UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION	
Study Program	Mechanical Engineering
Study Module (if applicable)	-
Course Title	Modelling in Energy and Process Engineering
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	Dragica R. Milenković, Mladen M. Stojiljković, Branislav V. Stojanović, Mića V. Vukić
Teaching Mode	☒ Lectures ☐ Group tutorials ☐ Individual tutorials ☐ Laboratory work ☒ Project work ☐ Seminar ☐ Distance learning ☐ Blended learning ☐ Other

Purpose and Overview (max. 5 sentences)

To gain new knowledge in the field of modelling of objects and processes in energy and process engineering. To enable students to formulate independently and on scientific principles appropriate mathematical model which is related to the PhD thesis.

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

1) **Dynamic of objects and processes.** 2) **Dynamics of flow processes:** Mathematical models of flow processes with focused parameters; Mathematical models of flow processes with distributed parameters; Deterministic and stochastic processes. 3) **Dynamics of flow-thermal processes.** 4) **Dynamics of machines and motors.** 5) **Dynamics of energetic plants:** Dynamics of hydro-energetic plants; Dynamics of thermal power plants.

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	-	Written Examination	-

Practical Work	**50**	**Oral Examination**	**Max. 50**
Teaching Colloquia or Seminar	**-**	**Overall Sum**	**100**
***Final examination mark is formed in accordance with the Institutional documents**			