile of personal and professional competences of a military leader;

approaches to assessing and developing a military leader;

tools for managing the experience of a military leader;

*be able to:*

apply the acquired knowledge in simulated situations, everyday and combat activities;

evaluate models of military leadership;

identify the signs of counterproductive leadership;

implement the values of a military leader;

to develop the cognitive and volitional properties of a military leader;

develop the emotional intelligence and communication competence of a military leader;

to form an individual trajectory of development and career management of a military leader;

manage the experience of a military leader.

### **Organisational and methodological guidelines:**

It is mandatory to systematically consolidate the knowledge and skills acquired in the course of studying the discipline during practical, group classes and independent study.

In the course of studying the discipline, cadets (students) should develop a holistic view of military leadership in the Armed Forces of Ukraine, values, competencies, and worldview of a military leader.

The educational material to be studied during self-study is processed in accordance with the specified time and is submitted for current and final control together with the educational material that is processed in class under the guidance of a scientific and pedagogical employee.

During all forms of classes, active teaching methods, individual, group and frontal methods of knowledge control are used. Current control is carried out in the form of an oral survey or written express control during training sessions, including electronic questionnaires in various forms by the decision of the academic staff - the head of the classes.

For all types of classes, the following facilities are used: classrooms, computer labs, multimedia equipment, visual teaching aids, writing utensils, distance learning platforms, electronic manuals, questionnaires by the decision of the academic staff member - the head of the class.

### **Information and methodological support:**

1. Doctrine of Military Leadership in the Armed Forces of Ukraine. OP 1-296: approved by the NGS of the Armed Forces of Ukraine. NGS of the Armed Forces of Ukraine of 22.01.2024.
2. To lead. To fight. To win. Ethos of the Marine Corps of Ukraine / edited by A. Zelinskyi. Kyiv: Ukraine Crisis Media Center with the support of the US Embassy in Ukraine and the NGO "Spirit of America", 2017 edition, 133 p.
3. Zelinsky A. Anatomy of a Warrior: Spirit, Way, Power. Kyiv: Circle of Life, 2023 edition, 215 p.
4. Zelinsky A. Semenovi zori. Lviv: Staryi Lev Publishing House, 2023. 488 c.
5. Pressfield S. Gates of Fire: The Heroic Epic of the Battle of Thermopylae. Kyiv: Nash format, edition 2023.
6. Willink D., Bebin L. Absolute responsibility. Leadership lessons from Navy SEALs. Kyiv: Knigolav, 2020 edition, 400 p.
7. Willink D. Discipline is Freedom. Kyiv: #knigolav, 2022 edition, 256 p.

8. Willink D. *Strategy and Tactics of Leadership* / translated from English by L. Pylaeva. Kyiv: Book Chef, 2021. 368 c.
9. *Resilience: Hard-won wisdom for a better life*. Kharkiv: Ranok Publishing House, 2021 edition, 432 p.
10. McRaven V. G. *Make your bed* / translated from English by T. Zavoloko. Kyiv: KI-BOOKS Publishing Group, edition 2020, 128 p.
11. McRaven, W. *The Hero's Code. Lessons from a Life Well Lived*. Kyiv: KM-Books, edition 2022, 168 p.
12. McRaven, W. *Sea Stories. My life in special operations*. Kyiv: KM-BOOKS, 2020 edition, 408 p.
13. *Army Leadership and The Profession ADP 6-22*, July, 2019.
14. *Army Leader Transitions Handbook*, 2023.
15. *Leader Development. FM 6-22*, November, 2022.
16. *Mission and Command. Command and Control of Armed Forces. ADP 6-0*, July, 2019.

## Titles of topics and distribution of training time by type of training session

№ s/n	Types of training sessions and tests events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Conceptual foundations of military leadership</b>					
1	Group Session	4	2	2	<b>Lesson 1: Fundamentals of military leadership in the Armed Forces of Ukraine.</b> 1. Introduction to the discipline. Subject, objectives of the discipline and the procedure for its study. 2. Officer as a profession. 3. The essence of military leadership and management. 4. Model of requirements for a military leader. <i>Independent work:</i> Founding documents on military leadership. 1. Basic requirements of the Doctrine and other founding documents on military leadership.
2	Group Session	2	2		<b>Lesson 2. Mission, purpose and tasks of a military leader.</b> 1. Mission and purpose of a military leader. 2. Tasks of a military leader-officer. 3. Tasks of a military leader-sergeant.
3	Group Session	4	2	2	<b>Lesson 3: Principles of military leadership.</b> 1. Principles of military leadership in the Armed Forces of Ukraine. 2. Principles of military leadership in the armies of NATO member states. 3. Leadership by John Maxwell, Jocko Willink and others. <i>Independent work:</i> Levels of military leadership. 1. Tactical level of military leadership. 2. Operational level of military leadership. 3. Strategic level of military leadership.

<b>Total for the topic</b>		<b>10</b>	<b>6</b>	<b>4</b>	
<b>Topic 2: Values of a military leader.</b>					
4	Group Session	2	2		<b>Lesson 1: Values of a military leader.</b> 1. The essence of the value "Honour". 2. The essence of the Sustainability value. 3. The essence of the value "Professionalism". 4. The essence of the Unity value. 5. Values of a military leader in the armies of NATO member states.
5	Group Session	2	2		<b>Lesson 2. Ethos of the Warrior.</b> 1. Key concepts and structure of the Warrior ethos: "Spirit", "Path", "Power". 2. Comparison of the ethos of the Armed Forces of Ukraine: The ethos of the sergeant, Ethos of the Territorial Defence Forces, Ethos of the Marines.
6	Seminar (Roundtable Discussion)	2	2		<b>Lesson 3: Code of honour for national military leaders.</b> 1. Code of Cossack honour. 2. Code of Honour of Officers of the Ukrainian People's Republic. 3. The Code of Honour of the Officers of the Ukrainian Insurgent Army. 4. The Code of Honour of a Modern Officer of the Armed Forces of Ukraine.
<b>Total for the topic</b>		<b>6</b>	<b>6</b>		
<b>Topic 3. Competences of a military leader (Profile of a military leader)</b>					
7	Group Session	2	2		<b>Lesson 1: Model of military leadership development.</b> 1. Value and competence model of a military leader: values, experience, personal and professional competences. 2. Ecosystem of competences of a military leader: personal and professional. 3. Professional (military-specific) competencies of a military leader.
8	Group Session	2	2		<b>Lesson 2. Emotional and communication competence of a military leader.</b> 1. Emotional self-management of the military leader (Self-management) and management of the emotional state of subordinates and empathy of the military leader. 2. Establishing trust and mutual respect in the team. 3. Establishing effective communication with the team, providing feedback and constructive criticism.

				4. Crisis communication, conducting complex negotiations.
9	Group Session	2	2	<b>Lesson 3: Digital and managerial competence of a military leader.</b> 1. Basic digital skills of a modern military leader. 2. Self-determination (self-actualisation) and self-motivation of a military leader. 3. Motivation and development of personnel. 4. 4. Counterproductive military leadership.
10	Seminar (Roundtable Discussion)	2	2	<b>Lesson 4: Intelligence and thinking of a military leader.</b> 1. Analytical, systematic, critical thinking of a military leader. 2. Innovative (creative, out-of-the-box, unconventional) thinking of the military leader. 3. Examples of unconventional thinking of modern military leaders (domestic and foreign).
<b>Total for the topic</b>		<b>8</b>	<b>8</b>	
<b>Topic 4. Assessment and development of a military leader.</b>				
11	Practical Session	2	2	<b>Lesson 1: Assessing a military leader.</b> 1. Assessment of leadership qualities at the tactical level. 2. Assessment of leadership qualities at the operational level. 3. Assessment of leadership qualities at the strategic level. 4. Problematic aspects and promising approaches to assessing military leaders (domestic and foreign experience).
12	Group Session	2	2	<b>Lesson 2. Development of military leaders.</b> 1. Formation of an individual trajectory of development of a military leader (career management of a military leader). 2. Managing the experience of a military leader.
<b>Total for the topic</b>		<b>4</b>	<b>4</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>	<b>Credit</b>
<b>Total for the educational component</b>		<b>30</b>	<b>26</b>	<b>4</b>

### 4.3. OP 1.3 "General Tactics"

#### **The general objective of the discipline:**

Training of a serviceman who is able to apply the theoretical provisions of general combat, the basics of unit management and the requirements of guidelines for the design of combat graphic documents during the planning of combat operations; practically perform movement on the battlefield as part of combat groups and manage combat groups in the main types of combat; use a mechanized squad, mechanized platoon in modern conditions of general combat, taking into account the experience of using units in the Russian-Ukrainian war.

As a result of studying the discipline, students should:

*to know:*

the basics of general combat;

command and control requirements, battle planning procedures based on NATO military command and control procedures;

the procedure for drawing up combat graphic documents;

organisational and staffing structure, tactical and technical characteristics of weapons of mechanised units (squad, platoon);

the role, place and procedure for the use of mechanised units (squad, platoon) in a general combat;

Combat capabilities, tactical and technical characteristics of the weapons of the added units and the procedure for their use in combat;

the procedure for managing regular and attached units (battlegroup, squad, platoon) during combat;

peculiarities of organising the location of a mechanised platoon;

peculiarities of performing tasks in sentry protection by units of a mechanised platoon;

peculiarities of marching by mechanised units, actions of marching guard units;

tactics of mechanised units in defensive combat;

peculiarities of preparing and conducting defensive combat;

tactics of mechanised units in offensive combat;

peculiarities of preparing and conducting offensive combat;

*be able to:*

plan the actions of units in accordance with NATO military command and control procedures;

Prepare a mechanised unit with reinforcements for combat (tactical actions);

make decisions in a timely manner, set tasks, and achieve their fulfilment;  
prepare combat documents for the platoon;  
use the unit's firepower;  
Manage staff and additional units in the course of performing assigned tasks;  
to organise interaction with units of the armed services and special forces in a general battle.

### **Organisational and methodological guidelines**

The subject of the discipline is the theory and practice of using mechanized units in the main types of general military combat (tactical actions).

Group classes are conducted to study the theoretical provisions of the use of mechanized units in the main types of general military combat (tactical operations). In the course of group exercises, the learning material is assimilated, among other things, by performing individual tactical, graphic (graphical and calculation) tasks by cadets (students).

Group exercises are conducted in order to train cadets (students) in the work of a unit commander to prepare him/her for actions in various tactical conditions and to manage units during the course of actions. During group exercises, communications equipment, topographic maps are used, and during exercises in the field, weapons and military equipment, weapons and imitation are used. To mark the enemy's actions, enemy marking units may be involved and the target situation of the training ground may be used. During group exercises, all cadets (students) act as a unit commander, and the exercise leader acts as a senior commander (company commander).

Tactical formation and tactical exercises are conducted on the training tactical fields and other objects of the training grounds and designated areas. Other exercises are conducted in classrooms, specialized classes, on simulators (simulation equipment) and at training grounds.

### **Information and methodological support**

1. SBP 3-(01,02,04).58(59) Combat Statute of the Mechanised and Tank Troops of the Land Forces of the Armed Forces of Ukraine, Part III (platoon, section, tank): approved by Order of the Commander of the Land Forces of the Armed Forces of Ukraine No. 238 dated 25.05.2016 (as amended in 2017-2023).
2. TP 7-00(194)11.01. Collection of standards for combat training of the Land Forces of the Armed Forces of Ukraine - Kyiv: KP CSR of the Armed Forces of Ukraine, 2021 (as amended in 2023).

3. OP 7-(01,03-05)215.58(59) Album of diagrams of "Methodological materials for the training of tactical groups" (squad, platoon) - Zhytomyr: Centre for Operational Standards and Methods of Training of the Armed Forces of Ukraine, edition 2023.
4. Methodological materials "Preparation of assault groups (squad, platoon) for assault operations." - Kyiv: Main Doctrine and Training Directorate of the General Staff of the Armed Forces of Ukraine, edition 2023.
5. Weapons of the Russian-Ukrainian war of 2022-2023: Handbook-catalogue of the main types of weapons and military equipment used by the opposing sides during the repulsion of the large-scale invasion of Ukraine by the Russian Federation (24.02.2022 - 30.06.2023) / Ministry of Defence of Ukraine, Office of the Commander-in-Chief of the Armed Forces of Ukraine, General Staff of the Armed Forces of Ukraine, Centre for Military History Research of the Armed Forces of Ukraine. - Kyiv: Lira-K Publishing House, 2023. - 243 p.
6. VP 3-00(102).56 Methodological Recommendations "List and Structure of Combat (Formalised) Documents on the COIN to be Practised in the Units of the Armed Forces of Ukraine at the Tactical Level during the Planning and Conduct of Combat (Actions)" (squad, platoon, company, battalion and their levels) - Kyiv: Main Doctrine and Training Directorate of the General Staff of the Armed Forces of Ukraine, edition 2022. 3
7. Temporary Procedure for Processing Operational (Combat) Documents. Order of the Commander-in-Chief of the Armed Forces of Ukraine dated 11.09.2020 No. 140.

### Titles of topics and allocation of class time by type of training

№ s/n	Types of training sessions and tests events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Fundamentals of Combined Arms Combat.</b>					
1	Lecture	3	2	1	<p><b>Lesson 1: Composition, purpose of the Armed Forces of Ukraine and main types of weapons and military equipment.</b></p> <p>1. The order of passing the discipline.</p> <p>2. Composition and purpose of the branches of the Armed Forces of Ukraine. The use of the Armed Forces of Ukraine and branches of the armed forces in joint military operations.</p> <p>3. Combined arms combat, its components and their characteristics. Principles of combined arms combat.</p> <p><i>Independent work:</i> Composition, purpose of the Armed Forces of Ukraine and the main types of weapons and military equipment.</p> <p>1. Combined arms combat, its components and their characteristics. Tactical and technical characteristics of the main weapons of the Armed Forces of Ukraine.</p> <p>2. Rehearsing tactical manoeuvre schemes by units and fire.</p>

2	Group Session	3	2	1	<p><b>Lesson 2: The procedure for practicing diagrams and combat graphic documents.</b></p> <p>1. Fundamentals of unit management in combat (tactical actions). The work of a squad (platoon, company) commander in preparing combat (actions) (according to the TLP structure).</p> <p>2. The procedure for developing schemes and designing a working map.</p> <p>3. The main tactical symbols and basic abbreviations used in combat graphic documents.</p> <p>Independent work: Procedure for developing schemes, combat graphic documents.</p> <p>1. The symbols of the units of the Land Forces of the Armed Forces of Ukraine.</p> <p>2. Symbols of weapons and military equipment of the Land Forces of the Armed Forces of Ukraine.</p>
3	Lecture	3	2	1	<p><b>Lesson 3: Organisational structure, weapons and military equipment of units of a mechanised battalion of the Armed Forces of Ukraine.</b></p> <p>1. Purpose, organisational and staffing structure of units of a mechanised battalion.</p> <p>2. Forms and methods of using units based on the experience of the Russian-Ukrainian war.</p> <p><i>Independent work:</i> Organisational structure, weapons and military equipment of units of a mechanised battalion of the Armed Forces of Ukraine.</p> <p>1. Purpose, capabilities, organisational and staffing structure of logistics, technical and medical support units of a mechanised battalion.</p> <p>2. Developing a scheme of the organisational and staffing structure of a mechanised battalion.</p>
4	Group Session	3	2	1	<p><b>Lesson 4. Tactics of actions of units of a mechanized battalion in the main types of combat (tactical actions).</b></p> <p>1. Structure of a defensive battle of a mechanised battalion and main tactical indicators.</p> <p>2. Construction of an offensive battle of a mechanised battalion and main tactical indicators.</p> <p>3. Construction of the marching order of the MB on the march and the main tactical indicators. Location of the MB on the ground and the main tactical indicators.</p> <p>Independent work: Tactics of actions of units of a mechanised battalion in the main types of combat (tactical actions).</p> <p>1. Construction of the marching order of a mechanised battalion on the march and the main tactical indicators. Construction of defensive, offensive battle of a mechanised battalion and main tactical indicators.</p> <p>2. Location of the MB on site and key tactical indicators.</p>

5	Group Session	3	2	1	<p><b>Lesson 5. Actions of soldiers and combat (tactical) groups in combat.</b></p> <p>1. Techniques and methods of action of a soldier and combat (tactical) groups in defensive (offensive) combat.</p> <p>2. Commands, signals given to control the actions of combat (tactical) groups in defensive (offensive) combat.</p> <p><i>Independent work:</i> Actions of a soldier, combat (tactical) groups in combat.</p> <p>1. Training in giving commands to control the actions of combat (tactical) groups in a defensive battle.</p> <p>2. Training in giving commands to control the actions of combat (tactical) groups in offensive combat.</p>
6	Group Session	3	2	1	<p><b>Lesson 6. Techniques and methods of action of combat (tactical) groups during assault operations.</b></p> <p>1. Composition of the assault group, division into subgroups and their tasks.</p> <p>2. Tactics and methods of action of the trench entry subgroup.</p> <p>3. Techniques and methods of action of the fire support subgroup.</p> <p><i>Independent work:</i> Techniques and methods of action of combat (tactical) groups during assault operations. Preparation for the final control for the semester.</p> <p>1. Practice the diagram: Options for building an assault group's combat order.</p> <p>2. Training in issuing commands to control the actions of the capture subgroups and fire support during assault operations.</p>
7	Group Session	3	2	1	<p><b>Lesson 7. Combat capabilities of mechanised units.</b></p> <p>1. General provisions. Capabilities of mechanised units to combat enemy armoured vehicles.</p> <p>2. Capabilities of mechanised units to destroy enemy manpower. Manoeuvring capabilities.</p> <p><i>Independent work:</i> Combat capabilities of mechanised units.</p> <p>1. Calculation of the combat capabilities of a mechanised unit by variants of the given sets of forces and means.</p> <p>2. Study of standards for tactical training of mechanised units.</p>

<b>Total for the topic</b>		<b>21</b>	<b>14</b>	<b>7</b>	
<b>Topic 2. Tactics of actions of a mechanised unit in the main types of combat (tactical actions).</b>					
8	Group Session	3	2	1	<p><b>Lesson 1: Movement of the mechanised unit.</b></p> <p>1. General provisions for the movement of units.</p> <p>2. Peculiarities of movement of units on foot. Actions of personnel in combat tactical groups.</p> <p>3. Organisation of marching guard on the march: marching guard bodies, composition and tasks.</p> <p>4. Actions of units on the march.      Actions of units on the march.</p> <p><i>Independent work:</i> Movement of a mechanised unit.</p> <p>1.      General provisions for the movement of units. Organisation of marching guard on the march. To work out the scheme "Actions of a foot patrol during reconnaissance (inspection) of local objects (objects) on the route of movement".</p> <p>2. Develop the following scheme: "Techniques of movement of units on foot".</p>
9	Group Session	3	2	1	<p><b>Lesson 2. Location of the mechanised department on site.</b></p> <p>1 . General provisions for the location of subdivisions, features of the location of the mechanised department.</p> <p>2. Organisation of direct protection. Actions of personnel as part of combat tactical groups, in direct protection bodies (patrols, secret).</p> <p>3. Watch guard, actions of the department in the watch guard.      Watch guard, actions of the department in the watch guard.</p> <p><i>Independent work:</i> Location of the mechanised department on site.</p> <p>1. General provisions of the location of units .Watch guard, actions of the unit in the watch guard. Duties of the observer.</p> <p>2. Work out the following scheme: "Actions of a mechanised unit as a sentry post".</p>
10	Group Session	3	2	1	<p><b>Lesson 3: Defence of a mechanised unit.</b></p> <p>1. General provisions of defensive combat. Place and role of the mechanised unit in defensive combat.</p> <p>2. Building a defensive battle of a mechanised unit.</p> <p>3. Preparation of a defensive battle.</p> <p>4. Conducting defensive combat. Actions of the unit with division into combat groups.</p>

					<p><i>Independent work:</i> Defence of a mechanised unit.</p> <ol style="list-style-type: none"> <li>1. General provisions of defensive combat. To work out the scheme: "Construction of a defensive battle of a mechanised unit".</li> <li>2. Contents of the squad fire card.</li> </ol>
11	Group Session	3	2	1	<p><b>Lesson 4. Peculiarities of using a mechanised branch in an urban area.</b></p> <ol style="list-style-type: none"> <li>1. Procedure for movement within combat tactical groups in a settlement.</li> <li>2. Features of movement inside the building.</li> <li>3. Features of building defence as part of combat tactical groups.</li> </ol> <p><i>Independent work:</i> Peculiarities of using a mechanised department in an urban area.</p> <ol style="list-style-type: none"> <li>1. To practice schemes of variants of combat orders of a mechanised squad as part of combat (tactical) groups during operations in urban areas.</li> <li>2. Defence of the house</li> </ol>
12	Group Session	3	2	1	<p><b>Lesson 5. Offensive of the mechanised division. Final control (test) for the semester.</b></p> <ol style="list-style-type: none"> <li>1. General principles of offensive combat. Place and role of the mechanised squad in the offensive battle. Construction of an offensive battle of a mechanised squad.</li> <li>2. Preparation of an offensive battle.</li> <li>3. Conducting offensive combat. Actions of the unit with division into combat groups.</li> </ol> <p><i>Independent work:</i> The offensive of the mechanised division.</p> <ol style="list-style-type: none"> <li>1. Combat formations of a mechanised division in the offensive.</li> <li>2. To work out the schemes of variants of the construction of the combat order of a mechanised squad in the offensive with the division into combat groups.</li> </ol>
<b>FIELD TRAINING</b>					
13	Tactical Drill Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the TEF "Actions of a mechanised unit while moving on foot".</p> <ol style="list-style-type: none"> <li>1. Training in giving commands to change marching orders.</li> <li>2. Training in hand signalling while moving on foot.</li> <li>3. Study of the conditions for meeting tactical training standards within the unit.</li> </ol> <p><b>Lesson 6. Actions of a mechanised unit when moving on foot.</b></p> <ol style="list-style-type: none"> <li>1. Techniques of movement on foot, when approaching the enemy.</li> <li>2. Actions of the sentry unit.</li> </ol>

14	Tactical Drill Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the TSE "Actions of a mechanised unit during location on site".</p> <ol style="list-style-type: none"> <li>1. Training in setting tasks (observer, patrol, secret).</li> <li>2. Learning the procedure for repelling an attack by a sabotage and reconnaissance unit.</li> <li>3. Study of the conditions for meeting tactical training standards within the unit.</li> </ol> <p><b>Lesson 7. Actions of a mechanised unit while in place.</b></p> <ol style="list-style-type: none"> <li>1. Engineering equipment, camouflage of elements of the location area.</li> <li>2. Actions of the security authorities.</li> </ol>
15	Tactical Drill Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the TSE "Management of actions of a mechanised unit in a defensive battle".</p> <ol style="list-style-type: none"> <li>1. Training in issuing commands to control the actions of the squad and fire in defensive combat.</li> <li>2. Study of the conditions for meeting tactical training standards. Preparation of training sites.</li> </ol> <p><b>Lesson 8. Controlling the actions of a mechanised unit in a defensive battle.</b></p> <ol style="list-style-type: none"> <li>1. Preparation of a defensive battle. Fulfilment of tactical (engineering) training standards.</li> <li>2. Management of the unit's actions in combat. Fulfilment of tactical training standards.</li> </ol>
16	Tactical Drill Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the TSE "Management of actions of a mechanised unit in offensive combat".</p> <ol style="list-style-type: none"> <li>1. Training in issuing commands to control the actions of the squad and fire in offensive combat.</li> <li>2. Study of the conditions for meeting tactical training standards. Preparation of training sites.</li> <li>3. To work out the schemes of variants of building the combat order of a mechanised squadron in the offensive with the division into combat groups.</li> </ol> <p><b>Lesson 9. Controlling the actions of a mechanised unit in an offensive battle.</b></p> <ol style="list-style-type: none"> <li>1. Preparation of an offensive battle. Fulfilment of tactical training standards.</li> <li>2. Management of the unit's actions in combat. Fulfilment of tactical training standards.</li> </ol>
17	Tactical Drill Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the TOC "Management of actions of a mechanised unit in an urban area".</p> <ol style="list-style-type: none"> <li>1. Learning the rules of tactical actions. Watching training films.</li> <li>2. Preparation of training places.</li> </ol> <p><b>Lesson 10. Managing the actions of a mechanised unit in an urban area.</b></p> <ol style="list-style-type: none"> <li>1. Procedure for movement within combat tactical groups in a settlement.</li> <li>2. Actions of combat tactical groups inside the building.</li> </ol>

18	Tactical Drill Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the TSE "Management of actions of a mechanised unit during night operations".</p> <ol style="list-style-type: none"> <li>1. Training in giving signals (sound, light) to control the actions of the squad and fire in offensive combat.</li> <li>2. Study of the characteristics and operation of night vision devices, thermal imagers and other technical means of reconnaissance and surveillance. Preparation of training places.</li> </ol> <p><b>Lesson 11. Managing the actions of a mechanised unit when performing tasks at night.</b></p> <ol style="list-style-type: none"> <li>1. Transition to night actions.</li> <li>2. Tactical actions of the unit by type of combat.</li> <li>3. Performing tactical actions (tasks) of reconnaissance (surveillance, eavesdropping) and security with the use of technical means of reconnaissance and surveillance.</li> </ol>
<b>Total for the topic</b>		<b>33</b>	<b>22</b>	<b>11</b>	
<b>Topic 3: Tactics of a mechanised platoon in the main types of tactical actions.</b>					
19	Group Session	3	2	1	<p><b>Lesson 1: March of a mechanised platoon and actions in marching guard.</b></p> <ol style="list-style-type: none"> <li>1. General provisions. The experience of the Russian-Ukrainian war.</li> <li>2. Preparing the platoon for the march.</li> <li>3. Peculiarities of preparing a platoon for actions in marching guard.</li> <li>4. Management of platoon actions in marching guard.</li> </ol> <p><i>Independent work:</i> March of a mechanised platoon and actions in marching guard.</p> <ol style="list-style-type: none"> <li>1. Actions of platoon units when ambushed.</li> <li>2. Develop the following schemes: "Areas and boundaries assigned to the platoon during the march"; "Construction of the platoon's marching order when moving as part of the main force".</li> </ol>
20	Group Session	3	2	1	<p><b>Lesson 2. Positioning of a mechanised platoon on the ground and actions in sentry duty.</b></p> <ol style="list-style-type: none"> <li>1. General provisions. The experience of the Russian-Ukrainian war.</li> <li>2. Prepare the platoon for deployment.</li> <li>3. Peculiarities of preparing a platoon for actions in sentry duty.</li> <li>4. Management of platoon actions in guard posts and other security bodies.</li> </ol> <p><i>Independent work:</i> Positioning of a mechanised platoon on the ground and actions in sentry duty.</p> <ol style="list-style-type: none"> <li>1. Peculiarities of the location of units in base camps.</li> <li>2. Rehearse the following diagrams: "Location of a mechanised platoon in place within a company",</li> </ol>

					"Actions of a mechanised platoon in a sentry outpost".
21	Group Session	3	2	1	<p><b>Lesson 3. Participation in stabilisation operations and other tasks.</b></p> <p>1. Peculiarities of participation of troops in stabilisation operations.</p> <p>2. Peculiarities of participation in the performance of other tasks specified by the legislation of Ukraine.</p> <p><i>Independent work:</i> Participation in stabilisation operations and other tasks.</p> <p>1. Peculiarities of preparing a platoon for participation in stabilisation operations.</p> <p>2. Develop the following schemes: "Participation of a mechanised platoon in the search for enemy RRF and IAF", "Participation of a mechanised platoon in the protection and defence of important objects and communications".</p>
<b>Total for the topic</b>		<b>9</b>	<b>6</b>	<b>3</b>	
<b>Topic 4. Tactics of a mechanised platoon in a defensive battle.</b>					
22	Lecture	3	2	1	<p><b>Lesson 1: Mechanised platoon in defensive combat.</b></p> <p>1. Place, tasks of a mechanised platoon in a defensive battle.</p> <p>2. Building the defence of a mechanised platoon.</p> <p>3. Defensive combat.</p> <p><i>Independent work:</i> A mechanised platoon in defensive combat.</p> <p>1. Place and tasks of a mechanised platoon in a defensive battle. Study the experience of using mechanised units in defensive combat during the Russian-Ukrainian war.</p> <p>2. Practice the diagram: "Diagram of a mechanised platoon's stronghold".</p>

23	Group Session	4	2	2	<p>Lesson 2: Preparing for a defensive battle.</p> <ol style="list-style-type: none"> <li>1. Organisation of the battle.</li> <li>2. Preparing units for combat.</li> <li>3. Take up the defence and prepare the platoon's stronghold.</li> <li>4. Practical work of the platoon commander in subordinate units.</li> </ol> <p><i>Independent work:</i> Preparing a defensive battle.</p> <ol style="list-style-type: none"> <li>1: Peculiarities of the work of a mechanised platoon commander depending on the conditions of transition to defence.</li> <li>2. Combat documents developed by the platoon in preparation for defensive combat.</li> <li>3) Preparation of abstracts and reports for the seminar.</li> </ol> <p><i>Independent work:</i> Preparation for the seminar. Preparation and conduct of defensive combat in special conditions.</p> <ol style="list-style-type: none"> <li>1. Definition (purpose) of a defensive battle. The place of a mechanised platoon in a defensive battle. Sequential execution of defensive combat tasks.</li> <li>2. Preparation and conduct of defensive combat of mechanised units based on the experience of the Russian-Ukrainian war.</li> <li>3. Preparation and conduct of defensive combat of mechanised units in special conditions.</li> </ol>
24	Seminar	2	2		<p><b>Lesson 3: Preparation and conduct of defensive combat in special conditions.</b></p> <ol style="list-style-type: none"> <li>1. Definition (purpose) of a defensive battle. The place of a mechanised platoon in a defensive battle. Sequential execution of defensive combat tasks.</li> <li>2. Preparation and conduct of defensive combat of mechanised units based on the experience of the Russian-Ukrainian war.</li> <li>3. Preparation and conduct of defensive combat of mechanised units in special conditions.</li> </ol>
<p><b>A set of group exercises on the topic: "Transition of a mechanised platoon to defence in the absence of a collision with the enemy. Defensive combat".</b></p>					

25	Group exercise	3	2	1	<p><i>Independent work:</i> Preparation for a group exercise. "Preparing a mechanised platoon for defence in the absence of a collision with the enemy".</p> <ol style="list-style-type: none"> <li>1. Study of the tactical task. Preparation of a working map, drawing the initial situation.</li> <li>2. The content of the platoon leader's work in understanding the task, calculating time, and assessing the situation.</li> <li>3. Contents of the paragraphs of the preliminary combat order.</li> </ol> <p><b>Lesson 4. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Stage 1, 2.</b></p> <ol style="list-style-type: none"> <li>1. Understand the task at hand.</li> <li>2. Calculating the time. Assessment of the situation.</li> <li>3. Development of the first preliminary combat order.</li> <li>4. Communicating the first preliminary combat order to subordinates.</li> </ol>
26	Group exercise	3	2	1	<p><i>Independent work:</i> Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Stage 1, 2.</p> <ol style="list-style-type: none"> <li>1. Record the results of the task awareness on the platoon leader's work card. Finalising the time calculation</li> <li>2. Training in communicating the first preliminary combat order.</li> </ol> <p><b>Lesson 5. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Stage 3: "Development of a preliminary plan".</b></p> <ol style="list-style-type: none"> <li>1. Analysis of the task.</li> <li>2. Developing options for action.</li> </ol>
27	Group exercise	3	2	1	<p><i>Independent work:</i> Preparing a mechanised platoon for defence in the absence of an enemy engagement. Stage 3: "Development of a preliminary plan".</p> <ol style="list-style-type: none"> <li>1. Analysing the options for action. Comparison and selection of the final course of action</li> <li>2. Development of the battle plan. Preparation of a working map for the report of the plan.</li> </ol> <p><b>Lesson 6. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Stage 3: "Development of a preliminary plan".</b></p> <ol style="list-style-type: none"> <li>1. Report on the battle plan.</li> <li>2. Practice the second preliminary combat order.</li> </ol>

28	Group exercise	3	2	1	<p><i>Independent work:</i> Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Stage 6: "Completion of battle planning".</p> <ol style="list-style-type: none"> <li>1. Formulation of combat missions.</li> <li>2. Details of management and interaction issues.</li> <li>3. Detailing the issues of comprehensive support for actions.</li> </ol> <p><b>Lesson 7. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Stage 7: "Issuing a combat order".</b></p> <ol style="list-style-type: none"> <li>1. Issuing a combat order.</li> <li>2. Setting combat tasks for subordinates.</li> </ol>
<b>FIELD TRAINING</b>					
29	Tactical Exercise	6	4	2	<p><i>Independent work:</i> Preparation for the task "Preparation of a mechanized platoon for defence in the absence of collision with the enemy". Stage 5, 7.</p> <ol style="list-style-type: none"> <li>1. Completion of a combat order. Training in setting combat tasks for subordinates.</li> <li>2. Content of the reconnaissance.</li> <li>3. Preparation of a working map, devices for mapping the situation for work in the field. Preparation of equipment.</li> </ol> <p><b>Lesson 8. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Phase 5, 7.</b></p> <ol style="list-style-type: none"> <li>1. Conducting a reconnaissance.</li> <li>2. Issuance of a combat order.</li> </ol>
30	Tactical Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the task "Preparation of a mechanised platoon for defence in the absence of a collision with the enemy". Stage 4, 8.</p> <ol style="list-style-type: none"> <li>1. Training in setting combat tasks for subordinates on the ground (on a terrain model).</li> <li>2. Content of the organisation of management, interaction and comprehensive support on the terrain layout.</li> <li>3. Development of call sign forms for officials, tables of control and interaction signals.</li> </ol> <p><b>Lesson 9. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Phase 4, 8.</b></p> <ol style="list-style-type: none"> <li>1. Prepare the terrain layout.</li> <li>2. Organisation of management, interaction and comprehensive support on the terrain layout.</li> </ol>

