University of Gdańsk

Subject card

Subject name and code	Disclosure of traces and evidence of crime - phisics - lecture, PG_00132525						
Field of study	Criminology						
Date of commencement of studies	October 2026		Academic year of realisation of subject	2026/2027			
Education level	Master's studies		Subject group	Obligatory subject group in the field of study			
Mode of study	part-time studies		Mode of delivery	at the university			
Year of study	1		Language of instruction	Polish			
Semester of study	2		ECTS credits	2.0			
Learning profile	academic		Assessment form	exam			
Conducting unit	Faculty of Law and Administration -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. inż. Aneta Lewkowicz				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	10.0	0.0	0.0	0.0	0.0	10
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	10		0.0		40.0	50
Subject objectives	To introduce students to the terminology, classification, definitions concerning forensic traces. To get students introduced to a wide range of issues related to revealing, securing and examining traces of forensic science. To familiarise students with the types of examinations using physical phenomena to analyse forensic traces at the crime scene and in the forensic laboratory. To present methods/procedures for the disclosure/visualisation of forensic traces at the crime scene, with particular emphasis on physical methods.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[KRYMMU2_WG02] Has an in-depth knowledge of the nature of natural sciences related to the studied major, their place in the system of sciences and their mutual relations	The student has in-depth knowledge of the natural sciences related to their field of study, understands their place in the scientific system and their interrelationships with other fields of knowledge. They are familiar with the current directions of development of these sciences and their importance for solving complex theoretical and practical problems in the field of forensic sciences.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[KRYMMU2_WG05] Has an in-depth knowledge of methods and tools, including data and information extraction techniques, specific to criminology and forensic science	The student has in-depth knowledge of the methods and tools used in criminology and criminalistics, including techniques for obtaining data, revealing and securing evidence at the scene of the crime, and performing forensic analysis.	[SW4] test/exam - oral or written [SW1] oral statement/ conversation/discussion
[KRYMMU2_K05] Is able to independently and critically complement knowledge and skills, extended by the interdisciplinary dimension	The student has the ability to select a specific research method for analysing preserved traces. Demonstrates the ability to integrate information from various fields of science in order to conduct in-depth analysis of complex research and practical problems.	[SK1] oral statement/conversation/ discussion [SK4] test/exam - oral or written

Subject contents

Classification, definitions, types of traces in forensic science. Methods of revealing and securing forensic traces. Physical methods and phenomena used in disclosing forensic traces, e.g. with the use of phenomena presented in Jablonski's Diagram with special emphasis on the phenomenon of fluorescence, delayed fluorescence. Presentation of modern physical methods used in forensic science.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
test	51.0%	100.0%

Recommended reading

Basic literature	1. D. Halliday, R. Resnick, J. Walker, "Podstawy Fizyki", Wydawnictwo Naukowe PWN, Warszawa 2008; 2. P.W. Atkins, Chemia fizyczna, Wydawnictwo Naukowe PWN, Warszawa 2007; 3. A.Z. Hrynkiewicz, E. Rokita Fizyczne metody badań w biologii , medycynie i ochronie środowiska, Wydawnictwo Naukowe PWN, Warszawa 1999; 4. M. Kulicki, V. Kwiatkowska Wójcikiewicz, L.Stępka Kryminalistyka. Wybrane zagadnienia teorii praktyki śledczo sądowej, Wydawnictwo Uniwersytetu Mikołaja Kopernika, 2009; 5. J. Widacki Kryminalistyka ,Wydawnictwo C.H. Beck, 2012; 6. A. Filewicz, W. Krawczyk, A. Musiał Ślady fizykochemiczne. Ślady kryminalistyczne. Ujawnianie, zabezpieczanie, wykorzystanie, pod redakcją M. Goca i J. Moszczyńskiego, Diffin, Warszawa 2007; 7. E. Gruza, M. Goc, J. Moszczyński Kryminalistyka czyli rzecz o metodach śledczych, Wydawnictwo WAIP, 2009; 8. J. Wójcikiewicz Ekspertyza sądowa. Zagadnienia wybrane, Oficyna Wolters Kluwer , Warszawa 2007;
Supplementary literature	1. J. Zięba Palus Niektóre aspekty fizykochemicznych badań postrzałów, Biuletyn informacyjny CLK KGP 1996; 2 .J. Wąs Gubała Włókno jako ślad kryminalistyczny, Wydawnictwo Ekspertyz Sądowych, Kraków 2000;
eResources addresses	

Example issues/ example questions/ tasks being completed

Basic principles of securing forensic traces at crime scenes,- basic principles of sample preparation and their suitability for a given physical and chemical testing method,-.possibilities and limitations of modern testing techniques used in forensic science,- criteria for the selection of a suitable physical method used in forensic science.

Work placement

Not applicable

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