

Title <b>Intelligent building</b>	Code <b>10103222310103201313</b>
Field <b>Electrical Engineering</b>	Year / Semester <b>2 / 3</b>
Specialty <b>Electric and computer systems in industry and vehicles</b>	Course <b>core</b>
Hours Lectures: <b>1</b> Classes: -    Laboratory: -    Projects / seminars: <b>1</b>	Number of credits <b>4</b>
Language <b>polish</b>	

**Lecturer:**

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**Status of the course in the study program:**

Obligatory subject, Faculty of Electrical Engineering, field: Electrical Engineering, specialty: Electric and computer systems in industry and vehicles, full time graduate studies.

**Assumptions and objectives of the course:**

The objective of the course is to gain thorough knowledge of the theoretical and practical issues related to the construction of electronic components and systems, including microprocessor and computer ones, and the fundamentals of their design for intelligent building purposes.

**Contents of the course (course description):**

The course covers the legal status and norms concerning intelligent buildings, electrical engineering and electromagnetic compatibility, telecommunications and computer science. Basic electronic elements and components. IT networks. Introduction to the concept of microprocessor control and measurement systems. The sensors and actuators. Signal processing. Measuring systems, data storage - programmable memory and mass storage, data visualization elements. Electric and electronic executive systems. Ways of transmission of information in the intelligent buildings. Techniques of possessions protection - the intelligent building. European Installation Bus (EIB). Components of EIB. The wiring and supply. Information bus structures. An approximate process of designing and examples of application. System diagnostics.

Project classes: characteristic of the elements of an alarm system, principles concerning the selection of components of the system, implementing the project of an intelligent installation of a building with a special emphasis put on the alarm system (with a complete project documentation).

**Introductory courses and the required pre-knowledge:**

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

**Courses form and teaching methods:**

The lecture supported by multimedia presentation, project 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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