**Study program:** Integrated academic studies in dentistry

Type and level of the study program: integrated academic studies

Course title: Forensic medicine (DV-FMED)

Teacher: Radenko M. Vuković, Goran B. Stojiljković, Dragan O. Drašković, Stojan M. Petković, Igor S. Veselinović, Vladimir I. Pilija, Dušan M. Vapa

Course status: compulsory

**ECTS Credits: 2** 

**Condition:** Surgery

## Course aim

The main aim of the education in Forensic Medicine is getting students acquainted with the elements of protection of physical and psychical integrity of each person, and mutual connection between medicine and law. It is necessary inform the student on legal position of dentistry practice, as well as the ethic and legal responsibility of medical professionals. Mastering skills for practical application of the acquired theoretical knowledge. Development of critical thinking and abilities for the research work.

## **Expected outcome of the course:**

Practical application of skills: The examination of the injured, qualification and classification of the injury. Issuing of medical reports: the medical reports on injuries. Taking samples for the criminological, genetic and toxicology expertise. Gaining skills for making the expert analysis given in court. Skills for examination of the dead establishing the cause and the time of death. Identifying the person-the role of the dentist. Application of synthesis and analysis in the establishing the cause and effect correlations on the basis of (injury or disease)- secondary status-the final biological cause (the terminal cause of death)

## Course description

Theoretical education

- 1. The short history overview of forensic science. Definition of forensic medicine and its objectives. The relation with other medical disciplines and the close scientific disciplines- the relation between medicine and law.
- 2. Definition of health damage natural or violent Forensics aspect of natural death. Classification of the body injury according to the valid NOKSA. The relation between the injury and personal aspects of the injured. Morbid injury and traumatic decease.
- 3. The death and dying. Forensic classification of death. The brain death- organ and tissue transplantation. Medical and law matters considering the organ and tissue transplantation.
- 4. Thanatology: the properties and changes of corpse. Establishing the time of death.
- 5. The reactions of the body to the injury. The vital, agonal and posthumous injuries. Embolism. Shock.
- 6. Mechanical injuries. Wounds and injuries. Common and particular features of wounds and injuries. Classification.
- 7. Physical injuries. Effect of the high temperature. The effect of low temperature-frost bites. Injuries caused by technical and atmospheric electricity. Injuries caused by ionizing and x-ray radiation.
- 8. Asphysic injuries. General and local report. The distortion of the air contents. Obturation asphyxia. Strangulation asphyxia The pressure on the chest and abdomen. Situation asphyxia.
- 9. General and specific toxicology. Definitions. Classification of toxins: caustic toxins and caustic toxins with the resorptive effects. Pesticides. Gas toxins. Cyan. Heavy metals. Convulsive toxins. Medications. Poisoning gas. Poisoning caused by fungi.
- 10. Drug addiction- opiates psycho stimulus, hallucinogens.
- 11. Ethyl alcohol as the forensics problem.
- 12. Crancioncerebral injuries. Biomechanical injury. The types of skull break. Translational and rotational head injuries, Primary and secondary brain injuries.
- 13. Nutritive, biological and psychic injuries.
- 14. Accident, suicide, homicide- general terms, definition.
- 15. Forensics expert and forensics expertise, law principles in forensics expertise.
- 16. Qualification of body injuries. Laws and principles of forensics. Expertise of non-material injuries (pain, fear and decrease of living activities)
- $17.\ Legal$  aspects of medicine. Medico legal aspects during the medical intervention.

Practical education: exercises, other forms of education, research related activities

- 1. Getting familiar with the contents of Forensics institute.
- 2. Work in autopsy surgery.

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- Examination of the dead. Identification. Establishing the time and the cause of death.
- Description of the particularities and the changes of corpse.
- Examination and description of injuries.
- 3. Forensic anthropology and identification. Identification in mass accidents.
- 4. Medical crimes: expert analysis of biological traces, DNA analysis, controversial paternal authority.
- 5. Work in chemical-toxicological laboratory. Learning the possibilities of working with the gas and liquid chromatograph and UV spectrometer in toxicological identification of drugs. Methodology of expertise of the state of alcohol consuming.
- 6. Analysis of court report. Elements of analysis and synthesis. Noticing the relevant facts in the reports, their discussion and creating forensics opinion.
- 7. Double position video bim- overview of properties and various (mechanical, physical. etc.) injuries of the corpse.

## Literature

Compulsory

- 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						Other:
Lectures:	Practice:	Oth	er types of teaching:	Research related activities:		
30	15					
Teaching methods						
Student activity assessment (maximally 100 points)						
Pre-exam activities			points	Final exam		points
Lectures			40	Written		30
Practices			20	Oral		
Colloquium						
Essay			10			