Nazwa w jęz. angielskim: Computational Intelligence in studies of engineering, science and nature
Nazwa w języku polskim: Computational Intelligence w studiach nauk inżynieryjno-technicznych

Dane dotyczące zajęć:
Information on course:

Jednostka oferująca: Wydział Budownictwa // dr hab. inż. Ryszard Walentyński, prof. PŚ
Course offered by: Faculty of Civil Engineering // dr hab. inż. Ryszard Walentyński, prof. PŚ

Język wykładowy:

angielski

Language:

English

Strona WWW:
Course homepage:

Skrócony opis:

Short description:

The purpose of the lecture is to familiarize students of various faculties with high-level IT tools to collect and analyze various technical and scientific issues. Computational intelligence (CI) covers a wide spectrum of topics, such as symbolic and numerical computing, neural networks, natural language interpretation, and many more. The course is designed to help students use the available tools effectively and increase the efficiency with which to acquire the knowledge and skills necessary for their field of study and professional work. The course will be carried out remotely (ZOOM platform).

Opis:

Description:

Lecture:

1. Wolfram|Alpha
2. Wolfram Mathematica
3. Wolfram Cloud
4. Learning and computational Resources
5. Wolfram U
6. Mathematica on Raspberry Pi
7. Large Language Model in Wolfram Language
8. Selected Artificial Intelligence tools with Wolfram Language
9. Selected fields of application in learning and research

Lecture:

- **full-time studies: 30 h**
- **part-time studies: 18 h**

Number of ECTS credits: 2

Literatura:

Bibliography:

1. Stephen Wolfram, An Elementary Introduction to the Wolfram Language, https://WolframCloud.com
2. Wolfram U, Open courses for students and professionals, https://www.wolfram.com/wolfram-u/
3. Wolfram|Alpha, https://www.wolframalpha.com/

Efekty uczenia się:

Learning outcomes:

Knowledge: knows and understands the basic problems of modern civilization in relation to the achievements of science and technology Skills: is able to independently plan and implement his own lifelong learning Social competence: is ready to critically evaluate the knowledge he possesses and the content he receives, to recognize the importance of knowledge in solving cognitive and practical problems, and to consult experts in case of difficulties in solving the problem independently.
Metody i kryteria oceniania:
Assessment methods and assessment criteria:
Lecture Attendance on at least 70% lectures.

Przynależność do grup przedmiotów w cyklach:
Element of course groups in various terms:

Opis zajęć Course group description	
zajęcia z bazy UBZO studia stacjonarne i/lub niestacjonarne stopień studiów – dowolny kierunek studiów – dowolny, semester - dowolny elective courses full-time and part-time studies degree - any field of study - any semester - any	
cykl	2025/2026