31	Tactical Drill Exercise	6	4	2	<p><i>Independent work:</i> Preparation for the TPE "Preparation of a mechanised platoon for defence in the absence of a collision with the enemy". Stage 4, 8.</p> <p>1. Study of the conditions for the implementation of tactical training standards in a platoon (squad) in defensive combat.</p> <p>2. Preparation of training sites and training leaders at training sites.</p> <p><b>Lesson 10. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Phase 4, 8.</b></p> <p>1. Unit preparation and movement. Checking readiness. Fulfilment of tactical training standards as part of a platoon (squad).</p>
32	Tactical Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the task "Management of actions of a mechanized platoon in the course of defensive combat".</p> <p>1. Refine the working map.</p> <p>2. Prepare a table of call signs, a table of control and interaction signals.</p> <p><b>Lesson 11. Controlling the actions of a mechanised platoon in defensive combat.</b></p> <p>1. Platoon management in defensive combat: destruction of enemy intelligence; inflicting damage on the advancing enemy; fighting an attacking enemy; Destruction of the enemy trying to bypass or break into the platoon stronghold.</p> <p>2. Fighting in the trenches, participating in a counterattack.</p>
33	Tactical Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the TOR "Management of actions of a mechanised platoon during a defensive battle at night".</p> <p>1. Light support for defensive combat at night. Developing guidelines for preparing a platoon for night operations. Refinement of the working map on light support.</p> <p>2. Revision of the table of control signals and interaction on lighting issues</p> <p><b>Lesson 12. Controlling the actions of a mechanised platoon in defensive combat at night.</b></p> <p>1. Transition to night operations. Preparing units for defensive combat at night.</p> <p>2. Platoon management during a defensive battle at night: - destruction of enemy reconnaissance; - defeat of the advancing enemy; - fighting with the attacking enemy; - destruction of the enemy trying to bypass or break into the platoon stronghold.</p>
<b>Total for the topic</b>		<b>42</b>	<b>28</b>	<b>14</b>	

**Topic 5. Tactics of a mechanised platoon in an offensive battle.**

34	Lecture	3	2	1	<p><b>Lesson 1: Mechanised platoon attack.</b></p> <ol style="list-style-type: none"> <li>1. Place and role of a mechanised platoon in an offensive battle.</li> <li>2. Tasks of a mechanised platoon in an offensive battle, their content.</li> <li>3. Combat order, system of fire of a mechanized platoon in offensive combat.</li> <li>4. Conducting offensive combat.</li> </ol> <p><i>Independent work.</i> Advance of a mechanised platoon.</p> <ol style="list-style-type: none"> <li>1. Place and role of the mechanised platoon in an offensive battle. Tasks of a mechanised platoon in an offensive battle.</li> <li>2. Study the experience of using mechanised units in offensive combat during the Russian-Ukrainian war.</li> <li>3) Rehearse the scheme: "Actions of a mechanised platoon in an offensive battle".</li> </ol>
35	Group Session	4	2	2	<p><b>Lesson 2: Preparing and conducting offensive combat.</b></p> <ol style="list-style-type: none"> <li>1. Features of the platoon commander's work in planning an offensive battle.</li> <li>2. Peculiarities of managing platoon actions in offensive combat.</li> </ol> <p><i>Independent work:</i> Preparing and conducting offensive combat.</p> <ol style="list-style-type: none"> <li>1. Develop the following scheme: "Areas and boundaries to be assigned in an offensive with a deep advance".</li> <li>2. Rehearse the following scheme: "The order of regrouping, replacement for taking the initial position in the offensive from the position of direct contact with the enemy".</li> <li>3. Preparation of abstracts and reports for the seminar.</li> </ol> <p><i>Independent work:</i> Preparation for the seminar. Preparation and conduct of offensive combat in special conditions.</p> <ol style="list-style-type: none"> <li>1. Definition (purpose) of an offensive battle. The place of the mechanised platoon in an offensive battle. Sequential execution of offensive combat tasks.</li> <li>2. Preparation and conduct of offensive combat of mechanised units based on the experience of the Russian-Ukrainian war.</li> <li>3. Preparation and conduct of offensive combat of mechanised units in special conditions.</li> </ol>

36	Seminar	2	2		<p><b>Lesson 3: Preparing and conducting offensive combat in special conditions.</b></p> <ol style="list-style-type: none"> <li>1. Definition (purpose) of an offensive battle. The place of the mechanised platoon in an offensive battle. Sequential execution of offensive combat tasks.</li> <li>2. Preparation and conduct of offensive combat of mechanised units based on the experience of the Russian-Ukrainian war.</li> <li>3. Preparation and conduct of offensive combat of mechanised units in special conditions.</li> </ol>
<b>A set of group exercises on the topic: “Mechanized platoon attack with advance from depth”.</b>					
37	Group exercise	3	2	1	<p><i>Independent work:</i> Preparation of a mechanised platoon for an offensive with a move from depth. Stage 1, 2.</p> <ol style="list-style-type: none"> <li>1. Study of the tactical task. Preparation of a working map, drawing the initial situation.</li> <li>2. The content of the platoon leader's work in understanding the task, calculating time, and assessing the situation.</li> <li>3. Contents of the paragraphs of the preliminary combat order.</li> </ol> <p><b>Lesson 4. Preparation of a mechanised platoon for an advance from depth. Phase 1, 2.</b></p> <ol style="list-style-type: none"> <li>1. Understand the task at hand.</li> <li>2. Calculating the time. Assessment of the situation.</li> <li>3. Development of the first preliminary combat order.</li> <li>4. Communicating the first preliminary combat order to subordinates.</li> </ol>
38	Group exercise	3	2	1	<p><i>Independent work:</i> Preparation of a mechanised platoon for an attack from depth. Stage 3: "Development of a preliminary plan".</p> <ol style="list-style-type: none"> <li>1. Record the results of task awareness on the platoon commander's working card. Finalisation of the time calculation, preliminary combat order.</li> <li>2. Training in the delivery of the first preliminary combat order (PCO 1).</li> </ol> <p><b>Lesson 5. Preparation of a mechanised platoon for an attack from depth. Stage 3: "Development of a preliminary plan".</b></p> <ol style="list-style-type: none"> <li>1. Analysis of the task.</li> <li>2. Developing options for action.</li> </ol>

39	Group exercise	3	2	1	<p><i>Independent work:</i> Preparation of a mechanised platoon for an offensive with a move from depth. Stage 3: Development of a preliminary plan.</p> <ol style="list-style-type: none"> <li>Analysing the options for action. Comparison and selection of the final course of action</li> <li>Development of the battle plan. Preparation of a working map for the report of the plan.</li> </ol> <p><b>Lesson 6. Preparing a mechanised platoon for an advance from depth. Stage 3: "Developing a preliminary plan"</b></p> <ol style="list-style-type: none"> <li>Report on the battle plan.</li> <li>Practice the second preliminary combat order.</li> </ol>
40	Group exercise	3	2	1	<p><i>Independent work:</i> Preparation of a mechanised platoon for an attack from depth. Stage 6: "Completion of battle planning"</p> <ol style="list-style-type: none"> <li>Formulation of combat missions.</li> <li>Details of management and interaction issues.</li> <li>Detailing the issues of comprehensive support for actions.</li> </ol> <p><b>Lesson 7. Preparation of a mechanised platoon for an advance from depth. Stage 7: "Issuing a combat order".</b></p> <ol style="list-style-type: none"> <li>Issuing a combat order.</li> <li>Setting combat tasks for subordinates.</li> </ol>
<b>FIELD ACCESS</b>					
41	Tactical Exercise	4	2	2	<p><i>Independent work:</i> Preparation for the task "Preparation of a mechanised platoon for an offensive with a move from depth". Stage 5, 7.</p> <ol style="list-style-type: none"> <li>Completion of a combat order. Training in setting combat tasks for subordinates.</li> <li>Content of the reconnaissance.</li> <li>Preparation of a working map, devices for mapping the situation for work in the field. Preparation of equipment.</li> </ol> <p><b>Lesson 8. Preparation of a mechanised platoon for an advance from depth. Phase 5, 7.</b></p> <ol style="list-style-type: none"> <li>Conducting a reconnaissance.</li> <li>Issuance of a combat order.</li> </ol>

42	Tactical Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the task "Preparation of a mechanised platoon for an offensive with a deep advance". Stage 4, 8.</p> <ol style="list-style-type: none"> <li>1. Training in setting combat tasks for subordinates on the ground (on a terrain model).</li> <li>2. Content of the organisation of management, interaction and comprehensive support on the terrain layout.</li> <li>3. Development of call sign forms for officials, tables of control and interaction signals.</li> </ol> <p><b>Lesson 9. Preparation of a mechanised platoon for an advance from depth. Phase 4, 8.</b></p> <ol style="list-style-type: none"> <li>1. Prepare the terrain layout.</li> <li>2. Organisation of management, interaction and comprehensive support on the terrain layout.</li> </ol>
43	Tactical Drill Exercise	5	2	3	<p><i>Independent work:</i> Preparation for the TPE "Preparation of a Mechanised Platoon for an Advance from Depth". Phase 4, 8.</p> <ol style="list-style-type: none"> <li>1. Study of the conditions for the implementation of tactical training standards in a platoon (squad) in an offensive battle.</li> <li>2. Preparation of training sites and training leaders at training sites.</li> </ol> <p><b>Lesson 10. Preparation of a mechanised platoon for an advance from depth. Stage 4.8.</b></p> <ol style="list-style-type: none"> <li>1. Unit preparation and movement. Checking readiness. Fulfilment of tactical training standards as part of a platoon (squad).</li> </ol> <p><i>Independent work:</i> Preparation for the task "Management of actions of a mechanised platoon during an offensive battle".</p> <ol style="list-style-type: none"> <li>1. Refine the working map.</li> <li>2. Prepare a table of call signs, a table of control and interaction signals.</li> </ol>
44	Tactical Exercise	2	2		<p><b>Lesson 11. Controlling the actions of a mechanised platoon in an offensive battle.</b></p> <ol style="list-style-type: none"> <li>1. Platoon management during offensive combat: <ul style="list-style-type: none"> <li>platoon management during the advance from the depths;</li> <li>platoon management during the attack on the front line of enemy defence and the capture of the object of attack. Fighting in trenches;</li> <li>platoon management during combat in the depths of enemy defence.</li> </ul> </li> <li>2. Managing a platoon in pursuit of the enemy. Securing a favourable position.</li> </ol>

45	Tactical Exercise	3	2	1	<p><i>Independent work:</i> Preparation for the TK "Controlling the actions of a mechanised platoon during an offensive battle at night".</p> <ol style="list-style-type: none"> <li>1. Light support for offensive combat at night. Developing guidelines for preparing a platoon for night operations. Finalising the working map on lighting support.</li> <li>2. Revision of the table of control signals and interaction on lighting issues</li> </ol> <p>Lesson 12. Managing the actions of a mechanised platoon in an offensive battle at night.</p> <ol style="list-style-type: none"> <li>1. Transition to night operations. Preparing units for offensive combat at night.</li> <li>2. Platoon management during offensive combat at night: platoon management during the advance from the depths; platoon management during the attack on the front line of enemy defence and the capture of the object of attack. Combat in trenches; platoon management during combat in the depths of enemy defence.</li> </ol>
46		1		1	<p><i>Independent work:</i> Completion of preparation for the final control - EXAM.</p> <ol style="list-style-type: none"> <li>1. General provisions (fundamentals) of offensive combat, defensive combat, movement of units, positioning in place, participation in stabilisation actions of troops, comprehensive support of combat (actions).</li> <li>2. The sequence and content of the work of the mechanised platoon (squad) commander in preparing for combat in accordance with the 8 stages of TLP (Troop Leading Procedures). Management in the course of combat (actions)</li> <li>3. Organisational and staffing structure, technical specifications of weapons and military equipment of the units of the Land Forces of the Armed Forces of Ukraine (MB, MR, Mv, MvD, RVP, Gv, Kulv, Ptv, Zrv, Tv).</li> <li>4. Preparation of combat documents, basic tactical signs, and abbreviations.</li> </ol>
<b>Total for the topic</b>		<b>38</b>	<b>24</b>	<b>14</b>	
<b>Control measures</b>		<b>6</b>	<b>6</b>		<b>Examination</b>
<b>Total for the educational component</b>		<b>150</b>	<b>100</b>	<b>50</b>	

#### 4.4. EP 1.4 "Fundamentals of Military Management (including the Troop Leading Procedures) TROOP LEADING PROCEDURES)"

##### **The general objective of the educational program component:**

Providing primary knowledge and skills of a military management officer capable of professional military management of a unit, timely making informed management decisions in the organisation of combat, including NATO standards.

As a result of studying the discipline, students (trainees) should:

*to know:*

- basics and principles of the theory of command and control;
- the procedure for planning, organising and controlling the performance of official tasks;
- the content of assessing the situation, developing a plan, making a decision, setting tasks for subordinates, organising management and interaction;
- the content and procedure of comprehensive support measures;
- methodology and procedure for developing textual and graphic combat documents;
- methods of work of command and control bodies in organising and planning combat operations, their features, disadvantages and advantages;
- a methodology for assessing the combat capabilities of a mechanised platoon;
- content of the management activities of the mechanised platoon commander according to Troop Leading Procedures (TLP);
- the procedure for receiving a combat task and communicating a preliminary combat order under TLP procedures;

*be able to:*

- to carry out measures to organise combat;
- organise comprehensive support measures;
- assess the situation, develop a plan, make decisions, and set tasks for subordinates;
- develop text and graphic combat documents;
- choose the means of implementing the decision-making process;
- to organise the work of the command and control body in planning combat operations using various methods;
- assess the combat capabilities of a mechanised platoon;
- to set combat tasks and check readiness for their execution according to TLP procedures.

### **Organisational and methodological guidelines**

The discipline is designed to develop in servicemen organisational skills in managing units, professional skills in preparing and organising combat (combat use), developing a staff culture, the ability to assess the situation efficiently and quickly, develop proposals and conclusions, and the ability to report them briefly and clearly.

It is mandatory to systematically consolidate the knowledge and skills acquired in the course of studying the discipline during practical and group classes.

In the course of studying the discipline, to cultivate strong will, confidence in conducting measures for the organisation of combat operations (combat use), high military discipline, patriotism, a sense of personal responsibility for the organisation of the ability, including making responsible decisions, perseverance and determination to implement them.

The educational material provided for studying during independent work is submitted for final control together with the educational material that is processed in class under the guidance of a scientific and pedagogical employee.

During all forms of training, individual, group and frontal methods of knowledge control and active learning methods are used. The current control is carried out in the form of an oral survey or written express control during the training sessions.

For all types of classes, we use classrooms, computer labs, multimedia equipment, visual aids, and writing materials.

### **Information and methodological support**

1. Statutes of the Armed Forces of Ukraine.
  2. Fundamentals of Military Management. Part I. The work of the unit commander on the organisation of combat: a textbook / P. Tkachuk, I. Repin, V. Ozharevskyi. Lviv: NASV, 2017.
  3. Fundamentals of military management. Part II. Euro-Atlantic procedures and standards of unit management: a textbook / I. Repin, V. Ozharevskyi. Lviv: NASV, 2018.
  4. Fundamentals of Military Command Theory and NATO Staff Procedures: a textbook / V. Varakuta, I. Rolin, D. Dyachenko - Kharkiv: VITV NTU "KHPI", 2019.
- Fundamentals of management according to NATO standards: a textbook / I. Rolin, D. Dyachenko, V. Marushchenko - Kharkiv: VITV NTU "KHPI", 2021.

### **Titles of topics and distribution of study time by type of class**

№ s/n	Types of training classes, control events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Fundamentals of command and control and the process of preparing for combat.</b>					
1	Lecture	2	2		<b>Lesson 1: Fundamentals of the theory of troop management.</b> 1. Subject and content of the discipline. 2. Definition, purpose, tasks and functions of force management. 3. Troop management system and its elements.
2	Lecture	2	2		<b>Lesson 2. Laws and principles of troop management.</b> 1. The laws of command and control of troops and their essence. 2. Principles of troop management and their content. 3. Requirements for troop management.
3	Seminar	2	2		<b>Lesson 3. The essence and content of troop management.</b> 1. The content of laws on the management of troops. 2. Content and essence of the principles of command and control. 3. Tasks and functions of troop management.
4	Lecture	2	2		<b>Lesson 4. The content of the commander's management activity.</b> 1. Measures to organise combat operations (combat use). 2. The content of combat mission awareness and time calculation. 3. Content and procedure for issuing preliminary orders. 4. The essence of the situation assessment.

5	Group Session	2	2	<p><b>Lesson 5. Procedure for the implementation of measures to organise combat operations (combat use).</b></p> <ol style="list-style-type: none"> <li>1. Content and procedure for assessing the enemy.</li> <li>2. The content and procedure for evaluating your unit (troops).</li> <li>3. The content of the neighbourhood assessment.</li> </ol>
6	Lecture	2	2	<p><b>Lesson 6. Decision-making is the basis of command and control.</b></p> <ol style="list-style-type: none"> <li>1. The decision of the commander (chief), its essence and content. Requirements for the commander's decision.</li> <li>2. The essence and content of combat planning (combat employment).</li> <li>3. Reconnaissance by the unit commander.</li> </ol>
7	Group Session	1	1	<p><b>Lesson 7. The content of the commander's decision-making work.</b></p> <ol style="list-style-type: none"> <li>1. Features of decision-making in combat conditions. Factors influencing decision-making.</li> <li>2. Methods that facilitate independent combat decision-making.</li> </ol>
8	Lecture	2	2	<p><b>Lesson 8. The procedure for setting tasks for subordinates. Organisation of interaction and preparation of units for the implementation of tasks.</b></p> <ol style="list-style-type: none"> <li>1. The procedure for assigning combat tasks to subordinates. Combat order, combat order, their structure and content.</li> <li>2. The essence, content, forms, types and procedure for organising interaction.</li> <li>3. Preparing units for the execution of tasks.</li> </ol>
9	Group Session	1	1	<p><b>Lesson 9. The procedure for setting combat tasks and preparing units for their execution.</b></p> <ol style="list-style-type: none"> <li>1. The procedure for drawing up a combat order, its structure and content.</li> <li>2. Procedure for organising interaction and combat support.</li> <li>3. Procedure for organising management and communication.</li> </ol>
<b>Total for the topic</b>		<b>16</b>	<b>16</b>	
<b>Topic 2. Combat text and graphic documents.</b>				
10	Lecture	2	2	<p><b>Lesson 1: The procedure for developing textual combat documents.</b></p> <ol style="list-style-type: none"> <li>1. Combat documents, their classification and requirements.</li> <li>2. Requirements for the design of textual combat documents.</li> </ol>
11	Practical Session	2	2	<p><b>Lesson 2. The work of the platoon commander in issuing a combat order.</b></p> <ol style="list-style-type: none"> <li>1. Collecting and forming the initial data for the preparation of a combat order.</li> <li>2. Practical execution of a combat order.</li> </ol>

12	Lecture	2	2		<b>Lesson 3: The procedure for developing graphic combat documents.</b> 1. Features of the design of graphic combat documents. 2. Methods of preparation of graphic planning documents.
13	Practical Session	5	4	1	<b>Lesson 4. Preparation and execution of graphic combat documents for work.</b> 1. Glue and fold the map. 2. Add the details to the card. <i>Independent work:</i> 1. Raising the topographic base of the map. 2. Prepare and design the cover page.
14	Lecture	3	2	1	<b>Lesson 5. Military symbols and signs.</b> 1. Procedure for the construction of military symbols. 2. Detailed requirements for the application of military symbols, technical specification of symbols. <i>Independent work:</i> 1. Military symbols for weapons and military equipment. 2. Military symbols for command and control of troops. 3. Military symbols of military formations of branches of the armed forces and services.
15	Practical Session	4	4		<b>Lesson 6. Use of military symbols for combat documents.</b> 1. Application of military symbols on graphic combat documents. 2. Marking of troop control measures.
<b>Total for the topic</b>		<b>18</b>	<b>16</b>	<b>2</b>	
<b>Topic 3. Management activities of a mechanised platoon commander.</b>					
16	Lecture	2	2		<b>Lesson 1: Combat capabilities of a mechanised platoon.</b> 1. The concept of combat capabilities and their components. 2. The concept of firepower. 3. The concept of impact force. 4. The concept of manoeuvrability.
17	Practical Session	2	2		<b>Lesson 2: Assessment of the combat capabilities of a mechanised platoon.</b> 1. Preparation of initial data for calculating the combat capabilities of a mechanised platoon. 2. Calculate the firepower of a mechanised unit.
18	Lecture	2	2		<b>Lesson 3. Types of comprehensive coverage and their content.</b>

				<ol style="list-style-type: none"> <li>1. The concept of comprehensive coverage and its components.</li> <li>2. General characteristics of medical care.</li> <li>3. General characteristics of logistics support.</li> <li>4. Classification of equipment according to NATO standards.</li> </ol>
19	Group Session	2	2	<p><b>Lesson 4. Organisation of support for combat operations.</b></p> <ol style="list-style-type: none"> <li>1. Organisation of intelligence.</li> <li>2. Organisation of CBRN protection.</li> <li>3. Organisation of engineering support.</li> <li>4. Organisation of tactical camouflage.</li> <li>5. Organisation of security.</li> </ol>
<b>Total for the topic</b>		<b>8</b>	<b>8</b>	
<b>Topic 4. The work of a mechanised platoon commander in preparing for combat according to NATO standards.</b>				
20	Lecture	2	2	<p><b>Lesson 1: The content of the management activities of a mechanised platoon commander according to TLP procedures.</b></p> <ol style="list-style-type: none"> <li>1. Stages of the battle preparation process.</li> <li>2. Components of the stages of the battle preparation process.</li> </ol>
21	Group Session	2	2	<p><b>Lesson 2: Receiving a combat mission and communicating a preliminary combat order according to TLP procedures.</b></p> <ol style="list-style-type: none"> <li>1. Receiving a combat task (the first stage of the combat preparation process).</li> <li>2. Communicating the preliminary combat order (the second stage of the combat preparation process).</li> </ol>
22	Lecture	4	4	<p><b>Lesson 3: The procedure for developing a preliminary battle plan according to the TLP procedure.</b></p> <ol style="list-style-type: none"> <li>1. Content and procedure of work at the task analysis stage.</li> <li>2. Content and procedure of work at the stage of developing action options.</li> </ol>
23	Group Session	2	2	<p><b>Lesson 4. Developing a preliminary plan and preparing the unit for relocation under TLP procedures.</b></p> <ol style="list-style-type: none"> <li>1. The content and procedure of the process of comparing and selecting the final option.</li> <li>2. The content and procedure of work in the course of preparing the unit for relocation.</li> </ol>
24	Lecture	2	2	<p><b>Lesson 5. The procedure for conducting reconnaissance and completing battle planning according to TLP procedures.</b></p> <ol style="list-style-type: none"> <li>1. Content and procedure of work during reconnaissance.</li> <li>2. Content and procedure for completing battle planning.</li> </ol>

25	Lecture	2	2	<p><b>Lesson 6. The procedure for setting combat tasks and checking readiness to perform them according to TLP procedures.</b></p> <p>1. The procedure for drawing up a combat order, its structure and content. 2. Measures to verify readiness.</p>
26	Group Session	2	2	<p><b>Lesson 7. The work of the commander during combat (operations) according to NATO standards.</b></p> <p>1. Management of a unit during combat (operations). 2. Fire control of the unit. 3. Analysis of the battle.</p>
<b>Total for the topic</b>		<b>16</b>	<b>16</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>	<b>Credit</b>
<b>Total for the educational component</b>		<b>60</b>	<b>58</b>	<b>2</b>

#### 4.5. EP 1.5 "Management of day-to-day activities of the units"

##### **General objective of the educational program component:**

Training of an officer who is able to maintain the unit in constant readiness to perform assigned tasks, organise and conduct combat training in the unit according to training standards, use regulatory documents and organise safe conditions of military service in the unit, organise and conduct company economy.

As a result of studying the discipline, students (trainees) should:

*to know:*

the content of measures to maintain the unit in combat readiness;

the procedure for organising daily activities in the platoon (company);

the procedure for organising personnel records in the unit;

the procedure for keeping records of material assets in the unit;

the procedure for accepting and resigning the position of unit commander;

basic forms and methods of combat training in the company;

Methods of conducting classes according to training standards;

requirements for the safety of military activities during combat training, the use of weapons and military equipment, the performance of economic activities, and compliance with fire and environmental safety;

*be able to:*

develop and maintain personal documents on combat readiness;

organise and conduct combat training in the unit, and keep records of it;

conduct combat training classes in accordance with training standards;

Develop planning and reporting documents for combat training;

organise and support the day-to-day activities of the unit;

organise and manage company housekeeping;

work with restricted documents in a variety of environments;

Organise and keep records of material assets in the unit;

document the acceptance and surrender of the position of unit commander;

organise security measures in the unit during combat training, use of weapons and military equipment, household work, fire and environmental safety.

### **Organisational and methodological guidelines**

The subject matter of the discipline is the daily activities of the unit and the practice of using military units.

Group and practical exercises should be conducted to acquire practical skills in managing military units to ensure the fulfilment of daily tasks, maintaining units in constant readiness to perform assigned tasks, using examples from the experience of the Russian-Ukrainian war. In practical classes, it is advisable to practice using tasks that require logical thinking and contribute to the development of cadets' (students') creative abilities.

Classes are held in specialised classrooms, training complexes, training grounds and campuses, training fields, which must be equipped with the necessary stands, posters, simulators, computer equipment, etc. The educational material provided for studying during independent work is submitted for final control together with the educational material that is processed in the classroom under the guidance of a scientific and pedagogical employee.

During all forms of training, individual, group and frontal methods of knowledge control and active learning methods are used. The current control is carried out in the form of an oral survey or written express control during the training sessions.

### **Information and methodological support**

1. Law of Ukraine "On Military Duty and Military Service" of 25.03.1992 No. 2232-XII (as amended).
2. Law of Ukraine "On State Secrets" of 21.01.94 No. 3855-XII (as amended).
3. Law of Ukraine "On the Armed Forces of Ukraine" of 06.12.1991 No. 1934-XII (as amended).
4. Law of Ukraine "On mobilisation training and mobilisation" of . 21.10.1993 No. 3543-XII (as amended).
5. Law of Ukraine "On Defence of Ukraine" of 06.12.1991 No. 1932-XII (as amended).
6. Statutes of the Armed Forces of Ukraine.

## Titles of topics and distribution of training time by type of training session

№ s/n	Types of training classes, control events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Organisation of security of military service in everyday life</b>					
1	Lecture	2	2		<b>Lesson 1: Theoretical foundations of military security</b> 1. Legal basis for the security of military activities. 2. Safety in the operation and maintenance of weapons and military equipment. 3. Investigation of an accident in a military unit.
<b>Total for the topic</b>		<b>2</b>	<b>2</b>		
<b>Topic 2. Health and safety and the basics of occupational health and safety</b>					
2	Lecture	2	2		<b>Lesson 1: Classification of hazards by source of origin</b> 1. Natural, social, and man-made hazards and their impact factors. 2. Organisation of labour protection in a military unit. 3. Labour protection instructions and their purpose.
<b>Total for the topic</b>		<b>2</b>	<b>2</b>		
<b>Topic 3: Fundamentals of military administrative activity</b>					
3	Lecture	2	2		<b>Lesson 1: Legislation of Ukraine on the protection of state secrets</b> 1. Information with restricted access. State secrets. 2. General provisions on the organisation of classified work in a military unit (subdivision). 3. General Provisions on the Organisation of Official Records Management...

<b>Total for the topic</b>		<b>2</b>	<b>2</b>		
<b>Topic 4. Service activities of the unit commander</b>					
4	Lecture	2	2	-	<b>Lesson 1: Activities of the unit commander in personnel management</b> 1. Organisation of personnel records in the unit... 2. Procedure for appointment and dismissal of personnel from the positions of non-commissioned officers of the unit. 3. The procedure for certification by the unit commander of subordinate personnel.
<b>Total for the topic</b>		<b>2</b>	<b>2</b>		
<b>Topic 5. Organisation of service of troops in the unit</b>					
5	Lecture	2	2		<b>Lesson 1: Fundamentals of organising military service in a unit</b> 1. Content, essence and tasks of military service. 2. Organisation of the daily watch service in the unit. 3. Organisation of the guard service in the unit
6	Group Session	2	2		<b>Lesson 2: Organisation of accounting and storage of weapons and ammunition</b> 1. Requirements of the guiding documents on the accounting and storage of weapons and ammunition in the unit (guard). 2. Responsibilities of officials to ensure the accounting and storage of weapons and ammunition in the unit.
<b>Total for the topic</b>		<b>4</b>	<b>4</b>		
<b>Topic 6: Fundamentals of combat training in a unit</b>					
7	Lecture	2	2		<b>Lesson 1: Fundamentals of combat training organisation</b> 1. Purpose, tasks and content of training of the Armed Forces of Ukraine. 2. General provisions for the organisation of combat training. 3. Requirements of regulatory documents on combat training planning.
8	Group Session	2	2		<b>Lesson 2: Organising individual and collective training</b> 1. Organisation of individual training. The system of individual training. 2. Forms of collective training. 3. Platoon combat training logbook...
9	Practical Session	2	2		<b>Lesson 3: Planning combat training in a unit</b> 1. Develop and draw up a training schedule for the unit (separate platoon).

				2. Drawing up a lesson plan (outline, operational map).
10	Seminar	2	2	<b>Lesson 4. High-quality organisation of combat training and service of troops in a unit is the basis for maintaining combat readiness</b> 1. Discuss the activities of the unit commander in organising the service of troops in the unit. 2. Discuss the activities of the unit commander in organising combat training in the unit.
<b>Total for the topic</b>		<b>8</b>	<b>8</b>	
<b>Topic 7. Fundamentals of combat and mobilisation readiness</b>				
11	Group Session	2	2	<b>Lesson 1: Military mobilisation and combat readiness of units</b> 1. Fundamentals of military mobilisation. 2. Combat readiness of units. 3. Manning units with mobilisation resources.
<b>Total for the topic</b>		<b>2</b>	<b>2</b>	
<b>Topic 8: Organization and maintenance of military economy</b>				
12	Lecture	2	2	<b>Lesson 1: Organisation and management of company facilities</b> 1. Fundamentals of company management. 2. The work of the commander of a unit for military economy.
13	Practical Session	2	2	<b>Lesson 2: Acceptance and surrender of cases and position by the unit commander</b> 1. General regulations on the reception and delivery of cases and the position of platoon leader. 2. Preparation of documents for acceptance of cases and the position of platoon commander.
14	Practical Session	2	2	<b>Lesson 3: Accounting for material assets in a unit</b> 1. Preparation of accounting documents for the receipt and delivery of material assets of the unit. 2. Prepare documents for writing off material assets.
<b>Total for the topic</b>		<b>6</b>	<b>6</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>	<b>Credit</b>
<b>Total for the educational component</b>		<b>30</b>	<b>30</b>	

#### **4.6. GP 1.6 "Radiation, chemical, biological protection of units (including ecology)"**

##### **The general objective of the educational program component:**

Training of a serviceman capable of implementing radiation, chemical, biological (RBC) protection measures aimed at protecting units from the use of weapons of mass destruction and the consequences of the destruction of high-risk objects in various conditions, and developing their psychological stability when acting in difficult conditions of modern combat.

As a result of studying the discipline, students (trainees) should:

*to know:*

basic information about weapons of mass destruction;  
methods and ways of determining CBRN contamination;  
maximum permissible levels of ionising radiation, radiation safety standards;  
classification, pathogenic properties of biological agents, and methods of their combat use;  
the procedure for using protective equipment for its intended purpose, peculiarities of preparation and use of individual and collective protective equipment during the performance of tasks, depending on the combat situation;  
service equipment of the CBRN defence forces;

*be able to:*

organise measures to protect against weapons of mass destruction;  
use CBRN contamination detection equipment and personal protective equipment against weapons of mass destruction;  
determine the maximum permissible levels of ionising radiation in accordance with radiation safety standards;  
operate in conditions of biological contamination;  
use the service equipment of the CBRN troops.

##### **Organisational and methodological guidelines**

The study of the discipline is aimed at mastering the basic provisions of CBRN protection and acquiring skills in the use of CBRN protection means.

To achieve the overall learning objective, the following forms of learning are provided:

frontal form of training, when all cadets (students) perform the same task at the same time under the supervision of a teacher;

group form of training, when cadets (students) are combined into groups (departments) depending on the staffing structure of the unit, which work in parallel;

individual form of training, when cadets (students) complete tasks sequentially, one by one.

Depending on the level of knowledge or skill required, the following methods are used:

explanatory and illustrative method, in which the teacher presents the ready-made information by various means, and the cadets (students) perceive, understand and fix it in their memory;

a reproductive method, the main feature of which is the proof and repetition of a method of activity, to be used in practical classes.

To develop the creative abilities of cadets (students), problem-based learning methods are used during practical classes.

The following control methods are used in teaching the discipline:

entrance control;

current control;

final control.

The number of control measures, forms of their implementation, and frequency are communicated to cadets (students) at the beginning of the discipline.

Classes are held in specialised classrooms, training complexes, training grounds and campuses, training fields, which must be equipped with the necessary stands, posters, simulators, computer equipment, etc. The educational material provided for studying during independent work is submitted for final control together with the educational material that is processed in the classroom under the guidance of a scientific and pedagogical employee.

### **Information and methodological support**

1. Doctrine on Chemical, Biological, Radiological and Nuclear Protection of Troops (Forces): Order of the General Staff of the Armed Forces of Ukraine of 19.10.2020 No. 346.

