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FACULTY OF MEDICINE

Approved:
Dean:
(Prof. Yoto Yotov, MD, PhD)

SYLLABUS

IN

FORENSIC MEDICINE AND DEONTOLOGY

Specialty	**MEDICINE**
Educational - qualification degree	**master**
Organizational form of education	**full-time**
Auditorial activity (Lectures/Seminars)	**75 (45/30)**
Extra-auditorial activity	**15**
ECTS- credits	**3**
Discipline type	**compulsory**
Semester/s of education	**tenth**
Semester of examination	**tenth**
Developer(s) of the Syllabus:	**Assoc. Prof. Emilia Kaisheva, MD, PhD**

Varna, 2024

ANNOTATION

Aims of the course	The basic purpose of Forensic Medicine is to investigate medicobiological issues in law practice. The main issues are: 1)death investigation –early and late changes; forensic traumatology-blunt, sharp and firearm injuries, fall and vehicle accidents; asphyxia; death by heat, cold and electricity; forensic toxicology; sudden nonviolent unexpected death; infanticide; identification; 2) forensic examination of living person –physical and sexual assault. 3)medical law - medical malpractice and negligence, euthanasia, abortion, transplantation

Outcomes for students at the end of the course:	
Competences	**Knowledge:** ▪ Forensic medicine - definition, problems, methods, content and importance. The main object in Forensic Medicine ▪ Medico-legal investigation of death. Diagnosis of death. Death c certification. Changes after death –early and late changes. ▪ Forensic traumatology. Mechanical injuries –types of injuries, types of wounds. Blunt trauma – bruises, scrapes, contusions, lacerations. Closed and open fractures, skull fractures. Brain injuries, neck, spinal and chest injuries, blunt chest and abdomen trauma. ▪ Fall injuries. Transportation injuries. Sharp injuries - kinds of wounds. ▪ Firearm examination (wound ballistics). Entrance and exit wounds from different weapons. Explosives. The doctor's duty in firearm injuries and deaths. ▪ Vital injuries and injuries after death. A cause and a genesis of death in mechanical injuries. ▪ Mechanical asphyxia. Stages. Classification. Morphology. Strangulation – types, genesis. Traumatic asphyxia. Mechanical asphyxia. Suffocation, choking, drowning ▪ Death by electricity and lightning. Injuries due to heat and cold. Barotrauma ▪ Forensic toxicology – general aspects of poisoning, toxic and fatal dose. Conditions for toxic effect. The doctor's duty in cases of suspected poisoning. Samples required for toxicological analysis. Acid and base poisoning, mercury poisoning. Carbon monoxide poisoning, food poisoning. ▪ Ethanol and methanol poisoning. Drug and narcotic poisoning Sudden nonviolent unexpected death. Trace evidence and secretions. Blood stains. DNA expertise. ▪ Forensic examination of living patients. Physical and sexual assault. ▪ Pregnancy, abortion and birth – investigation in living and dead women Infanticide. Identification of living persons and death bodies. Identification of skeletal remains. ▪ Brain death, clinical death, biological death. ▪ Legal aspects of medical practice. Medical law – definition, e content,

	problems. Requirements for licensing and registration of the doctors. Medical confidentiality. Consent to medical treatment. ▪ Medical malpractice –medical negligence and professional misconduct. Criminal abortion. Legal termination of pregnancy in different countries. Euthanasia and physician-assisted suicide. Tissue and organ transplantation. Accidents in medical practice. **Skills:** ▪ *Accurate diagnosis of death* ▪ *Accurate preparation of a Death Certificate* ▪ *Objective and accurate description of traumatic injuries and recognition of the damaging mechanism.*
Competence group	**1. Patient Care** that is compassionate, appropriate, and effective for treating health problems and promoting health.
Knowledge	▪ *To know the main object and aims of Forensic medicine* ▪ *To recognise all signs of death, and recognise the different traumatic factors that may cause it.*
Skills	▪ *To apply scientific and analytical methods in solving clinical scientific problems.* ▪ *To apply medical and scientific knowledge in clinical environments.*
Competence group	**2. Medical Knowledge** about established and evolving biomedical, clinical, and cognate (eg, epidemio-logical and social-behavioral) sciences and the application of this knowledge to patient care.
Knowledge	▪ *To be able to take down accurate medical documentation with the aim of forensic medicine in mind.* ▪ *To examine and asses the practices of care for the patiens.* ▪ *To asses and assimilate scientific evidence.*
Skills	▪ *To apply evidence-based medicine.* ▪ *To contribute to the good medical practice.*
Competence group	**3. Practice-Based Learning and Improvement** that involves investigation and evaluation of their own patient care, appraisal, and assimilation of scientific evidence, and improvements in patient care.
Knowledge	▪ *To be able to take down accurate medical documentation with the aim of forensic medicine in mind.* ▪ *To examine and asses the practices of care for the patiens.* ▪ *To asses and assimilate scientific evidence.*

