

<b>Name of the course</b>	<b>Epidemiology with Clinical Rotation</b>			<b>Code</b>	MSE605
<b>Type of study program:</b>	Integrated university study program, Medicine			<b>Year of study:</b>	6
<b>Credits (ECTS):</b>	3.0	<b>Semester:</b>	XI	<b>Number of hours per semester (l+s+e)</b>	60 (20+20+20)
<b>Status of the course:</b>	obligatory	<b>Preconditions:</b>	According to the Rulebook	<b>Comparative conditions:</b>	/
<b>Access to course:</b>	Sixth year students			<b>Hours of instructions:</b>	According to schedule
<b>Course teacher:</b>	Ivan Vasilj, PhD, Full Professor				
<b>Consultations:</b>	As agreed with students				
<b>E-mail address and phone number:</b>	ivan.vasilj@fzs.sum.ba				
<b>Associate teachers</b>	Krunoslav Capak, PhD, Associate Professor; Kristina Bevanda, MD				
<b>Consultations:</b>	As agreed with students				
<b>E-mail address and phone number:</b>					
<b>The aims of the course:</b>	The aims of the course are: Understanding the mechanisms of the origin, spread and distribution of diseases in the population, and ways to suppress the spread of epidemics of infectious diseases, as well as ways to fight against chronic non-infectious diseases				
<b>Learning outcomes (general and specific competences):</b>	<p>After passing the course the student:</p> <ul style="list-style-type: none"> <li>• Plans and defines epidemiological research, analyzes epidemiological data;</li> <li>• Evaluates the application of epidemiological research methods;</li> <li>• Solves problem tasks with basic measures of frequency (incidence, prevalence, mortality and lethality);</li> <li>• Analyzes the current situation of the epidemic in Bosnia and Herzegovina and the surrounding area;</li> <li>• Implements current epidemiological measures to control and prevent infectious and non-infectious diseases;</li> <li>• Explains models of surveillance of infectious and mass non-infectious diseases, and discusses the importance of immunization.</li> </ul>				
<b>Course content (Syllabus):</b>	<p>(L1) Basic definitions, disease models and division of epidemiology.  (L2) Epidemiological methods: natural course of infectious and non-infectious diseases, epidemiological variables, epidemiological research, epidemiological measurements.  (L3) Causes of disease-risk factors: physical, chemical, biotic and psychosocial.  (L4) The role of persons and causative agents.  (L5) Vogralik's chain.  (L6) Prevention (primary, secondary and tertiary) of infectious and chronic non-infectious diseases.  (L7) Epidemiology of droplet, intestinal, blood-borne diseases. Anthroozoonosis.  (L8) Vaccination.  (L9) Military epidemiology.  (L10) Communications in epidemiology.  (L11) Hospital infections. Naturally-focal infections.  (L12) Surveillance of infectious diseases. Chronic non-infectious diseases.  (L13) Threatening infectious diseases.  (L14) Prevalence of tuberculosis.  (S1) Comparison of measurements from three or more independent samples, categorical data analysis, numerical data association analysis  (S2) Health statistics, vital statistics, demographic statistics  (S3) Analytical, experimental and meta-analysis  (S4) Types of epidemiological measures, frequencies and associations.  (S5) Epidemiology of mass non-infectious diseases, measures of incidence, associations and potential impact.  (S6) Blood-borne diseases, techniques of epidemiological surveillance of hospital infections.  (S7) Planning mandatory vaccinations, optional vaccines, vaccinations under certain epidemiological circumstances, and the importance of vaccines.  (S8) DDD in infectious disease surveillance</p>				