2. Military standard 01.107.004-2022 (01) "Environmental safety management system for troops (forces) during military operations". Enacted by the order of the Head of the Department of Standardisation, Codification and Cataloguing

### Titles of topics and distribution of study time by type of class

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Nuclear, chemical, biological and incendiary weapons. Weapons based on new physical principles.</b>					
1	Lecture	2	2		<p><b>Lesson 1: General characteristics of weapons of mass destruction and high-risk facilities.</b></p> <p>1: The role and place of discipline in the training of military personnel, the procedure for passing discipline and reporting.</p> <p>2.. General characteristics of nuclear weapons. Damaging factors of a nuclear explosion and protection against them.</p> <p>3. General characteristics of chemical weapons. Protection of units from the effects of chemical weapons</p> <p>4. General characteristics of biological weapons. Protection of units from the effects of biological weapons.</p>
2	Group Session	2	2		<p><b>Lesson 2. Incendiary weapons.</b></p> <p>1. General characteristics of incendiary weapons and current views on their use.</p> <p>2. The damaging factors of incendiary weapons.</p> <p>3. Classification of incendiary substances and mixtures.</p> <p>4. Protection of personnel, weapons, military equipment and fortifications from the effects of incendiary weapons.</p>

<b>Total for the topic</b>	<b>4</b>	<b>4</b>		
<b>Topic 2. Fundamentals of radiation, chemical and biological protection of units</b>				
3	Lecture	3	2	1
<p><b>Lesson 1: Purpose, tasks and measures of radiation, chemical and biological protection of units.</b></p> <p>1. Content of tasks and measures of radiation, chemical, biological protection of units, forces and means for their implementation.</p> <p>2. The work of commanders and staffs in organising radiation, chemical and biological protection.</p> <p>3. Organisation and conduct of radiation, chemical and biological intelligence in the unit.</p> <p>4. Conventional symbols used for graphical representation of the CBR situation and actions of CBR protection units.</p> <p><i>Independent work:</i> Purpose, tasks and measures of radiation, chemical, biological protection of units.</p> <p>1. Procedure for organising radiation, chemical and biological protection of units.</p> <p>2. Procedure for radiation, chemical and biological protection of units.</p> <p>3. Conventional symbols used for graphical representation of the CBR situation and actions of CBR protection units.</p>				
4	Practical Session	2	2	
<p><b>Lesson 2 Using portable technical intelligence equipment.</b></p> <p>1. Work with chemical intelligence and control devices.</p> <p>2. Work with radiation detection and monitoring devices.</p> <p><i>Independent work:</i> Use of portable technical intelligence equipment.</p> <p>1. Sequence of actions in preparation for work and checking the operability of radiation detection devices.</p> <p>2. Sequence of actions in preparation for work and checking the performance of chemical reconnaissance devices.</p>				

5	Practical Session	2	2		<p><b>Lesson 3: Practical use of personal protective equipment. Basics of special treatment.</b></p> <ol style="list-style-type: none"> <li>1. Radiation, chemical, biological contamination warning signals.</li> <li>2. Procedure for the implementation and evaluation of standard No. 1.</li> <li>3. Procedure for fulfilling and evaluating the standard No. 4a; 4b.</li> <li>4. Procedure for the implementation and evaluation of the standard No. 6; 7; 8.</li> <li>5. Individual special treatment agents and the procedure for their use</li> <li>6. Purpose and structure of special processing kits and their preparation for use in various processing methods.</li> </ol>
6	Practical Session	2	2		<p><b>Lesson 4. Theoretical basis of aerosols application. Application of technical means of setting up aerosol curtains.</b></p> <ol style="list-style-type: none"> <li>1. General principles of aerosol camouflage.</li> <li>2. Technical means of general-purpose aerosol camouflage and their characteristics.</li> <li>3. The procedure for using hand-held smoke grenades.</li> <li>4. The procedure for using smoke bombs.</li> </ol>
<b>Total for the topic</b>		<b>9</b>	<b>8</b>	<b>1</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>15</b>	<b>14</b>	<b>1</b>	

#### 4.7. EP 1.7 "Military topography"

##### **The general objective of the educational program component:**

The purpose of teaching the discipline is to teach military personnel to use a topographic map as the main measuring and graphic document about the terrain, to draw up terrain diagrams, to navigate the terrain, to assess its tactical properties, to move by azimuths and by topographic map.

As a result of studying the discipline, students (trainees) should:

*to know:*

tactical properties of the terrain;

layout and nomenclature of topographic maps;

symbols for topographic maps;

methodology for determining the characteristics of the terrain;

methods for determining geographical, rectangular and polar coordinates of terrain objects;

methods for determining coordinates on topographic maps in the World Geodetic System WGS-84, Mercator Cartographic Projection (UTM), and the MGRS targeting system;

rules for determining directional angles and magnetic azimuths;

the procedure for measuring distances and areas on a topographic map;

the procedure for working with photographic documents;

the procedure for navigating unfamiliar terrain with and without a map;

the procedure for using navigation devices;

*be able to:*

assess the tactical properties of the terrain;

determine the nomenclature of adjacent sheets of topographic maps;

Read topographic maps;

Determine the mutual visibility between objects and the steepness of slopes;

build vertical terrain profiles;

determine the geographical, rectangular, and polar coordinates of terrain objects;

determine the coordinates on topographic maps in the WGS-84 global geodetic system, the Mercator Cartographic Projection (UTM), and the MGRS targeting system;

Measure distances, areas and angles on a topographic map;

perform measurements on a map, aerial image and on the ground;

navigate unfamiliar terrain with and without a map;

plan and move along a specific route.

### **Organisational and methodological guidelines**

The methodological basis for teaching the discipline is a mandatory and systematic reference to the experience of the Russian-Ukrainian war, taking into account the content of general military, tactical and military-specialist disciplines that cadets (students) will study; giving preference to practical training.

It is mandatory to systematically consolidate the knowledge and skills acquired in the course of studying the discipline during practical (field) classes by performing exercises to determine your location, map orientation, orientation on the ground using a map, measuring angles and distances on the map and terrain, etc.

The educational material provided for studying during independent work is submitted for final control together with the educational material that is processed in class under the guidance of a scientific and pedagogical employee.

To achieve the overall learning objective, the following forms of learning are provided:

frontal form of training, when all cadets (students) perform the same task at the same time under the supervision of a teacher;

group form of training, when cadets (students) are combined into groups (departments) depending on the staffing structure of the unit, which work in parallel;

individual form of training, when cadets (students) complete tasks sequentially, one by one.

Depending on the level of knowledge or skill required, the following methods are used:

explanatory and illustrative method, in which the teacher presents the ready-made information by various means, and the cadets (students) perceive, understand and fix it in their memory;

a reproductive method, the main feature of which is the proof and repetition of a method of activity, to be used in practical classes.

To develop the creative abilities of cadets (students), problem-based learning methods are used during practical classes.

Current control is carried out in the form of an oral survey or written express control during training sessions.

### **Information and methodological support**

1. Shmal S. Military topography. Kyiv: Editorial and Publishing Centre of the Armed Forces of Ukraine, 2018.
2. Instruction on the use of topographic, special, digital (electronic) maps in the Armed Forces of Ukraine. approved by the Order of the General Staff of the Armed Forces of Ukraine dated 31.12.2021 No. 422.
3. Methodological guide on the use of NATO topographic maps in the Armed Forces of Ukraine. Kyiv, 2017.
4. An album of samples of topographic, special maps and photographic documents about the area produced by the topographic service of the Armed Forces of Ukraine. Kyiv: Editorial and Publishing Centre of the Armed Forces of Ukraine, 2019.
5. Instructions for the use of the World Geodetic System WGS-84. Order of the Ministry of Defence of Ukraine dated 18.09.2023 No. 563.  
39 c.
6. Combat Statute of the Land Forces "Geospatial Support of the Land Forces of the Armed Forces of Ukraine" BP 3-30(11).01, Kyiv, 2020.

### Titles of topics and distribution of training time by type of training session

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1 Topographic maps.</b>					
1	Group Session	4	2	2	<p><b>Lesson 2 Topographic maps of the Armed Forces of Ukraine.</b></p> <ol style="list-style-type: none"> <li>1. Purpose, scale and characteristics of topographic maps.</li> <li>2. The essence of topographic mapping and nomenclature.</li> <li>3. Summary tables of topographic maps.</li> <li>4. Prepare a topographic map for work.</li> </ol> <p><i>Independent work:</i> Topographic maps of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> <li>1. Practice identifying adjacent sheets of topographic maps at different scales.</li> </ol>
2	Group Session	4	2	2	<p><b>Lesson 4. Study the terrain on a map.</b></p> <ol style="list-style-type: none"> <li>1. The essence of the relief image by horizontal lines.</li> <li>2. The height of the relief section.</li> <li>3. Determine the elevation and elevation of points on the map.</li> <li>4. 4. Determine the steepness of slopes from the map.</li> </ol> <p><i>Independent work:</i> Study the terrain on a map.</p> <ol style="list-style-type: none"> <li>1. Perform individual tasks to build a vertical profile of the terrain.</li> </ol>

3	Group Session	3	2	1	<p><b>Lesson 7. The system of geographical coordinates.</b></p> <ol style="list-style-type: none"> <li>1. The concept of a geographic coordinate system.</li> <li>2. Determine geographic coordinates from a topographic map.</li> <li>3. Plotting targets on a map using known geographic coordinates.</li> </ol> <p><i>Independent work:</i> Geographic coordinate system.</p> <ol style="list-style-type: none"> <li>1. Determine the location of the object (target) in the geographic coordinate system.</li> </ol>
4	Group Session	3	2	1	<p><b>Lesson 8. The system of flat rectangular coordinates.</b></p> <ol style="list-style-type: none"> <li>1. The essence of the plane rectangular coordinate system.</li> <li>2. Determining rectangular coordinates from a topographic map. Additional coordinate grid at the junction of neighbouring zones.</li> <li>3. Place targets on the map using rectangular coordinates.</li> </ol> <p><i>Independent work:</i> Flat rectangular coordinate system.</p> <ol style="list-style-type: none"> <li>1. Determine the location of an object (target) in a flat rectangular coordinate system.</li> <li>2. Determine the location of the object (target) in the polar and bipolar coordinate systems.</li> </ol>
5	Group Session	4	2	2	<p><b>Lesson 9. Azimuths and directional angles.</b></p> <ol style="list-style-type: none"> <li>1. Directional angle, true and magnetic azimuths. The procedure for determining the directional angles from the map.</li> <li>2. Direction correction. Switch from directional angles to azimuths and vice versa.</li> </ol> <p><i>Independent work:</i> Azimuths and directional angles.</p> <ol style="list-style-type: none"> <li>1. Determination of directional angles and azimuths. Calculate the directional correction.</li> <li>2. Training in the transition from directional angles to azimuths and vice versa.</li> </ol>
<b>Total for the topic</b>		<b>18</b>	<b>10</b>	<b>8</b>	
<b>Topic 2 Terrain as an element of the combat environment.</b>					
6	Group Session	2	2		<p><b>Lesson 2. Working with aerial images.</b></p> <ol style="list-style-type: none"> <li>1. Prepare the aerial image for work.</li> <li>2. Transfer targets from the aerial image to the map.</li> <li>3. Determine the rectangular coordinates of targets from an aerial image.</li> </ol>

7	Practical Session	5	4	1	<b>Lesson 3: Measuring and orienteering without and with a map.</b> 1. Orientation on the ground without a map. 2. Measure angles and determine distances on the ground. 3. Orientation on the map. Determining the point of standing. <i>Independent work:</i> Drawing a map of the area. 1. Conventional symbols used on terrain diagrams. 2. Drawing up a map of the area.
<b>Total for the topic</b>		<b>7</b>	<b>6</b>	<b>1</b>	
<b>Topographic maps of NATO countries.</b>					
8	Practical Session	3	2	1	<b>Lesson 1: Locating objects on NATO maps.</b> 1. Determine the geographical coordinates. 2. Determine the rectangular coordinates. 3. Features of using the Military Grid Reference System. <i>Independent work:</i> Determining the position of objects on NATO maps. 1. Determining the position of objects using the Military Grid Reference System with varying accuracy.
<b>Total for the topic</b>		<b>3</b>	<b>2</b>	<b>1</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>30</b>	<b>20</b>	<b>10</b>	

#### 4.8. PLO 1.8 "Engineering training"

##### **General objective of the educational program component:**

Training of a serviceman who is able to provide comprehensive engineering support to the unit, to practically perform the tasks of engineering support for the mobility of his troops (forces), engineering measures to restrict the mobility of enemy forces and means, engineering measures to increase the survivability and safety of the use of troops (forces) and objects, general engineering support for troops (forces).

As a result of studying the discipline, students (trainees) should:

*to know:*

demonstrate knowledge of the nature of engineering support tasks;

processes of comprehensive support of the unit (by types, branches of the Armed Forces of Ukraine, other military formations established in accordance with the laws of Ukraine) during combat use and daily activities;

*be able to:*

to organise the execution of tasks on engineering support for the mobility of their troops (forces);

to carry out engineering measures to restrict the mobility of enemy forces and assets;

carry out engineering measures to increase the survivability and safety of troops (forces) and facilities;

organise the performance of general engineering support tasks for troops (forces).

##### **Organisational and methodological guidelines**

The subject of the discipline is a set of measures for the engineering training of units in order to timely and covertly move them out, deploy them, conduct manoeuvres, create the necessary conditions for the successful completion of assigned tasks, increase the level of protection of units and objects from enemy weapons, inflict losses on the enemy and complicate his actions.

Lecture classes are held to study the theoretical provisions of the use of units in the main types of combat (tactical actions), and they include separate questions on the specifics of unit actions and decision-making procedures by the unit commander according to NATO standards (TLP).

Group training is conducted to teach personnel techniques and methods of performing engineering support tasks in various combat conditions, taking into account the experience of the war with the Russian Federation.

Practical classes are conducted to consolidate and deepen theoretical knowledge, as well as to instil in students the skills of using theoretical provisions in solving specific practical problems. During practical classes, it is advisable to practice performing tasks that require logical thinking and promote the development of students' creative abilities.

### **Information and methodological support**

1. Temporary Guidelines on Engineering Support of the Armed Forces of Ukraine - Kyiv: General Staff of the Armed Forces of Ukraine, 2019.

2. SBP 3-(01,02,04).58(59) Combat Statute of the Mechanised and Tank Troops of the Land Forces of the Armed Forces of Ukraine, Part III (platoon, section, tank): approved by the Order of the Commander of the Land Forces of the Armed Forces of Ukraine No. 238 dated 25.05.2016 (as amended in 2017-2023).

3. Combat Statute of the Artillery of the Armed Forces of Ukraine, Part II (Division, Battery, Platoon, Gun) / Kyiv: Varta, 2017.

4. On Approval of the Guidelines on Subversive (Explosive) Activities in the Armed Forces of Ukraine. Order of the General Staff of the Armed Forces of Ukraine No. 1 of 04 January 2017 - Kyiv, 2017.

5. On approval of the guidelines for the use of engineered ammunition by units of the Armed Forces of Ukraine. Order of the General Staff of the Armed Forces of Ukraine of 04 January 2017 No. 2 - Kyiv, 2017.

### Titles of topics and distribution of training time by type of training session

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Fundamentals of engineering support of combat operations.</b>					
1	Lecture	3	2	1	<p><b>Lesson 1: Engineer troops and tasks of engineering support of combat.</b></p> <p>1. The main tasks of engineering support (engineering support for the mobility of own troops (forces); engineering measures to limit the mobility of enemy forces and assets; engineering measures to increase the survivability and safety of troops (forces) and objects; general engineering support for troops (forces).</p> <p>2. Organisational and staffing structure and capabilities of an engineer platoon of a mechanised (tank) battalion, an engineering support group of a mechanised (tank) brigade.</p> <p><i>Independent work</i></p> <p>1. Sequence and scope of engineering equipment in the area of concentration of the mechanised, tank (artillery) platoon.</p> <p>2. Sequence and scope of checkpoint engineering equipment.</p>
2	Group Session	3	2	1	<p><b>Lesson 2: Engineering reconnaissance of the enemy and terrain.</b></p> <p>1. Purpose, tasks, bodies of engineering intelligence and methods of its conduct.</p> <p>2. The work of the unit commander in organising engineering reconnaissance of the enemy and the terrain.</p> <p>3. The procedure for conducting a search (reconnaissance) of the area based on the experience of the war with the Russian Federation.</p> <p><i>Independent work</i></p> <p>1. Characteristic demasking features of minefields.</p> <p>2. Composition, equipment and tasks of the emergency demining group.</p>
<b>Total for the topic</b>		<b>6</b>	<b>4</b>	<b>2</b>	

<b>Topic 2. Fortification of troop positions, construction of protective structures and engineering camouflage measures.</b>					
3	Group Session	3	2	1	<p><b>Lesson 1: Fortification equipment of troop positions.</b></p> <ol style="list-style-type: none"> <li>1. General requirements for the fortification of troop positions.</li> <li>2. Arrangement of fortifications for firing at the positions of mechanised and tank units.</li> <li>3. Arrangement of fortifications to protect personnel.</li> </ol> <p><i>Independent work</i></p> <ol style="list-style-type: none"> <li>1. Procedure for equipping single trenches for firing from a rifle (machine gun), trenches for tanks, armoured personnel carriers, armoured personnel carriers, cannon. Procedure for equipping anti-fragmentation shelters, blocked gaps, and dugouts.</li> <li>2. Purpose, specifications of the main types of earthmoving equipment (PZM-2, EOY-4421, MDK-3).</li> </ol>
4	Group Session	3	2	1	<p><b>Lesson 2: Conducting engineering security measures for the use of troops and facilities to camouflage troops and facilities, simulate their actions.</b></p> <ol style="list-style-type: none"> <li>1. General provisions on camouflage.</li> <li>2. Methods of camouflage of personnel and equipment.</li> <li>3. Disguising fortifications and objects based on the experience of the war with the Russian Federation.</li> </ol> <p><i>Independent work</i></p> <ol style="list-style-type: none"> <li>1. Purpose, technical characteristics and composition of sets of service engineering camouflage means.</li> <li>2. Purpose, technical characteristics, composition of personnel sets of anti-radar camouflage and concealment equipment.</li> </ol>
<b>Total for the topic</b>		<b>6</b>	<b>4</b>	<b>2</b>	
<b>Topic 3. Blasting operations.</b>					
5	Group Session	3	2	1	<p><b>Lesson 1: Destruction, basics of the fire method of detonating explosive charges. Basics of the electric method of detonating explosive charges.</b></p> <ol style="list-style-type: none"> <li>1. Classification of explosives.</li> <li>2. Purpose, technical characteristics and structure of fire detonation devices.</li> <li>3. Purpose, technical characteristics and design of electrical detonation devices.</li> <li>4. Purpose, technical characteristics of sapper wires and test equipment.</li> </ol> <p><i>Independent work.</i></p> <ol style="list-style-type: none"> <li>1. Purpose and composition of the kit for preparation and conduct of blasting operations in the field.</li> <li>2. The Criminal Code of Ukraine on violation of the established rules for handling explosives and means</li> </ol>

					of detonation. 3. General requirements for safety measures during blasting operations.
6	Group Session	3	2	1	<p><b>Lesson 2: Anti-tank mines.</b></p> <p>1. Purpose and classification of anti-tank mines.</p> <p>2. General design, technical characteristics, kit composition, procedure for installation and neutralisation (destruction) of TM-62 series anti-tank anti-track mines.</p> <p>3. Foreign-made anti-tank mines used by the Armed Forces of Ukraine.</p> <p><i>Independent work.</i></p> <p>1. Purpose, technical characteristics, design, principle of operation, procedure for neutralisation (destruction) of MVCH-62 fuzes.</p> <p>2. Purpose, technical characteristics, design, principle of operation, procedure for neutralisation (destruction) of MVP-62 and MVP-62M fuzes.</p>
7	Group Session	4	2	2	<p><b>Lesson 3: Anti-personnel mines. Means and main types of mines that can be laid remotely.</b></p> <p>1. Purpose and classification of anti-personnel mines used in the war with the Russian Federation.</p> <p>2. General design, technical characteristics, principle of operation, procedure for laying and neutralising (destroying) anti-personnel mines.</p> <p>3. Foreign-made anti-personnel mines used by the Armed Forces of Ukraine</p> <p>4. Purpose, technical characteristics, design, principle of operation and procedure for defusing mines laid by remote mining systems.</p> <p><i>Independent work.</i></p> <p>1. Methods of fixing minefields.</p> <p>2. Fill in the minefield fixation card.</p>

8	Practical Session	6	4	2	<p><b>Lesson 4. Making passages in minefields by explosive means.</b></p> <p>1. Overcoming minefield obstacles by non-standard demining teams (demining).</p> <p>2. The procedure for manufacturing ignition tubes.</p> <p>3. The procedure for detonating explosive charges by fire.</p> <p><i>Independent work</i></p> <p>1. Procedure for calculating the weight of explosives and their placement for making a passage in anti-tank non-explosive barriers.</p> <p>2. Procedure for calculating the weight of explosives and their placement for making a passage in anti-personnel non-explosive barriers.</p>
<b>Total for the topic</b>		<b>16</b>	<b>10</b>	<b>6</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>30</b>	<b>20</b>	<b>10</b>	

#### 4.9. OP 1.9 "Organisation of military communications"

##### **General objective of the educational program component:**

Training of a serviceman who knows the basics of unit management, the procedure for preparing and conducting modern combined arms combat using standard means of communication during the performance of service and combat missions in peacetime and wartime and is able to apply the acquired knowledge in practice.

As a result of studying the discipline, students should:

*to know:*

the procedure for using the latest means of communication;

tactical and technical characteristics of the main types of communications equipment;

the procedure for creating a unit management system in a modern combined arms battle, the principles of using communication means in the main types of combat, taking into account the use of electronic warfare by the enemy;

organising the management of a subordinate unit in preparation for and during a general combat using regular means of communication;

*be able to:*

organise communication with subordinate and interacting units in the main types of combat;

to carry out radio communications in radio networks and radio directions, to conduct official negotiations by means of communication in conditions of interference, to meet the requirements of radio masking, covert command and control of troops and ensure the security of communications;

Practical skills in working with standard and modern means of communication of the unit;

correctly apply the documents of covert (hidden) management of the unit.

##### **Organisational and methodological guidelines**

The subject of the discipline is the theory and practice of organising military communications to control a unit during modern combined arms combat.

Group and practical exercises should be conducted to acquire practical skills in organising military communications using modern means of communication, using examples from the experience of the Russian-Ukrainian war.

Classes are held in specialised classrooms, training complexes, training grounds and campuses, training fields, which must be

equipped with the necessary stands, posters, simulators, computer equipment, etc. The educational material provided for studying during independent work is submitted for final control together with the educational material that is worked out in class under the guidance of a scientific and pedagogical employee.

During all forms of training, individual, group and frontal methods of knowledge control and active learning methods are used. The current control is carried out in the form of an oral survey or written express control during the training sessions.

### **Information and methodological support**

1. Doctrine. Communication and information systems. Kyiv: General Staff of the Armed Forces of Ukraine, 2020.
2. Doctrine of the Communications and Cyber Security Forces of the Armed Forces of Ukraine. Kyiv: General Staff of the Armed Forces of Ukraine, 2021.
3. Guideline "Tactical Communication" VKDP 6-110(03).01. Kyiv: General Staff of the Armed Forces of Ukraine, 2020.

### Titles of topics and distribution of training time by type of training session

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Fundamentals and methods of organising military communications in tactical command and control units.</b>					
1	Group Session	3	2	1	<p><b>Lesson 1: Fundamentals of radio communication. Conducting radio communication (radio exchange) in units. Field means of wire communication of tactical command and control units.</b></p> <p>1. General concepts of radio communication. Frequency ranges and the concept of electromagnetic wave propagation.</p> <p>2. Rules of radio communication, phonetic alphabet and numbers. The procedure for reporting on the situation, call signs.</p> <p>3. Purpose, composition and procedure for coding messages, orders using documents of covert management of units.</p> <p>4. Purpose, general structure and main specifications of TA-57 telephone set and P-193M field switchboard.</p> <p><i>Independent work:</i> Fundamentals of radio communication. Conducting radio communication (radio exchange) in units.</p> <p>1. Advantages and disadvantages of radio communication.</p> <p>2. Methods of radio wave propagation. Features of propagation of radio waves of the VHF and UHF ranges.</p> <p>Ways of organising radio communication.</p>

<b>Total for the topic</b>		<b>3</b>	<b>2</b>	<b>1</b>	
<b>Topic 2 Tactical and technical characteristics, capabilities and modes of operation of basic means of communication in units of the tactical command and control of the Armed Forces of Ukraine. Covert command and control of units.</b>					
2	Group Session	2	2		<p><b>Lesson 1: Tactical and technical characteristics, capabilities and modes of operation of the main radio communication equipment of tactical command and control units.</b></p> <p>1. Tactical and technical characteristics of Motorola radio stations DP 4800, DP 4400, DM 4600 (Lybid K-1A). Capabilities and modes of operation of DP 4800, DP 4400, DM 4600 (Lybid K-1A).</p> <p>2. The main tactical and technical characteristics and operating modes of HARRIS RF-7850M-HH radio stations.</p> <p>3. Options for using radio stations in tactical command and control units.</p>
3	Group Session	3	2	1	<p><b>Lesson 2: Tactical and technical characteristics and modes of operation of HARRIS ultra-shortwave radio stations. Preparation for the operation of satellite communication stations of tactical command and control units.</b></p> <p>1. Main tactical and technical characteristics and modes of operation of HARRIS RF-7850M-HH radio stations.</p> <p>2. The composition of the radio station. Controls of the radio station. Preparing the radio for operation.</p> <p>3. Main technical characteristics, procedure for setting up and masking the StarLink satellite communication station.</p> <p><i>Independent work:</i> Tactical and technical characteristics and modes of operation of HARRIS ultra-short-wave radio stations. Preparation for the operation of satellite communication stations of tactical command and control units.</p> <p>1. Application options for HARRIS RF-7850M-HH radios.</p> <p>2. The procedure for preparing the configuration and masking of the StarLink satellite communication station.</p>

4	Practical Session	3	2	1	<p><b>Lesson 3. Application of documents for covert command and control of units in planning and performing tasks in combat zones.</b></p> <p>1. Procedure for coding messages and orders using documents of covert management of subdivisions.</p> <p>2. Procedure for transmitting signals and commands by radio (situation report (SITREP), contact report (CONTACT REPORT), request for evacuation of the wounded (CASEVAC).</p> <p><i>Independent work:</i> Application of documents for covert command and control of units in the planning and execution of tasks in combat zones.</p> <p>1. Procedure for coding messages and orders using documents of covert management of subdivisions.</p>
5	Practical Session	2	2		<p><b>Lesson 4. Work on communication means using documents of covert control of tactical command and control units.</b></p> <p>1. Work on radio communications, transfer of information through documents of covert command of units.</p> <p>2. Preparation for the operation and deployment of the StarLink satellite terminal, transmission of information to the Armed Forces command and control system via open communication channels.</p> <p>3. Preparation and operation of the TA-57 field telephone set and the P-193M field telephone switchboard.</p>
<b>Total for the topic</b>		<b>10</b>	<b>8</b>	<b>2</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>15</b>	<b>12</b>	<b>3</b>	

#### 4.10. EP 1.10 "Combat system of warrior survival (including tactical medicine)"

##### **The general objective of the educational program component:**

Training of a serviceman who is able to provide first aid in case of injuries and traumas during the performance of official (combat) functions and tasks; apply techniques and methods of ensuring life support in autonomous conditions, counteracting the impact of natural factors on a person, moving on foot over long distances.

As a result of studying the discipline, students (trainees) should:

*to know:*

the most common causes and signs of injuries and traumas requiring first aid, the procedure and methods of providing first aid to the injured and affected;

the procedure for organising movement on the territory controlled by the enemy;

basic life support measures in autonomous conditions;

*be able to:*

provide first aid for wounds, bleeding, poisoning and other combat injuries using service equipment;

organise and equip locations for a small unit in the face of a possible encounter with the enemy;

take measures to counteract the impact of environmental conditions on the human body.

##### **Organisational and methodological guidelines**

Classes in the discipline should be conducted to acquire theoretical knowledge and practical skills of survival in various conditions, for further use of this experience in their service and combat activities.

Theoretical concepts are practiced in the classroom with the use of teaching aids (posters, diagrams, models, training films), and practical issues are practiced on the ground using individual medical equipment and first aid equipment.

Classes are held in specialised classrooms, training complexes, laboratories, training grounds and campuses, training fields, etc.

### **Information and methodological support**

1. Combat system of warrior survival. Study guide / Shkurpit O.M., Felko M.V., Bachynskyi V.V. Odesa: VA m. Odesa, 2018.
2. TCCC Combat Life Saver (TCCC CLS). Observations, Insights and Lessons. Handbook. 2020.
3. Standard of Individual Training STI-000G.21L "Tactical Medicine", approved by the Order of the Commander of the Medical Forces of the Armed Forces of Ukraine No. 121 dated 28.12.2023.
4. Medical support. Requirements for training of all military personnel in combat casualty care (STANAG 2122/AMedP-8.15, "REQUIREMENT FOR TRAINING IN CASUALTY CARE FOR ALL MILITARY PERSONNEL", IDT).

## Titles of topics and distribution of study time by type of class

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1. Fundamentals of providing assistance to victims of hostilities. Assisting victims in the area of direct threat</b>					
1	Lecture	1	1	-	<b>Lesson 1: First aid measures in combat conditions. Means of individual medical equipment of a serviceman.</b> 1. Principles and algorithm of providing first aid to victims of hostilities. 2. The role and responsibility of non-medical personnel in providing assistance to victims of hostilities. 3. Means of individual medical equipment of a serviceman.
2	Group Session	2	1	1	<b>Lesson 2. Measures of first aid in combat conditions. Means of individual medical equipment of a serviceman.</b> 1. Principles and algorithm of providing first aid to victims of hostilities. 2. Means of individual medical equipment of a serviceman. <i>Independent work.</i> 1. Definition and objectives of tactical medicine. 2. Fundamentals of normal human anatomy and physiology. 3. Composition and purpose of individual and group medical first aid kits. 4. Algorithm for providing assistance to a victim of MARCH PAWS.

