



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	Industrial Automation		
Level of Study	<input checked="" type="checkbox"/> Bachelor	<input type="checkbox"/> Master's	<input 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	III		
Number of ECTS Allocated	6		
Name of Lecturer/Lecturers	Žarko Čojbašić		
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 analysis and design of contemporary industrial control systems and especially with control system components. Allow students to get to know analysis and design of industrial control from the aspect of choice of components as well as to gain practical insight into basic industrial control equipment.

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

Theoretical lectures * Control loop and its components. Control objects. * Measuring elements – sensors. Transducers. Actuators. * Compensators and regulators. Components of digital regulators. Power sources. * Industrial automation based on PLCs. * Controller communications, busses. Human-machine interface. Distributed control and SCADA systems.
Practice * Examples of typical systems. Practical aspects of control systems components choice. * Realization of sample control solutions, PLCs programming.

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	10	Written Examination	25

Practical Teaching	10	Oral Examination	25
Teaching Colloquia	30	Overall Sum	100

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