

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

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

**BASIC TACTICAL LEVEL COURSE L-1A AND
THE LOGISTICS FORCES TACTICAL LEVEL PROFESSIONAL COURSE
(AMMUNITION, EXPLOSIVE DEVICES, LIGHTING AND SIGNALLING
EQUIPMENT), L-1B (AEDLSE)**

by military speciality	707200	"Organisation of operation and repair of artillery weapons"
	707400	"Storage and repair of ammunition, detonators, lighting and signalling equipment, explosives"

APPROVED

The Academic Council of the Military Academy
(Odesa)

(the minutes of " _____ " _____ 20__ № _____)

Chairman of the Academic Council

Military Academy (Odesa)

Major General

Andrii KOVALCHUK

Put into operation

by the order of the Commandant of the Military
Academy (Odesa) " _____ " _____ 20__ № _____

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PREFACE

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 01 March 2024 No. 60.

Chairman of the working (project) group:

Serhii NAUMENKO, Deputy Head of the Central Department for Provision of Weapons of Mass Destruction of the Logistics Command of the Armed Forces of Ukraine, Colonel.

Members of the working group:

Stanislav NIKUL, Head of the Department of Missile and Artillery Armament of the Faculty of Missile and Artillery Armament Specialist Exercise of the Military Academy (Odesa), PhD in Engineering, Associate Professor, Colonel;

Oleh KRAVCHUK, Professor of the Department of Missile and Artillery Armament, Faculty of Missile and Artillery Armament Specialists Exercise, Military Academy (Odesa), PhD in Engineering, Senior Researcher, Colonel;

Viacheslav GOLOVAN, Professor of the Department of Missile and Artillery Armament of the Faculty of Missile and Artillery Armament Specialists of the Military Academy (Odesa), PhD in Engineering, Professor, member of the Armed Forces of Ukraine.

ACCOUNTED FOR:

1. Professional standard of a tactical officer of the Armed Forces of Ukraine.
2. Educational programme of the professional military education course "Basic course of tactical level L-1A", OP 7-00(341)345.61.
3. Comments from internal and external stakeholders.
4. Proposals from students and academic staff of the Military Academy (Odesa).
5. Experience in combat operations.

I. PROFILE OF THE EDUCATIONAL PROGRAMME PROFESSIONAL MILITARY EDUCATION COURSE

1 - General information	
Full name of the higher education institution (FFPW, VNP WO)	Military Academy (Odesa)
Name of the document on completion and scope of the educational programme of the professional military education course	Certificate of completion of the professional military education course "Basic course of tactical level L-1A and professional course of tactical level of Logistics Forces (ammunition, explosives, lighting and signalling equipment), L-1B (BVPOLSZ), under VOS 707200, 707400". Scope of the study programme: 40 ECTS credits.
Background.	Possession of a higher education degree not lower than a bachelor's degree, fitness for military service in the officer's position.
Language(s) of presentation	Ukrainian.
Validity of the educational programme of the professional military education course	For the period of martial law
2 - Objectives of the study programme	
<p>Exercise of a tactical officer who is competent in the operation of rocket and artillery weapons, capable of performing assigned tasks in positions with the staff category of "senior lieutenant", carrying out professional activities in accordance with official duties, being a leader in a military team, making decisions in accordance with the requirements of governing documents and critical analysis of the situation, being responsible for them, and being responsible for subordinates.</p> <p>Performance of official (special) duties that determine the scope of tasks assigned by the position and other regulatory acts.</p>	
3 - Characteristics of the study programme	
Subject area	Field of knowledge: "25 Military sciences, national security, state border security". Speciality: "255 Weapons and military equipment". Specialisation: "Ammunition, explosives, lighting and signalling equipment.
The main focus of the curriculum of the professional military education course	Professional military education for military service in typical positions defined in the professional standard of a tactical officer.
Features of the programme	<p>Module 1: Basic Tactical Level Course, L-1A is mandatory for the following category of persons involved in the course: servicemen and women called up for military service during mobilisation who are currently undergoing or have already completed the PVE, servicemen and women who are performing military service under a contract in military units but do not have combat experience; civilian citizens of Ukraine who have not previously performed military service and have no combat experience.</p> <p>Module 2. The Tactical Ammunition, Explosives, Lighting and Signalling Equipment, L-1B (TELAEL) course is applicable to all categories of persons who have completed the Basic Tactical Course, L-1A.</p> <p>Exercise in the system of multi-level professional military</p>

	education of officers of the Armed Forces of Ukraine. Features of the combat experience of the Russian-Ukrainian war.
4 - Opportunities for graduates to find employment and further education	
Employment opportunities	Primary positions of junior officers as defined in the professional standard for tactical level officers.
Further exercise	Exercise under the educational programme of the professional military education course "Command Course of Tactical Level Management of Operation of Weapons of Mass Destruction, L-1C (UENSOZZBBR)".
5 - Teaching and assessment	
Teaching and learning	The main types of sessions used to teach the components of the educational programme are: lectures, seminars, practical sessions, group sessions, tactical exercises independent work, including at the field exercise base.
Evaluation	<p>Ongoing supervision during sessions, working on 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 in each discipline.</p> <p>Assessment of the learning outcomes of course students includes the full range of control measures provided by the programmes of academic disciplines and is carried out on a 100-point scale, ECTS scale and national scale.</p> <p>The result of the test on the exercise material can be assessed on a two-tier scale: "passed" or "failed".</p>
6 - Programme competences	
Military and professional competences (MPC)	<p>MIC-1. The ability to perform official duties in good faith and honesty in accordance with the requirements of the Statutes of the Armed Forces of Ukraine and other regulatory legal acts governing official activities, and to demand that subordinates comply with and fulfil them.</p> <p>MIC-2. The ability to plan, organise combat and manage a unit in the main types of combat (tactical actions).</p> <p>MIC-3. 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); conduct historical and retrospective analysis.</p> <p>MIC-4. The ability to analyse and understand the mission; lead personnel to achieve it, demonstrating values, character traits and thinking based on examples of the Warrior ethos and outstanding military leadership.</p> <p>MIC-5. Ability to improve professional, methodological and physical skills; personally conduct combat exercise sessions with personnel (unit); work with secret documents, store weapons and ammunition, ensure compliance with security measures during session s; maintain constant readiness of the unit to perform assigned tasks in peacetime and wartime.</p> <p>MIC-6. Ability to organise CBRN protection in the unit; use personal protective equipment and overcome contaminated</p>

	<p>areas in various conditions of the situation in the course of performing assigned tasks.</p> <p>MIC-7. Ability to determine the tactical properties of the terrain when conducting 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>MIC-8. Ability to perform engineering support tasks in various types of combat.</p> <p>MIC-9. Ability to organise and maintain communication in the unit using standard means of communication.</p> <p>MIC-10. The ability to perform professional activities in conditions of prolonged, diverse physical exertion and mental stress; to organise the exercise of servicemen to ensure their physical readiness to perform assigned tasks; to organise the performance of tactical medicine tasks.</p> <p>MIC-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 exercise 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>MIC-12. Ability to apply disciplinary practice in relation to subordinate personnel; manage a unit in compliance with international humanitarian law.</p>
<p>Military-specific competences (MSC)</p>	<p>BCK-1. Ability to perform specialised logistics tasks in the field of professional activity.</p> <p>VSK-2. The ability to organise the procedure for keeping records, categorising and storing rocket and artillery weapons in military units.</p> <p>GC-3. Ability to use knowledge of the structure of close combat and reconnaissance equipment, artillery devices to perform practical tasks in professional activities.</p> <p>VSK-4. Ability to use knowledge of the structure and operation of ground-based weapon systems in units military units.</p>
<p>7 - Programme learning outcomes</p>	
<p>Professional exercise</p>	<p>LO 1. Apply the requirements of the Statutes of the Armed Forces of Ukraine in the organisation of service activities in the unit, internal and guard service, maintaining military discipline and ensuring the unit's coherence.</p> <p>RNvp-2. To prepare the unit for combat (tactical actions), to manage the actions of the unit during combat (tactical actions).</p> <p>LO-3. To know and understand the principles and procedures for managing a unit according to NATO standards and be able to use them to achieve service and combat objectives; to make informed decisions on the actions of the unit in a combat situation using the principles and procedures of NATO standards; to be able to conduct historical and</p>

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.

LO5. Know the methods of improving their professional and methodological skills, personally conduct combat exercise sessions 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 sessions, firing (flights, campaigns), exercises (exercise), readiness checks.

LO-6. Organise 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.

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.

LOE 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.

PLO-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 sessions 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.

PLO-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.

LO 1. Apply knowledge of the logistics support of military units.

	<p>RNvs-2. To organise and carry out accounting, categorisation, write-off and storage of rocket and artillery weapons in units of military units.</p> <p>RNvs-3. To use means of close combat and reconnaissance, artillery devices, control their technical condition, conduct reconciliations and inspections. Organise the operation and repair of close combat and reconnaissance equipment and artillery devices in the troops. To master new models of close combat and reconnaissance equipment and artillery devices. Monitor compliance with safety measures during the operation of close combat and reconnaissance equipment and artillery devices.</p> <p>RNvs-4. Apply the acquired knowledge to the operation and repair of samples of ground-based weapons systems in military units. Carry out categorisation of rocket and artillery weapons. Draw conclusions from the technical characteristics of rocket and artillery weapons.</p>
8 - Resource support for programme implementation	
Human resources support	<p>Academic staff involved in the educational programme are full-time employees of the Military Academy, some of them have academic degrees and academic titles.</p> <p>The practice-oriented nature of the educational programme involves the wide participation of practitioners who are relevant to the programme, which enhances the synergy between theoretical and practical exercise.</p> <p>The head and members of the working group on the development of the programme, , as well as the teaching staff that ensures the implementation of the educational programme meet the requirements set by the Ministry of Defence of Ukraine.</p>
Logistical support	<p>The material and technical base of the Military Academy (Odesa) and the Centre for Supporting the Educational Process of the Military Academy is used to implement the competencies and learning outcomes specified in the educational programme. 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 sessions (laboratories); specialised laboratories; gyms, sports grounds; library, reading room; multimedia equipment; premises for research and teaching staff; barracks premises; dining room, etc.</p>
Information and educational support	<p>Teaching and learning materials are 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 Defence of Ukraine, and consist of the following materials:</p> <ul style="list-style-type: none"> instructional and methodological materials for practical sessions; teaching materials for all types of exercise sessions; methodological guidelines for organising independent work; diagnostic tools. <p>The library fund is used in teaching, including teaching</p>

	<p>materials, educational and methodological developments of teaching staff.</p> <p>The programme is implemented using the virtual learning environment of the Military Academy (Odesa), author's developments, textbooks and manuals, and other teaching and learning materials.</p> <p>The official website of the Academy (http://vaodesa.mil.gov.ua/) 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 organised.</p>
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2. LIST OF COMPONENTS OF THE CURRICULUM OF THE PROFESSIONAL MILITARY EDUCATION COURSE AND THE CORRESPONDENCE OF PROGRAMME COMPETENCES AND LEARNING OUTCOMES TO THE COMPONENTS OF THE CURRICULUM

2.1. List of components of the EP

Code. n/a.	Components of the educational programme (academic disciplines/modules)	Number of credits	Form of final control
Module 1: Basic tactical course, L-1A			
WP 1.1	History of wars and military art	0,5	Credit
WP 1.2	Fundamentals of military leadership	1	Credit
WP 1.3	General tactics	5	Examination
OP 1.4	Fundamentals of military management (including Troop Leading Procedures)	2	Credit
VP 1.5	Manage the day-to-day operations of the divisions	1	Credit
VP 1.6	Radiation, chemical, biological protection of units (including ecology)	0,5	Credit
VP 1.7	Military topography	1	Credit
VP 1.8	Engineering exercise	1	Credit
VP 1.9	Organisation of military communications	0,5	Credit
GP 1.10	Combat system for survival of soldiers (including tactical medicine)	2	Credit
GP 1.11	Statutes of the Armed Forces of Ukraine and their practical application (including drill exercise)	0,5	Credit
GP 1.12	Small arms and firearms exercise	3	Credit
GP 1.13	Fundamentals of military law and international humanitarian law	0,5	Credit
GP 1.14	Intelligence exercise	0,5	Credit
GP 1.15	Fundamentals of organising and conducting warfare in the electromagnetic environment and cyberspace	0,5	Credit
GP 1.16	Basics of using tactical-grade unmanned systems	0,5	Credit
Total per module		20	
Module 2. Tactical level professional course Ammunition, explosive devices, lighting and signalling equipment, L-1B (BVPFI)			
BC 1	Basics of logistics support	5	Examination
BC 2	Organisation of supply and maintenance of rocket and artillery weapons in military units	5	Examination
BC 3	Construction and operation of close combat and reconnaissance equipment, artillery devices	4	Examination
BC 4	Structure and operation of munitions	6	Examination
Total per module		20,0	
Total under the loan programme		40,0	

2.2 Correspondence of programme competences to the components of the educational programme

	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	
MIC-1											+										
MIC-2			+	+										+		+					
MIC-3	+			+																	
MIC-4		+																			
MIC-5					+																
MIC-6						+															
MIC-7							+														
MIC-8								+													
MIC-9									+						+						
VPK-10										+											
MIC-11												+									
MIC-12													+								
VSK-1																	+				
VSK-2																		+			
VSK-3																			+		
VSK-4																					+

2.3 Correspondence of learning outcomes to the components of the educational programme

	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	
RNvp-1											+										
RNvp-2			+	+										+		+					
RNvp-3	+			+																	
RNvp-4		+																			
RNvp-5					+																
RNvp-6						+															
RNvp-7							+														
RNvp-8								+													
RNvp-9									+						+						
RNvp-10										+											
RNvp-11												+									
RNvp-12													+								
RNvsp-1																	+				
RNvsp-2																		+			
RNvsp-3																			+		
RNvsp-4																					+

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
8	VP 1.8	Engineering exercise	-	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	-	-	-	-	-	-	-	-
10	GP 1.10	Combat system for survival of soldiers (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 exercise)	-	1	0,5	15	12	6	-	6	2	1	-	-	-	-	-	-	-	-
12	GP 1.12	Small arms and firearms exercise	-	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 exercise	-	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 for the Logistics Forces (ammunition, explosive devices, lighting and signalling equipment), L-1B (ERRAO)																				
17	BC 1	Basics of logistics support	1	-	5	150	94	8	56	30	6	50	-	-	-					
18	BC 2	Organising the supply and maintenance of missiles and ammunition in the units of a military unit.	1	-	5	150	94	6	54	34	6	50	-	-	-					

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
19	BC 3	Construction and operation of close combat and reconnaissance equipment, artillery devices	1	-	4	120	76	-	34	42	4	40	-	-	-					
20	BC 4	Structure and operation of munitions	1	-	6	180	116	8	96	12	4	60	-	-	-					
Total per module			4		20	600	380	22	240	118	20	200	-	-	-					
Total number of			5	15	40	1200	804	113	415	276	58	338								
Number of hours per week																				
Number of exams:													-		-	-	-			
Number of credits:																				

4. PROGRAMMES OF THE EDUCATIONAL PROGRAMME COMPONENTS

4.1. EP 1.1 "History of wars and military art"

General objective of the educational programme component

Exercise of military personnel 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, students (trainees) should:

to know:

the most important wars and military conflicts in historical retrospect;
characteristic features and peculiarities of the development of martial art in the wars of the past;
interdependence of tactics on the development of weapons and military equipment;
Perspective directions of development of the armed struggle of our time;

to 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 through the analysis of the past, to master the basics of historical research methodology, 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 Army 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 subject matter of the exercise topics and the logical sequence of their gradual study focuses on modern wars and conflicts (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 processed in class under the guidance of a scientific and pedagogical employee.

During all forms of exercise, 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 exercise sessions.

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

Information and methodological support:

1. White Book of the Anti-Terrorist Operation in the East of Ukraine (2014-2016) / Edited by I. Rusnak - Kyiv: NUOU, 2017.
2. Warfare 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 50s-80s of the twentieth century: a textbook / I. Furman, S. Sydorov, R. Pyliavets et al.
4. Military art in local wars and armed conflicts of the 90s of the twentieth and early twenty-first centuries: a textbook / I. Furman, S. Sydorov, R. Pyliavets et al.
5. Military Historical Description of the Russian-Ukrainian War (monthly publication since March 2022) / MoD, General Staff of the Armed Forces of Ukraine, Central Military Intelligence Department of the Armed Forces of Ukraine.

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

№ s/n	Types of exercise sessions and tests events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic № 1. Introduction to military history. Wars and the development of military art from the Ancient World to the end of World War II.					
1	Lecture	2	2		Class 1. Factors that influenced the evolution of martial arts. 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	Class 2. The development of military art in the First and Second World Wars. 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.
Total for the topic		5	4	1	
Theme 2. The development of martial arts in wars and armed conflicts of the second half of the twentieth century					

4	Lecture	2	2		<p>Class 1. Wars and armed conflicts of the second half of the twentieth century.</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>
Total for the topic		2	2		
Topic 3. The art of war and characteristics of wars of the early twenty-first century.					
5	Lecture	3	2	1	<p>Class 1. The fight against terrorism on the example of the wars of the early twenty-first century.</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>
Total for the topic		3	2	1	
Topic 4. Formation and development of the Armed Forces of Ukraine.					
7	Group session	3	2	1	<p>Class 1. Military history of Ukraine from Kyivan Rus to the present day.</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>
Total for the topic		3	2	1	
Control measures		2	2		Credit
Total for the educational component		15	12	3	

4.2. EP 1.2 "Fundamentals of Military Leadership"

The general objective of the educational programme 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;

to 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 sessions 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 sessions, 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 exercise sessions, including electronic questionnaires in various forms by the decision of the academic staff - the head of the sessions.

For all types of sessions, 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. Leadership Strategy and Tactics / 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 study time by type of class

№ s/n	Types of exercise sessions and tests events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Conceptual foundations of military leadership					
1	Group session	4	2	2	Class 1: Fundamentals of military leadership in the Armed Forces of Ukraine. 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		Class 2. Mission, purpose and tasks of a military leader. 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	Class 3: Principles of military leadership. 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.

Total for the topic	10	6	4	
Topic 2: Values of a military leader.				
4	Group session	2	2	Class 1: Values of a military leader. 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	Class 2. Ethos of the Warrior. 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 (round table)	2	2	Class 3: Code of honour for national military leaders. 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.
Total for the topic	6	6		
Topic 3. Competences of a military leader (Profile of a military leader)				
7	Group session	2	2	Class 1. Model of military leadership development. 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	Class 2. Emotional and communication competence of a military leader. 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	<p>Class 3: Digital and managerial competence of a military leader.</p> <p>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.</p>
10	Seminar (round table)	2	2	<p>Class 4: Intelligence and thinking of a military leader.</p> <p>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).</p>
Total for the topic		8	8	
Topic 4. Assessment and development of a military leader.				
11	Practical exercise	2	2	<p>Class 1: Assessing a military leader.</p> <p>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).</p>
12	Group session	2	2	<p>Class 2. Development of military leaders.</p> <p>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.</p>
Total for the topic		4	4	
Control measures		2	2	Credit
Total for the educational component		30	26	4

4.3. EP 1.3 "General Tactics"

General objective of the educational programme component

Exercise 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 when planning 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 mechanised squad, mechanised 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 (trainees) 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;

to 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 mechanised units in the main types of general combat (tactical actions).

Group sessions are conducted to study the theoretical provisions of the use of mechanised units in the main types of combined arms combat (tactical actions). In the course of Group sessions, the cadets (students) learn the educational material by performing individual tactical, graphic (graphical and calculation) tasks.

Group exercises are conducted to train cadets (students) in the work of a unit commander to prepare him/her for actions in various tactical situations and to manage units during the course of actions. During group exercises, communication equipment and 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 exercise 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 tactical exercise fields and other exercise grounds and designated areas. Other exercises are conducted in classrooms, specialised classrooms, simulators (simulation equipment) and exercise 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 25.05.2016 (as amended in 2017-2023).
2. TP 7-00(194)11.01. Collection of standards for combat exercise 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 exercise of tactical groups" (squad, platoon) - Zhytomyr: Centre for Operational Standards and Methods of Exercise of the Armed Forces of Ukraine, edition 2023.
4. Methodological materials "Preparation of assault groups (squad, platoon) for assault operations." - Kyiv: Main Doctrine and Exercise 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 Exercise Directorate of the General Staff of the Armed Forces of Ukraine, edition 2022.
7. Temporary Procedure for Processing Operational (Combat) Documents. Order of the Commander-in-Chief of the Armed Forces of Ukraine of 11.09.2020 No. 140.

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

№ s/n	Types of exercise sessions and tests events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Fundamentals of Combined Arms Combat.					
1	Lecture	3	2	1	<p>Class 1: Composition, purpose of the Armed Forces of Ukraine and main types of weapons and military equipment.</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>Class 2: The procedure for practicing diagrams and combat graphic documents.</p> <ol style="list-style-type: none"> 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). 2. The procedure for developing schemes and designing a working map. 3. The main tactical symbols and basic abbreviations used in combat graphic documents. <p><i>Independent work:</i> Procedure for developing schemes, combat graphic documents.</p> <ol style="list-style-type: none"> 1. The symbols of the units of the Land Forces of the Armed Forces of Ukraine. 2. Symbols of weapons and military equipment of the Land Forces of the Armed Forces of Ukraine.
3	Lecture	3	2	1	<p>Class 3: Organisational structure, weapons and military equipment of units of a mechanised battalion of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Purpose, organisational and staffing structure of units of a mechanised battalion. 2. Forms and methods of using units based on the experience of the Russian-Ukrainian war. <p><i>Independent work:</i> Organisational structure, weapons and military equipment of units of a mechanised battalion of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Purpose, capabilities, organisational and staffing structure of logistics, technical and medical support units of a mechanised battalion. 2. Developing a scheme of the organisational and staffing structure of a mechanised battalion.
4	Group session	3	2	1	<p>Class 4. Tactics of actions of units of a mechanized battalion in the main types of combat (tactical actions).</p> <ol style="list-style-type: none"> 1. Structure of a defensive battle of a mechanised battalion and main tactical indicators. 2. Construction of an offensive battle of a mechanised battalion and main tactical indicators. 3. Construction of the marching order of the MB on the march and the main tactical indicators. <p>Location of the MB on the ground and the main tactical indicators.</p> <p><i>Independent work:</i> Tactics of actions of units of a mechanised battalion in the main types of combat (tactical actions).</p> <ol style="list-style-type: none"> 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. 2. Location of the MB on site and key tactical indicators.

5	Group session	3	2	1	<p>Class 5. Actions of soldiers and combat (tactical) groups in combat.</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. Exercise in giving commands to control the actions of combat (tactical) groups in a defensive battle.</p> <p>2. Exercise in giving commands to control the actions of combat (tactical) groups in offensive combat.</p>
6	Group session	3	2	1	<p>Class 6. Techniques and methods of action of combat (tactical) groups during assault operations.</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. Exercise 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>Class 7. Combat capabilities of mechanised units.</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 exercise of mechanised units.</p>
Total for the topic		21	14	7	
Topic 2. Tactics of actions of a mechanised unit in the main types of combat (tactical actions).					

8	Group session	3	2	1	<p>Class 1: Movement of the mechanised unit.</p> <ol style="list-style-type: none"> 1. General provisions for the movement of units. 2. Peculiarities of movement of units on foot. Actions of personnel in combat tactical groups. 3. Organisation of marching guard on the march: marching guard bodies, composition and tasks. 4. Actions of units on the march. <p><i>Independent work:</i> Movement of a mechanised unit.</p> <ol style="list-style-type: none"> 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". 2. Develop the following scheme: "Techniques of movement of units on foot".
9	Group session	3	2	1	<p>Class 2. Location of the mechanised department on site.</p> <ol style="list-style-type: none"> 1. General provisions for the location of subdivisions, features of the location of the mechanised department. 2. Organisation of direct protection. Actions of personnel as part of combat tactical groups, in direct protection bodies (patrols, secret). 3. Watch guard, actions of the department in the watch guard. <p><i>Independent work:</i> Location of the mechanised department on site.</p> <ol style="list-style-type: none"> 1. General provisions of the location of units .Watch guard, actions of the unit in the watch guard. Duties of the observer. 2. Work out the following scheme: "Actions of a mechanised unit as a sentry post".
10	Group session	3	2	1	<p>Class 3: Defence of a mechanised unit.</p> <ol style="list-style-type: none"> 1. General principles of defensive combat. Place and role of the mechanised unit in defensive combat. 2. Building a defensive battle of a mechanised unit. 3. Preparation of a defensive battle. 4. Conducting defensive combat. Actions of the unit with division into combat groups. <p><i>Independent work:</i> Defence of a mechanised unit.</p> <ol style="list-style-type: none"> 1. General provisions of defensive combat. To work out the scheme: "Construction of a defensive battle of a mechanised unit". 2. Contents of the squad fire card.

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

14	Tactical and 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"> 1. Exercise in setting tasks (observer, patrol, secret). 2. Learning the procedure for repelling an attack by a sabotage and reconnaissance unit. 3. Study of the conditions for meeting tactical training standads within the unit. <p>Class 7. Actions of a mechanised unit while in place.</p> <ol style="list-style-type: none"> 1. Engineering equipment, camouflage of elements of the location area. 2. Actions of the security authorities.
15	Tactical and 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"> 1. Exercise in issuing commands to control the actions of the squad and fire in defensive combat. 2. Study of the conditions for meeting tactical training standads. Preparation of exercise sites. <p>Class 8. Controlling the actions of a mechanised unit in a defensive battle.</p> <ol style="list-style-type: none"> 1. Preparation of a defensive battle. Fulfilment of tactical (engineering) training standads. 2. Management of the unit's actions in combat. Fulfilment of tactical training standads.
16	Tactical and 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"> 1. Exercise in issuing commands to control the actions of the unit and fire in offensive combat. 2. Study of the conditions for meeting tactical training standads. Preparation of exercise sites. 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. <p>Class 9. Controlling the actions of a mechanised unit in an offensive battle.</p> <ol style="list-style-type: none"> 1. Preparation of an offensive battle. Fulfilment of tactical training standads. 2. Management of the unit's actions in combat. Fulfilment of tactical training standads.
17	Tactical and 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"> 1. Learning the rules of tactical actions. Watching exercise films. 2. Preparation of exercise places. <p>Class 10. Managing the actions of a mechanised unit in an urban area.</p> <ol style="list-style-type: none"> 1. Procedure for movement within combat tactical groups in a settlement. 2. Actions of combat tactical groups inside the building.

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

21	Group session	3	2	1	<p>Class3. Participation in stabilisation operations and other tasks.</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 subversive forces and illegal armed groups", "Participation of a mechanised platoon in the protection and defence of important objects and communications".</p>
Total for the topic		9	6	3	
Topic 4. Tactics of a mechanised platoon in a defensive battle.					
22	Lecture	3	2	1	<p>Class 1: Mechanised platoon in defensive combat.</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>Class 2: Preparing for a defensive battle.</p> <ol style="list-style-type: none"> 1. Organisation of the battle. 2. Preparing units for combat. 3. Take up the defence and prepare the platoon's stronghold. 4. Practical work of the platoon commander in subordinate units. <p><i>Independent work:</i> Preparing a defensive battle.</p> <ol style="list-style-type: none"> 1: Peculiarities of the work of a mechanised platoon commander depending on the conditions of transition to defence. 2. Combat documents developed by the platoon in preparation for defensive combat. 3) Preparation of abstracts and reports for the seminar. <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"> 1. Definition (purpose) of a defensive battle. The place of a mechanised platoon in a defensive battle. Sequential execution of defensive combat tasks. 2. Preparation and conduct of defensive combat of mechanised units based on the experience of the Russian-Ukrainian war. 3. Preparation and conduct of defensive combat of mechanised units in special conditions.
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24	Seminar session	2	2		<p>Class 3: Preparation and conduct of defensive combat in special conditions.</p> <p>1. Definition (purpose) of a defensive battle. The place of a mechanised platoon in a defensive battle. Sequential execution of defensive combat tasks.</p> <p>2. Preparation and conduct of defensive combat of mechanised units based on the experience of the Russian-Ukrainian war.</p> <p>3. Preparation and conduct of defensive combat of mechanised units in special conditions</p> <p>.</p>
<p>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".</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> <p>1. Study of the tactical task. Preparation of a working map, drawing the initial situation.</p> <p>2. The content of the platoon leader's work in understanding the task, calculating time, and assessing the situation.</p> <p>3. Contents of the paragraphs of the preliminary combat order.</p> <p>Class 4. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Stage 1, 2.</p> <p>1. Understand the task at hand.</p> <p>2. Calculating the time. Assessment of the situation.</p> <p>3. Development of the first preliminary combat order.</p> <p>4. Communicating the first preliminary combat order to subordinates.</p>

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"> 1. Record the results of the task awareness on the platoon leader's work card. Finalising the time calculation 2. Exercise in communicating the first preliminary combat order. <p>Class 5. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Stage 3: "Development of a preliminary plan".</p> <ol style="list-style-type: none"> 1. Analysis of the task. 2. Developing options for action.
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"> 1. Analysing the options for action. Comparison and selection of the final course of action 2. Development of the battle plan. Preparation of a working map for the report of the plan. <p>Class 6. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Stage 3: "Development of a preliminary plan".</p> <ol style="list-style-type: none"> 1. Report on the battle plan. 2. Practice the second preliminary combat order.
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"> 1. Formulation of combat missions. 2. Details of management and interaction issues. 3. Detailing the issues of comprehensive support for actions. <p>Class 7. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Stage 7: "Issuing a combat order".</p> <ol style="list-style-type: none"> 1. Issuing a combat order. 2. Setting combat tasks for subordinates.
FIELD EXERCISE					

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"> 1. Completion of a combat order. Exercise in setting combat tasks for subordinates. 2. Content of the reconnaissance. 3. Preparation of a working map, devices for mapping the situation for work in the field. Preparation of equipment. <p>Class 8. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Phase 5, 7.</p> <ol style="list-style-type: none"> 1. Conducting a reconnaissance. 2. Issuance of a combat order.
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"> 1. Exercise in setting combat tasks for subordinates on the ground (on a terrain model). 2. Content of the organisation of management, interaction and comprehensive support on the terrain layout. 3. Development of call sign forms for officials, tables of control and interaction signals. <p>Class 9. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Phase 4, 8.</p> <ol style="list-style-type: none"> 1. Prepare the terrain layout. 2. Organisation of management, interaction and comprehensive support on the terrain layout.
31	Tactical and 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> <ol style="list-style-type: none"> 1. Study of the conditions for the implementation of tactical training standads in a platoon (squad) in defensive combat. 2. Preparation of exercise sites and training leaders at exercise sites. <p>Class10. Preparation of a mechanised platoon for defence in the absence of a collision with the enemy. Phase 4, 8.</p> <ol style="list-style-type: none"> 1. Unit preparation and movement. Checking readiness. Fulfilment of tactical training standads as part of a platoon (squad).
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> <ol style="list-style-type: none"> 1. Refine the working map. 2. Prepare a table of call signs, a table of control and interaction signals.

					<p>Class 11. Controlling the actions of a mechanised platoon in defensive combat.</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>Class 12. Controlling the actions of a mechanised platoon in defensive combat at night.</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>
Total for the topic		42	28	14	
Topic 5. Tactics of a mechanised platoon in an offensive battle.					
34	Lecture	3	2	1	<p>Class 1: Mechanised platoon attack.</p> <p>1. Place and role of a mechanised platoon in an offensive battle.</p> <p>2. Tasks of a mechanised platoon in an offensive battle, their content.</p> <p>3. Combat order, system of fire of a mechanised platoon in offensive combat.</p> <p>4. Conducting offensive combat.</p> <p><i>Independent work.</i> Advance of a mechanised platoon.</p> <p>1. Place and role of the mechanised platoon in an offensive battle. Tasks of a mechanised platoon in an offensive battle.</p> <p>2. Study the experience of using mechanised units in offensive combat during the Russian-Ukrainian war.</p> <p>3) Rehearse the scheme: "Actions of a mechanised platoon in an offensive battle".</p>

35	Group session	4	2	2	<p>Class 2: Preparing and conducting offensive combat.</p> <p>1. Features of the platoon commander's work in planning an offensive battle.</p> <p>2. Peculiarities of managing platoon actions in offensive combat.</p> <p><i>Independent work:</i> Preparing and conducting offensive combat.</p> <p>1. Develop the following scheme: "Areas and boundaries to be assigned in an offensive with a deep advance".</p> <p>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".</p> <p>3. Preparation of abstracts and reports for the seminar.</p> <p><i>Independent work:</i> Preparation for the seminar. Preparation and conduct of offensive combat in special conditions.</p> <p>1. Definition (purpose) of an offensive battle. The place of the mechanised platoon in an offensive battle. Sequential execution of offensive combat tasks.</p> <p>2. Preparation and conduct of offensive combat of mechanised units based on the experience of the Russian-Ukrainian war.</p> <p>3. Preparation and conduct of offensive combat of mechanised units in special conditions.</p>
36	Seminar session	2	2		<p>Class 3: Preparing and conducting offensive combat in special conditions.</p> <p>1. Definition (purpose) of an offensive battle. The place of the mechanised platoon in an offensive battle. Sequential execution of offensive combat tasks.</p> <p>2. Preparation and conduct of offensive combat of mechanised units based on the experience of the Russian-Ukrainian war.</p> <p>3. Preparation and conduct of offensive combat of mechanised units in special conditions.</p>
<p>A set of group exercises on the topic: "Advance of a mechanised platoon with a move from depth".</p>					

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"> 1. Study of the tactical task. Preparation of a working map, drawing the initial situation. 2. The content of the platoon leader's work in understanding the task, calculating time, and assessing the situation. 3. Contents of the paragraphs of the preliminary combat order. <p>Class 4. Preparation of a mechanised platoon for an advance from depth. Phase 1, 2.</p> <ol style="list-style-type: none"> 1. Understand the task at hand. 2. Calculating the time. Assessment of the situation. 3. Development of the first preliminary combat order. 4. Communicating the first preliminary combat order to subordinates.
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"> 1. Record the results of task awareness on the platoon commander's working card. Finalisation of the time calculation, preliminary combat order. 2. Exercise in the delivery of the first preliminary combat order (PCO 1). <p>Class 5. Preparation of a mechanised platoon for an attack from depth. Stage 3: "Development of a preliminary plan".</p> <ol style="list-style-type: none"> 1. Analysis of the task. 2. Developing options for action.
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"> 1. Analysing the options for action. Comparison and selection of the final course of action 2. Development of the battle plan. Preparation of a working map for the report of the plan. <p>Class 6. Preparing a mechanised platoon for an advance from depth. Stage 3: "Developing a preliminary plan"</p> <ol style="list-style-type: none"> 1. Report on the battle plan. 2. Practice the second preliminary combat order.
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"> 1. Formulation of combat missions. 2. Details of management and interaction issues. 3. Detailing the issues of comprehensive support for actions.

					<p>Class 7. Preparation of a mechanised platoon for an advance from depth. Stage 7: "Issuing a combat order".</p> <ol style="list-style-type: none"> 1. Issuing a combat order. 2. Setting combat tasks for subordinates.
FIELD ACCESS					
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"> 1. Completion of a combat order. Exercise in setting combat tasks for subordinates. 2. Content of the reconnaissance. 3. Preparation of a working map, devices for mapping the situation for work in the field. Preparation of equipment. <p>Class 8. Preparation of a mechanised platoon for an advance from depth. Phase 5, 7.</p> <ol style="list-style-type: none"> 1. Conducting a reconnaissance. 2. Issuance of a combat order.
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"> 1. Exercise in setting combat tasks for subordinates on the ground (on a terrain model). 2. Content of the organisation of management, interaction and comprehensive support on the terrain layout. 3. Development of call sign forms for officials, tables of control and interaction signals. <p>Class 9. Preparation of a mechanised platoon for an advance from depth. Phase 4, 8.</p> <ol style="list-style-type: none"> 1. Prepare the terrain layout. 2. Organisation of management, interaction and comprehensive support on the terrain layout.

43	Tactical and drill exercise	5	2	3	<p><i>Independent work:</i> Preparation for the TPE "Preparation of a mechanised platoon for an offensive with a deep advance". Phase 4, 8.</p> <ol style="list-style-type: none"> 1. Study of the conditions for the implementation of tactical training standads in a platoon (squad) in an offensive battle. 2. Preparation of exercise sites and training leaders at exercise sites. <p>Class 10. Preparation of a mechanised platoon for an advance from depth. Stage 4.8.</p> <ol style="list-style-type: none"> 1. Unit preparation and movement. Checking readiness. Fulfilment of tactical training standads as part of a platoon (squad). <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"> 1. Refine the working map. 2. Prepare a table of call signs, a table of control and interaction signals.
44	Tactical exercise	2	2		<p>Class 11. Controlling the actions of a mechanised platoon in an offensive battle.</p> <ol style="list-style-type: none"> 1. Platoon management during offensive combat: 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. Fighting in trenches; platoon management during combat in the depths of enemy defence. 2. Managing a platoon in pursuit of the enemy. Securing a favourable position.
45	Tactical exercise	3	2	1	<p><i>Independent work:</i> Preparation for the TK "Management of actions of a mechanised platoon during an offensive battle at night".</p> <ol style="list-style-type: none"> 1. Light support for offensive combat at night. Developing guidelines for preparing a platoon for night operations. Finalising the working map on lighting support. 2. Revision of the table of control signals and interaction on lighting issues <p>Class 12. Managing the actions of a mechanised platoon during an offensive battle at night.</p> <ol style="list-style-type: none"> 1. Transition to night operations. Preparing units for offensive combat at night. 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.

46		1	1	<p><i>Independent work:</i> Completion of preparation for the final control - EXAM.</p> <p>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).</p> <p>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)</p> <p>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 (<i>MB, MR, Mv, MvD, RVP, Gv, Kulv, Ptv, Zrv, Tv</i>).</p> <p>4. Preparation of combat documents, basic tactical signs, and abbreviations.</p>
Total for the topic		38	24	14
Control measures		6	6	Examination
Total for the educational component		150	100	50

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

General objective of the educational programme 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 sessions.

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 exercise, 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 exercise sessions.

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

Information and methodological support

1. The general military regulations 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.
5. 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 exercise sessions, control events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic № 1. Fundamentals of command and control and the process of preparing for combat.					
1	Lecture	2	2		Class 1: Fundamentals of the theory of troop management. 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		Class 2. Laws and principles of troop management. 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		Class 3. The essence and content of troop management. 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		Class 4. The content of the commander's management activity. 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>Class 5. Procedure for the implementation of measures to organise combat operations (combat use).</p> <ol style="list-style-type: none"> 1. Content and procedure for assessing the enemy. 2. The content and procedure for evaluating your unit (troops). 3. The content of the neighbourhood assessment.
6	Lecture	2	2	<p>Class 6. Decision-making is the basis of command and control.</p> <ol style="list-style-type: none"> 1. The decision of the commander (chief), its essence and content. Requirements for the commander's decision. 2. The essence and content of combat planning (combat employment). 3. Reconnaissance by the unit commander.
7	Group session	1	1	<p>Class7. The content of the commander's decision-making work.</p> <ol style="list-style-type: none"> 1. Features of decision-making in combat conditions. Factors influencing decision-making. 2. Methods that facilitate independent combat decision-making.
8	Lecture	2	2	<p>Class 8. The procedure for setting tasks for subordinates. Organisation of interaction and preparation of units for the implementation of tasks.</p> <ol style="list-style-type: none"> 1. The procedure for assigning combat tasks to subordinates. Combat order, combat order, their structure and content. 2. The essence, content, forms, types and procedure for organising interaction. 3. Preparing units for the execution of tasks.
9	Group session	1	1	<p>Class9. Procedure for setting combat tasks and preparing units for their execution.</p> <ol style="list-style-type: none"> 1. The procedure for drawing up a combat order, its structure and content. 2. Procedure for organising interaction and combat support. 3. Procedure for organising management and communication.
Total for the topic		16	16	
Topic 2. Combat text and graphic documents.				
10	Lecture	2	2	<p>Class 1: The procedure for developing textual combat documents.</p> <ol style="list-style-type: none"> 1. Combat documents, their classification and requirements. 2. Requirements for the design of textual combat documents.
11	Practical exercise	2	2	<p>Class 2. The work of the platoon commander in issuing a combat order.</p> <ol style="list-style-type: none"> 1. Collecting and forming the initial data for the preparation of a combat order. 2. Practical execution of a combat order.

12	Lecture	2	2		Class 3: The procedure for developing graphic combat documents. 1. Features of the design of graphic combat documents. 2. Methods of drawing up graphic planning documents.
13	Practical session	5	4	1	Class 4. Preparation and execution of graphic combat documents for work. 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	Class 5. Military symbols and signs. 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		Class 6. The use of military symbols for combat documents. 1. Application of military symbols on graphic combat documents. 2. Marking of troop control measures.
Total for the topic		18	16	2	
Topic№ 3. Management activities of a mechanised platoon commander.					
16	Lecture	2	2		Class 1: Combat capabilities of a mechanised platoon. 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		2	2		Class 2: Assessment of the combat capabilities of a mechanised platoon. 1. Preparation of initial data for calculating the combat capabilities of a mechanised platoon. 2. Calculation of the firepower of a mechanised unit.
18	Lecture	2	2		Class 3: Types of comprehensive coverage and their content.

				<ol style="list-style-type: none"> 1. The concept of comprehensive coverage and its components. 2. General characteristics of medical care. 3. General characteristics of logistics support. 4. Classification of equipment according to NATO standards.
19	Group session	2	2	<p>Class 4. Organisation of support for combat operations.</p> <ol style="list-style-type: none"> 1. Organisation of intelligence. 2. Organisation of CBRN protection. 3. Organisation of engineering support. 4. Organisation of tactical camouflage. 5. Organisation of security.
Total for the topic		8	8	
See № 4. The work of a mechanised platoon commander in preparing for combat according to NATO standards.				
20	Lecture	2	2	<p>Class 1: The content of the management activities of a mechanised platoon commander according to TLP procedures.</p> <ol style="list-style-type: none"> 1. Stages of the battle preparation process. 2. Components of the stages of the battle preparation process.
21	Group session	2	2	<p>Class2: Receiving a combat mission and communicating a preliminary combat order according to TLP procedures.</p> <ol style="list-style-type: none"> 1. Receiving a combat mission (the first stage of the combat preparation process). 2. Communicating the preliminary combat order (the second stage of the combat preparation process).
22	Lecture	4	4	<p>Class 3: The procedure for developing a preliminary battle plan according to the TLP procedure.</p> <ol style="list-style-type: none"> 1. Content and procedure of work at the task analysis stage. 2. Content and procedure of work at the stage of developing action options.
23	Group session	2	2	<p>Class 4. Developing a preliminary plan and preparing the unit for relocation under TLP procedures.</p> <ol style="list-style-type: none"> 1. The content and procedure of the process of comparing and selecting the final option. 2. The content and procedure of work in the course of preparing the unit for relocation.
24	Lecture	2	2	<p>Class5. The procedure for conducting reconnaissance and completing battle planning according to TLP procedures.</p> <ol style="list-style-type: none"> 1. Content and procedure of work during reconnaissance.

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

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

General objective of the educational programme component

Exercise of an officer who is able to maintain the unit in constant readiness to perform assigned tasks, organise and conduct combat exercise in the unit according to training standads, 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 a 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 exercise in the company;

Methods of conducting sessions according to training standads;

requirements for the safety of military activities during combat exercise, 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 exercise in the unit, and keep records of it;

conduct combat exercise sessions in accordance with training standads;

Develop planning and reporting documents for combat exercise;

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 exercise, 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 sessions, it is advisable to practice using tasks that require logical thinking and contribute to the development of cadets' (students') creative abilities.

Sessions are held in specialised classrooms, exercise complexes, exercise grounds and campuses, exercise 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 exercise, 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 exercise 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 exercise 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 study time by type of class

№ s/n	Types of exercise sessions, control events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Organisation of security of military service in everyday life					
1	Lecture	2	2		Class 1: Theoretical foundations of military security 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.
Total for the topic		2	2		
Topic 2. Health and safety and the basics of al health and safety					
2	Lecture	2	2		Class 1: Classification of hazards by source of origin 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.
Total for the topic		2	2		
Topic 3: Fundamentals of military administrative activity					
3	Lecture	2	2		Class 1: Legislation of Ukraine on the protection of state secrets 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...

Total for the topic		2	2		
Topic 4. Service activities of the unit commander					
4	Lecture	2	2	-	Class1: Activities of the unit commander in the field of human resources management 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 of subordinate personnel by the unit commander.
Total for the topic		2	2		
Topic 5. Organisation of service of troops in the unit					
5	Lecture	2	2		Class1: Fundamentals of organising military service in a unit 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		Class 2: Organisation of accounting and storage of weapons and ammunition 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.
Total for the topic		4	4		
Topic 6: Fundamentals of combat exercise in a unit					
7	Lecture	2	2		Class 1: Fundamentals of combat exercise organisation 1. Purpose, tasks and content of exercise of the Armed Forces of Ukraine. 2. General provisions for the organisation of combat exercise. 3. Requirements of regulatory documents on combat exercise planning.
8	Group session	2	2		Class2: Organising individual and collective exercise 1. Organisation of individual exercise. The system of individual exercise. 2. Forms of collective exercise. 3. Platoon combat exercise logbook...
9	Practical session	2	2		Class3: Planning combat exercise in a unit 1. Develop and draw up a exercise schedule for the unit (separate platoon). 2. Drawing up a lesson plan (outline, operational map).

10	Seminar	2	2	<p>Class 4. High-quality organisation of combat exercise and service of troops in a unit is the basis for maintaining combat readiness</p> <p>1. Discuss the activities of the unit commander in organising the service of troops in the unit.</p> <p>2. Discuss the activities of the unit commander in organising combat exercise in the unit.</p>
Total for the topic		8	8	
Topic 7. Fundamentals of combat and mobilisation readiness				
11	Group session	2	2	<p>Class 1: Military mobilisation and combat readiness of units</p> <p>1. Fundamentals of military mobilisation.</p> <p>2. Combat readiness of units.</p> <p>3. Manning units with mobilisation resources.</p>
Total for the topic		2	2	
Topic 8. Organisation and maintenance of military economy				
12	Lecture	2	2	<p>Class 1: Organisation and management of company facilities</p> <p>1. Fundamentals of company management.</p> <p>2. The work of the commander of a unit for military economy.</p>
13	Practical session	2	2	<p>Class2: Acceptance and surrender of cases and position by the unit commander</p> <p>1. General regulations on the acceptance and delivery of cases and the position of platoon leader.</p> <p>2. Preparation of documents for acceptance of cases and the position of platoon leader.</p>
14	Practical session	2	2	<p>Class 3: Accounting for material assets in a unit</p> <p>1. Preparation of accounting documents for the receipt and delivery of material assets of the unit.</p> <p>2. Prepare documents for writing off material assets.</p>
Total for the topic		6	6	
Control measures		2	2	Credit
Total for the educational component		30	30	

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

General objective of the educational programme component

Exercise 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 exercise, when all cadets (students) perform the same task at the same time under the supervision of a teacher;

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

individual form of exercise, 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 sessions.

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

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, frequency are communicated to cadets (students) at the beginning of the discipline.

Sessions are held in specialised classrooms, exercise complexes, exercise grounds and campuses, exercise 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 exercise sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Nuclear, chemical, biological and incendiary weapons. Weapons based on new physical principles.					
1	Lecture	2	2		Class 1: General characteristics of weapons of mass destruction and high-risk facilities. 1: The role and place of discipline in the exercise of military personnel, the procedure for passing discipline and reporting. 2.. General characteristics of nuclear weapons. Damaging factors of a nuclear explosion and protection against them. 3. General characteristics of chemical weapons. Protection of units from the effects of chemical weapons 4. General characteristics of biological weapons. Protection of units from the effects of biological weapons.
2	Group session	2	2		Class 2. Incendiary weapons. 1. General characteristics of incendiary weapons and current views on their use. 2. The damaging factors of incendiary weapons. 3. Classification of incendiary substances and mixtures. 4. Protection of personnel, weapons, military equipment and fortifications from the effects of incendiary weapons.
Total for the topic		4	4		
Topic 2. Basics of radiation, chemical and biological protection of units					

3	Lecture	3	2	1	<p>Class 1: Purpose, tasks and measures of radiation, chemical and biological protection of units.</p> <ol style="list-style-type: none"> 1. Content of tasks and measures of radiation, chemical, biological protection of units, forces and means for their implementation. 2. The work of commanders and staffs in organising radiation, chemical and biological protection. 3. Organisation and conduct of radiation, chemical and biological intelligence in the unit. 4. Conventional symbols used for graphical representation of the CBR situation and actions of CBR protection units. <p><i>Independent work:</i> Purpose, tasks and measures of radiation, chemical, biological protection of units.</p> <ol style="list-style-type: none"> 1. Procedure for organising radiation, chemical and biological protection of units. 2. Procedure for radiation, chemical and biological protection of units. 3. Conventional symbols used for graphical representation of the CBR situation and actions of CBR protection units.
4	Practical exercise	2	2		<p>Class2 Using portable technical intelligence equipment.</p> <ol style="list-style-type: none"> 1. Work with chemical intelligence and control devices. 2. Work with radiation detection and monitoring devices. <p><i>Independent work:</i> Use of portable technical intelligence equipment.</p> <ol style="list-style-type: none"> 1. Sequence of actions in preparation for work and checking the operability of radiation detection devices. 2. Sequence of actions in preparation for work and checking the performance of chemical reconnaissance devices.
5	Practical exercise	2	2		<p>Class 3: Practical use of personal protective equipment. Basics of special treatment.</p> <ol style="list-style-type: none"> 1. Radiation, chemical, biological contamination warning signals. 2. Procedure for the implementation and evaluation of standard No. 1. 3. Procedure for fulfilling and evaluating the standard No. 4a; 4b. 4. Procedure for the implementation and evaluation of the standard No. 6; 7; 8. 5. Individual special treatment agents and the procedure for their use 6. Purpose and structure of special processing kits and their preparation for use in various processing methods.
6	Practical exercise	2	2		<p>Class 4. Theoretical basis of aerosols application. Application of technical means of setting up aerosol curtains.</p> <ol style="list-style-type: none"> 1. General principles of aerosol camouflage. 2. Technical means of general-purpose aerosol camouflage and their characteristics. 3. The procedure for using hand-held smoke grenades. 4. The procedure for using smoke bombs.
Total for the topic		9	8	1	
Control measures		2	2		Credit
Total for the educational component		15	14	1	

4.7. EP 1.7 "Military topography"

General objective of the educational programme 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 exercise.

It is mandatory to systematically consolidate the knowledge and skills acquired in the course of studying the discipline during practical (field) sessions 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 goal, the following forms of learning are provided:

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

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

individual form of exercise, 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 sessions.

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

Current control is carried out in the form of an oral survey or written express control during exercise 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 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 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 study time by type of session

№ s/n	Types of exercise sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1 Topographic maps.					
1	Group sessions	4	2	2	<p>Class 2: Topographic maps of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Purpose, scale and characteristics of topographic maps. 2. The essence of topographic mapping and nomenclature. 3. Summary tables of topographic maps. 4. 4. Prepare the topographic map for work. <p><i>Independent work:</i> Topographic maps of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Practice identifying adjacent sheets of topographic maps at different scales.
2	Group sessions	4	2	2	<p>Class4. Study the terrain on a map.</p> <ol style="list-style-type: none"> 1. The essence of the relief image by horizontal lines. 2. The height of the relief section. 3. Determine the elevation and elevation of points on the map. 4. 4. Determine the steepness of slopes from the map. <p><i>Independent work:</i> study the terrain on a map.</p> <ol style="list-style-type: none"> 1. Perform individual tasks to build a vertical profile of the terrain.

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

7	Practical session	5	4	1	<p>Class 3: Measuring and orienteering without and with a map.</p> <p>1. Orientation on the ground without a map.</p> <p>2. Measure angles and determine distances on the ground.</p> <p>3. Orientation on the map. Determining the point of standing.</p> <p><i>Independent work:</i> Drawing a map of the area.</p> <p>1. Conventional symbols used on terrain diagrams.</p> <p>2. Drawing up a map of the area.</p>
Total for the topic		7	6	1	
Topographic maps of NATO countries.					
8	Practical session	3	2	1	<p>Class1: Locating objects on NATO maps.</p> <p>1. Determine the geographical coordinates.</p> <p>2. Determine the rectangular coordinates.</p> <p>3. Features of using the Military Grid Reference System.</p> <p><i>Independent work:</i> Determining the position of objects on NATO maps.</p> <p>1. Determining the position of objects using the Military Grid Reference System with varying accuracy.</p>
Total for the topic		3	2	1	
Control measures		2	2		Credit
Total for the educational component		30	20	10	

4.8. PLO 1.8 "Engineering exercise"

General objective of the educational programme component

Exercise 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 improve 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 exercise 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 sessions 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 exercise sessions are 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 sessions 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 sessions, 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 25.05.2016 (as amended in 2017-2023).

3. Combat Regulations 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 study time by type of class

№ s/n	Types of exercise sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Fundamentals of engineering support of combat operations.					
1	Lecture	3	2	1	<p>Class 1: Engineer troops and tasks of engineering support of combat.</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>Class 2: Engineering reconnaissance of the enemy and terrain.</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>

Total for the topic	6	4	2	
Topic 2. Fortification of troop positions, construction of protective structures and engineering camouflage measures.				
3	Group session	3	2	1
<p>Session 1: Fortification equipment of troop positions.</p> <p>1. General requirements for the fortification of troop positions. 2. Arrangement of fortifications for firing at the positions of mechanised and tank units. 3. Arrangement of fortifications to protect personnel.</p> <p><i>Independent work</i></p> <p>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. 2. Purpose, specifications of the main types of earthmoving equipment (PZM-2, EOV-4421, MDK-3).</p>				
4	Group session	3	2	1
<p>Class2: Conducting engineering security measures for the use of troops and facilities to camouflage troops and facilities, simulate their actions.</p> <p>1. General provisions on camouflage. 2. Methods of camouflage of personnel and equipment. 3. Disguising fortifications and objects based on the experience of the war with the Russian Federation.</p> <p><i>Independent work</i></p> <p>1. Purpose, technical characteristics and composition of sets of service engineering camouflage means. 2. Purpose, technical characteristics, composition of personnel sets of anti-radar camouflage and concealment equipment.</p>				
Total for the topic	6	4	2	
Topic 3. Blasting operations.				

5	Group session	3	2	1	<p>Class 1: Destruction, basics of the fire method of detonating explosive charges. Basics of the electric method of detonating explosive charges.</p> <ol style="list-style-type: none"> 1. Classification of explosives. 2. Purpose, technical characteristics and structure of fire detonation devices. 3. Purpose, technical characteristics and design of electrical detonation devices. 4. Purpose, technical characteristics of sapper wires and test equipment. <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Purpose and composition of the kit for preparation and conduct of blasting operations in the field. 2. The Criminal Code of Ukraine on violation of the established rules for handling explosives and means of detonation. 3. General requirements for safety measures during blasting operations.
6	Group session	3	2	1	<p>Class 2: Anti-tank mines.</p> <ol style="list-style-type: none"> 1. Purpose and classification of anti-tank mines. 2. General design, technical characteristics, kit composition, procedure for installation and neutralisation (destruction) of TM-62 series anti-tank anti-track mines. 3. Foreign-made anti-tank mines used by the Armed Forces of Ukraine. <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Purpose, technical characteristics, design, principle of operation, procedure for neutralisation (destruction) of MVCH-62 fuzes. 2. Purpose, technical characteristics, design, principle of operation, procedure for neutralisation (destruction) of MVP-62 and MVP-62M fuzes.

7	Group session	4	2	2	<p>Session 3: Anti-personnel mines. Means and main types of mines that can be laid remotely.</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 exercise	6	4	2	<p>Class4. Making passages in minefields by explosive means.</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>
Total for the topic		16	10	6	
Control measures		2	2		Credit
Total for the educational component		30	20	10	

4.9. EP 1.9 "Organisation of military communications"

General objective of the educational programme component

Exercise 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.

Sessions are held in specialised classrooms, exercise complexes, exercise grounds and campuses, exercise 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 exercise, 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 exercise 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 study time by type of class

№ s/n	Types of exercise sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Fundamentals and methods of organising military communications in tactical command and control units.					
1	Group session	3	2	1	<p>Class 1: Fundamentals of radio communication. Conducting radio communication (radio exchange) in units. Field means of wire communication of tactical command and control units.</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>

Total for the topic		3	2	1	
Topic 2 Tactical and technical characteristics, capabilities and modes of operation of basic communication equipment in units of the tactical command and control of the Armed Forces of Ukraine. Covert command and control of units.					
2	Group session	2	2		<p>Class 1: Tactical and technical characteristics, capabilities and modes of operation of the main radio communication equipment of tactical command and control units.</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>Class 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.</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 exercise	3	2	1	<p>Class 3. Application of documents for covert command and control of units in planning and performing tasks in combat zones.</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 exercise	2	2		<p>Class 4. Work on communication means using documents of covert control of tactical command and control units.</p> <p>1. Work on radio communications, transfer of information using 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>
Total for the topic		10	8	2	
Control measures		2	2		Credit
Total for the educational component		15	12	3	

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

General objective of the discipline

Exercise 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 in case of injuries, 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

Sessions 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, exercise films), and practical issues are practiced on the ground using individual medical equipment and first aid equipment.

Sessions are held in specialised classrooms, exercise complexes, laboratories, exercise grounds and campuses, exercise 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 Exercise STI-000G.21L "Tactical Medicine", approved by the Order of the Commander of the Medical Forces of the Armed Forces of Ukraine No. 121 28.12.2023.
4. Medical support. Requirements for exercise of all military personnel in combat casualty care (STANAG 2122/AMedP-8.15, "REQUIREMENT FOR EXERCISE IN CASUALTY CARE FOR ALL MILITARY PERSONNEL", IDT).

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

№ s/n	Types of exercise sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Fundamentals of providing assistance to victims of hostilities. Assisting victims in the area of direct threat					
1	Lecture	1	1	-	Class 1: First aid measures in combat conditions. Means of individual medical equipment of a serviceman. 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	Class 2. Measures of first aid in combat conditions. Means of individual medical equipment of a serviceman. 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 the victim MARCH PAWS.

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

6	Practical exercise	2	2	<p>Session 2: Assisting victims with massive bleeding - M (Massive bleeding).</p> <ol style="list-style-type: none"> 1. Examine the casualty for massive bleeding. 2. Application of indirect pressure on the vessels. 3. Application of direct pressure to the vessels. 4. Use of tourniquets for limbs with a gate type and ratchet mechanism. 5. Perform tamponade using haemostatic and conventional means. Reassess the effectiveness of tamponade. 6. Application of compression dressings.
7	Practical exercise	3	2	1 <p>Class 3: Assistance in case of obstruction of the upper airway - A (Airways).</p> <ol style="list-style-type: none"> 1. Manual restoration of airway patency. 2. Determining the presence of breathing (the "Hear-See-Feel" method). 3. Place the victim in a stable lateral position. 4. Restoration of airway patency in case of suspected cervical spine injury. 5. Manual removal of foreign bodies from the oral cavity. 6. Insertion of a nasopharyngeal airway. 7. Artificial lung ventilation using a ventilation bag with a mask alone or together. 8. State of consciousness on the AVPU scale. <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Structure of the human upper respiratory tract. 2. Signs of upper airway obstruction and emergency respiratory care "Tactical First Aid" (TFA). 3. Selection of a nasopharyngeal airway (NPA). 4. State of consciousness on the AVPU scale.
8	Practical exercise	3	2	1 <p>Class 4. Providing assistance using the MARCH algorithm. Assessment of breathing and life-threatening chest injuries - R (Respiration).</p> <ol style="list-style-type: none"> 1. Types and symptoms of chest injuries. 2. Assessment of respiratory rate and depth. 3. The procedure and sequence of chest examination. 4. The procedure for using occlusal stickers. 5. Conducting the "venting" depressurisation technique (Burping technique). 6. The procedure for needle decompression. <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Structure of the human chest. 2. Identification of signs of tension pneumothorax.

9	Practical exercise	4	2	2	<p>Class 5. Providing assistance using the MARCH algorithm. Circulation - C (Circulation).</p> <ol style="list-style-type: none"> 1. Immobilisation of the pelvic bones. 2. Assessment of radial pulse and level of consciousness. 3. Conversion and relocation of the turnstile. 4. Control (reassessment) of external and internal bleeding and search for other injuries (wounds). <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Reassess the control of massive bleeding. 2. Signs of pelvic fracture. 3. Symptoms of hypovolemic (haemorrhagic) shock. The lethal triad.
10	Practical exercise	2	2		<p>Class 6. Providing assistance using the MARCH algorithm. Hypothermia - H (Hypothermia).</p> <ol style="list-style-type: none"> 1. Use of different types of thermal blankets and heating elements. Prevention of hypothermia. 2. Examine and assess a victim with suspected head and eye injuries. 3. Provide pre-hospital care in case of suspected head and eye injuries.
11	Group session	3	2	1	<p>Class 7. Thermal injuries. Fractures. Use of painkillers and antibiotics. Wounds.</p> <ol style="list-style-type: none"> 1. The procedure for providing pre-hospital care to victims with thermal injuries. 2. Immobilisation of limbs, neck, spine. 3. Applying a bandage when fixing foreign bodies in the victim's body. 4. Apply a bandage to the amputated limb, pack the amputated limb. 5. Wound assessment and dressing. <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Degrees and types of thermal injuries and methods of calculating their area. 2. Procedure for examination and assessment of a victim with suspected musculoskeletal injuries, types of musculoskeletal injuries. 3. The concept and contents of the individual pill kit (CWMP), the main types of painkillers and antibiotics.
Total for the topic		20	14	6	
Topic 3. Sorting, moving and preparing for evacuation. Evacuation transport					
12	Group session	2	2		<p>Session 1: Triage in case of mass casualties. Sorting the wounded by evacuation priority.</p> <ol style="list-style-type: none"> 1. Maintain sorting documentation. 2. Sorting algorithms and categories.
13	Group session	3	2	1	Class 2: Moving and preparing for evacuation.

					<ol style="list-style-type: none"> 1. Loading victims into/on various types of transport. 2. Securely fix the wounded for transport. 3. Transmit a verbal report. 4. Filling in the victim card. <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Types of equipment for moving victims. 2. Types of land and air transport for evacuation of victims.
14	Group session	4	4	-	<p>Class 3: Simulation exercises.</p> <ol style="list-style-type: none"> 1. Rehearse a scenario for assisting a victim with different types of injuries. 2. Summing up the results.
Total for the topic		9	8	1	
Topic 4. Fundamentals of the combat system of survival of warriors.					
15	Lecture	4	2	2	<p>Class 1: The basics of survival.</p> <ol style="list-style-type: none"> 1. The concepts of survival and autonomous existence. Factors affecting human survival. 2. Purpose and composition of the emergency kit and emergency bag. <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Equipment and options for equipment tiering. 2. Methods and means of signalling.
16	Group session	4	2	2	<p>Class 2: Catering and water supply.</p> <ol style="list-style-type: none"> 1. Methods of cooking and storing food in the field. Use of natural resources for food. 2. Finding water sources, water purification and disinfection. 3. Methods of obtaining and preserving fire. Fire for cooking. <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Recommendations for compliance with the drinking regime. 2. Types of bonfires and their purpose.
17	Practical exercise	4	2	2	<p>Class 3: Basics of survival. The basics of rational nutrition and water supply.</p> <ol style="list-style-type: none"> 1. Finding water sources, water purification and disinfection. 2. Fire production and fire preservation. 3. Preparation and storage of food in the field. Use of natural resources for food. <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Equipment and options for echeloning the serviceman's equipment. 2. Modern mandatory items of personal equipment for servicemen.

					3. Principles of preparing and completing a survival kit. Typical composition of an individual survival kit.
18	Group session	3	2	1	<p>Class 4. The basics of moving and studying tracks on the ground.</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>Class 5. Orientation when operating in enemy-controlled territory.</p> <p>1. Orientation in space and time.</p> <p>2. Determine the direction and follow it while driving.</p> <p>3. Methods of determining distances on the ground.</p> <p>4. Ways to determine the linear dimensions of local objects (landmarks).</p> <p><i>Independent work.</i></p> <p>1. Practically solve problems of determining the local time by the celestial bodies.</p> <p>2. Practically solve problems of determining distances on the ground and linear dimensions of objects.</p>
20	Group session	2	1	1	<p>Class 6. Organisation of recreation in the territory controlled by the enemy.</p> <p>1. Requirements for places of rest, arrangement of shelter in different conditions. Organisation of rest.</p> <p>2. Actions in the conditions of enemy use of sniffer dogs.</p> <p><i>Independent work:</i> Arranging a shelter, ensuring the safety of the resting place.</p> <p>1. Ensuring the safety of the recreation area.</p> <p>2. Practice the types of shelter using the equipment and tools at hand.</p>
Total for the topic		19	10	9	
Control measures		3	2	1	Credit
Total for the educational component		60	40	20	

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

General objective of the educational programme component

Exercise 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 exercise 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 exercise 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 sessions 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 exercise and study of the Statutes of the Armed Forces of Ukraine with the personnel of the unit;

correctly perform elements of drill exercise in everyday activities.

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

Information and methodological support

1. Statute of the Internal Service of the Armed Forces of Ukraine.
2. Disciplinary Statute of the Armed Forces of Ukraine.
3. The Charter of the Garrison and Guard Services of the Armed Forces of Ukraine.
4. The Articles of Arms of the Armed Forces of Ukraine.
5. Standard of individual exercise in the subject of study "Statutes of the Armed Forces of Ukraine" (introductory course), STI 000G.17L.
6. Standard of individual exercise 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 study time by type of class

№ s/n	Types of exercise sessions, control events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Duties, rights and responsibilities of military personnel.					
1	Lecture	1	1		Session 1: Responsibilities of the command team officials. 1. Duties of the platoon leader. 2. Distribution of authority at the platoon level between the officer and the NCO.
Total for the topic		1	1		
Topic 2. Military discipline					
2	Lecture	1	1		Session 1: Incentives and disciplinary sanctions applied and imposed on military personnel. 1. Incentives applicable to military personnel. 2. Disciplinary sanctions imposed on military personnel.
Total for the topic		1	1		
Topic 3. Daily routine of a military unit.					
3	Lecture	3	2	1	Session 1: Daily routine, preparation and reconnaissance. 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).
Total for the topic		3	2	1	

Topic 4. Organisation of the guard service.				
4	Lecture	2	2	Class 3: Rights and duties of guard officials. 1. Duties of guard officials. 2. Procedure for the use of physical force and weapons by guard personnel.
Total for the topic		2	2	
Topic 5. Drill exercise				
5	Practical session	1	1	Class 1: Formations and their management. 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	Class 2. Drill techniques and movement without weapons. 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	Session 3: Getting out of line, getting back into line. Approaching and departing from a superior. 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	Class 4. Drill techniques and movement with weapons. 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		Class 5. Drill techniques and movement with weapons. 1. Drills with weapons: "Put down - WEAPON", "To - WEAPON", "Behind - WEAPON" by distributions. 2. Performing drills with weapons: "Put down - WEAPON", "To - WEAPON", "Behind - WEAPON" in general. 3. Performing a military salute with weapons on the spot and in motion.
Total for the topic		6	6		
Control measures		2	2		Credit
Total for the educational component		15	14	1	

4.12. OP 1.12 "Small arms and firearms exercise"

General objective of the educational programme component

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

As a result of studying the discipline, students (trainees) 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 the unit's standard weapons;

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

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

the procedure for using night sights and surveillance devices;

safety measures when handling small arms and grenades;

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

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

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

The firing exercises shall be conducted in accordance with the Course of Fire from Small Arms and Combat Vehicles. During firing exercises, use elements of psychological impact on the trainees, namely firing blank ammunition behind the firing party 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 Exercise 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-7V (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 study time by type of class

№ s/n	Types of exercise sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Arming units.					
1	Lecture	4	2	2	Class 1: General concepts of small arms. 1. 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. <i>Independent work.</i> 1. Classification of small arms. 2. Learn the basics and rules of shooting.
2	Group session	3	2	1	Session 2: 5.45 mm RPK-74 machine gun. 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. <i>Independent work.</i> 1. Preparing the RPK-74 machine gun for firing.

