



**KAPITAŁ LUDZKI**  
NARODOWA STRATEGIA SPÓJNOŚCI

Projekt współfinansowany przez  
Unię Europejską w ramach  
Europejskiego Funduszu  
Społecznego

**UNIA EUROPEJSKA**  
EUROPEJSKI  
FUNDUSZ SPOŁECZNY



<b>Course title</b>		<b>ECTS code</b>	
Food additives		13.3.0532	
<b>Name of unit administrating study</b>			
Faculty of Chemistry			
<b>Studies</b>			
<b>faculty</b>	<b>field of study</b>	<b>type</b>	pierwszego stopnia
Wydział Chemii	Chemia	<b>form</b>	stacjonarne
		<b>specjalty</b>	chemia żywności
		<b>specialization</b>	wszystkie
<b>Teaching staff</b>			
dr hab. Joanna Makowska, profesor uczelni			
<b>Forms of classes, the realization and number of hours</b>		<b>ECTS credits</b>	
<b>Forms of classes</b>		1	
Lecture		classes - 15 h	
<b>The realization of activities</b>		tutorial classes – 2 h	
classroom instruction		student's own work – 8 h	
<b>Number of hours</b>		Total: 25 h - 1 ECTS	
Lecture: 15 hours			
<b>The academic cycle</b>			
2024/2025 winter semester			
<b>Type of course</b>		<b>Language of instruction</b>	
obligatory		polish	
<b>Teaching methods</b>		<b>Form and method of assessment and basic criteria for evaluation or examination requirements</b>	
- multimedia-based lecture		<b>Final evaluation</b>	
- problem-focused lecture		Graded credit	
		<b>Assessment methods</b>	
		a written exam with test questions or/and with open questions (tasks)	
		<b>The basic criteria for evaluation</b>	
		<ul style="list-style-type: none"> <li>a positive note of the written test consisting of 15-20 test questions and open questions covering the issues listed in the program content of the lecture</li> </ul>	
<b>Method of verifying required learning outcomes</b>			
<b>Required courses and introductory requirements</b>			
<b>A. Formal requirements</b>			
Participation and obtaining credit in the following subjects: 1. Organic chemistry 2. Inorganic chemistry 3. Basics of human nutrition			
<b>B. Prerequisites</b>			
<ul style="list-style-type: none"> <li>Genetics (from the high school program),</li> <li>biochemistry (from the high school program),</li> <li>microbiology (from the high school program)</li> </ul>			
<b>Aims of education</b>			

Provide students with the latest expertise in EU law on additives, processing aids and their conditions of use;  
To familiarize students with the division of food additives and the influence of these additives on the human body.  
To acquaint students with the basics of GMO production methods and to explain the role of genetically modified organisms in the human economy.

**Course contents**

A. Issues of the lecture  
Basic legal regulations concerning substances added to food;  
Division of food additives in commercial food products;  
Possibilities and controversies in the use of chemical compounds in food;  
Food enrichment purposes; GMO- definitions, legal regulations and goals.  
GMO food.  
Labeling of GMO food.  
Activities of non-governmental organizations in the field of modified food.

**Bibliography of literature**

A. Literature required for the final completion of the course (passing the exam):  
A.1. used during classes  

- Maciej Taczanowski - Food law in terms of Poland's membership in the European Union Scientific and Technical Publishing House, December 2009- Food Chemistry, Volume 3
- Jan Gawęcki, Tomasz Roszkowski - Human nutrition and public health vol. 3 Ed. Gdańsk University of Technology, Gdańsk,
- Bednarski W., Fiedurka J. (ed.) 2007 - Basics of genetic engineering

A.2. studied independently by the student Scientific and Technical Publishing House, December 2009 - Food Chemistry, Volume 3 B. Supplementary literature  
Selected scientific publications in the field of the discussed subject

**The learning outcomes (for the field of study and specialization)**

K\_W03: explains to an advanced degree the relationship between the structure of matter and its observed properties;  
K\_W04: characterizes the methods of the analysis of chemical compounds; K\_W05: has advanced knowledge of the studied chemical specialty; K\_U03: selects the appropriate equipment and laboratory apparatus to conduct chemical experiments; K\_U08: presents facts from chemistry in an accessible way, using scientific language typical for chemical sciences; K\_U09: can learn independently; K\_K02: works individually, demonstrating initiative and independence of action, and works in a team taking various roles; K\_K03: sets the priorities in an appropriate manner for the implementation of the tasks set by himself and / or others;

**Knowledge**

- he/she knows the basic classification systems of substances added to food.
- he/she understands the issues and the advisability of using chemical compounds and natural origin in food.
- he/she knows the main legal regulations concerning additives in food.
- he/she knows the basic risks and benefits for the human body resulting from the presence of additional substances in food.
- he/she knows the methods of in vitro recombination DNA used to modify organisms

**Skills**

- student has the ability to define legal regulations (regulation of the Minister of Health of 2003 and resulting from the division adopted in documents from the European Union) regarding additives in food.
- student has the ability to classify food additives in various market groups of food products. - analyzes and verifies the purposefulness of food enrichment by food industry producers. - has a general knowledge of GMOs.
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- student analyzes and verifies the purposefulness of food enrichment by food industry producers.
- student has a general knowledge of GMOs.

**Social competence**

- student understands the social aspects of the practical application of acquired knowledge and skills and the related responsibility.
- student understands the need for lifelong learning, inspires and organizes the learning process of others.
- student interacts and works in a group, taking on various roles in it.
- student shows creativity in independent and team work.

## Contact

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