

Artificial Intelligence Project

2025 - 2026

Is part of the next programmes:

- M0012004 Master of Computer Science: Software Engineering
- M0012005 Master of Computer Science: Data Science and Artificial Intelligence
- M0012006 Master of Computer Science: Computer Networks
- M0048004 Master of Computer Science: Software Engineering
- M0048005 Master of Computer Science: Data Science and Artificial Intelligence
- M0048006 Master of Computer Science: Computer Networks
- M0090004 Master of Teaching in Science and Technology: Computer Science

Course Code:	2001WETPDB
Study Domain:	Computer Science
Semester:	1E SEM
Contact Hours:	45
Credits:	6

Study Load (hours):	168
Contract Restrictions:	No contract restriction
Language of Instructions:	ENG
Lecturer(s):	 Bart Goethals
Examperiod:	exam in the 1st semester

1. Prerequisites *

speaking and writing of:

- English

extra commentary:

This course will be taught in English only.

specific prerequisites for this course

Good knowledge of database principles and architectures.

Good programming skills in Python

2. Learning outcomes *

- The main objective of this course is to learn how to independently design, analyze, and solve a complex data science problem in practice. By the end of the semester, students will have gained hands-on experience in the thorough analysis of a large practical data science problem and in the development and presentation of a practical solution.

3. Course contents *

The students participate in a data science 'challenge'. The topic of the challenge can change every year. Over the past years, the focus of the challenges has been recommender systems. For example, students participated in the Outbrain Click Competition on Kaggle, the WSDM cup and worked with the H&M Next Purchase Prediction dataset.

4. International dimension *

- This course stimulates international and intercultural competences.
- Students use course materials in a foreign language.
- Students give presentations in a foreign language.
- Students compare the course contents in an international context.

5. Teaching method and planned learning activities

5.1 Used teaching methods *

Class contact teaching

- Lectures
- Skills training

Personal work

Project

- Individually
- In group

5.2 Planned learning activities and teaching methods

The class consists of a mix of traditional lectures and “project meetings”, in which students will present their work to the class and provide feedback to their peers, as well as receive feedback from the lecturers. Attending both the lectures and the project meetings is mandatory. Student will be evaluated on their active participation and ability to communicate their ideas to their peers and provide feedback.

5.3 Facilities for working students *

6. Assessment method and criteria *

6.1 Used assessment methods *

Examination

Practical examination

- Practical

Other assessment methods

- Project
- Presentation

6.2 Assessment criteria *

Students are evaluated on their problem solving skills, their creativity, their ability to use data science techniques to solve problems, and their ability to communicate effectively. Students will receive a detailed scoresheet at the start of the course.

Their overall grade is made up of three main components:

- the quality of their final report
- their final presentation and Q&A
- the final version of their code.

Students can score bonus points by participating actively in lectures and project meetings, as well as by answering their peers questions on Discord. The course can be retaken in the summer period. Students who retake the course in the summer period will have to complete additional project work.

7. Study material

7.1 Required reading *

Study materials depend on the topic of the project and consist of:

- Lecture presentations
- Research papers
- Book chapters
- Blogposts

7.2 Optional reading

The following study material can be studied voluntarily :

Depending on the subject of the project.

8. Contact information *

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Jens.leysen@uantwerpen.be

9. Tutoring

Questions can be addressed to the teacher and assistants via e-mail or after making an appointment. Students are encouraged to address questions to their peers on the course Discord in the public channels first.