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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Sciences and Mathematics  |
| **GENERAL INFORMATION** |
| Study program  | **Physics** |
| Study Module (if applicable) | Applied physics  |
| Course title | Plasma processing of materials  |
| Level of study | [ ] Bachelor [x]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [x] Spring |
| Year of study  | second |
| Number of ECTS allocated |  |
| Name of lecturer/lecturers | Saša Gocić |
| Teaching mode |  [x] Lectures [ ] Group tutorials [x]  Individual tutorials [x] Laboratory work [x]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| The main goal of this course is to improve student’s understanding of the plasma processing of materials. Different kinds of non-equilibrium plasma sources will be examined through a theoretical work accompanied by examples from scientific papers. Also, the main technology based on plasma applications will be introduced. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Glow discharge, corona, RF plasma, capacitively and inductively coupling, Arc discharge; Plasma interactions with surfaces; The formation of plasma on the surface; Deposition (CVD, PECVD, PVD); Application of thin films; Cleaning, oxidation, hardening the surface; The basic processes of growth; implantation; Plasma etching; Applications in microelectronics; Basics of plasma diagnostics. |
| **LANGUAGE OF INSTRUCTION** |
| [ ] Serbian (complete course) [ ]  English (complete course) [ ]  Other \_\_\_\_\_\_\_\_\_\_\_\_\_ (complete course)[x] Serbian with English mentoring [ ] Serbian with other mentoring \_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **ASSESSMENT METHODS AND CRITERIA** |
| **Pre exam duties** | **Points** | **Final exam** | **points** |
| **Activity during lectures** | **10** | **Written examination** |  |
| **Practical teaching** | **30** | **Oral examination** | **40** |
| **Teaching colloquia** | **20** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |