



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Devices of automation and actuators [S1AiR1E>EiUA]

### Course

Field of study

Automatic Control and Robotics

Year/Semester

3/5

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

English

Form of study

full-time

Requirements

compulsory

### Number of hours

Lecture

30

Laboratory classes

30

Other (e.g. online)

0

Tutorials

0

Projects/seminars

0

### Number of credit points

5,00

### Coordinators

dr inż. Stanisław Gardecki

stanislaw.gardecki@put.poznan.pl

### Lecturers

### Prerequisites

none

### Course objective

none

### Course-related learning outcomes

Knowledge:

Has a basic knowledge of metrology, knows and understands the methods of measurement of electrical and non-electrical quantities; knows the computational methods and computer tools necessary to analyse experimental results [K1\_W11 (P6S\_WG)].

Has advanced structured knowledge in the construction, application and control of automation and robotics executive systems [K1\_W18 (P6S\_WG)].

Knows and understands typical engineering technologies, principles and techniques of construction of simple automation and robotics systems; knows and understands the principles of selection of executive systems, computational units and measurement and control elements and devices [K1\_W20 (P6S\_WG)].

Knows and understands the basic processes in the life cycle of devices and selected safety systems used

in automation and robotics [K1\_W22 (P6S\_WG)].

Skills:

Can interpret with understanding the design technical documentation and simple technological diagrams of automation and robotics systems [K1\_U2 (P6S\_UW)].

Can determine and use models of simple electromechanical systems and selected industrial processes, and use them for analysis and design of automation and robotics systems [K1\_U11 (P6S\_UW)].

Be able to use appropriately selected methods and measuring instruments and measure relevant signals and, on the basis of these, determine the static and dynamic characteristics of automation components and obtain information on their basic properties [K1\_U14 (P6S\_UW)].

Is able to build, commission and test a simple electronic and electromechanical system [K1\_U15 (P6S\_UW)].

Social competences:

The graduate is aware of the need for a professional approach to technical issues, meticulous familiarization with the documentation and environmental conditions in which the equipment and its components can operate. The graduate is ready to observe the rules of professional ethics and to demand it from others, to respect the diversity of opinions and cultures [K1\_K5 (P6S\_KR)].

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

none

### Programme content

none

### Course topics

none

### Teaching methods

none

### Bibliography

none

### Breakdown of average student's workload

	Hours	ECTS
Total workload	120	5,00
Classes requiring direct contact with the teacher	60	2,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	60	2,50