



CD8.5.1 CURRICULUM DISCIPLINĂ

Redacția: 06

Data: 20.09.2017

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**FACULTY OF MEDICINE
STUDY PROGRAM 0912.1 MEDICINE
DEPARTMENT OF MILITARY AND DISASTER MEDICINE**

APPROVED

at the meeting of Quality Assurance and Curriculum Evaluation Committee the Faculty of Medicine

Minutes No. __ of _____

Chairman MD-PhD, Associate Professor

Suman Serghei _____

APPROVED

at the meeting of the Faculty Council of Medicine I

Minutes No. __ of _____

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

Plăcintă Gheorghe _____

APPROVED

at the meeting of the Department of Military Medicine
and Disasters

Minutes No. 2 of 17.10.2017

Head of the department MD-PhD, Associate Professor

Dumitraș Vasile _____

SYLLABUS

DISASTER MEDICINE

Integrated studies

Type of course: **Compulsory**

Chișinău, 2017



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I. INTRODUCTION

- **General presentation of the discipline: place and role of the discipline in specific competences of professional/speciality 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.

- **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.

- **Language (s) of the course:** Romanian and Russian;
- **Beneficiaries:** students of the 4th year, faculty of Medicine I, General Medicine.

II. DISCIPLINE ADMINISTRATION

Discipline code		S.08.O.076	
Discipline denomination		Disaster medicine	
Discipline responsible		MD-PhD, Associate Professor, colonel doctor (r)-V. Dumitraș	
Year	IV	Semester	VIII
Total number of hours, including:			60
Lectures	10	Practical hours	-
Seminars	25	Individual work	25
Clinical internship			-
Assesment form	CD	Number of credits	2



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III. DISCIPLINE LEARNING OBJECTIVES

At the end of the course, the student will be able to know:

✓ *At knowledge and understanding level:*

- the definition and classification of disasters and exceptional medical condition characteristics;
- the missions and organisational structure of Disaster Medicine Republican Service;
- the medical and tactical features of the earthquakes and catastrophic floods;
- 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. PRELIMINARY CONDITIONS AND EXIGENCIES

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 IV-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.



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V. THEMES AND DISTRIBUTION OF HOURS

Courses (lectures), seminars and individual work

No. d/o	Subject	Number of hours		
		lectures	seminars	Individual work
1.	Definition of disasters and their classification. Medical and tactical characteristics of outbreaks resulted from disasters.	2	4	2
2.	Role, mission and structure of Civil Protection and the Emergency Medical Service in the Republic of Moldova.	2	4	2
3.	Population protection from disaster situations in peacetime.	2	4	4
4.	Characteristic of sanitation issues caused by disasters.	2	3	2
5.	Medical identification of disaster outbreaks.		2	4
6.	Organizing particularities of treatment and evacuation measures in resolving medical and sanitary consequences of the disasters.	2	6	7
7.	Organization of medical supply to institutions and healthcare units in disaster situations.		2	4
		10	25	25
Total		60		



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VI. REFERENCE OBJECTIVES AND THEMATIC 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. • 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. 	1. Fundamental concepts of disaster medicine.
	2. Research methods in disaster medicine.
	3. Personality concept in disaster medicine.
	4. General characteristics of disasters.
	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 	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.



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Objectives	Thematic units
<p>various disaster situations, for a deeper understanding of the human personality.</p> <ul style="list-style-type: none">• 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.	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.

VII. PROFESSIONAL COMPETENCIES (SPECIFIC (SC) AND TRANSVERSAL (CT)) AND STUDY GOALS

✓ SPECIFIC PROFESSIONAL COMPETENCIES (CS)

- CP1. Identification and use of concepts, principles and basic practice in disaster medicine.
 - CP2. Identification of disaster types (natural, technogenic, social), the medical and tactical characteristics of the outbreaks and the structure of possible loss for establishing medical evacuation methods.
 - CP3. Appropriate use of standard criteria and methods of assessment in fundamental medical and biological disciplines for the recognition of triage and the selection of treatment and evacuation measures of the injured patient.
 - CP4. Application of the principles and methods of the fundamental and clinical medical-biological sciences for the elaboration of the patterns of certain problems related to the professional field.
 - 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.

✓ 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.
- CT2. Study of human psychology in crisis situations.
- CT3. Efficient and effective development of organized team activities.
- CT4. Identification of opportunities for continuous training and efficient use of learning resources and techniques for their personal self development.
- CT5. Ability to interpret results and form conclusions in crisis situations.



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- ✓ CT6. Ability to communicate at the individual and population level, send messages and perceive the response.

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).