3	Group session	3	2	1	<p>Session 3: 7.62 mm PKM (PC) machine gun.</p> <p>1. Purpose, combat characteristics, general structure of the PKM (PC) machine gun. Completeness, 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>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>Class 4. Service pistols.</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>Class 5. 40 mm RPG-7V (RPG-7D) hand-held anti-tank grenade launcher. RPG-18 rocket-propelled grenades.</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>Class 6. Small arms and grenade launchers of the leading countries of the world.</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>Class 7. Check of combat and bringing small arms to normal combat.</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>

Total for the topic	22	15	7	
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Topic 2. The basics of shooting.					
8	Group session	3	2	1	<p>Class 1: Internal and external ballistics.</p> <p>1. Information on internal and external ballistics. 2. Explosives. Main groups of explosives. 3. Shot periods. 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>
Total for the topic		3	2	1	
Topic 3. Rules of shooting.					
9	Group session	4	2	2	<p>Class 1: Rules of small arms fire.</p> <p>1. Rules for choosing a sight and aiming point when shooting small arms at targets. 2. Influence of firing conditions on the flight of a bullet. Determination of corrections for deviations from normal (tabulated) firing conditions. 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>Class 2: Rules of fire from the 40-mm RPG-7V (RPG-7D) anti-tank grenade launcher.</p> <p>1. Rules for assigning initial settings. 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>Class 3: Fire mission. Its essence and sequence of solution.</p> <p>1. General information about shooting from different types of weapons. 2. Elements of solving a fire mission. 3. 3. Direct shooting exercise.</p>
Total for the topic		10	6	4	

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

					1. Servicing the weapon after firing.
17	Practical exercise(night)	5	4	1	<p>Session 4. Practical shooting with 5.45 mm AK-74 at night.</p> <p>1. Execution of the exercise 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 standads 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	Practical exercise (methodological practice)	7	6	1	<p>Class 5. Exercise firing drills with 5.45 mm AK-74 rifle, RPK-74 machine gun, 40 mm RPG-7 grenade launcher.</p> <p>1. Execution of the exercise 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 standads No. 1, 2 for the 40 mm RPG-7 grenade launcher and fire training standads No. 26, 27, 28, 29 for the 5.45 mm AK-74 rifle.</p> <p>4. Exercise 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 exercise	7	6	1	<p>Class 6. Exercise control firing from a 5.45 mm AK-74 rifle (RPK-74 machine gun) and a 40 mm RPG-7 grenade launcher.</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. Exercise 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 exercise	7	6	1	<p>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.</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 standads 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 exercise	6	4	2	<p>Class 8. Performing exercise firing from a 9 mm PM and Fort-14 pistol.</p> <p>1. Execution of the exercise exercise COP 2.12.1.1 "Shooting at a stationary target" with a 9 mm PM pistol and Fort-14.</p> <p>2. Exercise in the implementation of firearms training standads No. 13, 14, 16 for the 9 mm PM pistol. Safety measures during practical shooting.</p> <p>3. Fulfilment of firearms training standads 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>
Total for the topic		43	37	6	
Control measures		6	4	2	Credit
Total for the educational component		90	68	22	

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

General objective of the educational programme 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 sessions should be conducted to consolidate and deepen theoretical knowledge, as well as to instil in students the skills to use theoretical provisions in solving specific practical problems. In practical sessions, 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. On Military Duty and Military Service. Law of Ukraine, 1992 (as amended).
3. Regulations on the Military Service of Citizens of Ukraine in the Armed Forces of Ukraine.

Decree of the President of Ukraine, 2022.

4. On Social and Legal Protection of Servicemen and Members of Their Families. Law of Ukraine, 1991 (as amended).
5. Statute of the Internal Service of the Armed Forces of Ukraine.
6. Disciplinary Statute of the Armed Forces of Ukraine.
7. The Code of Ukraine on Administrative Offences.
8. On the Status of War Veterans and Guarantees of Their Social Protection. Law of Ukraine, 1993 (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 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 exercise sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Military duty and military service.					
1	Lecture	2	2	1	<p>Class 1: The procedure for military service. Social and legal protection of servicemen and their families</p> <p>1. Types of military service. Peculiarities of military service by different categories of servicemen in peacetime and wartime.</p> <p>2. The concept of the right to social protection. Benefits for servicemen and members of their families</p> <p><i>Independent work.</i></p> <p>1. Peculiarities of military service by persons called up for mobilisation.</p> <p>2. Age limit for military service under martial law.</p>
Total for the topic		3	2	1	
Topic 2. Legal responsibility of military personnel.					
2	Group session	2	2		<p>Class 1: Administrative and material responsibility of military personnel.</p> <p>1. Peculiarities of administrative responsibility of military personnel.</p> <p>2. Legal characteristics of military administrative offences.</p> <p>3. The concept and grounds of liability.</p> <p>4. Types of material liability. The procedure for compensation for material damage.</p>

3	Lecture	3	2	1	<p>Class 2: Criminal liability of military personnel.</p> <ol style="list-style-type: none"> 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. <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. Physical or mental coercion. 2. Execution of a lawful order or instruction. 3. An act involving risk.
Total for the topic		5	4	1	
Topic 3. Service inspection and service investigation in the Armed Forces of Ukraine.					
4	Practical exercise	2	2		<p>Class 1: Methods of conducting an internal audit and internal investigation.</p> <ol style="list-style-type: none"> 1. The concept, tasks, grounds for appointment and peculiarities of an internal audit and internal investigation. 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. 3. Procedure for conducting and documenting the results of an internal audit and internal investigation.
Total for the topic		2	2		
Topic 4. Application of international humanitarian law.					
5	Group session	3	2	1	<p>Class 1: Application of international humanitarian law.</p> <ol style="list-style-type: none"> 1. Determination of the legal status of participants in hostilities. 2. Prohibited means and methods of warfare. 3. Legal regime for the protection of war victims and prisoners of war. 4. International legal protection of civilian objects and cultural property. 5. Watching educational films on the Law of Armed Conflict and analysing the violations of international humanitarian law. 6. Solving the problems of an interactive primary curriculum on the law of war. 7. Responsibility for violations of international humanitarian law <p><i>Independent work.</i></p> <ol style="list-style-type: none"> 1. A civilian object during an armed conflict.

					2. Protection of cultural property in the event of armed conflict. 3. Special measures to protect women.
Total for the topic	3	2	1		
Control measures	2	2		Credit	
Total for the educational component	15	12	3		

4.14. OP 1.14 "Intelligence Exercise"

General objective of the educational programme 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;

the organisational 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 Exercise" is closely interrelated with the academic discipline "General Tactics".

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

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

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

№ s/n	Types of exercise sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independen t work	
1	2	3	4	5	6
Topic 1: Fundamentals of Military Intelligence					
1	Lecture	3	2	1	<p>Class 1: Tactical intelligence.</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>
Total for the topic		3	2	1	
Topic 2. Organisational structure and armament of motorised infantry (tank) units of the Russian armed forces					
2	Group session	3	2	1	<p>Class 1: Organisational and staffing structure, weapons and combat equipment of motorised infantry (tank) units of the Russian Armed Forces.</p> <p>1. Organisational and staffing structure of the 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>
Total for the topic		3	2	1	

Topic 3: Fundamentals of Combat by Motorised Infantry (Tank) Units of the Russian Armed Forces					
3	Group session	3	2	1	<p>Session 1: Motorised rifle (tank) units of the Russian Armed Forces in defence.</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 rifle (tank) company in defence.</p>
4	Group session	3	2	1	<p>Class 3. Motorised rifle (tank) units of the Russian Armed Forces in the offensive.</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>
Total for the topic		6	4	2	
Control measures		3	2	1	Credit
Total for the educational component		15	10	5	

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

General objective of the educational programme 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. The Law of Ukraine on the Protection of Information in Information and Communication Systems.
2. The Law of Ukraine On the Basic Principles of Ensuring Cybersecurity of Ukraine.
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 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 exercise sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Fundamentals of organisation and conduct of electronic warfare in the Armed Forces of Ukraine.					
1	Lecture	2	2	-	Class 1: Fundamentals of electronic warfare organisation in the Armed Forces of Ukraine. Combat capabilities of electronic warfare forces and means. 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.
Total for the topic		2	2		
Topic 2. Organisation of the use of electronic warfare units					
2	Lecture	2	2	-	Class 1: Organisation of the use of electronic warfare units. 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	-	<p>Class 2: Planning the use of electronic warfare units.</p> <p>1. The list of documents to be worked out in the course of planning radio suppression and their content.</p> <p>2. Measures to ensure radio electronic protection of the command and control systems of troops and weapons (radio electronic means) of the military unit.</p> <p>3. Electronic warfare support capabilities and their tasks for planning the use of military units.</p>
Total for the topic		4	4		
Topic 3: Fundamentals of organising and conducting cyber actions to obtain information about the enemy					
4	Lecture	2	2	-	<p>Class1: Wi-Fi and Bluetooth wireless access technologies: basics of application and features of operation.</p> <p>1. Basic principles of wireless access technologies and cellular networks. Parameters and characteristics of network signals.</p> <p>2. Features of wireless technologies and cellular networks</p>
5	Practical exercise	2	2	-	<p>Class 2: Basics of cyber intelligence in relation to Wi-Fi and Bluetooth wireless access technologies.</p> <p>1. Scans the radio frequency spectrum of Wi-Fi and Bluetooth wireless access technologies to detect the presence of access points and radiation sources.</p> <p>2. Basic principles of conducting actions in cyberspace in relation to enemy reconnaissance assets in mobile cellular networks, Wi-Fi, Bluetooth networks.</p>
6	Group session	2	2	-	<p>Class 3: Basic principles of using methods and tools for searching for information in open sources.</p> <p>1. Identification of intelligence sources.</p> <p>2. Use of information retrieval methods and tools.</p> <p>3. Analysis of the results.</p>
Total for the topic		6	6		
Control measures		3	2	1	Credit
Total for the educational component		15	14	1	

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

General objective of the educational programme 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 sessions;

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 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 Exercise 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 exercise sessions, control measures	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Topic 1: Technical exercise					
1	Lecture	2	2		Session 1: Current state and prospects for the development of tactical unmanned systems. 1. The role and place of the discipline "Fundamentals of the use of tactical class unmanned systems" in the system of exercise 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		Class 2: Classification of unmanned systems. 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	Class 3: Components of UAVs and principles of UAV operation. 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.
Total for the topic		7	6	1	
Topic 2. Tactical and special exercise.					

4	Group session	3	2	1	<p>Class 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.</p> <p>1. Features of planning the use of tactical class UAVs. 2. General approaches to the preparation of 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 exercise	3	2	1	<p>Session 2: Practicing basic UAV control skills on a simulator for copter-type UAVs.</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>
Total for the topic		6	4	2	
Control measures		2	2		Credit
Total for the educational component		15	12	3	

4.17. VS 1 "Fundamentals of logistics support"

General objective of the educational programme component

The aim of the course is to train an officer who has creative thinking and organisational skills in organising logistics support. Formation of a scientific approach to the operation of weapons and military equipment in the performance of service and combat missions in peacetime and wartime.

During the sessions, students learn rational methods of officer's work, methods of evaluating military-technical tasks, develop such an important trait as creative thinking, improve their ability to analyse, compare and systematise facts, make generalisations, form conclusions, justify their proposals, prove and defend their decisions during the performance of service and combat missions in peacetime and wartime.

In accordance with the requirements of the educational and professional programme, the discipline provides the acquisition of competence(s):

1. EC 1. Ability to perform specialised logistics tasks in the field of professional activity.

In accordance with the requirements of the educational and professional programme, the following programme learning outcomes (PLOs) are established, which must be mastered by the cadet (student, adjunct) after studying the discipline:

1. LO 1. Apply knowledge of the logistics support of military units.

Information and methodological support

1. The Law of Ukraine "On Defence of Ukraine".
2. Doctrine of Logistics Force. VKP 4-32(41).01.
3. Doctrine of the Use of Logistics Forces. VKP 4-32(03).01.
4. Joint Logistics Doctrine SP 4-00(30)03.01.
5. Doctrine of Logistics Support of the Land Forces of the Armed Forces of Ukraine VKP 4-00(11.01).
6. Doctrine Provision of material and technical means, works and services VKP 4-179(03).01.
7. Doctrine on the organisation of movements and transportations in the Armed Forces of Ukraine VKP 4-00(03.01).
8. Combat Statute Logistics of the Land Forces of the Armed Forces of Ukraine (tactical level) BP 4-32(11.01).
9. Combat Statute Logistics Operations of the Armed Forces of Ukraine (tactical level) BP 4-146(11.01).

10. Combat Regulations of the Operation for the Deployment of Troops (tactical level) BP 4-147(11.01).
11. Guideline on Combat Exercise of Logistics Forces of the Armed Forces of Ukraine VKPD 7-00(41.01).
12. Basic Provisions of Logistics Support of the Armed Forces of Ukraine: approved by the Order of the Ministry of Defence of Ukraine of 11.10.2016 No. 522.
13. Regulations on military transportations by rail, sea, river and air: enacted by the Order of the Ministry of Defence of Ukraine No. 595 of 05.09.2013.
14. Temporary Procedure for the Registration of Operational (Combat) Documents: approved by the Order of the Commander-in-Chief of the Armed Forces of Ukraine of 11.09.2020 No. 140.
15. Methodological recommendations on ensuring the protection and defence of convoys transporting weapons, missiles and ammunition and military-technical property: methodological manual. Kyiv : Arming the Armed Forces of Ukraine, 2014. 38 c.
16. Norms for the accumulation, maintenance and echeloning of fixed stocks of missiles and ammunition in the Armed Forces of Ukraine in peacetime: approved by the Order of the NGSN-GC of the Armed Forces of Ukraine of 15.07.2008.
17. Norms of irrecoverable losses, withdrawal for repair of weapons and equipment, and expenditure of other material resources in the operations of the Armed Forces of Ukraine: approved by the Order of the Chief of Staff of the Armed Forces of Ukraine of 26.01.2016.
18. Collection of combat kits and norms of military stocks of missiles and ammunition in the Armed Forces of Ukraine: approved by the order of the CSR of the Armed Forces of Ukraine of 27.05.2003.
19. Demianchuk B.O., Malyshev O.V. Fundamentals of technical support. Substantiation of decisions: a textbook. Odesa: VA, 2013. 250 c.
20. Demianchuk B.O., Golovan V.G., Goncharuk A.A., Nikul S.O., Malyshev O.V. Fundamentals of technical support. Actions of the missile and artillery service: a textbook. Odesa: VA, 2014. 280 c.
21. Dachkovskiy V.O., Ovcharenko I.V., Yaroshenko O.V. Fundamentals of evacuation of weapons and military equipment: a textbook. Kyiv: Ivan Cherniakhovskiy National University, 2017. 180 c.
22. Artillery repair and maintenance workshop MRS-AR. Technical description and instruction manual. 49122-0000000 TO.
23. Mechanical repair workshop MRM-M1. Operating manual. 4920-0000000 RE.
24. TA-6 transport vehicle for transporting equipment. Passport. 12U1.258-0000000 PS.
25. Workshop for repair of radio engineering stations. Technical description and operating instructions. AE2.009.054 TO.
26. Maintenance workshop MTO-V. Technical description and operating instructions. 49101-0000000 TO.

27. Newsletter No. 5 "Innovative developments of weapons and military equipment based on the results of open source monitoring"

28. Newsletter No. 7 "Innovative developments of weapons and military equipment based on the results of open source monitoring"

Further reading

29. Instruction on the Organisation of Accounting, Storage and Issuance of Small Arms and Ammunition in the Armed Forces of Ukraine: approved by the Order of the Minister of Defence of Ukraine of 29.06.2005, No. 359.

30. Instruction on Accounting for Military Property in the Armed Forces of Ukraine: approved by the Order of the Minister of Defence of Ukraine of 17.08.2017 No. 440.

31. Regulation on Arsenals, Bases and Storage Warehouses of Missiles and Ammunition of the Armed Forces of Ukraine: approved by the Order of the Chief of the General Staff of the Armed Forces of Ukraine of 30.05.2017 No. 191 dsk.

Information resources on the Internet

1. Website of the Military Academy (Odesa). www.vaodessa.org.ua
2. Electronic library of the Military Academy (Odesa) (internal network). <http://192.168.1.254/>
3. Electronic library of the Department of Missile and Artillery Armament (internal network of the Military Academy (Odesa)). <http://192.168.1.254/index.php/kafedra-rao>
4. Website of the Ministry of Defence of Ukraine. <http://www.mil.gov.ua/>
5. Vernadsky National Library of Ukraine. <http://www.nbu.gov.ua/>
6. Collection of scientific papers of the Military Academy (Odesa). <http://zbirnyk.vaodessa.org.ua/index.php/uk/>
7. Military Technical Digest of the Hetman Petro Sahaidachnyi National Army Academy. <http://vtz.asv.gov.ua/>
8. Scientific and Technical Journal of the Central Research Institute of Military Equipment of the Armed Forces of Ukraine. <https://journal.cndiovt.com.ua/about>

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

№ s/n	Types of exercise sessions and tests events	Total hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Section 1. Basics of logistics support.					
Topic 1: The system and organisation of logistics support for troops.					
1.	Lecture	2	2		Class 1: Introduction. 1. The purpose and objectives of the discipline. The role and place of the discipline in the system of exercise of the weapons logistician. 2. General provisions for logistics support of the Armed Forces of Ukraine
2.	Group session	2	2		Class 2: Basics of logistics support in the Armed Forces of Ukraine and the Russian Armed Forces. 1. The essence and content of logistics support for troops (forces). 2. The Logistics Forces Command. 3. 3. Main Logistics Department. 4. 4. Structure of the central office of the Ministry of Transport of the Russian Federation.
3.	Group session	4	2	2	Class 3: Logistics support functions. 1. Guidelines for organising logistics support. 2. Logistics support functions. <i>Independent work</i> ^ Doctrinal publications on logistics support 1. Doctrines of logistics support. 2. Combat logistics regulations.

