

Study program: Electrical engineering, Mechanical Engineering			
Type and level of studies: BSC			
Course unit: Electronics			
Teacher in charge: Marijana Gavrilović Božović			
Language of instruction (<i>English or other foreign language</i>): English			
ECTS: 6			
Prerequisites: No			
Semester: <i>Summer semester</i>			
Course unit objective Throughout this course, students will gain insight into the basic principles of electronics components and electronic systems functioning. They will also learn how those systems are applied in practice.			
Learning outcomes of course unit After completion of the course, students should be familiar with the characteristics and working principles of basic electronic components. Using that knowledge they should be able to choose adequate electronic components for specific tasks and applications.			
Course unit content <i>Theoretical classes</i> Passive electronic components. Semiconductors. PN junction. Diodes. Application of diodes. Bipolar transistors. Field effect transistors. Amplifiers with bipolar and field effect transistors. Operational amplifiers. Basic circuits with operational amplifiers. Differential amplifier. Current sources. Power amplifiers. Comparators. Basic logic circuits. Basic combinational circuits. Bistable circuits. Basic sequential circuits. <i>Practical classes</i> Static properties of semiconductor components. One stage amplifier with bipolar transistor. Electronic amplifiers. Logical circuits.			
Literature 1. Daniel M. Kaplan and Christopher G. White, Hands-On Electronics : A Practical Introduction to Analog and Digital Circuits, Cambridge University Press 2003 2. Owen Bishop, Electronics – A First Course, Second Edition, Elsevier 2006 3. Ian R. Sinclair and John Dunton, Practical Electronics Handbook, Sixth Edition, Elsevier 2007 4. Yannis Tsvividis, A first lab in circuits and electronics, John Wiley & Sons, Inc. 2002			
Number of teaching hours:			Other classes:
Lectures: 3	Practice: 2	Other forms of classes :	Independent work:
Teaching methods: Lectures, auditory and laboratory exercises, consultations. Evaluation of knowledge: written and oral exam, practical tests			
Examination methods:			
Exam prerequisites:	No. of points:	Final exam:	No. of points:
Student's activities during lectures:	10	Oral examination	30
Practical classes/ tests	20	Written examination	40
Seminar/homework			
Seminar/presentation			
Grading system:			
Grade	No. of points	Description:	
10	91-100	Excellent	
9	81-90	Exceptionally good	
8	71-80	Very good	
7	61-70	Good	
6	51-60	Passing	
5	0-50	Failing	