



DISCIPLINE SHEET

1. Program Information

1.1.	UNIVERSITY: Carol Davila University of Medicine and Pharmacy
1.2.	FACULTY: Faculty of Medicine
1.3.	DEPARTMENT: Department 3 – Complementary Sciences
1.4.	COURSE: Hygiene and Medical Ecology
1.5.	FIELD OF STUDY: Health
1.6.	CYCLE OF STUDIES: Bachelor's Degree
1.7.	STUDY PROGRAM: Medicine

2. Course Information

2.1.	Course title in the curriculum: Hygiene and Medical Ecology				
2.2.	Course code: DDIII6S5M				
2.3.	Course type (DF/DS/DC): DS				
2.4.	Course status (DOB/DOP/DFA): DOB				
2.5.	Course lecturers: Prof. Maria Nițescu, PhD, Assoc. Prof. Mirela Nedelescu, PhD, Lecturer Simona Pârvu, PhD, Lecturer Anca Munteanu, PhD				
2.6.	Seminar lecturers: Prof. Maria Nițescu, PhD, Associate Prof. Mirela Nedelescu, PhD, Lecturer Simona Pârvu, PhD, Lecturer Anca Munteanu, PhD, Assistant Prof. Irina Mihaela Stoian, PhD				
2.7. Year of study:	III	2.8. Semester:	V/VI	2.9. Type of assessment (E/C):	E

3. Total Estimated Time (hours/semester of teaching activity and individual study/preparation)

I. University training (lectures, practical application, assessment)						
3.1. Hours per week:	4	of which:	3.2. Lecture:	2	3.3. Seminar/Laboratory:	2
3.4. Total hours in the curriculum:	56	of which:	3.5. Lecture:	28	3.6. Seminar/Laboratory:	28
Assessment (number of hours): 1.5 hours (90 minutes)						
II. Individual preparation/study						
Time allocation (hours):					ore	
Study of course materials, textbooks, books, and recommended basic bibliography:					28	
Additional research in the library, online documentation:					8	
Carrying out specific activities for project work, laboratory, assignments, papers:					4	
Preparation for presentations or tests, preparation for the final exam:					25	
Consultations:					2	
Other activities:					2	
3.7. Total hours of individual study:					69	
3.9. Total hours per semester (3.4 + 3.7):			125			
3.10. Number of credits:			5			

4. Prerequisites (where applicable)

4.1. Curriculum-related:	Fundamental knowledge of anatomy, physiology, biochemistry, microbiology.
4.2. Skills-related:	Digital competences

5. Requirements (where applicable)

5.1. For course delivery:	Multimedia equipment (video projector, laptop, audio devices, etc.)
5.2. For seminar/laboratory delivery:	Specific laboratory equipment and materials. Medical equipment for anthropometric measurements, bioelectrical impedance.

6. Learning Outcomes**

Knowledge	Skills	Responsibility and Autonomy
- To explain the fundamental concepts of hygiene and its role in health promotion. -To understand the role of environmental factors and nutrition in disease prevention. -To understand the negative effects of human exposure to environmental risk factors and the related prophylactic measures. -To understand the hygiene and sanitary regulations applicable to environmental factors, food, child and youth communities, and the hospital environment.	-To assess the impact of environmental factors on health. -To interpret relevant statistical data for disease prevention in relation to environmental factors. -To develop recommendations for improving living and working conditions. -To communicate effectively hygiene and health concepts to patients and the community. -To actively participate in health education campaigns and programs. - Become familiar with laboratory tests, identifying risks in relation to environmental factors and interpreting the results of laboratory tests; - Analyze environmental factor quality monitoring reports issued by relevant institutions and be able to assess the possible risks to public health in relation to these factors.	-Responsibility in promoting health and preventing disease. -Respect for legal and ethical standards in medical and sanitary activity. -Initiative in organizing and participating in public health projects.

7. Course Objectives (correlated with learning outcomes)

7.1. General Objective	• Acquiring specialized knowledge and skills in the field of hygiene, as well as the capacity to organize and implement interventions for improving public health.
7.2. Specific Objectives	• To describe environmental factors, housing conditions, and conditions in the workplace (hospital).

	• To explain the role of environmental factors in promoting health and preventing disease. • To assess the negative effects of human exposure to environmental risk factors and to understand ways of preventing and combating these adverse effects. • To understand the role of macro- and micronutrients in promoting health and to define the principles of healthy nutrition. • To characterize the nutritional value and know the daily recommended intake for the main food groups. • To explain the methods for assessing dietary intake and nutritional status at the individual, community, and institutional levels. • To identify dietary risk factors in relation to acute and chronic diseases. • To develop nutritional recommendations for healthy individuals by age group and to identify the main evidence-based dietary patterns recommended. • To understand the methodology for monitoring hygiene and sanitary conditions in child and youth communities in order to prevent adverse health effects. • To be familiar with the basic legislative framework applicable to the field of hygiene.
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8. Course Contents