4.	Group session	4	2	2	<p>Class 4. Logistical support of the actions of the Armed Forces of Ukraine and the Russian Armed Forces.</p> <p>1. The system of logistics support for the Armed Forces of Ukraine and the Russian Armed Forces. 2. Types of logistics support in the Armed Forces of Ukraine and the Russian Armed Forces.</p> <p><i>Independent work:</i> Application of logistics forces.</p> <p>1. Objectives and principles of the use of logistics forces. 2. Tasks of logistics forces during their employment. 3. Procedure for the use of logistics forces.</p>
5.	Group session	4	2	2	<p>Class 5. System of provision of material and technical means, works and services.</p> <p>1. The system of providing material and technical resources. 2. Distribution of tasks with provision of material and technical means, works and services. 3. The role and place of a separate logistics brigade of the Russian Armed Forces</p> <p><i>Independent work. Peculiarities of providing material and technical means, works and services during the application .</i></p> <p>1. Peculiarities of providing material and technical means, works and services during different types of combat.</p>
6.	Group session	4	2	2	<p>Class 6. The system of technical support of troops' actions.</p> <p>1. General information about the system of support for troops. 2. The concept of the system of technical support for military operations.</p> <p><i>Independent work:</i> Fundamentals of planning and organisation of technical support for troops.</p> <p>1. Characteristics of the tasks of preparing combat support. 2. Planning of technical support for combat operations. 3. Organisation of technical support for combat operations.</p>
7.	Group session	4	2	2	<p>Class 7. Support services in the system of technical support of military operations.</p> <p>1. The role and place of support services in the system of technical support of military operations. 2. Settlement and delivery units.</p> <p><i>Independent work:</i> Structure and tasks of support services in the system of technical support of military operations.</p> <p>1. Structures of support services in the system of technical support of military operations. 2. Tasks of support services in the system of technical support of military operations.</p>
8.	Group session	2	2		<p>Class 8. Standards of accumulation, maintenance and echeloning of missiles and ammunition.</p> <p>1. Material assets and their reserves. 2. Standards for the accumulation and maintenance of missiles and ammunition. 3. Echeloning of missiles and ammunition.</p>

9.	Group session	4	2	2	<p>Class 9. Provision of troops with weapons and military equipment, missiles and ammunition, military technical property.</p> <p>1. The system of supplying troops with weapons and military equipment (WME), missiles and ammunition (MA), and military-technical property (MTP).</p> <p>2. Procedure for manning the troops with weapons, munitions and equipment.</p> <p><i>Independent work:</i> Planning the provision of troops with weapons and military equipment, missiles and ammunition, military-technical property.</p> <p>1. Planning for the provision of troops with weapons, munitions and equipment. Initial data for planning.</p> <p>2. Procedure for reclaiming weapons, equipment, supplies and materials (application procedure).</p>
10.	Practical session	6	4	2	<p>Class 10. Equipping troops with weapons and military equipment, missiles and ammunition, military technical property.</p> <p>1. Procedure for manning the troops with weapons, ammunition and military equipment.</p> <p>2. The procedure for manning the RB troops.</p> <p><i>Independent work:</i> Preparation for the seminar.</p> <p>1. 1. Doctrines of logistics support</p> <p>2. Organisation of logistics support for troops.</p>
11.	Seminar	2	2		<p>Session 11: Fundamentals of logistics support for the forces.</p> <p>1. The essence and content of logistics support for troops (forces).</p> <p>2. The system of logistics in the Armed Forces of Ukraine and the Russian Federation.</p> <p>3. The system of technical support for the actions of troops in the Armed Forces of Ukraine and the Russian Federation.</p>
Total for the topic		38	24	14	
Topic 2. Military repair bodies.					
12.	Lecture	4	2	2	<p>Class 1: Military repair units (subunits).</p> <p>1. Repair platoon, RAO company. Purpose, tasks, capabilities and organisational structure in the Armed Forces of Ukraine. Organisational and staffing structure in the Russian Armed Forces.</p> <p>2. Repair and restoration battalion. Purpose, tasks, capabilities and organisational structure in the AFU. Organisational and staffing structure in the Russian Armed Forces.</p> <p>3. A separate repair and restoration regiment. Purpose, tasks, capabilities and organisational structure in the AFU. Organisational and staffing structure in the RF Armed Forces</p> <p><i>Independent work:</i> Units of logistics and technical support of troops.</p> <p>1. Logistics battalion. Purpose, tasks, organisational and staffing structure.</p> <p>2. A material support battalion. Purpose, tasks, organisational and staffing structure</p>

13.	Group session	4	2	2	<p>Class 2. Mobile maintenance and repair vehicles of the Armed Forces of Ukraine and the Russian Federation.</p> <p>1. Purpose and composition of field repair workshops MRS-AR, MRM-M1, MRS-OR, TA-5(6), ADB-309, ESB-4BC. Modifications of field repair workshops of the Russian Armed Forces</p> <p>2. Purpose and composition of field repair workshops OE, OP, H-1L. Modifications of field repair workshops of the Russian Armed Forces</p> <p>3. Purpose of inspection machines. Modifications of control and inspection machines of the Russian Federation</p> <p><i>Independent work:</i> Maintenance and repair workshops.</p> <p>1. Purpose and composition of the MTO-B workshop.</p> <p>2. Purpose and composition of the MRTS workshop.</p>
14.	Practical session	6	6		<p>Class 3. Operation of maintenance and repair facilities.</p> <p>1. Preparation and operation of the winch and crane boom.</p> <p>2. Preparation and operation of the workshop from the generator set.</p> <p>3. Preparation and operation of the workshop from an external power source.</p> <p>4. The procedure for preparing and checking the workshop for use.</p>
15.	Group session	4	2	2	<p>Class 4. Symbols used in logistics documents.</p> <p>1. General requirements for symbols.</p> <p>2. Symbols used in operational documents for logistics support.</p> <p><i>Independent work:</i> Study the symbols used in logistics.</p> <p>1. Order of the General Staff of the Armed Forces of Ukraine 11.09.2020 No. 140.</p>
16.	Group session	4	2	2	<p>Session 5. Temporary technical support bodies.</p> <p>1. Temporary technical support bodies. Concept, classification.</p> <p>2. Composition, tasks and designation of temporary technical support bodies.</p> <p><i>Independent work:</i> Work of temporary technical support bodies.</p> <p>1. Peculiarities of the work of temporary technical support bodies.</p> <p>2. Practical work of temporary technical support bodies.</p>
17.	Group session	4	2	2	<p>Class 6. Organization of evacuation of weapons and military equipment.</p> <p>1. Basic concepts of evacuation of weapons and military equipment.</p> <p>2. Purpose, specifications of evacuation vehicles in the Armed Forces of Ukraine. Differences with evacuation vehicles of the Russian Federation.</p> <p><i>Independent work. Evacuation of weapons and military equipment.</i></p> <p>1. Peculiarities of evacuation of different types of weapons and military equipment.</p> <p>2. Evacuation of weapons and military equipment in difficult conditions.</p>

18.	Group session	2	2		<p>Class 7. Tasks of technical support units in combat conditions.</p> <p>1. The main tasks of technical support that repair units solve in combat conditions. 2. Organisation of maintenance and restoration of weapons and military equipment. 3. Procedure for the transfer of weapons and military equipment that are not covered by repair in a military unit. 4. Procedure for delivery of the repair fund.</p>
19.	Group session	2	2		<p>Class 8. Protection, security and defence of repair units and their management in combat conditions.</p> <p>1. Organisation of protection and special treatment of personnel, weapons and military equipment of repair units. 2. Security, defence, engineering arrangement and camouflage of the area where the repair units are located.</p>
20.	Practical session	8	4	4	<p>Class 9. Developing a plan for the protection and defence of repair units.</p> <p>1. Development of a scheme for the deployment of the MHPSS. 2. Development of a plan for the protection and defence of the MHPSS. 3. Management of a repair unit in combat conditions. <i>Independent work. Finalise the plan for the protection and defence of the FOBM.</i> 1. Refinement of the MHPSS scheme. 2. Finalise the plan for the protection and defence of the FOBM.</p>
21.	Practical session	6	6		<p>Session 10. Deployment of MHPSS elements.</p> <p>1. Organise and conduct an MHM&E class in the area. 2. Deploy MHPSS elements in the designated area. 3. Curtailment of the elements of the MHPSS.</p>
22.	Group session	6	2	4	<p>Session 11: Working on technical documentation.</p> <p>1. The procedure for filling in passports (forms). 2. Filling in the repair reports. <i>Independent work: Preparing for the seminar</i> 1. Military repair bodies of the unit. 2. The work of the commander of a repair unit in combat operations. 3. Conventional designations of logistics support.</p>
23.	Seminar	4	4		<p>Class 12. Repair bodies of the unit.</p> <p>1. Organisational and staffing structure of technical and logistics support units in the AFU and the RF Armed Forces. 2. The work of the commander of a repair unit in various types of combat.</p>
Control measures		2	2		Credit
Total for the topic		56	38	18	
Section 2: Organisation of technical support and military decision-making in NATO forces					

Topic 3. The work of the repair unit commander, NATO military decision-making.					
24.	Lecture	2	2	<p>Session 1: Military decision-making in NATO forces.</p> <p>1. Troops leading procedures (TLP). General provisions of TLP. 2. Receive the assignment (Step 1). 3. Issue a preliminary WARNO order (Step 2).</p>	
25.	Group session	4	2	2	<p>Class 2: The algorithm of the commander's work in managing the unit.</p> <p>1. Develop a preliminary action plan (Step 3). 2. Start driving (Step 4). <i>Independent work:</i> Algorithm of the commander's work on unit management. Stage 1, 2, 3. 1. A detailed analysis of the METT-TC mission (3a). 2. Assessment of risk and development of key points. (3 c). 3. Developing and selecting an action option (3 b, 3d).</p>
26.	Group session	4	2	2	<p>Class 3: Algorithm of the commander's work on unit management.</p> <p>1. Conducting reconnaissance (Step 5). 2. Finalise the plan (Step 6). 3. Issue the ORPOD combat order (Step 7). 4. Control check (Step 8). <i>Independent work:</i> The work of the commander in preparing the unit. 1. Types and methods of working out orders. 2. Pre-combat checks and inspections.</p>
27.	Practical session	8	4	4	<p>Class 4. Developing a TLP part 1.</p> <p>1. Issuing an order. 2. Perform steps 1, 2, 3 of the EMP. <i>Independent work.</i> Revision of the TLP part 1. 1. Refinement of steps 1, 2, 3 of the IBM process. 2. Refine the manoeuvre scheme.</p>
28.	Practical session	6	6		<p>Class 5. Developing a TLP part 2.</p> <p>1. Complete steps 4, 5, 6, 7 of the EMP. 2. Control, verification, improvement.</p>
Total for the topic		24	16	8	
Topic 4. Organisation of technical support of a military unit during the preparation and entry of combat (movement of troops).					

29.	Lecture	4	2	2	<p>Class 1: Organisation of work of the commander of the repair unit in preparation for combat operations.</p> <p>1. The sequence of work of the commander of a repair unit in preparation for combat operations. 2. Preparation of combat, planning and accounting documents.</p> <p><i>Independent work:</i> The work of a repair unit commander during combat operations.</p> <p>1. Awareness of the task by the commander of the repair unit. 2. Issuing preliminary orders and calculating the time. 3. Assess the situation and make a decision.</p>
30.	Group session	2	2		<p>Class 2. General provisions of troop transport.</p> <p>1. Basic requirements for transporting troops. 2. Calculations for transporting and loading troops.</p>
31.	Group session	4	2	2	<p>Class 3: Organisation of technical support during troop movements.</p> <p>1. Peculiarities of technical support in preparation for movement. 2. Peculiarities of technical support during the movement on your own. 3. Features of technical support during combined arms movement.</p> <p><i>Independent work:</i> Technical support of a military unit in preparation and during the movement of troops.</p> <p>1. Actions of technical support forces and means in the preparation and movement of troops.</p>
32.	Group session	2	2		<p>Class 4. Work of the commander of a repair unit in preparation for and during defence.</p> <p>1. Content of technical support measures in preparation for defence. 2. Sequence of work of the commander of the repair unit in preparation and during defence.</p>
33.	Group session	4	2	2	<p>Class 5. Work of the commander of a repair unit in preparation for and during the offensive.</p> <p>1. Content of technical support measures in preparation for an offensive. 2. Actions of technical support forces and means during the offensive.</p> <p><i>Independent work:</i> Peculiarities of technical support of the unit in preparation and during the battle.</p> <p>1. Peculiarities of technical support of the unit during defence in the city. 2. Peculiarities of technical support of the unit during an offensive battle in the city</p>
34.	Group session	2	2		<p>Class 6. Features of the use of repair bodies in various types of combat (on the march), in the fight against illegal armed groups.</p> <p>1. Features of the use of repair bodies in different types of combat (on the march). 2. Peculiarities of the use of repair bodies in the fight against illegal armed groups.</p>

35.	Seminar	8	4	4	<p>Class 7. The use of repair bodies in various types of combat (on the march), in the fight against illegal armed groups.</p> <p>1. Organisation of technical support during the movement of troops. 2. The work of the commander of a repair unit in preparation for and during defence. 3. Work of the commander of the repair unit in preparation and during the offensive. 4. 4. Use of repair bodies in the fight against illegal armed groups.</p> <p><i>Independent work:</i> Preparation for the exam. 1. Preparation for the exam.</p>
Total for the topic		26	16	10	
Control measures		6	6		Examination
Total for the educational component		150	100	50	

4.18 AF 2. Organisation of supply and maintenance of missiles and ammunition in military unit units

General objective of the educational programme component

The programme "Organisation of supply and maintenance of missiles and ammunition in military units" is aimed at exercise a bachelor's degree graduate, a tactical level military management officer, a specialist in organising logistics (technical) support for military units.

During the sessions, students learn rational methods of officer's work, methods of evaluating military-technical tasks, develop such an important trait as creative thinking, improve their ability to analyse, compare and systematise facts, make generalisations, form conclusions, justify their proposals, prove and defend their decisions during the performance of service and combat missions in peacetime and wartime.

In accordance with the requirements of the educational and professional programme, the discipline provides the acquisition of competence(s):

ECL 2. Ability to organise the procedure for keeping records, categorising and storing rocket and artillery weapons in military units.

In accordance with the requirements of the educational and professional programme, the following programme learning outcomes (PLOs) are established, which must be mastered by the cadet (student, adjunct) after studying the discipline:

RNvs 2. Organise and carry out accounting, categorisation, decommissioning and storage of rocket and artillery weapons in military units.

Expected learning outcomes

In accordance with the requirements of the educational and professional programme, the following learning outcomes have been identified and formulated

RNvs 2. Organise and carry out accounting, categorisation, write-off and storage of rocket and artillery weapons in military units.

Information and methodological support

1. Decision of the National Security and Defence Council of Ukraine "On the New Edition of the Military Doctrine of Ukraine", approved by the Decree of the President of Ukraine of 24.09.2015 No. 555/2015.

2. Temporary Doctrine of Exercise and Employment of the Armed Forces of Ukraine, approved by the Order of the Ministry of Defence of Ukraine of 02.12.2013.

3. "The Regulation on the Military (Ship) Economy of the Armed Forces of Ukraine was approved by the Order of the Minister of Defence of Ukraine of 16.07.1997 No. 300.
4. "Instructions on Categorisation of Missile and Artillery Weapons" approved by the Order of the Minister of Defence of Ukraine of 04.01.2019 No. 4.
5. "Instructions on the organisation of repair of rocket and artillery weapons in peacetime" approved by the Order of the Ministry of Defence of Ukraine of 16.08.2012 No. 545.
6. The "Instructions on Accounting for Military Property in the Armed Forces of Ukraine" were enacted by the Order of the Minister of Defence of Ukraine of 17.08.17 No. 440.
7. "The Instruction on the Organisation of Accounting, Storage and Issuance of Small Arms and Ammunition in the Armed Forces of Ukraine was approved by the Order of the Minister of Defence of Ukraine of 29.06.2005, No. 359.
8. The "Instructions on the specifics of the inventory of small arms, missiles and ammunition in the Armed Forces of Ukraine" were enacted by the Order of the Minister of Defence of Ukraine of 10 January 2017, No. 16.
9. "Methodology for determining the residual value of property of the Armed Forces of Ukraine and other military formations" was enacted by the Resolution of the Cabinet of Ministers of Ukraine of 29.05.1998 No. 759.
10. "The Procedure for Write-Off of Military Property in the Armed Forces of Ukraine and the State Special Transport Service was enacted by the Order of the Minister of Defence of Ukraine No. 81 of 29.03.2021.
11. The Law of Ukraine "On the Statute of the Internal Service of the Armed Forces of Ukraine" was enacted on 24.03.1999, No. 548-XIV.
12. The Law of Ukraine "On the Legal Regime of Property in the Armed Forces of Ukraine" was enacted on 21.09.1999, No. 1075-XIV.
13. The Law of Ukraine "On Public Procurement" was enacted on 25.12.2015, No. 922-VIII.
14. The Law of Ukraine "On Defence Procurement" was enacted on 17.07.2020, No. 808-IX.
15. "Some Issues of Defence Procurement for the Period of Martial Law" was approved by the Resolution of the Cabinet of Ministers of Ukraine of 11.11.2022 No. 1275.
16. "On Approval of the Peculiarities of Public Procurement of Goods, Works and Services for Customers Provided for by the Law of Ukraine "On Public Procurement" for the Period of the Legal Regime of Martial Law in Ukraine and within 90 days from the date of its Termination or Cancellation" approved by the Resolution of the Cabinet of Ministers of Ukraine No. 1178 of 12.10.2022.
17. Newsletter No. 5 "Innovative developments of weapons and military equipment based on the results of open source monitoring"

18. Newsletter No. 7 "Innovative developments of weapons and military equipment based on the results of open source monitoring"

Information resources on the Internet

1. Website of the Military Academy (Odesa). www.vaodessa.org.ua
2. Electronic library of the Military Academy (Odesa) (internal network). <http://192.168.1.254/>
3. Electronic library of the Department of Missile and Artillery Armament (internal network of the Military Academy (Odesa)). <http://192.168.1.254/index.php/kafedra-rao>
4. Website of the Ministry of Defence of Ukraine. <http://www.mil.gov.ua/>
5. Website of the Verkhovna Rada of Ukraine. [http:// zakon.rada.gov.ua](http://zakon.rada.gov.ua)
6. Vernadsky National Library of Ukraine. <http://www.nbuv.gov.ua/>.
7. Collection of scientific papers of the Military Academy (Odesa). <http://zbirnyk.vaodessa.org.ua/index.php/uk/>.
8. Military Technical Digest of the Hetman Petro Sahaidachnyi National Army Academy. <http://vtz.asv.gov.ua/>
9. Scientific and Technical Journal of the Research Institute of Military Equipment of the Armed Forces of Ukraine. <https://journal.cndiovt.com.ua/about>

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

№ s/n	Types of exercise sessions, control measures	Number of hours	Among them.		Topic title and study questions
			Audit hours	Independent work	
1	2	3	4	5	6
Section 1. Organisation of supply and maintenance of radioactive material in units of a military unit.					
Topic 1: General provisions on the organisation of rocket and artillery weapons operation.					
1.	Lecture	2	2		Class 1: Basics of logistics support. 1. Purpose and objectives of the discipline, its role and place in the system of exercise of RAO specialists. 2. General provisions for logistics support of the Armed Forces of Ukraine and the organisational and staffing structure of the missile and artillery armament service of a military unit. 3. 3. The main key documents that regulate the activities of the support services.
2.	Lecture	2	2		Class 2: Fundamentals of the theory of rocket and artillery weapons operation. 1. Basic concepts and definitions of rocket and artillery weapons. 2. Basic concepts and definitions of rocket and artillery weapons operation. 3. Basic provisions for the organisation of the operation of rocket and artillery weapons.
3.	Group session	4	2	2	Class 3: Commissioning of rocket and artillery weapons. 1. Procedure for acceptance and transfer of radioactive waste. 2. Commissioning of RAW into operation. 3. Authorisation of personnel to operate RAW. <i>Independent work:</i> Organisation of personnel access to work at RAO warehouses. 1. Procedure for processing documents for admission of personnel.
4.	Group session	2	2		Class 4. Basics of the theory of maintenance and repair of equipment. 1. Purpose, tasks, types and methods of maintenance of weapons and equipment. 2. Purpose, tasks, types and methods of repair of weapons and equipment.

5.	Group session	2	2		<p>Class 5. Means of operation of radioactive waste.</p> <ol style="list-style-type: none"> 1. General characteristics of radioactive waste management facilities. 2. Purpose and classification of spare parts and accessories. 3. Operational documentation and the procedure for its maintenance.
6.	Practical exercise	5	2	3	<p>Class 6. The procedure for maintaining operational documentation.</p> <ol style="list-style-type: none"> 1. The procedure for filling in the forms for weapons. 2. The procedure for filling out passports for CMMs. <p><i>Independent work:</i> Organisation of planning for the transport of weapons, missiles and ammunition.</p> <ol style="list-style-type: none"> 1. Transportation of radioactive waste by road. 2. Transportation of radioactive waste by rail. 3. Transportation of radioactive waste by sea (river) and air.
7.	Group session	5	2	3	<p>Class 7. Safety measures for operation of radioactive waste in the military.</p> <ol style="list-style-type: none"> 1. Design and operational measures to ensure safe operation of the weapon. 2. Safety measures for handling weapons during their use and maintenance. <p><i>Independent work:</i> Organisation of lightning protection in parts.</p> <ol style="list-style-type: none"> 1. Lightning protection of storage areas. 2. Requirements for the installation and operation of lightning protection.
8.	Group session	4	2	2	<p>Class 8. Organisation of safe operation of technical equipment.</p> <ol style="list-style-type: none"> 1. Organisation of safe operation of boiler supervision facilities. 2. Organisation of safe operation of electrical installations and protective equipment. 3. Organisation of safe operation of high and low pressure hoses and hoses. <p><i>Independent work:</i> Organising safety measures for ammunition handling.</p> <ol style="list-style-type: none"> 1. Safety measures for handling ammunition when working in storage facilities and during loading and unloading operations. 2. Safety measures for handling ammunition at firing positions. 3. Procedure for handling dangerous ammunition.
9.	Group session	4	2	2	<p>Class 9. Organisation of fire safety in a military unit.</p> <ol style="list-style-type: none"> 1. General provisions on fire safety. 2. Special fire safety requirements for arsenals, bases and storage facilities for missiles, artillery and engineering ammunition, aircraft munitions, and explosives. 3. Special fire safety requirements for weapons and military equipment parks <p><i>Independent work:</i> Requirements for environmental protection in the operation of weapons and equipment.</p> <ol style="list-style-type: none"> 1. Sources of contaminated waste generation. 2. Requirements for environmental protection during the operation of weapons and equipment.

Total for the topic		30	18	12	
Section 2. General provisions on the organisation of the operation of rocket and artillery weapons.					
Topic 2. Accounting for rocket and artillery weapons in units of a military unit.					
10.	Group session	2	2		Class 1: Organisation of military property accounting in military units. 1. Organisation of radioactive waste accounting in military unit units. 2. Peculiarities of organisation of radioactive waste accounting in repair units of a military unit.
11.	Group session	5	2	3	Class 2. General provisions on the organisation of military property accounting. 1. General provisions on the organisation of radioactive waste accounting in a military unit. 2. Types of administrative accounting documents. 3. Types of primary accounting documents. 4. Types of accounting registers (books and accounting cards). <i>Independent work:</i> Organisation of military property accounting in a military unit. 1. General Provisions 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. 400).
12.	Group session	2	2		Class 3: Procedure for preparing accounting documents kept in units of a military unit. 1. Procedure for registration of accounting registers (books and cards) kept in units of a military unit. 2. Procedure for the execution of administrative and auxiliary accounting documents kept in the units of a military unit.
13.	Practical exercise	6	6		Class 4. Preparation of accounting documents kept in the units of a military unit. 1. Prepare a book of registration and movement of accounting documents. 2. Preparation of a book of accounting for the availability and movement of military property (warehouse, unit). 3. Preparation of a record book by numbers and securing weapons, military equipment and other military property.
14.	Group session	5	2	3	Class 5. Procedure for preparing primary accounting documents kept in units of a military unit. 1. The procedure for issuing a consignment note for the issue (delivery) of military property in a military unit. 2. Procedure for drawing up an act of acceptance and transfer of military property. <i>Independent work:</i> Regulations on the organisation of military property accounting in the Armed Forces of Ukraine. 1. Types of auxiliary accounting documents.

