PREVENTIVE MEDICINE	
GENERAL INFORMATION	
Course teacher	Asst. Prof. Ljiljana Trtica Majnarić
Associates	Asst. Prof. Saška Marczi, MEdu Biol et Chem, PhD
	Asst. Prof. Ivan Miškulin, MEE, PhD
Study programme	University Graduate Study of Medical Laboratory Diagnostics
Course status	mandatory
Year of study, semester	2nd year, 3rd semester
ECTS credits	**4**
Form of teaching (number of classes)	Lectures: 25; seminars: 15; Lab. exercises: 5
Expected number of students attending the course	20
COURSE DESCRIPTION	
Course objectives	

Acquiring basic knowledge and terms and understanding the content, role and purpose of preventive medicine in the health protection system, as well as the significance of laboratory diagnostics and methodology in specific individual areas of preventive medicine.

Course entry requirements and competencies needed for the course

Completed courses at the Undergraduate Study Programme of Medical Laboratory Diagnostics or equivalent bachelor's degree (baccalaureate)

Learning outcomes at study programme level

1.2, 2.1, 2.4, 2.6, 3.1

Expected learning outcomes at course level

After attending lectures, completing seminars, independent study and passing the exam, students will be able to:

1. know the definition of preventive medicine and distinguish between the role of preventive procedures in infectious and chronic non-infectious diseases.
2. understand the basic stages of preventive actions in natural course of chronic diseases: primary, secondary and tertiary.
3. define conditions for a screening test, differentiate between a screening test and a screening programme.
4. understand the role of evidence-based medicine (EBM) in the process of making a medical decision.
5. being able to define and understand the significance of biomarkers in diagnostic procedures.
6. explain the influence of guidelines and scoring system in the process of making a medical decision.
7. understand the purpose and role of preventive and diagnostic procedures in early detection of specific diseases and their treatment.

Detailed course content in accordance with class schedule

Lectures: Introduction: preventive medicine - explanation of terms, historical development, modern trends. Chronic non-infectious diseases and epidemiological situation in modern societies. EBM, epidemiological observation studies, randomized clinical studies, meta-analyses, basic statistical measures in epidemiological research. Biomarkers - significance, biochemical, non-biochemical, the issue of identifying new biomarkers - example of a cardiovascular disease. Screening - primary, secondary and tertiary prevention; screening test as a preventive measure, criteria required for a test to become a screening test, difference: screening test - screening programme, sensitivity and specificity of a screening test, examples of screening tests and screening

programmes. Guidelines, scoring systems, prediction models, systems supporting the process of making medical decisions; computer data modelling. Problem of early detection of chronic non-infectious diseases - examples: Alzheimer's dementia. SCORE system for cardiovascular diseases. Role and activities of county institutes of public health in monitoring and organising implementation of preventive activities. The most significant public health issues in the Republic of Croatia and Osijek-Baranja County and measures implemented for their prevention.

Seminars: Medical sources of information. Search and use of bibliographic and citation databases. Nutrition and health. Eating disorders. Physical activity and health. Analysis of works from the literature. Post-Covid syndrome.

Laboratory exercises: Molecular diagnostics of hereditary diseases.

Forms of teaching
Lectures; Seminars; Laboratory exercises; Independent assignments.

Students' responsibilities
Attendance is obligatory throughout all course forms and the student has to attend all the exams. Student absence of up to 30% is considered acceptable in each teaching form. Practical work and seminars that were not completed have to be taken in the form of colloquiums. The student has to attend all forms of exams required.

Monitoring students' work *(Connecting learning outcomes, teaching methods and evaluation)*

Teaching activity	ECTS	Learning outcome	Student activity	Evaluation methods	Grade points	
					Min.	Max.
Attending classes	0.25	1-7	Attendance	Attendance records	1	5
					8	20
Seminar paper	0.75		Seminar paper	Writing and presenting seminar paper		
Laboratory exercises			Practical work	Report	2	5
Final exam	3	1-7	Studying for final exam	Written exam	24	40
				Oral exam	15	30
Total	**4**				**50**	**100**

Evaluation of written part of final exam

Percentage of correct answers (%)	Grade points
96.00-100	40
90.00-95.00	36
80.00-89.00	32
70.00-79.00	28
60.00-70.00	24

Evaluation of oral part of final exam:
15 grade points: answer satisfies minimum criteria; 16 – 20 grade points: average answer with clearly identifiable errors; 21 – 25 grade points: very good answer with minor errors; 26 – 30 grade points: excellent answer.

Formulating the final grade:
Grade points achieved in classes are combined with points achieved in the final exam. Grading in the ECTS system is absolute grading and represents one's final achievement. Grades are numerically expressed as follows: A – excellent (5): 80-100 grade points; B – very good (4): 70-79.99 grade points; C – good (3): 60-69.99 grade points; D – sufficient (2): 50-59.99 grade points

Assigned reading (available in the library and in other media)

Title	Number of copies in the library	Availability in other media
Babuš, V. Epidemiološke metode, Medicinska naklada, Zagreb, 2000	4	

Further reading

1. K Strnad, M, Vorko Jović, A, Rudan I. Epidemiologija kroničnih nezaraznih bolesti, Medicinska naklada, Zagreb, 2010.

2. Kolčić I, Vorko-Jović A. Epidemiologija. Zagreb, Medicinska naklada, 2012

3. Fletcher RW, Fletcher SW. Clinical Epidemiology: the essentials. Fourth edition. Philadelphia: Lippincot, Williams and Wilkins 2005

Quality assurance methods that ensure the acquisition of exit competencies

Anonymous, quantitative, standardised students' opinion survey on the course and teacher's work, carried out by the Quality Assurance Office of the Faculty of Medicine in Osijek.