



## SUBJECT OUTLINE

### 1. Programme of study description

1.1.	THE "CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY
1.2.	THE FACULTY OF MEDICINE / THE CLINICAL DEPARTMENT 2
1.3.	DISCIPLINE: EPIDEMIOLOGY
1.4.	DOMAIN OF STUDY: Healthcare – regulated sector within the EU
1.5.	CYCLE OF STUDIES: BACHELOR'S DEGREE
1.6.	PROGRAMME OF STUDY: MEDICINE

### 2. Subject description

2.1.	Name of the subject/compulsory subject/elective subject within the discipline: Epidemiology						
2.2.	Location of the discipline:						
2.3.	Course tenured coordinator:						
2.4.	Practicals/clinical rotations tenured coordinator:						
2.5. Year of study	VI	2.6. Semester	XI,XI I	2.7. Type of assessment	Examination	2.8. Subject classification	DOD

### 3. Total estimated time (hours/semester of didactic activity) – teaching module

Number of hours per week	4	Out of which: course	2	Clinical rotation	2
Total number of hours from curriculum	24	Out of which: course	12	Clinical rotation	12
Distribution of allotted time					Hours
Study from textbooks, courses, bibliography, and student notes					
Additional library study, study on specialized online platforms and field study					
Preparing seminars / laboratories, assignments, reports, portfolios and essays					
Tutoring					
Examinations					
Other activities					
Total hours of individual study					
Number of credit points					2

### 4. Prerequisites (where applicable)

4.1. of curriculum	-
4.2. of competencies	-

### 5. Requirements (where applicable)

5.1. for delivering the course	-
5.2. for delivering the clinical rotation	-

### 6. Acquired specific competencies

Professional competencies (expressed through knowledge and skills)	Identifying the risk of disease in a population context, based on knowledge, understanding of the concept and levels of prevention, formulation, and application of the most effective measures of prevention based on the year of the analysis and interpretation of the factors revealed, followed by their evaluation and consecutive schedule. Approach the health condition at a community level,
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	<p>from the perspective of the bio-psycho-social complex based on the knowledge, analysis, and interpretation of the particularities of the determinants and favoring factors of the epidemiological process, provided by the surveillance system.</p> <p>Using the appropriate prevention and control measures as a form of epidemiological intervention, with effectiveness regulated by evaluation.</p>
<b>Transversal competencies (of role, of professional and personal development)</b>	<p>Identify the objectives to be achieved, the available resources, the conditions for completion, the stages of work, the working times, the deadlines for achieving references and related risks in field conditions.</p> <p>Identifying roles and responsibilities in a multidisciplinary team, applying effective relationships and work techniques within the team and to the patient or contacts.</p> <p>Efficient use of information sources and resources for communication and assisted professional training (Internet portals, specialized software applications, data bases, online courses, etc.) both in Romanian language and in a language of international circulation.</p>

#### **7. Subject learning objectives (based on the scale of acquired specific competencies)**

<b>7.1. General learning objective</b>	<p>The course programs and practical work offer five perspectives on the epidemiology of communicable diseases: basic concepts and methods; epidemiological surveillance and outbreak investigation; vaccines; occupational risk, universal precautions, decontamination, and sterilization; general observations on the epidemiology of important and representative infectious diseases.</p>
<b>7.2. Specific learning objectives</b>	<p>At the end of this module students should be able to:</p> <ol style="list-style-type: none"> <li>1) to prove the understanding of the factors determining the temporal, spatial, and social distribution of communicable diseases;</li> <li>2) demonstrate knowledge and knowledge of the basic principles necessary for the design of epidemiological studies, including transversal, cohort, case-control, and intervention studies.</li> <li>3) to prove the understanding of the methodology for planning and conducting the outbreak investigation.</li> <li>4) demonstrate that they have general notions about surveillance systems for communicable diseases.</li> <li>5) to apply universal precautions, decontamination, disinfection, and sterilization requirements;</li> <li>6) to show an understanding of planning, conducting, and evaluating vaccination activities.</li> </ol>

#### **8. Content**

<b>8.1. Course</b>	<b>Teaching methods</b>	<b>Observations</b>
<p>Course 1 <b>Epidemiology – Definitions. Basic methods and processes (2 hours)</b></p> <p>1. Introduction, definitions, history,</p>	<p>Presentation of the course material in an interactive manner, with presentation in Power Point (facilitated by the endowment of the rooms with laptop and</p>	