3	Practical Session	3	2	1	<p><b>Lesson 3: Providing assistance to victims in the area of direct threat.</b></p> <ol style="list-style-type: none"> <li>1. Basics of communication with the victim and ways to approach him/her.</li> <li>2. Stop massive bleeding from the extremities using a mechanical haemostatic device (collar type).</li> </ol> <p><i>Independent work.</i></p> <ol style="list-style-type: none"> <li>1. Basic action plan and safety rules for working in conditions of direct threat (under enemy fire).</li> <li>2. Algorithm of actions when applying a mechanical haemostatic agent (collar type).</li> <li>3. Signs of massive bleeding.</li> </ol>
4	Practical Session	3	2	1	<p><b>Lesson 3: Moving the victim to a shelter.</b></p> <ol style="list-style-type: none"> <li>1. Moving the victim out of the immediate threat zone independently without the use of additional equipment.</li> <li>2. Moving (dragging, carrying) the victim out of the immediate threat zone in a group without the use of additional equipment.</li> <li>3. Extracting the victim from the vehicle (combat vehicle, car, etc.).</li> </ol> <p><i>Independent work.</i></p> <ol style="list-style-type: none"> <li>1. Ways to move the victim out of the immediate threat zone without using regular and improvised means.</li> <li>2. Methods of moving (dragging, carrying) the victim out of the area of direct threat in a group without the use of additional equipment.</li> <li>3. Rules for extracting a victim from a vehicle (combat vehicle, car, etc.).</li> </ol>
<b>Total for the topic</b>		<b>9</b>	<b>6</b>	<b>3</b>	
<b>Topic 2. Assisting victims in the area of indirect threat</b>					
5	Practical Session	3	2	1	<p><b>Lesson 1: Basics of providing assistance in an indirect threat zone.</b></p> <ol style="list-style-type: none"> <li>1. Fundamentals of providing assistance in an area of indirect threat (equipment, safety rules, communication, triage).</li> <li>2. Fundamentals of assessment of victims in the area of indirect threat (principles, assessment of the status of consciousness, pulse and respiratory rate, communication with the victim and his/her isolation).</li> </ol> <p><i>Independent work.</i></p> <ol style="list-style-type: none"> <li>1. Algorithm for providing assistance to a victim of MARCH PAWS.</li> </ol>

6	Practical Session	2	2		<p><b>Lesson 2: Assisting victims with massive bleeding - M (Massive bleeding).</b></p> <ol style="list-style-type: none"> <li>1. Examine the casualty for massive bleeding.</li> <li>2. Application of indirect pressure on the vessels.</li> <li>3. Application of direct pressure to the vessels.</li> <li>4. Use of tourniquets for limbs with a gate type and ratchet mechanism.</li> <li>5. Perform tamponade using haemostatic and conventional means. Reassess the effectiveness of tamponade.</li> <li>6. Application of compression dressings.</li> </ol>
7	Practical Session	3	2	1	<p><b>Lesson 3: Assistance in case of obstruction of the upper airway - A (Airways).</b></p> <ol style="list-style-type: none"> <li>1. Manual restoration of airway patency.</li> <li>2. Determining the presence of breathing (the "Hear-See-Feel" method).</li> <li>3. Place the victim in a stable lateral position.</li> <li>4. Restoration of airway patency in case of suspected cervical spine injury.</li> <li>5. Manual removal of foreign bodies from the oral cavity.</li> <li>6. Insertion of a nasopharyngeal airway.</li> <li>7. Artificial lung ventilation using a ventilation bag with a mask alone or together.</li> <li>8. State of consciousness on the AVPU scale.</li> </ol> <p><i>Independent work.</i></p> <ol style="list-style-type: none"> <li>1. Structure of the human upper respiratory tract.</li> <li>2. Signs of upper airway obstruction and emergency respiratory care "Tactical First Aid" (TFA).</li> <li>3. Selection of a nasopharyngeal airway (NPA).</li> <li>4. State of consciousness on the AVPU scale.</li> </ol>

8	Practical Session	3	2	1	<p><b>Lesson 4. Providing assistance using the MARCH algorithm. Assessment of breathing and life-threatening chest injuries - R (Respiration).</b></p> <ol style="list-style-type: none"> <li>1. Types and symptoms of chest injuries.</li> <li>2. Assessment of respiratory rate and depth.</li> <li>3. The procedure and sequence of chest examination.</li> <li>4. The procedure for using occlusal stickers.</li> <li>5. Conducting the "venting" depressurisation technique (Burping technique).</li> <li>6. The procedure for needle decompression.</li> </ol> <p><i>Independent work.</i></p> <ol style="list-style-type: none"> <li>1. Structure of the human chest.</li> <li>2. Identification of signs of tension pneumothorax.</li> </ol>
9	Practical Session	4	2	2	<p><b>Lesson 5. Providing assistance using the MARCH algorithm. Circulation - C (Circulation).</b></p> <ol style="list-style-type: none"> <li>1. Immobilisation of the pelvic bones.</li> <li>2. Assessment of radial pulse and level of consciousness.</li> <li>3. Conversion and relocation of the turnstile.</li> <li>4. Control (reassessment) of external and internal bleeding and search for other injuries (wounds).</li> </ol> <p><i>Independent work.</i></p> <ol style="list-style-type: none"> <li>1. Reassess the control of massive bleeding.</li> <li>2. Signs of pelvic fracture.</li> <li>3. Symptoms of hypovolemic (haemorrhagic) shock. The lethal triad.</li> </ol>
10	Practical Session	2	2		<p><b>Lesson 6. Providing assistance using the MARCH algorithm. Hypothermia - H (Hypothermia).</b></p> <ol style="list-style-type: none"> <li>1. Use of different types of thermal blankets and heating elements. Prevention of hypothermia.</li> <li>2. Examine and assess a victim with suspected head and eye injuries.</li> <li>3. Provide pre-hospital care in case of suspected head and eye injuries.</li> </ol>

11	Group Session	3	2	1	<p><b>Lesson 7. Thermal injuries. Fractures. Use of painkillers and antibiotics. Wounds.</b></p> <p>. The procedure for providing pre-hospital care to victims with thermal injuries.</p> <p>2. Immobilisation of limbs, neck, spine.</p> <p>3. Applying a bandage when fixing foreign bodies in the victim's body.</p> <p>4. Apply a bandage to the amputated limb, pack the amputated limb.</p> <p>5. Wound assessment and dressing.</p> <p><i>Independent work.</i></p> <p>1. Degrees and types of thermal injuries and methods of calculating their area.</p> <p>2. Procedure for examination and assessment of a victim with suspected musculoskeletal injuries, types of musculoskeletal injuries.</p> <p>3. The concept and contents of the individual pill kit (CWMP), the main types of painkillers and antibiotics.</p>
<b>Total for the topic</b>		<b>20</b>	<b>14</b>	<b>6</b>	
<b>Topic 3. Sorting, moving and preparing for evacuation. Evacuation transport</b>					
12	Group Session	2	2		<p><b>Lesson 1: Triage in case of mass casualties. Sorting the wounded by evacuation priority.</b></p> <p>1. Maintain sorting documentation.</p> <p>2. Sorting algorithms and categories.</p>
13	Group Session	3	2	1	<p><b>Lesson 2: Moving and preparing for evacuation.</b></p> <p>1. Loading victims into/on various types of transport.</p> <p>2. Securely fix the wounded for transport.</p> <p>3. Transmit a verbal report.</p> <p>4. Filling in the victim card.</p> <p><i>Independent work.</i></p> <p>1. Types of equipment for moving victims.</p> <p>2. Types of land and air transport for evacuation of victims.</p>
14	Group Session	4	4	-	<p><b>Lesson 3: Simulation exercises.</b></p> <p>1. Rehearse a scenario for assisting a victim with different types of injuries.</p> <p>2. Summing up the results.</p>
<b>Total for the topic</b>		<b>9</b>	<b>8</b>	<b>1</b>	

<b>Topic 4. Fundamentals of the combat system of survival of warriors.</b>					
15	Lecture	4	2	2	<p><b>Lesson 1: The basics of survival.</b></p> <p>1. The concepts of survival and autonomous existence. Factors affecting human survival.</p> <p>2. Purpose and composition of the emergency kit and emergency bag.</p> <p><i>Independent work.</i></p> <p>1. Equipment and options for equipment tiering.</p> <p>2. Methods and means of signalling.</p>
16	Group Session	4	2	2	<p><b>Lesson 2: Catering and water supply.</b></p> <p>1. Methods of cooking and storing food in the field. Use of natural resources for food.</p> <p>2. Finding water sources, water purification and disinfection.</p> <p>3. Methods of obtaining and preserving fire. Fire for cooking.</p> <p><i>Independent work.</i></p> <p>1. Recommendations for compliance with the drinking regime.</p> <p>2. Types of bonfires and their purpose.</p>
17	Practical Session	4	2	2	<p><b>Lesson 3: Basics of survival. The basics of rational nutrition and water supply.</b></p> <p>1. Finding water sources, water purification and disinfection.</p> <p>2. Fire production and fire preservation.</p> <p>3. Preparation and storage of food in the field. Use of natural resources for food.</p> <p><i>Independent work.</i></p> <p>1. Equipment and options for echeloning the serviceman's equipment.</p> <p>2. Modern mandatory items of personal equipment for servicemen.</p> <p>3. Principles of preparing and completing a survival kit. Typical composition of an individual survival kit.</p>
18	Group Session	3	2	1	<p><b>Lesson 4. The basics of moving and studying tracks on the ground.</b></p> <p>1. Organisation of movement in the territory controlled by the enemy.</p> <p>2. Procedure for movement and actions when encountering the local population and the enemy.</p> <p>3. Study of footprints of people and equipment, determination of the age of the trail and the troops' camping.</p> <p><i>Independent work.</i></p> <p>1. Organisation of movement on the ground. Marching order during movement.</p> <p>2. Rules of the tracker.</p>

19	Group Session	2	1	1	<p><b>Lesson 5. Orientation when operating in enemy-controlled territory.</b></p> <ol style="list-style-type: none"> <li>1. Orientation in space and time.</li> <li>2. Determine the direction and follow it while driving.</li> <li>3. Methods of determining distances on the ground.</li> <li>4. Ways to determine the linear dimensions of local objects (landmarks).</li> </ol> <p><i>Independent work.</i></p> <ol style="list-style-type: none"> <li>1. Practically solve problems of determining the local time by the celestial bodies.</li> <li>2. Practically solve problems of determining distances on the ground and linear dimensions of objects.</li> </ol>
20	Group Session	2	1	1	<p><b>Lesson 6. Organisation of recreation in the territory controlled by the enemy.</b></p> <ol style="list-style-type: none"> <li>1. Requirements for places of rest, arrangement of shelter in different conditions. Organisation of rest.</li> <li>2. Actions in the conditions of enemy use of sniffer dogs.</li> </ol> <p><i>Independent work:</i> Arranging a shelter, ensuring the safety of the resting place.</p> <ol style="list-style-type: none"> <li>1. Ensuring the safety of the recreation area.</li> <li>2. Practice the types of shelter using the equipment and tools at hand.</li> </ol>
<b>Total for the topic</b>		<b>19</b>	<b>10</b>	<b>9</b>	
<b>Control measures</b>		<b>3</b>	<b>2</b>	<b>1</b>	<b>Credit</b>
<b>Total for the educational component</b>		<b>60</b>	<b>40</b>	<b>20</b>	

#### 4.11. GP 1.11 "Statutes of the Armed Forces of Ukraine and their practical application"

##### **The general objective of the educational program component:**

Training of a serviceman who has theoretical knowledge and practical skills and is able to establish a firm order in subordinate units, give uniform instructions on training and education of servicemen, clearly define the range of duties of soldiers and the procedure for their performance.

As a result of studying the discipline, students should:

*to know:*

requirements of the statutes of the Armed Forces of Ukraine;

general duties, rights and responsibilities of military personnel;

organisation of internal order in the unit;

the procedure for organising internal service in the unit (platoon, company);

the procedure for organising the training of the personnel of the daily patrol assigned from the unit;

the rights of the unit commander to apply incentives and impose disciplinary sanctions on subordinate servicemen;

Methods of conducting drill classes and the Statutes of the Armed Forces of Ukraine;

*be able to:*

personally comply with the requirements of the Statutes of the Armed Forces of Ukraine;

apply the requirements of the Statutes of the Armed Forces of Ukraine in the daily activities of the unit;

organise the accommodation of personnel in compliance with the requirements of the statutes and internal regulations;

organise the performance of service by the unit's personnel in daily patrols;

ensure the safe storage of weapons and ammunition;

exercise disciplinary power, correctly apply disciplinary measures (rewards, penalties) to subordinate servicemen;

conduct drill training and study of the Statutes of the Armed Forces of Ukraine with the personnel of the unit;

correctly perform elements of drill training in everyday activities.

Logistical support: classrooms, a training ground, a guardhouse, multimedia equipment.

### **Information and methodological support**

1. Law of Ukraine "On the Statute of the Internal Service of the Armed Forces of Ukraine" of 18.12.2024 No. 548-XIV (as amended).
2. Law of Ukraine "On the Disciplinary Statute of the Armed Forces of Ukraine" dated 09.08.2024 No. 551-XIV (as amended).
3. Law of Ukraine "On the Charter of the Garrison and Guard Services of the Armed Forces of Ukraine" of 09.08.2024 No. 550-XIV (as amended).
4. Law of Ukraine "On the Regulations of the Armed Forces of Ukraine" of 01.10.2020 No. 549-XIV (as amended).
5. Standard of individual training in the subject of study "Statutes of the Armed Forces of Ukraine" (introductory course), STI 000G.17L.
6. Standard of individual training in the subject of drill (course of study of actions as part of a squad (platoon), STI 000G.29L.

### Titles of topics and distribution of training time by type of training session

№ s/n	Types of training classes, control events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Duties, rights and responsibilities of military personnel.</b>					
1	Lecture	1	1		<b>Lesson 1: Responsibilities of the command team officials.</b> 1. Duties of the platoon leader. 2. Distribution of authority at the platoon level between the officer and the NCO.
<b>Total for the topic</b>		<b>1</b>	<b>1</b>		
<b>Topic 2. Military discipline</b>					
2	Lecture	1	1		<b>Lesson 1: Incentives and disciplinary sanctions applied and imposed on military personnel.</b> 1. Incentives applicable to military personnel. 2. Disciplinary sanctions imposed on military personnel.
<b>Total for the topic</b>		<b>1</b>	<b>1</b>		
<b>Topic 3. Daily routine of a military unit.</b>					
3	Lecture	3	2	1	<b>Lesson 1: Daily routine, preparation and reconnaissance.</b> 1. Daily duty, the procedure for assigning duty and reporting on them. 2. Preparation and reconnaissance of the daily patrol. 3. Equipment of premises (places) for duty by the daily squad. <i>Independent work.</i> 1. Study of the duties of the persons on duty (day watch and company watch).

<b>Total for the topic</b>		<b>3</b>	<b>2</b>	<b>1</b>	
<b>Topic 4. Organisation of the guard service.</b>					
4	Lecture	2	2		<b>Lesson 3: Rights and responsibilities of guard officials.</b> 1. Duties of guard officials. 2. Procedure for the use of physical force and weapons by guard personnel.
<b>Total for the topic</b>		<b>2</b>	<b>2</b>		
<b>Topic 5. Drill training</b>					
5	Practical Session	1	1		<b>Lesson 1: Formations and their management.</b> 1. The line and its elements. Formation management and the order of giving commands. 2. Duties of servicemen before lining up and in formation. 3. Signals for formation control and machine control.
6	Practical Session	1	1		<b>Lesson 2. Drill techniques and movement without weapons.</b> 1. 1. The combat position. Execution of commands: "Halt", "Stand at attention", "Attention", "At ease", "Get in line", "Headgear - take off (put on)". 2. Turns in place and while driving. 3. Movement in formation and marching steps, running.
7	Practical Session	1	1		<b>Lesson 3: Getting out of line, getting back into line. Approaching and departing from a superior.</b> 1. Withdrawal from deployed formation and return to formation. 2. Withdrawal from the marching formation and return to the formation. 3. Approaching and departing from the boss.
8	Practical Session	2	2		<b>Lesson 4. Drill techniques and movement with weapons.</b> 1. The order of execution of commands: "STAND STILL", "ATTENDANCE", "AT EASE", "HATS OFF (ON)" with weapons in the "ON THE STRAP", "BEHIND THE BACK" and "ON THE BREAST" positions, "BELT LOOSEN (TIGHTEN)" as assigned. 2. Position of the weapon when moving "ON THE ROAD", "FOR PATROL", "DURING PATROL IN A POPULATED AREA". 3. Procedure and execution of drills "Weapon on re - ME", "Rifle on - chest", "Weapon - behind the back".

9	Practical Session	1	1	<p><b>Lesson 5. Drill techniques and movement with weapons.</b></p> <p>1. Drills with weapons: "Put down - WEAPON", "To - WEAPON", "Behind - WEAPON" by distributions.</p> <p>2. Performing drills with weapons: "Put down - WEAPON", "To - WEAPON", "Behind - WEAPON" in general.</p> <p>3. Performing a military salute with weapons on the spot and in motion.</p>
<b>Total for the topic</b>		<b>6</b>	<b>6</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>	<b>Credit</b>
<b>Total for the educational component</b>		<b>15</b>	<b>14</b>	<b>1</b>

#### 4.12. OP 1.12 "Small arms and firearms training"

##### **The general objective of the educational program component:**

Training of a serviceman who is able to use small arms, grenade launchers, be able to fire them, to control platoon fire in various types of combat in order to perform assigned combat missions.

As a result of studying the discipline, cadets (students) should:

*to know:*

purpose, tactical and technical characteristics, combat properties, general structure, principle of operation, procedure for incomplete disassembly and assembly after incomplete disassembly, as well as the procedure for post-firing maintenance of regular weapons of the unit;

procedure for observing the battlefield and selecting a target, initial settings for each type of weapon, procedure for conducting and adjusting fire, methods of targeting;

basics of fire control and procedure for setting fire tasks of the unit;

procedure for the use of night firing devices

*be able to:*

use regular weapons;

conduct combat checks and bring the weapon to normal combat at different distances;

use lighted reactive, signal cartridges and signal pistols.

##### **Organisational and methodological guidelines**

The training is conducted at firing ranges and sites. Before conducting practical training, it is mandatory to study safety measures and clarify (finalize) them before the start of the training. Personnel arrive for practical training in full field equipment with weapons.

During the practical training, the purpose, combat properties and structure of weapons, ammunition, aiming and observation devices are studied; the basics and rules of shooting.

During fire training, skills are developed and improved in handling weapons (firing techniques), reconnaissance of targets by observation, determination of their range and targeting.

The firing exercises are conducted in accordance with the Small Arms and Combat Vehicle Firing Course. During firing

exercises, elements of psychological influence on the trainees shall be applied, namely, firing blank ammunition behind the firing and using explosive packages at safe distances.

### **Information and methodological support**

1. Small arms and combat vehicle firing course. Order of the General Staff of the Armed Forces of Ukraine of 17 April 2018, no. 160.
2. Collection of Standards for Combat Training of the Land Forces of the Armed Forces of Ukraine - Kyiv: Military Publishing House, 2021.
3. Manual of fire 5.45 mm Kalashnikov rifles (AK-74, AKS-74, AK-74N, AKS-74N) and 5.45 mm Kalashnikov machine guns (RPK-74, RPK-74N, RPK-74N). VKDP 7-00(01).01.
4. Manual on shooting 7.62 mm Kalashnikov machine guns KK, KKM, KKS, KKMS, KKB, KKMB, KKT". VKDP 7-00(01).01.
5. RPG-7B (RPG-7D) Hand-held Anti-Tank Grenade Launcher Manual. VKDP 7-01(03-05, 22, 23)03.01.
6. Manual. On the use of foreign-made weapons in the Armed Forces of Ukraine (instructions for use). Part 1 (small arms). VP 7-(01).03.01.
7. Manual. On the use of foreign-made weapons in the Armed Forces of Ukraine (instructions for use). Part 2 (anti-tank weapons). VP 7-(01).03.01.
8. Handbook for the commander of a mechanised unit. VP 7-00(11).01.

### Titles of topics and distribution of training time by type of training session

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Arming units.</b>					
1	Lecture	4	2	2	<p><b>Lesson 1. General concepts of small arms.</b></p> <p>1. The main tasks and procedure for studying the discipline.                      2. The purpose of modern small arms and melee weapons.                      3. Design properties of small arms and melee weapons.</p> <p><i>Independent work.</i></p> <p>1. Classification of small arms.                      2. Learn the basics and rules of shooting.</p>
2	Group Session	3	2	1	<p><b>Lesson 2: 5.45 mm RPK-74 machine gun.</b></p> <p>1. Purpose, combat characteristics, general structure of the RPK-74 machine gun, completeness, operation of parts and mechanisms of the standard weapon. Ammunition, spare parts and accessories.                      2. The procedure for incomplete disassembly of weapons and assembly after incomplete disassembly. Maintenance of weapons.                      3. Checking the combat and bringing the RPK-74 machine gun back to normal.</p> <p><i>Independent work.</i></p> <p>1. Preparing the RPK-74 machine gun for firing.</p>
3	Group Session	3	2	1	<p><b>Lesson 3. 7.62 mm PKM (PC) machine gun.</b></p> <p>1. Purpose, combat characteristics, general structure of the PKM (PC) machine gun. Completeness, ammunition, spare parts and accessories.                      2. The procedure for incomplete disassembly of weapons and assembly after incomplete disassembly. Maintenance of weapons.                      3. Check the combat and bring the PKM (PKT) machine guns back to normal.</p> <p><i>Independent work.</i></p> <p>1. Possible delays in firing and how to eliminate them.</p>

4	Group Session	3	2	1	<p><b>Lesson 4. Service pistols.</b></p> <p>1. Purpose, combat properties, general structure, operation of parts and mechanisms of service pistols. Ammunition, spare parts and accessories.</p> <p>2. The procedure for incomplete disassembly of weapons and assembly after incomplete disassembly. Maintenance of weapons.</p> <p><i>Independent work.</i></p> <p>1. Possible delays in firing and how to eliminate them.</p>
5	Group Session	4	3	1	<p><b>Lesson 5. 40 mm RPG-7V (RPG-7D) hand-held anti-tank grenade launcher. RPG-18 rocket-propelled grenades.</b></p> <p>1. Purpose, combat capabilities, general structure and procedure for use of the RPG-7.</p> <p>2. The procedure for incomplete disassembly and assembly of the RPG-7.</p> <p>3. Purpose, combat properties, general structure of RPG-7 rounds and RPG-18, RPG-22, 26 grenades.</p> <p><i>Independent work.</i></p> <p>1. Preparing the RPG-7B (RPG-7D) grenade launcher for firing.</p>
6	Group Session	2	2		<p><b>Lesson 6. Small arms and grenade launchers of the leading countries of the world.</b></p> <p>1. NATO rifles, machine guns and grenade launchers.</p> <p>2. Purpose, general structure, principle of operation of the AR-15 platform.</p> <p>3. Procedure for incomplete disassembly of the weapon and assembly after incomplete disassembly.</p>
7	Group Session	3	2	1	<p><b>Lesson 7. Checking the combat and bringing small arms to normal combat.</b></p> <p>1. Check the combat and bring the weapon to normal combat at different distances.</p> <p>2. Combat checks and bringing the weapon to normal operation of NATO small arms.</p> <p><i>Independent work.</i></p> <p>1. Improving the skills of bringing weapons to normal combat.</p>
<b>Total for the topic</b>		<b>22</b>	<b>15</b>	<b>7</b>	

**Topic 2. The basics of shooting.**

8	Group Session	3	2	1	<p><b>Lesson 1: Internal and external ballistics.</b></p> <p>1. Information on internal and external ballistics.</p> <p>2. Explosives. Main groups of explosives.</p> <p>3. Shot periods.</p> <p>4. Measurement of angles, formula for the thousandth.</p> <p><i>Independent work.</i></p> <p>1. Learn the basic concepts of internal and external ballistics.</p>
<b>Total for the topic</b>		<b>3</b>	<b>2</b>	<b>1</b>	
<b>Topic 3. Rules of shooting.</b>					
9	Group Session	4	2	2	<p><b>Lesson 1: Rules of small arms fire.</b></p> <p>1. Rules for choosing a sight and aiming point when shooting small arms at targets.</p> <p>2. Influence of firing conditions on the flight of a bullet. Determination of corrections for deviations from normal (tabulated) firing conditions.</p> <p>3. Composition, purpose of KJ-83, KJ-2017 and the procedure for their application.</p> <p><i>Independent work.</i></p> <p>1. Solving firing tasks.</p>
10	Group Session	4	2	2	<p><b>Lesson 2: Rules of fire from the 40-mm RPG-7V (RPG-7D) anti-tank grenade launcher.</b></p> <p>1. Rules for assigning initial settings.</p> <p>2. Rules of fire from the 40-mm RPG-7V (RPG-7D) anti-tank grenade launcher against moving and emerging targets.</p> <p><i>Independent work.</i></p> <p>1. Field rules of fire from the 40-mm RPG-7V (RPG-7D) anti-tank grenade launcher.</p>
11	Group Session	2	2		<p><b>Lesson 3: Fire mission. Its essence and sequence of solution.</b></p> <p>1. General information about shooting from different types of weapons.</p> <p>2. Elements of solving a fire mission.</p> <p>3. 3. Direct shooting training.</p>
<b>Total for the topic</b>		<b>10</b>	<b>6</b>	<b>4</b>	
<b>Topic 4. Methodological training of unit commanders.</b>					

12	Group Session	4	2	2	<p><b>Lesson 1: Methods of conducting firearms training.</b></p> <p>1. General requirements, methods and forms of firearms training.</p> <p>2. Organisation and procedure of fire training.</p> <p>3. Assessment of firearms training.</p> <p><i>Independent work.</i></p> <p>1. Procedure for working on teaching and training cards.</p>
13	Practical Session	2	2		<p><b>Lesson 2: Organising and conducting control firearms training sessions.</b></p> <p>1. The procedure for organising control classes.</p> <p>2. The procedure for conducting control classes.</p>
<b>Total for the topic</b>		<b>6</b>	<b>4</b>	<b>2</b>	
<b>Topic 5. Fire training. Performing firing exercises with small arms and melee weapons.</b>					
14	Group Session	2	2		<p><b>Lesson 1: Basic provisions of the Small Arms and Combat Vehicle Shooting Course, shooting conditions and safety measures.</b></p> <p>1. Basic provisions of the Small Arms and Combat Vehicle Shooting Course.</p> <p>2. Conditions for firing exercises and safety measures.</p>
15	Practical Session	2	2		<p><b>Lesson 2: Maintenance, preparation of machine guns (5.45 mm RPK-74 machine gun, 7.62 mm PKM (PC) machine gun) and 40 mm RPG-7 grenade launcher for firing. Fulfilment of fire training standards. Solving fire tasks.</b></p> <p>1. Maintenance, preparation of machine guns (5.45 mm RPK-74 machine gun and 7.62 mm PKM (PC) machine gun) for firing.</p> <p>2. Maintenance and preparation of a 40 mm RPG-7 grenade launcher for firing.</p> <p>3. Fulfilment of fire training standards No. 13, 14, 16 for machine guns and 40 mm RPG-7 grenade launcher.</p>
16	Practical Session	7	6	1	<p><b>Lesson 3: Exercises on firing from the 5.45 mm AK-74 rifle, 40 mm RPG-7 grenade launcher (PUS-7), throwing a hand-held training grenade.</b></p> <p>1. Execution of the training exercise COP 2.01.1.1 "Shooting from a standstill at emerging targets" with the 5.45 mm AK-74 rifle.</p> <p>2. Execution of the initial firing exercise COP 1.06.1.1 "Shooting from a standstill at a stationary target with PUS-7" from a 40 mm RPG-7 grenade launcher.</p> <p>3. Performing the initial training grenade throwing exercise COP 4.16.2.6 "Throwing an offensive hand grenade on the move in foot order".</p> <p>4. Practicing firearms training standards No. 1 and 2 for the 5.45 mm AK-74 rifle and 40 mm RPG-7 grenade launcher.</p> <p><i>Independent work.</i></p> <p>1. Servicing the weapon after firing.</p>
17	Night Practical	5	4	1	<p><b>Lesson 4. Practical shooting with 5.45 mm AK-74 at night.</b></p>

	Session				<p>1. Execution of the training exercise COP 2.01.1.1 "Shooting from a standstill at emerging targets" with the 5.45 mm AK-74 rifle at night.</p> <p>2. Practicing firearms training standards No. 1, 2 and the procedure for aiming at night using a device for night shooting with a 5.45 mm AK-74 rifle.</p> <p>3. Rules for the use of illuminated reactive, signal cartridges and signal pistols. Procedure for the use of night sights and surveillance devices.</p> <p><i>Independent work.</i></p> <p>1. Servicing the weapon after firing.</p>
18	Methodical Practical Session	7	6	1	<p><b>Lesson 5. Exercise firing drills with 5.45 mm AK-74 rifle, RPK-74 machine gun, 40 mm RPG-7 grenade launcher.</b></p> <p>1. Execution of the training exercise COP 2.01(03-04).1.1 "Shooting from a standstill at emerging targets" with the 5.45 mm AK-74 rifle and RPK-74 machine gun at the positions in the combined rifle squads.</p> <p>2. Execution of the COP 2.06(07).1.1 "Shooting from a standstill at an emerging target" and the COP 1.06.1.1 "Shooting from a standstill at a stationary target with PUS-7" from a 40 mm RPG-7 grenade launcher.</p> <p>3. Practicing fire training standards No. 1, 2 for the 40 mm RPG-7 grenade launcher and fire training standards No. 26, 27, 28, 29 for the 5.45 mm AK-74 rifle.</p> <p>4. Training in performing the duties of a rifle squad commander in organising and controlling squad fire</p> <p><i>Independent work.</i></p> <p>1. Servicing the weapon after firing.</p>
19	Practical Session	7	6	1	<p><b>Lesson 6. Exercise control firing from a 5.45 mm AK-74 rifle (RPK-74 machine gun) and a 40 mm RPG-7 grenade launcher.</b></p> <p>1. Execution of the control firing exercise COP 3.01.1.1 "Shooting from a standstill at emerging targets with a change of firing position" with the 5.45 mm AK-74 rifle by positions in combined rifle squads.</p> <p>2. Execution of the control firing exercise COP 3.06.2.1 "Shooting from a fixed position with a change of firing position at targets that appear and move , with RPG " by positions in combined rifle squads.</p> <p>3. Training in performing the duties of a rifle squad commander in organising and managing squad fire.</p> <p><i>Independent work.</i></p> <p>1. Servicing the weapon after firing.</p>

20	Practical Session	7	6	1	<p><b>Lesson 7. Execution of combat firing exercises of combat groups (twos, threes) with an assault rifle, a handgun, a machine gun and an under-barrel grenade launcher.</b></p> <p>1. Execution of the live-fire exercise COP 6.18.2.2 "Firing as part of a machine gun crew".</p> <p>2. Execution of the live-fire exercise COP 6.18.2.3 "Firing as part of a combat team in various ways" with the 5.45 mm AK-74 rifle.</p> <p>3. Practicing firearms training standards No. 30, 31, 32, 33 with the 5.45 mm AK-74 rifle.</p> <p>4. Solving firing tasks.</p> <p><i>Independent work.</i></p> <p>1. Servicing the weapon after firing.</p>
21	Practical Session	6	4	2	<p><b>Lesson 8. Performing training firing from a 9 mm PM and Fort-14 pistol.</b></p> <p>1. Execution of the training exercise COP 2.12.1.1 "Shooting at a stationary target" with a 9 mm PM pistol and Fort-14.</p> <p>2. Training in the implementation of firearms training standards No. 13, 14, 16 for the 9 mm PM pistol. Safety measures during practical shooting.</p> <p>3. Fulfilment of firearms training standards No. 1, 2, 24, 25 for the 9 mm PM pistol and Fort-14</p> <p><i>Independent work.</i></p> <p>1. Servicing the weapon after firing.</p>
<b>Total for the topic</b>		<b>43</b>	<b>37</b>	<b>6</b>	
<b>Control measures</b>		<b>6</b>	<b>4</b>	<b>2</b>	<b>Credit</b>
<b>Total for the educational component</b>		<b>90</b>	<b>68</b>	<b>22</b>	

#### 4.13. gm 1.13 "Fundamentals of military law and international humanitarian law"

##### **General objective of the educational program component:**

To prepare a serviceman who is able to apply knowledge of international humanitarian law; understand the procedure for military service, bringing servicemen to criminal, administrative and material responsibility; know the procedure for conducting an internal investigation in the Armed Forces of Ukraine; social and legal protection of servicemen and their families within the framework of the current legislation of Ukraine.

As a result of studying the discipline, students should:

*to know:*

the procedure for military service;

social and legal protection of military personnel and their families;

the procedure for bringing servicemen to administrative responsibility;

the procedure for bringing military personnel to financial responsibility;

the procedure for bringing military personnel to criminal liability;

the procedure for conducting an internal investigation in the Armed Forces of Ukraine;

requirements of international humanitarian law;

*be able to:*

conduct an internal investigation with the preparation of all necessary documents;

draw up a report on a military administrative offence;

to bring violators of military discipline in the unit to disciplinary, administrative and financial responsibility;

manage the unit in compliance with international humanitarian law.

##### **Organisational and methodological guidelines**

The subject of the discipline is the theory of studying the legislation of Ukraine and the practical application of its requirements during military service.

Lectures and practical classes should be conducted with the aim of consolidating and deepening theoretical knowledge, as well as instilling in students the skills of using theoretical provisions in solving specific practical problems. In practical classes, it is advisable to practice using tasks that require logical thinking and promote the development of students' creative abilities.

### **Information and methodological support**

1. The Constitution of Ukraine.
2. Law of Ukraine "On Military Duty and Military Service" of 25.03.1992 No. 2232-XII (as amended).
3. Law of Ukraine "On Social and Legal Protection of Servicemen and Members of Their Families" dated 09.02.2025 No. 2011-XII (as amended).
4. Decree of the President of Ukraine "Regulations on the Military Service of Citizens of Ukraine in the Armed Forces of Ukraine." 01.01.2025 No. 1153/2008 (as amended).
5. Law of Ukraine "On the Statute of the Internal Service of the Armed Forces of Ukraine" of 18.12.2024 No. 548-XIV (as amended).
6. Law of Ukraine "On the Disciplinary Statute of the Armed Forces of Ukraine" dated 09.08.2024 No. 551-XIV (as amended).
7. The Code of Ukraine on Administrative Offences.
8. Law of Ukraine "On the Status of War Veterans, Guarantees of Their Social Protection" of 01.01.2025 No. 3551-XII (as amended).
9. Instruction on the Procedure for the Implementation of International Humanitarian Law in the Armed Forces of Ukraine. Approved by the Order of the Ministry of Defence of Ukraine of 23.03.2017 No. 164.
10. The Procedure for Conducting an Internal Investigation in the Armed Forces of Ukraine, approved by Order of the Ministry of Defence of Ukraine No. 608 dated 21.11.2017 (registered with the Ministry of Justice of Ukraine on 13.12.2017 under No. 1503/31371).
11. Methodological Recommendations on Conducting an Internal Investigation (Inspection) in the Armed Forces of Ukraine (third edition), approved by the Commander-in-Chief of the Armed Forces of Ukraine on 10.2020.

## Titles of topics and distribution of study time by type of class

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Military duty and military service.</b>					
1	Lecture	2	2	1	<b>Lesson 1: The procedure for military service. Social and legal protection of servicemen and their families</b> 1. Types of military service. Peculiarities of military service by different categories of servicemen in peacetime and wartime. 2. The concept of the right to social protection. Benefits for servicemen and members of their families <i>Independent work.</i> 1. Peculiarities of military service by persons called up for mobilisation. 2. Age limit for military service under martial law.
<b>Total for the topic</b>		<b>3</b>	<b>2</b>	<b>1</b>	
<b>Topic 2. Legal responsibility of military personnel.</b>					
2	Group Session	2	2		<b>Lesson 1: Administrative and material responsibility of military personnel.</b> 1. Peculiarities of administrative responsibility of military personnel. 2. Legal characteristics of military administrative offences. 3. The concept and grounds of liability. 4. Types of material liability. The procedure for compensation for material damage.
3	Lecture	3	2	1	<b>Lesson 2: Criminal liability of military personnel.</b> 1. Peculiarities of criminal liability of military personnel. 2. The concept, composition and types of military criminal offences. 3. Criminal law characteristics of certain military criminal offences. <i>Independent work.</i> 1. Physical or mental coercion. 2. Execution of a lawful order or instruction. 3. An act involving risk.
<b>Total for the topic</b>		<b>5</b>	<b>4</b>	<b>1</b>	

<b>Topic 3. Service inspection and service investigation in the Armed Forces of Ukraine.</b>					
4	Practical Session	2	2		<p><b>Lesson 1: Methods of conducting an internal audit and internal investigation.</b></p> <p>1. The concept, tasks, grounds for appointment and peculiarities of an internal audit and internal investigation.</p> <p>2. Taking written explanations (determining the list and content of questions) in the course of an internal audit and internal investigation into a given fact.</p> <p>3. Procedure for conducting and documenting the results of an internal audit and internal investigation.</p>
<b>Total for the topic</b>		<b>2</b>	<b>2</b>		
<b>Topic 4. Application of international humanitarian law.</b>					
5	Group Session	3	2	1	<p><b>Lesson 1: Application of international humanitarian law.</b></p> <p>1. Determination of the legal status of participants in hostilities.</p> <p>2. Prohibited means and methods of warfare.</p> <p>3. Legal regime for the protection of war victims and prisoners of war.</p> <p>4. 4. International legal protection of civilian objects and cultural property.</p> <p>5. Watching educational films on the Law of Armed Conflict and analysing the violations of international humanitarian law.</p> <p>6. Solving the problems of an interactive primary curriculum on the law of war.</p> <p>7. Responsibility for violations of international humanitarian law</p> <p><i>Independent work.</i></p> <p>1. A civilian object during an armed conflict.</p> <p>2. Protection of cultural property in the event of armed conflict.</p> <p>3. Special measures to protect women.</p>
<b>Total for the topic</b>		<b>3</b>	<b>2</b>	<b>1</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>15</b>	<b>12</b>	<b>3</b>	

#### 4.14. OP 1.14 "Intelligence Training"

##### **General objective of the educational program component:**

Acquiring theoretical knowledge and practical skills in conducting reconnaissance, detecting and assessing the enemy in the unit (link - squad, platoon), as well as in the organisation, armament, tactics of actions, motorised infantry (tank) units of the armed forces of the Russian Federation (link - squad, platoon, company), and the main means of destruction used by the enemy in the war against Ukraine.

