


Discipline	Semiconductor Devices and Integrated Circuits code: 5251 Semester – /winter/		
Specialty	Electronics		
ECTS credits: 6	Form of assessment: Exam		
Lecturer	Associate Professor, PhD Toncho Papanchev Room: 208E Phone: +359 895550851 E-mail: t.papanchev@tu-varna.bg		
Department	Department of Electronics and Microelectronics		
Faculty	Faculty of Computer Sciences and Automation		
Learning objectives			
The curriculum of the course “Semiconductor Devices and Integrated Circuits” is designed to introduce students to basic semiconductor devices and the principles on which they operate. The topics included in the course cover details regarding the manufacturing of semiconductor devices, their main properties, capabilities and typical application in electronic devices.			
CONTENTS:			
	Training Area	Hours lectures	Hours seminar exercises
	Semiconductor materials.	3	-
	Semiconductor resistors.	2	-
	Diodes.	3	6
	Bipolar junction transistors (BJT).	4	8
	Thyristors.	3	2
	Field effect transistors (jFET)	3	2
	Metal-oxide-semiconductor FET (MOSFET).	3	2
	Isolated gate bipolar transistors (IGBT).	3	2
	Optoelectronic devices.	3	2
	Integrated circuits (IC).	3	6
	<b>TOTAL:</b> 60 h	<b>30</b>	<b>30</b>