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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Technology |
| **GENERAL INFORMATION** |
| Study program  | **International Material and Energy Flow Management**  |
| Study Module (if applicable) |  |
| Course title | Engineering principles of sustainable water and energy management |
| Level of study | ☐Bachelor ☒ Master’s ☐ Doctoral |
| Type of course | ☒ Obligatory☐ Elective |
| Semester  | ☒ Autumn ☐Spring |
| Year of study  | 5st |
| Number of ECTS allocated | 4 ECTS |
| Name of lecturer/lecturers | Ljiljana Takić, Marija Stojanović Krasić  |
| Teaching mode | ☒Lectures ☐Group tutorials ☐ Individual tutorials☐Laboratory work ☐ Project work ☒ Seminar☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Students gain the necessary knowledge of sustainable water and energy management. The aim of the course is that students master the principles of integrated water resource management (IWRM) strategies, basic principles of energy systems and energy system design. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Lectures:**Introduction to global water problems. Water quality parameters and standards. Water treatment technology and distribution. Introduction to waste-water treatment. The Danube River basic management plan International water –related policies. Cyclic processes for energy conversion and their technical outline. Technical Principles of Conventional Power Plants. Electrical power generation**.** Electric power systems. Visions for possible future power supply systems. |
| **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** | **40** | **Written examination** |  |
| **Practical teaching** |  | **Oral examination** | **60** |
| **Teaching colloquia** |  | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |