



CD 8.5.1 DISCIPLINE SYLLABUS FOR
UNIVERSITY STUDIES

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FACULTY OF MEDICINE NO. 1
STUDY PROGRAM 0912.1 MEDICINE
DEPARTMENT OF MILITARY AND DISASTER MEDICINE

APPROVED

at the meeting of the Commission for Quality Assurance and Evaluation of the Curriculum in
Medicine

Minutes No. 1 of 16.09.21
Chairman MD-PhD, Associate Professor

Serghei Suman

APPROVED

at the Council meeting of the Faculty of
Medicine No. 1

Minutes No. 1 of 21.09.21
Dean of Faculty of Medicine No.1,
MD-PhD, Associate Professor

Gheorghe Plăcintă

APPROVED

approved at the meeting of the Department of Military
Medicine and Disasters

Minutes No. 3 of 16.09.2021

Head of the department MD-PhD Associate Professor

Vasile Dumitraș

SYLLABUS

DISASTER MEDICINE

Integrated studies

Type of course: **Compulsory**

Curriculum elaborat de colectivul de autori:

Vasile Dumitraș, dr. of med., associate professor

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Nicon Cîrstea, university assistant

Chisinau, 2021



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I. INTRODUCTION

I. General presentation of the discipline: place and role of the discipline in specific competences of professional/specialty training program formation

Disaster Medicine is a branch of medicine, which deals with the problems related to injured medical care in disasters consequences liquidation process. It provides organization and implementation of a complex of treatment, evacuation, sanitary, hygienic and antiepidemic measures: supply of medical and technical equipment, directing the forces and means of medical service, medical staff training and recycling.

These made possible to develop a system of medical theoretical knowledge and practical skills in order to act appropriately in exceptional situations developed as a consequence of disasters.

II. Aim of the Curriculum in professional training

Studying the basis of medical assurance of the population in exceptional situations in peace time, aims to prepare students to face theoretical and practical problems necessary to a physician to organize emergency care for the injured in case of disasters in peace time.

III. Language (s) of the course: Romanian, Russian;

IV. Beneficiaries: students of the 3th year, faculty of Medicine No. 1.

II. MANAGEMENT OF THE DISCIPLINE

Code of discipline		S.05.O.045	
Name of the discipline		Disaster medicine	
Person(s) in charge of the discipline		Vasile Dumitraş, dr. of med., associate professor	
Year	III	Semester/Semesters	V
Total number of hours, including:			30
Lectures	10	Practical/laboratory hours	4
Seminars	10	Self-training	6
Form of assessment	E***	Number of credits	1

III. TRAINING AIMS WITHIN THE DISCIPLINE

At the end of the discipline study the student will be able to:

- *At knowledge and understanding level:*
 - the definition and classification of disasters and exceptional medical condition characteristics;
 - the missions and organizational structure of Disaster Medicine Republican Service;
 - the medical and tactical features of the earthquakes and catastrophic floods;



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- the characteristic of disaster harmful factors, the classification of sanitary loss;
- the healing and evacuation measures contents and organization in disasters medical sanitary consequences liquidation;
- health care institutions and emergency care units supply organization with medical, sanitary, household and special materials;
- the organization of staged medical work viewing reception, triage and medical help for the injured;
- monitoring documents fulfillment order.
- **At application level:**
 - to perform the medical triage of the injured in different disasters and organize the first aid, pre-medical aid and first medical aid.
- **At integration level:**
 - the Republic of Moldova Civil Protection missions and organizational structure;
 - population medical insurance planning in case of disasters;
 - organization of qualified and specialized medical help for the victims;
 - general and special measures to protect the population in peace time.

IV. PROVISIONAL TERMS AND CONDITIONS

Students must initially possess certain knowledge and practical skills in order to study Disaster Medicine, taking into consideration the perspective of working in the field of emergency medical care under exceptional situations, in the Republic of Moldova Civil Protection medical structures, providing medical care for the injured and the sick in case of medical evacuation liquidating the medical consequences of calamities in peace time. Students study basic medical subjects and the basis of the clinical subjects as a prerequisite before starting the subject.

Students of the III-th year require the following:

- skills confirmed in medical, biological and clinical sciences (surgery, therapy, etc.);
- digital skills (use of the internet, processing of documents, electronic tables and presentations, etc.);
- communication skills and team work;
- qualities - tolerance, compassion, autonomy.

V. THEMES AND ESTIMATE ALLOCATION OF HOURS

Lectures, practical hours/ laboratory hours/seminars and self-training

No. d/o	THEME	Number of hours			
		Lectures	Seminars	Practical hours	Self-training
1.	Definition of disasters and their classification. Medical and tactical characteristics of outbreaks resulted from disasters.	2	1	-	1
2.	Role, mission and structure of Civil Protection and the Emergency Medical Service in the Republic of Moldova.	2	2	-	1



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No. d/o	THEME	Number of hours			
		Lectures	Seminars	Practical hours	Self-training
3.	Population protection from disaster situations in peacetime.	2	2	-	1
4.	Characteristic of sanitation issues caused by disasters.	1	1	-	1
5.	Medical identification of disaster out breaks.	-	2	-	1
6.	Organizing particularities of treatment and evacuation measures in resolving medical and sanitary consequences of the disasters.	2	2	2	1
7.	Organization of medical supply to institutions and healthcare units in disaster situations.	1	-	2	-
		10	10	4	6
Total		30			

VI. PRACTICAL TOOLS PURCHASED AT THE END OF THE COURSE

Practical tools are:

- to carry out the medical triage of the injured in various catastrophes and to organize the first aid, the pre-medical aid and the first medical aid;
- to carry out the sanitary-epidemiological recognition in the foci of calamities.
- the missions and organizational structure of the civil protection of the R.M.;
- planning the medical insurance of the population in case of calamities;
- planning the sanitary-hygienic and anti-epidemic insurance of the population in exceptional situations;
- sanitary-epidemiological surveillance at the hospital level;
- general and special measures for the protection of the population in peacetime.

VII. OBJECTIVES AND CONTENT UNITS

Objectives	Thematic units
Subject (chapter) 1. Disaster medicine. National System of Crisis Management of Moldova (rescue - unblocking, medical assistance).	
<ul style="list-style-type: none"> • To define the basic concepts and criteria of Disaster Medicine. • To know the research methods in Disaster Medicine. • To apply the knowledge about measures to prevent human and material losses in the medical field. 	1. Fundamental concepts of disaster medicine.
	2. Research methods in disaster medicine.
	3. Personality concept in disaster medicine.
	4. General characteristics of disasters.



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Objectives	Thematic units
<ul style="list-style-type: none"> To know basic international classifications of disasters. To be able to analyze the causes of disasters. To apply the acquired knowledge for the analysis of the types of disasters (medical and tactical characteristics). To apply the acquired knowledge about the characteristics of injuries in disasters in the medical field. To know the national emergency response in crisis situations. 	5. International classification. OMS classification.
	6. Causes and injuring factors of Disasters.
	7. Medical and tactical characteristic of the disasters.
	8. Purpose, mission and structure of the Civil Protection of the Republic of Moldova.
	9. Purpose, missions and organization of the Emergency Healthcare.

Subject (chapter) 2. The interpersonal relationship between the doctor and the injured patient (injured, ill).

<ul style="list-style-type: none"> To define the role and status of the physician in the treatment and evacuation system. To know the main strategies for optimizing the medical aid. To demonstrate skills for analysis and self-analysis of behavior according to the medical situation. To apply the acquired knowledge to optimize medical aid compliance. To integrate optimal decisions to optimize medical aid and evacuation. 	1. Physicians' position depending on the medical condition.
	2. Strategies for optimizing medical aid.
	3. Optimal use of the algorithm for healthcare.
	4. Possibilities to optimize compliance in healthcare.
	5. Using maneuver with forces and means depending on changes in medical condition.

Subject (chapter) 3. Physician personality. Psychology of the personality of the injured patient.

<ul style="list-style-type: none"> To define concepts of personality, and professionalism of the physician in crisis situations (disaster situations). To analyze human behavior in disaster situations. To apply methods of psychological knowledge of people in risk situations, in professional activity. To integrate human behavior analysis skills, in various disaster situations, for a deeper understanding of the human personality. To define the main strategies in the relationship with injured patients. To know the main types of personality of patients in crisis situations. To demonstrate a relationship and behavior skills with different types of patients. To integrate knowledge about the techniques of providing medical aid to the injured and to apply it in medical practice. 	1. Structure and dynamics of the physician's personality.
	2. Additional behavior among physicians.
	3. Human psychology in crisis situations.
	4. Determination of human behavior in disaster situations.
	5. Patient relationship strategy in disaster situations.
	6. Case studies, and differentiated discussion.
	7. Applications for medical aid to injured people.
	8. Analysis of techniques for providing medical aid to the injured patients, according to the condition and the type of the injuries.



VIII. PROFESSIONAL (SPECIFIC (SC)) AND TRANSVERSAL (TC) COMPETENCES AND STUDY FINALITIES

✓ **SPECIFIC PROFESSIONAL COMPETENCIES (CS)**

- CP1. Identification and use of concepts, principles and basic practice in disaster medicine.
- CP5. Use of basic knowledge in medical and military health care disciplines to explain and interpret specific algorithms in the professional field of disaster medicine.
- CP6. Appropriate use and argumentation of concepts, principles and theories in the fields of military and disaster medicine in the context of sustainable development and the prevention of disaster situations.
- CP7. Definition of concepts, theories, methods and basic principles regarding collection, processing, analysis and interpretation of the necessary information for the professional activity.
- CP8. Carrying out the pedagogical and methodical-didactic activity within the technical and professional higher education institutions in the field of health.

✓ **Transversal Competencies (CT)**

- CT1. Application of rigorous and effective working rules. Manifestation of responsible attitude towards the scientific and didactic field, for optimal and creative validation of their own potential in crisis situations, following the principles and norms of professional ethics.

Study goals

- To be able to communicate at the individual and population level, send messages and perceive the response.
- To know, understand and use the specific terminology related to disaster medicine.
- To identify the risk factors and the health status of the population and find out the possibility of the removal or mitigation of their effects.
- To master the general norms of the population protection, and population education in order to protect themselves from the risk factors of a disaster.
- To ensure security during mitigation actions of the consequences of a disaster.
- To solve the situational problems and formulate the conclusions.
- To determine the diagnosis for assessment of the patient's status and provide prehospital medical assistance as a result of the studies regarding the character of the possible pathologies in the regional disaster outbreak, including the ophthalmological ones.

Note. The study goals (are deduced from the professional competencies and formative valences of the informational content of the discipline).

✓

IX. STUDENT'S SELF-TRAINING

Nr.	Expected results	Strategies of implementations	Evaluation criteria	Deadline
1.	Work with information sources:	To read carefully the lecture or the material in the textbook for the topic. To read the questions on the topic, which require subject reflection.	Ability to extract the essential information; interpretative skills; work volume	During the semester



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		<p>Get acquainted with the list of additional information sources on the topic.</p> <p>To select the source of additional information on the topic.</p> <p>To read the whole text and summarize the essential information.</p> <p>To formulate generalizations and conclusions regarding the importance of the topic / subject.</p>		
2.	Work with online materials	<p>Online self-evaluation, study of online materials from the departments website . and expression of own opinions through forum and chat.</p>	Number and duration of website use, self-evaluation results.	During the semester
3.	Work with books and ICT	<p>Systematic work in the library and media (audiovisual service)</p> <p>Exploring actual electronic sources on the subject.</p>	<p>1. Ability to form judgments, logical thinking, flexibility, etc.</p> <p>2. Ability to systematize the informational material.</p>	3.
4.	Report	<p>Analysis of relevant sources on the topic of the paper.</p> <p>Analysis, systematization and synthesis of information on the proposed topic.</p> <p>Composition of the report in accordance with the requirements in force and presenting the report to the department.</p>	<p>1. Ability to systematize and analyze the informational material obtained through individual work.</p> <p>2. Information consistency of the given topic.</p>	During the semester
5.	Case study analysis	<p>Choosing and description of a case study.</p> <p>Causal analysis of the issues raised in the case study.</p> <p>Prognosis of the investigated case.</p> <p>Deduction of the expected outcome of the case.</p>	<p>1. Data analysis, synthesis and generalization obtained through individual work.</p> <p>2. Form an algorithm of knowledge based on the obtained conclusions.</p>	During the semester

X. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-ASSESSMENT

XI. *Teaching and learning methods used*

When teaching the discipline of Disaster Medicine, different teaching methods and procedures are used, oriented towards the efficient acquisition and achievement of the objectives of the teaching



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process. Theoretical lessons use traditional methods (lesson-presentation, lesson-conversation, synthesis lesson). In the practical works are used forms of individual activity, in group. For the deeper acquisition of the material, thematic films, didactic materials are used: tables, schemes, microphotographs, transparent foils. In the extracurricular lessons and activities are used Information Technology Communication - PowerPoint presentations.

- **Observation** - Identifying the characteristic elements of some structures or phenomenon, describing these elements or phenomena.
- **Analysis** - Imaginary decomposition of the whole into component parts. Highlighting the essentials. Studying each element as a component part of the whole.
- **Scheme / figure analysis** - Selection of the necessary information. Recognition based on selected knowledge and information the structures indicated in the diagram, drawing. Analysis of the functions / role of recognized structures.
- **Modeling** - Identifying and selecting the necessary elements for modeling the phenomenon. Imagination (graphic, schematic) of the studied phenomenon. Realization of the respective phenomenon using the elaborated model. Formulation of conclusions, deduced from arguments or findings.

XII. Applied (specific to the discipline) teaching strategies / technologies

"Group interview", "Case study".

XIII. Methods of assessment (including the method of final mark calculation)

The **current** evaluation of the knowledge in the discipline is performed at seminars and practical sessions based on the advanced medical point in disasters, using situational problems. During the module at the end of each discipline the student is assessed with a minimum of three grades (two for control papers and one for individual work). The final evaluation in the differentiated colloquium takes place on the last day of the module, according to the university requirements.

The **final** grade in the assessment of knowledge includes: the average annual grade of three components (50%) and the grade in the exam (50%), using the ways of rounding the grades indicated in the table.

Method of mark rounding at different assessment stages

Intermediate marks scale (annual average, marks from the examination stages)	National Assessment System	ECTS Equivalent
1,00-3,00	2	F
3,01-4,99	4	FX
5,00	5	E
5,01-5,50	5,5	
5,51-6,0	6	



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6,01-6,50	6,5	D
6,51-7,00	7	
7,01-7,50	7,5	C
7,51-8,00	8	
8,01-8,50	8,5	B
8,51-9,00	9	
9,01-9,50	9,5	A
9,51-10,0	10	

The average annual mark and the marks of all stages of final examination (computer assisted, test, oral) - are expressed in numbers according to the mark scale (according to the table), and the final mark obtained is expressed in number with two decimals, which is transferred to student's record-book.

Absence on examination without good reason is recorded as "absent" and is equivalent to 0 (zero). The student has the right to have two re-examinations in the failed exam.

XIV. RECOMMENDED LITERATURE:

A. Compulsory :

1. V. Dumitraş, I. Dediu, N. Cîrstea, D. Grigorean, D. Cebotar „Sanitary management of disasters”. Compendium, including electronic form (Romanian language). Chisinau 2010.
2. V. Dumitraş, N. Cîrstea, A. Bulgac, D. Cebotar "Management of the prehospital phase of medical support in calamities and exceptional situations". Compendium, including electronic form (Romanian language). Chisinau, 2019.

B. Additional :

1. Law of the Republic of Moldova “On civil protection”, no. 271 of 09.11.1994.
2. M. Pîslă, S. Gheorghită, N. Caterniuc, A. Cotelea, E. Cioban, A. Guţu, R. Ostaficiuc, I. Pînzaru, I. Şalaru, I. Ursulean, S. Vasiliţă, M. Zavtoni „, Management of public health risks and emergencies”, Chisinau. 2013.
3. V. Dumitraş, N. Cîrstea, D. Cebotar “Basics of medical protection of chemical weapons”, Methodological elaboration, CEP “Medicine”, Chisinau, 2013.
4. The National Guide on Medical Triage in Incidents with Multiple Victims and Disasters,
5. approved by the order of the Ministry of Health of the Republic of Moldova no. 249 of April 15, 2010. Guide.
6. World Health Organization, Regional Office for Europe: Security Assessment health and crisis management capabilities in the Republic of Moldova. Chisinau, 2008. Guide.