

**Subject card**

<b>Subject name and code</b>	Fundamentals of Chemistry - lecture, PG_00132715						
<b>Field of study</b>	Criminology						
<b>Date of commencement of studies</b>	October 2024	<b>Academic year of realisation of subject</b>			2024/2025		
<b>Education level</b>	Master's studies	<b>Subject group</b>			Optional subject group		
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>			at the university		
<b>Year of study</b>	1	<b>Language of instruction</b>			Polish		
<b>Semester of study</b>	1	<b>ECTS credits</b>			2.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>	Department of Bioinorganic Chemistry -> Faculty of Chemistry -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr hab. Agnieszka Chylewska				
	<b>Teachers</b>						
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
<b>Learning activity and number of study hours</b>	<b>Learning activity</b>	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	<b>Number of study hours</b>	30		0.0		20.0	50
<b>Subject objectives</b>	getting acquainted with the basic chemical laws and concepts used in forensic research methods						
<b>Learning outcomes</b>	<b>Course outcome</b>		<b>Subject outcome</b>		<b>Method of verification</b>		
	[KRYMMU2_WG01] The graduate demonstrates widened knowledge about legal science and related penal sciences, their the place in the system of sciences and mutual relation		Can combine legal sciences with chemical sciences and use them synergistically in forensic research.		[SW4] test/exam - oral or written		
	[KRYMMU2_UW01] The graduate utilizes theoretical knowledge in the field of criminology and the related scientific disciplines to analyze and interpret problems connected with widely understood crime		Applies acquired chemical knowledge and uses it to solve forensic problems. Adapts information from the basics of chemistry to unusual situations. Selects a convenient research method to solve the problem using chemical knowledge. 4. Adapts chemical information to unusual, new situations. 5. Creatively selects an appropriate research method to solve problems using chemical knowledge.		[SU4] test/exam - oral or written		
	[KRYMMU2_KK01] The graduate is aware of the level of his/her knowledge and skills, and also understands the need of lifelong learning		Understands the need for further education to obtain qualifications. Be careful when contacting unknown substances that pose a potential threat to life.		[SK4] test/exam - oral or written		

Subject contents	Basic chemical laws and concepts; general classification and characterization of chemical substances along with their applications in research methods; the use of quantitative composition calculations of compounds as crime traces; general outline and classification of research methods with particular emphasis on physical phenomena and laws applied in equipment used for forensic analysis; examples of chemical applications and reactions in forensic analysis; microtrace analysis based on basic inorganic compounds; and the development of chemical research methods in forensic science over the past decade.		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Exam	51.0%	100.0%
Recommended reading	Basic literature	<p>Wykaz literatury</p> <p>A. Literatura wymagana do ostatecznego zaliczenia zajęć (zdania egzaminu):</p> <p>A.1. wykorzystywana podczas zajęć:</p> <p>Hanausek T. (2000) Kryminalistyka. Zarys wykładu. Zakamycze. Kraków.</p> <p>Bader H. J., Rothweil M., Maciejowska I., Wietecha-Posłuszny R. (2008) Chemia sądowa. Chemia w szkole, 5/2008: 14-21.</p> <p>De Wael K., Lepot L., Gason F., Gilbert B. (2008) In search of blood Detection of minute particles using spectroscopic methods. Forensic Science International, 180: 37-42.</p> <p>Wood M., Laloup M., Samyn N., Morris M. R., De Brujn E. A., Maes R. A., Young M. S., Maes V., De Boeck G. (2004) Simultaneous analysis of gammahydroxybutyric acid and its precursors in urine using liquid chromatographytandem mass spectrometry. Journal of Chromatography A, 1056: 83-90.</p> <p>Ruffell A., McKinley J. (2005) Forensic geoscience: applications of geology, geomorphology and geophysics to criminal investigations. Earth- Science Reviews, 69: 235-247.</p> <p>Kaplan I.R., Galperin Y., Lu S.T. &amp; Lee R.P. (1997) Forensic Environmental Geochemistry: differentiation of fuel types, their sources and release time. Organic Geochemistry, 27: 289-317.</p> <p>A.2. studiowana samodzielnie przez studenta</p> <p>Kulicki M. (1994) Kryminalistyka. Wydawnictwo UMW. Toruń.</p> <p>Migaszewski Z. M., Gałuszka A. (2006) Geologiczny dowód zbrodni - geologia sądowa w postępowaniu karnym, Przegląd Geologiczny, 54: 484- 487.</p> <p>Sołtyszewski I., Polak P. (2007) Badania kryminalistyczne. Wyd. UMW. Olsztyn. Wójcikiewicz J. (2002) Ekspertyza sądowa, Zakamycze. Kraków.</p>	

	Supplementary literature	<p>B. Literatura uzupełniająca</p> <p>Galuszka A., Zelek M. (2008) Geolog detektywem? <i>Mente et malleo</i> w kryminalistyce. Materiały z konferencji II Dni Kryminalistyki Wydziału Prawa Uniwersytetu Rzeszowskiego.</p> <p>Migaszewski Z. M., Galuszka A. (2007) Podstawy geochemii środowiska. WNT. Warszawa.</p> <p>Pikulski S. (1997). Podstawowe zagadnienia taktyki kryminalistycznej. Wyd. TEMIDA 2. Białystok</p>
	eResources addresses	<p>Basic</p> <p><a href="https://bg.ug.edu.pl/">https://bg.ug.edu.pl/</a> - Books and e-books</p>
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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