As a result of studying the discipline, students should:

*to know:*

military intelligence agencies of the unit, their capabilities in conducting intelligence;  
types and methods of tactical reconnaissance, the procedure for conducting reconnaissance in a unit;  
organisational and staffing structure, weapons, equipment and tactics of units (squad, platoon, company) of the motorised rifle (tank) troops of the armed forces of the Russian Federation;  
the main means of destruction used by the enemy in the war against Ukraine;

*be able to:*

organise and conduct intelligence in the unit;  
select landmarks, determine their distances and draw a map of landmarks;  
Identify and expose enemy objects, weapons and equipment;  
assess the external environment and the enemy.

##### **Organisational and methodological guidelines**

The academic discipline "Intelligence Training" is closely interrelated with the academic discipline "General Tactics".

Lectures and group classes are conducted to study the organisation, tactics, tactical and technical characteristics and intelligence features of weapons and military equipment of the main units of the Russian Army (squad and company), as well as the basics of conducting reconnaissance, detecting and assessing the enemy in the unit.

Seminars and practical classes are held to consolidate and deepen the theoretical knowledge and practical skills acquired during lectures and group classes.

The final result of studying the discipline is the acquisition of theoretical knowledge of the organisation and tactics of enemy actions, as well as the basics of conducting intelligence in the unit.

### **Information and methodological support**

1. Manual for studying the organisational structure of the units of the ground forces of the armed forces of the Russian Federation. - Kyiv: DIU, 2024. - 68 p.

2. Study guide. Intelligence and Foreign Armies. Part 2. Information work. - Zhytomyr: ZhVI, 2019. 124 p.

3. Study guide. Organisation, armament and basics of tactics of the motorised rifle units of the Land Forces of the Armed Forces of the Russian Federation: ZhVI, 2020. 351 p.

Handbook of the JFO participant. Arms and military equipment of the RF Armed Forces - Kharkiv: KHNUPS, 2020.

### Titles of topics and distribution of training time by type of training session

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Fundamentals of Military Intelligence</b>					
1	Lecture	3	2	1	<p><b>Lessons 1: Tactical intelligence.</b></p> <p>1. Purpose, tasks, types, forces and means of tactical intelligence.</p> <p>2. Methods of conducting military intelligence.</p> <p>3. Military intelligence agencies.</p> <p><i>Independent work.</i></p> <p>1. Purpose, tasks, types of tactical intelligence.</p> <p>2. Military intelligence agencies and their characteristics.</p>
<b>Total for the topic</b>		<b>3</b>	<b>2</b>	<b>1</b>	
<b>Topic 2. Organisational structure and armament of motorised infantry (tank) units of the Russian armed forces</b>					
2	Group Session	3	2	1	<p><b>Lessons 1: Organisational and staffing structure, weapons and combat equipment of motorised infantry (tank) units of the Russian Armed Forces.</b></p> <p>1. Organisational and staffing structure of a motorised infantry (tank) division (crew), weapons and military equipment, their visual identification.</p> <p>2. Organisational and staffing structure of a motorised infantry (tank) platoon, weapons and military equipment, their visual identification.</p> <p>3. Organisational and staffing structure of a motorised infantry (tank) company, weapons and military equipment, their visual identification.</p> <p><i>Independent work.</i></p> <p>1. Organisational and staffing structure of a motorised infantry (tank) platoon.</p> <p>2. Organisational and staffing structure of a motorised infantry (tank) company.</p>

<b>Total for the topic</b>	<b>3</b>	<b>2</b>	<b>1</b>		
<b>Topic 3: Fundamentals of Combat by Motorised Infantry (Tank) Units of the Russian Armed Forces</b>					
3	Group Session	3	2	1	<p><b>Lessons 1: Motorised rifle (tank) units of the Russian Armed Forces in defence.</b></p> <p>1. Fundamentals of defensive combat of motorised infantry (tank) units of the Russian Armed Forces (purpose, conditions, types, tasks).</p> <p>2. A motorised rifle unit in defence.</p> <p>3. A motorised infantry (tank) platoon in defence.</p> <p>4. A motorised infantry (tank) company in defence.</p> <p><i>Independent work.</i></p> <p>1. A motorised infantry (tank) platoon in defence.</p> <p>2. A motorised infantry (tank) company in defence.</p>
4	Group Session	3	2	1	<p><b>Lessons 3. Motorised rifle (tank) units of the Russian Armed Forces in the offensive.</b></p> <p>1. Fundamentals of offensive combat of motorised infantry (tank) units.</p> <p>2. A motorised rifle squad in the offensive.</p> <p>3. A motorised infantry (tank) platoon in the offensive.</p> <p>4. A motorised infantry (tank) company in the offensive.</p> <p><i>Independent work.</i></p> <p>1. A motorised infantry (tank) platoon in the offensive.</p> <p>2. A motorised infantry (tank) company in the offensive.</p>
<b>Total for the topic</b>		<b>6</b>	<b>4</b>	<b>2</b>	
<b>Control measures</b>		<b>3</b>	<b>2</b>	<b>1</b>	<b>Credit</b>
<b>Total for the educational component</b>		<b>15</b>	<b>10</b>	<b>5</b>	

#### 4.15. EP 1.15 "Fundamentals of organising and conducting warfare in the electromagnetic environment and cyberspace"

##### **The general objective of the educational program component:**

Acquaintance of cadets with basic terms and definitions, basics of organisation and conduct of electronic warfare and cyber intelligence (planning, methods of employment of electronic warfare and cyber warfare units), tactical and technical characteristics of electronic warfare and cyber warfare means, procedure of deployment and intended use, as well as implementation of basic cybersecurity measures (cyber hygiene), understanding of the main aspects of cyber operations.

As a result of studying the discipline, students should:

*to know:*

Definition, tasks and components of electronic and cyber warfare;

organisational structure, equipment and combat capabilities of the electronic warfare unit within the military unit;

basic tactical standards for the use of an EWR unit;

basic organisational measures for electronic and cyber defence;

the procedure for collecting and using information on the electronic environment to ensure the use of the unit;

*be able to:*

organise and carry out electronic protection of electronic means (proper use of communication equipment, etc.) of the unit;

use the basic methods of fighting in an electromagnetic environment;

apply regulatory and legal acts and guidelines for conducting warfare in the electromagnetic environment in everyday activities;

to solve the problem of detecting signals of cellular communication facilities and wireless access points deployed using Wi-Fi and Bluetooth technologies;

apply basic methods and tools for searching for information from open sources;

take measures to mislead the enemy using social networks, messengers and information platforms;

to use means of processing and transmitting information in the information and communication systems of the Armed Forces of Ukraine in compliance with the requirements of guiding documents in the field of cybersecurity and information protection;

act in accordance with the requirements of the guidelines on the procedure for responding to cyber incidents in the information and communication systems of the Armed Forces of Ukraine.

### **Organisational and methodological guidelines**

The academic discipline "Fundamentals of organising and conducting warfare in the electromagnetic environment and cyberspace" is closely interrelated with the academic discipline "Organisation of military communications".

### **Information and methodological support**

1. Law of Ukraine "On Protection of Information in Information and Communication Systems" dated 28.06.2024 No. 80/94-BP.
2. Law of Ukraine "On the Basic Principles of Ensuring Cybersecurity of Ukraine" of 28.06.2024 No. 2163-VIII.
3. Rules for Ensuring Information Protection in Information, Electronic Communication and Information and Communication Systems, approved by Resolution of the Cabinet of Ministers of Ukraine No. 373 dated 29.03.2006.
4. Concept for the development of the electronic warfare system in the Armed Forces of Ukraine until 2026.
5. VKP 10(3)-27(03.01. Doctrine on electronic warfare in joint operations.
6. Guidelines "Organisation and Conduct of Electronic Warfare in Combined Arms Combat". Developed by the working group of the Electronic Warfare Department of the Main Directorate of Electronic and Cyber Warfare of the General Staff of the Armed Forces of Ukraine. 2022p.
7. Electronic warfare. Joint Publication JP 3-13.1 - USA, 2012.

### Titles of topics and distribution of study time by type of class

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Fundamentals of organisation and conduct of electronic warfare in the Armed Forces of Ukraine.</b>					
1	Lecture	2	2	-	<b>Lesson 1: Fundamentals of electronic warfare organisation in the Armed Forces of Ukraine. Combat capabilities of electronic warfare forces and means.</b> 1. Definition, tasks and components of electronic warfare. The electronic warfare management system of the PC of Ukraine. 2. Organisational and staffing structure of the units of the SSR (type of the Armed Forces of Ukraine). 3. Theoretical foundations of electronic jamming of radio communications, UAVs and radar. 4. Purpose and main tactical and technical characteristics of the equipment of the electronic warfare unit. Tasks and combat capabilities of the electronic warfare unit. 5. Options for building combat formations of an electronic warfare unit of a military unit (brigade) in defence and offence.
<b>Total for the topic</b>		<b>2</b>	<b>2</b>		
<b>Topic 2. Organisation of the use of electronic warfare units</b>					
2	Lecture	2	2	-	<b>Lesson 1: Organisation of the use of electronic warfare units.</b> 1. Planning of radio jamming by the EW unit (by area of activity). 2. Planning of the use of the electronic protection unit (by area of activity). 3. Planning the use of an electronic warfare support unit from a military unit (by area of activity).

3	Group Session	2	2	-	<b>Lesson 2: Planning the use of electronic warfare units.</b> 1. The list of documents to be worked out in the course of planning radio suppression and their content. 2. Measures to ensure radio electronic protection of the command and control systems of troops and weapons (radio electronic means) of the military unit. 3. Electronic warfare support capabilities and their tasks for planning the use of military units.
<b>Total for the topic</b>		<b>4</b>	<b>4</b>		
<b>Topic 3: Fundamentals of organising and conducting cyber actions to obtain information about the enemy</b>					
4	Lecture	2	2	-	<b>Lesson 1: Wi-Fi and Bluetooth wireless access technologies: basics of application and features of operation.</b> 1. Basic principles of wireless access technologies and cellular networks. Parameters and characteristics of network signals. 2. Features of wireless technologies and cellular networks
5	Practical Session	2	2	-	<b>Lesson 2: Basics of cyber intelligence in relation to Wi-Fi and Bluetooth wireless access technologies.</b> 1. Scans the radio frequency spectrum of Wi-Fi and Bluetooth wireless access technologies to detect the presence of access points and radiation sources. 2. Basic principles of conducting actions in cyberspace in relation to enemy reconnaissance assets in mobile cellular networks, Wi-Fi, Bluetooth networks.
6	Group Session	2	2	-	<b>Lesson 3: Basic principles of using methods and tools for searching for information in open sources.</b> 1. Identification of intelligence sources. 2. Use of information retrieval methods and tools. 3. Analysis of the results.
<b>Total for the topic</b>		<b>6</b>	<b>6</b>		
<b>Control measures</b>		<b>3</b>	<b>2</b>	<b>1</b>	<b>Credit</b>
<b>Total for the educational component</b>		<b>15</b>	<b>14</b>	<b>1</b>	

#### 4.16. EP 1.16 "Fundamentals of the use of tactical class unmanned systems"

##### **The general objective of the educational program component:**

Acquaintance of cadets (students) with basic terms and definitions, basics of organising the use of unmanned aerial vehicles (UAVs) (planning, methods of using UAVs), classification and tactical and technical characteristics of UAVs, their structure, procedure of deployment and intended use.

As a result of studying the discipline, students (trainees) should:

*to know:*

purpose, composition, principles of operation of unmanned systems on the example of unmanned aircraft systems of tactical classes;

operating rules and restrictions on UAVs and target loads;

the basics and procedure for preparing for the use of tactical class UAVs;

main tactical and technical characteristics of the regular UAVs of the air force, the armed forces, the army, artillery and reconnaissance units of the armed forces of Ukraine and the armed forces of the Russian Federation;

*be able to:*

to prepare for the use and use of copter-type UAVs;

organise data transfer from the BpAC;

use Kropyva software to determine coordinate information;

to act individually and as part of a unit when planning to use tactical-class UAVs.

##### **Organisational and methodological guidelines**

The academic discipline "Fundamentals of the use of tactical class unmanned systems" is closely interrelated with the academic discipline "General Tactics".

##### **Information and methodological support**

1. Guidelines for the combat use of Class I UAVs in the Armed Forces of Ukraine (Order of the General Staff of the Armed Forces of Ukraine No. 379DSK dated 09.12.2021).

2. Fundamentals of construction of unmanned robotic systems for special purposes: a textbook / Y.G. Danik, P.P. Topolnitsky, I.V. Puleko, P.V. Pozdnyakov, A.V. Rodionov, M.V. Bugayov - Zhytomyr: ZhVI, 2016. - 306 p.

3. STANAG 4670 (Edition 1). Recommended Guidance for the Training of Designated Unmanned Aerial Vehicle Operator. NATO Standardisation Agreement. 2006.

4. STANAG 4671 (Edition 1). Unmanned Aerial Vehicle Systems Airworthiness Requirements. NATO Standardisation Agreement. 2009.

5. Concept of equipping military units and subdivisions of the Armed Forces of Ukraine with unmanned aerial systems for the period up to 2025. Order of the Ministry of Defence of Ukraine of 02.11.2016 No. 580.

6. The concept of using unmanned aerial systems in the Armed Forces of Ukraine. Order of the Chief of the General Staff of the Armed Forces of Ukraine of 13.05.2017 No. 169.

## Titles of topics and distribution of study time by type of class

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Technical training</b>					
1	Lecture	2	2		<b>Lesson 1: Current state and prospects for the development of tactical unmanned systems.</b> 1. The role and place of the discipline "Fundamentals of the use of tactical class unmanned systems" in the system of training of officers. 2. Current state, types and classification of unmanned systems in the Armed Forces of Ukraine. 3. 3. The main guiding documents regulating the use of unmanned systems in the Armed Forces of Ukraine.
2	Lecture	2	2		<b>Lesson 2: Classification of unmanned systems.</b> 1. Classification of unmanned aerial systems. 2. Classification of ground robotic systems (platforms). 3. Classification of marine unmanned vehicles (systems, complexes). 4. 4. The main models of BPS used by units of the Armed Forces of Ukraine.
3	Group Session	3	2	1	<b>Lesson 3: Components of UAVs and principles of UAV operation.</b> 1. Components of unmanned systems (on the example of UAVs). 2. Principles of operation of copter and aircraft-type UAVs. 3. External factors affecting UAV flight. 4. General characteristics of navigation systems used in unmanned systems. <i>Independent work.</i> 1. UAV controls, basic parameters of flight data and the procedure for its processing. 2. Development of a flight plan. 3. The main forms and methods of using unmanned systems.

<b>Total for the topic</b>	<b>7</b>	<b>6</b>	<b>1</b>	
<b>Topic 2. Tactical and special training.</b>				
4	Group Session	3	2	1
<p><b>Lesson 1: The procedure for planning the use of UAVs. Types of reporting and information documents and the procedure for their execution based on the results of the use of unmanned systems.</b></p> <p>1. Features of planning the use of tactical class UAVs.  2. General approaches to drawing up a flight mission, development of planning documents for the use of UAVs.  3. Types of reporting and information documents (RIDs) and the procedure for their preparation.</p> <p><i>Independent work.</i></p> <p>1. Features of the use of tactical class UAVs in combat conditions.  2. Features and procedure for decoding aerial reconnaissance materials.  3. Rehearsing options for conducting aerial reconnaissance and adjusting artillery fire using various types of UAVs</p>				
5	Practical Session	3	2	1
<p><b>Lesson 2: Practicing basic UAV control skills on a simulator for copter-type UAVs.</b></p> <p>1. Practice launching and landing a copter-type UAV.  2. Practicing basic flight procedures, including artillery fire correction using copter-type UAVs.</p> <p><i>Independent work.</i></p> <p>1. Purpose and peculiarities of the use of the Kropyva SPZ by UAV crews.  2. The main types and capabilities of tactical-class regular UAVs in the Air Force, Special Forces, Combined Arms and Artillery units, and military intelligence units.  3. Preparation for the test in the discipline.</p>				
<b>Total for the topic</b>	<b>6</b>	<b>4</b>	<b>2</b>	
<b>Control measures</b>	<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>	<b>15</b>	<b>12</b>	<b>3</b>	

#### 4.17 AF 1. "Organisation of transportations and transportation in the Armed Forces of Ukraine"

##### **The general objective of the educational program component:**

The purpose of teaching the discipline "Organisation of transportations and transportations in the Armed Forces of Ukraine" is: to train a tactical officer who has knowledge of the basics of logistics, procedure and rules for organising and carrying out road transport, movements (transportations) by rail, air, sea transport by classes of supply in different conditions of the situation and to prepare a specialist who has knowledge of the basics of logistics, organisation and planning of transportations, movements (transportations), without

As a result of studying the discipline, the student should

*to know:*

the procedure for organising and carrying out military transportations (transportations) by road by various types of transport;

the procedure for organising the planning and management of transportation at the tactical level of employment of troops (forces);

Procedure for organising military road transport by classes of supply of weapons and equipment

*be able to:*

to organise and carry out transportation by rail, air and sea;

to organise military road transport by classes of supply of weapons and equipment

##### **Organisational and methodological guidelines:**

Classes in the discipline are conducted to acquire theoretical knowledge and practical skills in planning and organising the transport of personnel and material resources by road, the procedure for their documentation.

Theoretical concepts are practiced in the classroom with the use of teaching aids (posters, diagrams, models, training films), while practical issues are addressed during practical classes using specialised classrooms and field training facilities.

##### **Logistics:**

Classes are held in specialised classrooms, training complexes, laboratories, training grounds and campuses, training fields, etc.

### **Information and methodological support:**

1. Joint Logistics Doctrine. A military guiding doctrinal publication for military organisational structures that defines the views and basic provisions on logistics support of the Armed Forces of Ukraine. - Kyiv, General Staff of the Armed Forces of Ukraine, 2020 - 39 p.
2. Order of the Ministry of Defence of Ukraine of 11.10.2016 No. 522 "On Approval of the Basic Provisions for Logistics Support of the Armed Forces of Ukraine".
3. Allied Joint Doctrine for Logistics, Edition B Version 1, December 2018.
4. NATO Glossary of Terms and Definitions.
5. JOINT LOGISTICS February 2019, INCORPORA UNO CHANGE May 2019 ("Joint Logistics Doctrine", MO USA).
6. NATO Principles and Policies for Logistics
7. Order of the Ministry of Defence of Ukraine of 11.10.2016 No. 522 "On Approval of the Basic Provisions for Logistics Support of the Armed Forces of Ukraine".
8. Law of Ukraine "On Transport".
9. Law of Ukraine "On Defence".
10. Law of Ukraine "On the Functioning of the Unified Transport System of Ukraine in a Special Period".
11. Doctrine on the organisation of movements and transportations in the Armed Forces of Ukraine. Military guideline publication for military organisational structures on the organisation of movements and transportations in the Armed Forces of Ukraine - Kyiv, KSL of the Armed Forces of Ukraine, 2020 - 29 p.
12. Order of the Ministry of Defence of Ukraine of 05.09.201J No. 595 "On Approval of the Regulation on Military Transport by Rail, Sea, River and Air".
13. Instruction of the Department (Commandant's Office) of Military Communications. Military guidance publication for the bodies of military communications of the Armed Forces of Ukraine. - Kyiv, KSL AFU, 2020 - 45 p.
14. Resolution of the Cabinet of Ministers of Ukraine of 04.11.2015 No. 891 "On Approval of the Procedure for Organising Railway Transport Activities in the Course of Military Railway Transportation".
15. Order of the Ministry of Defence of Ukraine of the Ministry of Infrastructure of Ukraine of 01.12.2015 No. 666/503 "On Approval of the Instruction on Planning Military Railway Transportation".
16. Order of the Ministry of Defence of 01.12.2014 No. 853 "On Approval of the Instruction on the Management of Military Railway Transport".
17. Order of the Ministry of Defence of Ukraine, Ministry of Infrastructure of Ukraine of 12.10.2016 No. 526/350 "On Approval of the Instruction on Planning and Management of Military Water Transport in the Armed Forces of Ukraine".
18. Order of the Ministry of Defence of Ukraine of the Ministry of Infrastructure of Ukraine of 08.11.2011 No. 684/525 "On Approval of the Regulation on Interaction of Military Communications Authorities on Sea and River Transport of Ukraine with the Ministry of Infrastructure of Ukraine, the central executive body for the implementation of the state policy in the field

of security on sea and river transport, enterprises, institutions and organisations belonging to the sphere of management of the Ministry of Infrastructure of Ukraine on military sea and river transport".

19. Order of the General Staff of the Armed Forces of Ukraine of 27.03.2013 No. 67 "On Approval of the Instruction on Organisation and Keeping Records of Civilian Shipowners' Vessels. capabilities of water transport means for the needs of the Armed Forces of Ukraine".

21 Guideline for a motor vehicle brigade (regiment, separate motor vehicle battalion). Military guideline publication for military organisational structures on the organisation of movements and transportations in the Armed Forces of Ukraine - Kyiv, KSL AFU, 2020 - 83 p.

22. Marchuk V.E., Grigorak M.Y., Harmash O.M. Warehouse logistics. Study guide. - Kherson, Oldie+, 2020 - 256 p.

23. Bosniak M.G. Freight road transport. Textbook for students of speciality 7.100403 "Organisation of transportations and management in transport (automobile)" - K.: Slovo Publishing House, 2010. - 408 c.

24. Marchenko V.M. Logistics: Textbook / V.M. Marchenko, V.V. Shutyuk. - K.: Artek Publishing House. 2018. - 312 c.

25. Methodological Recommendations on the Motor Transport Service - Kyiv, KSL of the Armed Forces of Ukraine, 2015 - 56 p.

26. Military rear. Basics of logistics support of military units (subdivisions), tactical groups (manual adapted in the rear of the Armed Forces of Ukraine taking into account the experience of logistics support of military units in the anti-terrorist operation). - Kyiv, Tyl ZSU, 2015 - 273 p.

27. DSTU 4500-3:2008. - Kyiv, Derzhspozhyvstandart Ukrainy, 2010. - 37 p.

28. Resolution of the Cabinet of Ministers of Ukraine of 18.01.2001 No. 30 "On the Movement of Large and Heavy Vehicles on Roads, Streets and Railway Crossings".

29. Law of Ukraine "On Motor Vehicle Transport" .

30. Order of the Minister of Internal Affairs of Ukraine dated 04.08.2018 No. 656 "On Approval of Certain Regulatory Acts on Road Transport of Dangerous Goods"

31. European Agreement concerning the International Carriage of Dangerous Goods by Road of 30 September 1957 (ADR).

32. Order of the Chief of the General Staff of the Armed Forces of Ukraine of 23.12.2019 No. 482-DSK on approval of the temporary guidelines for the organisation of movements and transport in the AFU.

33. Order of the Chief of the General Staff of the Armed Forces of Ukraine of 17.10.2016 No. 387 "On Approval of the Instruction on Organisation and Planning of Cargo and Passenger Transportation by Road in the Armed Forces of Ukraine".

34. Order of the Minister of Defence of Ukraine and the Ministry of Infrastructure of Ukraine of 01.12.2015 No. 666/503 On Approval of the Instruction on Planning Military Railway Transportation.

35. Order of the Minister of Defence of Ukraine of 07.05.2019 No. 210 "On Approval of the Regulation on the Protection and Escort of Military Cargoes on Rail and Water Transport".

36. The Law of Ukraine "On Road Traffic", ed. "Traffic accidents", 1993.

37. Illustrated Traffic Rules of Ukraine 2022. Textbook, 26th edition, revised and supplemented. - Kharkiv, Monolith, 2022, - 67 p.

38. Order of the Commander of the Land Forces of the Armed Forces of Ukraine of 29 January 2016 No. 57 "On Approval of the Instruction on the Organisation of Protection and Defence of Motor Vehicle Convoys Transporting Missiles (Ammunition) and Other Material and Technical Facilities from Central Supply Bodies (Centres, Arsenals, Bases, Warehouses) to the Troops during a Special Period".

39. Methodological recommendations for ensuring the protection and defence of convoys transporting weapons, missiles and ammunition and military-technical property: Methodological recommendations. - K.: Arming the Armed Forces of Ukraine, 2014.

## Titles of topics and distribution of study time by type of study session

№ s/n	Types of training sessions, control events	Total hours	Among them.		Title of the topic and study questions.
			Audit hours	Independent works	
1	2	3	4	5	6
<b>Section 1. Organisation of military transportations.</b>					
<b>Topic 1: Organisation of military road transport</b>					
1.	Lecture	2	2		<b>Lesson 1: Types of military road transport</b> 1. Purpose and types of military road transport. 2. Methods of organising road transport. 3. Settlement and delivery units.
2.	Group Session	2	2		<b>Lesson 2: Vehicle parts (sub-assemblies), their purpose and use.</b> 1. Purpose, composition and tasks of automotive units (subdivisions). 2. Typical organisational and staffing structure of an automotive unit (subdivision). . 3. Capabilities of the automotive unit (subdivision) .
3.	Group Session	4	2	2	<b>Lesson 3: Logistics units (subdivisions), their purpose and procedure of use.</b> 1. Purpose, composition and tasks of logistics units (subdivisions). 2. Typical organisational and staffing structure of a motor vehicle unit (subdivision) of logistics. 3. Capabilities of the logistics unit (subdivision). <i>Independent work:</i> Parts (subdivisions) of logistics, their purpose and procedure of use.
4.	Lecture	4	2	2	<b>Lesson 4. Intra-warehouse transportation.</b> 1. Classification of warehouses, their structure and main functions. 2. Technological areas of the warehouse. 2. Organisation of the technological process in the warehouse. <i>Independent work:</i> Intra-warehouse transport
5.	Group Session	4	2	2	<b>Lesson 5. Warehouse equipment.</b>

					<ol style="list-style-type: none"> <li>1. Warehouse equipment for cargo storage and its design features</li> <li>2. Warehouse equipment for the loading and unloading area.</li> <li>3. Lifting and transport equipment.</li> </ol> <p><i>Independent work:</i> Warehouse equipment</p>
6.	Group Session	4	2	2	<p><b>Lesson 6. Packaging, labelling and sealing of goods in transport logistics.</b></p> <ol style="list-style-type: none"> <li>1. Containers and packaging of cargo.</li> <li>2. Methods and technologies of cargo marking.</li> <li>3.. Methods of preparing cargo for transport</li> </ol> <p><i>Independent work:</i> Packaging, labelling and sealing of goods in transport logistics.</p>
7.	Group Session	4	2	2	<p><b>Lesson 7. Military cargoes.</b></p> <ol style="list-style-type: none"> <li>1. Military cargo and its classification.</li> <li>2. Packaging and marking of military cargo.</li> <li>3.. Rules for loading and unloading military cargo.</li> </ol> <p><i>Independent work:</i> Military cargo.</p>
8.	Practical Session	4	4		<p><b>Lesson 8. Calculation of loading and unloading stations parameters, number of stations and their work volumes</b></p> <ol style="list-style-type: none"> <li>1. Calculation of the loading and unloading front of trucks.</li> <li>2. Calculate the throughput capacity of loading and unloading points.</li> <li>3. Determine the number of loading and unloading stations.</li> </ol>
9.	Lecture	4	2	2	<p><b>Lesson 9. Delivery of goods by road.</b></p> <ol style="list-style-type: none"> <li>1. Organisation and planning of centralised supply transportation of material resources.</li> <li>2. Organisation and planning of road transport of material resources in military and support units.</li> <li>3. Carrying out road transport of material resources in military and support units.</li> </ol> <p><i>Independent work:</i> Delivery of goods by road.</p>
10.	Group Session	2	2		<p><b>Lesson 10. Formalised documents for the organisation and planning of centralised supply chain transport of materials.</b></p> <ol style="list-style-type: none"> <li>1. Plans (annual, monthly, daily) and application for organisation of centralised supply of material resources.</li> <li>2. Route and cover letters for the road convoy, a statement of the composition and loading of the road convoy, a report (run) of vehicle downtime.</li> </ol>
11.	Group Session	4	2	2	<p><b>Lesson 11: Organisation of transportation of passengers, wounded and sick in the AFU.</b></p> <ol style="list-style-type: none"> <li>1. General provisions on the organisation of personnel transportation.</li> <li>2. Rules for transporting the wounded and sick.</li> <li>3. Norms for seating personnel, wounded and sick in vehicles.</li> </ol> <p><i>Independent work:</i> Organisation of transportation of passengers, wounded and sick in the Armed Forces</p>

					of Ukraine.
12.	Group Session	4	2	2	<p><b>Lesson 12. Technical and economic indicators of the technical condition and operation of road transport.</b></p> <p>1. Indicators characterising the technical condition of the rolling stock of the vehicle fleet.</p> <p>2. Indicators characterising the operation of the rolling stock of the vehicle fleet.</p> <p><i>Independent work:</i> Technical and economic indicators of the technical condition and operation of road transport.</p>
13.	Practical Session	4	4		<p><b>Lesson 13. Calculation of road transport performance indicators.</b></p> <p>1. Calculation of indicators that characterise the production capabilities of road transport.</p> <p>2. Calculation of indicators characterising the efficiency of road transport use.</p> <p><i>Independent work:</i> Calculation of road transport performance indicators.</p>
14.	Group Session	4	2	2	<p><b>Lesson 14. Rules and formulas for calculating rolling stock performance indicators on different routes</b></p> <p>1. Performance of rolling stock on different routes.</p> <p>2. Calculation of vehicle performance on different routes per day (shift).</p> <p>3. The impact of individual factors on the performance of the vehicle per day (shift).</p> <p><i>Independent work:</i> Rules and formulas for calculating rolling stock performance indicators on different routes</p>
15.	Practical Session	7	4	3	<p><b>Lesson 15. Calculation of rolling stock performance indicators on different routes</b></p> <p>1. Performance of rolling stock on different routes.</p> <p>2. Calculation of vehicle performance on different routes per day (shift).</p> <p>3. The impact of individual factors on the performance of the vehicle per day (shift).</p> <p><i>Independent work:</i> Calculation of rolling stock performance indicators on different routes</p>
16.	Group Session	2	2		<p><b>Lesson 16. Indicators of the production program for the operation of rolling stock of the vehicle fleet.</b></p> <p>1. Indicators characterising the readiness of the rolling stock fleet to perform its intended tasks.</p> <p>2. Indicators characterising the performance of the vehicle and rolling stock of the fleet.</p> <p><i>Independent work:</i> Indicators of the production program for the operation of rolling stock of the vehicle fleet.</p>
17.	Practical Session	6	4	2	<p><b>Class 17. Calculation of rolling stock operation efficiency indicators.</b></p> <p>1. Calculation of indicators characterising the readiness of the rolling stock fleet to perform its intended tasks.</p> <p>2. Calculation of indicators characterising the performance of the vehicle and rolling stock of the fleet.</p> <p><i>Independent work:</i> Calculation of rolling stock operation efficiency indicators.</p>
18.	Group Session	4	2	2	<p><b>Lesson 18. Organisation and planning of evacuation transport.</b></p>

					<ol style="list-style-type: none"> <li>1. Conditions and organisation of evacuation.</li> <li>2. Evacuation forces and means.</li> <li>3. The procedure for their application.</li> </ol> <p><i>Independent work:</i> Organisation and planning of evacuation transport.</p>
<b>Total for the topic</b>		<b>69</b>	<b>44</b>	<b>25</b>	
<b>Topic 2. Organisation of transportation of oversized, heavy, dangerous, bulk and liquid cargo.</b>					
21.	Lecture	4	4		<p><b>Lesson 1: Organisation of transportation of bulky and heavy cargo.</b></p> <ol style="list-style-type: none"> <li>1. Conditions and regime of passage of large and heavy vehicles.</li> <li>2. The procedure for approving the route for large and heavy vehicles.</li> <li>3. Requirements for drivers, equipment of oversized and heavy vehicles and placement of cargo.</li> </ol>
22.	Lecture	2	2		<p><b>Lesson 2: Organisation of dangerous goods transportation.</b></p> <ol style="list-style-type: none"> <li>1. DSTU 4500-3:2008: terms, designations of dangerous goods and general requirements for dangerous goods.</li> <li>2. Classification of dangerous goods (class, subclass, group)</li> <li>3. Classification code of the dangerous goods.</li> </ol>
23.	Group Session	4	4		<p><b>Lesson 3: Indicators and criteria for classifying dangerous goods.</b></p> <ol style="list-style-type: none"> <li>1. Indicators and criteria for classifying dangerous goods by hazard class.</li> <li>2. Classification tables and diagrams of dangerous goods by hazard class.</li> </ol>
24.	Group Session	7	4	3	<p><b>Lesson 4. Degrees of cargo hazard.</b></p> <ol style="list-style-type: none"> <li>1. The procedure for determining the main degree of danger of the cargo.</li> <li>2. The procedure for determining the additional degree of danger of the cargo.</li> </ol> <p><i>Independent work:</i> Degrees of cargo hazard.</p>
25.	Group Session	2	2		<p><b>Lesson 5. Rules for the transport of dangerous goods.</b></p> <ol style="list-style-type: none"> <li>1. General provisions.</li> <li>2. The powers of the Ministry of Internal Affairs and the National Police in relation to the transport of dangerous goods.</li> <li>3. Supervision and control over the road transport of dangerous goods</li> </ol>
26.	Group Session	4	2	2	<p><b>Lesson 6. Procedure for issuing and processing a certificate of authorisation of vehicles for the carriage of certain dangerous goods</b></p> <ol style="list-style-type: none"> <li>1. Procedure for issuing a certificate of approval of vehicles for the carriage of certain dangerous goods</li> <li>2. Procedure for issuing a certificate of approval of vehicles for the carriage of certain dangerous goods</li> </ol> <p><i>Independent work:</i> Procedure for issuing and processing a certificate of approval of vehicles for the carriage of certain dangerous goods</p>
27.	Group Session	2	2		<p><b>Lesson 7. Organisation of transport of explosive cargo in the Armed Forces of Ukraine.</b></p> <ol style="list-style-type: none"> <li>1. Peculiarities of organising the transport of explosive cargo.</li> </ol>

					2. Transportation of missiles and ammunition. 3. Safety measures for the transport of explosive cargo.
28.	Group Session	2	2		<b>Lesson 8. Organisation of transport of weapons and military equipment .</b> 1. Procedure for the transport of weapons and military equipment. 2. Requirements for the transport of military equipment and weapons. 3. Safety measures for the transport of explosive cargo.
29.	Group Session	6	2	4	<b>Lesson 9. Organisation of liquid fuels and lubricants transportation .</b> 1. The procedure for transporting liquid fuels and lubricants. 2. Vehicle equipment for the transport of liquid fuels and lubricants. 3. Safety measures for the transport of liquid fuels and lubricants. <i>Independent work:</i> Organisation of transport of liquid fuels and lubricants .
30.	Group Session	2	2		<b>Lesson 10. Organisation of bulk cargo transportation.</b> 1. Features of transporting non-metallic materials . 2. Features of quarry transport .
31.	Group Session	6	2	4	<b>Lesson 11: Peculiarities of liquid bulk cargo transportation.</b> 1. Packaging and requirements for vehicles for the carriage of liquid bulk cargo. 2. Classification of liquid bulk cargoes and characteristics of their transportation conditions. <i>Independent work:</i> <b>Features of the organisation of liquid bulk cargo transportation.</b>
32.	Group Session	4	2	2	<b>Lesson 12. Characteristics of the main means of transportation of military-technical equipment in the Armed Forces of Ukraine.</b> 1. Classification of the main means of transportation of military-technical property in the Armed Forces of Ukraine. 2. Capabilities of the main means of transportation of military and technical equipment in the Armed Forces of Ukraine. <i>Independent work:</i> Characteristics of the main means of transportation of military-technical property in the Armed Forces of Ukraine.
<b>Total for the topic</b>		<b>45</b>	<b>30</b>	<b>15</b>	
<b>Section 2. Organisation of transportations of motor units (subdivisions) by means of transport.</b>					
<b>Topic 3: Organisation of military transport by rail, sea (river) and air.</b>					
34.	Lecture	2	2		<b>Lesson 1: Transporting a military vehicle by water and air.</b> 1. Peculiarities of transporting a motor military unit by water transport. 2. Peculiarities of transporting a military vehicle by air. 3. Security measures for the transport of a motorised military unit by water and air transport
35.	Group Session	4	4		<b>Lesson 2: Transporting a road military unit by rail.</b> 1. General provisions for the organisation of transportation of automobile units (subdivisions) by rail.

