Study program: Modern computer technologies

Course title: Sensors and Actuators

Professor/assistant: Dejan Blagojević

Type of course: elective

ECTS credits: 6

Pre-requisites: none

Aims of the course:
• Introducing the basic principles of operation of sensors and actuators based on the principles of converting energy from one form to another. Introducing students to basic knowledge on application of optimal selection of methods for conversion of energy, i.e. an adequate choice of sensors / actuators in industrial plants. Prepare students to work in multi-disciplinary areas.

Learning outcomes:
The student is able to:
• classify sensors by type and purpose and uplift the optimized source in accordance with the requirements of the process,
• determine the place and task of sensors in the production process,
• manage the process by using sensory device parameters,
• resolve simpler technical problems of control and detection of change of production / process parameters using sensors,
• monitor and analyze output results from sensor devices and make decisions on the needs for process optimization,
• combine skills from related technical fields.

Syllabus

Theoretical part

Practical part:

Literature

Number of active classes
Lectures: 30  Practical classes: 30  Research work:

Teaching methods
Combinations of interactive approach with practical problems solving.

Grading system (maximum 100 points), grading scale from 5 to 10: below 51 points grade 5, grade 6 from 51-60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91-100 points.

Pre-exam obligations points  Final exam points
activity during theoretical lectures 10  written exam 70
practical training 20  oral exam

colloquium(s)/seminar papers

Sum 30  Sum 70