					2. Procedure for preparing auxiliary accounting documents.
15.	Practical session	6	4	2	<p>Class 6. Preparation of primary accounting documents that are kept in units of a military unit.</p> <p>1. Issuance of an invoice for the issue (delivery) of military property in a military unit. 2. Execution of an act of acceptance and transfer of military property. <i>Independent work:</i> Regulations on the organisation of military property accounting in the Armed Forces of Ukraine. 1. Peculiarities of accounting for missile and rocket-artillery weapons, equipment and property. Section 15 of the Order of the Ministry of Defence of Ukraine of 17.08.17 No. 440.</p>
16.	Group session	2	2		<p>Class 7. Organisation of missile and ammunition accounting during exercises and practical firing in military units.</p> <p>1. Accounting for missiles and ammunition during exercises and practical firing in military units. 2. Procedure for registration of accounting documents for the issuance of missiles and ammunition for exercises and practical firing in the units of a military unit.</p>
17.	Practical session	4	4		<p>Class 8. Preparation of primary, administrative and auxiliary accounting documents kept during exercises and practical firing in the units of a military unit.</p> <p>1. Preparation of an ammunition distribution and delivery list at the military unit's warehouse. 2. Drawing up an ammunition distribution and delivery list at the military unit's combat supply point.</p>
Total for the topic		32	24	8	
Section 3. Organisation of RAW storage.					
Topic 3: Organisation of storage of weapons and ammunition in military units.					
18.	Group session	5	2	3	<p>Class 1: Organisation of storage of small arms, ammunition and hand grenades.</p> <p>1. Places of storage of small arms and ammunition. 2. Requirements for the opening (closing) of warehouses and premises for the repair of small arms. <i>Independent work:</i> Peculiarities of organising the accounting, storage and issuance of small arms, ammunition and hand grenades at arsenals, bases and warehouses. 1. General Provisions of the Instruction on the Organisation of Accounting, Storage and Issuance of Small Arms and Ammunition in the Armed Forces of Ukraine, Order of the Ministry of Defence of Ukraine of 29 June 2005, No. 359.</p>
19.	Group session	2	2		Class 2: Peculiarities of organising the receipt and issue of small arms, ammunition and hand

					grenades at arsenals, bases and warehouses. 1. Issuance of ammunition and hand grenades. 2. Registration of acceptance of ammunition and hand grenades.
20.	Practical session	2	2		Session 3: Peculiarities of the organisation of acceptance and issue of small arms, ammunition and hand grenades. 1. The procedure for issuing ammunition and hand grenades. 2. Registration of acceptance of ammunition and hand grenades.
Total for the topic		9	6	3	
Topic 4. Organisation of RAW storage during military operations.					
21.	Group session	5	2	3	Session 1: Organisation of storage of missiles and ammunition during combat operations. 1. General provisions on the organisation of storage of missiles and ammunition during combat operations 2 Location of an artillery storage facility for radioactive waste. 3. Procedure for storing missiles and ammunition at company ammunition points during combat operations. <i>Independent work:</i> Organisation of small arms storage during combat operations. 1. Peculiarities of accounting and storage of small arms and ammunition by national personnel.
22.	Group session	2	2		Class 2. Storage of small arms during combat operations. 1. Peculiarities of storage of small arms during combat operations. 2. Peculiarities of storage of small arms at company ammunition points during combat operations.
Total for the topic		7	4	3	
Topic 5. Organisation of military property accounting during combat operations, participation in anti-terrorist operations, international peacekeeping and security operations.					
23.	Group session	5	2	3	Class 1: Accounting for military property in military units engaged in combat operations. 1. Procedure and peculiarities of accounting for military property in military units engaged in combat operations 2. Peculiarities of accounting for military property at military warehouses of troops (forces) engaged in combat operations. <i>Independent work:</i> Peculiarities of accounting for military property in troops (forces) engaged in combat operations. 1. Peculiarities of accounting for military property in the support services of military command and control bodies of troops (forces) engaged in combat operations.
24.	Group session	2	2		Class 2: Peculiarities of accounting for small arms, ammunition and hand grenades in units during

					combat operations. 1. Procedure for echeloning and accumulation of missiles and ammunition stocks in units during combat operations. 2. Organising the accounting of small arms and ammunition in the brigade at company and platoon and platoon supply points.
Total for the topic		7	4	3	
Section 4. Organisation of radioactive waste categorisation and write-off.					
Topic 6: Organization of radioactive waste categorization.					
25.	Group session	2	2		Class 1: General provisions on the organisation of radioactive waste categorisation. 1. General information on radioactive waste categorisation. 2. Categorisation of small arms.
26.	Group session	5	2	3	Class 2. General provisions on the organisation of categorisation of missiles, ammunition and spare parts for them. 1. Categorisation of ammunition . 2. Categorisation of missiles and their spare parts. <i>Independent work:</i> General information on the categorisation of rocket and artillery weapons. 1. General Provisions of the Instruction on the Procedure for Categorisation of Rocket and Artillery Order of the Ministry of Defence of Ukraine of 04.01.2019 No. 4.
27.	Practical session	2	2		Session 3: Transferring missiles and ammunition from one category to another. 1. Drawing up a technical condition report for the transfer of missiles from one category to another. 2. Drawing up a quality (technical condition) certificate for the transfer of ammunition from one category to another.
28.	Group session	5	2	3	Class 4. The procedure for transferring and registering radioactive waste from one category to another. 1. The procedure for transferring and registering small arms from one category to another. 2. The procedure for transferring and registering military-technical property from one category to another. <i>Independent work:</i> Categorisation of equipment for the operation of rocket and artillery weapons. 1. Categorisation of equipment for the repair and operation of rocket and artillery weapons. 2. Categorisation of alkaline batteries (accumulators).
29.	Practical session	2	2		Class 5. Transfer of radioactive waste from one category to another. 1. Drawing up a technical condition report for the transfer of small arms from one category to another. 2. Transfer of military-technical property of the RAO nomenclature from one category to another.
Total for the topic		16	10	6	
Topic 7. Organisation of radioactive waste write-off.					

30.	Group session	4	2	2	<p>Class 1: Organisation of write-offs of material assets in the Armed Forces of Ukraine.</p> <p>1. General Regulations on the organisation of write-offs from the accounting of material assets in the Armed Forces of Ukraine.</p> <p>2. Organisation of write-offs of material assets in the Armed Forces of Ukraine.</p> <p><i>Independent work:</i> Write-offs of material and cash assets in the Armed Forces of Ukraine.</p> <p>1. General Regulations on the Procedure for Writing Off Material and Cash Assets from the Records of the Armed Forces of Ukraine (Order of the Ministry of Defence of Ukraine No. 81 of 29.03.2021).</p>
31.	Group session	2	2		<p>Class 2: Procedure for writing off military property from the records based on acts.</p> <p>1. Procedure for writing off military property on the basis of acts of qualitative (technical) condition.</p> <p>2. Procedure for writing off military property under acts of write-off.</p>
32.	Group session	2	2		<p>Class 3: The procedure for determining the residual value of property of the Armed Forces of Ukraine.</p> <p>1. The procedure for determining the residual value of property of the Armed Forces of Ukraine.</p> <p>2. The procedure for assessing the residual value of military property.</p>
33.	Practical session	4	2	2	<p>Class 4. Preparation of documents for write-off of inventory based on acts of quality (technical) condition.</p> <p>1. Preparation of documents for the write-off of weapons and military equipment from the register, according to the act of qualitative (technical) condition.</p> <p>2. Preparation of documents for the write-off of spare parts and accessories for small arms on the basis of acts of quality (technical) condition.</p> <p><i>Independent work:</i> Write-off of material assets from the accounting of material assets on the basis of an inspector's certificate.</p> <p>1. Legislative and regulatory framework governing the procedure for writing off military property under the inspection certificate.</p>
34.	Practical session	2	2		<p>Class 5. Preparation of documents for the write-off of munitions and their containers based on acts of qualitative (technical) condition.</p> <p>1. Registration of write-offs from the munitions account based on acts of qualitative (technical) condition.</p> <p>2. Writing off containers for munitions based on quality (technical) condition reports</p>
Total for the topic		14	10	4	
Section 5. Arrangement of inventory of material assets and acceptance of transfer of position by officials of the support service.					
Topic 8: Organisation and procedure of inventory of material assets.					
35.	Group session	2	2		<p>Class 1: Inventory of material assets.</p> <p>1. Procedure for conducting an inventory of RAW material assets.</p>

					2. The procedure for conducting an inventory of small arms. 3. The procedure for conducting an inventory of munitions.
36.	Practical session	2	2		Class 2: Preparation of documents for the inventory of RAW material assets. 1. Prepare an inventory of the small arms inventory. 2. Prepare an inventory of the ammunition inventory.
Total for the topic		4	4		
Topic 9: Organisation of the handover reception by RAO officials.					
37.	Group session	5	2	3	Class 1: Procedure for accepting and handing over cases and positions by persons responsible for military (ship) economy. 1. General provisions for accepting and handing over cases and positions. 2. Receiving and handing over cases and position by the unit commander. 3. Acceptance and delivery of cases and position as a platoon commander for weapons repair. <i>Independent work:</i> Regulations on the military (ship) economy of the Armed Forces of Ukraine. 1. General Provisions on the Military (Ship) Economy of the Armed Forces of Ukraine, Order of the Ministry of Defence of Ukraine of 16.07.1997 No. 300. 2. Rights and duties of officials of a military unit (ship) and formation related to management of military (ship) facilities.
38.	Practical session	4	4		Class 2. Preparation of documents for acceptance of the transfer of position by officials. 1. Drawing up an act of acceptance of the transfer of position by the commander of the repair unit. 2. Prepare a statement of availability and quality of material assets.
Total for the topic		9	6	3	
Topic 10. Organisation of the work of the head of the service for paid receipt of property, works and services.					
39.	Lecture	4	2	2	Class 1: Public procurement in the defence sector. 1. Basic principles of public procurement. 2. Procurement planning and other prerequisites for procurement. 3. State regulation and control in the procurement sector. <i>Independent work:</i> General conditions of procurement. 1. Revision of the Laws of Ukraine "On Defence Procurement" and "On Public Procurement". 2. Study of the basic principles of the Resolution of the Cabinet of Ministers of Ukraine of 11.11.2022 No. 1275 "On Approval of the Peculiarities of Defence Procurement for the Period of Martial Law".

40.	Group session	4	2	2	<p>Session 2: Interaction between structural units in the course of public procurement in the field of defence.</p> <p>1. Responsibility of the procurement initiator. 2. Distribution of functions and responsibilities of officials (officers) of the military unit in the process of procurement of goods, works and services.</p> <p><i>Independent work:</i> Purpose and main tasks of those responsible for the formation and implementation of budget programmes.</p> <p>1. Main functions and list of those responsible for the development and implementation of budget programmes. 2. Characteristics of the procurement cycle. 3. Organisation of the customer's procurement activities.</p>
41.	Practical exercise	4	2	2	<p>Session 3: Developing documentation for public procurement.</p> <p>1. Justification of the business need. 2. Developing documentation to prepare for procurement. 3. Work on the selection of counterparties.</p> <p><i>Independent work.</i></p> <p>1. Finalise the documentation for public procurement.</p>
42.	Group session	4	2	2	<p>Class 4. General principles of organising contractual work in a military unit.</p> <p>1. Requirements for execution of contracts for the procurement of goods and services for public funds. 2. Classification of contracts: by subject matter, purpose of conclusion. 3. Preparation and approval of draft contracts.</p> <p><i>Independent work:</i> Organisation of the work of the head of the service for the receipt and posting of property, works and services for the funds of subventions from local self-government bodies.</p> <p>1. Algorithm for working out procurement at the expense of subventions from local governments. 2. The general method of concluding the contract.</p>
Total for the topic		16	8	8	
Control measures		6	6		Examination
Total for the educational component		150	100	50	

4.19 AF 3. Construction and operation of melee, reconnaissance and artillery equipment

The general objective of the educational programme component:

As a result of studying the discipline, the student should

to know:

the main provisions of the guidelines for the organisation of maintenance and repair of melee, reconnaissance and artillery equipment;

the structure of melee weapons, reconnaissance and artillery devices and their preparation for practical tasks in professional activities;

the procedure for the operation and storage of melee, reconnaissance and artillery equipment;

the procedure for organising and conducting maintenance of close combat, reconnaissance and artillery equipment;

content and methods of preparation of close combat, reconnaissance and artillery equipment for intended use.

be able to:

organise the storage and issuance of the appropriate range of products;

plan, organise and control the restoration of melee, reconnaissance and artillery equipment;

maintenance of close combat, reconnaissance and artillery equipment;

be aware of current trends in the development of close combat, reconnaissance and artillery equipment;

check close combat, reconnaissance and artillery equipment for operability, inspect and test close combat, reconnaissance and artillery equipment;

use melee, reconnaissance and artillery equipment only for its intended purpose and maintain it in good technical condition.

Organisational and methodological guidelines:

The methodology of teaching a discipline is based on the basic principles of didactics (theory of reasoning and learning). It provides a scientific and pedagogical description of the forms and methods of teaching, indicates the most appropriate combinations to achieve a certain level of learning, and determines the conditions for their most effective use.

Logistics:

Sessions should be held in specialised classrooms, which should be equipped with samples of rocket and artillery weapons. It is mandatory to use technical means of exercise during exercise sessions.

Information and methodological support:

1. The Law of Ukraine "On Defence of Ukraine". Constitution of Ukraine. The Basic Law. - Kyiv, 1996 (as amended) // Official Gazette of Ukraine of 01.10.2010. White Paper of Ukraine 2020.
2. Order of the Minister of Defence of Ukraine No. 300 of 16.07.1997 "Regulations on Military Economy in the Armed Forces of Ukraine".
3. Order of the Minister of Defence of Ukraine No. 440 17.08.2017 "On Approval of the Instruction on Accounting for Military Property in the Armed Forces of Ukraine".
4. Order of the Minister of Defence of Ukraine No. 569 of 20.10.2015 "On Approval of the Instruction on Organisation of Accounting, Storage and Issuance of Small Arms and Ammunition in the Armed Forces of Ukraine" (as amended).
5. Order of the Minister of Defence of Ukraine No. 4 of 04.01.2019 "On Approval of the Instruction on Categorisation of Missile and Artillery Weapons".
6. Reliability of equipment. Terms and definitions. 01.01.95 - K.: Gosstandart of Ukraine, 1995.
7. Optical and optoelectronic means of reconnaissance. Odesa. VA-2020. O.I.Kravchuk, A.O.Levchenko.
8. Fundamentals of the structure of optical and optoelectronic means of military and special intelligence. Study guide.
9. Odesa. VA-2014.K.V.Salukvadze, V.G.Staroselets, V.N.Chukhnin. Theoretical bases of artillery weapons operation. V.S.Kutsopale.
10. Fundamentals of Storage and Restoration of Weapons Combat Capability. A.S. Abdulin, K.V. Salukvadze, V.M. Shakhmametiev.
11. Maintenance and repair of artillery weapons.
12. Missile and artillery weapons operation manual. Part 1, 2.Chyzh I.G., "Theory of Optical Systems" Kyiv, Igor Sikorsky Kyiv Polytechnic Institute, 2022.
13. "Fundamentals of construction and design of artillery instruments" Odesa, OISV, 1998.
14. Maintenance of small arms. Military Academy 2018.
15. Structure and operation of small arms. Part I. Theoretical basis of small arms structure. Military Academy, 2019.
16. Graduate Handbook. Part 4. Military Academy 2018.
17. Small arms. Military Academy 2013.
18. Small arms and melee weapons. Part I. OISV. 2000 p.
19. Rifle manual. 5.45 mm Kalashnikov assault rifle (AK-74, AKS-74, AK-74N, AKS-74N) and 5.45 mm Kalashnikov handguns (RPK-74, RPK-74N, RPK-74N) - Kyiv: Ministry of Defence of Ukraine.
20. Manual on marksmanship. 7.62 mm Dragunov sniper rifle - Kyiv: Ministry of Defence of Ukraine.

21. Manual on marksmanship. 7.62 mm machine guns PC, PCS, PCB, PCM, PCMS, PCMB, PKT.
 22. Guidelines on firearms. Makarov 9mm pistol (PM) - Kyiv: Ministry of Defence of Ukraine.
 23. Manual on marksmanship. 12.7 mm machine gun "UTES." - K.: Ministry of Defence of Ukraine. Main Command of the Land Forces of the Armed Forces of Ukraine, 2004.
 24. Manual on marksmanship. 14.5 mm Volodymyrov heavy machine gun. Main Command of the Land Forces of the Armed Forces of Ukraine, 2004.
 25. Information Bulletin No. 1 "Experience of using 12-gauge shotguns by Russian Federation units to destroy UAVs"
 26. Newsletter No. 5 "Innovative developments of weapons and military equipment based on the results of open source monitoring"
 27. Newsletter No. 7 "Innovative developments of weapons and military equipment based on the results of open source monitoring"
 28. Information Bulletin No. 65 of the Department of Study and Implementation of Combat Experience of the Exercise Centre of the Joint Forces Operation "Khortytsia" "Recommendations on the use of the automated remote-controlled combat module "Sabre"
- Information resources
1. Website of the Military Academy (Odesa). www.vaodessa.org.ua.
 2. Electronic library of the Military Academy (Odesa) (internal network). <http://192.168.1.254/>.
 3. Electronic library of the Department of Missile and Artillery Armament (internal network of the Military Academy (Odesa)). <http://192.168.1.254/index.php/kafedra-rao>.
 4. Website of the Ministry of Defence of Ukraine. <http://www.mil.gov.ua/>.

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

№ s/n	Types of exercise sessions, control measures	Number of hours	Among them.		Semester numbers, name of the content module, sessions, educational issues
			Audit hours	Independent work	
1	2	3	4	5	6
Section 1. Structure and operation of individual small arms					
Topic 1. Structure and operation of pistols.					
1	Group session	4	2	2	<p>Class 1: Structure and operation of pistols of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Purpose, specifications, structure and operation of the 9 mm PM pistol. 2. Purpose, specifications, structure and operation of the 9 mm APS pistol. 3. Purpose, specifications, construction and operation of the 7.62 mm TT pistol. 4. Purpose, specifications, construction and operation of pistols of the Russian Armed Forces. <p><i>Independent work:</i> Equipment and maintenance of pistols of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Components and maintenance procedure for the 9 mm PM. 2. Completeness and maintenance procedure of the 9 mm APS. 3. Components and maintenance procedure for 7.62 mm TT.
2	Group session	4	2	2	<p>Class 2: Structure and operation of NATO pistols.</p> <ol style="list-style-type: none"> 1. Purpose, specifications, structure and operation of the 9 mm VZ-82 pistol. 2. Purpose, specifications, structure and operation of the 9 mm Beretta M9 pistol. 3. Purpose, specifications, construction and operation of the 9 mm Glock 17 pistol. <p><i>Independent work:</i> Equipment and maintenance of pistols of NATO member states.</p> <ol style="list-style-type: none"> 1. Contents and maintenance procedure for 9 mm VZ-82. 2. Contents and maintenance of the Beretta M9. 3. Components and maintenance of the 9 mm Glock 17.

3	Practical exercise	6	6		Class 3: Maintenance of pistols. 1. Carry out maintenance of the PM and APS. 2. Carry out maintenance of the VZ-82 and Beretta M9.
Total for the topic		14	10	4	
Topic 2. Structure and operation of assault rifles.					
4	Group session	4	2	2	Class 1: Structure and operation of assault rifles of the Armed Forces of Ukraine. 1. Purpose, specifications, structure and operation of the 5.45 mm AK-74 rifle. 2. Purpose, specifications, construction and operation of the 5.45 mm assault rifle FORT-221. 3. Purpose, specifications, construction and operation of the 5.45 mm Vulcan assault rifle. 4. Purpose, specifications, structure and operation of the Russian Armed Forces assault rifles. <i>Independent work:</i> Equipment and maintenance of assault rifles of the Armed Forces of Ukraine. 1. Components and maintenance procedure for the 5.45 mm AK-74 rifle. 2. Components and maintenance procedure of the 5.45 mm assault rifle FORT-221. 3. Components and maintenance of the 5.45 mm Vulcan assault rifle.
5	Group session	4	2	2	Session 2: Structure and operation of NATO assault rifles. 1. Purpose, specifications, construction and operation of the 5.56 mm GROT assault rifle. 2. Purpose, specifications, construction and operation of the 5.56 mm FN F2000 assault rifle. 3. Purpose, specifications, construction and operation of the 7.62 mm FN FAL assault rifle. <i>Independent work:</i> Components and maintenance of NATO assault rifles. 1. Contents and maintenance of the 5.56 mm GROT. 2. Contents and maintenance procedure for the 5.56 mm FN F2000. 3. Components and maintenance procedure for the 7.62 mm FN FAL.
6	Practical exercise	6	6		Class 3: Maintenance of assault rifles. 1. Maintenance of AK-74 and FORT-221. 2. Perform maintenance on the GROT, FN F2000 and FN FAL.
Total for the topic		14	10	4	
Topic 3. Construction and operation of sniper rifles.					

7	Group session	4	2	2	<p>Class 1: Structure and operation of sniper rifles of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Purpose, specifications, construction and operation of the 7.62 mm SVD rifle. 2. Purpose, specifications, construction and operation of the 7.62 mm UAR-10 rifle. 3. Purpose, specifications, construction and operation of the 14.5 mm ALLIGATOR rifle. 4. Purpose, specifications, construction and operation of sniper rifles of the Russian Armed Forces. <p><i>Independent work:</i> Equipment and maintenance of sniper rifles of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Components and maintenance procedure for 7.62 mm SVD. 2. Components and maintenance procedure for 7.62 mm UAR-10. 3. Contents and maintenance of the 14.5 mm ALLIGATOR.
8	Group session	4	2	2	<p>Session 2: Structure and operation of NATO sniper rifles.</p> <ol style="list-style-type: none"> 1. Purpose, specifications, structure and operation of the 7.62 mm M110 rifle. 2. Purpose, specifications, construction and operation of the 12.7 mm Barret M107 rifle. <p><i>Independent work:</i> Equipment and maintenance of sniper rifles of NATO member states.</p> <ol style="list-style-type: none"> 1. Components and maintenance procedure 7.62 mm M110. 2. Contents and maintenance of the 12.7 mm Barret M107.
9	Practical exercise	6	6		<p>Session 3: Maintenance of sniper rifles.</p> <ol style="list-style-type: none"> 1. Maintenance of the SVD and UAR-10. 2. Perform maintenance on the M110, Barret M107.
Total for the topic		14	10	4	

Section 2. Structure and operation of group models of melee weapons.

Topic 4. Structure and operation of machine guns.

