Title	Code
Electrical engineering	**1010134271010310421**
Field: **Environmental Engineering Extramural First-cycle studies**	Year / Semester: **4 / 7**
Specialty: **-**	Course: **core**
Hours: Lectures: **2** Classes: **-** Laboratory: **8** Projects / seminars: **-**	Number of credits: **4**
	Language: **polish**

Lecturer:

dr inż. Eugeniusz Sroczan
Instytut Elektroenergetyki
tel. 061 6652276
e-mail: eugeniusz.sroczan@put.poznan.pl

Faculty:

Faculty of Civil and Environmental Engineering
ul. Piotrowo 5
60-965 Poznań
tel. (061) 665-2413, fax. (061) 665-2444
e-mail: office_dceeaf@put.poznan.pl

Status of the course in the study program:

obligatory

Assumptions and objectives of the course:

Familiarity with basic electric devices applied in environmental protection and building automation from practice and design points of view.

Contents of the course (course description):

Constant current circuit ? node, branch, current, voltage, current source and voltage source. Alternating current ? one and three phase. Asynchronous motor, stepper motor- mechanical characteristics, control of rotation speed. Semiconductor devices: transistor, , thyristor, triac, photovoltaic cell. Rectifiers. Frequency converters. Logic circuits and amplifiers of signals. Power demand. The selection and coordination of protective devices. Measuring techniques of: voltage, current, power and energy. Electric lighting. Electrical wirings. Protection for safety and protection against overvoltages and electromagnetic. Quality of electric energy. Safe exploitation of the electric appliance.

Introductory courses and the required pre-knowledge:

Fundamentals of physics.

Courses form and teaching methods:

Lectures supported by audio-visual devices.

Form and terms of complete the course - requirements and assessment methods:

Passing the written test.

Basic Bibliography:

Additional Bibliography: