Title **Energy management in intelligent buildings**	Code **1010324491010320602**
Field **Computer science**	Year / Semester **5 / 9**
Specialty **Microprocessors systems programming**	Course **core**
Hours Lectures: **8** Classes: **-** Laboratory: **-** Projects / seminars: **8**	Number of credits **5**
	Language **polish**

Lecturer:

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Status of the course in the study program:

Obligatory subject, Faculty of Electrical Engineering, extramural undergraduate studies, field: Computer Science, specialty: Programming of microprocessor systems.

Assumptions and objectives of the course:

In-depth knowledge of theoretical and practical problems associated with the construction of components and electronic systems, therein microprocessors, informatics and the fundamentals of their design for an intelligent building.

Contents of the course (course description):

Legal status and standards for intelligent buildings, electrical and electromagnetic compatibility, telecommunication and informatics. Basic elements and electronic components. Networks. Introduction to the concept of microprocessor control systems and measurement systems. Sensors and actuators. Signal Processing. Measurement systems, data collection - programmable memory, mass, data visualization components. Electrical and electronic systems of regulations. Methods of transmission of information in intelligent buildings. EIB (European Installation Bus). EIB device components. Wiring and power. Structure of the information bus. Approximate course design and application examples. System Diagnostics.

Introductory courses and the required pre-knowledge:

Basic knowledge of electrical engineering, electronics and digital-circuit engineering.

Courses form and teaching methods:

The lecture illustrated with slides and films, design classes.

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

Tests in a written form, control assignments, exam, projects.

Basic Bibliography:

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Additional Bibliography:

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