|  |
| --- |
|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  |  |
| **GENERAL INFORMATION** |
| Study program  | **Chemistry** |
| Study Module (if applicable) | Chemistry |
| Course title | Modern Electroanalytical Methods |
| Level of study | [ ] Bachelor [x]  Master’s [ ]  Doctoral |
| Type of course | [x]  Obligatory [ ]  Elective |
| Semester  |  [ ]  Autumn [x] Spring |
| Year of study  | I |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Milan Stojkovic |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Introduction with high selective and high sensitive modern electroanalytical methods and application in real samples analysis* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Electroanalytical methods. Electrochemical sensors. Ion-selective electrodes. Selectivity, detection limit, response time. Solid membrane electrodes. Liquid membrane electrodes. Glass electrode. Biosensors. Voltammetry and polarography. Voltammetry with linear potential change. Voltagrams. Classical polarography. Dropping mercury electrode. Ilkovich equation of diffusion current. Heyrovsky-Ilkovich equation of polarographic waves. Hydrodynamic voltammetry. Amperometric titration. Pulse polarography. Differential pulse polarography. Modern voltammetric methods.** |
| **LANGUAGE OF INSTRUCTION** |
| [x] Serbian (complete course) [ ]  English (complete course) [ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)[ ] Serbian with English mentoring [ ] Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **ASSESSMENT METHODS AND CRITERIA** |
| **Pre exam duties** | **Points** | **Final exam** | **points** |
| **Activity during lectures** | **5** | **Written examination** | **20** |
| **Practical teaching** | **25** | **Oral examination** | **20** |
| **Teaching colloquia** | **30** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |