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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of technology |
| **GENERAL INFORMATION** |
| Study program  | **Chemical technologies** |
| Study Module (if applicable) |  |
| Course title | Application of specific software in process engineering |
| Level of study | [ ] Bachelor [x]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [x]  Autumn [ ] Spring |
| Year of study  | I |
| Number of ECTS allocated | 6 |
| Name of lecturer/lecturers | Sreten Stojanovic |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [x]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *Training students for using software package Matlab and corresponding toolboxes for the purposes of modelling, identification and optimization of technological processes.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Basis of Matlab. M-Files and M-functions. The equations and numerical computations. Symbolic math toolbox. Symbolic variables, expressions and functions. Equations and symbolic computations. The simulation of dynamic systems by using Simulink. Optimization toolbox. Types of optimization, criteria and constraints. Solvers for optimization. System identification toolbox. Parametric models.** |
| **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** |  |
| **Practical teaching** | **20** | **Oral examination** | **30** |
| **Teaching colloquia** | **45** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |