

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

<b>Język wykładowy:</b>
angielski
<b>Language:</b>
English
<b>Strona WWW: Course homepage:</b>
<b>Skrócony opis:</b>
<b>Short description:</b>
The aim of the lecture is to familiarize students of various faculties with high-level IT tools for collecting and analyzing 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 of acquiring knowledge and skills needed for their field of study and professional work. The course will be carried out remotely (ZOOM platform).
<b>Opis:</b>
<b>Description:</b>
<b>Lecture:</b> <ol style="list-style-type: none"><li>1. Wolfram Alpha</li><li>2. Wolfram Mathematica</li><li>3. Wolfram Cloud</li><li>4. Mathematica on Raspberry Pi</li><li>5. Selected fields of application in learning and research</li></ol>
<b>Lecture:</b> <ul style="list-style-type: none"><li>• full-time studies: 30 h</li><li>• part-time studies: 18 h</li></ul>
<b>Number of ECTS credits: 2</b>
<b>Literatura:</b>
<b>Bibliography:</b>
<ol style="list-style-type: none"><li>1. Stephen Wolfram, An Elementary Introduction to the Wolfram Language, <a href="https://WolframCloud.com">https://WolframCloud.com</a></li><li>2. Wolfram U, Open courses for students and professionals, <a href="https://www.wolfram.com/wolfram-u/">https://www.wolfram.com/wolfram-u/</a></li><li>3. Wolfram Alpha, <a href="https://www.wolframalpha.com/">https://www.wolframalpha.com/</a></li></ol>
<b>Efekty uczenia się:</b>
<b>Learning outcomes:</b>
Knowledge Student knows:

Selected tools of Computational Intelligence for collecting and analyzing various technical and scientific Issues.

**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 grupy przedmiotów Course group description	Cykl pocz. First term	Cykl kon. Last term
przedmioty obieralne studia stacjonarne i niestacjonarne stopień studiów – dowolny kierunek studiów – dowolny, semestr dowolny  elective courses full-time and part-time studies degree - any field of study - any semester - any	2022/2023	