STUDY MODULE DESCRIPTION FORM

Name of the module/subject		Code
Chemistry		**1011105231011100133**
Field of study	Profile of study (general academic, practical)	Year /Semester
Engineering Management - Part-time studies -	**(brak)**	**2 / 3**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**elective**
Cycle of study:	Form of study (full-time,part-time)	
First-cycle studies	**part-time**	
No. of hours		No. of credits
Lecture: **10** Classes: **10** Laboratory: **-** Project/seminars: **-**		**4**
Status of the course in the study program (Basic, major, other)	(university-wide, from another field)	
(brak)	**(brak)**	
Education areas and fields of science and art		ECTS distribution (number and %)

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	General chemistry on a high school level
2	**Skills**	Basic fluency in English language
3	**Social competencies**	Ability to work in a team

Assumptions and objectives of the course:

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

Study outcomes and reference to the educational results for a field of study

Knowledge:

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]

Skills:

1. Recognition of chemical formulas and language of chemical reactions - [K01_InzAU2, K01_InzAU7]

Social competencies:

1. Ability to communicate in English language in the area of metal corrosion and polymers. Ability to communicate with chemists - [K01_InzAK01]

Assessment methods of study outcomes

Current assessment during classes.

Course description

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.

Teaching methods:

Lecture - informative lecture
Exercises - exercises method

Basic bibliography:

1. I. Czarnecki, T.Broniewski, O.Henning, Chemia w budownictwie, Arkady, Warszawa, 1994; rozdziały: Chemia polimerów i Korozja materiałów metalicznych

Additional bibliography:

Result of average student's workload

Activity	Time (working hours)
1. Lecture	10
2. Classes	10
3. Consultations	8
4. Preparation for classes	18
5. Preparation for assessment of classes	5
6. Preparation for assessment of lectures	5
7. Final assessment of lectures	2
8. Final assessment of classes	2

Student's workload

Source of workload	hours	ECTS
Total workload	60	4
Contact hours	32	2
Practical activities	10	1