

Title <b>SCADA Systems</b>	Code <b>1010324491010320601</b>
Field <b>Computer science</b>	Year / Semester <b>5 / 9</b>
Specialty <b>Microprocessors systems programming</b>	Course <b>core</b>
Hours Lectures: - Classes: - Laboratory: - Projects / seminars: <b>8</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: Computer science, specialty: Programming of microprocessor systems, extramural undergraduate studies.

**Assumptions and objectives of the course:**

The objective of the course is to familiarize students with the principles of designing, constructing and operation of a control and a visualization system, configuration of the elements of a system and capabilities of SCADA environments. Another objective is getting familiar with the possibility to work in a simulation mode and with real PLC drivers.

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

The structure of industrial drivers does not consist of any systems that visualize their work. For the person overseeing the technological process to have an access to data representing performance of various elements in the installation and to enable the interference in the work of executive elements it is essential to use supplementary tools, SCADA systems which enable the visualization of the process, control over the progress of industrial processes and archiving of indispensable parameters. The lecture deals with the characteristics of SCADA system, with the emphasis put on practical aspects of their functioning, configuration and extraction of the chosen system elements. During the project activities the subject area of the first degree studies is being extended mainly by the cooperation with actual PLC driver. Steerage and visualization applications will be created during the project activities. All the projects are additionally enriched with a description of adopted solutions.

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

Basic knowledge of electrical engineering, electronics and computer science. Basics of programming in C, Pascal or other high-level language.

**Courses form and teaching methods:**

The lecture supported by the multimedia presentation - presentation of the functions, capabilities and applications of SCADA systems.  
Designing - laboratory classes, realization of an individual project.

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

Lecture - credit on the basis of a written test.  
Project - Implementing of the visualization and steerage drafts.

**Basic Bibliography:**

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**Additional Bibliography:**

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