University of Gdańsk

Subject card

Subject name and code	Food safety and food control, PG_00121298						
Field of study	Chemical Business, Chemistry, Environmental Protection						
Date of commencement of studies	October 2024		Academic year of realisation of subject	2026/2027			
Education level	undergraduate studies		Subject group	Optional subject group			
Mode of study	full-time studies		Mode of delivery	at the university			
Year of study	3		Language of instruction	English			
Semester of study	6		ECTS credits	2.0			
Learning profile	academic		Assessment form				
Conducting unit	Katedra Analizy Środowiska -> Faculty of Chemistry						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Łukasz Haliński				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	15.0	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	33.0	50	
Subject objectives	1. To introduce to method development for determination of organic toxins in complex food matrices; 2. To familiarize with principles of extraction and purification methods used in food analysis; 3. To teach how to choose the right analytical technique: gas chromatography, liquid chromatography, mass spectrometry; 4. To familiarize with limitations of different analytical approaches and methods in real-life scenarios; 5. To introduce to major groups of natural and anthropogenic toxins in foods 6. To develop skills of the method development to the specific purpose;						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[CHEML3_U04] Plans and performs simple chemical experiments and analyses the results obtained.	Students develop the analytical procedure on the basis of the chemical properties of the compound, evaluate the reliability of the results and indicate their strengths and weaknesses.	[SU2] presentation/project/paper/ report [SU4] test/exam - oral or written
[CHEML3_K02] Works individually demonstrating initiative and independence of activity and cooperates in a team fulfilling various roles in it.	Students are able to find, choose and plan the use of suitable analytical techniques for the specific analytical problem while working in the teams.	[SK2] presentation/project/paper/ report
[CHEML3_W12] Characterises the basic principles of health and safety at work in a chemical laboratory; knows and describes the hazards associated with working with hazardous substances, ways to counteract these hazards and rules of conduct during an accident.	Student ocenia ryzyko, związane z procedurą laboratoryjną, na podstawie właściwości substancji chemicznych oraz zasad działania aparatury.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/ report
[CHEML3_W10] Enumerates and describes the basic aspects of the construction, operation and use of measuring apparatus and equipment used in experimental works in the field of chemistry and related sciences.	Students can explain the principles of different modern analytical techniques and their usefulness in certain analytical tasks.	[SW4] test/exam - oral or written
[CHEML3_U07] Prepares documented elaboration on a specific problem in the field of selected chemical and physical issues.	Students elaborate the results, obtained during the exercises, in the form of an laboratory report.	[SU2] presentation/project/paper/ report

Subject contents

Major groups of toxins in foods of different origin. Extraction and purification of toxins from food samples. Extraction techniques used and their limitations. Choosing the right analytical technique: basics of gas chromatography, liquid chromatography and mass spectrometry. Basics of calibration and validation. Limitations of analytical approaches in real-life scenarios.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Laboratory reports (120 min)	51.0%	40.0%
Short written test on each class (10 min)	51.0%	60.0%

Recommended reading

Basic literature	Materials will be available for students during the course.
Supplementary literature	Lack
eResources addresses	Adresy na platformie eNauczanie:

Example issues/ example questions/ tasks being completed

Work placement

Not applicable

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