UNIVERSITY OF NIŠ

Course Unit Descriptor	Faculty	Faculty of Mechanical Engineering

GENERAL INFORMATION			
Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Pipelines		
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	Dragoljub S. Živković		
Teaching Mode	☒ Lectures	☐ Group tutorials	☐ Individual tutorials
	☒ Laboratory work	☒ Project work	☒ Seminar
	☐ Distance learning	☐ Blended learning	☐ Other

Purpose and Overview (max. 5 sentences)

Introduce students to the basics of theoretical, structural, mechanical and thermal hydraulic principle of operation of different types of pipelines. The course enables the mastering of calculation methods, production, construction and operation of various types of pipelines.

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

1) General introduction – basic concepts, standards, definitions, terms and types of pipelines; 2) Materials for manufacture of pipelines, corrosion and corrosion protection; 3) Changes in material characteristics with temperature; 4) Production of pipes and installation of flange connections; 5) Pipe fittings and pipeline supports; 6) Compensation of temperature dilatation; 7) Laying the pipelines; 8) Water Supply pipelines – Hydraulic calculation of main lines; 9) Oil supply pipelines – hydraulic calculation of pipelines in isothermal and non-isothermal flow of oil; 10) Gas supply pipelines – hydraulic calculation of pipelines in isothermal flow of gas; 11) Steam supply pipelines – hydraulic calculation of pipelines for superheated and wet steam; 12) Techno-economic calculation of pipelines.

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**	**10**
Practical Teaching	**5**	**Oral Examination**	**Max. 30 (depending on Teaching Colloquia)**
Teaching Colloquia	**50**	**Overall Sum**	**100**
***Final examination mark is formed in accordance with the Institutional documents**			