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| **Study program:** Chemistry (PhD) |
| **Course title: Modern electroanalytical methods of analysis (H333C)** |
| **Name of lecturer/lecturers: Milan B. Stojković** |
| **Type of course: elective** |
| **Number of ECTS allocated 10** |
| **Course objectives****Acquisition of new knowledge in the field of electrochemical sensors and ion selective electrodes. Training****students for a more complete understanding and solving specific problems. Application of electroanalytical****method in the analysis of real samples.** |
| **Course outcomes****The student can:****-correctly select the appropriate sensor method in the analysis of a real and complex sample.****-properly handles analytical equipment (sensors and electrodes).****- perform proper sensor calibration and ion selective electrode** |
| **SYLLABUS***Lectures**Types of electrochemical sensors and ion selective electrodes. Principles of work. Analytical application.**Sensor calibration. Selectivity, detection limit, response time. Automation with help of microcontroller. Connection of sensors in an integrated system. Continuous monitoring of parameters.**Use of the Software* |
| **References**1. С. Митић, Електроаналитичка хемија, ПМФ, Ниш, 2008. 2. C.D. Kohl, T. Wagner, Gas Sensing Fundamentals, Springer-Verlag Berlin Heidelberg 2014. 3. A.J. Bard, L.R. Faulkner, Electrochemical Methods, Fundamentals and Applications, Wiley, 2001. |
| **Active teaching classes** | **Lectures 105** | **Laboratory work** |
| **Teaching mode:** lectures, project teaching, seminar, case studies |
| **ASSESSMENT METHODS AND CRITERIA (Max 100 points)** |
|  seminar work – 40 points; oral exam - 60 points |