					<p>2. The work of the commander and staff in organising the transportation of a motorised military unit by rail.</p> <p>3. Procedure for determining the required number of wagons (platforms) for the transport of automotive units (subdivisions) by rail...</p>
36.	Group Session	2	2		<p><b>Lesson 3: Officials of the daily routine of a military echelon</b></p> <p>1.. Officials of the military echelon and their duties.</p> <p>2. Composition and duties of the daily guard and the guard of the military echelon.</p> <p>3. Actions of military echelon officials during transportation.</p>
37.	Group Session	2	2		<p><b>Lesson 4. Combat support of a military echelon.</b></p> <p>1. The essence and content of combat support of a military echelon.</p> <p>2. Warning and control signals of the military echelon.</p> <p>3. Disguise units in the area of loading and unloading.</p> <p>4. Defence of a military echelon.</p>
38.	Group Session	6	2	4	<p><b>Lesson 5. Equipment and sequence of loading a military echelon.</b></p> <p>1. Military equipment for wagons and loading and unloading facilities.</p> <p>2. The order of loading and methods of securing military equipment and weapons on platforms and in covered wagons.</p> <p>3. Fastening devices and materials for fastening equipment and property of the military echelon.</p> <p>4. Safety measures during loading and unloading operations.</p> <p><i>Independent work:</i> Equipment and loading sequence of a military echelon.</p>
39.	Practical Session	6	6		<p><b>Lesson 6. Loading samples of weapons and military equipment into a military echelon.</b></p> <p>1. Calculation of material resources for mounting weapons and military equipment in a military echelon.</p> <p>2. Performing work on loading and fastening samples of weapons, military equipment and military-technical property.</p> <p>3. Maintenance of machines during transport.</p>
<b>Total for the topic</b>		<b>22</b>	<b>18</b>	<b>4</b>	
<b>Section 3. The work of the commander of a motor vehicle unit in organising and carrying out military road transport.</b>					
<b>Topic 4. Planning and preparation of military road transport</b>					
40.	Lecture	2	2		<p><b>Lesson 1. Location of automotive units (subdivisions) on site.</b></p> <p>1. Operational and tactical requirements for the location of the vehicle unit on site...</p> <p>2. Responsibilities of the commander and staff for organising the location on the ground.</p> <p>3. Variants of battle order schemes when positioned on the ground.</p>
41.	Group Session	2	2		<p><b>Lesson 2: Protection and defence of a motor vehicle unit (subdivision) when located on site.</b></p> <p>1. Responsibilities of the commander for the organisation of security and defence.</p> <p>2. Calculation of security and defence forces and means.</p>

					3. 3. Organisation of security and defence.
42.	Group Session	4	2	2	<b>Lesson 3: Standards and calculation methods for transport planning.</b> 1. Regulations on transport planning. 2. Methodology of transportation calculations.
43.	Group Session	2	2		<b>Lesson 4. Actions of road units (convoys) during transportation.</b> 1. Convoys, their composition, formation and construction. 2. Preparing for the transport. 3. Variants of column construction schemes.
44.	Practical Session	2	2		<b>Lesson 5. Calculation of transportations</b> 1. Calculation of transportation by a separate road unit. 2. Development of schemes for the construction of a convoy (columns).
45.	Group Session	2	2		<b>Lesson 6. The decision of the commander of a motorized military unit (separate motorized unit) to march (convoy) on its own</b> 1. The procedure for making a decision to march (column) on its own. 2. The commander's card for the march (column) on his own. 3. Setting the task of making a march (column) on its own.
46.	Group Session	4	2	2	<b>Lesson 7. The marching order of a motorised military unit on the march.</b> 1. Building a marching order of a motorised unit for a march. 2. Marching of a motorised military unit (column) on its own. 3. Movement of motorised military units on their own. <i>Independent work:</i> The marching order of a motorised military unit on the march.
47.	Group Session	2	2		<b>Exercise 8. Duties of personnel on the march.</b> 1. Duties of the column commander. 3. Duties of the senior driver. 2. Duties of the personnel of the column(s).
48.	Group Session	2	2		<b>Lesson 9. Loading and unloading of convoys.</b> 1. Duties of the commander and personnel during loading (unloading) of convoys. 2. Duties of the commander upon arrival of the column in the area. 3. Equipment of the waiting area and the area and loading (unloading) points
49.	Group Session	2	2		<b>Lesson 10. Measures to control and preserve cargo.</b> 1. Cover letter for the cargo. 2. Responsibilities of the driver and the receiver for the control and safety of the cargo. 3. Requirements for cargo stowage.

<b>Total for the topic</b>	<b>24</b>	<b>20</b>	<b>4</b>		
<b>Topic 5. Management of military road transport</b>					
50.	Lecture	2	2		<b>Lesson 1. Management of the automotive department (separate automotive unit).</b> 1. The essence and content of management. 2. Organisation of the dispatch service in a motor vehicle military unit.
51.	Group Session	2	2		<b>Lesson 2. The work of the commander and staff of a motorized military unit (separate motorized unit).</b> 1. Source documents for road transport planning. 2. The sequence and content of the commander's work. 3. Sequence and content of the work of the Chief of Staff.
52.	Group Session	2	2		<b>Lesson 3. Provision of military road transport.</b> 1. Logistics support. 2. Medical support.
53.	Practical Session	2	2		<b>Lesson 4 Working card of the commander of a motor vehicle military unit (separate motor vehicle unit).</b> 1. General setting and partial setting. 2. Decision of the commander and chief of staff.
54.	Practical Session	4	2	2	<b>Lesson 5. The work of chiefs of service of a motor vehicle military unit (separate motor vehicle unit).</b> 1. Sequence and content of the work of the chief of logistics of a motor vehicle military unit. 2. Calculations and proposals of service chiefs in the commander's decision.
55.	Practical Session	2	2		<b>Lesson 6. Formalised documents of the columns and the dispatch service.</b> 1. Report. 2. Documentation of the dispatching service. 3. Documentation of the convoy leader... 4. The procedure for documenting cargo.
56.	Practical Session	6	2	4	<b>Lesson 7. Methods of organising and conducting military road transport training.</b> 1. The procedure for preparing for classes. 2. Methods of conducting group and practical classes.
<b>Total for the topic</b>	<b>18</b>	<b>14</b>	<b>4</b>		
<b>Control measures</b>	<b>4</b>	<b>4</b>			<b>Credit</b>
<b>Total for the educational component</b>	<b>180</b>	<b>126</b>	<b>54</b>		

## 4.18 AF 2. "Organisation of Operation of Military Vehicles"

### **The general objective of the educational program component:**

The purpose of teaching the discipline "Organisation of Military Vehicle Operation" is to prepare a tactical officer who has the necessary knowledge and skills in organising the operation of motor vehicles as a function of the activities of officials in order to perform tasks in planning and conducting operational and technical activities.

As a result of studying the discipline, the student should

*to know:*

the procedure for acceptance of the OJSC and its commissioning;

organising the departmental registration of OJSC

organisation of maintenance of the Company's facilities at the PMD and in the field using stationary and mobile maintenance and repair equipment;

general provisions on the organisation of storage by OJSCs;

organising the transport of the Company by various means of transport;

organisation of the use of the OJSC and the procedure for its accounting;

organisation of the park service;

the procedure for supplying military units of AT and AM.

*be able to:*

organise events related to the acceptance and commissioning of the OJSC;

monitor the technical condition and operation of machines;

keep records of OJSC and automotive property;

take measures to prepare the unit for rail transport

keep records of equipment and report on the use of OAOs in the unit.

### **Organisational and methodological guidelines:**

Classes in the discipline should be conducted to acquire theoretical knowledge and practical skills in the procedure for acceptance, commissioning, organisation of maintenance of OJSC, its maintenance in different conditions and organisation of accounting.

Theoretical concepts are practiced in the classroom with the use of teaching aids (posters, diagrams, models, training films), while practical issues are addressed during practical classes using specialised classrooms and field training facilities.

### **Logistics:**

Classes are held in specialised classrooms, training complexes, laboratories, training grounds and campuses, training fields, etc.

**Information and methodological support:**

1. DSTU V 3576-98. Operation and repair. Terms and definitions. - Kyiv: Standards Publishing House, 1998.
2. DSTU 2860-94. Reliability of equipment. Terms and definitions. - K.: Standards Publishing House, 1998.
3. Order of the Minister of Defence of Ukraine No. 440-2018 on Approval of the Guidelines for Accounting for Military Property in the Armed Forces of Ukraine.
4. Methodological recommendations for determining the operating time (service life) for the repair of automotive equipment and automotive property. Arming of the Armed Forces of Ukraine. 2017.
5. Order of the Ministry of Defence of Ukraine No. 678 of 12.12.2016 on approval of the Instruction on the use of motor vehicles in the Ministry of Defence and the Armed Forces of Ukraine.
6. Resolution of the Cabinet of Ministers of Ukraine No. 137 dated 30.01.2012 "On Approval of the Procedure for Mandatory Technical Control and Scope of Inspection of Vehicles...
7. Order of the Minister of Defence of Ukraine No. 300 of 16.07.97 on approval of the Regulation on the military (ship) economy of the Armed Forces of Ukraine.
8. Appendix 2 to the Order of the Minister of Defence of Ukraine of 06.01.1999 No. \*1. "Norms of consumption of fuel, oils, greases and special liquids during operation, repair and conservation of military equipment and weapons of the Armed Forces of Ukraine".
9. Order of the Minister of Defence of Ukraine No. 219 of 01.07.02 on approval of the Guidelines for the operation of motor vehicles in the Armed Forces of Ukraine for peacetime.
10. Order of the Ministry of Defence of Ukraine No. 581 of 05.03.2004 "On Approval of the Instruction on Inspection and Condition of Weapons and Military Equipment in the Armed Forces of Ukraine".
11. Order of the Minister of Defence of Ukraine No. 714 dated 05.12.2006 "On Approval of Amendments to the Manual on Operation of Motor Vehicles in the Armed Forces of Ukraine"
12. Order of the Minister of Defence of Ukraine No. 184 of 10.04.06 on approval of the Rules for the use of number plates, installation (application) of distinctive marks, colour schemes, inscriptions and special signals on vehicles of the Armed Forces of Ukraine.
13. Maintenance and service of accumulator batteries, equipment of accumulator military units. Recommendations. - K.: Varta, 1996.
14. Storage of Motor Vehicles and Property in the Armed Forces of Ukraine. Guidelines. - K.: Varta, 1999.
15. Driving course (KV-2019) dated 19.11.2019, approved by the Chief of the Main Department of the General Staff of the Armed Forces of Ukraine.
16. Order of the Ministry of Defence of Ukraine dated 29.03.2021 No. 81 "On Approval of the Procedure for Writing Off Military Property in the Armed Forces of Ukraine and the State Special Transport Service".
17. MELNIK V.V., MELENCHUK V.M., CHERESHENKO B.V. Organisation and technical means of evacuation.

Study guide. - VA, 2019.

18. Nikishin V.A., Kuprinenko O.M., Berezensky R.V., Melenchuk V.M. Fundamentals of Operation of Military Vehicles: Study guide. - Odesa: Military Academy, 2014.

19. Order of the Ministry of Defence of Ukraine No. 595 dated 05.09.2013 "On Approval of the Regulation on Military Transportation by Rail, Sea, River and Air".

20. Order of the Ministry of Defence of Ukraine dated 29.03.2021 No. 81 "On Approval of the Procedure for Write-Off of Military Property in the Armed Forces of Ukraine and the State Special Transport Service".

21.

### **Auxiliary**

1. Doroshenko O.F. Operation of military motor vehicles. Part 1: Study guide - L.: LISV, 2006.

2. Doroshenko O.F. Operation of military motor vehicles. Part 2. Study guide. - L.: LISV, 2006.

3. Doroshenko O.F. Operation of military motor vehicles. Part 3. Study guide. - L.: LIVS, 2007.

4. Doroshenko O.F. Operation of military motor vehicles. Part 4. Study guide. - L.: LISV, 2007.

5. Fornalchyk E.Y., Olishevia M.S., Mastikash O.L., Pelyo R.A. Technical operation and reliability of cars. Textbook - L.: Afisha, 2004.

6. Guidelines on logistical support of troops (forces). Draft. - K.: General Staff of the Armed Forces of Ukraine, 2008.

7. Collection of technical training program for drivers (driver mechanics) in the Armed Forces of Ukraine. Kyiv. Military publishing house "Varta", 1996.

8. Semon B.Y., Marchuk V.E., Ivanov V.I., Berdnik V.V., Kharchenko V.V., Shulga I.F., Koskov Y.M., Saliy A.G., Shchepotev O.I. Organisation of operation of automotive and electric and gas aviation equipment: Textbook. - K.: NAOU, 2004. - 290 c.

**The names of the topics and the distribution of class time by type of class:**

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Title of the topic and study questions.
			Audit classes	Independent work	
1	2	3	4	5	6
<b>Topic 1: General provisions on the organisation of the operation of an OJSC.</b>					
1.	Practical Session	6	4	2	<b>Lesson 1: The procedure for documenting the commissioning of a JSC.</b> 1. Procedure for documenting the acceptance of the OJSC in a military unit. 2. Procedure for documenting the commissioning of the OJSC in a military unit. <i>Independent work:</i> Number plates, identification and warning signs, inscriptions and markings. 1. General provisions on the use of number plates. 2. Range allocation, procedure for assigning number plates, accounting. 3. Identification marks and the procedure for their use and application.
2.	Group Session	4	4		<b>Lesson 2: Departmental registration, organisation and procedure of mandatory technical control. Running-in of OJSC.</b> 1. The procedure for registration (re-registration) and deregistration of vehicles. 2. The procedure for mandatory technical control. 3. 3. Running-in of the OJSC.
<b>Total by topic</b>		<b>10</b>	<b>8</b>	<b>2</b>	
<b>Topic 2. Organisation of maintenance in a military unit.</b>					
3.	Group Session	4	4		<b>Lesson 1: Organisation of maintenance of OJSC.</b> 1. General provisions. 2. Maintenance planning. 3. Organisation and procedure for seasonal maintenance. 4. Peculiarities of organisation of maintenance of military vehicles during hostilities.

4.	Group Session	4	2	2	<p><b>Lesson 2: Planning and conducting a park day.</b></p> <ol style="list-style-type: none"> <li>1. Purpose and objectives of the park day.</li> <li>2. Planning and preparation of the park day.</li> <li>3. Comprehensive provision of a park day.</li> <li>4. Procedure for holding a park day.</li> </ol> <p><i>Independent work:</i> Organising seasonal maintenance in a military unit.</p> <ol style="list-style-type: none"> <li>1. List of documentation for seasonal maintenance of the unit and the procedure for its execution.</li> <li>2. The list of documentation for seasonal maintenance of a military unit and the procedure for its execution.</li> </ol>
<b>Total by topic</b>		<b>8</b>	<b>6</b>	<b>2</b>	
<b>Topic 3: Basic provisions and requirements for vehicle fleets.</b>					
5.	Group Session	4	4		<p><b>Lesson 1: Internal order in the park.</b></p> <ol style="list-style-type: none"> <li>1. Dividing the park territory into plots, assigning them to subdivisions. Numbering of buildings, gates and park equipment with signs.</li> <li>2. Organisation of storage of equipment, batteries, and spare parts.</li> <li>3. Organisation of maintenance and repair.</li> <li>4. Organise briefings for drivers and supervisors.</li> </ol>
6.	Practical Session	6	4	2	<p><b>Lesson 2: Planning the use of OJSC.</b></p> <ol style="list-style-type: none"> <li>1. Planning the use of the OJSC for a month, a day.</li> <li>2. Organising the exit and return of vehicles to the park.</li> <li>3. Organisation of the work of the head of the CTU.</li> </ol> <p><i>Independent work:</i> Planning for the use of a VAT</p> <ol style="list-style-type: none"> <li>1. The procedure for admission to the park.</li> <li>2. Features of the equipment of field parks.</li> </ol>
<b>Total by topic</b>		<b>10</b>	<b>8</b>	<b>2</b>	
<b>Topic 4. Operation of machines in difficult conditions.</b>					
7.	Group Session	2	2		<p><b>Lesson 1. Operation of machines in difficult conditions. Means of ensuring the movement of machines at night.</b></p> <ol style="list-style-type: none"> <li>1. Ensuring the operation of the OJSC in off-road conditions...</li> <li>2. Peculiarities of operation of motor vehicles in the course of hostilities.</li> <li>3. Requirements for light camouflage of machines, purpose, characteristics and use of light camouflage equipment and night vision devices.</li> </ol>
8.	Practical Session	4	4		<p><b>Lesson 2: Procedure for the use of camouflage equipment and night vision devices in the operation of the OJSC.</b></p>

					<p>1. The use of light camouflage equipment and night vision devices in the operation of OJSC.</p> <p>2. The use of light camouflage devices and night vision devices when moving convoys of the military.</p>
<b>Total by topic</b>		<b>6</b>	<b>6</b>		
<b>Topic 5. Transport of machines.</b>					
9.	Group Session	2	2		<p><b>Lesson 1: General provisions on the organisation of transport of military vehicles.</b></p> <p>1. Organisation and provision of military transport.</p> <p>2. Organising the work of the military unit's command in preparation for transportation.</p> <p>3. General provisions for transportation by rail.</p>
10.	Practical Session	8	6	2	<p><b>Lesson 2: Transportation of OJSC by rail.</b></p> <p>1. Loading and placing equipment on a rolling stock.</p> <p>2. Materials and devices for loading and securing wheeled and tracked vehicles.</p> <p>3. Practical implementation of calculations.</p> <p>4. Practical loading and securing of weapons and military equipment on the platform using the UBC.</p> <p><i>Independent work:</i> Features of transporting machines by air and sea (river) transport.</p> <p>1. Features of transportation by sea (river) transport.</p> <p>2. Peculiarities of transportation by air.</p>
<b>Total by topic</b>		<b>10</b>	<b>8</b>	<b>2</b>	
<b>Topic 6: Organization of storage of OJSC.</b>					
11.	Group Session	4	2	2	<p><b>Lesson 1: Organisation of storage of military vehicles.</b></p> <p>1. The procedure for preparing an OJSC for a merger.</p> <p>2. The procedure for keeping OJSC in storage.</p> <p><i>Independent operation:</i> Preparing the machines for use after storage.</p> <p>1. Organisation of work.</p> <p>2. Measures to reduce the preparation of machines for use.</p> <p>3. Technological process of removing machines from storage.</p>
<b>Total by topic</b>		<b>4</b>	<b>2</b>	<b>2</b>	
<b>Topic 7. Accounting and reporting for the use of military vehicles.</b>					
12.	Group Session	4	2	2	<p><b>Lesson 1: Procedure for applying fuel and lubricants consumption rates in the operation of an OJSC.</b></p> <p>1. The procedure for applying fuel consumption.</p> <p>2. The procedure for applying oil and lubricant consumption rates.</p>

					3. Procedure for applying consumption rates of special liquids. <i>Independent work:</i> Procedure for applying fuel and lubricants consumption rates during the operation of a vehicle. 1. The procedure for applying fuel consumption. 2. The procedure for applying oil and lubricant consumption rates. 3. The procedure for applying the consumption rates of special liquids.
13.	Practical Session	4	4		<b>Lesson 2: Procedure for accounting and controlling the use of OJSC.</b> 1. Purpose of accounting and reporting. 2. Handout and roadmap. 3. A book for recording machine operation and fuel consumption. 4. Reports on the presence and movement of vehicles (fuel and lubricants).
<b>Total by topic</b>		<b>8</b>	<b>6</b>	<b>2</b>	
<b>Topic 8: Procedure for providing automotive equipment and automotive property.</b>					
14.	Group Session	4	2		<b>Lesson 1: Procedure for providing military units with automotive equipment and automotive property.</b> 1. The procedure for supplying a military unit with motor vehicles and property. 2. Procedure for receiving automotive property from warehouses and unit depots 3. Categorisation of motor vehicles and property.
			2		<i>Independent work:</i> The procedure for providing military units with motor vehicles and motor vehicle property. 1. The procedure for supplying a military unit with motor vehicles and property. 2. Procedure for receiving automotive property from warehouses and unit depots 3. Categorisation of motor vehicles and property.
15.	Practical Session	4	4		<b>Lesson 2: Procedure for determining the service life (service life) of automotive equipment and automotive property.</b> 1. Operating hours of the OJSC before repair (write-off). 2. Storage and operation periods of batteries, the procedure for writing off batteries. 3. Operating standards for tyres and awnings. Features of tyre and awning write-off.
<b>Total for the topic</b>		<b>8</b>	<b>6</b>	<b>2</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>66</b>	<b>52</b>	<b>14</b>	

### 4.19 AF 3. "Organisation of repair of military motor vehicles"

#### **General objective of the educational program component:**

The purpose of teaching the discipline "Organisation of repair of military automotive equipment" is to prepare a tactical officer who has the necessary knowledge and skills to organise the operation of maintenance and repair of automotive equipment as a function of the activities of officials in order to perform tasks in planning and conducting maintenance and repair activities.

As a result of studying the discipline, the student should

*to know:*

overall organisation of the recovery of OJSCs in peacetime and wartime;

structure and capabilities of repair and evacuation units;

operating standards for OJSCs and automotive property before repair and write-off;

methods of organising the repair of OJSC;

the procedure for handing over machines (units) for repair and receiving them back from repair;

purpose, key characteristics and capabilities of the company's repair shops;

basic provisions for organising the evacuation of the company;

methods of evacuation operations.

*be able to:*

organise technical reconnaissance, evacuation and repair of faulty and damaged vehicles in various types of combat;

keep records and write off automotive property spent on repairs of the company;

Prepare (deploy) for use mobile means of maintenance, repair and evacuation, depending on the tasks assigned to the unit.

#### **Organisational and methodological guidelines:**

Classes in the discipline should be conducted to acquire theoretical knowledge and practical skills in the procedure for acceptance, commissioning, organisation of maintenance of OJSC, its maintenance in various conditions and organisation of accounting.

Theoretical concepts are practiced in the classroom with the use of teaching aids (posters, diagrams, models, training films), while practical issues are addressed during practical classes using specialised classrooms and field training facilities.

### **Logistics:**

Classes are held in specialised classrooms, training complexes, laboratories, training grounds and campuses, training fields, etc.

### **Information and methodological support:**

1. DSTU V 3576-98. Operation and repair. Terms and definitions. - Kyiv: Standards Publishing House, 1998.
2. DSTU 2860-94. Reliability of equipment. Terms and definitions. - K.: Standards Publishing House, 1998.
3. Order of the Minister of Defence of Ukraine No. 440-2018 on Approval of the Guidelines for Accounting for Military Property in the Armed Forces of Ukraine.
4. Methodological recommendations for determining the operating time (service life) for the repair of automotive equipment and automotive property. Arming of the Armed Forces of Ukraine. 2017.
5. Order of the Ministry of Defence of Ukraine No. 678 of 12.12.2016 on approval of the Instruction on the use of motor vehicles in the Ministry of Defence and the Armed Forces of Ukraine.
6. Resolution of the Cabinet of Ministers of Ukraine No. 1137 dated 30.01.2012 "On Approval of the Procedure for Mandatory Technical Control and Scope of Inspection of Technical Condition of Vehicles"...
7. Order of the Minister of Defence of Ukraine No. 300 of 16.07.97 on approval of the Regulation on the military (ship) economy of the Armed Forces of Ukraine.
8. Appendix 2 to the Order of the Minister of Defence of Ukraine of 06.01.1999 No. \*1. "Norms of consumption of fuel, oils, greases and special liquids during operation, repair and conservation of military equipment and weapons of the Armed Forces of Ukraine".
9. Order of the Minister of Defence of Ukraine No. 219 of 01.07.02 on approval of the Guidelines for the operation of motor vehicles in the Armed Forces of Ukraine for peacetime.
10. Order of the Ministry of Defence of Ukraine No. 581 of 05.03.2004 "On Approval of the Instruction on Inspection and Condition of Weapons and Military Equipment in the Armed Forces of Ukraine".
11. Order of the Minister of Defence of Ukraine No. 714 dated 05.12.2006 "On Approval of Amendments to the Manual on Operation of Motor Vehicles in the Armed Forces of Ukraine"
12. Order of the Minister of Defence of Ukraine No. 184 of 10.04.06 on approval of the Rules for the use of number plates, installation (application) of distinctive marks, colour schemes, inscriptions and special signals on vehicles of the Armed Forces of Ukraine.
13. Maintenance and service of accumulator batteries, equipment of accumulator military units.

Recommendations. - K.: Varta, 1996.

14. Storage of Motor Vehicles and Property in the Armed Forces of Ukraine. Guidelines. - K.: Varta, 1999.
15. Driving course (KV-2019) dated 19.11.2019, approved by the Chief of the Main Department of the General Staff of the Armed Forces of Ukraine.
16. Order of the Ministry of Defence of Ukraine dated 29.03.2021 No. 81 "On Approval of the Procedure for Writing Off Military Property in the Armed Forces of Ukraine and the State Special Transport Service".
17. Nikishin V.A., Kuprinenko O.M., Berezensky R.V., Melenchuk V.M. Fundamentals of operation of military automotive equipment: Study guide. - Odesa: Military Academy, 2014.
18. Order of the Ministry of Defence of Ukraine No. 595 dated 05.09.2013 "On Approval of the Regulation on Military Transportation by Rail, Sea, River and Air".
19. Melnyk V.V., Melenchuk V.M., Cheriushenko B.V. Organisation and technical means of evacuation. Study guide. - VA, 2019.

### Titles of topics and distribution of study time by type of study session

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Title of the topic and study questions.
			Audit classes	Independent work	
1	2	3	2	5	6
<b>Topic 1: Basic provisions for the repair of military vehicles.</b>					
1.	Group Session	4	2	2	<p><b>Lesson 1: The system and types of repair of vehicles and units.</b></p> <ol style="list-style-type: none"> <li>1. Machine repair system.</li> <li>2. Types of repair of machines and units</li> <li>3. Principles of machine repair organisation.</li> </ol> <p><i>Self-preparation:</i> Review the material covered:</p> <ol style="list-style-type: none"> <li>1. Machine repair system.</li> <li>2. Types of repair of machines and units</li> <li>3. Principles of machine repair organisation.</li> </ol> <p><b>Lesson 2: Service life (service life) of the vehicle before repair and write-off.</b></p> <ol style="list-style-type: none"> <li>1. General requirements for the application of service life (service life) standards for motor vehicles.</li> <li>2. Operating time standards before repair or write-off of automotive equipment during intensive use.</li> <li>3. Service life before repair and write-off of motor vehicles that are used with limited resource consumption or are in storage.</li> </ol>
2.	Group Session	4	2	2	<ol style="list-style-type: none"> <li>4. Operating standards (service lives) before automotive property is written off</li> </ol> <p><i>Self-preparation:</i> Review the material covered:</p> <ol style="list-style-type: none"> <li>1. General requirements for the application of service life (service life) standards for motor vehicles.</li> <li>2. Operating time standards before repair or write-off of automotive equipment during intensive use.</li> <li>3. Operating standards (service lives) before automotive property is written off</li> </ol>

3.	Group Session	6	4	2	<p><b>Lesson 3. Methods of repairing OJSC and methods of organising repair work.</b></p> <p>1. Methods of repair of OJSC. Methods of organising repair work.  2. Organisation of labour protection and safety measures during repair works.  3. Responsibilities of occupational safety and health officials.</p> <p><i>Self-preparation:</i> Review the material covered:  1. Responsibilities of occupational health and safety officials.</p>
<b>Total by topic</b>		<b>14</b>	<b>8</b>	<b>6</b>	
<b>Topic 2. Procedure for handing over (receiving) machines for repair.</b>					
4.	Group Session	4	2	2	<p><b>Lesson 1: The procedure for submitting machines for repair.</b></p> <p>1. General provisions.  2. Technical requirements for the preparation and delivery of machines for repair.  3. Procedure for handing over machines for current and medium repairs.  4. Procedure for handing over machines for overhaul.</p> <p><i>Self-preparation:</i> Review the material covered:  1. General provisions.  2. Procedure for handing over machines for current and medium repairs.  3. Procedure for handing over machines for overhaul.</p>
5.	Group Session	4	2	2	<p><b>Lesson 2: The procedure for receiving machines after repair.</b></p> <p>1. Receiving vehicles after repair from the repair unit of your military unit.  2. Receiving the car from the repair unit (workshop) of the connection.  3. The procedure for receiving machines and units from repair plants.  4. The procedure for filing complaints in case of poor quality repairs.</p> <p><i>Self-preparation:</i> Review the material covered:  1. Procedure for receiving machines and units from repair plants.  2. The procedure for filing complaints in case of poor quality repairs.</p>
6.	Practical Session	2	2		<p><b>Lesson 3: The procedure for receiving machines after repair.</b></p> <p>1. Receiving vehicles after repair from the repair unit of your military unit.  2. Receiving the car from the repair unit (workshop) of the connection.  3. The procedure for receiving machines and units from repair plants.  4. The procedure for filing complaints in case of poor quality repairs.</p>
7.	<b>Total by topic</b>	<b>10</b>	<b>6</b>	<b>4</b>	
<b>Topic 3. Mobile automotive repair shops of a repair platoon.</b>					

8.	Group Session	4	2	2	<p><b>Lesson 1: Organisational and staffing structure of the ATO repair platoon, composition and production facilities opportunities .</b></p> <p>1. Purpose, characteristics, composition and production capabilities of repair platoon workshops. 2. Basic tactical and technical data of repair platoon workshops. <i>Self-preparation:</i> Review the material covered: 1. Purpose, characteristics, composition and production capabilities of repair platoon workshops.</p>
9.	Practical Session	2	2		<p><b>Lesson 2. Repair workshops MRS-AT-M1, MRM-M1</b></p> <p>1. Purpose, characteristics, composition and production capabilities of the MRS-AT-M1 workshop. 2. Purpose, characteristics, composition and production capabilities of the MRM-M1 workshop. 3. Deployment procedure and equipment specifications.</p>
10.	Practical Session	2	2		<p><b>Lesson 3: TA-5, ESB-4VZ, ADB-305 transport vehicle.</b></p> <p>1. Purpose, characteristics, composition and production capabilities of the TA-5 transport vehicle. 2. Purpose, characteristics, composition and production capabilities of the ESB-4VZ. 3. Purpose and characteristics of the ADB-305 welding unit. 4. Deployment procedure and equipment specifications.</p>
<b>Total by topic</b>		<b>8</b>	<b>6</b>	<b>2</b>	
<b>Topic 4. Basic provisions for the evacuation of OJSC.</b>					
11.	Lecture	6	4	2	<p><b>Lesson 1: Basic provisions for the evacuation of OJSC.</b></p> <p>1. Basic provisions for the evacuation of OJSC 2. Types and characteristics of stuck evacuation objects. 3. Classification of evacuation objects by transportability categories. 4. Evacuation of vehicles from the battlefield. <i>Self-preparation:</i> Review the material covered: 1. Basic provisions for the evacuation of OJSC 2. Types and characteristics of stuck evacuation objects. 3. Classification of evacuation objects by transportability categories.</p>

12.	Group Session	4	2	2	<p><b>Lesson 2. Methods of evacuation and recovery of stuck and sunken vehicles.</b></p> <p>1. Methods of evacuation and recovery of stuck and sunken vehicles.  2. Means of evacuation of the Company and their technical characteristics.  3. Means and methods of transporting damaged machines.</p> <p><i>Self-preparation:</i> Review the material covered:  1. Methods of evacuation and recovery of stuck and sunken vehicles.  2. Means of evacuation of the Company and their technical characteristics.</p>
13.	Practical Session	4	4		<p><b>Lesson 3: Conducting evacuation operations</b></p> <p>1. Determine the location of the object, ways of approaching it, the scope and nature of the work  2. Prepare the means of evacuation and the facility for subsequent evacuation  3. Practical work on loading the object onto an evacuation tractor.</p>
14.	Practical Session	6	6		<p><b>Lesson 4. Conducting evacuation operations.</b></p> <p>1. Extracting (self-extracting) objects.  2. Pulling objects with tractors using engine traction  3. Pulling objects with tractor winches  4. Extraction of objects using lifting devices of evacuation tractors</p>
<b>Total for the topic</b>		<b>20</b>	<b>16</b>	<b>4</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>54</b>	<b>38</b>	<b>16</b>	

## 4.20 BC 4. "Cars"

### **General objective of the educational program component:**

The purpose of teaching the discipline "Automobiles" is to prepare a technically competent tactical officer with in-depth knowledge of the structure of the chassis of automotive vehicles, the main technical characteristics and principles of operation of the mechanisms of the chassis of automotive vehicles and is able to analyse processes in the components and assemblies of automotive vehicles.

