Course title:	Programming in Python
Course title in Polish:	Programowanie w języku Python
Course for discipline:	Engineering

Semester:	6	**Status of course:**	faculty	**Language:**	english
Academic year:		**Catalog number:**			

Coordinator of course:	Adam Kiczko
Lecturer od course:	Adam Kiczko
Executing unit:	Institute of Environmental Engineering
Ordering unit:	Doctoral School SGGW
Assumptions, goals and description of the course:	The aim of the course is to familiarize students with the basics of scientific programming in Python. Main goals are to: intorduce the language syntax, teaching how to perform basic calculations, presenting the most important libraries enabling statistical analyzes and solving basic engineering problems.
Didactic form, number of hours:	10 hours of computer laboratories.
Teaching methods:	Problem solving
Limit of people in the group:	15

Learning outcomes

KNOWLEDGE - the graduate knows and understands:	**SKILLS - the graduate is able to:**	**COMPETENCES - the graduate is ready to:**
To the extent enabling to revise the existing pradigms in the field/discipline - the world achievments, gathering theoretical background as well as general and selected detailed issues	Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline	Critically evaluate the achievments in the field/discipline represented
Major general development trends in the field/discipline		Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect
		Support the ethos of scientific circles and conduct independent research

The method of verification of learning outcomes:	Project
Form of documentation of achieved learning outcomes:	Archiving of project files
Elements and weights of the final grade:	Project 100%
Place of the course:	Computer laboratory

Basic and supplementary literature

Asabeneh S. Yetayeh, (2023), 30-Days-Of-Python, on-line tutorial: https://github.com/Asabeneh/30-Days-Of-Python

Comments:	

Estimated number of hours of work of the doctoral student necessary to achieve the assumed learning outcomes:	20

Leraning outcomes reference to the second degree characteristics of the National Qualification Framework (level 8) covering doctoral competences:

Symbol:	**Learning outcomes:**	**8 level NQF**
SD1_KW01	To the extent enabling to revise the existing pradigms in the field/discipline - the world achievments, gathering theoretical background as well as general and selected detailed issues	P8S_WG
SD1_KW02	Major general development trends in the field/discipline	P8S_WG
SD1_KU05	Carry out critical assessment of the scientific research findings and expert activities and their contribution to the knowledge development in the field/discipline	P8S_UW
SD1_KK01	Critically evaluate the achievments in the field/discipline represented	P8S_KK
SD1_KK03	Recognise knowledge in solving cognitive and practical problems characteristic for the area of research (field/discipline) and in an interdisciplinary aspect	P8S_KK
SD1_KK08	Support the ethos of scientific circles and conduct independent research	P8S_KR