

## Specification for the book of courses

<b>Study program</b>		Electrical Engineering and Computer Science		
<b>Module</b>		Control Systems		
<b>Type and level of studies</b>		Undergraduate Academic Studies		
<b>The name of the course</b>		Digital Control Systems		
<b>Lecturer (for lectures)</b>		Veselić R. Boban		
<b>Lecturer/associate (for exercises)</b>		Mitić M. Vladimir		
<b>Lecturer/associate (for OFE)</b>		Mitić M. Vladimir, Todorović Z. Darko		
<b>Number of ECTS</b>	6	<b>Course status (obligatory/elective)</b>	Obligatory	
<b>Prerequisites</b>				
<b>Course objectives</b>	The purpose of this course is to give the theoretical and practical knowledge related to the linear digital control systems.			
<b>Course outcomes</b>	Acquired theoretical and practical knowledge that is necessary for understanding of topics of other subjects in later years of study.			
<b>Course outline</b>				
<b>Theoretical teaching</b>	Introduction to digital control systems. System structure and its components. Discrete-time signal analysis. Signal sampling and reconstruction processes. Sampling theorem. Transform methods in discrete-time systems analysis. Discrete-time transfer function. State space representations of discrete-time control systems. Stability analysis techniques. Time response analyses. Steady-state accuracy.			
<b>Practical teaching (exercises, OFE, study and research)</b>	Solving specific problems during exercises and laboratory work facilitate the students to master the methodological units that are studied through theoretical classes.			
<b>Textbooks/references</b>				
1	K. Ogata, Discrete-time Control Systems. Prentice-Hall, Englewood Cliffs, N.J., 1995.			
2	C. L. Phillips, and H. T. Nagle, Digital Control System Analysis and Design, Prentice-Hall, Englewood Cliffs, N.J., 1995.			
3	R.C. Dorf, and R.H. Bishop, Modern Control Systems, Prentice-Hall, 2004.			
4				
5				
<b>Number of classes of active education per week during semester/trimester/year</b>				
<b>Lectures</b>	<b>Exercises</b>	<b>OFE</b>	<b>Study and research work</b>	<b>Other classes</b>
2	2	1	0	0
<b>Teaching methods</b>	Lectures; Exercises; Laboratory work; Consultations.			
<b>Grade (maximum number of points 100)</b>				
<b>Pre-exam duties</b>	<b>Points</b>	<b>Final exam</b>	<b>Points</b>	
<b>Activity during lectures</b>	5	<b>Written exam</b>	20	
<b>Exercises</b>	15	<b>Oral exam</b>	20	
<b>Colloquia</b>	40			
<b>Projects</b>	0			