

Discipline	Intelligent Electronic Devices	code: 5567	Semester – /summer/
Specialty	Electronics		
ECTS credits: 7	Form of assessment: Exam		
Lecturer	Associate Professor, PhD Angel Marinov Room: 609E Phone: +359 52 383 266 E-mail: a.marinov@tu-varna.bg		
Department	Department of Electronics and Microelectronics		
Faculty	Faculty of Computer Sciences and Automation		
Learning objectives			
<p>The course “Intelligent Electronic Devices” introduces students to an array of contemporary devices and fields that utilize specialised algorithms for data collection and processing, and environment control. The hardware platforms used to implement the systems are examined, as are the algorithms and software approaches. Additionally, for each device and field, practical issues and specifics about the fields of application are discussed.</p>			

CONTENTS:		
Training Area	Hours lectures	Hours seminar exercises
Intelligent electronic device (IED) – definition and basic concepts.	2	2
Hardware platforms for design and development of IEDs.	2	2
Communications in IEDs.	2	2
Power supplies for IEDs.	2	2
Introduction to software algorithms used in IEDs. Machine learning algorithms.	2	2
Intelligent sensors.	2	2
Data gathering as a part of IEDs.	2	2
Electronic systems based on IoT (Internet of Things).	4	4
Wearable devices.	4	4
Electronic devices for smart homes.	4	4
IEDs in energy distribution. Smart grids.	4	4
TOTAL: 60 h	30	30