UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION	
Study Program	Mechanical Engineering
Study Module (if applicable)	–
Course Title	Virtual Product Development
Level of Study	☐ Bachelor ☐ Master's ☒ Doctoral
Type of Course	☐ Obligatory ☒ Elective
Semester	☐ Autumn ☒ Spring
Year of Study	I
Number of ECTS Allocated	10
Name of Lecturer/Lecturers	Milčić S. Dragan, Mijajlović M. Miroslav
Teaching Mode	☒ Lectures ☐ Group tutorials ☒ Individual tutorials ☒ Laboratory work ☒ Project work ☒ Seminar ☐ Distance learning ☐ Blended learning ☐ Other

Purpose and Overview (max. 5 sentences)

To introduce students to advanced contents in field of virtual product development. To enable the students to independently and based on scientific principles perform product development by usage of virtual product development methods and tools.

Syllabus (brief outline and summary of topics, max. 10 sentences)

Industrial Product Development. Virtual Product Development. Product models. Virtual Product Development Tools. Digital Mock-Up (DMU). Finite Elements Method (FEM), Computational Fluid Dynamics (CFD). Multi-Body Simulation (MBS). Virtual Reality. Product technical documentation. Rapid prototyping (RPT). Numerical Control/Robot Control/Measure Control (NC/RC/MC). Planning of manufacturing and control. Product data management. Concepts of team work on product development (Concurrent Design, Simultaneous Engineering)

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	5	Written Examination	–

Practical Teaching	**45**	**Oral Examination**	**50**
Teaching Colloquia	**–**	**Overall Sum**	**100**
***Final examination mark is formed in accordance with the Institutional documents**			