

# Rules of the course „ Neural Networks” (PE)

2023/2024

## Basic information

- The course encompasses 15 two-hour lectures (stationary mode).
- Course allocation: Rob. Sem. 1 and EMARO
- Consultation hours: <https://ztmir.meil.pw.edu.pl/web/eng/Pracownicy/Contact-hours>.
- The students can participate in consultations in other hours, subject to making an appointment by e-mail: [andrzej.kordecki@pw.edu.pl](mailto:andrzej.kordecki@pw.edu.pl).
- Subject webpage: <https://ztmir.meil.pw.edu.pl/web/eng/Dydaktyka/Zajecia-dydaktyczne/Neural-Networks>

## Characteristic of the undertaken topics:

- General characteristics of the neural networks,
- Neuron, neural networks, discrete systems,
- Feedforward (mainly) and recurrent networks,
- Neural network training and generalization methods.
- Designing and modification of the neural network.
- Neural networks in classification and clustering,
- Neural networks in image processing,
- Familiarization with tools for modeling of the ANN in Python.

## Evaluation

The evaluation is based on the test, which consists of two parts:

- Theoretical – single choice test,
- Task-based – calculate solution of problem.
- Optional activity during classes.

The notes, formulas, cell phones and other aids other than the calculator cannot be used during test. The students are not allowed to share information during the examination. The students must have an identification document with their photo.

## Time schedule

Examination test:

- The test will be at the last lecture classes.
- The test results will be uploaded on the Neural Network web page within next few days.
- Each participant has the right to improve the test result once.

## Grades

Final grade:

$$G = (G_t + G_a) / 25 * 100$$

where:  $G_t$  – test points in range 0-25,  $G_a$  – optional activity points.

The classes have been prepared and will be conducted with the use of Python software.

Grading scale:

<i>Grade</i>	<i>5</i>	<i>4,5</i>	<i>4</i>	<i>3,5</i>	<i>3</i>	<i>3</i>
<i>Points</i>	<i>100-90</i>	<i>89-80</i>	<i>79-70</i>	<i>69-60</i>	<i>59-50</i>	<i>49 or less</i>

Each participant has the right to improve the test result.

**Attendance:** Attendance at lectures is strongly encouraged, but is not considered compulsory.

The classes have been prepared and will be conducted with the use of Python software.