Course Title:	**Neural Networks – Use and Learning**
Institute/Division:	Department of Automation and Computer Engineering Faculty of Electrical and Computer Engineering
Course code:	**E–NN**
Erasmus subject code:	0610 Information and Communication Technologies (ICTs)
Number of contact hours:	45
Course duration:	1 semester (Fall/Winter)
ECTS credits:	6
Course description:	The aim of the course is to familiarize students with the use of neural networks. It is planned to familiarize students with both the issues of network design and the principles of network training. The course will cover the following topics: • principles of operation of neural networks, • network training mechanism, • design and creation of neural networks, • creation of generative networks, Part of the course will be devoted to the issues of using neural networks in creating artificial intelligence. After completing the course, students should be able to create a simple neural network project and conduct the generation of a training set as well as the process of learning a neural network.
Course type:	Lectures (20h), Computer laboratory (20h), Project (5h)
Literature:	Charu C. Aggarwal, *Neural Networks and Deep Learning*, Springer Nature 2023 Daniel Graupe, *Principles Of Artificial Neural Networks (3rd Edition)*, World Scientific Publishing Co Pte Ltd, 2013
Assessment method:	Laboratory exercises and project
Prerequisites:	Any programming language
Contact Person:	Marcin Pawlik, PhD Eng., marcin.pawlik@pk.edu.pl