As a result of studying the discipline, the student should

*to know:*

chassis structure of automotive vehicles;

basic technical characteristics and principles of operation of automotive chassis mechanisms;

processes that take place in the components and assemblies of automotive equipment;

methods of diagnosing breakdowns and malfunctions that may occur during the operation of automotive equipment;

the procedure for carrying out technological actions to ensure the correct operation of automotive equipment;

*be able to:*

apply the acquired knowledge and understanding to analyse processes in automotive engineering;

detect breakdowns and malfunctions in the operation of automotive equipment;

organise repair activities to ensure the correct operation of automotive equipment.

### **Organisational and methodological guidelines:**

Classes in the discipline are conducted to acquire theoretical knowledge of the structure of automotive equipment, its individual components (assemblies) and understanding of the processes that occur in them. Students should acquire practical skills in detecting breakdowns and malfunctions in automotive equipment and be able to organise repair work.

Theoretical concepts are practiced in the classroom with the use of teaching aids (posters, diagrams, models, training films), while practical issues are addressed during practical classes using specialised classrooms and field training facilities.

### **Logistics:**

Classes are held in specialised classrooms, training complexes, laboratories, training grounds and campuses, training fields, etc.

### **Information and methodological support:**

1. Album of drawings of ZIL-131 (edited by A. Kachura) - Moscow: Kolos, 1975, 208 pp;
2. The ZIL-131 car and its modifications. KE, (under the general editorship of M. Sekirin) - M. VI, 1982, - 296 pp;
3. KrAZ-6322-02, KrAZ-63221-02, KrAZ-6446-02.KE, - K., 2008 - 264 p.;
4. URAL Diesel Cars (under the general editorship of A. Romanchenko) - M. Transport, 1984, - 208 pp;
5. Construction and maintenance of KAMAZ trucks (under the general editorship of E Unger) - M. Transport, 1976, - 391 p.;
6. GAZ-66-11 car and its modifications. KE, (under the general editorship of M. Sekirin) - M. VI, 1987, - 215 p.;
7. Cars UAZ-469 and UAZ-469B. KE, (under the general editorship of M. Sekirin) - M. VI, 1989, - 127 p.;
8. Automobiles. Fundamentals of construction, theory (under the general editorship of V. Sirota) - O. VA, 2016, - 355 p.;
9. Automobiles. Theory (under the general editorship of V. Sakhno) - O. VA, 2017, - 413 p.
10. On the Strategic Defence Bulletin of Ukraine: Decree of the President of Ukraine dated 06.06.2016 No. 240/2016 // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine.
11. White Book of the Anti-Terrorist Operation in the East of Ukraine (2014-2016) / [edited by I. Rusnak] - Kyiv: Ivan Chernyakhovsky National Defence University of Ukraine, 2017. 162 p.

No s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6

**Topic 1: Vehicle transmission**

1.	Lecture	3	2	1	<p><b>Lesson 1: Clutch of cars.</b></p> <p>1. Purpose, types and requirements for clutches.</p> <p>2. Schematic diagrams of friction clutches.</p> <p>3. 3. Clutch control actuator.</p> <p>4. The structure of the clutch.</p> <p>5. the principle of operation of the clutch.</p> <p><i>Independent work:</i> A hydraulic transformer.</p> <p>1. Features of the design and operation of the hydroelectric transformer.</p>
3.	Lecture	3	2	1	<p><b>Lesson 2: Car gearbox.</b></p> <p>1. Purpose, types and requirements for gearboxes.</p> <p>2. Design and operation of gearboxes</p> <p>3. Gearbox control mechanisms.</p> <p><i>Independent operation:</i> Continuously variable gearboxes for cars.</p> <p>1. Design features of a continuously variable transmission and its operation.</p>
4.	Group Session	3	2	1	<p><b>Lesson 3: Transmissions of cars.</b></p> <p>1. Design features of a three-speed gearbox.</p> <p>2. Design features of a two-shaft gearbox.</p> <p>3. Operation of gearboxes.</p> <p><i>Independent operation:</i> Features of gearbox control actuators.</p> <p>1. Features of gearbox control actuators and their operation.</p>

5	Lecture	3	2	1	<p><b>Lesson 4.</b> Transfer case of a car.</p> <ol style="list-style-type: none"> <li>1. Purpose, classification and requirements for the distribution box.</li> <li>2. General structure of the transfer case.</li> <li>3. Operation of the transfer case.</li> </ol> <p><i>Independent operation:</i> Control actuators for dispenser boxes.</p> <ol style="list-style-type: none"> <li>1. Design features of transfer case control drives</li> </ol>
6	Group Session	3	2	1	<p><b>Lesson 5.</b> Transfer case of a car with a differential.</p> <ol style="list-style-type: none"> <li>1. Design features.</li> <li>2. Operation of the distribution box.</li> </ol> <p><i>Independent operation:</i> Features of a mixed-drive dispenser box.</p> <ol style="list-style-type: none"> <li>1. Design features of the dispenser box and its operation.</li> </ol>
7	Lecture	3	2	1	<p><b>Lesson 6.</b> Driveline transmission of cars.</p> <ol style="list-style-type: none"> <li>1. Purpose, classification and requirements for universal joints.</li> <li>2. The general structure of the drive train.</li> <li>3. Operation of the drive train.</li> <li>4. Purpose and types of equal angular velocity joints.</li> <li>5. Features of equal angular velocity joints</li> </ol> <p><i>Independent operation:</i> Design features of multi-joint universal joint drives</p> <ol style="list-style-type: none"> <li>1. Design features of multi-jointed universal joint drives.</li> </ol>
8	Lecture	3	2	1	<p><b>Lesson 7.</b> Drive axles of cars.</p> <ol style="list-style-type: none"> <li>1. Purpose, classification and requirements for drive axles.</li> <li>2. Design features.</li> </ol> <p><i>Independent work:</i> Features of bridge crankcase structures.</p> <ol style="list-style-type: none"> <li>1. Features of bridge crankcase designs.</li> </ol>
9	Group Session	3	2	1	<p><b>Lesson 8.</b> The main transmission of cars.</p> <ol style="list-style-type: none"> <li>1. Purpose, classification and requirements for the main gear.</li> <li>2. Features of the structure of the main gears.</li> <li>3. Operation of the main gear.</li> </ol> <p><i>Independent operation:</i> Design features of two-stage final drives.</p> <ol style="list-style-type: none"> <li>1. Design features of two-stage final drives.</li> </ol>

10	Group Session	3	2	1	<p><b>Lesson 9.</b> Differential of cars.</p> <p>1. Purpose, classification and requirements for differentials.</p> <p>2. Design features and operating principle.</p> <p>3. Purpose, classification and requirements for half-axles.</p> <p>4. Design features.</p> <p><i>Independent work:</i> Features of the design of high-friction differentials.</p> <p>1. Design features and operation of high-friction differentials.</p>
<b>Total for the topic</b>		<b>27</b>	<b>18</b>	<b>9</b>	
<b>Topic 2. Chassis of cars</b>					
11.	Lecture	3	2	1	<p><b>Lesson 1:</b> Chassis of a car.</p> <p>1. Purpose and composition of the vehicle chassis</p> <p>2. Purpose, types and design of load-bearing systems.</p> <p><i>Independent work:</i> Features of spinal frame structures</p> <p>1. Features of the spinal frame construction.</p>
12.	Lecture	4	2	2	<p><b>Lesson 2:</b> Car suspension.</p> <p>1. Purpose, types and requirements for suspension.</p> <p>2. Suspension design.</p> <p><i>Independent operation:</i> Features of independent suspension designs.</p> <p>1. Features of independent suspension designs.</p>
13.	Group Session	3	2	1	<p><b>Lesson 3:</b> Elastic elements of suspensions, damping device.</p> <p>1. Purpose and classification of elastic elements.</p> <p>2. Design features of elastic elements.</p> <p>3. Purpose and classification of extinguishing devices.</p> <p>4. Design features of extinguishing devices.</p> <p><i>Independent work:</i> Design features of lever shock absorbers.</p> <p>1. Design features of lever shock absorbers</p>
14.	Group Session	3	2	1	<p><b>Lesson 4.</b> Guides and stabilising elements of suspensions.</p> <p>1. Purpose and classification of suspension guide elements</p> <p>2. Design features of the suspension guide elements.</p> <p>3. Purpose and classification of stabilising elements of suspensions</p> <p>4. Design features of stabilising elements of suspensions.</p> <p><i>Independent work:</i> Features of the Macpherson suspension design</p> <p>1. Features of the Macpherson suspension design</p>

15.	Lecture	3	2	1	<p><b>Lesson 5.</b> Wheels and tyres of a car.</p> <ol style="list-style-type: none"> <li>1. Purpose and types of wheels.</li> <li>2. Purpose, types and requirements for tyres.</li> <li>3. Wheel design.</li> <li>4. Diagonal and radial tyres.</li> <li>5. Tubular and tubeless tyres.</li> </ol> <p><i>Independent operation:</i> Features of wheel rim designs.</p> <ol style="list-style-type: none"> <li>1. Features of wheel disc designs</li> </ol>
	<b>Total for the topic</b>	<b>16</b>	<b>10</b>	<b>6</b>	
<b>Topic 3. Vehicle control systems</b>					
16	Lecture	3	2	1	<p><b>Lesson 1.</b> Steering a car</p> <ol style="list-style-type: none"> <li>1. Purpose, types and requirements for steering.</li> <li>2. Steering mechanism.</li> <li>3. Steering drive.</li> <li>4. The design of the steering system.</li> </ol> <p><i>Independent operation:</i> Injury-prone steering</p> <ol style="list-style-type: none"> <li>1. Features of the design of the steering wheel</li> </ol>
17	Group Session	3	2	1	<p><b>Lesson 2.</b> Steering mechanisms.</p> <ol style="list-style-type: none"> <li>1.</li> <li>2. Screw mechanisms</li> <li>3. Rail mechanisms</li> </ol> <p><i>Independent operation:</i> Power steering</p> <ol style="list-style-type: none"> <li>1. Purpose, types and requirements for power steering</li> </ol>
18	Practical Session	2	2		<p><b>Class 3:</b> Peculiarities of car steering structures.</p> <ol style="list-style-type: none"> <li>1. Features of truck steering designs.</li> <li>2. Features of passenger car steering structures.</li> </ol>
19	Lecture	3	2	1	<p><b>Lesson 4.</b> Braking systems of cars.</p> <ol style="list-style-type: none"> <li>1. Purpose, types and requirements for the braking system.</li> <li>2. Braking mechanisms.</li> <li>3. Brake actuators.</li> </ol> <p><i>Independent operation:</i> Features of anti-lock braking systems.</p> <ol style="list-style-type: none"> <li>1. Features of anti-lock braking systems.</li> </ol>
20	Group Session	4	2	2	<p><b>Lesson 5.</b> Braking mechanisms.</p> <ol style="list-style-type: none"> <li>1. Drum brake mechanisms.</li> </ol>

				2. Disc brake mechanisms. 3. Diagrams of double-circuit brake drives. 4. Features of pneumatic and hydraulic actuators.
				<i>Independent work:</i> Features of the design of unclamping devices of drum brake mechanisms.
<b>Total for the topic</b>	<b>15</b>	<b>10</b>	<b>5</b>	
<b>Control measures</b>	<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>	<b>60</b>	<b>40</b>	<b>20</b>	

## 4.21 BC 5. "Engines"

### **General objective of the educational program component:**

The purpose of teaching the discipline "Engines" is to prepare a tactical officer, platoon (company) commander with solid knowledge and skills, knowledge of the structure and design features of automotive engines of military vehicles, the principle of operation of engine systems and mechanisms, as well as the sequence of technological operations for partial disassembly and assembly of engines of military vehicles for general purpose according to standard algorithms, the main malfunctions of internal combustion engines.

As a result of studying the discipline, the student should

*to know:*

the structure of internal combustion engines;

the main faults of internal combustion engines and the procedure for their elimination;

Methods of analysing the traction and speed properties of a vehicle

be able to calculate the thermal process of the engine with the use of information technology and analyse the indicators of traction and speed properties of the car

*be able to:*

monitor the technical condition, use, safe and trouble-free operation of internal combustion engines;

organise work to eliminate malfunctions of internal combustion engines;

carry out maintenance of internal combustion engines.

### **Organisational and methodological guidelines:**

Classes in the discipline should be conducted to acquire theoretical knowledge of the structure of engines and should acquire practical skills in monitoring the technical condition of engines, detecting breakdowns and malfunctions, and be able to organise repair work.

Theoretical concepts are practiced in the classroom with the use of teaching aids (posters, diagrams, models, training films), while practical issues are addressed during practical classes using specialised classrooms and field training facilities.

### **Logistics:**

Classes are held in specialised classrooms, training complexes, laboratories, training grounds and campuses, training fields, etc.

### **Information and methodological support:**

1. P.M. Gaschuk, T.G. Myskiv, S.V. Nikipchuk. Automobile engines. Thermal and dynamic calculation: textbook. - Lviv. 2006.-144 c.
2. Raikov I.Y. and others Car design. Volume 2: Engine. 2001-568c.
3. Compiled by. P.M. Gaschuk, T.G. Myskiw. Thermal calculation of an automobile engine. Methodical instructions for the course project in the discipline "Automobile engines". - Lviv. 1996.-36 p. p.
4. M.M. Voznyi. Design of internal combustion engines. Course of lectures. - Lviv: LISV. 2004.
5. Raikov I.Y. and others Car design. Volume 2: Engine. 2001-568c.
6. P.M. Gaschuk, T.G. Miskiv. Thermal calculation of an automobile engine. Methodical instructions for the course project in the discipline "Automobile engines". - Lviv. 1996.-36 p. p.
7. Internal combustion engines. Theory [Text]: Textbook / V.G. Dyachenko; edited by A.P. Marchenko - Kharkiv: NTU "KhPI", 2008. 488 p.
8. Automobile engines. Internal combustion engines: course design: textbook / V.V. Klymenko, D.O. Kotov - Odesa: VA (Odesa), 2018 - 78 p.
9. Sorokivskyi O.I., Malashchenko V.V. Calculation of the main elements of the engine lubrication system and cooling systems. Methodical instructions for practical work and individual tasks in the discipline "Automobile engines". - Lviv. LvCNTEI. 2006.-20.

## Titles of topics and distribution of study time by type of study session

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: The structure of the engine.</b>					
1.	Lecture	2	2		<b>Lesson 1: Structure and operation of piston internal combustion engines.</b> 1. Purpose, classification, general structure, and evaluation parameters of internal combustion engines. 2. Basic concepts, definitions and parameters that characterise the engine design. 3. Principle of operation, procedure of four-stroke and two-stroke engines.
2.	Group Session	4	2	2	<b>Lesson 2: Crank mechanism.</b> 1. Purpose, general structure, classification of crank mechanisms. 2. The forces acting on the parts of the crank mechanism. <i>Independent operation:</i> Crank mechanism. 1. Placement of the crank mechanism in the engine. 2. Kinematics and dynamics of the crank mechanism.
3.	Group Session	4	2	2	<b>Lesson 3: Gas distribution mechanism.</b> 1. Purpose, general structure of gas distribution mechanisms. 2. Operation of the gas distribution mechanism. Phases of gas distribution. <i>Independent work:</i> The structure of the gas distribution mechanism. 1. Valve and spool gas distribution mechanisms. 2. Adjusting the timing on modern engine models. 3. Structure and operation of hydraulic compensators.
4.	Practical Session	4	4	-	<b>Lesson 4. Structure and operation of the CMM and the timing belt.</b> 1. Engine cylinder block, piston group. 2. Connecting rod group, crankshaft. 3. The procedure and sequence of operation of the gas distribution mechanism. 4. The procedure and sequence of adjusting the gaps in the gas distribution mechanism.

5	Group Session	4	2	2	<p><b>Lesson 5. Engine lubrication and cooling systems.</b></p> <ol style="list-style-type: none"> <li>1. Purpose, general structure, classification of lubrication systems.</li> <li>2. Operation of the lubrication system for four-stroke and two-stroke engines.</li> <li>3. Purpose, general structure, classification of engine cooling systems.</li> <li>4. Elements of liquid and air cooling systems.</li> </ol> <p><i>Independent operation:</i> Engine lubrication and cooling systems.</p> <ol style="list-style-type: none"> <li>1. Operation of the engine lubrication system components .</li> <li>2. The operation of the engine cooling system components.</li> <li>3. Starting heaters. Structure and procedure for starting the starter heater.</li> </ol>
6	Practical Session	2	2		<p><b>Lesson 6. Structure and operation of the main elements of engine lubrication and cooling systems.</b></p> <ol style="list-style-type: none"> <li>1. Oil pumps, filters and radiators (heat exchangers).</li> <li>2. Crankcase ventilation and its devices.</li> <li>3. Liquid pumps, radiators and fans.</li> </ol>
7	Group Session	2	2		<p><b>Lesson 7. The power supply system of a petrol engine.</b></p> <ol style="list-style-type: none"> <li>1. Purpose, general structure, classification of power supply systems.</li> <li>2. Structure of the main elements of the petrol engine power supply system.</li> <li>3. Operation of the petrol engine power supply system.</li> </ol>
8	Group Session	4	2	2	<p><b>Lesson 8. Power supply system of a diesel engine.</b></p> <ol style="list-style-type: none"> <li>1. Structure and operation of the elements of the diesel engine power system.</li> <li>2. Purpose, structure and operation of high and low pressure pumps.</li> <li>3. Purpose, structure and operation of the engine speed governor and fuel injection advance clutch</li> </ol> <p><i>Independent operation:</i> Motor power supply system.</p> <ol style="list-style-type: none"> <li>1. Components of the engine power supply system.</li> <li>2. Operation of the engine power supply system components.</li> <li>3. Operation of engine power systems in different modes.</li> </ol>
9	Practical Session	2	2		<p><b>Lesson 9. The engine power supply system.</b></p> <ol style="list-style-type: none"> <li>1. Structure of the motor power supply system.</li> <li>2. Construction and checking the operation of fuel pumps.</li> <li>3. Check and adjust the carburettor.</li> </ol>
<b>Total for the topic</b>		<b>28</b>	<b>20</b>	<b>8</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		
<b>Total for the educational component</b>		<b>30</b>	<b>22</b>	<b>8</b>	

#### **4.22 BC 6. "Electronic and electrical equipment of the vehicle"**

##### **The general objective of the educational program component:**

The purpose of teaching the discipline "Electronic and Electrical Equipment of the Vehicle" is to train a tactical officer, platoon (company) commander, who has in-depth knowledge of the purpose, structure, basic technical characteristics of the electrical equipment of military vehicles, understanding of the principle of operation of systems, devices and additional electrical equipment, development of practical skills and ability of cadets to maintain vehicles in constant combat readiness for combat use.

As a result of studying the discipline, the student should  
to know:

structure and principles of operation of electronic and microprocessor equipment, systems (devices) of electrical and electronic equipment of military vehicles;

procedure for operation and maintenance of systems (devices) of electrical and electronic equipment of military vehicles;  
basic malfunctions that occur during the operation of systems (devices) of electrical and electronic equipment of military vehicles and the procedure for their elimination.

be able to:

Analyse and evaluate the processes that occur in the circuits of electrical and electronic devices of military vehicles;

use various devices to diagnose the operation of systems (devices) of electrical and electronic equipment of military vehicles;

organise the correct operation and timely maintenance of electronic and microprocessor equipment, systems (devices) of electrical and electronic equipment of military vehicles;

organise timely troubleshooting of electrical and electronic equipment of military vehicles.

##### **Organisational and methodological guidelines:**

Classes are conducted to acquire theoretical knowledge of the structure and principles of operation of electronic and microprocessor equipment, systems (devices) of electrical and electronic equipment of military vehicles, its individual components (assemblies) and understanding of the processes that occur in them. The cadets must acquire practical skills in

analysing and evaluating the processes occurring in the circuits of electrical and electronic devices of military vehicles, conducting diagnostics of the systems and organising their proper operation.

Theoretical concepts are practiced in the classroom with the use of teaching aids (posters, diagrams, models, training films), while practical issues are addressed during practical classes using specialised classrooms and field training facilities.

### **Logistics:**

Classes are held in specialised classrooms, training complexes, laboratories, training grounds and campuses, training fields, etc.

### **Information and methodological support:**

1. Sazhko V. A. Electrical equipment of cars and tractors: Textbook. - Kyiv: Caravel, 2008. - 400 p. (1 copy).
2. KrAZ-5233VE, KrAZ-5233NE trucks Operation Manual. Kremenchuk, 209. 245c.
3. Stokov O.P., Maintenance and repair of trucks and cars, buses: Textbook: 2 books / O.P. Stokov, M.G. Makarenko, V.F. Frolov, V.O. Pavlenko. Edited by. Stokov-K: Gramota. 2005.- 352c.
4. Operation manual. Armoured combat wheeled vehicle Kozak 2M1 - K.: Varta, 2019. - 528 p.
5. Operating instructions. Vehicles MAZ-631705, 642508, 531605 (BOGDAN 631705, 642508, 531605) - Cherkasy: Bogdan Motors, 2018.- 304p.
6. Kondratiuk I.O., Yevsiukov Y.V. Electrical equipment of military vehicles: Study guide: - Part I *batteries, generators*: - Odesa: VA, 2013.- 142p.

## Titles of topics and distribution of study time by type of study session

№ s/n	Types of training sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: Power supply system.</b>					
1.	Lecture	4	2	2	<p><b>Lesson 1: General information about batteries.</b></p> <ol style="list-style-type: none"> <li>1. Purpose of batteries and requirements for them.</li> <li>2. Structure, operation and types of batteries.</li> <li>3. Features of the structure of different types of batteries.</li> <li>4. Features of the operation of batteries manufactured using AGM technology.</li> </ol> <p><i>Independent work:</i> The structure of rechargeable batteries.</p> <ol style="list-style-type: none"> <li>1. Structure and operation of modern batteries.</li> </ol>
2.	Group Session	3	2	1	<p><b>Lesson 2: Structure and operation of generators.</b></p> <ol style="list-style-type: none"> <li>1. Purpose, general structure and operation of DC generators.</li> <li>2. Purpose, general structure and operation of alternators (peculiarities of the structure of alternators of HAMVY and Oshkosh cars).</li> <li>3. Features of the structure and operation of brushless generators.</li> </ol> <p><i>Independent work:</i> Operation of generator sets.</p> <ol style="list-style-type: none"> <li>1. Operating conditions of generator sets and basic requirements for them.</li> <li>2. Classification of generators and their technical characteristics.</li> </ol>

3.	Practical Session	5	4	1	<p><b>Lesson 3.</b> Operation of generators.</p> <ol style="list-style-type: none"> <li>1. Check the components of the alternator with an ohmmeter.</li> <li>2. Check the alternator components with an ohmmeter.</li> <li>3. Check the brush assembly of the alternators.</li> </ol> <p><i>Independent work:</i> The structure of alternators.</p> <ol style="list-style-type: none"> <li>1. Structure, operation and types of alternators.</li> <li>2. Features of the structure of modern brushless generators.</li> </ol>
4.	Group Session	3	2	1	<p><b>Lesson 4.</b> Relay regulators.</p> <ol style="list-style-type: none"> <li>1. Structure and operation of contact relay regulators.</li> <li>2. Structure and operation of electronic relay regulators.</li> <li>3. 3. Integral voltage regulators.</li> </ol> <p><i>Independent operation:</i> Operation of the contact relay controller.</p> <ol style="list-style-type: none"> <li>1. Purpose and structure of the contact relay controller.</li> <li>2. The principle of operation of the contact relay controller.</li> </ol>
<b>Total for the topic</b>		<b>15</b>	<b>10</b>	<b>5</b>	
<b>Topic 2. The ignition and electric starting system of the engine.</b>					
5.	Lecture	3	2	1	<p><b>Lesson 1:</b> General information about the electric motor starting system.</p> <ol style="list-style-type: none"> <li>1. Requirements for electric engine starting systems.</li> <li>2. General structure of electric motor starting systems.</li> <li>3. Classification of starters and their technical characteristics.</li> </ol> <p><i>Independent work:</i> Structure, operation of electric engine starting systems.</p> <ol style="list-style-type: none"> <li>1. Structure and operation of modern electric motor starting systems.</li> <li>2. Features of the structure and operation of modern electric motor starting systems.</li> </ol>
6	Group Session	4	2	2	<p><b>Lesson 2: The structure of starters.</b></p> <ol style="list-style-type: none"> <li>1. Structure and operation of the St2, HMMWV starter.</li> <li>2. The structure and operation of the electric starting system of the ZIL-131 vehicle.</li> <li>3. Features of the structure and operation of electric starting systems for engines (Oshkosh starter with gearbox).</li> </ol> <p><i>Independent work:</i> The structure of starters.</p> <ol style="list-style-type: none"> <li>1. Electrical diagram of the starter.</li> <li>2. Operation of the starter.</li> </ol>

7	Group Session	4	2	2	<p><b>Lesson 3. General information about the ignition system.</b></p> <p>1. Purpose and requirements for ignition systems.  2. Electrical diagrams and general structure of ignition systems.  3. Purpose, structure and principle of operation of the main devices of the ignition system.</p> <p><i>Independent work:</i> General information about the ignition system.</p> <p>1. Purpose and requirements for ignition systems.  2. Structure of ignition systems.</p>
8	Practical Session	2	2		<p><b>Lesson 4. Structure and operation of the contact ignition system.</b></p> <p>1. Structure and operation of the main elements of ignition systems.</p> <p>1. Check the operation of the low voltage circuit elements of the ignition system.  2. Check the low voltage circuit of the ignition system.</p>
<b>Total for the topic</b>		<b>13</b>	<b>8</b>	<b>5</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>30</b>	<b>20</b>	<b>10</b>	

## 4.23 BC 7. "Vehicle maintenance"

### **General objective of the educational program component:**

The purpose of teaching the discipline "Motor Vehicle Support" is to teach officers the basics of theory and practice of organising and implementing motor vehicle support of units in order to maintain them in constant combat readiness in peacetime and wartime and create conditions for the timely deployment of forces and means for the use of motor vehicles in various conditions for their intended purpose, to develop skills and instill practical skills in the organisation and implementation of motor vehicle support of units, as well as the organisation of measures for the effective use and

As a result of studying the discipline, students should:

*to know:*

- experience of automotive support of the Armed Forces of Ukraine in modern conditions;
- the structure of the system of logistics support for combat operations of the Armed Forces of Ukraine, the role, place, tasks and basic principles of motor vehicle support for combat operations of troops;
- basic technical support measures and the procedure for their implementation in preparation for and during combat;
- the automotive support subsystem of the Armed Forces of Ukraine, ways of its reform and development;
- requirements of the governing documents that regulate the procedure for organising and conducting ATO in peacetime and wartime;
- basics of organisation and implementation of ATO of military units during a battle (march), its main tasks, forces and means and the procedure for their management;
- basic provisions on the combat and mobilisation readiness of military units.

*be able to:*

- to introduce into everyday activities the experience of organising motor vehicle support for combat operations of military units in modern conditions;
- plan, organise and carry out the ATO of units (subdivisions) in accordance with the requirements of governing documents;
- manage the forces and means of the unit's ATO in peacetime and wartime;
- plan the work of the chief of the military unit's logistics service to ensure combat readiness of the unit's daily activities and in the course of performing assigned tasks;
- conduct technical training sessions with drivers and special training with specialists of the military unit's FEA service;
- perform the functional duties of the head of the FEA service of the military unit;
- to organise and carry out combat (march) activities of military units;

analyse the state of the military unit's vehicle maintenance system in order to identify urgent measures for its effective functioning;

to calculate combat readiness indicators of a military unit, indicators of vehicle failure, production capabilities of forces and means of automotive support of a military unit;

timely processing of applications for additional manning of military units with automotive equipment and automotive property;

analyse the capability of motor vehicle support forces and means to evacuate and repair vehicles during the march and in combat operations;

to predict possible failure of vehicles, mobile repair and evacuation vehicles, sanitary losses among drivers and specialists of repair and recovery units, as well as losses of automotive property in various types of combat (march);

plan, organise and carry out training of the FEA service personnel to perform assigned tasks;

conduct technical and specialised training sessions with drivers and other specialists of the FEA service;

use the material and technical base of the military unit to conduct the training;

organise technical reconnaissance, evacuation of technically defective and damaged machines to repair sites;

organise work at the damaged vehicle assembly point (DVAP) to receive, repair and transfer repaired vehicles to the divisions;

composition, basic technological equipment, production capabilities of repair and recovery and evacuation units and the procedure for using mobile technical means of repair and evacuation of military vehicles in the field;

organise the preparation of vehicles, repair and evacuation equipment for the movement and march of mechanised units (formations);

perform calculations for the section of the technical support plan for movement and march;

to set tasks for subordinates to perform the tasks of automotive support of the march;

Monitor the performance of subordinates' tasks and work orders;

to organise the preparation of AT, repair and evacuation vehicles in the course of preparation and conduct of various types of combat by mechanised units;

to organise and manage the motor vehicle support of the military unit during the march and various types of combat;

Prepare proposals for motor vehicle support to the plan of technical support for the military unit's actions;

to document and graphically draw up the section of motor transport support of the plan of technical support of the march, defensive and offensive combat of a military unit, to be able to keep a working card of the chief of the motor transport service of a military unit.

### **Organisational and methodological guidelines:**

Classes in the discipline are conducted to acquire theoretical knowledge of the experience and procedure for organising motor vehicle support of military units (formations) in modern conditions and to acquire practical skills in planning and organising motor vehicle support in various types of combat.

Theoretical concepts are practiced in the classroom with the use of teaching aids (posters, diagrams, models, training films), while practical issues are addressed during practical classes using specialised classrooms and field training facilities.

### **Logistics:**

Classes are held in specialised classrooms, training complexes, laboratories, training grounds and campuses, training fields, etc.

### **Information and methodological support**

1. Order of the Ministry of Defence of Ukraine and the Commander-in-Chief of the Armed Forces of Ukraine No. 50/31 of 23 January 2024 "On the organisation of short-term planning of measures for the maintenance and development of the Armed Forces of Ukraine for 2024, 2025 and two subsequent years".
2. The use of military repair bodies in combat conditions. - Odesa: OISV, 2001. - 86 c.
3. Strategic Defence Bulletin of Ukraine of 17 September 2021, No. 473/2021.
4. Law of Ukraine "On Defence of Ukraine" of 5.10.2000.
5. Statutes of the Armed Forces of Ukraine. Approved by the Laws of Ukraine of 24.03.1999 No. 548-XIV; No. 551-XIV; No. 550-XIV; No. 549-XIV. - K.: Vipol, 2004. - 498 c.
6. Order of the Ministry of Defence of Ukraine and the National Guard of the Armed Forces of Ukraine No. 88 of 18.03.2018 "On Approval of the Instruction on Inspection and Assessment of the Condition of Weapons and Military Equipment in the Armed Forces of Ukraine".
7. Order of the Ministry of Defence of Ukraine No. 184 of 10.04.2006 "On Approval of the Rules for the Use of Number Plates, Installation (Application) of Distinctive Marks, Colour Schemes, Inscriptions and Special Signals on Vehicles

of the Armed Forces of Ukraine"

8. Order of the Ministry of Defence of Ukraine of 01.07.2002 No. 219. "On Approval of the Guidelines for the Operation of Motor Vehicles in the Armed Forces of Ukraine".

9. Order of the Ministry of Defence of Ukraine No. 5 of 10 January 1997 "On Approval of the Regulation on Training of Drivers and Other Specialists of the Motor Vehicle Service in the Armed Forces of Ukraine and Their Admission to Driving Vehicles".

10. Order of the Ministry of Defence of Ukraine dated 11.09.2020 No. 140 "On Approval of the Temporary Procedure for the Processing of Operational (Combat) Documents".

11. Order of the Deputy Minister of Defence of Ukraine for Armaments - Chief of the Armed Forces of Ukraine No. 72 of 22.07.1998 "On Approval of the Guidelines for the Storage of Motor Vehicles and Property in the Armed Forces of Ukraine".

12. Order No. 92 of the Chief of the General Staff - Commander-in-Chief of the Armed Forces of Ukraine of 31.08.2009 "On Amendments to the Instruction on the Procedure for Assessing Combat and Mobilisation Readiness".

