

<b>Name of the course</b>	<b>Forensic Medicine</b>			<b>Code</b>	MSE604
<b>Type of study program:</b>	Integrated university study program, Medicine			<b>Year of study:</b>	6
<b>Credits (ECTS):</b>	3	<b>Semester:</b>	XII	<b>Number of hours per semester (l+s+e)</b>	50 (17+17+16)
<b>Status of the course:</b>	obligatory	<b>Preconditions:</b>	In accordance with 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>	Pero Bubalo, MD, PhD				
<b>Consultations:</b>	As agreed with students				
<b>E-mail address and phone number:</b>	<a href="mailto:pero.bubalo@mef.hr">pero.bubalo@mef.hr</a> ; +385997206487				
<b>Associate teachers</b>	Petar Škavić MD				
<b>Consultations:</b>	As agreed with students				
<b>E-mail address and phone number:</b>	<a href="mailto:petar.skavic@mef.hr">petar.skavic@mef.hr</a> ; +38598737966				
<b>The aims of the course:</b>	The aims of the course are: to introduce students with the role of forensic medicine in medical practice, proper scene and body investigations needed in cases of evident or suspected traumatic deaths (homicides, suicides, accidents), types and tasks of forensic medical examination, issues regarding examination of living persons as well as corpses and human remains and applied methodology.				
<b>Learning outcomes (general and specific competences):</b>	<p>Upon completion of this course students will be able to:</p> <ul style="list-style-type: none"> <li>describe and explain the basic theoretical principles from the field of forensic medicine, including the issues of thanatology, forensic traumatology, expert opinion making and medical law;</li> <li>perform external examination of a dead body, recognize signs of death and distinguish whether the autopsy is required in order to properly record the fact of death (fill in the death certificate);</li> <li>identify, describe and name injuries on the body;</li> <li>recognize the cases of suspicious and non-natural death and to place a request for forensic autopsy;</li> <li>describe proper sampling for toxicology analysis.</li> </ul>				
<b>Course content (Syllabus):</b>	<p>Lectures: Introduction to Forensic Medicine; Thanatology; Blunt force trauma; Sharp force trauma; Gunshot injuries; Asphyxia; Drowning; Physical injuries; Sudden natural death; Human identification in mass disasters; Forensic toxicology; Pregnancy – related deaths; Infanticide.</p> <p>Seminars: Medicolegal death investigation; Crime scene investigation; PMI assessment; Injury assessment; Traffic accidents analysis; Forensic anthropology; Forensic genetics; Complication of injuries; SIDS; Suicide vs. Homicide.</p> <p>Exercises: Examination of the dead body/autopsy; Forensic medical examination of living persons; Death certificate and burial permit; Forensic anthropology; Medical documentation; Expert opinion making.</p>				
<b>Format of instruction: (mark in bold)</b>	<b>Lectures</b>	<b>Exercises</b>	<b>Seminars</b>	<b>Independent assignments</b>	
	<b>Consultations</b>	Work with mentor	<b>Field work</b>	Other	
<b>Student responsibilities:</b>	Attending classes; Actively participate in classes; Writing Seminar essay; Passing written and oral exam.				
<b>Screening student work: (mark in bold)</b>	<b>Class attendance</b>	<b>Class participations</b>	<b>Seminar essay</b>	Practical training	
	<b>Oral exam</b>	<b>Written exam</b>	Continuous assessment	Essay	
<b>Detailed evaluation within a European system of points</b>					
<b>STUDENTS RESPONSIBILITIES</b>	<b>HOURS</b>	<b>PROPORTIONS OF ECTS CREDITS</b>		<b>PROPORTIONS OF GRADE</b>	
Attending classes	50	1.7		0%	

Seminar essay	10	0.3	0%
Written exam	15	0.5	50%
Oral exam	15	0.5	50%
Total	90	3	100%

Further clarification:

**The written exam**  
The written exam contains 40 questions, which cover all areas covered by the curriculum. To pass the exam (grade sufficient), the student must answer 55% of the questions correctly. According to the Rulebook on studying at the University of Mostar, grades are assigned as follows: 0-54% insufficient (1); 55-66% sufficient (2); 67-78% good (3); 79-90% very good (4); 91-100% excellent (5).

**The oral exam**  
All chapters of forensic medicine will be covered by the oral exam, especially in those parts that are essential in the daily work of a doctor. Integrative knowledge and forensic reasoning skills will be required. The exam will consist of four questions that student will receive on a card. The condition for taking the oral exam is that the student has passed the written exam.

**The final grade**  
The final grade will be calculated as the arithmetic mean of the grade of the written and oral exam grade.

