

<b>Course title</b> Wykład dyplomowy - Chemia a społeczeństwo/Community and chemistry		<b>ECTS code</b> 13.3.0592	
<b>Name of unit administrating study</b>  <b>Faculty of Chemistry</b>			
<b>Studies</b>			
<b>Field of study</b>	<b>Type</b>	<b>Form</b>	
Chemistry	Bachelor	Full-time studies	
<b>Teaching staff</b> Prof. dr hab. inż. Marek Kwiatkowski			
<b>Forms of classes, the realization and number of hours</b>		<b>ECTS credits</b>	
<b>A. Forms of classes, in accordance with the UG Rector's regulations</b> lecture		lecture 30 h tutorial classes 5 h student's own work 15 h TOTAL: 50 h - 2 ECTS	
<b>B. The realization of activities</b> In-class learning			
<b>C. Number of hours</b> lecture 30 h			
<b>The academic cycle</b> 2021/2022 summer semester			
<b>Type of course</b> obligatory		<b>Language of instruction</b> Polish	
<b>Teaching methods</b> Lecture with a multimedial presentation		<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> Course completion (with a grade)	
		<b>B. Assessment methods</b> Two multiple choice tests, one in the middle and one at the end of the semester.	
		<b>The basic criteria for evaluation</b> More than 50% points from every test.	
<b>Required courses and introductory requirements</b> <b>A. Formal requirements</b> none <b>B. Prerequisites</b> General Chemistry, Inorganic Chemistry, Organic Chemistry, Physical Chemistry.			
<b>Aims of education</b> To explain the students how the acquired chemistry knowledge is related to phenomena and problems they know from their personal experience and knowledge about the contemporary world.			
<b>Course contents</b>  Chemistry of foodstuffs and cooking. Water – properties, natural waters, composition and properties of common drinks. Alcoholic beverages and stimulants – properties, chemistry, preparation. Chemistry of cleaning agents and cosmetics. Chemistry in agriculture: soil, fertilizers, pesticides. Chemical industry: manufacturing of bulk chemicals, raw material sources, economics of chemical production. Production of energy, fossil fuels. Elements of environmental chemistry.			

**Bibliography of literature**

- A. Literature required to pass the course**
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. Handouts prepared by the author.
- B. Extracurricular readings**

**Knowledge**

Lists main and components of foodstuffs, beverages, stimulants, cleaning agents and cosmetics, reflects on their function, describes their chemical and biochemical transformations. Describes the role of chemistry in agriculture, manufacturing industry and energy production. Reflects on impact of chemistry on the development of civilization as well as on the natural environment.

**Skills**

Predicts the relationship between the molecular structure of chemicals and their properties and potential application, explaining the use of particular components in foodstuffs, beverages, stimulants, cleaning agents and cosmetics. Using professional terminology, argues how the energy production, chemical industry and agriculture affect the world, showing the advantages and disadvantages.

**Social competence**

Appreciates the necessity to understand how chemistry affects our everyday life. Finds this relationship as important in teaching process.