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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  Master’s  Doctoral | | |
| Type of course | | | | Obligatory  Elective | | |
| Semester | | | | Autumn Spring | | |
| Year of study | | | | second | | |
| Number of ECTS allocated | | | |  | | |
| Name of lecturer/lecturers | | | | Saša Gocić | | |
| Teaching mode | | | | Lectures Group tutorials  Individual tutorials  Laboratory work  Project work  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)  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** | | | | | | |