|  |
| --- |
|  **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty**  | Faculty of Sciences and Mathematics |
| **GENERAL INFORMATION** |
| Study program  | Computer Science |
| Study Module (if applicable) |  |
| Course title | Numerical Methods 2 |
| Level of study | [x] Bachelor [ ]  Master’s [ ]  Doctoral |
| Type of course | [ ]  Obligatory [x]  Elective |
| Semester  |  [ ]  Autumn [x] Spring |
| Year of study  | 3rd |
| Number of ECTS allocated |  |
| Name of lecturer/lecturers | Marko Miladinovic |
| Teaching mode |  [x] Lectures [ ] Group tutorials [ ]  Individual tutorials [x] Laboratory work [ ]  Project work [ ]  Seminar [ ] Distance learning [ ]  Blended learning [ ]  Other |
| **PURPOSE AND OVERVIEW (max. 5 sentences)** |
| *The purpose of this course is to learn several numerical methods which comes as a continuation of the material from the course numerical methods 1. After the acquisition of knowledge from previous course student will be able to attend and learn methods from this course. The topics which are covered by this course are numerical methods in linear algebra, numerical interpolation, numerical differentiation and integration.* |
| **SYLLABUS (brief outline and summary of topics, max. 10 sentences)** |
| **In this course several groups of numerical methods will be studied. This course naturally comes as a continuation of the course numerical methods 1. This course covers numerical methods in linear algebra such as Gauss, Gauss-Jordan methods for solving system of linear equations, LU and Cholesky factorization, iterative methods such as Jacobi and Gauss-Seidela method. Additionally, Interpolation algorithms such as Lagrange and Newton interpolation will be studied. Also, Numerical differentiation and integration will be considered as well. Practical examination will be carried out in the programming package MATHEMATICA.** |
| **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** | **10** | **Written examination** | **25** |
| **Practical teaching** |  | **Oral examination** | **40** |
| **Teaching colloquia** | **25** | **OVERALL SUM** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |