**SYLLABUS**

Academic year 2017/2018

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| **Name of a course / module** | **Law and Forensic Science** | |
| **Name of a department where course is held** | **Department of Forensic Medicine**  **Department of Medical Law and Bioethics** | |
| **E-mail of department** | **zms@umb.edu.pl**  [**prawomedyczne@umb.edu.pl**](mailto:prawomedyczne@umb.edu.pl) | |
| **Faculty of** | Medicine with Division of Dentistry and Division of Medical Education in English | |
| **Name** **of a field of study** |  | |
| **Level** **of education** | *First degree studies, Uniform master’s degree studies* | |
| **Form** **of study** | full time X                                 part time | |
| **Language of instruction** | Polish                                           English X | |
| **Type of course** | obligatory X                                 facultative | |
| **Year of study / Semester** | I    II    III    IV    **V** | 1   2   3    4   5    6   7  8   **9**   **10** |
| **Introductory courses with preliminary requirements** |  | |
| **Number of didactic hours with specification of forms of conducting classes** | Total hours: 50      Lectures 20 hours     Classes 30 hours | |
| **Assumptions and aims**  **of the course** | Forensic pathology is a section of medicine that specifies in determining the cause of death by examining a corpse. The autopsy is performed by a medical examiner, usually during the investigation of criminal law cases. During the course students should learned about various kinds of death, about mechanism of this death and about specific autopsy techniques. Forensic medicine departure including also Forensic Genetics Laboratory and Forensic Toxicology Laboratory. Mission of the Forensic Genetics Laboratory is to supply the legal system and the community with a Forensic DNA testing facility. The Toxicology laboratory prepare the chemical examination, identification and quantifying of a drug, poison or substance in blood, urine, bile, vitreous and human tissue, also the ability to interpret the results of findings. All of information associated with examinations are also obligatory for all of the students. | |
| **Didactic methods** | *-* providing knowledge in a form of a lecture  - consultation (both regular and organized in individual cases)  - discussion  - presentation  - case description  - self study  - study of the literature | |
| **Full name of the person conducting the course** | employed scientific and teaching staff | |
| **Full name of the person responsible for teaching** | Michał Szeremeta | |