8.1. Lectures	Teaching methods	Remarks
Lecture 1 – Introduction to food hygiene. Importance of nutrition in health promotion and prevention of chronic non-communicable diseases. Food groups. Nutritional quality of foods. Recommended intake.	- Lecture; - Interactive presentation according to the syllabus, using multimedia/video projector, PowerPoint presentations, educational films; - For all lectures, updated electronic materials in ppt format are available on the faculty website.	2 hours
Lecture 2 – Food safety. Microbiological and chemical contamination. The One Health concept. Health effects of contaminated food exposure.		2 hours
Lecture 3 – Energy and macronutrients intake. Role in health, nutritional quality assesment, daily recommended intake, food sources.		2 hours
Lecture 4 – Micronutrients: fat-soluble and water-soluble vitamins, minerals - Role in health, daily recommended intake and food sources.		2 hours
Lecture 5 – Nutrition Across the Lifespan. Specific physiological changes and nutritional needs. Nutrition of hospitalized patients. Malnutrition risk assesment.		2 hours
Lecture 6 – Dietary imbalances. Micronutrients deficiency as a global public health problem, protein-energy malnutrition, and diseases caused by excess of energy and macronutrients.		2 hours
Lecture 7 – Climate change and its impact on ecosystems and health. Air pollution. Chemical pollutants with major impact on health (Part I – irritant pollutants and asphyxiants) – effects on human health,		2 hours

reference standards.		
Lecture 8 – Air pollution. Chemical pollutants with major impact on health (Part II – toxic pollutants, carcinogenic pollutants, allergens), effects on health. Preventive measures.		2 hours
Lecture 9 – Habitat – environmental risk factors for human health. UV radiation, ionizing radiation – impact on human health. Preventive measures.		2 hours
Lecture 10 – Water pollution. Infectious and non-infectious diseases related to water. Preventive measures		2 hours
Lecture 11 – Hospital environmental hygiene (Part I). Hygiene requirements for hospitals. Reference standards.		2 hours
Lecture 12 – Hospital environmental hygiene (Part II). Hospital environmental factors contributing to healthcare-associated infections. Non-pharmacological measures for preventing healthcare-associated infections.		2 hours
Lecture 13 – Hygiene standards for institutions dedicated to children and youth.		2 hours
Lecture 14 – Growth laws. Monitoring the health status of children and youth in educational institutions.		2 hours
Recent bibliography: 1. Hygiene – ppt-courses for III-year students Medicine, UMFC 2. European Environment Agency (EEA). Europe's changing climate hazards — an index-based interactive EEA report, 2021, https://www.eea.europa.eu/publications/europes-changing-climate-hazards-1 3. WHO Global air quality guidelines: particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide, 2021, https://www.who.int/publications/i/item/9789240034228?ua=1 4. WHO guidelines for indoor air quality: selected pollutants, 2010, https://www.euro.who.int/_data/assets/pdf_file/0009/128169/e94535.pdf 5. European Centre for Disease Prevention and Control (ECDC). Food- and waterborne diseases and zoonoses, https://www.ecdc.europa.eu/en/food-and-waterborne-diseases-and-zoonoses 6. WHO. Guidelines for drinking-water quality: Fourth edition incorporating the first and second addenda, 2022, https://www.who.int/publications/i/item/9789240045064 7. WHO. Water, sanitation and hygiene, WASH Strategy 2018-2025, https://www.who.int/publications/i/item/WHO-CED-PHE-WSH-18.03 8. WHO, Evaluation of certain contaminants in food: eighty-third report of the Joint FAO/WHO Expert Committee on Food Additives, 2017, https://apps.who.int/iris/handle/10665/254893 9. European Food Safety Authority (EFSA). Nutrient profiling – scientific advice for EU Farm to Fork initiative, 2022, https://www.efsa.europa.eu/en/news/nutrient-profiling-scientific-advice-eu-farm-fork-initiative 10. European Food Safety Authority (EFSA). Data reports 2021: Chemical Contaminant and Additives occurrence (2011-2015), https://www.efsa.europa.eu/en/data-report/chemical-contaminant-and-additives-occurrence-2011-2015		
8.2. Laboratory / Practical Work	Teaching methods	Observații
LP 1 – Organoleptic quality of food. Spoilage. Chemical and microbiological contamination. Contamination pathways. Measures to prevent chemical and biological contamination.	- Practical demonstrations and specific laboratory experiments, according to the syllabus;	2 hours
LP 2 – Foods of animal origin (meat and meat products,	- Case studies, reports,	2 hours

