UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION	
Study Program	Mechanical Engineering
Study Module (if applicable)	-
Course Title	Advanced Course of Purification Techniques
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	Mladen M. Stojiljković, Velimir P. Stefanović, Gordana M. Stefanović, Predrag M. Živković
Teaching Mode	☒ Lectures ☐ Group tutorials ☐ Individual tutorials ☐ Laboratory work ☒ Project work ☒ Seminar ☐ Distance learning ☐ Blended learning ☐ Other

Purpose and Overview (max. 5 sentences)

Course program concept is to introduce the students to the theoretical principles of purification, as well as to the practical techniques that can be applied to the purification of various gasses, water and soil. Students are given the broader insight of all new trends and techniques in this area.

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

Basic characteristics of air dispersed systems; General theory of dusting systems; Precipitation of particles under the influence of centrifugal forces; Precipitation of particles in the liquid film; Precipitation of particles in bubbling processes; Precipitation of particles with sprayed water; Precipitation of particles under the influence of electrical charge; Energy theory of wet purification of gasses; Dry gas purifiers; Wet gas purifiers; Centrifugal liquid purifiers - hydrocyclones. Filtration of liquids; Microfiltration, ultrafiltration, nanofiltration; Reverse osmosis and dialysis; Membrane electrical and electrochemical processes; New trends in purification techniques.

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	**0**	**Overall Sum**	**100**
***Final examination mark is formed in accordance with the Institutional documents**			