	(S9) Intestinal infectious diseases, anthroozoonosis, preventable infectious diseases. (S10) Epidemiology of infectious diseases transmitted by insects (E1) Descriptive epidemiology (E2) Calculation of incidence, prevalence, mortality rate. (E3) Calculation of sensitivity, specificity, positive and negative predictive value of the diagnostic test. Epidemiological indicators of health status (E4) Law on the Protection of the Population from Infectious Diseases. (E5) Familiarization with the work of the epidemiological service.			
<b>Format of instruction</b> (mark in bold)	<b>Lectures</b>	<b>Exercises</b>	<b>Seminars</b>	Independent assignments
	<b>Consultations</b>	Work with mentor	Field work	Other
<b>Student responsibilities</b>	Students are obliged to regularly attend and actively participate in all forms of classes. In the case of being prevented from attending classes, students should have proof of a justified reason			
<b>Screening student work</b> (mark in bold)	<b>Class attendance</b>	<b>Class participations</b>	Seminar essay	<b>Practical training</b>
	<b>Oral exam</b>	<b>Written exam</b>	Continuous assessment	Essay
<b>Detailed evaluation</b> within a <i>European system of points</i>				
<b>STUDENTS RESPONSIBILITIES</b>	<b>HOURS</b>	<b>PROPORTIONS OF ECTS CREDITS</b>	<b>PROPORTIONS OF GRADE</b>	
Attending classes	60	2.0	10%	
Written exam	15	0.5	80%	
Oral exam	15	0.5	10%	
Total	90	3	100%	
<u>Exam (maximum 32 points)</u> The final exam tests key, specific competencies. The final test has 32 questions. A student who correctly solves less than 18 questions (55%) of the final test does not receive a grade higher than F. <u>Final grade</u> is the sum of ECTS grades achieved during classes and on the final exam, and is determined based on the absolute distribution according to the Rulebook on studying at the University of Mostar: 0 – 54% insufficient (1) 55 – 66% sufficient (2) 67 – 78% good (3) 79 – 90% very good (4) 91 – 100% excellent (5)				
<b>Required literature:</b>	Gordis L. epidemiology 3 <sup>rd</sup> ed WB SANDESS Company PHILADELPHIA,2004.; Gamulin S. Clinical research clinical epidemiology. Medicinska naklada 2012.; David L Heyman,MD Editor. Control of communicable diseases. American Public Health Association 2022.			
<b>Optional literature:</b>				
<b>Additional information about the course</b>				

Annexes: calendar classes

<b>The number of teaching units</b>	<b>TOPICS AND LITERATURE</b>
<b>I.</b>	Title: Introduction to epidemiology
	Short description: History of epidemiology, definition of epidemiology, exercises
	Literature: Gordis L. epidemiology 3 <sup>rd</sup> ed WB SANDESS Company PHILADELPHIA,2004.
<b>II.</b>	Title: Epidemiological methods, epidemiological variables, epidemiological research
	Short description: Natural course of infectious and non-infectious diseases, epidemiological variables, epidemiological research
	Literature: Gamulin S. Clinical research clinical epidemiology. Medicinska naklada 2012.
<b>III.</b>	Title: Causes of diseases and risk factors
	Short description: Physical, chemical, bio- and psychosocial risk factors

	Literature: Gordis L. epidemiology 3 <sup>rd</sup> ed WB SANDESS Company PHILADELPHIA,2004.
<b>IV.</b>	Title: Selected chapters from non-infectious and infectious mass diseases
	Short description: Selected chapters from non-infectious and infectious mass diseases
	Literature: Gamulin S. Clinical research clinical epidemiology. Medicinska naklada 2012.
<b>V.</b>	Title: Prevention of disease
	Short description: Prevention (primary, secondary and tertiary) of infectious and chronic non-infectious diseases.
	Literature: David L Heyman,MD Editor. Control of communicable diseases. American Public Health Association 2022.
<b>VI.</b>	Title: Vaccination
	Short description: Mandatory and non-mandatory vaccination
	Literature: David L Heyman,MD Editor. Control of communicable diseases. American Public Health Association 2022.
<b>VII.</b>	Title: Vaccination which prevents diseases
	Short description: Vaccination which prevents diseases, whether non-infectious or infectious
	Literature: David L Heyman,MD Editor. Control of communicable diseases. American Public Health Association 2022.
<b>VIII.</b>	Title: Blood-borne diseases
	Short description: Epidemiology of droplet, intestinal, blood-borne diseases. Anthroozoonosis. Zoonosis.
	Literature: Gordis L. epidemiology 3 <sup>rd</sup> ed WB SANDESS Company PHILADELPHIA,2004.
<b>IX.</b>	Title: Quarantine disease and droplet infections
	Short description: Quarantine disease and droplet infections
	Literature: Gamulin S. Clinical research clinical epidemiology. Medicinska naklada 2012.
<b>X.</b>	Title: Water-borne diseases
	Short description: Infectious and non-infectious diseases in water
	Literature: Gordis L. epidemiology 3 <sup>rd</sup> ed WB SANDESS Company PHILADELPHIA,2004.
<b>XI.</b>	Title: Surveillance
	Short description: Surveillance of infectious and chronic non-infectious diseases, laboratory support and confirmation, monitoring
	Literature: Gordis L. epidemiology 3 <sup>rd</sup> ed WB SANDESS Company PHILADELPHIA,2004.
<b>XII.</b>	Title: Clinical epidemiology, military epidemiology and molecular epidemiology
	Short description: Clinical epidemiology, military epidemiology and molecular epidemiology
	Literature: Gamulin S. Clinical research clinical epidemiology. Medicinska naklada 2012.
<b>XIII.</b>	Title: VCTC centers
	Short description: Work of vaccination centers and epidemiological services, public health laboratory
	Literature: Gamulin S. Clinical research clinical epidemiology. Medicinska naklada 2012.