

Course title Rysunek techniczny / Technical drawing		ECTS code 13.3.0902	
Name of unit administrating study Faculty of Chemistry			
Studies			
Field of study	Type	Form	
Chemical Business	Bachelor / Engineer	Full-time studies	
Teaching staff mgr inż. Paweł Mazierski			
Forms of classes, the realization and number of hours		ECTS credits 3	
A. Forms of classes, in accordance with the UG Rector's regulations laboratory classes		classes - 45 h tutorial classes – 5 h student's own work – 25 h	
B. The realization of activities in-class learning		Total: 75 h - 3 ECTS	
C. Number of hours 45 h laboratory classes			
The academic cycle First year, summer semester			
Type of course obligatory		Language of instruction Polish	
Teaching methods Solving tasks Auditorium exercises with a multimedia presentation		Form and method of assessment and basic criteria for evaluation or examination requirements	
		A. Final evaluation, in accordance with the UG study regulations course completion (with a grade)	
		B. Assessment methods written exam with open questions and tasks	
		C. The basic criteria for evaluation or exam requirements Auditory exercises: • passing two written tests covering: (1) axonometric and orthographic projections, (2) cross-sections and dimensioning • negative evaluation of each test must be improved writing test correction	
Required courses and introductory requirements Mathematics, physics, chemistry Basic knowledge of mathematics, physics, chemistry and computer use, the ability to use accessories to perform graphic works			
Aims of education • 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			
Course contents - normalized elements of technical drawing - rules of orthographic projections - views and cross sections - dimensioning, - rules of axonometric projections, - technical drawings			

Bibliography of literature**A. Literature required to pass the course**

T. Dobrzański „Rysunek techniczny maszynowy” WNT W-wa, ostatnie edycje

B. Extracurricular readings**Knowledge**

Student:

1. defines and presents normalized elements of technical drawing
2. describes, illustrates and explains the principles of orthographic projection
3. describes views and cross sections
4. understands the principles of dimensioning
5. knows the principles of axonometric projection
6. can make a technical drawing

Skills

Student:

1. uses terminology to present (in written and oral form) the content of the subject
2. uses the basic drawing techniques used in engineering graphics
3. knows the operation of devices based on their technical drawings
4. analyzes technical drawings, draws conclusions about the correctness of their implementation

Social competence

Student:

1. Understands the need for continuous education,
2. is aware of the need for honest and reliable work,
3. appreciates the need to be able to work in a team in accordance with its role in it,
4. is aware of the need for a critical analysis of own work
5. shows cautious criticism in receiving information, especially available in the mass media