

MINISTRY OF DEFENSE OF UKRAINE

**KRUTY HEROES MILITARY INSTITUTE OF TELECOMMUNICATIONS
AND INFORMATION TECHNOLOGY**

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

***TACTICAL LEVEL COMMAND COURSE
(ELECTRONIC INFORMATION SYSTEMS, OPERATIONAL EQUIPMENT
AND SPECIAL WEAPONS), L-1C (EISOESW)***

by military specialty

*093100 “ Electronic information systems,
operational equipment and special weapons ”*

APPROVED

by the Academic Council of the Kruty Heroes
Military Institute of Telecommunications and
Information Technology
(Minutes of 29.08.2024 No. 20)

of the Kruty Heroes Military Institute of
Telecommunications and Information
Technology

Colonel  Hryhori RADZIVILOV

ENACTED

by Order No. 539 of 2 September 2024
of the Chief of the Kruty Heroes Military
Institute of Telecommunications and
Information Technology

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PREFACE

DEVELOPED by a working group: Military Unit A0515 and the Kruty Heroes Military Institute of Telecommunications and Information Technology.

Decision of the commander of military unit A0515 of September 10, 2024
№ 222/1/2/616

Chairman of the working group: Colonel Ivan Datsenko, head of department of military unit A3458, PhD in technical sciences.

Members of the working group:

Colonel Oleksii SILKO, Deputy Head of the Institute for Academic Affairs of the Kruty Heroes Military Institute of Telecommunications and Information Technology, PhD in Engineering, Associate Professor;

Colonel Igor PANCHENKO, Head of the Department of Special Information Systems and Robotic Complexes, Faculty of Combat Application of Control and Communication Systems, Kruty Heroes Military Institute of Telecommunications and Information Technology, PhD in technical sciences, Associate Professor;

Lieutenant Colonel Oleksii VOSKOLOVYCH, Associate Professor of the Department of Special Information Systems and Robotic Complexes, Faculty of Combat Application of Control and Communication Systems, Kruty Heroes Military Institute of Telecommunications and Information Technology, PhD in Engineering, Associate Professor;

Lieutenant Colonel Oleksandr MAKARENKO, Senior Lecturer at the Department of Special Information Systems and Robotic Complexes Faculty of Combat Application of Control and Communication Systems, Kruty Heroes Military Institute of Telecommunications and Information Technology;

Lieutenant Colonel Andrii BERNATSKYI, Senior Lecturer at the Department of Special Information Systems and Robotic Complexes Faculty of Combat Application of Control and Communication Systems, Kruty Heroes Military Institute of Telecommunications and Information Technology;

Liudmyla SLOTVINSKAYA, an employee of the Armed Forces of Ukraine, Lecturer at the Department of Special Information Systems and Robotic Complexes Faculty of Combat Application of Control and Communication Systems, Kruty Heroes Military Institute of Telecommunications and Information Technology;

TAKEN INTO ACCOUNT:

1. Professional standard of a tactical officer of the Armed Forces of Ukraine Radio electronic information systems, operational equipment and special weapons (MS 093100).
2. Experience of training and employment of troops (forces), prospects for the development of the Armed Forces of Ukraine, procedures and standards adopted by the armed forces of NATO member states, as well as taking into account the experience of the Russian-Ukrainian war.

I. PROFILE OF THE EDUCATIONAL PROGRAMME OF THE PROFESSIONAL MILITARY EDUCATION COURSE

1 – General information	
Full name of the Higher Military Educational Institution (or other authorized educational establishment)	Kruty Heroes Military Institute of Telecommunications and Information Technology
Title of the document awarded and the scope of the educational programme of the professional military education course	Certificate of completion of the EDUCATIONAL PROGRAMME for the professional military education course “Tactical Level Command Course L-1C” (EISOESW), за MS 093100”. Scope of the educational program: 20 ECTS credits.
Prerequisites	A higher education degree of at least a bachelor's degree or a master's degree, completion of the basic course of the tactical level L-1A and the professional course of the tactical level L-1B.
Language(s) of instruction	Ukrainian
Validity period of the educational programme	Before updating or implementing a new educational program
2. Aims of the educational programme	
Training of officers enrolled in the reserve of candidates for promotion to tactical level positions from the staff category "captain" in the operational and technical intelligence units of the Armed Forces of Ukraine and other military formations established in accordance with the legislation of Ukraine	
3. Characteristics of the Educational Programme	
Field of study	Field of knowledge: “25 Military sciences, national security, state border security ”; Specialty: “255 Weapons and military equipment ”; Specialization: “ Electronic information systems, operational equipment and special weapons ”
Main focus of the educational programme of the professional military education course	Professional military education for military service in typical positions defined in the professional standard of the respective level.
Specific features of the programme	Tactical level command course (TLP+MDMP – Military Decision Making Process). The course provides for the development of competencies in leadership, management procedures according to NATO standards (TLP) with the study of military decision-making processes (MDMP), as well as competence in conducting information and analytical work in the operational and technical intelligence units of the Armed Forces of Ukraine and other military formations established in accordance with the legislation of Ukraine.
4. Employment and Further Education Opportunities	

Employment opportunities	Typical positions of persons with the rank of "captain" as defined in the professional standard of a tactical level officer, a command group officer, a command department officer, a department officer in the intelligence units of the Armed Forces of Ukraine.
Further education	Training under the EDUCATIONAL PROGRAMME of the professional military education course for tactical-level officers, "Tactical-level command and staff course (comprehensive intelligence).", L-2 (CI)".
5 – Teaching and assessment	
Teaching and learning	The main types of classes used to teach the components of the educational program: lectures; seminars, group, practical, group exercises; tactical (tactical and formation, tactical and special) independent classes, including at the field training base.
Assessment	Assessment of students' learning outcomes includes the full range of Assessment activities provided by the programs of educational components and is carried out on a 100-point scale, ECTS scale and national scale.
6 – Program competencies	
Military professional competencies (MPC)	<p>MPC-1 The ability to train a military unit (mechanized company, rank 4 ship, etc.) to conduct combat (actions) in the main types of combat, stabilization actions, including procedures used in the armed forces of NATO member states (TLP), and taking into account modern combat experience.</p> <p>MPC-2 The ability to exercise leadership skills, as well as to effectively define and distribute tasks to subordinate officers and NCOs, in the course of daily activities, combat training, and during the planning and conduct of combat operations by a military unit (mechanized company, 4th rank ship, etc.).</p> <p>MPC-3 The ability to effectively manage company (ship) economy, fulfill the requirements of regulations and guidelines for maintaining military discipline, order and security of military service during combat training, daily activities and combat operations of a military unit (mechanized company, ship of the 4th rank, etc.).</p> <p>MPC-4 Ability to determine and apply methods of work of the commander and staff to organize the management of the unit in accordance with the standards of NATO member states on the basis of military decision-making procedures (MDMP).</p>
Military specialty competencies by specialization (MSC)	<p>MSC-1 Ability to develop software and information support for military information systems through the use of modern information technologies.</p> <p>MSC-2 Ability to develop, deploy, operate and maintain distributed multi-platform heterogeneous military information systems based on modern information technologies of hardware and software virtualization, building parallel and distributed software applications.</p> <p>MSC-3 Ability to solve special tasks of studying the functioning of information and communication services (services) by analytical processing of information using automated information retrieval systems, including special ones, in the decision-making process of military command and control.</p>
7 – Program learning outcomes	
Learning Outcomes – Military-Professional Training (MPT-LO)	MPT-LO-1 Apply knowledge and skills of procedures used in the armed forces of NATO member states (TLP), modern combat experience, types of combat support in the preparation of a military unit (mechanized

	<p>company, 4th rank ship, etc.) for combat (actions) in the main types of combat, stabilization actions.</p> <p>MPT-LO-2 Apply confidence, determination, timeliness, analysis of the moral and business qualities of subordinate officials and combat capabilities of a subordinate military unit (mechanized company, 4th rank ship, etc.) in the course of daily activities, combat training, and in the planning and conduct of combat operations.</p> <p>MPT-LO-3 Know the requirements of regulations and guidelines for maintaining company (ship) facilities, observance of military discipline, order and safety of military service during combat training activities, daily activities and combat operations of a military unit (mechanized company, ship of the 4th rank, etc.).</p> <p>MPT-LO-4 Understand the basics of the military decision-making process, the organization of unit management according to the standards of NATO member states.</p> <p>MST-LO-1 Develop software and information support for information systems using modern information technologies.</p> <p>MST-LO-2 Possess the skills of building and using the UAS in the operational and technical intelligence units of the Armed Forces of Ukraine and other military formations established in accordance with the legislation of Ukraine.</p> <p>MST-LO-3 Apply methods and software tools for information research and influence on the services of military information and communication systems.</p> <p>PHbc-4 Solve special tasks of analytical information processing using automated information retrieval systems, including special ones, in the decision-making process of military command and control.</p>
8.Resource Support for Programme Implementation	
Personnel support	Academic staff with combat experience and professional service experience who have a proven level of academic and professional activity in academic disciplines.
Material and technical support	The logistical support meets the requirements for providing educational services in the field of higher education and is sufficient to ensure the quality of training, in particular: classrooms; computer classrooms (laboratories); specialized laboratories, training grounds, shooting ranges, and tactical fields; sports halls, sports grounds; library, reading room; multimedia equipment; premises for academic staff; barracks; dining hall, weapons and military equipment, etc.
Information and educational-methodological support	<p>The library is provided with professional periodicals of the relevant profile, including in electronic form. Access to databases of periodicals is available.</p> <p>There is an official website that contains basic information on the educational and publishing activities of higher education institutions (HEIs), their structure, licenses and accreditation certificates, information on educational and research structural units, admission rules, contact information, etc.</p> <p>Higher education institutions (HEIs) develop the following: curricula for academic disciplines; teaching and methodological and logistical support for each academic discipline; guidelines for independent and Self-Study; assessment criteria and means of diagnosing the learning of educational material; textbooks, study guides, lecture notes in accordance with the list</p>

	of recommended literature for each academic discipline, the number of which meets the established requirements; methodological materials for conducting final control.
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2. LIST OF COMPONENTS OF THE EDUCATIONAL PROGRAMME OF THE PROFESSIONAL MILITARY EDUCATION COURSE AND CORRESPONDENCE BETWEEN PROGRAMME COMPETENCIES AND LEARNING OUTCOMES AND THE COMPONENTS OF THE EDUCATIONAL PROGRAMME

