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 ☒ Laboratory work ☐ Distance learning	☒ Group tutorials ☒ Project work ☐ Blended learning	☐ Individual tutorials ☒ Seminar ☐ 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*

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**			