

DISCIPLINE SHEET**ACADEMIC YEAR****2022-2023****1. DATA ABOUT THE STUDY PROGRAM**

1.1 Institution of higher education	UNIVERSITY OF MEDICINE AND PHARMACY OF CRAIOVA
1.2 Faculty	MEDICINE
1.3 Department	3
1.4 Study Domain	HEALTH
1.5 Study cycle	LICENCE
1.6 Study program/ Qualification	MEDICINE

2. DATA ABOUT THE DISCIPLINE

2.1 DISCIPLINE NAME	MEDICINE FOR EXTREME CONDITIONS		
2.2. Discipline code	MED 5211		
2.3 The holder of course activities	POPESCU DRAGOS, MACOVEI ADRIAN		
2.4 The holder of seminar activities	POPESCU DRAGOS, MACOVEI ADRIAN		
2.5. Academic degree	ASSOCIATE PROFESSOR, LECTURER		
2.6. Employment (base norm/associate)	BASE NORM		
2.7. Year of study	V	2.8. Semester	II
2.9. Course type (content)		2.10. Regime of discipline (compulsoriness)	
		CRD	

3. THE ESTIMATED TOTAL TIME (teaching hours per semester)

3.1 Number of hours per week	2	From which - course	1	seminary/laboratory	1
3.4 Total hours in curriculum	28	From which - course	14	seminary/laboratory	14
Time found distribution (hours)					
Study from manual, course support, bibliography, and notes					10
Additional documentation in the library, specialized electronic platforms and, on the field					7
Training seminars / labs, homework, reports, portfolios, and essays					4
Tutoring					-
Examinations					1
Other activities: counselling, student scientific programs					-
3.7 Total hours of individual study	22				
3.9 Total hours per semester	50				
3.10 Number of credits	2				

4. PREREQUISITES (where appropriate)

4.1 curriculum	-
4.2 competency	-

5. CONDITIONS (where appropriate)

5.1. of course deployment	-
5.2. of seminary/ lab deployment	-

6. SPECIFIC COMPETENCES ACCRUED

PROFESSIONAL COMPETENCES	C1 Identifying extreme conditions specific diseases and afflictions C2 Treatment of extreme conditions diseases and afflictions C3 Contraindications for extreme conditions activities. Extreme conditions risk management. Travel risk management. C4 Travele medicine and interactions with risk populations/zones C5 Scientific research using simulators and data collection specific to extreme conditions.
TRANSVERSAL COMPETENCES	CT1 Survival skills. Psychological training for quick decisions. CT3 Opening towards new. Technical limits understanding. Projections for future directions of human species.

7. DISCIPLINE OBJECTIVES (based on the grid of specific competences acquired)

7.1 The general objective of the discipline	Study of human organism limitations in extreme conditions and specific diseases of this conditions, as well as preventing and treatment modalities.
7.2 The specific objectives of the discipline	Basic notions, theoretical and practica regarding: <ul style="list-style-type: none"> • Human body adaptation in extreme conditions • Clinical particularities in extreme conditions • Emergency and basic medical assistance in extreme conditions specific diseases • Search and rescue, medical evacuation procedures

