STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Bases of electronics and the telecommunications	**1010331511010337054**

Field of study	Profile of study (general academic, practical)	Year /Semester
Information Engineering	**general academic**	**1 / 1**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**obligatory**

Cycle of study:	Form of study (full-time,part-time)
First-cycle studies	**full-time**

No. of hours	No. of credits
Lecture: **15** Classes: **-** Laboratory: **30** Project/seminars: **-**	**4**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
other	**university-wide**

Education areas and fields of science and art	ECTS distribution (number and %)
technical sciences	**4 100%**
Technical sciences	**4 100%**

Responsible for subject / lecturer:

dr inż. Krzysztof Bucholc
email: krzysztof.bucholc@put.poznan.pl
tel. +48 61 665 3531
Wydział Elektryczny
ul. Piotrowo 3A 60-965 Poznań

Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Student has a basic knowledge resulting from the high school
2	**Skills**	Student is able to meet the challenges arising from the high school.
3	**Social competencies**	Student has social skills resulting from the high school.

Assumptions and objectives of the course:

The subject aims to provide the student with an understanding of basic EE abstractions on which analysis and design of electrical and electronic circuits and systems are based.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Student poses structured and theoretically founded knowledge of analog and digital electronic circuits. - [K_W03]

Skills:

1. Student is able to build, troubleshoot, and test simple simple electronic circuits. - [K_U08]

Social competencies:

1. Student is aware of the importance of the accurate completion of the project, notational standards, respect for linguistic correctness and timely submissions - [[K_K07]]

Assessment methods of study outcomes

Lecture: Written test.

Laboratory: Writtent tests 7-th and 14-th week. Laboratory reports.

Course description

Lecture

Direct current circuits. Sinusoidal current circuits. Intrisic and extrinsic semiconductors. Diode.Transistor. Optoectronic elements. Operational amplifier. Filters. Analysis on nonsinusoidal signals. Transmission line. Digital circuits.

Laboratory

Direct current circuits.Electrical measurement. Capacity and inductivity. Sinusoidal current circuits.Dides. LEDs. Bipolar transistor. Operational amplifier. Fourier transform. Filters. Transmission line.

Basic bibliography:

1. P.Horowitz, W.Hill, Sztuka Elektroniki, wyd. 7, WKiŁ, Warszawa, 2010

Additional bibliography:

1. Elektrotechnika i elektronika dla nieelektryków, Praca zbiorowa, WNT, 1999

Result of average student's workload

Activity	Time (working hours)
1. Lecture	15
2. Laboratory	30
3. Consultation	2
4. Preparation for laboratories	35
5. Prepartion of laboratory reports	18

Student's workload

Source of workload	hours	ECTS
Total workload	100	4
Contact hours	47	2
Practical activities	50	2