13. Guidelines for the automotive service.

14. Order of the Minister of Defence of Ukraine dated 17.08.2017 No. 440 "On Approval of the Instruction on Accounting for Military Property in the Armed Forces of Ukraine"

15. Order of the Minister of Defence of Ukraine of 28.08.2017 No. 455 "On Approval of the Procedure for the Transfer of Military Property to Enterprises, Institutions and Organisations Regardless of Ownership for Development, Production, Modernisation, Development

16. Order of the Minister of Defence of Ukraine dated 12.12.2016 No. 678 "On Approval of the Instruction on the Use of Motor Vehicles in the Ministry of Defence and the Armed Forces of Ukraine".

17. Order of the Chief of the General Staff - Commander-in-Chief of the Armed Forces of Ukraine of 12.04.2010 No. 55 "On Approval and Introduction of the Table of Urgent Reports on Operational and Logistical Support of Troops (Forces) for Peacetime".

18. Order of the Minister of Defence of Ukraine dated 29.03.2021 No. 81 "On Approval of the Procedure for Write-Off of Military Property in the Armed Forces of Ukraine and the State Special Transport Service (as amended)".

19. Standards for motor vehicle support of military operations. - K.: KISV, 1995. - 25 c.

20. Methodological recommendations on the organisation of the reception of mobilisation resources received for manning a military unit. - K.: GOMU of the General Staff of the Armed Forces of Ukraine, 1999. - 116 c.

21. Technical training of drivers (driver mechanics). Methodological manual. - K.: Varta, 1998. - 128 c.
22. The use of military repair bodies in combat conditions. - Odesa: OISV, 2001. - 86 c.
23. Fundamentals of automotive support. Process modelling. Study guide / B.O. Demianchuk, S.M. Verpivskyi, V.M. Melenchuk, Military Academy (Odesa), 2015.

## Topics and allocation of class time by type of class

№ s/n	Types training classes, control events	Total hours	of which.		Topic and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Topic 1: The main tasks of motor vehicle support of troops.</b>					
1.	Group Session	3	2	1	<p><b>Lesson 1: The system of technical support of the Armed Forces of Ukraine.</b></p> <p>1. The concept of technical support of troops. Types of technical support.</p> <p>2. The system of technical support. Basic principles and tasks of technical support.</p> <p>3. Subsystem of motor transport support, tasks, principles of organisation of motor transport support of combat operations of units and subunits.</p> <p><i>Independent work:</i> The system of technical support of the Armed Forces of Ukraine.</p>
2.	Group Session	3	2	1	<p><b>Lesson 2. Tasks and organisation of the car service.</b></p> <p>1. The main tasks of the car service.</p> <p>2. Organisation of the automotive service in subdivisions and military units.</p> <p>3. Officials of the automotive service of units and military units and their duties.</p> <p><i>Independent work:</i> Tasks and organisation of the automotive service.</p>
3.	Group Session	5	4	1	<p><b>Lesson 3: Forces and means of automotive support.</b></p> <p>1. Forces and means of automotive support of the JFO.</p> <p>2. Purpose, organisation and production capabilities of repair and evacuation vehicles of rvb (remr), ombr, (tbr) units and units</p> <p>3. Calculate the production capabilities of the maintenance units of the ombr.</p> <p><i>Independent work:</i> Forces and means of auto-technical support.</p>

4.	Group Session	5	4	1	<p><b>Lesson 4. Manning of military units with motor vehicles and personnel of the motor vehicle service according to mobilisation orders.</b></p> <p>1. Equipping military units with motor vehicles and automotive service personnel.  2. Reception points for personnel and vehicles of a military unit.  3. Performing calculations for the provision of automotive property for the intact stocks of the Ombudsman (according to the assignment).  <i>Independent work:</i> Manning of military units with automotive equipment and personnel of the automotive service according to mobilisation orders.</p>
5.	Group Session	5	4	1	<p><b>Lesson 5. The procedure for storing fixed assets.</b></p> <p>1. Organisation of storage of automotive equipment.  2. Repair and maintenance kits of automotive property, the procedure for their formation and echeloning.  3. Carrying out calculations of accumulation and echeloning of "NZ" equipment sets of the ombr.  <i>Independent work:</i> The procedure for storing fixed assets.</p>
6.	Group Session	10	8	2	<p><b>Lesson 6 Sequence of work of the chief of the logistics service in organising motor transport support of combat operations.</b></p> <p>1. Application of planning and decision-making procedures in accordance with NATO standards in the planning of vehicle support of the NAS).  2. Procedure for managing vehicle maintenance.  3. Drawing up an algorithm (TLP, MDMP) for the work of the head of the battalion's foreign trade service (company commander) in planning the ATO  <i>Independent work:</i> The sequence of work of the chief of the ZEVT service in the organisation of motor support of the battle (march).</p>
7.	Group Session	5	4	1	<p><b>Lesson 7. Performing calculations in the planning of vehicle maintenance.</b></p> <p>1. Main indicators of combat readiness of a military unit in the FEA service.  2. Performing calculations of combat readiness indicators.  3) Performing calculations to assess the production capabilities of the automotive support units.  4. Carrying out calculations of accumulation and echeloning of "NZ" equipment sets of the ombr  <i>Independent work:</i> Performing calculations in the planning of vehicle maintenance.</p>

8.	Group Session	5	4	1	<p><b>Lesson 8. The work of the EWT service during the preparation and conduct of combat operations (march).</b></p> <ol style="list-style-type: none"> <li>1. Procedure for the work of the chief of the EWT service during preparation for combat operations (march)</li> <li>2. Planning the use of forces and means of motor transport support of the <i>battalion</i> during combat operations (march).</li> <li>3. Organisation of vehicle recovery in combat conditions.</li> </ol> <p><i>Independent work:</i> The work of the airborne service in preparation for and during combat operations (march).</p>
9.	Group Session	10	8	2	<p><b>Lesson 9. Organisation of the restoration of military vehicles in the course of combat operations.</b></p> <ol style="list-style-type: none"> <li>1. Organisation of technical reconnaissance and collection of technically defective and damaged vehicles in the course of combat operations</li> <li>2. Damaged vehicle assembly point (DVAP), its purpose, characteristics and location.</li> <li>3. The use of temporarily created REMGs to restore damaged equipment during combat.</li> <li>4. Forces and means of motor vehicle support of <i>the JTF</i> for evacuation of damaged vehicles.</li> <li>5. Calculations of the capabilities of <i>the ombr</i> units during the evacuation of technically defective and damaged vehicles in the course of combat operations.</li> </ol> <p><i>Independent work:</i> Organisation of the restoration of military vehicles in the course of hostilities.</p>
10.	Group Session	10	8	2	<p><b>Lesson 10. Vehicle support for the march of the Ombr.</b></p> <ol style="list-style-type: none"> <li>1. Basic provisions for the organisation of the march.</li> <li>2. Measures of automotive support in preparation for and during the march.</li> <li>3. Peculiarities of motor transport support during the movement of troops.</li> <li>4. Practice the preliminary order for vehicle support to the <i>jnbr</i> units.</li> <li>5. Organisation of maintenance, evacuation and repair of vehicles during the march.</li> <li>6. Composition, tasks and repair by marching closure of columns of ombr units.</li> <li>7. Rehearse the scheme of organisation of the logistics of the columns of the Ombudsman units on the march.</li> <li>8. Preparation of an order to the commander of the vehicle repair company for the preparatory period.</li> </ol> <p><i>Independent work:</i> Automotive support for the Ombre march</p>

11.	Group Session	5	4	1	<p><b>Lesson 11: Organisation of the ATO in defensive combat.</b></p> <p>1. Influence of the nature and conditions of defensive combat on the ATO.</p> <p>2. The main measures of motor vehicle support and the procedure for their implementation in preparation for defence.</p> <p>3. The main measures of automotive support and the procedure for their implementation in the course of a defensive battle.</p> <p>4. Preparation of proposals for the use of forces and means of motor vehicle support in defensive combat (according to the task).</p> <p>5. Deployment of forces and means of the ATO in a defensive battle.</p> <p><i>Independent work:</i> Organisation of the ATO in defensive combat</p>
12.	Group Session	5	4	1	<p><b>Lesson 12. Organisation of the ATO in the offensive.</b></p> <p>1. Influence of the nature and conditions on the ATO in the offensive.</p> <p>2. The main measures of automotive support and the procedure for their implementation in preparation for the offensive.</p> <p>3. The main measures of automotive support and the procedure for their implementation during the offensive.</p> <p>4. Procedure for the use of forces and means of motor support in the offensive.</p> <p>5. Deployment of forces and means of the air force in the offensive.</p> <p><i>Independent work:</i> Organisation of the ATO in the offensive</p>
<b>Total for the topic</b>		<b>71</b>	<b>56</b>	<b>15</b>	
<b>Control measures</b>		<b>4</b>	<b>4</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>75</b>	<b>60</b>	<b>15</b>	

## 4.24 BC 8. Organisation of transport of fuels and lubricants

### **General objective of the educational program component:**

The purpose of teaching the discipline "Organisation of transport of fuels and lubricants" is to prepare a bachelor's degree in providing tactical level troops (forces) with a capable:

- organise and maintain records of fuel and lubricants in the military unit, documenting their movement and write-off;
- to organise the reception, storage, refreshment and issuance of material resources for the service of fuels and lubricants in the unit of the military unit and their documentary registration;
- plan and control the business activities of the fuel service;
- organise fire safety and safety activities at the division's facilities where fuels and lubricants are used;
- plan and organise the repair of technical equipment and weapons in the unit using approved fuels and lubricants;
- have practical skills in clarifying the task, studying the situation, and developing a solution for the transport of fuels and lubricants;
- master the methodology and organise classes on special and tactical-special training in the organisation of the transportation of fuels and lubricants in a subordinate unit.

As a result of studying the discipline, the student should

*to know:*

content and methods of work functional responsibilities and procedure for organising the work of the platoon commander of the logistics supply platoon;

general provisions and basic principles of the use of logistics units;

the way units act in the course of performing tasks;

rules and regulations are necessary to ensure the safe and accident-free transport of dangerous and special cargo.

*be able to:*

to perform duties in accordance with their official assignment in primary military positions;

transport special, explosive and fire hazardous cargoes in compliance with safety rules and sanitary and hygienic requirements;

take measures to keep records of transported material and technical assets;

monitor the storage of material and technical assets;

to manage and provide comprehensive support for the actions of the fuel service units during the preparation and execution of assigned tasks;

Maintain interaction with other departments to ensure the successful completion of tasks.

### **Organisational and methodological guidelines:**

Classes in the discipline are conducted to acquire theoretical knowledge and practical skills in the peculiarities of the procedure for planning and organising the transport of fuels and lubricants by road, the procedure for their documentation.

Theoretical concepts are practiced in the classroom with the use of teaching aids (posters, diagrams, models, training films), while practical issues are addressed during practical classes using specialised classrooms and field training facilities.

### **Logistics:**

Classes are held in specialised classrooms, training complexes, laboratories, training grounds and campuses, training fields, etc.

### **Information and methodological support:**

1. *On the Statute of the Internal Service of the Armed Forces of Ukraine: Law of 24.03.1999, №548-XIV // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine. Date of update: 03.07.2020.*
2. *Resolution of the Cabinet of Ministers of Ukraine of 05.08.2020 No. 686 "On Approval of the Norms of Losses of Oil Products during their Acceptance, Storage, Release, Transshipment and Transportation" // Database "Legislation of Ukraine" / VR of Ukraine. Resolution of the Cabinet of Ministers of Ukraine of 03.05.2000 No. 748 "On Approval of the Regulation on Inventory of Military Property in the Armed Forces" // Database "Legislation of Ukraine" / VR of Ukraine.*
3. *Resolution of the Cabinet of Ministers of Ukraine of 04.08.2000 No. 1225 "On Approval of the Regulation on the Procedure for Accounting, Storage, Write-Off and Use of Military Property in the Armed Forces of Ukraine" // Database "Legislation of Ukraine" / VR of Ukraine.*
4. *Resolution of the Cabinet of Ministers of Ukraine of 1998 No. 759 (as amended) "On Approval of the Methodology for Determining the Residual Value of Property of the Armed Forces of Ukraine and Other Military Formations" // Database "Legislation of Ukraine" / VR of Ukraine.*
5. *Law of Ukraine "On the Material Liability of Military Personnel and Persons Equated to Them for Damage Caused to the State" // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine.*

6. Resolution of the Cabinet of Ministers of Ukraine of 15 July 2020 No. 604 "On Approval of the List of Arms, Weapons and Ammunition, the Shortage or Theft of which is Compensated by the Perpetrators in Multiple Ratio to their Value" / VR of Ukraine.
7. Order **No. 112 of the** Deputy Minister of Defence of Ukraine - Chief of the Logistics of the Armed Forces of **12.11.1998** "On Approval of the Guidelines for the Operation of Military Fuel Depots of the Armed Forces of Ukraine"
8. Order of the Ministry of Finance of Ukraine **No. 572 dated 17.06.2015** "On Approval of Standard Forms for Reflecting Inventory Results by Budgetary Institutions".
9. Order of the Minister of Defence of Ukraine of 1997, No. 300 "On Approval of the Regulation on the Military Economy of the Armed Forces of Ukraine" // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine.
10. On Approval of the Instruction on Accounting for Military Property in the Armed Forces of Ukraine: Order of the Ministry of Defence of Ukraine of **17.08.2017 No. 440** // Database "Legislation of Ukraine" / VR of Ukraine.
11. Order of the Minister of Defence of Ukraine "On Approval of the Procedure for Write-Off of Military Property in the Armed Forces of Ukraine and the State Special Transport Service" of **29.03.2021 No. 81** // Legislation of Ukraine Database / VR of Ukraine.
12. MoD Order **No. 590 of 12.11.2010** "Regulations on Financial Management military unit of the Armed Forces of Ukraine".
13. Order of the Ministry of Defence of Ukraine of **19.12.2014 No. 905** "On Approval of the Instruction on Organisation and Maintenance of Accounting in the Armed Forces of Ukraine." -K.: 2014.
14. Order of the National General Staff of the Armed Forces of Ukraine of **2017 №124** "On Approval of the Instruction on Record Keeping in the Armed Forces of Ukraine". -K.: 2017. Database.
15. Order of the Ministry of Defence of Ukraine **No. 474 dated 28.08.2019** "On Approval of the Procedure for Using the List of Documents Generated in the Activities of the Ministry of Defence of Ukraine and the Armed Forces of Ukraine, Indicating the Periods of Document Retention and the List of Documents Generated in the Activities of the Ministry of Defence of Ukraine and the Armed Forces of Ukraine, Indicating the Periods of Document Retention".
16. Order of the Ministry of Defence of Ukraine **No. 6T-2016** "On the norms of echeloning military stocks of material resources in the Armed Forces of Ukraine".
17. Order of the Ministry of Defence of Ukraine **No. 01 of 06.01.1999** "On Establishing Standards for the Consumption of Fuel, Oils, Greases and Special Liquids in the Operation, Repair and Preservation of Military Equipment and Arms of the Armed Forces of Ukraine".
18. Order of the Ministry of Defence of Ukraine **No. 513 of 13 October 2009** "On Approval of Amendments to the Order of the Minister of Defence of Ukraine No. 01 of 06.01.99".
19. Order of the Ministry of Defence of Ukraine **No. 303 of 07 June 2019** "On Approval of Amendments to the Order of the Minister of Defence of Ukraine No. 01 of 06.01.99".

20. Order of the Ministry of Defence of Ukraine **dated 08.12.2016 No. 662** "On Approval of the Instruction on Quality Control of Fuel and Lubricants and Special Liquids in the State Aviation of Ukraine" // Database "Legislation of Ukraine" / VR of Ukraine. Date of update: 17.02.2017.
21. Order of the Ministry of Defence of Ukraine **No. 1 of 11.01.2010** "On Amendments to Certain Orders of the Minister of Defence of Ukraine".
22. Order of the Ministry of Defence of Ukraine **of 09.11.2016 No. 596** "On Approval of the Instruction on Organisation of Transfer of Weapons, Military Equipment and Property for Repair".
23. Order of the Ministry of Defence of Ukraine **No. 374 of 11.06.14** "On Approval of the List of Kits for Provision of Service Equipment and Property of the Fuel and Lubricants Service to the Staffs of Military Units of the Armed Forces of Ukraine in Peacetime and Wartime". SSC.
24. Order of the Ministry of Logistics of Ukraine - NT of the Armed Forces of Ukraine **No. 60 of 23.05.00** "On the introduction of the Instruction on documentary audit (inspection) of the fuel service of a military unit, warehouse, base and fuel supply centre".
25. Order of the Ministry of Defence of Ukraine on the Logistics of the Armed Forces of Ukraine **No. 7 of 11.04.1994** "On the introduction of the Instruction on the handling of toxic technical liquids".
26. Order of the Ministry of Defence of Ukraine for the Logistics **No. 24 of 02.02.1994** "On the introduction of the Guidelines for the handling of ethyl alcohol".
27. Order of the Logistics Ministry of the Armed Forces of Ukraine **No. 45 of 30.05.1997** "On the organisation of operation and inspection of the condition of technical means of the fuel service of the Armed Forces of Ukraine".
28. Order of the Ministry of Defence of Ukraine for the Logistics of the Armed Forces of Ukraine **No. 46 of 30.05.1997** "On the organisation of mass distribution of fuel to motor vehicles".
29. Order of the Chief of the General Staff of the Armed Forces of Ukraine **No. 508 of 30.12.2016** "On Approval of the Instruction on Establishing the Service Life of Fuel and Lubricants before Repair and Write-Off of Technical Facilities".
30. Order of the Chief of the General Staff of the Armed Forces of Ukraine **No. 509 of 30 December 2016**, "Guidelines for the organisation of the work of fuel supply centres, bases, fuel depots of the Armed Forces of Ukraine".
31. Order of the Chief of the General Staff - Commander-in-Chief of the Armed Forces of Ukraine *of* 12.04.2010, No. 55 "On Approval and Introduction of the Table of Urgent Reports on Operational and Logistical Support of Troops (Forces) for Peacetime" // Database "Legislation of Ukraine" / Verkhovna Rada of Ukraine.
32. Order of the Command of the Air Force of the Armed Forces of Ukraine **No. 131 dated 25.10.2017** "On Approval of Temporary Standards for the Consumption of Fuel, Oils, Greases, Special Liquids during the Operation of Aviation Equipment of the Armed Forces of Ukraine".
33. Order of the Command of the Naval Forces of the Armed Forces of Ukraine **No. 113 dated 18.12.2017** "On Approval of Temporary Standards for the Consumption of Fuel and Lubricants during the Operation of the Naval Forces of the Armed Forces of Ukraine".

34. Order of the Head of the Central Centre for Claims and Complaints of the Logistics of the Armed Forces of Ukraine of **09.07.1997** "Methodological instructions on the procedure for organising claims and complaints work and consideration in the military units of the fuel service of the Armed Forces of Ukraine".
35. Guidelines for the storage of technical means of fuel service. Kyiv: Varta, 2000.
36. "Use of Fuel on Military Equipment", Military Publishing House, 1994.
37. "Provision of fuel for military units". Military publishing house.

## Titles of topics and distribution of study time by type of study session

№ s/o	View training sessions, control measures	Total hours	Among them.		Title of the topic and study questions.
			Audit hours	Independent work	
<b>Topic 1: Vehicles for refuelling and transporting fuel.</b>					
1.	Lecture	4	2	2	<b>Lesson 1: Requirements and general layout of refuelling equipment.</b> 1. Requirements for refuelling equipment. 2. The layout of automotive fuel and oil refuelling facilities. <i>Independent work:</i> Requirements and general layout of refuelling equipment.
2.	Group Session	2	2		<b>Lesson 2: Purpose, equipment and principle of operation of the ATMZ-5-4320 and ATZ-9.3-260 fuel tankers.</b> 1. Technological scheme of fuel and oil filling stations. 2. Operation of fuel and oil refuellers.
3.	Lecture	5	2	3	<b>Lesson 3: Individual and group refuelling techniques.</b> 1. Purpose, classification of individual and group refuelling equipment. 2. Layout of refuelling units and assemblies. <i>Independent work: Individual and group refuelling activities.</i>
4.	Practical Session	4	4		<b>Lesson 4. Equipment of individual and group refuelling facilities.</b> 1. Purpose, technical characteristics and equipment of group refuelling facilities. 2. Equipment and principle of operation of components and assemblies of the CCD-14 3. Purpose, technical characteristics of individual refuelling equipment. 4. Equipment and principle of operation of KR-40 units and assemblies.
5.	Lecture	2	2		<b>Lesson 5. A fuel tanker.</b> 1. Purpose, technical characteristics of road tanks and trailers. 2. Layout of units and assemblies, principle of their operation.

6.	Group Session	5	2	3	<b>Lesson 6. Application of tank trucks AII-5,5-4320, AII-10-260, AII-12-63221</b> 1. Equipment and principle of operation of units and assemblies AC-5,5-4320, AC-12-63221. 2. Preparation for work, operation of AC-5,5-4320, AC-10-26 3. 3. Dismantling and maintenance after operation of the AC-5.5-4320. <i>Independent operation: Application of tank trucks AII-5,5-4320, AII-10-260, AII-12-63221</i>
<b>Total for the topic</b>		<b>22</b>	<b>14</b>	<b>8</b>	
<b>Topic 2. Means of pumping.</b>					
7.	Lecture	2	2		<b>Lesson 1: Classification of pumping equipment.</b> 1. Requirements for technical equipment. 2. Layout of fuel pumping stations.
8.	Group Session.	7	4	3	<b>Lesson 2: Purpose and equipment of the UGS-160 and UGS-240 fuel pumping stations.</b> 1. Purpose and technical characteristics of UGS-160. 2. Design and operation of components and assemblies. <b>Application of tank trucks AII-5,5-4320, AII-10-260, AII-12-63221</b> <i>Independent work: Purpose and equipment of the UGS-160 and UGS-240 fuel pumping stations.</i>
9.	Practical Session	7	4	3	<b>Lesson 3: Use of motorised pumping units for pumping fuel.</b> 1. Purpose and principle of operation of MNUG-20 and MNUG-80 units. 2. Deploying and preparing the MNUG-20 for operation. 3. Control over the operation of MNUG-20. 4. 4. Roll-up and maintenance after work. <i>Independent work: Use of motorised pumping units to pump fuel.</i>
10.	Practical Session	4	4		<b>Lesson 4. Using a motorised oil pumping unit.</b> 1. Purpose and principle of operation of MNUM-14 and MNUM-60 units. 2. Deployment and preparation of the MNUM-14 for operation. 3. Control over the operation of the MNUM-14. 4. 4. Roll-up and maintenance after work.
<b>Total for the topic</b>		<b>20</b>	<b>14</b>	<b>6</b>	
<b>Topic 3. Fuel storage and transportation facilities.</b>					

11.	Lecture	5	2	3	<b>Lesson 1: Fuel storage facilities.</b> 1. Classification of fuel storage facilities and requirements for them. 2. Means of transporting fuel by rail. 3. Means of transporting fuel by water. 4. 4. Main pipelines. <i>Independent work:</i> Fuel storage facilities.
12.	Practical Session	7	4	3	<b>Lesson 2: Use of fuel storage facilities.</b> 1. The procedure for deploying fuel storage facilities on the ground. 2. The procedure for measuring fuel in storage and transport facilities. 3. The procedure for using refuelling modules. <i>Independent work: Use of fuel storage facilities.</i>
13.	Group Session	2	2		<b>Class 3: Final class on the topic: Technical means of fuel storage and transportation.</b>
<b>Total for the topic</b>		<b>14</b>	<b>8</b>	<b>6</b>	
<b>Control measures</b>		<b>4</b>	<b>4</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>60</b>	<b>40</b>	<b>20</b>	

#### 4.25 AF 9. "Organisation of transport of missiles and ammunition"

##### **General objective of the educational program component:**

The purpose of studying the discipline "Organisation of transportation of missiles and ammunition" is to familiarise cadets with the general concepts of destruction means for missile and artillery weapons of the Army, Navy and Air Force of the Armed Forces of Ukraine, with the rules of transportation of dangerous goods and the organisation of accounting for missiles and ammunition during transportation.

As a result of studying the discipline, the student should

*to know:*

rules and regulations are necessary to ensure the safe and accident-free transport of dangerous and special cargo;  
rules for drawing up accounting documents for the acceptance and transfer of missiles and ammunition

*be able to:*

organise the transport of special, explosive and fire hazardous cargo, complying with safety rules and executing correct accounting documents for the acceptance and transfer of missiles and ammunition.

##### **Organisational and methodological guidelines:**

Classes in the discipline should be conducted to acquire theoretical knowledge and practical skills in the peculiarities of the procedure for planning and organising the transportation of missiles and ammunition by road, the procedure for their documentation.

Theoretical concepts are practiced in the classroom with the use of teaching aids (posters, diagrams, models, training films), while practical issues are addressed during practical classes using specialised classrooms and field training facilities.

##### **Logistics:**

Classes are held in specialised classrooms, training complexes, laboratories, training grounds and campuses, training fields, etc.

##### **Information and methodological support:**

1. Order of the Ministry of Defence of Ukraine of 17.08.2017 No. 440 "On Approval of the Instruction on Accounting for Military Property in the Armed Forces of Ukraine".

2. Order of the Ministry of Infrastructure of Ukraine of 26.07.2013 No. 550 "On Approval of the Rules for the Operation of Wheeled Vehicles".
3. Order of the Ministry of Infrastructure of Ukraine dated 05.06.2013 No. 348 "On Approval of the Rules for the Provision of Services in the Seaports of Ukraine".
4. Order of the Ministry of Transport and Communications of Ukraine of 20.05.2006 No. 488 "On Approval of Operational Norms for the Average Service Life of Pneumatic Tyres of Wheeled Vehicles and Special Vehicles on Wheeled Chassis".
5. Order of the Ministry of Industrial Policy of Ukraine of 15.02.2010 No. 70 "On Approval of the Rules for Technical Operation of Railway Transport of Industrial Enterprises".
6. Order of the Ministry of Internal Affairs of Ukraine of 04.08.2018 No. 656 "On Approval of the Procedure for Approval and Registration of Vehicle Movement during Road Transport of Dangerous Goods".
7. Law of Ukraine "On the Statute of the Internal Service of the Armed Forces of Ukraine" (Vidomosti Verkhovnoi Rady Ukrayiny (VVR), 1999, No. 22-23, p. 194).
8. Order of the Ministry of Defence of Ukraine of 29.06.2005 No. 359 "On Approval of the Instruction on the Organisation of Accounting, Storage and Issuance of Small Arms and Ammunition in the Armed Forces of Ukraine".
9. Order of the NGS No. 191 of 30.05.2017. "On Approval of the Regulation on Arsenal, Bases and Storage Depots of Missiles and Ammunition of the Armed Forces of Ukraine".
10. MoD Order No. 5 dsk of 06.06.17 "On Approval of the Procedure for Organising Access Control at Particularly Important and Restricted Facilities of the Ministry of Defence of Ukraine and the Armed Forces of Ukraine".
11. Order of the General Staff of the Armed Forces of Ukraine No. 386/dsk "Regulations on Field Artillery Depots of the Armed Forces of Ukraine", 04.10.2019.
12. Military Standard 01.310.001 "Logistics of Troops (Forces). Basic Terms and Definitions". Part 2, MoD.
13. Vodchyts O.G., Egorov S.N., Pavilch V.M.. Aviation means of destruction. Study guide. - Kyiv: National Aviation University, 2008 -245 p.
14. Markovskiy K., Perov M. Descendants of the "Eris" // Kryla Batkivshchyny. 1994.
15. Combat aircraft. Edited by D.I. Gladkov. V/V, 1987.
16. Aviation means of destruction. Edited by F.P. Miropolsky. V/V, 1995.
17. Combat Vehicles of the Navy. Textbook. Under the general editorship of S.M. Rozgonaev - Sevastopol: Nakhimov Naval Academy, 2013.
18. Redeployment of airborne units - Odesa: OISV, 2002. - 76 c.
19. Textbook of the Sergeant of the Airborne Troops - K.: 2006. - 400 c.
20. Airborne Assault Forces of the Armed Forces of Ukraine, state and prospects of development. Lecture by the Commander of the Airborne Assault Forces of the Armed Forces of Ukraine, Lieutenant General Zabrodskyi M.V. - Odesa: Military Academy, 2018.

21. Organisation of safe functioning of arsenals, bases and ammunition depots: [textbook] Baghdasaryan NK, Havryliuk AO, Karas VB, Kopashynskyi SA, Tereshchenko AM, Shishanov MO - National Defence Academy of Ukraine. Department of Logistics. academic 2009. -183c.
- 22 NATO Standard AASTP-5. NATO guidelines for the storage, maintenance and transport of ammunition in deployed missions or operations. 2016, 127c.
23. Methodological Manual for Chiefs of Missile and Artillery Armament Services of Associations, Formations and Military Units. Central Armaments Department of the Main Logistics Directorate of the Support Forces Command of the Armed Forces of Ukraine, 2008.
24. Training manual "Ammunition and Missiles. Part I. Artillery Ammunition". Va (Odesa), 2016.
25. Training manual "Design and basics of designing ammunition and missiles. Part I. Explosives and Powders. OISI, 1999.
26. Manual "General Provisions, General Structure, Main Tactical and Technical Characteristics of Missiles and Ammunition, Organisation of Their Storage in the Land Forces of the Armed Forces of Ukraine". Kyiv, 2010.
27. Handbook "On the Structure, Classification, Marking and Tactical and Technical Ammunition for Small Arms, Melee Weapons and Artillery". Dnipro. 2007.
28. Course of lectures "Ammunition for small arms", OISV, 1997.

### Titles of topics and distribution of study time by type of study session

№ s/n	Types of training sessions, control events	Total hours	of which.		Title of the topic and study questions.
			Audit hours	Independent work	
1	2	3	4	5	6
<b>Section 1. Organisation of transportation of missiles and ammunition.</b>					
<b>Topic 1: General concepts of munitions.</b>					
1.	Lecture	2	2		<b>Lesson 1: Introductory lecture.</b> 1. Objectives, content and structure of the discipline "Organisation of Missiles and Ammunition Transportation". 2. History of ammunition development. 3. General concepts of ammunition and its classification.
2.	Group Session	4	2	2	<b>Lesson 2. Means of destruction of ground forces.</b> 1. Ammunition for small arms and melee weapons. 2. Artillery ammunition. 3. Rockets and missiles. <i>Independent work:</i> Means of destruction of ground forces.
3.	Group Session	2	2		<b>Lesson 3: Aircraft munitions.</b> 1. Purpose and classification of airborne weapons. 2. Characteristics of aircraft munitions.
4.	Group Session	4	2	2	<b>Lesson 4. Naval means of destruction.</b> 1. Purpose and classification of naval warfare equipment. 2. Artillery ammunition for ship artillery. 3. Mine, torpedo and anti-submarine weapons. <i>Independent work:</i> Naval means of destruction.

5.	Group Session	5	4	1	<b>Lesson 5. Basic structure of missiles and ammunition.</b> 1. Purpose and general structure of ammunition for small arms. 2. Purpose and general structure of artillery shots. 3. Purpose and general structure of rockets and missiles. <i>Independent work:</i> The basics of rockets and ammunition.
<b>Total for the topic</b>		<b>17</b>	<b>12</b>	<b>5</b>	
<b>Topic 2. Dangerous goods transport regulations: Ukrainian and international dimension.</b>					
6.	Group Session	2	2		<b>Lesson 1: Rules for the carriage of dangerous goods.</b> 1. Relevance of the topic of dangerous goods transportation. 2. Ukrainian legislation on the transport of dangerous goods 3. Procedure for organising transportations in the Armed Forces of Ukraine.
7.	Group Session	5	2	3	<b>Lesson 2. Safety measures during the transport of missiles and ammunition.</b> 1. Safety measures when working with explosives and ammunition. 2. Safety measures during the transport of missiles and ammunition.
8.	Group Session	2	2		<b>Lesson 3: Peculiarities of transporting missiles and ammunition by rail, water and air.</b> 1. Organisation and provision of military transport. 2. Peculiarities of organising the transportation of missiles and ammunition by rail. 3. Peculiarities of organising the transport of missiles and ammunition by sea and river transport.
9.	Group Session	4	2	2	<b>Lesson 4. Organising the transportation of missiles and ammunition according to international standards.</b> 1. UN requirements (IMDGC-08.10) for the transport of explosives and ammunition. 2. Requirements of the NATO AASTP-5 standard for the transport of explosives and ammunition.
<b>Total for the topic</b>		<b>13</b>	<b>8</b>	<b>5</b>	
<b>Topic 3: Organisation of missiles and ammunition accounting during transportation.</b>					
10.	Group Session	2	2		<b>Lesson 1: Organisation of the reception and transfer of missiles and ammunition for transport.</b> 1. Procedure for receiving and transferring missiles and ammunition in the army. 2. General requirements for the execution of documents for the acceptance and transfer of missiles and ammunition for transportation.
11.	Group Session	5	2	3	<b>Lesson 2: Accounting for missiles and ammunition during transport.</b> 1. General requirements of the guidelines for accounting for missiles and ammunition. 2. Organisation of accounting of missiles and ammunition during transportation.
12.	Group Session	2	2		<b>Class 3 Loading rates and methods of stowing (packing) missiles and ammunition.</b> 1. Standards for loading missiles and ammunition onto road and rail transport.

					2. Methods of stowing missiles and ammunition on road and rail transport.
13.	Group Session	4	2	2	<b>Lesson 4. General requirements for the operation of vehicles during transport.</b> 1. General rules for the operation of wheeled vehicles. 2. General rules of operation of railway transport.
<b>Total for the topic</b>		<b>13</b>	<b>8</b>	<b>5</b>	
<b>Control measures</b>		<b>2</b>	<b>2</b>		<b>Credit</b>
<b>Total for the educational component</b>		<b>45</b>	<b>30</b>	<b>15</b>	