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| **Study program:** Doctoral academic studies **-** Chemistry |
| **Course title:** Atomic Spectroscopy (H324C) |
| **Name of lecturer/lecturers:** Jelena M. Mrmošanin |
| **Type of course:** elective |
| **Number of ECTS allocated:** 10 |
| **Course objectives** The student acquires knowledge about atomic spectroscopy, the way of formation and structure of atomic spectra, types of spectra and probability of quantum transitions, as well as understands the importance and application of atomic spectroscopy in analysis. |
| **Course outcomes** After this course, the student will be able to:- understand how atomic spectra are formed,- apply the acquired knowledge in further experimental work,- choose the optimal method of analysis in accordance with the practical challenge of analyzing real samples,- understand and interpret obtained results. |
| **SYLLABUS***Lectures*Introduction to atomic spectroscopy. Application of atomic spectroscopy in analysis. Kinds of spectra, shape and width of spectral lines. Spectral line broadening, Doppler broadening spectral lines. Probability of quantum transitions, intensity of emission and absorption lines. Methods of excitation of atoms. Application of atomic spectroscopy in qualitative and quantitative analysis. |
| **References**1. A. A. Jovanović, Atomska spektroskopija (spektrohemijski aspekt), Fakultet za Fizičku hemiju, Beograd, 2006.2. J. W. Robinson (editor), Practical Handbook of Spectroscopy, CRC Press, Boka paxon, 1991.3. J. M. Hollas, Modern Spectroscopy, John Wiley & Sons, Chichester, 2004. |
| **Active teaching classes** | **Lectures:** 105 | **Laboratory work:** / |
| **Teaching mode:** lectures, seminar, consultations |
| **ASSESSMENT METHODS AND CRITERIA (Max 100 points)** |
| activity during the lecture - 5 points; seminar - 50 points; oral exam - 45 points |