


**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>	
Chemistry in practice		13.3.0753	
<b>Name of unit administrating study</b>			
null			
<b>Studies</b>			
<b>faculty</b>	<b>field of study</b>	<b>type</b>	all
Faculty of Chemistry	Chemical Business	<b>form</b>	all
		<b>specialty</b>	all
		<b>specialization</b>	all
<b>Teaching staff</b>			
dr hab. Janusz Madaj, profesor uczelni			
<b>Forms of classes, the realization and number of hours</b>		<b>ECTS credits</b>	
<b>Forms of classes</b>		2	
Auditorium classes, Lecture		classes - 30 h	
<b>The realization of activities</b>		tutorial classes – 5 h	
classroom instruction		student's own work – 15 h	
<b>Number of hours</b>		Total: 50 h - 2 ECTS	
Auditorium classes: 15 hours, Lecture: 15 hours			
<b>The academic cycle</b>			
2023/2024 summer 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>	
- 15 h Auditorium classes - multimedia-based lecture		<b>Final evaluation</b>	
		Graded credit	
		<b>Assessment methods</b>	
		written test with open-ended questions, oral exam	
		<b>The basic criteria for evaluation</b>	
		The basic criteria for evaluation or exam requirements	
		<ul style="list-style-type: none"> <li>• positive assessment of the written exam consisting of 5-10 open questions covering issues mentioned in the course contents of the subject; answers to the questions will require solving tasks related to the saved learning outcomes; the grading scale will be adapted to the rules of the study regulations;</li> <li>• for students who have obtained a written exam from 50 to 30% of correct answers - an oral exam - a positive assessment of the answers to 3 questions ;</li> <li>• the condition to take the exam is to get credits from the auditorium classes</li> </ul>	
		Auditorium classes:	
		<ul style="list-style-type: none"> <li>• presentation of 1-2 presentations prepared on the basis of selected literature material, active participation in the group's work and discussion of the presented problems</li> </ul>	
<b>Method of verifying required learning outcomes</b>			
<b>Required courses and introductory requirements</b>			
<b>A. Formal requirements</b>			
none			
<b>B. Prerequisites</b>			
Basic knowledge in the field of general and organic chemistry			
<b>Aims of education</b>			

<p>Aims of education</p> <ul style="list-style-type: none"> <li>familiarize students with the issues mentioned in the lecture's program,</li> <li>acquainting students with the basic economic principles of the functioning of the chemical industry,</li> <li>developing the skills of critical evaluation and interpretation of the presented news and analysis of source texts.</li> </ul>	
<p><b>Course contents</b></p> <p>Course contents</p> <p>During the classes, students will be introduced to selected aspects of the chemical industry. Among them, they will be inform about the dyeing, food and biochemical industries. There will be known about technological processes and engineering techniques used in various branches of the chemical industry (various types of fermentations, techniques used in the metallurgical, electronic and biomedical industries). The economic issues of the chemical industry and its importance in the operation of the country's economy will be presented and discussed.</p>	
<p><b>Bibliography of literature</b></p> <p>Bibliography of literature</p> <p>Literature required to pass the course</p> <p>Ali El Ali Speight, Handbook of Industrial Chemistry – Organic Chemicals</p> <p>Extracurricular readings</p>	
<p><b>The learning outcomes (for the field of study and specialization)</b></p>	<p><b>Knowledge</b></p> <p>Knowledge</p> <ol style="list-style-type: none"> <li>defines and presents selected chemical processes and engineering methods in the chemical industry</li> <li>describes and illustrates selected industrial processes using chemical reactions</li> <li>understands the relationships and dependencies between the economy and the functioning of the chemical industry</li> </ol>
	<p><b>Skills</b></p> <p>Skills</p> <ol style="list-style-type: none"> <li>uses chemical terminology to the extent necessary to present (in written and oral form) the content of the subject</li> <li>predicts the course of selected industrial chemical reactions and the products of these transformations</li> <li>uses the basic analytical techniques used in the analysis of industrial products</li> <li>can indicate engineering techniques important in the chemical industry</li> <li>can indicate significant economic aspects of the chemical industry</li> </ol>
	<p><b>Social competence</b></p>
<p><b>Contact</b></p> <p>janusz.madaj@ug.edu.pl</p>	