POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)
pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

COURSE DESCRIPTION CARD - SYLLABUS

Course name
Information engineering

Course

Field of study
Automatic Control and Robotics

Area of study (specialization)

Level of study
First-cycle studies

Form of study
full-time

Year/Semester
1/2

Profile of study
general academic

Course offered in
english

Requirements
compulsory

Number of hours

Lecture

Tutorials

Laboratory classes
30

Projects/seminars

Other (e.g. online)

Number of credit points

Lecturers

Responsible for the course/lecturer:

mgr inż. Dominik Pieczyński email:
dominik.pieczynski@put.poznan.pl tel.
+48616475920 Faculty of Control, Robotics and
Electrical Engineering ul. Piotrowo 3A, 60-965
Poznań

Responsible for the course/lecturer:

Prerequisites

Basic knowledge from high school program in mathematics , computer science and logic; Programming
knowledge from first semester; Ability of obtaining information from the literature, databases and other

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sources; Skills of self-education in order to improve and update professional skills; English at B2 level that allows communicating , as well as reading cards catalogs, application notes, manuals and descriptions of tools.

Course objective

Learning object-oriented programming, familiarization with basic libraries and tools supporting PC programming.

Course-related learning outcomes

Knowledge

1. Student has theoretical and practical knowledge related to selected algorithms and data structures and methods and techniques of procedural, as well as object-oriented programming.

Skills

1. The student is able to design, implement, test, and run an algorithm that solves engineering tasks in chosen development environment on a PC for selected operating systems. 2. The student is able to work individually and in a team; is able to estimate the time needed for the commissioned work; able to develop and implement a work schedule to meet deadline.

Social competences

1. The student is aware of and understands the validity of non-technical aspects and effects of engineering activities including its impact on the environment and the resulting responsibility for the decisions.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes are with a single test and individual preparation of application that meets set criteria.

Programme content

1. Programming in a language that supports object-oriented programming. 2. Handling and formatting of input/output. 3. Design and implementation of simple classes. 4. Use of inheritance and polymorphism. 5. Use of external libraries that support programming. 6. Development of GUI applications.

Teaching methods

1. Dedicated laboratory instructions with code examples. 2. Instruction analysis with tasks implementation and discussion with a laboratory tutor.

Bibliography

Basic

1. Bjarne Stroustrup, The C++ programming language (4th Edition) 2. Materials shared via ekursy.put.poznan.pl

Additional

Online documentation of libraries used.

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Breakdown of average student's workload

	Hours	ECTS
Total workload	90	2
Classes requiring direct contact with the teacher	30	1
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1]	60	1

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[1] delete or add other activities as appropriate