2.1. List of the Components of the Educational Programme

Code	Course Components (Academic Disciplines / Modules)	Number of Credits (ECTS)	Form of Final Assessment
MP 01	Combat use and management of company actions in combat	3	Credit (Pass/Fail)
MP 02	Military leadership	3	Credit (Pass/Fail)
MP 03	Daily activities	2	Credit (Pass/Fail)
MP 04	The work of the battalion headquarters in planning and conducting combat operations according to MDMP procedures	2	Credit (Pass/Fail)
MS 01	D-01	6	Credit (Pass/Fail)
MS 02	D-02	4	Credit (Pass/Fail)
Total Credits for the Programme		20	

2.2 Compliance of program competencies with components of the educational program

	MP 01	MP 02	MP 03	MP 04	MS 01	MS 02
MPC-1	+					
MPC-2		+				
MPC-3			+			
MPC-4				+		
SCC -1					+	
SCC -2					+	
SCC -3					+	+

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

	MP 01	MP 02	MP 03	MP 04	MS 01	MS 02
MPT-LO-1	+					
MPT-LO-2		+				
MPT-LO-3			+			
MPT-LO-4				+		
MST-LO -1						
MST-LO -2					+	+

MST-LO -3						+
MST-LO -4					+	+

3. DISTRIBUTION OF EDUCATIONAL PROGRAMME COMPONENTS

№ 3/II	Code of academic discipline	Name of the discipline (module)	Final reporting (breakdown by semester)		Number of ECTS credits	Total number of hours	Audit hours (under the supervision of the AS, instructors)				Control Session	Self-Study
			exams	Credit (Pass/Fail)			In total	including				
								lectures	group s Exercises, workshops	Practical Classes, laboratory		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	MP 01	Combat use and management of company actions in combat		1	3	90	60	8	30	22	2	28
2	MP 02	Military leadership		1	3	90	44	10	32	2	2	44
3	MP 03	Daily activities of military units		1	2	60	38		28	10	2	20
4	MP 04	The work of the battalion headquarters in planning and conducting combat operations according to MDMP procedures		1	2	60	44	4	38	2	2	14
5	MS 01	D-01	1		6	180	73	22	21	30	6	101
6	MS 02	D-02		1	4	120	86	10	22	54	2	32
		Comprehensive exam	1			6					6	
Total:			2	5	20	606	345	54	171	120	22	239
Total number			2	5	20	606	345	54	171	120	22	239
Number of exams												2
Number of Credit (Pass/Fail)												6

4. PROGRAMMES OF THE COMPONENTS OF THE EDUCATIONAL PROGRAMME

MP 01. Combat use and management of company actions in battle

General aim of the component:

The purpose of the component of the educational program Combat Use and Management of Company Actions in Combat is to provide students with knowledge of the basic provisions of modern combined arms combat, the responsibilities of the company commander, the basics of combat by a mechanized company of the Armed Forces of Ukraine, the tactics of company actions in various types of combat, the basics of unit management in combat, the peculiarities of the use of units of the Armed Forces of Ukraine, the main trends in the development of military art; mastering the ability to manage company actions in various types of combat, assess and predict the development of the tactical situation, plan the main types of combat (TLP), make timely decisions and set tasks for subordinates, taking into account the current situation, professionally perform their duties on the basis of acquired tactical thinking, correctly map the tactical situation and develop basic combat documents according to NATO standards, skillfully use the main provisions of the guiding combat documents on the organization of unit management in the course.

Learning outcomes:

Upon completion of this component, learners will acquire:

Knowledge of:

planning, organizing and conducting the main types of combat (military operations);
making optimal decisions based on the analysis of the information received, clearly defining combat missions for subordinate units (firepower);
orientation in difficult combat conditions;
organization of work on the management of the unit, taking into account NATO standards and Euro-Atlantic procedures, the work of headquarters in accordance with the TLP structure;
organization of combat, technical and logistical support in various types of combat.

Skills to:

apply the acquired knowledge and understanding of the processes of battle planning according to NATO standards in accordance with TLP procedures, preparation, conduct and support of combat by a combined arms unit (tactical group) to make informed decisions in combat conditions, solve atypical tasks, maintain constant combat readiness, give orders (instructions) and be responsible for their implementation.

Organizational and methodological guidelines:

It is mandatory to systematically consolidate the knowledge and skills acquired in the course of studying the component of the educational program during practical, group classes and Self-Study.

The educational material to be studied during self-study is processed in accordance with the specified time and submitted for current and final control together with the educational material that is processed in class under the guidance of an academic staff member.

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

The following facilities are used to conduct all types of classes: classrooms, computer labs, multimedia equipment, visual teaching aids, writing utensils, distance learning platforms, electronic manuals, questionnaires as decided by the academic staff member who leads the classes.

Material and Technical Support:

Computers, multimedia equipment, interactive whiteboards, working cards, “Delta” and “Kropyva” software, officer rulers, liners, and a collection of formalized documents are used to support the educational process in the discipline.

Information and Methodological Support^

1. The Combat Statute of the Mechanized and Tank Troops of the Land Forces of the Armed Forces of Ukraine. Part 2 (company, battalion) – K.: LF AFU, 2016 y.

2. Provisional Combat Statute of the Land Forces of the Armed Forces of Ukraine, Part 1 (Brigade). The Training Command of the Land Forces Command of the Armed Forces of Ukraine in cooperation with the Ivan Chernyakhovsky National Defense University of Ukraine, 2021.

3. Collection of standards for combat training of the Land Forces of the Armed Forces of Ukraine - K.: Ministry of Defense of Ukraine, 2018.

4. Album of unit action plans (squad, platoon, company, battalion). Kyiv, MITIT, 2022.

5. Rules for the Development and Design of Combat Graphic Documents. Kyiv, MITIT, 2022.

6. OPavlenko, A., Tsurikov, A., Yakubov, V., "Organization of Combat of Mechanized (Tank) Units", Training manual. Kyiv, MITIT, 2018.

7. Combat Statute of Mechanized Forces (Department), (draft), National Army Academy, Lviv – 2020 p.

Titles of topics and distribution of study time by types of classes

№	Types of Classes / Assessment Activities	Total hours	Including		Title of topic and study questions
			Auditorium hours	Self-Study Self-Study	
1	2	3	4	5	6
Topic 1. Fundamentals of combat use of a mechanized company in defensive combat. Fundamentals of comprehensive combat support.					
1	Practical class	4	4		<p>Lesson 1: General requirements for the design of combat graphic documents.</p> <ol style="list-style-type: none"> 1. The main provisions of the Order of the Commander-in-Chief of the Armed Forces of Ukraine dated 11.09.2020 No. 140 "On Approval of the Temporary Procedure for the Preparation of Operational (Combat) Documents". 2. Forms and content of combat documents WARNO, FRAGO, OPOD (according to TLP structure). 3. Designing a working map as a combat graphic document.
2	Practical class	4	4		<p>Lesson 2. Methods of calculating the combat capabilities of a mechanized company in a defensive battle.</p> <ol style="list-style-type: none"> 1. Methods for calculating the capabilities of a unit to combat armored objects and other firepower. 2. A methodology for calculating the capabilities of a unit to defeat the enemy with small arms fire.
3	Lecture	4	2	2	<p>Lesson 3: Preparation and conduct of a defensive battle by a mechanized company.</p> <ol style="list-style-type: none"> 1. Fundamentals of defensive combat. Building a mechanized company defense. 2. Procedure for preparing a mechanized company with reinforcements for defensive combat. 3. Management of the company during a defensive battle.
					<p>Independent work</p> <p>Topic. Preparation and actions of a mechanized company in a defensive battle.</p> <ol style="list-style-type: none"> 1. Study of the general situation (Tactical task №5). 2. Study of the partial situation (Tactical task №5).

4	Lecture	2	2		Lesson 4. Components of comprehensive support. Combat support. 1. Basic elements of comprehensive support. 2. Organization of intelligence and security. 3. Engineering support and tactical camouflage. 4. Organization of CBRN protection.
5	Group class	4	4		Lesson 5. Engineering support of the company's stronghold. 1. Fortifications that are built in the company's stronghold. 2. Engineering barriers that are installed in front of the company's stronghold.
7	Group class	8	8		Lesson 7. The work of the company commander in preparing a defensive battle (according to the TLP structure) in accordance with tactical task #5. 1. Receiving a combat mission by the company commander for defense. Development of a preliminary combat order. 2. Development of a preliminary battle plan. 3. Company preparation and movement. Conducting reconnaissance. 4. Completion of battle planning. Developing and issuing a combat order for defense. 5. Checking the company's readiness for defense.
8	Calculation and graphic work №1	10		10	Calculation and graphic work No. 1: "Plotting the decision of the commander of a mechanized company on defense on a working map"
9	Group class	2	2		Lesson 8. Company fire control in defensive combat. 1. The work of the company commander on the organization of fire. 2. Drawing up a scheme of company stronghold. 3. Company fire control in the course of combat.
10	Practical class	2	2		Lesson 9. Company management during defensive combat (according to the TLP structure). 1. Company management during defensive combat. 2. Analysis of the battle.
11	Practical class	6	6		Lesson 10. Collection and processing of information on the radiation, chemical, and biological situation. 1. Assessment of the predicted and actual radiation situation and its application to the working map. 2. Assessment of the predicted and actual chemical situation and its application to the working map.
Total for the topic		46	34	12	
Topic 2. Fundamentals of combat use of a mechanized company in offensive combat.					
12	Lecture	4	2	2	Lesson 1: Preparation and conduct of offensive combat by a mechanized company. 1. Fundamentals of offensive combat. Fire damage to the enemy in an offensive combat. 2. The procedure for preparing a mechanized company with reinforcements for offensive combat.

					3. Conducting an offensive battle by a mechanized company. Self-Study Topic: Preparation and actions of a mechanized company in offensive combat. 1. Studying the general situation (tactical task No. 6) 1. Studying the partial situation (tactical task No. 6)
13	Group class	10	10		Lesson 2. The company commander's work on preparing for an offensive battle (according to the TLP structure) in accordance with tactical task No. 6. 1. Receipt of the combat mission for the offensive by the company commander. Development of preliminary combat orders. 2. Development of a preliminary battle plan. 3. Preparation of the company and movement. Conducting reconnaissance. 4. Completion of battle planning. Development and issuance of combat orders for the offensive. 5. Checking the company's readiness for the offensive.
14	Calculation and graphic work №2	10		10	Calculation and graphic work No. 2: "Plotting the decision of the commander of a mechanized company to attack on a working map"
15	Group class	2	2		Lesson 3. Company command during offensive combat (according to the TLP structure). 1. Company command during offensive combat. 2. Combat analysis.
Total for the topic		26	14	12	
Topic 3. Participation of a mechanized company in stabilization operations.					
16	Lecture	2	2		Lesson 1: Use of mechanized companies in stabilization operations. 1. Tasks that can be performed by the company while participating in stabilization operations. 2. Participation of the mechanized company in the reinforcement of the protection and cover of the state border. 3. Participation of the mechanized company in the isolation of the crisis area.
17	Group class	2	2		Lesson 2. Participation of a mechanized company in the fight against enemy sabotage and reconnaissance forces and illegal armed groups. 1. Search for enemy sabotage and reconnaissance forces and illegal armed groups. 2. Protection and defense of important facilities and communications. Protection and escort of convoys. 3. Peculiarities of preparing a company for participation in stabilization operations.

18	Group class	2	2		Lesson 3: Organization and performance of service at checkpoints. 1. Arrangement of the checkpoint 2. Deployment of personnel at the checkpoint. 3. Actions of personnel during the inspection of vehicles and individuals at the checkpoint. 4. Tactics of the enemy in attacks on checkpoints
19	Practical class	10	6	4	Lesson 4. Making a diagram of a control checkpoint and a roadblock. 1. Making a diagram of a control checkpoint. 2. Making a diagram of a roadblock.
Total for the topic		16	12	4	
Assessment activities		2	2	-	Credit (Pass/Fail)
Total for the educational component		90	62	28	

MP 02. MILITARY LEADERSHIP

The aim of the component:

The aim of teaching the Leadership component of the educational programme is to develop students' competencies in accordance with the professional standards required of tactical-level officers, to teach them how to exert leadership influence on individual military personnel and the unit's personnel as a whole, developing the professional subjectivity and abilities of an officer necessary for the effective performance of functional duties in their primary position while performing assigned tasks.

Learning outcomes:

Upon completion of this component, learners will acquire:

Knowledge of:

forms and methods of resolving interpersonal conflicts in a military unit;
gender aspects of the officer's professional activity;
establishing and maintaining communication within the unit, with local authorities and the local population;
practices of working with the media;
forming an effective combat team and maintaining its readiness to perform combat missions;
identification and development of leadership qualities of personnel.

Skills to:

maintain a favorable moral and psychological climate and psychologically prepare the unit's personnel for actions in extreme conditions;

to work autonomously and in a team, performing duties in the course of combat use and daily activities of the unit (by types, branches of the Armed Forces of Ukraine, other military formations formed in accordance with the laws of Ukraine), to have leadership skills;

possess methodological skills, skills of self-development and self-education throughout life, study and use of best practices in professional activities.

Organizational and methodological guidelines:

It is mandatory to systematically consolidate the knowledge and skills acquired in the course of studying the component of the educational program during practical, group classes and Self-Study.

The educational material provided for studying 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 classrooms under the guidance of a research and teaching staff member.

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

The following facilities are used to conduct all types of classes: classrooms, computer labs, multimedia equipment, visual teaching aids, writing utensils, distance learning platforms, electronic manuals, questionnaires as decided by the academic staff member who leads the classes.

Material and Technical Support:

To support the learning process in the Leadership component of the EDUCATIONAL PROGRAMME , the department uses computers, multimedia equipment, and interactive whiteboards.

Information and methodological support:

1. The Constitution of Ukraine: Adopted at the fifth session of the Verkhovna Rada of Ukraine on June 28, 1996 - K.: Press of Ukraine, 1997. – 79 p.
2. Agayev N.A., Kokun O.M., Pishko I.O., Lozinska N.S., Gerasymenko M.V., Tkachenko V.V. Psychological support for the development of leadership qualities of future officers: Methodical manual. - K.: Research Center of the General Staff of the Armed Forces of Ukraine., 2014. – 209 p.
3. Batsevich F.S. Fundamentals of communicative linguistics. Kyiv: Akademia, 2009. 376 p.
4. Boyko O.V. Theory and methods of formation of leadership competence of officers of the Armed Forces of Ukraine: a monograph. Zhytomyr: O.O. Yevenok Publishing House, 2020. 667 p.
5. Boyko O.V., Litvinovskyi E.Y., Rudenko M.V. Pedagogical aspects of managing the process of education of servicemen: Study guide - K.: NDU., 2005. – 148 p.
6. Galagan V. Y., Orlov V. F., Otych O. M. Conflictology: Lecture Notes. K.: DETUT., 2008. – 293 p.
7. Hrytsevych TL, Kapinus OS, Matsevko TM, Tkachuk PP Social and psychological technologies of management of military collectives: a study guide. Lviv: NAA, 2018. – 256 p.
8. The Doctrine of Military Leadership in the Armed Forces of Ukraine, Main Personnel Department of the General Staff of the Armed Forces of Ukraine, OP 1-296, January 2024.
9. Experience in the use of the Armed Forces of the leading countries of the world (to be taken into account when acquiring capabilities by troops (forces) to perform assigned tasks), parts 1-3, 2014.
10. Kaidalova L.G., Plyaka L.V., Alyokhina N.V., Shapovalova V.S. Psychology of communication: a textbook. Kharkiv: NUPh, 2018. 140 p.

11. Kokun O.M., Agayev N.A., Pishko I.O., Lozinska N.S. Fundamentals of psychological knowledge about mental disorders for a military psychologist. Methodical manual. - K.: Research and Development Center of the General Staff of the Armed Forces of Ukraine, 2018. - 310 p.

12. Kokun O.M., Klochkov V.V., Moroz V.M., Pishko I.O., Lozinska N.S. Ensuring the psychological stability of servicemen in combat conditions: methodological manual / - Kyiv-Odesa: Phoenix., 2022. – 128 p.

13. Leadership as a special form of power in the modern military and professional environment. Bulletin of the National Defense University of Ukraine. Kyiv, 2018. № 2 (50).

14. Leadership of a sergeant and officer (psychological and pedagogical aspect): a textbook / edited by P. P. Tkachuk. Lviv: LISV, 2009.

15. Osodlo V.I., Pozdyshev S.O., Khmilyar O.F., Nevmerzhytskyi V.M. et al. Psychological and Pedagogical Aspects of the Military Leader's Activity: Textbook - Kyiv: Ivan Chernyakhovsky National University, 2014. 362 p.

16. Temporary intervention on the process of analyzing the actions of training activities, OP 7(3)-00(01).01 Center for Operational Standards and Training Methodology of the Armed Forces of Ukraine jointly with the Main Training Department of the Armed Forces of Ukraine and the International Center for Peacekeeping and Security, December 2019.

Titles of topics and distribution of training time by type of training activities

No	Type of Training Activities and Assessment	Total hours	Including		Title of topic and study questions
			Classroom	Self-Study Self-Study	
1	2	3	4	5	6
Topic 1: Social processes in the group and their impact on leadership development.					

1.	Lecture	4		2	2	<p>Lesson 1: Social group: features and types.</p> <ol style="list-style-type: none"> 1. Concepts, patterns, characteristics of groups, typology of groups. 2. Essential features of a small group. 3. The main approaches and directions for the study of small groups. 4. Types and structural characteristics of a small group. <p>Self-Study.</p> <p>Topic: Basic principles of scientific understanding of society.</p> <ol style="list-style-type: none"> 1. The nature of society in scientific tradition. 2. The problem of typology of societies.
2.	Seminar	4		2	2	<p>Lesson 4. Small group in the context of social psychology.</p> <ol style="list-style-type: none"> 1. Typology of social groups. 2. Group identification. 3. Small social groups: concept, characteristics, typology. 4. Small social groups in the military environment: functions, types. 5. Social and psychological structure of the group. <p>Self-Study.</p> <p>Topic: Society as a social system.</p> <ol style="list-style-type: none"> 1. The essence and basic elements of the social structure of society. 2. Social stratification and social mobility.
Total for the topic		8		4	4	
Topic 2. History and current state of psychological research on leadership.						
3.	Lecture	4		2	2	<p>Lesson 1. Leadership issues in human history.</p> <ol style="list-style-type: none"> 1. Management revolutions and the emergence of ideas about leadership. 2. The development of leadership theory in human history. <p>Self-Study</p> <p>Topic: General principles of leadership.</p> <ol style="list-style-type: none"> 1. The origins of leadership. 2. Philosophical and social approaches to understanding the phenomenon of leadership.