8. CONTENTS

8.1 Course (content units)	Nr. ore
1. Introduction. History. Atmosphere. Gas laws. Aircrafts. Atmospheric pressure: hypoxia and hypobarism.	2
2. Accelerations. Spatial Disorientation. Noise. Vibrations. Temperature. Other factors.	2
3. Hyperbaric medicine. Hyperbaric oxygen therapy	2
4. Space medicine.	2
5. Radiations.	2
6. Clinic of extreme environments. Elements of travel medicine.	2
7. Elements of toxicology and bioterrorism. Survival. Risk management issues.	2
BIBLIOGRAPHY Medicina condițiilor extreme, sub redacția Prof. univ. Dr. Marian Macri ISBN 978-606-524-053-7	
8.2 Practical work (topics / themes) – all practical topics may be covered online by slide presentation	
Altitude chamber. Reduced oxygen breathing device. Physiological response at altitude hypoxia. Physiological classification of atmosphere. Altitude acclimatization. Hypoxia and hyperventilation. Time of usefulness. Barotrauma.	2
Human centrifuge. Illusion types. Spatial disorientation demonstrator and trainer. Barany chair. Audiographic aspects. Pathology of increased and decreased temperature. Lightning pathology.	2
Types of diving. Recreational diving. Gas mixes. Drowning. Types of hyperbaric chambers. Decompression tables.	2
Human space exploration. Issues of space medicine. Occupational dosimetry in air and space. Adapting to microgravity. Adapting back to earth. Space hygiene. Telemedicine.	2
Altitude sickness. Motion sickness. Jet lag. Fear of flying. Deep venous thrombosis in long carrier flights. Decompression sickness. Disbaric osteonecrosis. Pulmonary barotrauma. Other clinical aspects. Medications in flight.	2
Medical contraindications for atmospheric flight, space flight, recreational diving and high altitude excursions. Dangerous life forms. Establishing vaccination indication. Endemic areas. Emerging threats in travel medicine. Biological agents. Chemical agents.	2
Expeditionary kit. First aid in extreme conditions. Special medical equipment. Types of evacuation. Search and rescue operations. Accidents: causes, prevention, investigation. Regulations. SAR and MEDEVAC.	2

9. CORROBORATING THE DISCIPLINE CONTENT WITH THE EXPECTATIONS OF EPISTEMIC COMMUNITY REPRESENTATIVES, PROFESSIONAL ASSOCIATIONS AND EMPLOYEE REPRESENTATIVES RELATING TO THIS PROGRAM

<ul style="list-style-type: none"> ▪ Acquired competencies facilitates access to specific training programs, with possibility of working in aeronautical, space and diving fields.

10. METHODOLOGICAL LANDMARKS

Types of activity	Teaching Techniques / learning materials and resources:
Course	Power point, knowledge feedback. In case of special situations (alert states, emergencies, other types of situations that limit the physical presence of students) the activity can be carried out online using computer platforms approved by the faculty / university. The online education process will be adapted appropriate to ensure the fulfillment of all the objectives provided in the discipline file.
Practical work	Videos, individual work
Individual study	-

11. RECOVERY PROGRAM

Absences recoveries	No. absences that can recover	Location of deployment	Period	In charge	Scheduling of topics
	3	UMF Craiova	Last Wednesday of each month	Assoc. prof. Dragoș Marian	Is based on practical work that must be recovered

			/online	POPESCU	
Schedule consultations / Students' Scientific Program	2 h	UMF Craiova	2-6 JAN/online 5-9 JUN/online	Assoc. prof. Dragoş Marian POPESCU	Is based on the requirements of the students
Program for students poorly trained	2 h	UMF Craiova	9-13 JAN/online 29 MAY - 2 JUN/online	Assoc. prof. Dragoş Marian POPESCU	Is based on the requirements of the students
12. ASSESMENT					
Activity	Types of assesment	Methos of evaluation		Percentage from final grade	
Course	Formative assesment through essays, projects and surveys during the semester Summative assesment during the exam	Multiple Choice Questions Answering System (MCQ)/MCQ with pre-printed forms and circled answers		75%	
Practical work	Formative assesment through Multiple Choice Questions Answering System (MCQ) or/and descriptive, projects, survey during the semester. Periodic assesment during the semester Summative assesment during the exam	Free-written form on pre-printed sheets		25%	
Periodic verification					
Attendance at the course					
Minimum performance standard	At least 50% for each component of the evaluation				
13. GUIDANCE AND COUNSELLING PROGRAMS					
Professional guidance and counselling programs (2 hours/monthly)					
Scheduling the hours		Location		In charge	
Last Wednesday of each month		UMF Craiova		Assoc. prof. Dragoş Marian POPESCU	

Endorsement date in the department: 28.09.2022

Department Director,
Prof. Cristin VERE

Coordinator of study program,
Prof. Marius Eugen CIUREA

Discipline holder,
Assoc. Prof. Dragoş Marian
POPESCU