



UNIVERSITY OF NIŠ

Course Unit Descriptor

Faculty

Faculty of Mechanical Engineering

GENERAL INFORMATION

Study Program	Mechanical Engineering		
Study Module (if applicable)	-		
Course Title	CNC Manufacturing Systems		
Level of Study	<input type="checkbox"/> Bachelor	<input checked="" type="checkbox"/> Master's	<input type="checkbox"/> Doctoral
Type of Course	<input checked="" type="checkbox"/> Obligatory	<input type="checkbox"/> Elective	
Semester	<input checked="" type="checkbox"/> Autumn	<input type="checkbox"/> Spring	
Year of Study	I		
Number of ECTS Allocated	7		
Name of Lecturer/Lecturers	Miodrag T. Manić,		
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)

Introduction to structures, components and operation of numerically controlled machining system - (CNC) for different purposes, measuring machines, industrial robots and manipulators. Introduction to flexible manufacturing systems and computer integrated manufacturing.

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

1) Basic concepts of CNC, 2) Components of CNC system, CNC machining systems for different purposes and structures, 3) Industrial sensors and controllers, 4) Industrial systems for various purposes with the CNC control units, 5) Industrial Robots, 6) The application of robots and manipulators in the manufacturing, assembly, and process control, 7) Software support CNC system, 8) CIM systems. Flexible manufacturing systems, and factories of the future, 9) Intelligent Manufacturing Systems, 10) Expert systems and artificial intelligence.

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	20

Practical Teaching	10	Oral Examination	20
Teaching Colloquia	40	Overall Sum	100

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