4.	Group class	4		2	2	<p>Lesson 2. The origins of leadership psychology.</p> <ol style="list-style-type: none"> 1. The history of the emergence and development of leadership psychology in the pre-war period. 2. The evolution of leadership psychology in the post-war period. 3. Mechanisms of promotion to a leadership position: psychological exchange and implicit theory. 4. The relationship between the phenomena of “leadership” and “management.” <p>Self-Study</p> <p>Topic: The conceptual and categorical apparatus of leadership.</p> <ol style="list-style-type: none"> 1. Basic concepts and categories of leadership. 2. The leader and the group.
5.	Group class	4		2	2	<p>Lesson 3. Personal characteristics of a leader.</p> <ol style="list-style-type: none"> 1. Personal qualities of a leader. 2. Techniques for self-actualization and improving leadership effectiveness. 3. Motivation for leadership. 4. Formal and informal leadership. <p>Self-Study</p> <p>Topic: Laws and principles of leadership.</p> <ol style="list-style-type: none"> 1. Laws of leadership. 2. Principles of leadership.
6.	Group class	4		2	2	<p>Lesson 4. Public communication of a military leader.</p> <ol style="list-style-type: none"> 1. Language and leadership in military activities. 2. Rules for interaction between a military leader and the public and media. 3. Preparing a military leader for a press conference and interviews on specific topics. <p>Self-Study</p> <p>Topic. Rhetoric of a military leader.</p> <ol style="list-style-type: none"> 1. Rhetoric of persuasive speech. 2. Rhetoric of informative speech. 3. Rhetoric of inspiring speech.

7.	Seminar	4		2	2	<p>Lesson 5. Psychology of leadership: from behavioral model to cultural-value paradigm.</p> <ol style="list-style-type: none"> 1. Leadership: concepts and forms. 2. Psychological aspects of the leadership phenomenon. 3. Laws and principles of leadership. 4. Leadership theories. 5. Approaches to studying leadership. 6. Leadership: types and characteristics. <p>Self-Study.</p> <p>Topic. Styles, typology of leadership and its differences from management.</p> <ol style="list-style-type: none"> 1. Leadership styles. 2. Differences between leadership and management. 3. Analysis of specific situations (examples).
Total for the topic		20		10	10	
Topic 3: Theoretical and methodological foundations of military leadership.						
8.	Lecture	4		2	2	<p>Lesson 1. Professional activity and leadership of an officer.</p> <ol style="list-style-type: none"> 1. Leadership in the professional activity of an officer. 2. Differences between leadership and management (command). 3. Basic leadership competencies of an officer. 4. Culture of an officer's personality as a military leader. <p>Self-Study.</p> <p>Topic. Image and charisma of a leader.</p> <ol style="list-style-type: none"> 1. Image of a leader. 2. Charisma of a leader.
9.	Group class	4		2	2	<p>Lesson 2: Doctrine of Military Leadership Development in the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Tasks of military leadership. 2. Conditions of military leadership. 3. Standards of military leadership.
						<p>Self-Study</p> <p>Topic: Leadership concepts.</p> <ol style="list-style-type: none"> 1. The concept of leadership traits. 2. The concept of situational leadership. 3. The concept of transactional and transformational leadership. 4. The concept of value-based leadership.

10.	Group class	4		2	2	<p>Lesson 3. Psychological aspects of military leadership.</p> <ol style="list-style-type: none"> 1. Psychological structure of a military leader's personality and its orientation. 2. Temperament and character of a military leader. 3. Psychological characteristics of a military leader. <p>Self-Study</p> <p>Topic. Characteristics of a military leader's personality.</p> <ol style="list-style-type: none"> 1. Mental characteristics of a military leader. 2. Self-determination of the level of authority and leadership. 3. Solving situational tasks related to the manifestation of the mental characteristics of a military leader based on specific examples of the professional activities of officers and sergeants.
11.	Group class	4		2	2	<p>Lesson 4. Models and characteristics of situational leadership in a military unit</p> <ol style="list-style-type: none"> 1. Fundamentals of situational leadership. 2. Methods of situational leadership for officers (sergeants). 3. Determining the level of readiness of a specific military personnel for professional activity in a given situation. <p>Self-Study.</p> <p>Topic. Values, ethics, and standards of conduct for officers as the foundation of military leadership.</p> <ol style="list-style-type: none"> 1. Values (attributes) of a military leader. 2. Key competencies of a military leader. 3. Virtues of a military leader.
12.	Group class	4		2	2	<p>Lesson 5. Gender dimensions of military leadership.</p> <ol style="list-style-type: none"> 1. The phenomenon of female leadership: theoretical approaches and empirical patterns. 2. Gender aspects of modern democracy (based on the experience of NATO member states). <p>Self-Study.</p> <p>Topic: The authority of a military leader.</p> <ol style="list-style-type: none"> 1. The power of a military leader. 2. Basic procedures (algorithm) of direct (immediate) leadership of an officer (analysis of specific situations). 3. The authority of a military leader.

13.	Seminar	4		2	2	<p>Lesson 6. Theory and practice of military leadership.</p> <ol style="list-style-type: none"> 1. Psychological characteristics of the military management process. 2. Types and models of officer leadership. 3. Leadership in a military team. 4. Styles of military team management. 5. Psychological aspects of military leadership. 6. Values, ethics, and standards of officer behavior as the foundation of military leadership. <p>Self-Study.</p> <p>Topic. Methods of motivating unit personnel by a military leader.</p> <ol style="list-style-type: none"> 1. Models (techniques) of motivation of unit personnel by a military leader. 2. Alternative motivation of unit personnel by a military leader.
Total for the topic		24		12	12	
Topic 4. Forms and methods of resolving interpersonal conflicts in a military unit.						
14.	Lecture	4		2	2	<p>Lesson 1. Conflicts in military units and the need for their constructive resolution.</p> <ol style="list-style-type: none"> 1. The impact of conflicts on military personnel and the moral and psychological state of the unit. 2. Causes of conflicts between military personnel. <p>Self-Study.</p> <p>Topic. Manipulative techniques and “toxic” behavior of individual military personnel.</p> <ol style="list-style-type: none"> 1. Basic techniques of manipulative and “toxic” behavior of individual military personnel. 2. Psychological characteristics of “toxic” military leaders.
15.	Group class	4		2	2	<p>Lesson 2. Constructive resolution of conflicts between military personnel.</p> <ol style="list-style-type: none"> 1. Forms and criteria for resolving conflicts. 2. Conditions and factors for constructive conflict resolution. 3. Psychological mechanisms for constructive conflict resolution. <p>Self-Study.</p> <p>Topic. Types of “toxic” military officials.</p> <ol style="list-style-type: none"> 1. Identifying the behavior of “toxic” military personnel. 2. Behaviors of “toxic” military leaders.
16.	Group class	4		2	2	<p>Lesson 3: Military leader and conflict resolution.</p> <ol style="list-style-type: none"> 1. Effectiveness of third party participation in conflict resolution. 2. Activities of the officer-leader to resolve conflicts between subordinates. 3. Features of the participation of a military psychologist in conflict resolution. 4. Algorithm of conflict resolution.

						Self-Study. Topic: Leadership interaction between officers and sergeants. 1. Distribution of leadership functions between sergeants and officers. 2. Leadership interaction between officers and sergeants in combat situations.
17.	Group class	4		2	2	Lesson 4. Establishing and maintaining communication in the unit. 1. Organization of internal communication work in the units of the Armed Forces of Ukraine. 2. The influence of the commander on the moral and psychological state in the military unit. Self-Study. Topic: Information and propaganda support of the Armed Forces of Ukraine. 1. Organization of information and propaganda support of the Armed Forces of Ukraine. 2. The commander is the sole owner, leader and main organizer of internal communication work in the units of the Armed Forces of Ukraine.
18.	Seminar	4		2	2	Lesson 5. Characteristics of conflicts in military units and ways to resolve them. 1. Features and types of internal conflicts in military units. 2. Causes and factors of interpersonal and intergroup conflicts in military units. 3. Activities of a military leader to prevent and avert conflicts in a military unit. 4. Modeling the resolution of a conflict situation in the military by a military leader. 5. Methods of conflict management in a military unit. 6. Features of internal communication in units of the Armed Forces of Ukraine during the Russian-Ukrainian war. Self-Study. Topic: Leadership techniques for time management. 1. Time management using the Eisenhower Matrix. 2. Multiplying time using the Rory Waden method.
Total for the topic		20		10	10	
Topic 5. Forming an effective combat team and maintaining its readiness to perform combat missions.						
19.	Lecture	4		2	2	Lesson 1. The role of a military leader in team building and cohesion of military personnel. 1. Stages of formation of a combat-ready team from a military unit by a military leader. 2. The rallying of personnel into a combat-ready team by a military leader. 3. Identification and development of leadership qualities of the unit's personnel. Self-Study. Topic: Building effective teams. 1. Principles of designing effective teams. 2. Definition and typology of teams.

