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|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | **Faculty of Civil Engineering and Architecture** |
| **GENERAL INFORMATION** |
| Study program  | Architecture |
| Study Module (if applicable) |  |
| Course title | BIOCLIMATIC ARCHITECTURE 1 |
| Level of study | Integrated studies  |
| Type of course | Obligatory  |
| Semester  | Spring |
| Year of study  | 3rd  |
| Number of ECTS allocated | 3 |
| Name of lecturer/lecturers | Miomir S. Vasov |
| Teaching mode | Lectures Seminar |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Familiarize students with issues important for the design and engineering in the context of bioclimatic architecture, energy-efficient construction and rational use of energy resources. |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| Qualifying students for detection and analysis of bioclimatic and environmental performances of the buildings. Course content: Green building, Ecological Architecture. A brief history of the development and definition of concepts in the field of bioclimatic, ecological, solar and energy-efficient architecture, Bioclimatic elements in the urban planning and design, Renewable energy, Passive solar systems, Specific aspects of systems and components for passive solar operation: direct/indirect intervention, green roofs and walls, Trombe wall, a greenhouse, Elements for shading and structural systems for protection from the sun, Specific aspects of systems and components for passive cooling and ventilation, Active solar systems, Specific aspects of systems and components for active solar intervention: thermal solar receivers, photovoltaic solar receivers, heat pumps, Principles of Passive Houses, Green building - application of traditional and new ecological materials, Examples of the application of bioclimatic principles in the architectural and structural design of buildings. |
| **LANGUAGE OF INSTRUCTION** |
| Serbian (complete course)  |
| **ASSESSMENT METHODS AND CRITERIA** |
| **Pre exam duties** | **Points** | **Final exam** | **points** |
| **Activity during lectures** | **5** | **Written examination** | **40** |
| **Practical teaching** | **5+10** | **Oral examination** | **20** |
| **Teaching colloquia** | **20** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |