

**Subject card**

<b>Subject name and code</b>	Technical drawing, PG_00080839						
<b>Field of study</b>	Chemical Business						
<b>Date of commencement of studies</b>	October 2024	<b>Academic year of realisation of subject</b>			2024/2025		
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>			Obligatory subject group in the field of study		
<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>	2	<b>ECTS credits</b>			3.0		
<b>Learning profile</b>	academic	<b>Assessment form</b>			credit		
<b>Conducting unit</b>	Faculty of Chemistry -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr inż. Paweł Mazierski				
	<b>Teachers</b>		dr inż. Paweł Mazierski				
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	0.0	0.0	45.0	0.0	0.0	45
	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>	45		8.0		22.0	75
<b>Subject objectives</b>	acquainting students with all issues mentioned in the program content of the subject teaching students how to make technical drawings to develop skills of critical assessment and interpretation of technical drawings and analysis of source texts						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[BCHINŻ_U08] Uses the chemical nomenclature and engineering terminology properly.	- uses terminology to present (in written and oral form) the content of the subject	[SU1] oral statement/conversation/discussion [SU8] observation of student's independent or team work
	[BCHINŻ_K02] Works individually demonstrating initiative and independence in actions, and effectively cooperates in a team, performing various roles in it.	- appreciates the need to be able to work in a team in accordance with its role in it - shows cautious criticism in receiving information, especially available in the mass media	[SK2] presentation/project/paper/report [SK8] observation of student's independent or team work
	[BCHINŻ_U02] Uses basic methods, techniques and tools in formulating and solving engineering tasks in the field of chemistry.	- uses the basic drawing techniques used in engineering graphics - can make a technical drawing	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report
	[BCHINŻ_K04] Demonstrates responsibility for the safety of her/his own and others' work.	- is aware of the need for honest and reliable work,	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[BCHINŻ_U01] On the basis of the acquired knowledge, identifies, analyses and solves engineering tasks and problems in broadly understood chemistry.	- knows the operation of devices based on their technical drawings - analyzes technical drawings, draws conclusions about the correctness of their implementation	[SU1] oral statement/conversation/discussion [SU2] presentation/project/paper/report [SU5] implementation of a problem task
	[BCHINŻ_K03] Independently sets or implements a set action plan specifying priorities for its implementation; critically assesses its progress.	- Understands the need for continuous education - is aware of the need for a critical analysis of own work	[SK1] oral statement/conversation/discussion [SK8] observation of student's independent or team work
	[BCHINŻ_W03] Describes the techniques of higher mathematics and IT tools necessary to describe and model chemical phenomena and technological processes.	- defines and presents normalized elements of technical drawing - describes, illustrates and explains the principles of orthographic projection - knows the principles of axonometric projection	[SW4] test/exam - oral or written [SW1] oral statement/conversation/discussion
	[BCHINŻ_W04] Describes the role of experiment and computer simulation in the design process of engineering issues.	- describes views and cross sections - understands the principles of dimensioning	[SW1] oral statement/conversation/discussion [SW3] text preparation/written work
Subject contents	<ul style="list-style-type: none"> <li>- normalized elements of technical drawing</li> <li>- rules of orthographic projections</li> <li>- views and cross sections</li> <li>- dimensioning</li> <li>- rules of axonometric projections</li>   <li>- technical drawings</li>   <li>- dimensional tolerances and fits</li>   <li>- construction connections</li> </ul>		
Prerequisites and co-requisites	A. Formal requirements Mathematics, physics, chemistry B. Prerequisites Basic knowledge of mathematics, physics, chemistry and computer use, the ability to use accessories to perform graphic works		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Test III	51.0%	20.0%
	Test II	51.0%	30.0%
	Test I	51.0%	30.0%
	Project 2 - drawing folder	51.0%	10.0%
	Project 1	51.0%	10.0%
Recommended reading	Basic literature	A.1. used during classes A.2. studied independently by the student	
	Supplementary literature	T. Dobrzański "Machine technical drawing" WNT W-wa, last editions	
	eResources addresses		

Example issues/ example questions/ tasks being completed	
Work placement	Not applicable

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