20.	Group class	4		2	2	<p>Lesson 2: Formation of a Combat-Ready Team by a military leader in a combat situation.</p> <ol style="list-style-type: none"> 1. Factors of cohesion of the unit's personnel in a combat situation. 2. Characteristic features of a combat-ready team. 3. Development of a combat-ready team by a military leader (Combat-Ready Teams). <p>Self-Study.</p> <p>Topic. Development of a combat-ready team by a military leader (Combat-Ready Teams).</p> <ol style="list-style-type: none"> 1. Actions of a military leader at the stage of development of a combat-ready team. 2. Compliance by the military leader with the principles of training personnel in a combat situation. 3. Signs of development of a combat-ready team.
21.	Seminar	4		2	2	<p>Lesson 4. Maintaining the team's readiness to perform combat missions as a military leader.</p> <ol style="list-style-type: none"> 1. Principles of designing effective teams. 2. Features of interaction in a combat-ready team. 3. Managing the activities of a combat-ready team. 4. Military leadership practices for maintaining unit cohesion. 5. Positive role models for military personnel behavior in combat situations to maintain combat team cohesion. 6. Military leader practices for personnel development. <p>Self-Study.</p> <p>Topic. Models for military leaders to create a positive climate in a combat-ready team.</p> <ol style="list-style-type: none"> 1. Creation by a military leader of a positive climate and growth mindset among victorious soldiers (S. McCrystal, V. McRaven, D. Willink). 2. Intentional military leadership (methodology by D. Marquet (cap. David Marquet)). 3. Role models of military leader behavior in a combat situation to maintain the cohesion of a combat-ready team.
22.	Practical class	4		2	2	<p>Lesson 4. Press conference and interview of a military leader.</p> <ol style="list-style-type: none"> 1. Presentation of a military leader's narrative on a specific topic. 2. Role-playing game: "Press conference of a military leader on topical issues of military professional activity". <p>Self-Study.</p> <p>Topic. Information and communication support for the Armed Forces of Ukraine.</p> <ol style="list-style-type: none"> 1. Information activities of public relations agencies (press services) of the Armed Forces of Ukraine. 2. Types of information materials and training of representatives of the Armed Forces of Ukraine to communicate with the media.

Total for the topic	16		8	8	
Assessment activities	2		2	-	Credit (Pass/Fail)
Total for the educational component	90		46	44	

MP 03. DAILY ACTIVITIES OF MILITARY UNITS

General objective of the educational programme components:

The aim of studying the Daily activities of military units component of the educational programme is to provide students with knowledge on the procedure for compiling and maintaining administrative documents, organizing personnel records in a unit, organizing and maintaining company Material and Technical Support, the main tasks of military service in a unit, the levels of combat readiness of units, methods of developing and maintaining combat readiness planning documents in a unit, organizing inspections and assessing the combat and mobilization readiness of a unit, the basics of organizing and methods of combat training of units, the procedure for applying training standards in the course of organizing combat training classes, the basics of organizing and methods of checking the combat training of units; development of skills in compiling and maintaining administrative documents, organizing personnel records, organizing and maintaining company Material and Technical Support, organizing and implementing military service activities in the unit, implementing measures to maintain constant combat readiness, maintaining combat readiness planning documents, organizing and implementing individual and collective training activities.

Upon completion of the component, learners will acquire:

Knowledge of:

the procedure for preparing and maintaining management documents;
organization of personnel records in the unit;
organization and maintenance of company economy;
the main tasks of the service of troops in the unit, the levels of combat readiness of units;
methods of developing and maintaining combat readiness planning documents in the unit;
organization of inspections and assessment of combat and mobilization readiness of the unit;
basics of organization and methods of combat training of units;
the procedure for applying training standards in the organization of combat training;
basics of organization and methodology for checking combat training of units.

Skills to:

prepare and maintain administrative documents in the unit;
organize personnel records;
organize and maintain company records;
organize and implement military service activities in the unit;
carry out measures to maintain constant combat readiness;
maintain combat readiness planning documents;
organize and carry out individual and collective training measures.

Organizational and methodological guidelines:

It is mandatory to systematically consolidate the knowledge and skills acquired during the study of the EDUCATIONAL PROGRAMME component during practical, group classes, and independent preparation.

The educational material intended for study during independent preparation is worked on in accordance with the specified time and is subject to current and final assessment together with the educational material that is worked on in classes under the guidance of a scientific and pedagogical worker.

During all forms of classes, active teaching methods, individual, group, and frontal methods of knowledge assessment are used. Current assessment is carried out in the form of oral questioning or written express assessment during classes, including electronic questionnaires in various forms at the discretion of the scientific and pedagogical staff member leading the classes.

The following resources are used for all types of classes: classrooms, computer labs, multimedia equipment, visual teaching aids, writing supplies, distance learning platforms, electronic manuals, and questionnaires, as decided by the scientific and pedagogical staff member leading the classes.

Material and Technical Support:

Computers, multimedia equipment, interactive whiteboards, and a collection of formalized documents are used to support the teaching process for this discipline.

Information and methodological support:

1. Guidelines for combat training in the Armed Forces of Ukraine: Main Department of Doctrine and Training of the General Staff of the Armed Forces of Ukraine. – K., 2020. – 64 p.

2. Guidelines for combat training of the communication troops of the Armed Forces of Ukraine: The Command of the Communications and Cyber Security Troops of the Armed Forces of Ukraine together with the Kruty Heroes Military Institute - Kyiv, August 2020. 165 p.

3. Compilation of uniform standards and training tasks for the communications troops of the Armed Forces of Ukraine: approved by order of the Commander of the Communications and Cybersecurity Troops of the Armed Forces of Ukraine No. 479 dated December 1, 2021.

4. Management of the daily activities of units: a textbook / M.A. Holova, S.I. Zaderienko, O.V. Ivashchenko and others; edited by M.A. Holova. - Lviv: NAA, 2018. 227 p.

5. Methodological recommendations on the specifics of organizing certain aspects of daily activities and military service in military units of the Land Forces of the Armed Forces of Ukraine. – Kyiv: Command of the Land Forces of the Armed Forces of Ukraine, 2016. – 268 p.

6. Instruction on the Organization of Preparation and Conduct of Inspections in the Armed Forces of Ukraine: approved by the Order of the General Staff of the Armed Forces of Ukraine of January 2, 2020, No. 1

7. Methodical manual on the main issues of organizing the daily activities of the troops (forces) / Tsytsyurskyi M.M., Kyrychenko S.O., Urazov O.Y. - K.: MoD, General Staff of the Armed Forces of Ukraine, 2007. 647 p.

Titles of topics and distribution of training time by type of training activities

No.	Type of Training Activities and Assessment	Total hours	Including		Title of the topic and learning questions
			classroom	Self-Study Self-Study	
1	2	3	4	5	6
Topic 1. Management of daily activities of units					
1	Group class	4	2	2	Lesson 1: The procedure for drawing up management documents. 1. Basics of the provisions of the guidelines for the organization of documentation of management activities. 2. Preparation and execution of official documents. 3. Use of official documents in the unit.
2	Group class	4	2	2	Lesson 2: Organization of personnel records in the unit. 1. The main provisions of the guiding documents on personnel accounting in the unit. 2. The procedure for accounting for personnel in the unit (company, platoon).

3	Group class	4	2	2	Lesson 3. Organization and management of military Material and Technical Support. 1. Fundamentals of organization and management of military Material and Technical Support. 2. Tasks and organization of company Material and Technical Support. 3. Organization of military property accounting in a unit. 4. Organization of military property write-offs.
4	Group class	4	2	2	Lesson 4. Content, main tasks of service of troops in a unit, subunit. 1. Content, tasks of the service of troops. 2. Planning the service of troops in a unit, subunit. 3. Summarizing and assessing the state of service of troops in a military unit (subunit).
5	Group class	4	2	2	Lesson 5. Levels of combat readiness of military units (subunits). 1. Degrees of combat and mobilization readiness of military units (subunits). 2. Degrees of combat readiness of military units (subunits) performing combat (special) tasks.
6	Group class	4	2	2	Lesson 6. Methods of developing and maintaining combat readiness planning documents in a unit. 1. Content and structure of documents of the unit's officials on combat readiness. 2. The procedure for updating and maintaining documents. Combat calculation of the unit and its content.
7	Group class	4	2	2	Lesson 7. Organization of inspections and assessments of combat and mobilization readiness of a military unit (subunit). 1: General provisions for the organization of inspections and assessments. 2. The procedure for assessing the combat and mobilization readiness of a military unit (subunit).
8	Group class	2	2	-	Lesson 8. Organization and conduct of restoring combat capability of military units (subunits). 1. Goals, objectives and stages of restoring combat capability. 2. Features of restoring the combat capability of military units (subunits) in a special period.
9	Group class	4	2	2	Lesson 9. Basics of organization and methods of combat training of units (subunits) 1. The main provisions of the guiding documents on the organization of combat training. Requirements for the combat training system of the unit (subunit). 2. Principles, forms and methods of military training.
10	Group class	4	2	2	Lesson 10. Organization of training of servicemen in the unit 1. Organization of individual training in the unit. 2. Organization of collective training in the unit. 3. Basic requirements for drawing up a weekly training schedule.
11	Group class	2	2	-	Lesson 11. Training facilities and equipment for combat training 1. General provisions. 2. Training facilities and equipment, their purpose and equipment. 3. Field training facilities and equipment, their purpose and equipment.

12	Group class	4	4	-	Lesson 12. Procedure for applying training standards in the organization of combat training. 1. General provisions for organizing training according to training standards. 2. Algorithm for preparing and conducting classes according to the standards. 3. Methods and organization of fire training classes.
13	Group class	4	2	2	Lesson 13. Basics of organization and methods of inspection of combat training of units (subunits) 1. Basic requirements of the guiding documents for conducting inspections and evaluations of servicemen and units. 2. The procedure for assessing individual and collective training of servicemen and units.
14	Practical class	10	10	-	Course work "Organization of tactical and formation (tactical and special) training with a unit of communication and cybersecurity troops"
Total for the topic		58	38	20	
Assessment activities		2	2	-	Credit (Pass/Fail)
Total for the educational component		60	40	20	

MP.04 THE WORK OF THE BATTALION HEADQUARTERS IN PLANNING AND CONDUCTING COMBAT OPERATIONS ACCORDING TO MDMP PROCEDURES

General aim of the component:

The aim of teaching the component of the educational programme “Work of the battalion headquarters in planning and conducting combat operations according to MDMP procedures’ is to provide theoretical foundations of management in military systems, in particular issues related to the methodology of researching management systems and processes, the organization of planning and operational management processes, assessment of the quality and optimization of management processes, application of new information technologies for troop and communications management; the basics of preparing and conducting operations according to NATO member country standards; the basics of the military decision-making process (MDMP); the basics of organizing the work of a battalion headquarters (division and equivalent) according to NATO member country standards.

Upon completion of the component, learners will acquire:

Knowledge of:

theoretical foundations of troop management, troop command and control bodies and points;
basics of preparing and conducting operations according to NATO member country standards;
basics of the military decision-making process (MDMP);

methods of work of commanders and staffs in organizing troop management according to NATO member country standards;
the procedure for developing documents on the organization of troop management (units, subunits) during combat operations (military operations);

methods of work of commanders and staffs in organizing the combat use of communications units and subunits.

Skills to:

use the general provisions of the military decision-making process (MDMP) in the preparation and conduct of military operations (combat operations);

use the acquired knowledge of the basics of preparing and conducting operations in accordance with the standards of NATO member states;

organization of interaction. Distribution of tasks and functions between structural units of the headquarters;

on the basis of guiding documents, develop and prepare combat documents that are developed and circulated in headquarters to organize the management of units in the preparation and conduct of military operations (combat operations);

using the decision on the combat use of the military unit (communication unit), to set a task for subordinates to fulfill it;

on the basis of guiding documents, using a map, to clarify the task, assess the situation and make a decision on the combat use of communication units;

perform assigned duties in accordance with MDMP procedures.

Organizational and methodological guidelines:

It is mandatory to systematically consolidate the knowledge and skills acquired during the study of the educational programme component during practical, group classes, and Self-Study.

The educational material intended for study during independent preparation is worked on in accordance with the specified time and is subject to current and final assessment together with the educational material that is worked on in classes under the guidance of a scientific and pedagogical worker.

During all forms of classes, active teaching methods, individual, group, and frontal methods of knowledge assessment are used. Current assessment is carried out in the form of oral questioning or written express assessment during classes, including electronic questionnaires in various forms at the discretion of the scientific and pedagogical staff member leading the classes.

The following resources are used for all types of classes: classrooms, computer labs, multimedia equipment, visual teaching aids, writing supplies, distance learning platforms, electronic manuals, and questionnaires, as decided by the scientific and pedagogical staff member leading the classes.

Material and Technical Support:

To support the educational process in this discipline, the department uses computers, multimedia equipment, interactive whiteboards, topographic maps, overlays, tablets for simulating the management of units during combat operations, and magnetic signs marking units (according to NATO standards).

Information and methodological support:

1. 1. Collection of unified standards and training tasks for the communications troops of the Armed Forces of Ukraine.
2. Guide to the organization of OTS at the communications centers of the Armed Forces of Ukraine.
3. Organization of military communications. Training manual.
4. NATO standard symbols (for military communications personnel). Visual training manual.
5. Doctrine of Communications and Information Systems.
6. Temporary Guidelines on the Organization of Communications and Information Systems of the Armed Forces of Ukraine.
7. Training manual of the Center for the Implementation of US Experience MDMP.
8. Guidelines for the work of a tactical staff officer. VP7-(01,02,04)11.01.
9. Information Bulletin "Study of the Combat Experience of the Armed Forces of Ukraine in the Russian-Ukrainian War".
10. Training standard Actions of the crew of CSV
11. VST 01.112.006-2021(01) "Military communications and information systems. NATO Communications Dictionary (AComP-01 (Edition 3) COMMUNICATIONS NATO GLOSSARY, MOD)" STANAG 5626.
12. VST 01.112.04 - 2017(01) "Military communications and information systems. NATO Dictionary of Communications and Information Systems" (AAP-31 Edition 3, IDT). STANAG 5064. NATO Handbook.

Titles of topics and distribution of training time by type of training activities

No.	Type of Training Activities and Assessment	Total hours	Including		Title of the topic and learning questions
			classroom	Self-Study Self-Study	
1	2	3	4	5	6
Topic 1: The work of the battalion (brigade) headquarters in planning and conducting combat operations according to MDMP procedures					
1	Lecture	3	2	1	Lesson 1: Structure and functions of the headquarters. 1. Structure and functions of the headquarters. 2. Distribution of responsibilities of staff officers.
2	Lecture	2	2	-	Lesson 2: Introduction to MDMP. 1. General provisions of the military decision-making process. 2. Stages of the military decision-making process.
3	Group class	6	4	2	Lesson 3: Military decision-making process, Stage 1: Receiving a combat mission. 1. Organization of the work of the headquarters. 2. Preparation of information and reference materials and other means necessary for planning the battle (actions). 3. Clarification of reference data and preparation of proposals. 4. Carrying out preliminary calculations. 5. Giving instructions by the commander to prepare for combat (combat operations), determining the measures that must be taken immediately to prepare for combat (actions). 6. Working out the previous order.
4	Group class	5	4	1	Lesson 4. Military decision-making process, Stage 2: Combat mission analysis. 1. Analysis of the task. 2. Realization of the received combat mission. 3. Evaluation of the enemy, the band (area) of future actions. 4. Determination of the specified, additional and main tasks. 5. Assessment of own troops and neighbors.

5	Group class	5	4	1	<p>Lesson 5. Military decision-making process, Stage 2: Combat mission analysis.</p> <ol style="list-style-type: none"> 1. Identification of constraints. 2. Identification of facts and assumptions. 3. Risk management. 4. Determining the list of important information and requirements for the protection of information (data). 5. Developing a preliminary plan for collecting, clarifying and verifying certain intelligence.
6	Group class	5	4	1	<p>Lesson 6. Military decision-making process, Stage 2: Combat mission analysis</p> <ol style="list-style-type: none"> 1. Clarification of combat (military action) timelines. 2. Establishment of a system for informing governmental and non-governmental organizations and the civilian population. 3. Formulation of existing issues. 4. Formulation of the combat mission. 5. Conducting a tactical meeting (briefing) to summarize the conclusions from the analysis of the mission and assessment of the situation and formulate the initial data for planning.
7	Group class	3	2	1	<p>Lesson 7. Military decision-making process, Stage 2: Combat mission analysis.</p> <ol style="list-style-type: none"> 1. Formulation of the commander's preliminary intent. 2. Development and communication of preliminary instructions for combat planning (actions). 3. Determination of criteria for evaluating options for action. 4. Issuing and communicating preliminary orders to subordinate troops.
8	Group class	5	4	1	<p>Lesson 8. Military Decision-Making Process, Stage 3: Developing Options.</p> <ol style="list-style-type: none"> 1. Development of options for action. 2. Conducting a comparative analysis of combat capabilities. 3. Developing options for how to accomplish the task. 4. Distribution of forces and means by elements of the order of battle. 5. Developing a battle plan (combat operations) and formulating a decision.
9	Group class	5	4	1	<p>Lesson 9. Military decision-making process, Stage 3: Developing options.</p> <ol style="list-style-type: none"> 1. Determining the order of organization of management. 2. Design of the developed options for action. 3. Conducting a tactical meeting (briefing) to consider options for action. <p>Selecting or amending the developed action options for further analysis.</p>
10	Practical class	2	2	-	<p>Lesson 10. Developing options for action.</p> <ol style="list-style-type: none"> 1. Calculation of forces and means of communication by elements of the combat order. 1. Distribution of forces and means of communication by elements of the combat order.

11	Group class	5	4	1	Lesson 11. Military Decision-Making Process, Stage 4: Analysis of Course of Action. 1. Analysis of Course of Action Options (simulation of course of action options, modeling). 2. Results of the simulation of course of action options. 3. Analysis (simulation) of course of action options. 4. Preparation of necessary information and reference materials (maps, diagrams, etc.) for analyzing (simulating) options for action.
12	Group class	3	2	1	Lesson 12. Military decision-making process, Stage 4: Analysis of the course of action. 1. Compilation of a list of available forces and assets. 2. Making a list of assumptions. 3. Making a list of critical (important) actions (events) and places (times) for making (clarifying) a decision.
13	Group class	3	2	1	Lesson 13. Military decision-making process, Stage 4: Analysis of the course of action. 1. Choosing a method of drawing options for action. 2. Choosing the order of accounting and displaying the results of the drawing of options. 3. Conducting the drawing of action options and evaluating the results. 1. Conducting a tactical meeting (briefing) on the results of the drawing of options.
14	Group class	3	2	1	Lesson 14. Military decision-making process, Stage 5: Comparing options. 1. Comparison of options. 2. Analysis of the advantages and disadvantages of the developed options. 3. Comparison of the developed options. 4. Conducting a tactical meeting (briefing) to determine the intent of the battle (combat operations).
15	Group class	3	2	1	Lesson 15. Military decision-making process, Stage 6: Approval of the course of action. 1. Approval of the course of action. 2. Developing the course of action.
Total for the topic		58	44	14	
Assessment activities		2	2	-	Credit (Pass/Fail)
Total for the educational component		60	46	14	

MS 01 D-01

General aim of the component::

The aim of the D-01 educational programme is to provide students with theoretical and practical knowledge about the structure, operating principles, and combat use of unmanned aerial system (UAVs), as well as methods for detecting and countering them. The program aims to provide students with a comprehensive understanding of the composition, structure, and basics of UAV operation, as well as to develop skills for their effective use in reconnaissance and monitoring tasks. Students will also learn about modern UASs, their design, control and navigation systems, and mission planning methods. Particular attention is paid to the practical training of UAV flight control skills and the process of integrating UASs into modern situational awareness systems. The practical educational programme component includes training in UAV control using simulators.

Upon completion of the component, learners will acquire:

Knowledge of:

construction and deployment of unmanned aerial system (UAS) in operational and technical reconnaissance units of the Armed Forces of Ukraine and other military formations;

UAS architecture and components;

types of unmanned aerial vehicles and their characteristics;

methods of countering unmanned aerial vehicles;

ways of using different types of unmanned aerial vehicles as air relays.

Skills to:

deploy unmanned aerial system, detect UAVs;

coordinate the actions of units to counter UAVs;

set up relay equipment on UAVs;

analyze the characteristics of various radio monitoring systems;

program Software Defined Radio (SDR) receivers using the Python programming language;

design and develop antenna devices for radio monitoring tasks;

organize communication between UAVs and ground control stations.

Organizational and methodological guidelines:

It is mandatory to systematically consolidate the knowledge and skills acquired during the study of the EDUCATIONAL PROGRAMME component during practical, group classes, and independent preparation.

The educational material intended for study during independent preparation is worked through in accordance with the specified time and is included in the current and final assessment together with the educational material that is worked through in classes under the guidance of a academic staff member.

During all forms of classes, active teaching methods, individual, group, and frontal methods of knowledge assessment are used. Current assessment is carried out in the form of oral questioning or written express assessment during classes, including electronic questionnaires in various forms at the discretion of the academic staff member leading the classes.

The following resources are used for all types of classes: classrooms, computer labs, multimedia equipment, visual teaching aids, writing supplies, distance learning platforms, electronic manuals, and questionnaires, as decided by the academic staff member leading the classes.

Material and Technical Support:

To support the educational process based on the educational programme component, the department uses computers, multimedia equipment, interactive whiteboards, models, and simulators.

Information and methodological support:

1. Panchenko I.V., Voskoloch O.I., Koltovskov D.G., Bernatsky A.P., Slotvinskaya L.I., Petrova D.V. Fundamentals of the theory and practice of using unmanned aerial system., MITIT, 2020.– 385
2. Radetsky V.G., Rusnak I.S., Danik Y.G. Unmanned aerial vehicles in modern armed conflict: Monograph. – Kyiv: NAOU, 2008. – 224 p.
3. Concept of equipping the Armed Forces of Ukraine with unmanned aerial system for the period until 2025, approved by Order of the Minister of Defense of Ukraine No. 01 dated April 16, 2010.
4. Theory and techniques of countering unmanned aerial attack vehicles / V. I. Tkachenko, Yu. G. Danik, G. A. Drobakha et al. – Kharkiv: Kharkiv Military University, 2019. – 368 p.
5. Ardupilot Official project website, [Electronic resource], contains information about the Ardupilot controller. Access mode: <http://ardupilot.com>.

Titles of topics and distribution of training time by type of training activities

No.	Type of Training Activities and Assessment	Total hours	Including		Title of the topic and learning questions
			classroom	Self-Study Self-Study	
1	2	3	4	5	6
Topic 1: Methods and means of radio monitoring and direction finding of UAV signals.					
1	Lecture	3	2	1	Lesson 1: Tasks of radio monitoring equipment. 1. Structure of the discipline, assessment tools, requirements for studying the discipline. 2. Basic concepts: radio frequency management, radio monitoring, radio direction finding. 3. Terms and their definitions. 4. Tasks of radio monitoring equipment. 5. Classification of radio monitoring equipment.
2	Group class	4	2		Lesson 2: Characteristics of families of radio monitoring devices, requirements for them. 1. Systems of radio monitoring and location of radiometers. 2. Stationary and mobile radio monitoring stations. 3. Portable radio monitoring equipment. 4. Wearable radio monitoring devices.
3	Group class	4	1	3	Lesson 3: Requirements for radio monitoring equipment 1. Requirements for the structure of stationary SRM. 2. Generalized structure of general-purpose MSRM. Self-Study Topic: Portable radio monitoring equipment 1.1. Stationary and mobile radio monitoring stations
4	Lecture	3	2	1	Lesson 4. Direction finding of radio sources. 1. Automatic radio compass. 2. Automatic radio direction finder with a small antenna base. 3. Doppler and quasi-Doppler direction finders. 4. Phase and correlation interferometers.

5	Group class	5	2	3	Lesson 5. Radio monitoring systems and location of radio sources. 1.Tasks of the system. 2. Requirements for the system of radio monitoring and location of radio sources. 3. Structure of the system of radio monitoring and location of radiation sources. 4.Organization of management in the radio monitoring system.
Total for the topic		21	10	8	
Topic 2. Methods and means of detecting UAV signals					
6	Lecture	4	2	2	Lesson 1: Topic. Software Defined Radio. Types, main characteristics 1. History 2. Types of SDR 3.How SDR works
7	Group class	6	2	4	Lesson 2. Modes of operation of Software Defined Radio. 1.Panoramic view of the air 2. Adjustable digital filters and sound effects 3.Possibility of measurements 4.Broadband processing
8	Practical lesson	6	2	4	Lesson 3: Practical work with SDR 1. Receiving data from the NOAA weather satellite
9	Lecture	2	2		Lesson 4. Topic. Modes of operation of Software Defined Radio. 1.Receiving and transmitting different types of modulation 2.Broadband recording and playback 3.Disadvantages of SDR
10	Group class	6	2	4	Lesson 5. Factors influencing the organization of UAV communication with the NSU 1. Influence of the Doppler effect 2. Influence of interference and refraction 3. Attenuation of radio waves in the atmosphere 4. Dependence of communication on the UAV's altitude
11	Practical class	6	2	4	Lesson 6. Practical work with SDR 1. Getting access to an SDR receiver using Python
12	Lecture	4	4		Lesson 7. Antenna and feeder devices of UAVs. 1.Pin antennas. 2.Slot antennas. 3.Spiral antennas.

13	Group class	6	2	4	Lesson 8. Antenna-feeder devices for UAVs. 1. Microstrip and fractal antennas. 2. Digital antenna arrays and directional antennas..
14	Practical class	6	2	4	Lesson 9. Selection, adjustment of equipment, calculation and development of antenna devices for practical training of radio monitoring tasks. 1.Calculation and development of antenna devices.
Total for the topic		46	18	26	
Topic 3. UAV command and telemetry radio lines					
16	Lecture	3	2	1	Lesson 1: Organization of data transmission from UAVs. 1.Radio communication lines with UAVs 2 Standardization of requirements for image transmission systems for UAVs 3 Requirements for video image formats and transmission channels 4.Data transmission standards
17	Group class	5	2	3	Lesson 2: Description and basic specifications of the CTS 1.Types of CTS modems 2.Modem operation modes 3.Authorization of modems in the network 4.Radio network parameters 5.Options for radio network topology
18	Practical class	4	2	2	Lesson 3: Description of the software 1. Purpose and structure of the software 2. System requirements 3. Installation and startup
19	Lecture	4	2	2	Lesson 4. Graphical interface of the software 1. The main controls 2. Functional elements of the software
20	Group class	6	2	4	Lesson 5. Graphical interface of the software. Modem management 1. Setting up a radio network 2. Management of the antenna complex 3. Setting up the topology 4. Ground modem parameters
21	Practical class	6	2	4	Lesson 6. Managing modems connected to the network 1.Setting up and designing communication connections

22	Lecture	2	2		Lesson 6. Modem firmware update and service settings 1. Update the software of the terrestrial modem 2. Updating the software of on-board modems
23	Group class	3	2	1	Lesson 7. Software of the UAV ground control station 1. Getting started. The main window 2. Toolbar and indicators 3. Toolbar
24	Practical class	8	4	4	Lesson 8. Ground control station software for UAVs 1. Flight route planning 2. Flight modes during planning 3. Types of payloads 4. Working with payloads
Total for the topic		44	19	20	
Тема 4. Бойове застосування БпЛА					
25	Lecture	4	2	2	Lesson 1. Composition and structure of UAS 1. Structure of modern UAS 2. Ground control equipment for UAVs 3. Operational configurations of remote piloting stations
26	Group class	5	2	3	Lesson 2. Composition and functional capabilities of the UAS. 1. Composition of the UAS 2. Payload of the Orlan-10 UAV 1.3. Modernization of the Orlan-10 UAV by the enemy
27	Practical class	4	2	4	Lesson 3: Launcher 1. Component parts 2. The principle of operation 3. Procedure for deployment and operation
28	Lecture	5	2	3	Lesson 4. Tactical and technical characteristics 1. Restrictions on UAV operation 1.1. Preparation for the flight
29	Group class	6	2	4	Lesson 5. Performing a flight 1. Responsibilities of the crew 2. Peculiarities of flight operations in non-standard conditions

