University of Gdańsk

Subject card

Subject name and code	Toxicology, PG_00081948		
Field of study	Chemistry		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2025/2026
Education level	Bachelor's studies	Subject group	Obligatory subject group in the field of study
Mode of study	full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	4	ECTS credits	1.0
Learning profile	academic	Assessment form	credit
Conducting unit	Laboratory of Toxicology and Radiation Protection -> Department of Environmental Chemistry and Radiochemistry -> Faculty of Chemistry -> Rector		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Dagmara Strumińska-Parulska	
	Teachers		

Lesson types							
	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	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	15	2.0	8.0	25

Subject objectives	
	introducing students to the basics of toxicology, familiarizing students with the issues mentioned in the lecture program content,

<table>
<tr><td>Learning outcomes</td><td>
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<tr><th>Course outcome</th><th>Subject outcome</th><th>Method of verification</th></tr>
<tr><td>[CHEML3_W05] Has basic knowledge of the chemical specialisation studied.</td><td>1. knows the goals and tasks of toxicology,
2. knows and understands terminology and basic concepts in the field of toxicology,
3. knows the general ideas of toxicology,</td><td>[SW4] test/exam - oral or written</td></tr>
<tr><td>[CHEML3_W03] Explains the relationship between the structure of matter and its observed properties.</td><td>1. knows the types and course of poisonings and general principles of prevention against poisonings,
2. knows the structure and toxicodynamic properties of selected heavy metals,
3. knows domestic and selected foreign poisonous plants and the structure and properties of the basic active substances contained in them,
4. knows the risk associated with the use of pesticides and selected food additives,</td><td>[SW4] test/exam - oral or written</td></tr>
<tr><td>[CHEML3_U08] Presents in an understandable way the basic facts about chemistry using a scientific language typical of chemical sciences.</td><td>1. uses correct toxicological terminology,
2. identifies domestic poisonous plants,
3. uses professional toxicological literature.</td><td>[SU4] test/exam - oral or written</td></tr>
<tr><td>[CHEML3_W02] Describes the properties of elements and the most important chemical compounds, enumerates the methods of their preparation and methods of analysis.</td><td>DO USUNIĘCIA</td><td>[SW5] implementation of a problem task</td></tr>
<tr><td>[CHEML3_U01] Identifies, analyses and solves problems in the field of broadly understood chemistry on the basis of the acquired knowledge.</td><td>1. is able to determine the risk of toxic substances in the human environment,
2. is aware of surrounding, easily accessible poisonous substances,</td><td>[SU4] test/exam - oral or written</td></tr>
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<tr><td>Subject contents</td><td>History and milestones in toxicology. Tasks of toxicology. Poisons, poisonings - types and their causes. Basic toxicological concepts and relationships. Basic factors determining the possibility of harmful effects of xenobiotics on living organisms. Dose-effect relationship. Pathways of absorption and excretion of poisons, their structure and fate of the poison in the human body (ADME). Mechanisms of toxic action and detoxification mechanisms. Chemical safety. Toxicometry. Principles and scope of toxicometric tests, experimental animals, alternative methods of toxicity testing. Determining safe values (NDS, NOAEL, LOAEL, ADI., MRL, MCL). Poisonous plants and their active substances. Toxicity of pesticides, food additives and selected heavy metals and their compounds.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td></td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>written test</td><td>51.0%</td><td>100.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>Seńczuk W (red.): Toksykologia współczesna
Piotrowski J.K. (red.): Podstawy toksykologii. Kompendium dla studentów szkół wyższych</td></tr>
<tr><td>Supplementary literature</td><td>-</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td>lecture content</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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