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| **Symbol and number of learning outcomes according to the teaching standards and other learning outcomes** | **Description of directional learning outcomes** | **Form of classes** | | **Verification methods  for achieving intended learning outcomes** |
| **Knowledge** | | | | |
| G.W1  G.W8  G.W13  G.W15 | 1. Thanatology: definition of death, cause and manner of death, interletal reactions. Signs of death. Changes due to resuscitation. Decomposition and other variants of postmortem changes. Inspection of the site where corps was found. Forensic autopsy. Special autopsy techniques. Sample preparation for analysis. Identification of unknown bones and disintegrated bodies. Sudden deaths due to natural disease. | | active participation | Summarizing methods:  - oral exam  - written exam (test.)      Forming methods:  - observation of the student's work  - pretest  - evaluation of the activity in the classroom  - completion of each activity  - assessment of preparation for classes  - discussion in class  - partial test  - case description |
| G.W14 | 2. Results of mechanical trauma: antemortem and postmortem injuries. Wounds due to blunt trauma- bruises, abrasions, contused, lacerated and bite wounds. Trauma to the skull and brain: skull fractures, intracranial hemorrhages, cerebral concussion, brain contusion. Spine injuries. Face and neck injuries. Injuries of the trunk, abdomen and extermities. Slashed wounds, incised wounds, stab wounds. Identification of weapons. | | active participation |
| G.W14 | 3. Fire-arms. Gunshot wounds. | | active participation |
| G.W.14 | 4. Asphyxia: suffocation, gagging, overlaying, choking, drowning, strangulation, hanging. | | active participation |
| G.W14 | 5. Electrocution, lightning stroke. Deaths due to fire. The effects of heat and cold: hyperthermia and hypothermia. | | active participation |
| G.W16 | 6. Infanticide: forensic examination of mother, infant’s autopsy. Pregnancy, childbirth, and abortion from the forensic point of view. | | active participation |
| E.W4 | 7. Sex related issues - sexual offence. Sexual deviance. Rape. Rape-homicides. | |
| G.W17  G.W18 | 8. Criminal forensic expertise: forensic examination, preparation of protocol and forensic opinion. Art. 156, art. 157, art. 217 of polish penal code. Forensic civil expertise: health definition, health consequences of road accidents, ability for working and earning, indemnity for pain, costs of treatment. Jurisdiction issues in insurance cases. | | active participation |
| C.W42  C.W43  C.W44  C.W45  G.W2  G.W19 | 9. Forensic toxicology. General facts about poisons. Collection of tissue for analysis. Ethanol toxicology, studies on ethanol metabolism and elimination, criminogenic implications of alcoholism. Carbon monoxide, methanol, glycol poisoning. Detection of poisons in biological material. Drug addiction. | | active participation |
| C.W1  C.W3  C.W5  C.W6  G.W19    GW6 | 10. Affilation of paternity. Blood group characters ABO, Se-se, Rh, Kell. Group characters of serum’s proteins (Hp, Gm, C3, Gc) and enzymes (ACP, ESD, PGM, GPT). DNA polymorphism analysis. Methods of DNA isolation. PCR techniques. Identification of biological material and analysis of liquid blood, bloodstains, sperm, saliva, body excretions, hairs, tissue material, etc.  11. Legal aspects of health services providing, patient's rights | | active participation        active participation |
| **Skills** | | | | |
| G.U1.  G.U 8.  G.U13.  G.U 15. | 1.Describe sigs of death and  evaluation time of death. Legal responsibilities of a physician for pronouncing a death.   Principles of  the procedure for and legal grounds of examination of a dead body where it was found, and forensic autopsy. Interpretation of  the frequency  of diseases and disability occurrence, evaluation of epidemiological background of commonly occurring diseases. | |  | Summarizing methods e.g,.  - realization of a specific task  Forming methods:  - observation of the student's work  - evaluation of the activity in the classroom  - completion of each activity  - assessment of preparation  for classes  - discussion in class  - partial tests |
| G.U14. | 2. Difference between injury and damage. Difference between various kind of injuries. Concept of violent and sudden death. | |  |
| G.U14. | 3. Describe signs of gunshot wounds and signs of fire-arms. | |  |
| G.U14. | 4.Describe various mechanism of asphyxias death. | |  |
| G.U14. | 5.Describe signs of  electrocution, lightning stroke, death due to fire and effects of hyperthermia and hypothermia. | |  |
| G.U16. | 6. Principles of forensic diagnosis and assessment of infanticide. | |  |
| E.U4. | 7. Problems: child maltreated and sexual abuse, mental impairment and behavior disorders. | |  |
| G.U17.   G.U18. | 8. Principles of forensic assessments concerning capacity to participate in legal proceedings. Biological effects or health detriments. Conception of medical error, most common causes of medical error and principles of making assessments following a medical error. | |  |