30	Practical class	4		2	Lesson 6. Landing a UAV 1. Preparation for landing 2. Landing in different conditions 3. Evacuation from the landing site
31	Lecture	6	2	4	Lesson 7. Transmission of control signals between two ground systems 1.Classification of control signals
32	Group class	8	4	4	Lesson 8. Practical flight operations in a simulator program 1.Planning a flight mission. 2.Emergency situations in flight 3.Practical flight operations on the simulator program
33	Practical class	16	5	10	Lesson 9 Practical flight operations. 1.Practical flight operations in the simulator program (maneuvers)
34	Practical class	8	4	4	Lesson 10 Practical flight operations. 1.Practical flight operations in the simulator program (maneuvers)
Total for the topic		86	20	35	
Assessment activities		6	6	-	Exam
Total for the educational component		180	79	101	

MS 02 D-02

General aim of the component::

The objective of the D-02 educational programme component is to provide students with knowledge and practical skills regarding UAV positioning methods and their application in conditions of radio-electronic countermeasures. Students study in detail UAV positioning methods and navigation systems, such as inertial navigation systems and satellite global positioning systems. Particular attention is paid to methods of ensuring UAV positioning in conditions of active electronic warfare, including the use of alternative navigation methods and the integration of data from various sensors. The program also covers ways to improve the noise immunity of UAV control and telemetry channels. The practical EDUCATIONAL PROGRAMME component includes practicing UAV control on simulators and in real flights in field conditions.

Upon completion of the component, learners will acquire:

Knowledge of:

- principles of operation and characteristics of the main UAV sensors and sensors;
- methods and means of electronic warfare that can be used against UAVs;
- basic approaches to managing a group of UAVs and algorithms for their interaction;
- principles of operation and capabilities of different types of UAV payloads (optoelectronic systems, radar stations, radio reconnaissance equipment);
- legal aspects of UAV use, including international norms and restrictions on the use of airspace and radio frequency spectrum.

Skills to:

- configure and optimize UAV navigation systems;
- analyze and interpret data obtained in the course of a flight mission;
- control the UAV flight;
- detect and classify various types of electronic interference that affect the operation of UAVs.
- using both standard and alternative UAV navigation methods.

Organizational and methodological guidelines:

It is mandatory to systematically consolidate the knowledge and skills acquired during the study of the EDUCATIONAL PROGRAMME component during practical, group classes, and independent preparation.

The educational material intended for study during independent preparation is worked on in accordance with the specified time and is subject to current and final assessment together with the educational material that is worked on in classes under the guidance of a academic staff.

During all forms of classes, active teaching methods, individual, group, and frontal methods of knowledge control are used. Current control is carried out in the form of oral questioning or written express control during training sessions, including electronic questionnaires in various forms at the discretion of the academic and pedagogical staff leading the classes.

The following resources are used for all types of classes: classrooms, computer labs, multimedia equipment, visual teaching aids, writing supplies, distance learning platforms, electronic manuals, and questionnaires, as decided by the academic staff leading the classes.

Material and Technical Support:

To support the educational process in this discipline, the department uses computers, multimedia equipment, simulators, interactive whiteboards, and models.

Information and methodological support:

1. Panchenko I.V., Voskolovych O.I., Koltovskov D.G., Bernatskyi A.P., Slotvinska L.I., Petrova D.V. Fundamentals of the theory and practice of using unmanned aerial systems. MITIT, 2020.- 385
2. Radetskyi V., Rusnak I., Danik Y. Unmanned aerial sestems in modern armed struggle: Monograph. - K.: NAOU, 2008. - 224 p.
3. The Concept of Equipping the Armed Forces of Ukraine with Unmanned Aircraft Systems for the Period up to 2025, approved by the Order of the Minister of Defense of Ukraine of 16.04.2010, No. 01.

Titles of topics and distribution of training time by type of training activities

No.	Type of Training Activities and Assessment	Total hours	Including		Title of the topic and learning questions
			classroom	Self-Study Self-Study	
1	2	3	4	5	6
Topic 1. Fundamentals of unmanned aerial vehicle systems design.					
1	Lecture	4	2	2	<p>Lesson 1. Basic principles of applied UAV control theory</p> <ol style="list-style-type: none"> 1. The use of UAVs in modern military conflicts. 2. Combat use of unmanned aerial vehicles by the enemy, their purpose and main characteristics. 3. Basic principles, terms, and definitions. <p>Self-Study.</p> <p>Topic: Basic principles of applied UAV control theory</p> <ol style="list-style-type: none"> 1. Classification of UAVs by UAS. 2. Use of unmanned aerial vehicles by the enemy
2	Group class	4	2	4	<p>Lesson 2. Composition and purpose of aviation equipment.</p> <ol style="list-style-type: none"> 1. Architecture of UAV aviation equipment 2. Aviation equipment for special purposes <p>Independent work.</p> <p>Topic. Purpose of aviation equipment.</p> <ol style="list-style-type: none"> 1. Target load and additional equipment of UAVs
3.	Practical class	4	2	2	<p>Lesson 3. Management of a group of UAVs.</p> <ol style="list-style-type: none"> 1. Basic concepts and definitions. 2. Basic approaches to UAV group management. 3. UAV group management algorithms. 4. Combat use of UAV groups.
4	Lecture	3	2	1	<p>Lesson 4. Training of UAV operators</p> <ol style="list-style-type: none"> 1. Requirements to the means and programs of training UAV operators in unmanned aerial systems. 2. Features of UAV operator training in the leading countries of the world

5	Group class	2	2		Lesson 5. Analysis of the use of unmanned aerial systems in Azerbaijan and the Armenian conflict 1. Analysis of new principles of warfare through the use of unmanned aerial systems 2. Experience in combating enemy air defense systems (SAMs, RPAs)
6	Practical class	10	8	2	Lesson 6. Use of unmanned aerial vehicles with improvised explosive devices. 1: Tactics of using unmanned aerial vehicles with improvised explosive devices 2. Conversion of civilian multi-rotor unmanned aerial vehicles into strike drones. 3. Use of improvised explosive devices
7	Practical class	8	8		Lesson 7. Purpose, design and tactical and technical characteristics of Russian UAVs 1. Reconnaissance UAV "Orlan-10" 2. Tactics of use (actions) of enemy UAVs 3. Strike unmanned aerial systems 4. Effectiveness of radar reconnaissance by RTW units on "Orlan-10" UAVs
8	Practical class	8	8		Lesson 8. Countering enemy attack UAVs 1: Counteracting enemy barrage munitions and striking unmanned aerial vehicles 2. Countering enemy shelling of takeoff points of "micro" UAVs 3. Methods of countering UAVs
9	Practical class	20	20		Lesson 9. Practical flight training using a flight simulator program. 1. Software and controls of the flight simulator. 2. Practical flight operations on the simulator program
Total for the topic		63	54	11	
Topic 2. Automatic control systems for UAVs					
10	Lecture	4	2	4	Lesson 1. UAV flight control and navigation system. 1. Purpose of the flight controller 2. Software configuration of navigation system parameters Self-Study 1. Main functions of the UAV flight control and navigation system. 2. Systems of the UAV flight control and navigation system. 3. UAV flight control modes.

11	Group class	4	2	4	Lesson 2: Aviation equipment and UAV sensors. 1.Architecture and principles of accelerometer operation. 2.Principle of operation of the MEMS gyroscope. 3.Principle of operation of the barometer sensor. Independent work Topic. Inertial navigation system 1.MEMS Magnetometer
12	Group class	4	2	4	Lesson 3: UAV navigation equipment. 1.Digital compasses. 2.Satellite global positioning systems. Independent work Topic. Global positioning satellite systems 1.Modes of UAV flight control
13	Practical class	12	2	2	Lesson 4. Practical flight training using a flight simulator program. 1.Software and controls of the flight simulator. 2.Practical flight operations on the simulator program
Total for the topic		24	8	14	
Topic 3: Fundamentals of radio engineering and basic principles of organizing radio control and data transmission channels from UAVs to the ground control station					
14	Lecture	4	2	2	Lesson 1: Justification of the need to use telecommunication airborne platforms. 1: Problematic issues in the organization of communication in the operational and tactical command and control of the Armed Forces of Ukraine. 2: The use of telecommunication aerial platforms in the leading countries of the world. 3.Options for building a communication system in the TLO using UAVs. 4.Algorithm of work of the commander of a military unit (subdivision) of communication to counteract the enemy's aerial reconnaissance (using UAVs) in defense)
15	Group class	4	2	2	Lesson 2: Organization of data transmission from UAVs. 1.Radio communication lines with UAVs. 2. Standardization of requirements for image transmission system for UAVs. NATO standards. 3. Requirements for video image formats and transmission channels.
16	Group class	8	8		Lesson 3. Methods of data transmission from UAVs to ground control stations. 1. Radio frequency transmission 2. Laser (optical) transmission method

17	Practical class	5	2	3	Lesson 4. Influence of electronic warfare equipment on the operation of airborne repeaters. 1. Basic concepts of electronic warfare. 2. Options for building interference-proof radio networks with airborne repeaters. 3. Option for calculating the interference protection of radio lines with an airborne repeater.
18	Practical class	10	10		Lesson 5. Practical exercises (field trip) 1. Flight control of aircraft-type UAVs 2. Deployment and launch of a UAV transponder
Total for the topic		37	24	7	
Assessment activities		2	2	-	Credit (Pass/Fail)
Total for the educational component		120	88	32	