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<tr><td colspan="2">NAME OF THE COURSE</td><td colspan="5">FORENSIC GENETICS I.</td></tr>
<tr><td>Code</td><td>FZ115</td><td>Year of study</td><td colspan="4">1st</td></tr>
<tr><td>Course teacher</td><td>Dragan Primorac, PhD, MD, Full professor</td><td>Credits (ECTS)</td><td colspan="4">4</td></tr>
<tr><td rowspan="2">Associate teachers</td><td rowspan="2">Damir Marjanović, PhD, Full Professor
Josip Crnjac, professor
Livia Slišković,MSc</td><td rowspan="2">Type of instruction (number of hours)</td><td>L</td><td>S</td><td>E</td><td>F</td></tr>
<tr><td>20</td><td>15</td><td>25</td><td></td></tr>
<tr><td>Status of the course</td><td>Mandatory</td><td>Percentage of application of e-learning</td><td colspan="4"></td></tr>
<tr><td colspan="7">COURSE DESCRIPTION</td></tr>
<tr><td>Course objectives</td><td colspan="6">To train students to recognize biological evidence from which samples for DNA analysis can be obtained. Students should learn about where and on which surfaces biological samples that contain a DNA can be found. Introduce students to the working methods and ways of processing traces in the laboratory with the aim of understanding the importance of proper exclusion of traces of DNA analysis</td></tr>
<tr><td>Course enrolment requirements and entry competences required for the course</td><td colspan="6">Requirements for course enrollment are defined by the Regulations at the University Department of Forensic Sciences and by the Regulations on Studies and System of Studies at the University of Split.</td></tr>
<tr><td>Learning outcomes expected at the level of the course (4 to 10 learning outcomes)</td><td colspan="6">1. Select the appropriate method of analysis of a wide range of forensic-genetic methods in the processing of biological traces of human origin.
2. Propose methods for collection of samples for DNA analysis.
3. To present the latest methods and basic DNA technology and its application in forensic medicine and judicial procedures.
4. To establish the identity of the person using the DNA from a small number of cells, which is very useful in the identification of the perpetrator of a criminal offense, paternity, and identify victims of mass disasters.
5. Classify techniques that are currently used in forensic genetics, including analysis and interpretation of short consecutive repetitive sequences (STR), population genetics, markers of mitochondrial DNA and Y chromosomes.
6. Manage basic techniques essential for the creation and use of the national DNA database.
7. Combine basic biostatistical rules in forensic genetics.</td></tr>
<tr><td>Course content broken down in detail by weekly class schedule (syllabus)</td><td>P1</td><td colspan="5">Scientific Basis of application of DNA in forensic medicine - the impact of forensic medicine in the development of legal science; application of statistics, population and clinical studies in forensic genetics; ethical, legal and social aspects of DNA testing and the creation of a national database</td></tr>
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	P2	Introduction to Forensic Genetics: basic principles and history; Application of molecular genetic advances in forensics: postulates PCR reactions, autosomal and sex related VNTR and STR markers, genomic (nuclear) DNA; basic genetic principles of forensic DNA analysis;
	P3	The basic stages in the process of DNA analysis
	P4	Testing of disputed paternity (application autosomal and related molecular markers), analysis of mtDNA
	P5	Determining the identity of the person. identification of the method of DNA analysis. DNA analysis of archaeological remains. introduction to laboratory work
	P6	Analysis of the X and Y chromosome and mitochondrial DNA - the application in forensic medicine
	V1	The collection of traces for DNA analysis
	V2	Methods of isolation, quantification, multiplication and detection of selected genetic markers in forensic genetics
	V3	The systematic functioning of forensic genetics laboratory
	S	Seminars

Format of instruction	☒ lectures ☒ seminars and workshops ☒ exercises ☐ *on line* in entirety ☐ partial e-learning ☐ field work	☐ independent assignments ☐ multimedia ☐ laboratory ☐ work with mentor ☐ (other)
Student responsibilities	Regularly attending lectures, seminar paper	

Screening student work *(name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)*	Class attendance	1,5	Research		Practical training	1
	Experimental work		Report		(Other)	
	Essay		Seminar essay	0,5	(Other)	
	Tests		Oral exam		(Other)	
	Written exam	2	Project		(Other)	
Grading and evaluating student	Assessment and evaluation of students' work is done in a way that from the total number of points which can be achieved, 20% is achieved by evaluation of seminar paper, and the					

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<tr><td>work in class and at the final exam</td><td colspan="3">other 80% is achieved through the written exam consisting of 20 questions and genetic task of which each of them carries 50% of the points test.
The highest number of points that a student can earn is 50.
Rating: sufficient (27-32 points); good (33-38 points); very good (39-44 points); excellent (45-50 points).</td></tr>
<tr><td rowspan="5">Required literature (available in the library and via other media)</td><td>Title</td><td>Number of copies in the library</td><td>Availability via other media</td></tr>
<tr><td>MARJANOVIĆ D., PRIMORAC D.; FORENZIČNA GENETIKA: TEORIJA I APLIKACIJA; LELO, SARAJEVO 2013.</td><td>Department library/ 1</td><td></td></tr>
<tr><td>D.PRIMORAC, M.SCHANFIELD; FORENSIC DNA APPLICATIONS: AN INTERDISCIPLINARY PERSPECTIVE; CRC PRESS; 2014</td><td>Department library/ 1</td><td></td></tr>
<tr><td>PRIMORAC D, MARJANOVIĆ D ET AL. ANALIZA DNA U SUDSKOJ MEDICINI I PRAVOSUĐU. ZAGREB: MEDICINSKA NAKLADA; 2008</td><td>University library</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Optional literature (at the time of submission of study programme proposal)</td><td colspan="3">Additional materials that are provided to students during lectures and seminars</td></tr>
<tr><td>Quality assurance methods that ensure the acquisition of learning outcomes</td><td colspan="3">- Analysis of success of the study in all courses in study progarmme
- Student survey on quality of teachers and teaching for each course in study programme
- Final exam conducted by course teacher examines all learning outcomes of course</td></tr>
<tr><td>Other (as the proposer wishes to add)</td><td colspan="3"></td></tr>
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