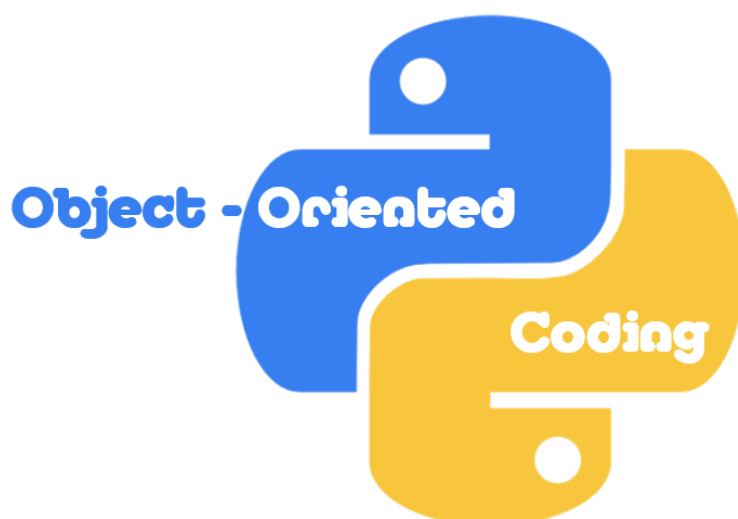


CERTIFICATE

This is to confirm that

Andrii Skrebtsov

participated in the course



of the DILLUGIS'24 project

(Digital Labs & Lectures for Ukrainian, German & International Students)

of the Eastern Bavarian Technical University Amberg-Weiden

taught in English, worth **5 ECTS**

in winter semester of 2024/25 educational year.

Weiden the 10.02.2025

Program Manager

A handwritten signature in blue ink, reading "Julia Heigl".

Prof. Dr. Julia Heigl

Lecturer

A handwritten signature in blue ink, reading "Manfred Beham".

Prof. Dr.-Ing. Manfred Beham

Attachment to the certificate
«Object Oriented Coding»

Course content:

- an introduction to object-oriented modelling and UML
- an overview of the language Python and the development environment
- writing classes and methods, test the code using unit testing
- basic data structures like lists, dictionaries and the corresponding looping technics
- concepts of inheritance and overloading methods
- persistent data storage using basic file IO
- realizing a complex, modular application

Examination: Implementation of sales data analyses

Lecturer: Prof. Dr.-Ing. Manfred Beham

Number of credits (in ECTS): 5

Language: English

Students have acquired the following professional, methodological and personal skills and competencies:

Professional Skills:

- identify core aspects of object-oriented programming and features of an object-oriented language
- use a development environment for writing and running the code
- develop and implement programs that apply core object-oriented programming concepts like classes, polymorphism, and method overloading
- use built in data-structures (collections) and functions
- read, process and analyse data from text (CSV) files
- using the API of built in Python modules

Methodological Skills:

- able to analyse and design an application using OO methods
- use step-by-step refinement to break down a problem into sub-problems (modularisation)
- understanding the basic technics of data-science

Personal Skills (Social Competence and Self-competence):

- able to present solutions that have been created, to discuss their quality and alternatives and to reflect on their problem-solving strategy in a technical and methodical manner