|  |
| --- |
|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Science and Mathematics |
| **GENERAL INFORMATION** |
| Study program  | **Computer Science** |
| Study Module (if applicable) |  |
| Course title | Introduction to Software engineering |
| Level of study | ☒Bachelor ☐ Master’s ☐ Doctoral |
| Type of course | ☒ Obligatory ☐ Elective |
| Semester  | ☒ Autumn ☐Spring |
| Year of study  | 1 |
| Number of ECTS allocated | 7 |
| Name of lecturer/lecturers | Rancic Svetozar |
| Teaching mode |  ☒Lectures ☒Group tutorials ☐ Individual tutorials ☐Laboratory work ☐ Project work ☐ Seminar ☐Distance learning ☐ Blended learning ☐ Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| Acquisition of sofrware enngineering knowadge, application of theory, knowledge and practice purposed for efficient production of software system, which satisfy specifications and customer requests |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **Principals of software engineering. Collection and analysis of customer requests. Design, construction, testing and maintenance. Software modelling and an introduction to UML: Basic elements of UML diagrams, development with UML. Modelling the structure and behaviour of software. Object-oriented analysis using UML. Analysis, architecture and design of classes. Design Patterns: Introduction to design patterns, their importance and applicability. Introduction to basic forms. User functions and user oriented design. Introduction to client - server architecture and client - server systems using UML, with an emphasis on class diagrams and state charts. Design Software: General principles of design: decomposition, bonding, cohesion, reuse, portability, flexibility. The evaluation of the design. Introduction to software testing and software project management. Implement the design using appropriate data structures, environments and APIs. Analysis, design and programming of simple applications.**  |
| **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** | **0** | **Written examination** | **25** |
| **Practical teaching** | **25** | **Oral examination** | **25** |
| **Teaching colloquia** | **25** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |