



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Term design

### Course

Field of study

Automatic control and robotics

Area of study (specialization)

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Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/6

Profile of study

general academic

Course offered in

English

Requirements

compulsory

### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

60

### Number of credit points

5

### Lecturers

Responsible for the course/lecturer:

mgr. inż. Jan Wietrzykowski

Responsible for the course/lecturer:

email: jan.wietrzykowski@put.poznan.pl

Wydział Automatyki, Robotyki i Elektrotechniki

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### Prerequisites

Students starting this course should have basic knowledge about programming, automatic control, robotics, and electronics. Additionally, they should be able to analyse and solve problems by themselves.

### Course objective

1. Development of skills of practical use of acquired knowledge.
2. Further development of skills of analysing and solving problems by themselves.
3. Forming skills of team work to solve research problem.

### Course-related learning outcomes

Knowledge



1. Have basic knowledge about selected fields of programming, automatic control, robotics, and electronics.
2. Have knowledge about recent trends and most relevant advances in fields of programming, automatic control, robotics, and electronics.

#### Skills

1. Can judgmentally use literature informations, technical documentation, and other sources in Polish and English.
2. Have self-education skills to improve and update their professional competences.
3. Can verify (in simulation or experimentally) hypotheses related with engineering tasks in the fields of automatic control and robotics.

#### Social competences

1. Understand the need to, and know the possibility to, constant learning and improving their professional, personal, and social competences. Are able to inspire others and organise their learning processes.
2. Make effort to communicate their opinions soundly and clearly.

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Grading of project realisation progress, commitment to team work, and final project report quality. The grade is average of two partial grades: grade assigned in the middle of the semester and grade assigned at the end of the semester.

#### Programme content

Each project is done by 2-3 people team of students. Students can choose from a pre-determined list of topics or propose their own. All topics are related to practical use of knowledge acquired during the course of studies.

#### Teaching methods

1. Performing simulation and hardware experiments.
2. Discussion.
3. Team work.
4. Working project demonstration.

#### Bibliography

##### Basic

1. Probabilistic robotics, Sebastian Thrun, Wolfram Burgard, Dieter Fox, The MIT Press, London, 2006.



Additional

1. Artificial Intelligence: A Modern Approach, Stuart Russell, Peter Norvig, Pearson Education, New Jersey, 2010.

**Breakdown of average student's workload**

	Hours	ECTS
Total workload	125	5,0
Classes requiring direct contact with the teacher	63	2,5
Student's own work (literature studies, preparation for classes, project preparation) <sup>1</sup>	62	2,5

<sup>1</sup> delete or add other activities as appropriate