SYLLABUS

Name: ***Python Programming Language (MakAu>SI7PPL19)***
Name in Polish:
Name in English: ***Python Programming Language***

Information on course:

Course offered by department: Faculty of Automatic Control, Electronics and Computer Science
Course for department: Silesian University of Technology

Default type of course examination report:

ZAL

Language:

English

Course homepage:

https://platforma.polsl.pl/rau2/course/view.php?id=1036

Short description:

As part of the course, students will learn about the most popular libraries of the Python language, which allow them to easily create very advanced and efficient applications.

Description:

Lecture:
Python is an interpreted, interactive programming language created by Guido van Rossum in 1990. It has a fully dynamic type system and automatic memory management, and is therefore similar to languages such as Tcl, Perl, Scheme and Ruby. Python is developed as an Open Source project, managed by the non-profit Python Software Foundation.
The subject is to familiarize with the advanced capabilities of the Python language and the areas of application in which this language can be used as a basic or additional programming tool.
As part of the lecture, students will learn about the characteristics of the language and the possibilities of using this language.
Laboratory:

Turtle module - fractal drawing
Designing desktop applications based on the PyQt5 framework
Library Keras
Flask framework
Creating 2D and 3D games

Number of hours of classes with direct participation of academic teachers or other persons conducting classes and students

Number of ECTS points: 2
including the number of points obtained in classes conducted with the direct participation of academic teachers or other persons conducting classes and students: 2

Total hours: 50h (contact 30h / own work 20h)
Lecture 15h
Laboratory 15h
Student's own work: preparation for classes

Bibliography:

David M. Beazley: Programowanie: Python. Read Me 2002, ISBN 83-7243-218-X. Chris Fehily: Po prostu Python. Helion 2002, ISBN 83-7197-684-4.
Mark Lutz: Python. Leksykon kieszonkowy. Helion 2001, ISBN 83-7197-467-1.
Marian Mysior (tłum.): Ćwiczenia z... Język Python. Mikom 2003, ISBN 83-7279-316-6.
Michael Dawson: Python Programming for the Absolute Beginner. Premier Press 2003, ISBN 1-592- 00073-8.
Mark Lutz: Programming Python, 2nd Edition. O'Reilly 2001, ISBN 0-596-00085-5.
Alex Martelli: Python in a Nutshell. O'Reilly 2003, ISBN 0-596-00188-6.
David Ascher, Mark Lutz: Learning Python, 2nd Edition. O'Reilly 2003, ISBN 0-596-00281-5.

Learning outcomes:

The student can screate the application in Python - K1A_W16, K1A_W22

Student can prepare well documented report in Polish and English
of the completed task - K1A_U05

Assessment methods and assessment criteria:

Lecture and laboratory:Covering all laboratory topics (submission of a written report)
Implementation of the project.
The syllabus is valid from the academic year 2024/2025 and its content is not subject to change during the semester.

Course credits in various terms:

<without a specific program>

Type of credits	Number	First term	Last term
European Credit Transfer System (ECTS)	2	2022/2023-Z	