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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 | | |