Course title: **Chemistry and society**					
Specialty	**Semester**	**Number of ECTS**	**Number of hours in the class**	**Form**	
Foreign students	**summer**	**2**	**30**	**Lecture**	

Name of lecturer: Prof. Marek Kwiatkowski

Objective of the course (expected learning outcomes and competences to be acquired)

Making students familiar with the multi-aspect relations between the chemistry content of their studies and the phenomena and problems they know from their everyday experience, as well as from their general knowledge about the contemporary world.

Prerequisites:Completed courses of General chemistry, Inorganic chemistry, Organic chemistry and Physical chemistry.

Teaching methods: Lecture with multimedia presentation

Course contents

Modern construction materials, their structure-properties relations: metals and alloys, corrosion of metals, plastics, their effect on the society and environment, materials for building construction, coatings. Chemical industry: economics of industrial processes, yield-rate compromise, raw materials and products. Energy sources: fossil fuels and consequences of their use for the society and environment. Chemistry in agriculture: soils, fertilizers, pesticides, effects of modern agriculture on the society and environment. Chemistry of food: energetic value, nutrients, composition of the most important foods, chemical reactions in the kitchen. Chemistry of stimulants: alcoholic drinks, recreational drugs. Chemistry of hygiene: cleaning products, cosmetics.

Recommended reading:

1. M. M. Jones, D. O. Johnston, J. T. Neterville, J. M. Wood, M. D. Joesten "Chemistry and Society", Saunders College Publishing, Philadelphia 1987.
2. K. Waldron "The Chemistry of Everything", Pearson/Prentice Hall, Upper Saddle River 2007.
3. Materials provided by the course instructor

Assessment methods:

- Written mid-term and end-term multiple choice tests

Language of instruction: English