| C.U42.    C.U43.    C.U44.    C.U45.    G.U2.  G.U19. | 9. Methods of identification and examination of risk factors, advantages and disadvantages of different epidemiological examinations. Basic terminology of general toxicology. Drug groups, the abuse of which can cause poisoning. Symptoms of typical acute poisonings; intoxication caused by alcohol, narcotics and psychotropic substances, heavy metals and other drugs. Measurements indicative of  cause and effect relation. Principles of material sampling for hemogenetic and toxicological examination. basic principles of diagnostic procedures in case of poisoning. | |  |
| C.U1.  C.U3.  C.U5.  C.U6.      G.U19 | 10. Essential genetics concepts. Proper human karyotype and different types of sex determination. Principles of  inheritance of a different number of characters, inheritance of quantitative characters, self-reliant inheritance of characters and inheritance of extranuclear genetic information. Genetic conditioning of human blood groups and serologic incompatibility of  Rh blood group system. Measurements indicative of  cause and effect relation; principles of material sampling for hemogenetic and toxicological examination. | |  |
| **Social competence** | | | | |
| K1 | He /She recognizes his/her own  diagnostic and therapeutic limitations,  educational needs, planning of educational activity | |  | Summarizing methods:  Continuous assessment by teachers (observation)  Forming methods:  - observation of the student's work  - discussion in class |
| K2 | He /She is able to work in a team of professionals, in a multicultural and multinational environment | |  |
| K3 | He /She implements the principles of professional camaraderie and cooperation with representatives of other professionals in the range of health care | |  |
| K4 | He /She observes doctor-patient privilege; and patient rights | |
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| **ECTS points** | 4 | | |
| **Student** **Workload** | | | |
| **Form of activity** | | **Number of hours** **to complete the** **activity** | |
| **Classes that require the participation of a teacher** | | | |
| 1. Realization of the course: lectures (according to the curriculum ) | | 20 | |
| 1. Realization of the course: classes (according to the curriculum ) | | 30 | |
| 1. Realization of the course: seminars; (according to the curriculum) | | 0 | |
| 1. Realization of the course: electives | |  | |
| 1. Participation in consultation | | as needed | |
|  | | Total hours:  slightly 50 | |
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| 1. Preparation for the theoretical and practical classes (realization of projects, documentation, case description etc.) | | | 60 |
| 1. Preparation for test/credit | | | 25 |
| 1. Preparation for an exam/final test-credit | | | 40 |
|  | | | Total hours: slightly 125 |
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| **Course contents:** *proszę wpisać hasłowo tematykę poszczególnych zajęć, pamiętając, aby przekładała się ona na zamierzone efekty kształcenia* | |
| **Learning outcomes**  **(symbol and number)** | **Topics** |
| 1. G.W1, G.W8, G.W13, G.W15  2. G.W1, G.W8, G.W13, G.W15  3. G.W1, G.W8, G.W13, G.W15.  4. G.W14  5. G.W14  6. G.W14  7. G.W14  8. C.W1, C.W3, C.W5, C.W6, G.W19  9. G. W16  10. C.W42, C.W43, C.W44, C.W45, G.W2, G.W19  11. C.W1, C.W3, C.W5, C.W6, G.W19  12. G.W1, G.W8, G.W13, G.W15  13. G.W14  14. G.W14  15. G.W14  16. E.W4  17. C.W42, C.W43, C.W44, C.W45, G.W2, G.W19, C.W1, C.W3, C.W5, C.W6, G.W19  18. C.W42, C.W43, C.W44, C.W45, G.W2, G.W19  19. C.W1, C.W3, C.W5, C.W6, G.W19  20. G.W.6  21. GW17, GW18 | 1.The role of Forensic Medicine.  2. Thanatology.  3. Death due to natural disease.  4. Wounds due to blunt trauma. Head trauma.  5. Wounds due to pointed and sharp weapons.  6. Asphyxia.  6. Deaths due to road accidents.  7. Deaths due to burns. Carbon monoxide poisoning.  8. Identification.  9. Infanticide.  10. Ethanol toxicology.  11. Forensic Serology.  12. Determination of the time of death.  13. Results of mechanical trauma.  14. Fire-arms. Gunshot wounds.  15. Electrocution, lightning stroke. Deaths due to fire. The effects of heat and cold.  16. Sex related issues.  17. Criminal forensic expertise.  18. Forensic toxicology.  19. Forensic genetic.  20. Patietn's rights in Europe (European Convention on Biomedicine)  21. The role of criminal law within healtcare sector |

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| **Obligatory textbook:** |
| 1. Forensic Pathology, Second Edition (Practical Aspects of Criminal & Forensic Investigations)      Dominick DiMaio (Author), Vincent J.M. DiMaio M.D. (Author)  2. Color Atlas Of Forensic Pathology. Jay Dix (Author)  3. E. Sarnacka (ed.), Health law. Selected issues, BLACK UNICORN, 2015 |
| **Optional textbook:** |
| Handbook of Forensic Pathology, Second Edition by Vincent J.M. DiMaio and Suzanna E. Dana |

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| **Criteria for assessing the achieved learning outcomes and the form and conditions for receiving credit**: |
| Result of the final test more than 60%.  Student is obliged to participate in all classes and lectures. One absence is allowed.  It is demanded in the case of health reasons a medical certificate of temporary disability and in other cases a certificate of proper authorities. |