



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Industrial and flexible automation in production		
Level of Study	<input type="checkbox"/> Bachelor	<input type="checkbox"/> Master's	<input checked="" type="checkbox"/> Doctoral
Type of Course	<input type="checkbox"/> Obligatory	<input checked="" type="checkbox"/> Elective	
Semester	<input checked="" type="checkbox"/> Autumn	<input type="checkbox"/> Spring	
Year of Study	II		
Number of ECTS Allocated	10		
Name of Lecturer/Lecturers	Vladislav A. Blagojević		
Teaching Mode	<input checked="" type="checkbox"/> Lectures	<input type="checkbox"/> Group tutorials	<input type="checkbox"/> Individual tutorials
	<input checked="" type="checkbox"/> Laboratory work	<input checked="" type="checkbox"/> Project work	<input checked="" type="checkbox"/> Seminar
	<input type="checkbox"/> Distance learning	<input type="checkbox"/> Blended learning	<input type="checkbox"/> Other

Purpose and Overview (max. 5 sentences)

Introduce students to the basics of industrial automation and flexible manufacturing systems, principles of automation machines and systems, types of control and applications thereof. The course is targeting both the theoretical and practical aspects of automation.

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

1) General introduction to digital systems, 2) The concept of digital systems employed for the automation of production processes, 3) System control technology and structure, 4) Designing and maintenance of hydraulic, pneumatic and electric circuits, 5) Designing of electro-pneumatic and electro-hydraulic schemes, 6) Computer in production systems, 7) PLCs, 8) PLC programming, 9) CNC, 10) Adaptive systems, 11) Robots.

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	25	Written Examination	25

Practical Teaching	0	Oral Examination	25
Teaching Colloquia	25	Overall Sum	100

***Final examination mark is formed in accordance with the Institutional documents**