AKADEMIA SZTUK PIĘKNYCH
IM. EUGENIUSZA GEPPERTA
WE WROCŁAWIU

Course name	General Chemistry with The Elements of Physics
Entity running the course	Faculty of Ceramics and Glass / Department of Conservation and Restoration of Ceramics and Glass
Entity for which the course has been prepared	
Course type	Core course, compulsory course.
Year of study/semester; Type of studies	Year II, semester 3 and 4, full time master's degree studies
ECTS credits	Semester 3: 2 ECTS credits Semester 4: 1 ECTS credits
Academic tutor	D.Sc. Zbigniew Burski
Aim of the course	The aim of the course is to make the student understand the use of inorganic and organic compounds in the conservation and restoration of glass and ceramics.
Prerequisites	The I year of the study passed.
Learning outcomes:	
– *knowledge*	The student has an extended knowledge of the physico-chemical phenomena occurring in glass and ceramics. They know the basic concepts and laws of chemistry. They know the properties of mineral binders. They know what the organic compounds properties are. They know the most important properties of plastics, stone, glass and ceramics, including corrosion processes.
– *skills*	The student can apply their knowledge in analyzing the corrosion phenomena in glass and ceramics. They can compare the properties of organic and inorganic compounds. They can analyze basic chemical reactions. They are able to point out corrosive destruction in plastics, stone, glass and ceramics.
– *personal and social competence*	The student initiates work in a team. They put the acquired knowledge into practice. They understand the need for extending their knowledge.
Course content	Fundamental concepts and laws of chemistry. Chemical reactions. Atomic structure. Chemical bonds. The stoichiometry of chemical equations. States of matter concentration - gas, liquid /dissociation, pH, hydrolysis, hydration, solubility product/, solid /crystallographic systems, polymorphism, isomorphism, actual crystals /. Physical and chemical properties of mineral binders. Chemistry of the organics /aliphatic or aromatic/. Polymers. The properties and corrosion of plastics, stone, glass and ceramics.
Course form and number of course hours	Lectures - 30 hours/sem.
Assessment methods and criteria	Semester 3: 100% active participation in classes Semester 4: 25% active participation in classes, 75 % pass – in a writing form.
Assessment type	Semester 3: pass. Semestr 4: graded pass
Literature	1. I.Barycka, K.Skudlarski, „Podstawy chemii" */Fundamentals of chemistry/* 2. L.Jones, P. Atkins, „Chemia ogólna" */General chemistry/* 3. L.Czarnecki i inni, „Chemia w budownictwie" */Chemistry in architecture/*
Teaching aids	
Language of instruction	Polish