

Discipline	COMPUTER ELECTRONICS	code: 10	summer semester
Specialty	Computer Systems and Technologies		
ECTS credits: 5	Form of assessment: exam		
Lecturer	Assoc. Prof. Emilian Bekov, PhD Room 602E; 415E Phone: +359 52 383 340 E-mail: emilian.bekov@tu-varna.bg		
Department	Electronics and Microelectronics		
Faculty	Faculty of Computing and Automation		
Learning objectives:			
<p>The aim of the course is to introduce the students of the specialty "COMPUTER SYSTEMS AND TECHNOLOGIES" to the electronics used in the computer technology, as executive devices, power devices, indication. The properties and applications of the main electronic elements - thyristor, simistor, optron, LED, photoelements, BJT, IGBT, MOSFET are studied. Operating amplifiers, circuit solutions for computer power supplies are considered. Knowledge and skills are obtained about designing electronic circuits, connecting and testing.</p>			
CONTENTS:			
Training Area		Hours lectures	Hours seminar exercises
Electronic components. Semiconductor diodes. V-A characteristics. Bipolar transistors. Static characteristics. Scheme CE. MOSFET. IGBT		6	6
Integrated circuits. Analog ICs. Digital IS		5	5
Design of elementary circuits. Linear pulse circuits. Diode limiters. Transistor switch with bipolar transistors		5	5
Power supply units. Transformers. Rectifiers. Stabilizers. Impulse stabilizers. Examples		5	5
Operational Amplifiers. Basic information about OA. Basic parameters of the OA without feedback. Basic Circuits of OA. Applications of OA		5	5
Sensors		4	4
TOTAL:		60 h	30
		30	30