VIII. STUDENT INDIVIDUAL WORK:

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. Get acquainted with the list of additional information sources on the topic. To select the source of additional information on the topic. To read the whole text and summarize the essential information. To formulate generalizations and conclusions regarding the importance of the topic / subject.	Ability to extract the essential information; interpretative skills; work volume	During the semester
2.	Work with online materials	Online self-evaluation, study of online materials from the departments website, and expression of own opinions through forum and chat.	Number and duration of website use, self-evaluation results.	During the semester
3.	Work with books and ICT	Systematic work in the library and media (audiovisual service) Exploring actual electronic sources	1. Ability to form judgments, logical thinking, flexibility, etc.	3.



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		on the subject.	2. Ability to systematize the informational material.	
4.	Report	Analysis of relevant sources on the topic of the paper. Analysis, systematization and synthesis of information on the proposed topic. Composition of the report in accordance with the requirements in force and presenting the report to the department.	1. Ability to systematize and analyze the informational material obtained through individual work. 2. Information consistency of the given topic.	During the semester
5.	Case study analysis	Choosing and description of a case study. Causal analysis of the issues raised in the case study. Prognosis of the investigated case. Deduction of the expected outcome of the case.	1. Data analysis, synthesis and generalization obtained through individual work. 2. Form an algorithm of knowledge based on the obtained conclusions.	During the semester

IX. METHODOLOGICAL SUGGESTIONS FOR TEACHING-LEARNING-EVALUATION

• *Teaching methods*

Different teaching method, oriented towards the good assimilation and the achievement of the objectives of the didactic process, are used for teaching the Discipline of Disaster Medicine. Traditional methods (lesson-exposure, lesson-conversation, lesson synthesis) are used during the theoretical hours. For practical work, teamwork is used as a form of individual activity. Thematic films, teaching materials, tables, diagrams, micrographs, translucent sheets are used for deeper learning of the material. Communication Technologies such as PowerPoint presentations are used during the class and extracurricular activities.

• *Recommended learning methods*

- Observation - Identification of characteristic elements of structures or phenomena, the description of these elements or phenomena.
- Analysis - Imaginary decomposition of the whole into component parts. Highlighting the essential elements. Studying each element as part of the whole.
- Scheme / figure analysis - Selection of required information. Recognition based on knowledge and information selected from the structures indicated in the diagram, drawing. Analysis of the functions / role of recognized structures.
- Modeling - Identify and select the elements needed to model the phenomenon. Imaging (graphically, schematically) the studied phenomenon. Realization of the phenomenon using the developed model. Formulate conclusions, which are deduced from arguments or findings.
- *Applied didactic strategies / technologies (specific to the subject)*



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"Group interviewing", "Multi - voting", "Case study", "Focus - group technique", etc.

▪ **Methods of evaluation (including an indication of how the final grade is calculated)**

The current assessment of the knowledge in the discipline is carried out at seminars and practical classes based on the medical aid during disaster, using situational problems. During the module at the end of each discipline, the student is assessed with a minimum of three marks (two for tests and one with individual work). The final assessment during the differential colloquy takes place on the last day of the module, according to the university requirements.

The final mark of the knowledge assessment includes: the three-part annual average score (50%) and the colloquium score (50%), using the methods of rounding up the marks indicated in the table.

How to round up the grades during evaluation steps

Intermediate note grid (annual average, grades from the exam stages)	National scoring system	Equivalent ECTS
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	
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	
8,51-8,00	9	B
9,01-9,50	9,5	
9,51-10,0	10	A

The average annual marks of all the final examination (computer assisted, test, verbal response) - are expressed in numbers according to the scoring scale (see table), and the final grade obtained is expressed in two decimal digits, which is passed to the student record card.

Failure to attend the examination without good reason is recorded as "absent" and is equivalent to a 0 (zero) rating. The student is allowed for 2 repeated attempts to pass the exam.



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X. RECOMMENDED BIBLIOGRAPHY

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- V. Dumitraș, I. Dediu, N. Cîrstea, D. Grigorean, D. Cebotar "The main organizations of the medical services have suffered in the catastrophe and through the situation. Compendium, including electronic form. Chisinau, 2016.

B. Additional:

1. The Law of the Republic of Moldova "On Civil Protection", no. 271 of 09.11.1994.
2. M. Pislă, S. Gheorghită, N. Caterrniuc, A. Cotelea, E. Cioban, A. Guțu, R. Ostaficiuc, I. Pîzaru, I. Șalaru, I. Ursulean, S. Vasiliță, M. Zavtoni " Management of Public Health Risks and Emergencies ", Chisinau, 2013.
3. Dumitraș, N. Cîrstea, D. Cebotar "The Basics of Chemical Weapon Medical Protection", Methodological elaboration, "Medicina" CEP, Chisinau, 2013.
4. The National Guidebook on Medical Triage in Multi-victim and Disaster-Related Incidents, Approved by Order of the Ministry of Health of the Republic of Moldova no.249 on 15 April 2010. Guide.
5. World Health Organization, Regional Office for Europe: Security Assessment Health and crisis management capacities in the Republic of Moldova. Chisinau, 2008. Guide.