Skills	▪ *To apply evidence-based medicine.* ▪ *To contribute to the good medical practice.*
Competence group	**4. Interpersonal and Communication Skills** that result in effective information exchange and teaming with patients, their families, and other health professionals.
Knowledge	▪ *To improve high communication skills*
Skills	▪ *To be able to communicate well, with the judicial authorities and the police.*
Competence group	**5. Professionalism,** as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
Knowledge	▪ *To learn how to demonstrate professional conduct and responsibility.* ▪ *To learn how to demonstrate humanity and cultural knowledge.*
Skills	▪ *To sustain emotional, physical and mental health.* ▪ *To aim for constant personal and professional growth.*
Competence group	**6. Systems-Based Practice,** as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.
Knowledge	▪ *To learn how to work effectively in other environments and healthcare systems that are in connection with their clinical specialty.* ▪ *To learn how to analyse the risk and benefits for the care of the individual patient as well as the population.*
Skills	▪ *To work in teams with representatives of different professions.* ▪ *To take part in identifying systemic mistakes and in the applying of potential systemic fixes.*

Key competencies for lifelong learning[1], that the discipline develops:	
Literacy competence Literacy is the ability to identify, understand, express, create, and interpret concepts, feelings, facts and opinions in both oral and written forms, using visual, sound/audio and digital materials across disciplines and contexts. It implies the ability to communicate and connect effectively with others, in an appropriate and creative way.	**X**

[1] As defined in 2018 r. by the European Union Council (https://eur-lex.europa.eu/legal-content/BG/TXT/HTML/?uri=CELEX:32018H0604(01)&from=EN)

Multilingual competence This competence defines the ability to use different languages appropriately and effectively for communication. It broadly shares the main skill dimensions of literacy: it is based on the ability to understand, express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing) in an appropriate range of societal and cultural contexts according to one's wants or needs.	
Mathematical competence and competence in science, technology, engineering A. Mathematical competence is the ability to develop and apply mathematical thinking and insight in order to solve a range of problems in everyday situations. Building on a sound mastery of numeracy, the emphasis is on process and activity, as well as knowledge. Mathematical competence involves, to different degrees, the ability and willingness to use mathematical modes of thought and presentation (formulas, models, constructs, graphs, charts). B. Competence in science refers to the ability and willingness to explain the natural world by making use of the body of knowledge and methodology employed, including observation and experimentation, in order to identify questions and to draw evidence-based conclusions. Competences in technology and engineering are applications of that knowledge and methodology in response to perceived human wants or needs. Competence in science, technology and engineering involves an understanding of the changes caused by human activity and responsibility as an individual citizen.	**X**
Digital competence Digital competence involves the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), safety (including digital well-being and competences related to cybersecurity), intellectual property related questions, problem solving and critical thinking.	**X**
Personal, social and learning to learn competence Personal, social and learning to learn competence is the ability to reflect upon oneself, effectively manage time and information, work with others in a constructive way, remain resilient and manage one's own learning and career. It includes the ability to cope with uncertainty and complexity, learn to learn, support one's physical and emotional well-being, to maintain physical and mental health, and to be able to lead a health-conscious, future-oriented life, empathize and manage conflict in an inclusive and supportive context.	**X**
Citizenship competence the ability to act as responsible citizens and to fully participate in civic and social life, based on an understanding of social, economic, legal and political concepts and structures, as well as global developments and sustainability.	**X**
Entrepreneurship competence Entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for others. It is founded upon creativity, critical thinking and problem solving, taking initiative and perseverance and the ability to work collaboratively in order to plan and manage projects that are of cultural, social or financial value.	**X**
Cultural awareness and expression competence Competence in cultural awareness and expression involves having an understanding of and respect for how ideas and meaning are creatively expressed and communicated in different cultures and through a range of arts and other cultural forms. It involves being engaged in understanding, developing and expressing one's own ideas and sense of place or role in society in a variety of ways and contexts.	

Methods of education
▪ lectures ▪ practicals and laboratory exercises, practical and creative problem solving, case studies, consultations, discussions, work with scientific literature, regulatory documents, databases, analyses, presentations, work with patients under observation, medical documentation