10	Group session	4	2	2	<p>Class 1: Structure and operation of machine guns of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Purpose, specifications, structure and operation of the 7.62 mm PKM machine gun. 2. Purpose, specifications, structure and operation of the 12.7 mm DShKM machine gun. 3. Purpose, specifications, structure and operation of the 12.7 mm NSV machine gun. 4. Purpose, specifications, structure and operation of the 14.5 mm KPVT machine gun. 5. Purpose, specifications, structure and operation of machine guns of the Russian Armed Forces. <p><i>Independent work:</i> Equipment and maintenance of machine guns of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Contents and maintenance of the 7.62 mm PKM. 2. Components and maintenance procedure for 12.7 mm angle grinders. 3. Completeness and maintenance procedure of 12.7 mm NSV. 4. Completeness and maintenance procedure for 14.5 mm Tubing.
11	Group session	4	2	2	<p>Session 2: Structure and operation of machine guns of NATO member states.</p> <ol style="list-style-type: none"> 1. Purpose, technical characteristics, structure and operation of the 7.62 mm MG 3. 2. Purpose, specifications, structure and operation of the 7.62 mm S6A1 machine gun. 3. Purpose, specifications, structure and operation of the 12.7 mm Browning M2 machine gun. <p><i>Independent work:</i> Equipment and maintenance of machine guns of NATO member states.</p> <ol style="list-style-type: none"> 1. Components and maintenance procedure 7.62 mm MG 3. 2. Components and maintenance procedure for 7.62 mm C6A1. 3. Contents and maintenance of the 12.7 mm Browning M2.
12	Practical exercise	6	6		<p>Session 3: Maintenance of sniper rifles.</p> <ol style="list-style-type: none"> 1. Carry out maintenance of PCMs, DSCMs, NSSs and CMPs. 2. Carry out maintenance of MG 3, C6A1 and Browning M2.
Total for the topic		14	10	4	
Topic 5. Structure and operation of grenade launchers.					

13	Group session	4	2	2	<p>Class 1: Structure and operation of grenade launchers of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Purpose, specifications, structure and operation of the 40 mm RPG-7V grenade launcher. 2. Purpose, specifications, structure and operation of the 40 mm GP-25 grenade launcher. 3. Purpose, specifications, structure and operation of the 73 mm SPG-9M grenade launcher. 4. Purpose, specifications, structure and operation of the 30 mm AGS-17 grenade launcher. 5. Purpose, specifications, structure and operation of the 40 mm grenade launcher UAG-40. 6. Purpose, specifications, structure and operation of grenade launchers of the Russian Armed Forces. <p><i>Independent work:</i> Equipment and maintenance of grenade launchers of the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Equipment and maintenance procedure for 40 mm RPG-7B. 2. Components and maintenance procedure for 40 mm GP-25. 3. Components and maintenance procedure for 73 mm SPG-9M. 3. Components and maintenance procedure for 30 mm AGS-17. 4. Components and maintenance procedure for 40 mm UAG-40.
14	Group session	4	2	2	<p>Session 2: Structure and operation of grenade launchers from NATO countries.</p> <ol style="list-style-type: none"> 1. Purpose, specifications, structure and operation of the 83 mm Carl Gustaf grenade launcher. 2. Purpose, specifications, structure and operation of the Pancerfaust grenade launcher 3. 3. Purpose, specifications, structure and operation of the 40 mm MK 19 grenade launcher. <p><i>Independent work:</i> Equipment and maintenance of grenade launchers of NATO member states.</p> <ol style="list-style-type: none"> 1. Contents and maintenance procedure for 83 mm Carl Gustaf. 2. Contents and maintenance of the Pancerfaust 3. 3. Components and maintenance procedure for 40 mm MK 19.
15	Practical exercise	4	4		<p>Class 3: Maintenance of grenade launchers.</p> <ol style="list-style-type: none"> 1. Maintenance of RPG-7V, SPG-9M, AGS-17 and UAG-40. 2. Maintenance of Carl Gustaf, Pancerfaust 3 and MK 19.
Total for the topic		12	8	4	
Section 3. Structure and operation of armament of infantry fighting vehicles.					
Topic 6. Structure and operation of armament of infantry fighting vehicles.					

16	Group session	4	2	2	<p>Class 1: Structure and operation of the 2A28 gun.</p> <p>1. Purpose, specifications, ammunition of the 73 mm 2A28 gun. 2. Structure of the 73 mm 2A28 gun. 3. Maintenance procedure for the 73 mm 2A28 gun. <i>Independent operation:</i> Mechanized ammunition laying and afterloader of the 73 mm 2A28 gun.</p> <p>1. Purpose, structure of the mechanised warhead of the 73 mm 2A28 gun. 2. Purpose and structure of the 73 mm gun afterburner 2A28.</p>
17	Group session	4	2	2	<p>Class 2: Structure and operation of the 30 mm 2A42 gun.</p> <p>1. Purpose, specifications, ammunition of the 30 mm 2A42 gun. 2. Structure of the 30 mm 2A42 gun. 3. Maintenance procedure for the 30 mm 2A42 gun. 4. Purpose, specifications, structure of 30 mm guns ZTM-1 and ZTM-2. <i>Independent operation:</i> The 30 mm 2A42 gun ammunition.</p> <p>1. Purpose and structure of the mechanised 30 mm gun 2A42. 2. Purpose and structure of the 30 mm stabiliser of the 2A42 gun.</p>
18	Practical exercise	6	6		<p>Class 3: Maintenance of infantry fighting vehicle guns.</p> <p>1. Maintenance of the 73 mm 2A28 gun. 2. Maintenance of the 30 mm 2A42 gun. 3. Maintenance of the 30 mm ZTM-2 gun.</p>
Total for the topic		14	10	4	
Section 4. Structure and operation of reconnaissance and artillery devices.					
Topic 7. Optical reconnaissance and surveillance devices.					
19	Group session	4	2	2	<p>Class 1: Binoculars.</p> <p>1. Purpose, technical specifications, binoculars' package. 2. Structure and principle of operation. <i>Independent work:</i> B-8 binoculars.</p> <p>1. Features of the B-8 binoculars. 2. The principle of operation of B-8.</p>

20	Group session	4	2	2	<p>Session 2: Periscopic artillery bead PAB-2AM.</p> <p>1. Purpose, technical specifications, and equipment of PAB-2AM. 2. Structure and principle of operation. 3. Optical diagram of PAB-2AM.</p> <p><i>Independent work:</i> Work with optical instruments.</p> <p>1. Working with binoculars. 2. Work with PAB-2AM.</p>
21	Practical exercise	4	4		<p>Class 3. Working with binoculars and PAB-2AM.</p> <p>1. Working with binoculars. 2. work with PAB-2AM.</p>
Just for the topic.		12	8	4	
Topic 8: Optical sights for melee weapons.					
22	Group session	2	2		<p>Class 1: PSO-1 optical sight.</p> <p>1. Purpose, technical specifications, completeness. 2. Structure and principle of operation. 3. 3. Optical scheme.</p>
23	Group session	2	2		<p>Class 2: PGO-7 optical sight.</p> <p>1. Purpose, technical specifications, completeness. 2. Structure and principle of operation. 3. 3. Optical scheme.</p>
24	Group session	4	2	2	<p>Session 3: PAG-17 optical sight.</p> <p>1. Purpose, technical specifications, completeness. 2. Structure and principle of operation. 3. 3. Optical scheme.</p> <p><i>Independent work:</i> Working with optical sights for the WBM</p> <p>1. Work with the PSO-1. 2. 2. Work with PGO-7. 3. 3. Work with PAG-17.</p>
25	Practical exercise	2	2		<p>Class 4. Working with optical sights for small arms and grenade launchers.</p> <p>1. Work with the PSO-1. 2. 2. Work with PGO-7. 3. 3. Work with PAG-17.</p>
Total for the topic		10	8	2	

Topic 9: Sights for artillery guns and mortars.					
26	Group session	4	2	2	<p>Class 1: Mechanical sight S71-40.</p> <p>1. Purpose, modifications and technical specifications of the S71-40. 2. Structure and principle of operation.</p> <p><i>Independent work:</i> Checking and adjusting the C71-40 sight</p> <p>1. Check the reticle mounting and the correct level adjustment. 2. Determination of the dead run of the target city corners mechanism. 3. Determining the dead travel of the aiming angle mechanism.</p>
27	Group session	4	2	2	<p>Class 2: Gun panorama PG-1M, gun collimator K-1.</p> <p>1. Purpose, technical specifications, scope of delivery, structure, principle of operation and optical diagram of the PG-1M. 2. Purpose, technical specifications, completeness, structure, principle of operation and optical diagram of the K-1.</p> <p><i>Independent work:</i> Check and adjust the panorama of the PG-1M.</p> <p>1. Align the zero line of sight.</p>
28	Practical exercise	4	4		<p>Class 3: Partial alignment of gun sights.</p> <p>1. Partial alignment of sighting devices 100 mm PTG MT-12. 2. Partial alignment of sighting devices 122 mm G D-30.</p>
Total for the topic		12	8	4	
Control measures		4	4		Examination
Total for the educational component		120	80	40	

4.20 WS 4 "Structure and operation of destruction means"

General objective of the educational programme component

The purpose of the discipline "Structure and operation of destruction means" is to study with students the basics of the structure and design of missiles and ammunition (except for engineering) for rocket and artillery weapons, to develop their primary skills in preparing missiles and ammunition for combat use and identifying those that are not allowed to operate and fire; to form a scientific point of view on the operation of missiles and ammunition.

As a result of studying the discipline, the student should

to know:

Identify the types of ammunition by markings, branding and different colours

identify types of rockets and missiles by their markings and appearance;

organise compliance with and monitor the implementation of safety measures when handling missiles and ammunition;

use knowledge of the basic principles of the structure and design of missiles and ammunition to properly organise their operation and prepare them for combat use;

be able to:

The ability to independently learn the main types of missiles and ammunition in service with the Armed Forces of Ukraine, as well as the procedure for their operation.

Has the knowledge and ability to describe ammunition, namely the purpose, structure and principle of operation, including the main types of lighting, signalling and imitation means. He/she is able to recognise the types of ammunition for artillery, small arms, melee weapons and hand grenades, as well as rockets and missiles by their markings and colouring.

Organisational and methodological guidelines:

Features of the methodology for conducting sessions:

The methodology of teaching a discipline is based on the basic principles of didactics (theory of reasoning and learning). It provides a scientific and pedagogical description of the forms and methods of teaching, indicates the most appropriate combinations to achieve a certain level of learning, and determines the conditions for their most effective use.

Logistics:

Sessions should be held in specialised classrooms, which should be equipped with samples of rocket and artillery weapons. It is mandatory to use technical means of exercise during exercise sessions.

Information and methodological support:

1. Order of the Ministry of Internal Affairs of Ukraine 04.08.2018 No. 656 "On Approval of the Procedure for Approval and Registration of Vehicle Movement during Road Transport of Dangerous Goods".
2. The 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).
3. 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".
4. Order of the National Guard of Ukraine No. 191 of 30.05.2017. "On Approval of the Regulation on Arsenal, Bases and Storage Depots for Missiles and Ammunition of the Armed Forces of Ukraine".
5. Military Standard 01.310.001 "Logistics of Troops (Forces). Basic terms and definitions". Part 2, MoD.
6. Auxiliary
7. VST 01.052.001-2021 (01) "Safety of ammunition and explosives. Risk management (STANAG 2617 Ed. 1 / ALP-16 Ed. A ALLIED LOGISTICS PUBLICATIONS FOR EXPLOSIVE SAFETY AND MUNITIONS RISK MANAGEMENT (ESMRM) IN NATO PLANNING, EXERCISE AND OPERATIONS, IDT)".
8. VST 01.052.008-2021 (01) "Safety of ammunition and explosives. Terms and definitions used in NATO" (AOP-38 Edition 5, SPECIALIST GLOSSARY OF TERMS AND DEFINITIONS ON AMMUNITION SAFETY, MOD).
9. VST 01.052.009-2022 (01) "Safety of ammunition and explosives. Storage, maintenance and transport of ammunition during combat operations (operations) (STANAG 4657 Ed.1/ AASTP-05 Ed.1 NATO GUIDELINES FOR THE STORAGE, MAINTENANCE AND TRANSPORT OF AMMUNITION ON DEPLOYED MISSIONS OR OPERATIONS, IDT).
10. VST 01.052.010-2022 (01) "Safety of ammunition and explosives. Guidelines for the classification of hazards associated with military ammunition and explosives (STANAG 4123 Ed. 3 / AASTP-03 Ed.1 MANUAL OF NATO SAFETY PRINCIPLES FOR THE HAZARD CLASSIFICATION OF MILITARY AMMUNITION AND EXPLOSIVES, IDT).
11. VST 01.052.011 - 2022 (01) "Safety of ammunition and explosives. Identification of ammunition (STANAG 2953 Ed. 4 / AOP-02 Ed.D IDENTIFICATION OF AMMUNITION, IDT)".
12. VST 01.052.012 - 2022 (01) "Safety of ammunition and explosives. Storage organisation" (STANAG 4440 Ed.2/AASTP-01 Ed. B NATO GUIDELINES FOR THE STORAGE OF MILITARY AMMUNITION AND EXPLOSIVES, IDT)".

13. VST 01.052.013-2022 (01) "Safety of ammunition and explosives. Assessment of safety and serviceability of non-nuclear ammunition" (STANAG 4297 Ed. 2 /AOP-15 Ed. 3 GUIDANCE ON THE ASSESSMENT OF THE SAFETY AND SUITABILITY FOR SERVICE OF NON-NUCLEAR MUNITIONS FOR NATO ARMED FORCES, IDT).
14. VST 01.052.014-2022 (01) "Safety of ammunition and explosives. "Supervision during operation. Basic provisions" (STANAG 4675 Ed.1/ AOP-62 Ed. A IN-SERVICE SURVEILLANCE OF MUNITIONS GENERAL GUIDANCE, IDT)".
15. VST 01.052.015-2022 (01) "Safety of ammunition and explosives. "Supervision during operation. Selective inspection method and test procedures" (STANAG 4675 Ed.1 / AOP-63 Ed. 1 AND IN-SERVICE SURVEILLANCE OF MUNITIONS SAMPLING AND TEST PROCEDURES, , IDT)".
16. VST 01.052.016-2022 (01) "Safety of ammunition and explosives. "Supervision during operation. Monitoring the condition of energy materials" (STANAG 4675 Ed.1 / AOP-64 Ed. 1 AND IN-SERVICE SURVEILLANCE OF MUNITIONS CONDITION MONITORING OF ENERGETIC MATERIALS, IDT)".
17. Order of the National Guard of Ukraine No. 191 of 30.05.2017. "On Approval of the Regulation on Arsenal, Bases and Storage Depots for Missiles and Ammunition of the Armed Forces of Ukraine".
18. LWP 4-00(226).01 Guidelines "Storage, maintenance and transportation of ammunition during combat operations (operations)".
19. LWP 4-00(227).01 Guidelines "Storage of Ammunition and Explosives in Ground Storage Facilities".
20. LWP 4-00(228).01 Military Catalogue "Classification of Hazards of Ammunition and Explosives".
21. Energy-saturated materials and fundamentals of chemical physics. Lecture notes. Sumy. Sumy State University. 2016.
22. Lebedev G.I. Explosives, powders and solid rocket fuel - Sumy: VIA, 2000.
23. Derevianchuk A.I., Shelest M.B. Artillery weapons and ammunition - Sumy: "Sumy State University Publishing House, 2010.
24. Regulation on Arsenal, Bases and Storage Depots for Missiles and Ammunition of the Armed Forces of Ukraine, approved by the Order of the Ministry of Defence of 30 May 2017, No. 191 dsk.
25. Hand Grenades: A manual on marksmanship. OISV. 2001.
26. Exercise manual "Complex 9K51. Part I. Material part". OISV. 2005.
27. Shunkov V.N.. Armed Forces of the World - Minsk: Potpourri LLC. 2002.
28. Complex 216. Operating manual 7X1.620.216 RE.
29. Complex 111-1. Operating manual 518.00.00.000.7 RE.
30. A manual for officers of air defence units of the Land Forces. Maintenance of the Air Defence Units of the Armed Forces. Kharkiv, KhUPS named after I. Kozhedub. 2015.

31. Roy M.V. Multiple launch rocket systems. Fundamentals of the structure and operation of artillery units and rocket projectiles. - Sumy: VIASDU, 2008.
32. T.D. Popovych, I.A. Kondratiuk, V.Y. Sarnatskyi Small arms and close combat weapons. 12.7 mm machine gun "Utes" (NSV-12.7). Fundamentals of structure and preparation for combat use - Odesa: Odesa Institute of the Armed Forces, 2000.
33. Manual on marksmanship. 30 mm automatic grenade launcher on a machine gun (AGS-17) - K.: Ministry of Defence of Ukraine. Main Command of the Land Forces of the Armed Forces of Ukraine, 2005. 120 p.
34. Manual on shooting. Hand grenades - K.: Ministry of Defence of Ukraine. Main Command of the Land Forces of the Armed Forces of Ukraine, 2005.
35. Manual on shooting sports. 9mm Makarov pistol (PM) - K.: Ministry of Defence of Ukraine. Main Command of the Land Forces of the Armed Forces of Ukraine, 2004.
36. A guide to marksmanship. 5.45 mm Kalashnikov assault rifle (AK-74, AKS-74, AK-74N, AKS-74N) and 5.45 mm Kalashnikov handguns (RPK-74, RPK-74N, RPK-74N) - K.: Ministry of Defence of Ukraine. Main Command of the Land Forces of the Armed Forces of Ukraine, 2005.
37. Manual on marksmanship. 12.7 mm machine gun "Utes" - K.: Ministry of Defence of Ukraine. Main Command of the Land Forces of the Armed Forces of Ukraine, 2005.
38. Manual on marksmanship. 14.5 mm heavy machine gun of Vladimirov (14.5 KPVT) - K.: Ministry of Defence of Ukraine. Main Command of the Land Forces of the Armed Forces of Ukraine, 2005.
39. Manual on marksmanship. Hand-held anti-tank grenade launcher (RPG-7, RPG-7D) - K.: Ministry of Defence of Ukraine. Main Command of the Land Forces of the Armed Forces of Ukraine, 2003.
40. Manual on marksmanship. RPG-7 hand-held anti-tank grenade launcher - K.: Ministry of Defence of Ukraine. Main Command of the Land Forces of the Armed Forces of Ukraine, 2005.
41. Artillery fire exercise and fire control / Textbook for higher artillery command schools.
42. Firing of ground artillery. Book 1. / Textbook.
43. Chernozubov A.D., Kirichenko V.D., Razin I.I., Mikhailov K.V. External ballistics. Part 1. - Moscow: F.E. Dzerzhinsky All-Russian Scientific and Research Institute, 1954.
44. Guidelines for shooting sports. - M.
45. RPG-7 hand-held anti-tank grenade launcher and PG-7V shot. - M.
46. Manual for the 40 mm GP-25 under-barrel grenade launcher. - M.
47. 23-mm twin gun ZU-23. Service manual. M.
48. G.K. Korinenko. Arming and shooting. Part II. Armament complex of an infantry fighting vehicle. - K.: KVTIU, 1989.

49. BMP-2 infantry fighting vehicle. Technical description and operating instructions. Part I. - Moscow.
50. Anti-aircraft self-propelled gun 2S6M. Technical description 2S6M 00 00 000 TO. - M.
51. Ammunition for 122-mm guns of ground, tank and self-propelled artillery. Manual. - M.
52. 100 mm MT-12 anti-tank gun. Technical description and operating instructions. Part III. Ammunition. - M.
53. 100 mm shot ZUOF12. Technical description. Supplement to the service manual. 100-mm anti-tank gun MT-12. - M.
54. 122 mm howitzer D-30 (2A18). Technical description and operating instructions.
55. 152 mm 3VOF27 round. Technical description and operating instructions. Supplement to the service manuals: 152-mm howitzer gun D-20, 122-mm gun circa 1931/1937, 122-mm howitzer ML-20M.
56. 120 mm mortar, circa 1938. Service manual. - M.
57. 120-mm tracked mortar 2C12. Technical description and operating instructions. Part 2. Ammunition. - M.:
58. Detonators VS-1 and VS-2. The head of the service is M.
59. Explosives VS-5 and VS-6. Service manual - M.
60. Main detonator GPV-2. Service manual - M.
61. Main detonator B-90. Service manual - M.
62. Detonators VS-5 and VS-6. Service manual - M.
63. Mechanical remote control tube DTM-75. Technical description and operating instructions. - M.
64. AR-5 radio detonator. The service's leadership is M.
65. AR-6 radio detonator. Service manual - M.
66. AR-27 radio detonator. Service manual. - M.
67. BM-21 combat vehicle. Technical description and operating instructions. - M.
68. BM-21 combat vehicle. Technical description and operating instructions. 2nd edition, supplemented. - M.
69. Rockets of the 9K57 multiple launch rocket system. Technical description and operating instructions. Technical description and operating instructions. Part 2. - Moscow.
70. Technical description and operating instructions for the 9M111M. 9M111M.00.00.000 TO. - M.
71. PTURS 9M113. Technical description and operating instructions. 9M111M.00.00.000 TO. - M.
72. Guided missile 9M114M. Technical description and operating instructions. 9M114 TO. - M.
73. Basics of anti-aircraft guided missiles and ground equipment. Textbook for an officer of the Air Defence Forces.
74. Short-range anti-aircraft missile system "Strela-10" / Zhdanovych B.K., Starun V.A., Andreichenko V.M. et al. - M.
75. Portable anti-aircraft missile system "Igla" (9K38). Technical description and operating instructions. 9K38 TO. - M.
76. Missile 9M79. Technical description and operating instructions. 9M79 TO. - M.

77. Fedoseev V.I., Sinyarev G.B. Introduction to Rocketry. - Moscow: State Publishing House of the Defence Industry, 1956.
78. Kropachev E.A., Dubrovsky M.P. Chemical bases of explosives, powders and solid rocket fuels. Lecture notes, part 1, 2, chipboard, Sumy, SSUACU, 1989.
79. An information bulletin (leaflet) on the use of phosphorus munitions by the enemy during hostilities.
80. Newsletter No. 5 "Innovative developments of weapons and military equipment based on the results of open source monitoring".
81. Newsletter No. 7 "Innovative developments of weapons and military equipment based on the results of open source monitoring".
82. Information bulletin "Use of high-precision weapon systems by the armed forces of the Russian Federation and ways to counter them".

Information resources on the Internet

1. Website of the Military Academy (Odesa). www.vaodessa.org.ua
2. Electronic library of the Military Academy (Odesa) (internal network). <http://192.168.1.254/>
3. Electronic library of the Department of Missile and Artillery Armament (internal network of the Military Academy (Odesa)). <http://192.168.1.254/index.php/kafedra-rao>
4. Website of the Ministry of Defence of Ukraine. <http://www.mil.gov.ua/>
5. Vernadsky National Library of Ukraine. <http://www.nbuv.gov.ua/>.
6. Collection of scientific papers of the Military Academy (Odesa). <http://zbirnyk.vaodessa.org.ua/index.php/uk/>.
7. Military Technical Digest of the National Army Academy named after Hetman Petro Sahaidachnyi. <http://vtz.asv.gov.ua/>
8. Scientific and Technical Journal of the Central Research Institute of Military Equipment of the Armed Forces of Ukraine. <https://journal.cndiovt.com.ua/about>.

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

No. s/n	Types of exercise sessions, control measures	Number of hours	of which.		Semester numbers, section titles, class topics, study questions.
			Audit hours	Independent work	
1	2	3	4	5	6
Section 1. Explosives, ammunition for small arms and melee weapons.					
Topic 1 Concepts of ballistics and explosives.					
1.	Lecture	2	2		Class 1: Introductory lecture 1. Objectives, content and structure of the discipline "Missiles and Ammunition". The system of assessment of cadets' knowledge of the discipline. 2. History of ammunition development and its classification. 3. 3. Entrance control
2.	Group session	4	2	2	Class 2. General information about internal and external ballistics. 1. Subject and objectives of external ballistics. 2. Subject and tasks of internal ballistics. <i>Independent work:</i> Elements of external ballistics. 1. Forces and moments acting on a projectile during flight.

4.	Group session	4	2	2	<p>Class 3: Explosive processes and explosives.</p> <p>1. Classification of explosive processes. 2. Classification of explosives. 3. Basic properties and characteristics of explosives.</p> <p><i>Independent work:</i> Explosive processes and explosives.</p> <p>1. Safety measures when working with explosives.</p>
5.	Group session	2	2		<p>Class 4. Explosives.</p> <p>1. Sensitivity of explosives and ways of influencing it. Phlegmatisers and sensitisers. 2. Explosives stability and ways to influence it. Catalysts and stabilisers. 3. Plastic and elastic explosives, their compositions, characteristics and purpose.</p>
Total for the topic		12	8	4	
Topic 2 Ammunition for small arms.					
6.	Group session	4	2	2	<p>Session 1: The basics of small arms ammunition.</p> <p>1. Purpose, classification and requirements for cartridges, methods of fixing in the chamber. 2. General structure of the cartridges.</p> <p><i>Independent work:</i> The basics of small arms ammunition.</p> <p>1. Basic requirements for the design of cartridges. 2. Features of cartridge classification.</p>
7.	Group session	2	2		<p>Class 2: Design of cartridges for small arms.</p> <p>1. Purpose, structure and principle of operation of cartridges with conventional bullets. 2. Features of the structure and principle of operation of cartridges with special bullets.</p>

8.	Group session	3	2	1	<p>Class 3: Ammunition for special weapons.</p> <p>1. Features of the structure and principle of operation of special cartridges.</p> <p>2. Auxiliary cartridges.</p> <p>3. Ammunition for hunting weapons</p> <p><i>Independent work:</i> Features of the structure of cartridges.</p> <p>1. Cartridges with double and triple action bullets.</p> <p>2. Features of the structure of blank cartridges.</p> <p>3. Types of cartridges for hunting weapons.</p>
9.	Group session	4	2	2	<p>Class 4. Branding, painting and marking of cartridges.</p> <p>1. Marking of ammunition of domestic and NATO countries.</p> <p>2. Painting of ammunition for small arms of domestic and NATO countries.</p> <p>3. Marking of boxes with ammunition for small arms of domestic and NATO countries.</p> <p><i>Independent work:</i> Features of painting and marking cartridges.</p> <p>1. Marking of wooden and metal boxes with ammunition.</p> <p>2. Peculiarities of marking ammunition for small arms in NATO countries.</p>
10.	Practical exercise	6	4	2	<p>Activity 5. Reading markings, branding and colouring on ammunition and its packaging. Preparation of ammunition for combat use.</p> <p>1. Read markings and colouring on ammunition and its containers of domestic and NATO manufacture.</p> <p>2. Prepare the ammunition for combat use.</p> <p><i>Independent work:</i> Ammunition for small arms.</p> <p>1. Explosives and basic concepts of explosive processes.</p> <p>2. Ammunition for small arms, purpose, features of use, general structure and procedure of use.</p>
11.	Seminar session	2	2		<p>Class 6. Explosives and small arms ammunition.</p> <p>1. The concept of explosion, explosive process, explosives and their classification.</p> <p>2. Ammunition for small arms, purpose, features of use, general structure and procedure of use.</p>
Total for the topic		21	14	7	
Topic 3 Ammunition for melee weapons.					

12.	Group session	2	2		<p>Session 1: Shots at grenade launchers.</p> <p>1. Grenade launchers for RPG-7, Carl Gustaf, and its modifications.</p> <p>2. Grenade launchers for SPG-9, C90-CR (M3) INSTALAZA, RGW90 "Matador" anti-tank grenade launchers and its modifications.</p>
13.	Group session	6	4	2	<p>Class 2: Shots at grenade launchers.</p> <p>1. Grenade launchers for automatic grenade launchers MK 19, HK GMG, .</p> <p>3. Grenade launcher shots to under-barrel grenade launchers.</p> <p><i>Independent work:</i> General structure of grenade launcher rounds.</p> <p>1. Grenade launcher shots to anti-tank grenade launchers.</p> <p>2. Grenade launchers for automatic grenade launchers</p> <p>3. Features of the structure of the VOG-25P shot.</p>
14.	Group session	6	4	2	<p>Session 3: Ammunition for infantry fighting vehicles and anti-aircraft guns.</p> <p>1. Shots to the 2A28 gun.</p> <p>2. Shots to the 2A42 gun (ZTM-1, ZTM-2, 2A72, KBA-2).</p> <p>3. Shots at the ZU-23 anti-aircraft gun and its modifications.</p> <p><i>Independent work:</i> Ammunition for BMP-1, BMP-2 and their modifications.</p> <p>1. Shots to the 2A28 gun.</p> <p>2. Shots to the 2A42 gun (ZTM-1, ZTM-2, KBA-2).</p> <p>3. Preparing for differentiated assessment</p>
Total for the topic		14	10	4	
Section 2 Hand grenades. Pyrotechnic lighting and signalling devices and imitation devices.					
Topic 4 Hand grenades and rocket-propelled grenades.					
15.	Group session	2	2		<p>Session 1: Purpose, structure and action of hand grenades.</p> <p>1. Hand-held fragmentation grenades.</p> <p>2. Hand-held anti-tank grenades.</p>

16.	Group session	5	2	3	<p>Class 2: Purpose, structure and operation of rocket-propelled grenades.</p> <p>1. Purpose, structure and operation of RPG-18, RPG-75, NLAW, SMAW-D;</p> <p>2. Purpose, structure and operation of the RPG-22, "PANZERFAUST 3";</p> <p>2. Purpose, structure and operation of RPG-26, AT-4, C90-CR-AM (M3).</p> <p><i>Independent work:</i> Purpose, structure and operation of hand grenades and anti-tank grenades.</p> <p>1. History of the development of hand-held fragmentation grenades.</p> <p>2. Features of the use of anti-tank grenades.</p> <p>3. Tactical and technical characteristics of RPG-18, RPG-22, RPG-26</p> <p>.</p>
17.	Practical exercise	6	4	2	<p>Activity 3: Reading markings, branding and colouring on 2A42, 2A28, ZU-23 rounds, grenade launchers, hand grenades, anti-tank grenades and rocket-propelled anti-tank grenades. Preparing them for combat use.</p> <p>1. Reading markings, branding and colouring on rounds up to 2A42, 2A28, 2A72, ZU-23, grenade launchers, hand grenades, anti-tank grenades and rocket-propelled anti-tank grenades.</p> <p>2. Preparation of 2A42, 2A28, 2A72, ZU-23 rounds, grenade launchers, hand grenades, anti-tank grenades and rocket-propelled anti-tank grenades for use.</p> <p><i>Independent work:</i> Reading markings, branding and colouring on 2A42, 2A28, 2A72, ZU-23 rounds, grenade launchers, hand grenades, anti-tank grenades and rocket-propelled anti-tank grenades. Preparing them for combat use.</p> <p>1. Reading markings, branding and colouring on rounds up to 2A42, 2A28, 2A72, ZU-23, grenade launchers, hand grenades, anti-tank grenades and rocket-propelled anti-tank grenades.</p>
18.	Group session	2	2		<p>Class 4. Reactive lighting cartridges.</p> <p>1. Classification of pyrotechnics.</p> <p>2. Reactive lighting cartridges, their preparation for use and safety precautions when handling them.</p> <p>3. Marking of reactive lighting cartridges.</p>
Total for the topic		15	10	5	
Section 3 Artillery ammunition.					
Topic 5 Artillery ammunition.					

19.	Lecture	4	2	2	<p>Session 1: General information about artillery shots.</p> <ol style="list-style-type: none"> 1. Artillery rounds and their main and additional elements, domestic and NATO production. 2. Classification of artillery rounds of domestic and NATO production. 3. Safety measures for various types of work with artillery shots and shells. <p><i>Independent work:</i> Artillery shots.</p> <ol style="list-style-type: none"> 1. Classification of artillery shots. 2. Requirements for the design of artillery rounds.
20.	Group session	4	2	2	<p>Class 2: Theoretical foundations of artillery shells.</p> <ol style="list-style-type: none"> 1. The principle of artillery shells. 2. Classification of artillery shells. 3. Main design characteristics of artillery shells. <p><i>Independent work:</i> The basics of artillery shells.</p> <ol style="list-style-type: none"> 1. Classification of artillery shells. 2. Requirements for artillery shells. 3. Design characteristics of artillery shells.
21.	Group session	4	2	2	<p>Session 3: Artillery shells of the main purpose.</p> <ol style="list-style-type: none"> 1. Purpose, structure, effect of fragmentation shells of domestic and NATO production. 2. Purpose, structure, effect of high-explosive shells of domestic and NATO production. 3. Purpose, structure, effect of high-explosive fragmentation shells of domestic and NATO production. <p><i>Independent work:</i> The basics of the structure of main purpose artillery shells.</p> <ol style="list-style-type: none"> 1. Design characteristics of fragmentation and high-explosive shells of domestic and NATO production. 2. Purpose, structure, effect of fragmentation shells of domestic and NATO production. 3. Purpose, structure, effect of high-explosive shells of domestic and NATO production.
22.	Group session	2	2		<p>Class 4. Main purpose artillery shells.</p> <ol style="list-style-type: none"> 1. Purpose, structure and effect of concrete piercing projectiles of domestic and NATO production. 2. Purpose, structure and effect of armour-piercing projectiles of domestic and NATO production.

23.	Group session	4	2	2	<p>Class 5. Main purpose artillery shells.</p> <p>1. Purpose, structure and effect of projectiles with ready-made killing elements, NATO cluster munitions.</p> <p>2. Purpose, structure, effect of incendiary shells of domestic and NATO production.</p> <p><i>Independent work:</i> Artillery shells of the main purpose.</p> <p>1. Purpose, structure and effect of fragmentation, high-explosive and fragmentation-fragmentation shells.</p> <p>2. Purpose, structure and effect of projectiles with ready-made killing elements.</p>
24.	Group session	6	4	2	<p>Class 6. Main purpose artillery shells.</p> <p>1. Purpose and classification of domestic and NATO ammunition.</p> <p>2. The structure and effect of domestic and NATO ammunition.</p> <p><i>Independent work:</i> Artillery shells of the main purpose.</p> <p>1. Purpose, structure and effect of armour-piercing projectiles.</p> <p>2. Purpose, structure and effect of cumulative projectiles.</p>
25.	Group session	4	2	2	<p>Class 7. Special purpose artillery shells.</p> <p>1. Purpose, structure and effect of lighting and propaganda projectiles.</p> <p>2. Purpose, structure and effect of smoke and targeting shells.</p> <p>3. Purpose, structure and effect of projectiles that install active radio interference of domestic and NATO production.</p> <p><i>Independent work:</i> Special purpose artillery shells.</p> <p>1. Effect of propaganda and illumination shells.</p> <p>2. Effect of smoke and targeting shells.</p>
26.	Group session	4	4		<p>Class 8. Features of the structure of tank ammunition.</p> <p>1. Requirements for the structure of tank shots, the combat kit of tank guns of domestic and NATO production.</p> <p>2. Combat purpose, structure and effect of tank shots.</p>

27.	Group session	6	4	2	<p>Class 9. General structure of mortar shots.</p> <p>1. Purpose and general structure of mortar rounds of domestic and NATO production. 2. Combat purpose and classification of mines of domestic and NATO production. 3. General structure and principle of operation of basic and special purpose mines.</p> <p><i>Independent work:</i> General structure of mortar rounds.</p> <p>1. General structure of mortar rounds. 2. Combat purpose and principle of operation of basic and special purpose mines.</p>
28.	Group session	2	2		<p>Lesson 10. Combat charges.</p> <p>1. Purpose and types of ammunition, requirements for them. 2. Permanent live ammunition. 3. Variable warheads. 4. Modular warheads. 5. Monoblock warheads.</p>
29.	Group session	3	2	1	<p>Lesson 11. Combat charges.</p> <p>1. Purpose, structure and operation of the sleeves. 2. Purpose, types of ignition devices, requirements for their design. 3. Requirements for marking and branding of ammunition, cartridges and ignition devices of domestic and NATO production.</p> <p><i>Independent work:</i> Combat charges.</p> <p>1. Marking and branding of ammunition. 2. Marking and branding of cartridge cases and ignition devices.</p>
Total for the topic		43	28	15	
Section 4 Artillery ammunition					
Topic 6 Artillery ammunition.					

30.	Group session	4	2	2	<p>Session 1: General information about high-precision weapons and high-precision ammunition.</p> <p>1. The concept and classification of precision weapons. 2. Purpose, technical specifications, principle of construction and operation of existing high-precision ammunition of domestic and NATO countries. <i>Independent operation:</i> High-precision ammunition. 1. Reconnaissance-strike and reconnaissance-firing systems, an example of application.</p>
31.	Group session	5	4	1	<p>Class 2: Marking, painting and labelling of artillery ammunition.</p> <p>1. Dyeing of artillery ammunition produced in Ukraine and NATO countries. 2. Marking and indexing of artillery ammunition of domestic and NATO production. 3. Marking of artillery ammunition produced in Ukraine and NATO countries. <i>Independent work:</i> Branding, painting and marking of artillery ammunition. 1. Painting of artillery ammunition. 2. Marking and indexing of artillery ammunition. 3. Marking of artillery ammunition.</p>
32.	Practical exercise	3	3		<p>Activity 3: Reading the markings on projectiles, ammunition charges and ammunition containers.</p> <p>1. Practical application of knowledge of safety precautions when handling ammunition and preparing it for firing. 2. Reading markings on shells, ammunition charges and containers of domestic and NATO ammunition. 3. Sorting of artillery ammunition.</p>
Total for the topic		12	8	3	
Topic 7 Subversives.					

33.	Lecture	3	2	1	<p>Class 1: Design of bombs.</p> <p>1. Purpose and schematic diagrams of fuzes. 2. Composition and purpose of fuze elements. 3. Classification of bombers.</p> <p><i>Independent work:</i> Design of bombers.</p> <p>1. Purpose and schematic diagrams of fuzes. 2. Composition and purpose of fuze elements. 3. Classification of bombers.</p>
34.	Group session	3	2	1	<p>Class 2: Purpose, principle of construction and operation of the main mechanisms and components of fuzes.</p> <p>1. Requirements for the design of fuzes. 2. Mechanisms and components of bombs. 3. Purpose, schematic diagram and principle of operation of radio detonators.</p> <p><i>Independent work:</i> Purpose, principle of construction and operation of the main mechanisms and components of fuzes.</p> <p>1. Requirements for the design of fuzes. 2. Mechanisms and components of bombs. 3. Purpose, schematic diagram and principle of operation of radio detonators.</p>
35.	Group session	5	4	1	<p>Session 3: The structure of mechanical impact fuzes.</p> <p>1. Purpose, structure and operation of the RGM-2, M557 (M557S1) mechanical impact fuze. 2. Purpose, structure and operation of RGM-6, B-429, M72V1A mechanical impact fuzes.</p> <p><i>Independent work:</i> The structure of impact fuzes.</p> <p>1. Purpose, structure and operation of the RGM-6 and V-429 mechanical impact fuzes.</p>
36.	Group session	6	4	2	<p>Class 4. Structure of mechanical fuses.</p> <p>1. Purpose, structure and operation of impact fuzes for M-6 and M-12 mines. 2. Purpose, structure and operation of the GVMZ-7 bomb.</p> <p><i>Independent work:</i> The structure of mechanical detonators.</p> <p>1. Purpose, structure and operation of impact fuzes for M-6 and M-12 mines. 2. Purpose, structure and operation of the GVMZ-7 bomb.</p>

37.	Group session	3	2	1	<p>Class 5. The structure of piezoelectric fuzes and fuzes for rocket projectiles.</p> <p>1. Purpose, structure and operation of the GPV-2 fuze. 2. Purpose, structure and operation of the MRV-U fuze.</p> <p><i>Independent work:</i> The structure of piezoelectric fuzes and fuzes for rocket projectiles.</p> <p>1. Purpose, structure and operation of the GPV-2 fuze. 2. Purpose, structure and operation of the MRV-U fuze.</p>
38.	Seminar session	2	2		<p>Class 6. Fuzes for artillery ammunition.</p> <p>1. Marking, branding and painting of artillery rounds. 3. Purpose, structure and principle of operation of fuzes.</p>
Total for the topic		22	16	6	
Section 4 Rockets and missiles.					
Topic 8 Rockets.					
39.	Group session	4	2	2	<p>Class 1: General structure of rockets and missiles.</p> <p>1. Rocket, missile and their elements. 2. Aerodynamic diagrams of rockets. 3. Classification of rockets and missiles and requirements for them.</p> <p><i>Independent work:</i> General structure of rockets and missiles.</p> <p>1. Rocket, missile and their elements. 2. Aerodynamic diagrams of rockets. 3. Classification of rockets and missiles and requirements for them.</p>
40.	Group session	3	2	1	<p>Class 2. Grad MLRS rockets.</p> <p>1. Purpose and use of rockets for Grad MLRS. 2. Structure and principle of operation of rockets for Grad MLRS.</p> <p><i>Independent work:</i> Rockets for the Grad MLRS.</p> <p>1. The history of the development of rockets for the Grad MLRS. 2. Modifications to Grad MLRS rockets.</p>
41.	Group session	3	2	1	<p>Class 3. Missiles for the Uragan MLRS.</p> <p>1. Purpose and use of missiles for the Uragan MLRS. 2. Structure and principle of operation of rockets for MLRS "Uragan".</p> <p><i>Independent work:</i> Missiles for the Uragan MLRS.</p> <p>Missiles for the Uragan MLRS.</p> <p>1. History of the development of rockets for the Uragan MLRS. 2. Modifications to the Uragan MLRS rocket.</p>

42.	Group session	3	2	1	<p>Class 4. Missiles for the Smerch MLRS.</p> <p>1. Purpose and use of rockets for Smerch MLRS.</p> <p>2. Structure and principle of operation of rockets for Smerch MLRS.</p> <p><i>Independent work:</i> Missiles for the Smerch MLRS.</p> <p>1. History of the development of rockets for the Smerch MLRS.</p> <p>2. Modifications to the Smerch MLRS rocket.</p>
Total for the topic		13	8	5	
Section 5 Rockets and missiles.					
Topic 9 Missiles for anti-tank, anti-aircraft and tactical missile systems.					
43.	Lecture	4	2	2	<p>Class 1: Missile on-board equipment.</p> <p>1. Purpose, composition and placement of on-board equipment.</p> <p>2. Command guidance system.</p> <p>3. Communication channel.</p> <p><i>Independent operation:</i> Onboard equipment of rockets.</p> <p>1. Purpose, composition and placement of on-board equipment.</p> <p>2. Command guidance system.</p> <p>3. Communication channel.</p>
44.	Group session	2	2		<p>Class 2. Missiles for anti-tank missile systems (ATMS).</p> <p>1. Purpose, structure and operation of the 9M113 (9M111).</p> <p>2. Purpose, structure and operation of missiles for the Stugna RK-2S (RK-2IS) ATGM.</p>
45.	Group session	3	2	1	<p>Class 3. Missiles for anti-tank missile systems (ATMS).</p> <p>1. Purpose, structure and operation of the 9M115 and 9M114.</p> <p>2. Purpose, structure and operation of missiles for the RK-3OF, RK-3K (RK-3I) Corsair ATGM.</p> <p><i>Independent work:</i> Missiles for anti-tank missile systems (ATMS).</p> <p>1. Purpose, structure and operation of missiles for the Stugna RK-2S (RK-2IS) ATGM.</p> <p>2. Purpose, structure and operation of missiles for the RK-3OF, RK-3K (RK-3I) Corsair ATGM.</p>
46.	Group session	2	2		<p>Class 4. Missiles for anti-aircraft missile systems (SAMs).</p> <p>1. Purpose, structure and operation of the 9M39 anti-aircraft guided missile.</p> <p>2. Features of the structure of the 9M313.</p>

47.	Group session	3	2	1	<p>Class 5. Missiles for anti-aircraft missile systems (SAMs).</p> <p>1. Purpose, structure and operation of the 9M37 anti-aircraft guided missile. 2. Purpose, design features of the 9M311 anti-aircraft guided missile. <i>Independent work:</i> Missiles for anti-aircraft missile systems (SAMs). 1. Purpose, structure and operation of the 9M39 and 9M37 anti-aircraft guided missiles. 2. Purpose, structure and operation of the 9M313 and 9M311 anti-aircraft guided missiles.</p>
48.	Group session	5	4	1	<p>Class 6. Missiles of tactical missile systems.</p> <p>1. Purpose, tactical and technical characteristics of the 9M79-1 missile. 2. Composition and general structure of the 9M79-1 missile warhead. 3. Composition, general structure and operation of the main parts 9H123K and 9H123Φ. <i>Independent work:</i> Missiles of tactical missile systems. 1. Tactical and technical characteristics of the 9H123K and 9H123F main units. 2. Reading the markings of 9M79-1 missiles.</p>
49.	Practical exercise	5	4	1	<p>Class 7. Marking of ATGM and SAM missiles.</p> <p>1. Marking features of the 9M113 (9M111), 9M114, 9M115, RK-2S (RK-2IS) and RK-3OF (RK-3K, RK-3I) missiles. 2. Marking features of 9M39, 9M37, 9M311 and 9M79-1 missiles. 3. Reading the markings of 9M39, 9M37, 9M311 and 9M79 missiles <i>Independent work:</i> Preparing for the exam</p>
Total for the topic		24	18	6	
Control measures		4	4		Examination
Total for the educational component		180	120	60	