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| **UNIVERSITY OF NIŠ** |
| **Course Unit Descriptor** | **Faculty** | Faculty of Mechanical Engineering |
| **GENERAL INFORMATION** |
| Study Program | **Mechanical Engineering** |
| Study Module (if applicable) | - |
| Course Title |  Application of finite element method |
| Level of Study | ☒ Bachelor | ☐ <Master’s | ☐ Doctoral |
| Type of Course | ☐ Obligatory | ☒ Elective |
| Semester | ☐ Autumn | ☒ Spring |
| Year of Study | III |
| Number of ECTS Allocated | 6 |
| Name of Lecturer/Lecturers | Nikola D. Korunović |
| Teaching Mode | ☒ Lectures | ☒ Group tutorials | ☐ Individual tutorials |
| ☒ Laboratory work | ☒ Project work | ☒ Seminar |
| ☐ Distance learning | ☐ Blended learning | ☐ Other |
| **Purpose and Overview (max. 5 sentences)** |
| *Students should learn the techniques for application of finite element method (FEM) in structural static, dynamic and thermal analysis, with accent to finite element model building.* |
| **Syllabus (brief outline and summary of topics, max. 10 sentences)** |
| * *Introduction to FEM, Basic elements of a FE model*
* *The process of finite element analysis (FEA), detailed description of phases in FEA*
* *Types of finite elements and basic formulations*
* *Linear structural analysis: modeling, errors and accuracy*
* *Thermal analysis*
* *Examples from engineering practice*
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| **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** | **10** | **Written Examination** | **40** |
| **Practical Teaching** | **30** | **Oral Examination** | **0** |
| **Teaching Colloquia** | **20** | **Overall Sum** | **100** |
| **\*Final examination mark is formed in accordance with the Institutional documents** |