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| **Study program:** Master studies Chemistry | | | | |
| **Course title:** Chemistry in everyday life (H242C) | | | | |
| **Name of lecturer/lecturers:** Ivan R. Palić | | | | |
| **Type of course: elective** | | | | |
| **Number of ECTS allocated: 7** | | | | |
| **Course objectives**  The aim of this course is to acquire knowledge about the diversity of structure, mutual interactions and properties of molecules, especially those that have a wide distribution, practical application, an important role in the functioning of living organisms or interesting physico-chemical characteristics. The material covered aims to highlight the interesting aspects of chemistry and to encourage students' curiosity and thinking about science and nature. The selected compounds/mixtures will be considered through a scientific-popular view and from a multidisciplinary aspect. | | | | |
| **Course outcomes**  Upon successful completion of this course, students, future professors and teachers will acquire knowledge that will enable them to present basic concepts related to the properties, structure and variety of atoms and compounds in a popular, interesting and chemically correct way. In this way, they will be able to bring the subject of chemistry much better and more efficiently to the students, and bring it down from the abstract to the practical and tangible level. | | | | |
| **SYLLABUS**  *Lectures*  Introductory terms: chemical elements and atoms, chemical bonds and compounds, organic molecules, structures and formulas, non-covalent compounds, mixtures, solid, liquid and gaseous substances; Compounds and mixtures of simple structure, i.e. composition; Smog, environmental pollution and acid rain; Fuels: petroleum gas, gasoline, coal; Alcohols and acids; Fats, oils and margarine; Soaps and other detergents; Polymers and plastics and rubber; Polyesters and acrylic resins, nylon; Hair, fur and silk; Sugar, starch and cellulose; Taste, smell and pain: sweet, sour, bitter, spicy; Food products: meat and baking, fruit; Plants and essential oils; The smell of animals; Sight and color; Analgesics, psychoactive substances, dangerous compounds.  *Laboratory work*  Other forms of teaching  Obtaining selected simple compounds; Examination of chemical and organoleptic properties of previously synthesized molecules; Three-dimensional structure of synthesized molecules; Comparison of the structure and properties of synthesized molecules. | | | | |
| **References**   1. P. Atkins, *Atkins' molecules*, Cambridge University Press, 2003. | | | | |
| **Active teaching classes** | **Lectures 45** | | **Laboratory work 30** | |
| **Teaching mode** | | | | |
| **ASSESSMENT METHODS AND CRITERIA (Max 100 points)** | | | | |
| **Pre exam duties** | **Points** | **Final exam** | | **Points** |
| Activity during lectures | 5 | Written examination | |  |
| Practical teaching | 5 | Oral examination | | 30 |
| Teaching colloquia | 60 |  | |  |