<b>Required literature:</b>	Payne-James J, Jones R, Karach Steven B, Manlove J. Simpson's Forensic Medicine. 13th ed. London Arnold Publishers 2011
<b>Optional literature:</b>	Dettmeyer RB, Vehoff MA, Schütz HF. Forensic Medicine Fundamentals and Perspectives. 1st ed. Springer Berlin, Heidelberg, 2014
<b>Additional information about the course:</b>	

Annexes: calendar classes

<i>The number of teaching units</i>	<b>TOPICS AND LITERATURE</b>
<b>I.</b>	Title: Introduction to Forensic Medicine
	Short description: Forensic medicine is a branch of medicine where the principles and knowledge of medicine is used for purposes of the law and justice. Aim of this course is to teach students so after graduation they are well informed about their medicolegal responsibilities and are capable of discharging medicolegal duties in medical practice.
	Literature: Simpson's Forensic Medicine
<b>II.</b>	Title: Thanatology and Examination of the dead body/autopsy
	Short description: Thanatology is the scientific study of the causes and circumstances of death. Understanding the early and late post mortem changes is imperative to estimate the time since death (TSD) or the post mortem interval (PMI) so it is very important to learn the changes that occur after death. Examination of the dead body/autopsy is performed to determine the cause and manner of death. After this course, students should be able to determine and recognize postmortem changes as well as determine the time and cause of death.
	Literature: Simpson's Forensic Medicine
<b>III.</b>	Title: Mechanical injuries
	Short description: Mechanical injuries are damage to the body caused by the mechanical action of sharp or blunt force. They are divided according to the characteristics of the means of injury: those caused by a point, a blade, a surface and a projectile of a hand-held firearm. Students should be able to distinguish the elements of each of the mentioned injuries
	Literature: Simpson's Forensic Medicine
<b>IV.</b>	Title: Asphyxia
	Short description: Asphyxia is an interruption of any stage of the supply or transport of oxygen between the environment and the organs, by obstructing the airways or respiration in general, the oxygen transporting medium blood, blood circulation, and the environment. After this course student should know what kind of asphyxiation led to death.
	Literature: Simpson's Forensic Medicine
<b>V.</b>	Title: Physical injuries
	Short description: Physical injuries are those that occur as a result of the effect of physical factors. These injuries are caused by the effect of increased or decreased temperature, electricity or various radiations. Aim of this course is to teach student to recognize and distinguish the causes of death resulting from physical injuries.
	Literature: Simpson's Forensic Medicine

<b>VI.</b>	Title: Sudden natural death
	Short description: According to the World Health Organization, a sudden death is one that occurs within 24 hours of the onset of symptoms, but most physician believe that death needs to occur within 6 hours. Sudden death occurs as a result of the loss of vital functions, and therefore it can be defined as cerebral, respiratory or cardiovascular. This course explains how to recognize how and why sudden death has occurred.
	Literature: Simpson's Forensic Medicine
<b>VII.</b>	Title: Traffic accidents analysis
	Short description: Traffic trauma is the most common and most important cause of violent health damage in the world. In the group of violent deaths, mortality caused by traffic accidents is on the first place. In most cases, traffic accidents are the result of a motor vehicle hitting a pedestrian, a vehicle collision, or a vehicle landing off the roadway. Traffic medicine is an interdisciplinary field embracing medicine, psychology, accident research and automobile construction. In this course, the mentioned terms will be explained more detailed.
	Literature: Simpson's Forensic Medicine
<b>VIII.</b>	Title: Forensic anthropology, Forensic genetics and Human identification in mass disasters
	Short description: Forensic anthropology is concerned with the classification of bone and skeletal findings in term of human specificity, age, sex, stature, origin, postmortem interval, preexisting diseases and injuries. The field of forensic genetics is tasked with identifying genetic fingerprints in trace evidence collected from crime scenes for the purposes of comparing it with the DNA of individuals implicated in a crime. Beside its criminological application it is also used to determine paternity and unidentified individuals. Methods used to establish identity in mass disasters include DNA analysis, forensic odontostomatology and fingerprinting. The basic things about the mentioned chapters should be mastered.
	Literature: Simpson's Forensic Medicine
<b>IX.</b>	Title: Forensic toxicology
	Short description: Forensic toxicology is the study of toxins (drugs, medications etc.) and their detection in and effect on the human organism in a legal context. Its areas of application mainly include the investigation of poisoning in living subjects and fatalities, as well as drug and medication abuse.
	Literature: Simpson's Forensic Medicine
<b>X.</b>	Title: Pregnancy – related deaths, Infanticide and SIDS
	Short description: Infanticide is the death of the infant caused in the first year of life. It could be caused by various forms of violence: blunt trauma, sharp force injuries, suffocation, drowning, scalds, burns, intoxications etc. SIDS - Sudden infant death syndrome, is the most frequent cause of death in the first year of life. It stands or sudden death of any infant or a young child which is unexpected by history and which postmortem examination fails to demonstrate an adequate cause of death.
	Literature: Simpson's Forensic Medicine
<b>XI.</b>	Title: Suicide vs. Homicide
	Short description: It is important to know the elements of suicide and homicide, as well as their types, main differences and characteristics of injuries that distinguish them.
	Literature: Simpson's Forensic Medicine
<b>XII.</b>	Title: Medical documentation, Death certificate and burial permit
	Short description: Medical documentation should be as accurate and detailed as possible in order to properly fill out the death certificate and burial permit.
	Literature: Simpson's Forensic Medicine
<b>XIII.</b>	Title: Expert opinion making
	Short description: Expert opinion is requested by the authorities or by private individuals for the purposes of protecting rights in civil and criminal inquiries. Forensic medicine plays an expert advisory role at the interface between medicine and the law.
	Literature: Lecture material