

<b>Study program:</b> Integrated academic studies in medicine
<b>Type and level of the study program:</b> integrated academic studies
<b>Course title: Forensic medicine (M6-FMED)</b>
<b>Teacher:</b> Vapa M. Dušan, Veselinović S. Igor, Vuković M. Radenko, Drašković O. Dragan, Maletin P. Miljen, Petković M. Stojan, Pilića I. Vladimir, Radosavkić S. Radosav, Stojiljković B. Goran
<b>Course status:</b> compulsory
<b>ECTS Credits: 4</b>
<b>Condition:</b> Surgery; Gynecology with obstetrics (exam); Paediatrics (exam)
<b>Course aim</b> The aim of this course is to provide students with knowledge and skills to understand and correlate medicine and law in order to provide personal physical and psychological integrity. Legal status of medical practice, ethical and legal responsibility of a physician. Use of acquired knowledge in practice. Development of skills necessary for scientific research.
<b>Expected outcome of the course:</b> Practical application of theoretical knowledge. Examination of the deceased, determination of cause, manner and time of death. Identification of the deceased. Examination of injured persons, classification and qualification of injuries. Issuance of medical documents - death certificates and medical reports of injuries. Taking biological samples for purpose of identification and toxicology screening. Use of medical knowledge in trial cases. Understanding the principles of causation - complex relations between primary cause (injury or disease), course of injury or disease along with all possible complications, and final consequences (complete or incomplete recovery vs. death).
<b>Course description</b> <i>Theoretical education</i> 1. Brief history of forensic medicine. Basic tasks of forensic medicine. Forensic medicine in relation to other medical and academical branches, primarily law. 2. Diseases and injuries. Deaths due to natural causes. Classification of injuries. Medico-legal aspects of natural death. Relationship between personal characteristics and injuries. Injuries and traumatic diseases. 3. External examination of injured and deceased. Death scene. Autopsy and exhumation. 4. Dying and death, terms and definitions. Concept of brain death. Medicolegal aspects of transplantation. 5. Tanatology. Postmortem changes. Time of death. 6. Reactions of the organism to injury. Vital, agonal and postmortal injuries. Embolism. Shock. 7. Mechanical injuries – classification and characteristics. Common features of wounds and injuries. Classification. 8. Physical injuries. Hyperthermia and hypothermia; the effect of heat and cold; electrocution; lightning injuries; radiation injuries. 9. Asphyxia. External and internal autopsy findings. Suffocation. Strangulation. Pressure on the chest and abdomen. Environmental suffocation and suffocating gasses. 10. General and special toxicology. Definitions and classification of poisons. Caustic poisons. Pesticides. Inhalants. Strychnine. Lead, iron and mercury poisoning. Mushroom poisoning. Convulsion poisons. Drugs, chemical warfare. 11. Drug addiction. Opioids, psychostimulants, hallucinogens. 12. Ethyl alcohol – forensic aspects. 13. Traffic injuries. Motor vehicle accidents, causes and categories. Traffic accidents (railway, air traffic and water transport). Pedestrian and cyclist deaths. 14. Craniocerebral injuries – classification and biomechanics. Types of cranial fractures, translation and rotation head injuries, primary and secondary brain injuries. 15. Falls from a height. Crush and blast injuries. 16. Nutritional, biological and psychic injuries. Sudden death during and immediately after mental and/or physical stress. 17. Forensic problems of sexual assaults. Infanticide – definition, medicolegal expertise. Paternity testing. SIDS. 18. Domestic violence. 19. Accident, suicide, homicide. Suicide vs. homicide - injury patterns. Bodies recovered from water or fire, self-inflicted injuries. 20. Forensic expert, legal provisions and basics of medicolegal expertise. 21. Forensic qualification of injuries. Legal provisions and medical criteria. Forensic expertise in civil proceedings (pain, fear, etc.). 22. Legal status of medical practice. Medicolegal aspects of medical interventions. 23. Forensic anthropology and identification in mass accidents. 24. Medical criminology, biological traces. DNA analysis.  <i>Practical education: exercises, other forms of education, research related activities</i> 1. Institute of Forensic Medicine - introduction to basic fields of work. 2. Work in autopsy room 3. External body examination. Identification. Time and cause of death. 4. Description of postmortem changes. 5. Evidence of injuries. Evidence of recent medical and/or surgical interventions. 6. Planning and proceedings of autopsy in accordance to specific cases. Demonstration of autopsy with discussion. Taking samples for pathohistology, toxicology screening, microbiological testing and DNA analysis. Presenting findings suitable for scientific research. 7. Issuing the death certificate in accordance to C30. Natural or violent death. 8. Chemical and toxicology laboratory: GC, GC/MSD, HPLC and UV spectrophotometrics use in forensic chemistry.

9. Medicolegal expertise (findings, discussion and conclusion) of court files. Elements of analysis and synthesis. Relevant findings in reports, forensic issues and reports.
10. Video presentation of postmortem changes, mechanical injuries, physical injuries, craniocerebral injuries, asphyxia and infanticide.

**Literature**

*Compulsory*

1. DiMaio D, DiMaio VJ. Forensic pathology (Practical Aspects of Criminal and Forensic Investigations) , second Edition. CRC press, 2001.
2. Mason JK. Forensic medicine (an illustrated reference). Chapman and Hall medical, 1993.

*Additional*

**Number of active classes**

Lectures: 30	Practice: 45	Other types of teaching:	Research related activities:	Other:
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**Teaching methods:** Lectures including PowerPoint presentations; Practice: examination of injured persons; external examination of the deceased. Discussion of autopsy findings. Biological sampling. Court files analysis. Medical reports and death certificates.

**Student activity assessment** (maximally 100 points)

<b>Pre-exam activities</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
Lectures	25	Written	30
Practices	25	Oral	-
Seminars	20	.....	
Colloquium			