


What?

The Winter School in Data Literacy is a module of Certificate in Data Literacy, which aims to provide participants with the skills necessary to transform data into knowledge.

Participants of the Winter School in Data Literacy will be put into groups of 3 to 4 persons made up of participants from various ENHANCE universities.

Participants will be given an open project challenge in Data Literacy scope that will be reviewed by academic teachers from Warsaw University of Technology, Universitat Politècnica de València - UPV (Spain), Politecnico di Milano - Polimi (Italy).

Winter School is FREE OF CHARGE.

It is provided under the BIP (Blended Intensive Programme) Erasmus+ funds. Students who are selected are asked to report to the ENHANCE office to confirm their mobility. No funding will be available for TU Delft students, and they can only join at their own expenses.

Where?

The Winter School in Data Literacy activity will be held in hybrid mode. A total of three modules will be delivered in online mode via Webex and one in-person module in Warsaw at Warsaw University of Technology.

The Winter School in Data Literacy schedule is split into two sections:

- **Training Section** - on this section, participants will be equipped with necessary knowledge delivered by tutors; training modules will be provided. Students will learn: Introduction to Python (focused on data analysis), data analysis, manipulation and visualisation; introduction to machine learning algorithms (e.g. decision tree, linear regression, naive Bayes), training, testing, validating, quality control; neural networks, and convolutional neural networks.
- **Project Section** - in accordance with the assumptions of the Problem Based Learning methodology, at the very beginning of the Winter School, students will be provided with a challenge. The challenge will be solved up to the end of the Winter School, gaining the necessary knowledge. Specifically, students will perform the project according to the Double Diamond method, going through the phases of redefinition, knowledge collection and synthesis, proper formulation of the research question, ideation, prototyping and testing. The design part will be reviewed several times during pitch sessions.

Prerequisites:

- **Completed** at least the first year of bachelor studies
- Basic Mathematics as function, matrices, basic graph theory, e.g. definition of tress
- Statistics and Probability
- Programming: nice to have but not necessarily
- Well-developed social competences

General schedule:
10 October 2024
November 18-22, 2024
November 25-29, 2024
December 2-6, 2024
December 9-13, 2024
DEADLINE FOR THE REGISTRATION
Block 1 (online):

The online meetings will be devoted to getting to know each other by students and tutors (workshop, self-presentations). Students will be introduced to the basic knowledge of Python, data analysis and manipulation libraries, data visualization, stackoverflow, codium.

Block 2 (online)

In this part, students will be introduced to the machine learning concept (training, testing, validating, quality control, decision tree, linear regression, naive Bayes), tabular data, Nerual Networks, Convolutional

Block 3 (in person, in Warsaw)

During their stay in Warsaw, students will work in international teams on the project preparation using data literacy tools under healthcare topic. Work in teams will be supervised and supported by tutors. Each team will be assigned tutors. Additionally, mini-lectures introducing students to the techniques of solving complex project problems will be organized.

Block 4 (online)

In this part, students will finish the design task and prepare their final version of a project. The tutors will support the teams in the process of preparing the final version of the project result. The projects prepared by students will be presented on our website.

General outcomes:

Participants who will complete the course and present their results will be awarded a **certificate of participation** in the ENHANCE Winter School in Data Literacy - Healthcare data with **4 ECTS** equivalence.

Link to application form:
For more information:

[CLIK HERE TO REGISTER](#)

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