fish, eggs, milk, and dairy products). Methods for assessing freshness and hygienic quality.	debates, use of databases, teamwork in micro-groups, individual study; - Reports/presentations are carried out in micro-groups.	
LP 3 – Foods of plant origin (vegetables and fruits, cereal derivatives, and dried legumes). Methods for assessing freshness and hygienic quality.		2 hours
LP 4 – Dietary fats. Confectionery products. Alcoholic and non-alcoholic beverages. Methods for assessing hygienic quality.		2 hours
LP 5 – Principles of healthy nutrition. Designing a diet for a healthy individual. Food technology methods. Evaluation of individual dietary intake. Demonstrative practical work.		2 hours
LP 6 – Evaluation of nutritional status. Anthropometric measurements. Demonstrative practical work..		2 hours
LP 7– Measurement of asphyxiant and irritant pollutants. Methodology for assessing the health impact of exposure to irritant pollutants. Practical demonstrations.		2 hours
LP 8 – Analysis of lead in the air. Assessment of the effects of lead on human health. Determination of soil contamination (biological, chemical, radiological) – effects on human health. Practical demonstrations.		2 hours
LP 9 – Thermal environment. Air vitiation. Exposure to ionizing and UV radiation.		2 hours
LP 10 – Measurement of bacterial contamination of water. Determination of chemical pollution of water. Water disinfection. Demonstrative practical work.		2 hours
LP 11– Hospital environmental cleaning and disinfection. Biocides. Sterilization of reusable medical devices. Methods for evaluating the effectiveness of cleaning and disinfection practices. Demonstrative practical work.		2 hours
LP 12 – Microbiological quality of air and surfaces in the hospital environment. Hand hygiene. Medical and community waste. Practical demonstrations.		2 hours
LP 13 – Methods for monitoring the health status of children and youth in educational institutions.		2 hours
LP 14 – Activity and rest schedule for children and adolescents. Dietary survey in a community.		2 hours

Recent bibliography:

1. Hygiene – ppt- practical work presentation for III-year students Medicine, UMFC
2. European Environment Agency (EEA). Europe's changing climate hazards — an index-based interactive EEA report, 2021, <https://www.eea.europa.eu/publications/europes-changing-climate-hazards-1>
3. WHO Global air quality guidelines: particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide, 2021, <https://www.who.int/publications/i/item/9789240034228?ua=1>
4. WHO guidelines for indoor air quality: selected pollutants, 2010, https://www.euro.who.int/_data/assets/pdf_file/0009/128169/e94535.pdf
5. European Centre for Disease Prevention and Control (ECDC). Food- and waterborne diseases and zoonoses, <https://www.ecdc.europa.eu/en/food-and-waterborne-diseases-and-zoonoses>

6. WHO. Guidelines for drinking-water quality: Fourth edition incorporating the first and second addenda, 2022, <https://www.who.int/publications/i/item/9789240045064>
7. WHO. Water, sanitation and hygiene, WASH Strategy 2018-2025, <https://www.who.int/publications/i/item/WHO-CED-PHE-WSH-18.03>
8. WHO, Evaluation of certain contaminants in food: eighty-third report of the Joint FAO/WHO Expert Committee on Food Additives, 2017, <https://apps.who.int/iris/handle/10665/254893>
9. European Food Safety Authority (EFSA). Nutrient profiling – scientific advice for EU Farm to Fork initiative, 2022, <https://www.efsa.europa.eu/en/news/nutrient-profiling-scientific-advice-eu-farm-fork-initiative>
10. European Food Safety Authority (EFSA). Data reports 2021: Chemical Contaminant and Additives occurrence (2011-2015), <https://www.efsa.europa.eu/en/data-report/chemical-contaminant-and-additives-occurrence-2011-2015>

9. Assessment

Type of activity	9.1. Evaluation criteria	9.2. Evaluation methods	9.3. Percentage of final grade
9.4. Lecture	- Adequate acquisition of the presented concepts and correct understanding of them	Written exam: - Presentation of two fundamental concepts (essay-type questions – 40%) - Solving 20 questions (10 single choice answer, 10 multiple choice answer– 20%)	60%
Lecture – resit session	- Adequate acquisition of the presented concepts and correct understanding of them	Written exam: - Presentation of two complex fundamental concepts (essay-type questions – 60%)	60%
9.5. Seminar/Laboratory	- Correct resolution of case studies, practical applications	Written exam: - One case study – 20% - Solving 10 questions (5 single choice answer, 5 multiple choice answer – 10%)	30%
Seminar/Laboratory – resit session	- Correct resolution of a complex case study, practical applications	Written exam: - One case study – 30%	30%
9.5.1. Individual/Group Project	- Preparation, in micro-groups, of a literature review on a topic selected from the list established by the course staff, in line with the syllabus - Drafting a summary of	- Oral presentation of the review (PowerPoint summary – max. 6 slides) - Evaluation of the review and summary	10%

	the review in accordance with the structure of scientific papers published at the Carol Davila UMF Congress		
9.6. Minimum performance standard			
• Correctly solving at least 50% of the multiple-choice questions in the written exam. Mandatory condition for passing. • Correctly solving at least 50% of the essay-type questions in the written exam. Mandatory condition for passing. • Correctly solving at least 50% of the case study. Mandatory condition for passing. • Meeting the minimum acceptance criteria for the review.			

Date of completion:

22.09.2025

**Signature of the course
tenured coordinator**

**Signature of the laboratory tenured
coordinator**

**Date of approval
the Department
Council:**

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