

<b>Course title</b> Podstawy aparatury chemicznej / Basics of chemical apparatus		<b>ECTS code</b> 13.3.0896	
<b>Name of unit administrating study</b> Faculty of Chemistry			
<b>Studies</b>			
<b>Field of study</b>	<b>Type</b>	<b>Form</b>	
Chemical Business	Bachelor / Engineer	Full-time studies	
<b>Teaching staff</b> Prof. dr hab. inż. Adriana Zaleska-Medynska			
<b>Forms of classes, the realization and number of hours</b>		<b>ECTS credits</b> 4	
<b>A. Forms of classes, in accordance with the UG Rector's regulations</b> lecture, auditorium classes, laboratory classes		classes - 45 h tutorial classes – 15 h student's own work – 40 h	
<b>B. The realization of activities</b> in-class learning		Total: 100 h - 4 ECTS	
<b>C. Number of hours</b> 45 h (15 h lecture, 15 h auditorium classes, 15 h laboratory classes)			
<b>The academic cycle</b> Second year, winter semester			
<b>Type of course</b> obligatory		<b>Language of instruction</b> Polish	
<b>Teaching methods</b>  Auditorium exercises: project implementation Laboratory exercises: tests, practical work and presentation of results in the form of a written report Lecture: written exam with open questions		<b>Form and method of assessment and basic criteria for evaluation or examination requirements</b>	
		<b>A. Final evaluation, in accordance with the UG study regulations</b> lecture – exam auditorium classes – course completion (with a grade)	
		<b>B. Assessment methods</b> - lecture: written exam with open questions - auditorium exercises: project implementation - laboratory exercises: tests, practical work and presentation of results in the form of a written report	
		<b>C. The basic criteria for evaluation or exam requirements</b>	
<b>Required courses and introductory requirements</b> Technical Drawing, mathematics, physics			
<b>Aims of education</b> • familiarize students with all the issues mentioned in the lecture's program content • developing skills of critical evaluation and interpretation of the work parameters of the discussed devices and analysis of source texts			
<b>Bibliography of literature</b>			
<b>A. Literature required to pass the course</b> Błasiński H., Młodziński B. - Aparatura przemysłu chemicznego, WNT 1983, Pikoń J., - Aparatura chemiczna, PWN 1978 Bieszk H., Urządzenia do realizacji procesów mechanicznych w technologii chemicznej, Wyd. PG. 2001, Bieszk H., Urządzenia do realizacji procesów cieplnych w technologii chemicznej, Wyd. PG. 2010.			
<b>B. Extracurricular readings</b>			

**Knowledge**

Student:

1. defines and presents the construction of typical technological devices
2. describes, illustrates and explains their functioning
3. characterizes the basic parameters of their work
4. understands the relationships and dependencies between their operation and construction

**Skills**

Student:

1. uses terminology to present (in written and oral form) the content of the subject
2. knows the operation of devices based on their graphic schemes
3. uses the basic computational techniques used in designing
4. analyzes the results of calculations, draws conclusions about the correctness of their operation

**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