

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Chemistry</b>		Code <b>1011101231010700133</b>
Field of study <b>Engineering Management - Full-time studies -</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>2 / 3</b>
Elective path/specialty <b>-</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>elective</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: <b>30</b> Classes: <b>15</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>4</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art <b>technical sciences</b> <b>Technical sciences</b>		ECTS distribution (number and %) <b>4 100%</b> <b>4 100%</b>
<b>Responsible for subject / lecturer:</b>  dr hab. inż Bogdan Wyrwas email: bogdan.wyrwas@put.poznan.pl tel. 616652706 Faculty of Chemical Technology ul. Berdychowo 4, 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	General chemistry on a high school level
2	<b>Skills</b>	Basic fluency in English language
3	<b>Social competencies</b>	Ability to work in a team
<b>Assumptions and objectives of the course:</b> Assumptions and objectives of the course: The aim of the course is to gain the knowledge from the area of chemical foundations of material science i.e. metal corrosion, synthetic polymers and lubricants		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b> 1. Understanding of mechanism of metal corrosion and methods of corrosion prevention. Understanding of polymers structure and link between polymers structure and its properties. - [K04_Inz_AW02, K07_Inz_AW05]		
<b>Skills:</b> 1. Recognition of chemical formulas and language of chemical reactions - [K01_InzAU2, K01_InzAU7]		
<b>Social competencies:</b> 1. Ability to communicate in English language in the area of metal corrosion and polymers. Ability to communicate with chemists - [K01_InzAK01]		
<b>Assessment methods of study outcomes</b>		
Current assessment during classes.		
<b>Course description</b>		

<p>Corrosion of metals. Electrochemical mechanism of corrosion. Anodic and cathodic reactions. Electrolyte. Protection of metals against corrosion. Coatings. Metallic coatings. Protectors. Cathodic protection. Anodic protection. Corrosion inhibitors. Chemical structure of polymers. Linear and cross-linked polymers. Termoplasticity of polymers. Chemical structures of popular polymers. Language of chemistry as an element of engineer knowledge.</p> <p>Teaching methods:                  Lecture - informative lecture                  Exercises - exercises method</p>		
<p><b>Basic bibliography:</b>                  1. I. Czarniecki, T. Broniewski, O. Henning, Chemia w budownictwie, Arkady, Warszawa, 1994; rozdziały: Chemia polimerów i Korozja materiałów metalicznych</p>		
<p><b>Additional bibliography:</b></p>		
<p><b>Result of average student's workload</b></p>		
<p><b>Activity</b></p>	<p><b>Time (working hours)</b></p>	
1. Lecture	30	
2. Classes	15	
3. Consultations	10	
4. Preparation for classes	25	
5. Preparation for assessment of classes	6	
6. Preparation for assessment of lectures	10	
7. Final assessment of lectures	2	
8. Final assessment of classes	2	
<p><b>Student's workload</b></p>		
<p><b>Source of workload</b></p>	<p><b>hours</b></p>	<p><b>ECTS</b></p>
Total workload	100	4
Contact hours	59	2
Practical activities	15	1