purposes, and fields of application 2. Epidemiological process (infection, transmission, receptivity, enabling factors)	video projector).	
<b>Course 2 Prophylaxis (2 hours)</b> 1. Addressing levels of prophylaxis when controlling communicable diseases 2. Immunoprophylaxis (definitions, types, principles of active/passive immunoprophylaxis biological products, indications and limits, principles of administration).	Presentation of the course material in an interactive manner, with presentation in Power Point (facilitated by the endowment of the rooms with laptop and video projector).	
<b>Course 3 Epidemiological surveillance. (2 hours)</b> 1. Definition, role in public health policies, legislation 2. Principles and stages for surveillance of communicable diseases 3. Attributes and assessment of surveillance systems		
<b>Course 4 Forms of manifestation of the epidemiological process; Indicators (2 hours)</b> 1. Description of forms of sporadic, endemic, epidemic, pandemic manifestation of the <b>epidemiological process</b> ; examples 2. Indicators for measuring the occurrence of communicable diseases and impact indicators (rates, reports, proportions, assignable risk, attributable fraction)		
<b>Course 5 Outbreak investigation (2 hours)</b> 1. Definition, stages/steps to investigate epidemics 2. Designing analytical studies for investigating epidemics 3. Formulating the results		
<b>Course 6 Surveillance of special public health issues (2 hours)</b> 1. Surveillance of healthcare associated infections – importance of the problem, definitions, legislation, types of surveillance 2. Antibioresistance and prudent use		



of antibiotics- the importance of the problem, definitions, surveillance		
<b>8.2. Clinical rotation</b>	<b>Teaching methods</b>	<b>Observations</b>
<b>CR 1 Control of communicable diseases (2 hours)</b> – measures applied to the determinants of the epidemiological process. Exercise and examples	Training students, divided into several groups, in carrying out exercises related to the surveillance and interpretation of epidemiological indicators, tables, graphs, the vaccination program, accidental exposure to blood and biological fluids	
<b>CR 2 Passive and active immunoprophylaxis (2 hours)</b> <b>1. Passive immunoprophylaxis</b> Wound management for tetanus prevention <b>2. Active immunoprophylaxis</b> 1.Vaccination schedule 2.Vaccines used in the National Vaccination Calendar		
<b>3Active immunoprophylaxis (2 hours)</b> 1.Vaccines recommended for groups at risk 2.Optional vaccines		
<b>4Outbreak investigation (2 hours)</b> 1.Epidemiological investigation exercises — use of indicators, choice of the type of study necessary for the investigation 2 Surveillance exercises Using graphs, tables, charts in presenting results		
<b>5Protection of medical staff. Standard precautions. (2 hours)</b> <u>Standard precautions</u> 1.Personal protective equipment 2.Safe injection practices 3.Cough etiquette 4. Safe handling of medical equipment/devices (disinfection, sterilization).		
<b>6Accident by exposure to biological products (2 hours)</b> Post exposure management <u>Hand Hygiene</u> 1.Importance 2.Recommended techniques		



3. Recommendations		
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#### Bibliography for course and clinical rotation

1. Pițigoi D, et al, editors Epidemiology. Course and practical work for students and resident physicians. Ed. Revised and added. Ed. Univ. Carol Davila, Bucharest, 2022
2. David L. Heymann. Disease control transmittedibile, Ed. 20-a Bucharest, Publishing House: Jones & Bartlett Publishers, 2012
3. Gordis L. Epidemiology. 5th Edition: Saunders Elsevier, 2014
4. Walter Orenstein & Paul A. Offit & Kathryn M. Edwards & Stanley A. Plotkin, Plotkin's Vaccines, 7th Edition, 2017
5. CDC. Epidemiology and Prevention of Vaccine-Preventable Diseases, 14th Edition "The Pink Book" <https://www.cdc.gov/vaccines/pubs/pinkbook/chapters.html>
6. Principles of Epidemiology, second edition, Public Health Service Centers for Diseases Control and Prevention (CDC) Atlanta, Georgia, USA, 2007
7. Cepoi V, Azoicai D (under red). *Guide to the management of healthcare-associated infections*, second edition. Ed. Global Management Arte, Bucharest, 2017.
8. National Center for Surveillance and Control of Communicable Diseases (CNSCBT). *Supervisory methodologies*. Available online: <http://www.cnscbt.ro/index.php/metodologii>

#### 9. Corroboration of the subject content with the expectations of the representatives of the epistemic community, professional associations, and major employers in the field of the programme of study

This module was addressed to medical students, that gives them notions of epidemiology and account of the role of infectious diseases necessary at the level of the practitioner's office. The data presented opens the population's perspective on some health conditions that they may encounter in medical activity, suggesting them also another dimension of personal and professional development. By its nature, epidemiology stimulates their abilities to work in a team, to communicate with the person in various situations, to recover and respect the diversity and multiculturalism.

#### 10. Assessment

Type of activity	Assessment criteria	Assessment methods	Assessment weighting within the final grade
<b>Course</b>	The correct answers to questions from the course material.	Written exam grid test with 20 questions out of which 10 simple complement and 10 multiple complement from the course material.	50%
<b>Clinical rotation</b>	The correct answers to questions from the seminar/laboratory activity	Written exam grid test with 10 multiple complement questions from the subject of practical work.	50%
<b>Minimum performance standard</b>			

Date of filing

Signature of the course tenured coordinator

Signature of the seminar tenured coordinator



**The "Carol Davila" University of Medicine and Pharmacy Bucharest  
The Quality Assurance Commission**

**Date of approval in the  
Council of the Department:**

**Signature of the Head of the  
Department**