inholland
university of
applied sciences

Data Science for Business IT

Course guide 2025-2026

Semester	Fall (semester 1)
Inholland location(s)	Alkmaar and Amsterdam
Inholland faculty	Engineering, Design and Computing
Language of instruction	English
Cycle	Bachelor level
Number of ECTS	30

Subjects

Subject title	ECTS	Course code
Data Science for Business IT	30	1920DSBITA

Content subjects

During the course students are working on a data science problem for an existing company or organization. For example, in the past students haven been working for the Royal Navy, Hoogheemraadschap Hollands Noorderkwartier, Enza zaden, theater De Vest, Esdégee Reigersdaal and Sail Amsterdam 2025. The customers for next year will be known in summer. The minor consists of two parts: data integration and data science.

Data integration

First you analyze the problem of the customer. What data do you need to answer his question? You will collect data from heterogeneous sources. You will design and implement an architecture for storing this data. Make the data suitable to be used by a data scientist.

Data science

You will translate the customer's question into a question for the data scientists (Applied Mathematics (AM) students). When they have done their work, you will translate their answers into an answer that your customer can understand.

Learning outcomes

Data Integration

The student identifies and opens heterogeneous sources to be able to load them into a database. An architecture must be designed for this. The student cleans up the data and assesses and checks the quality of the sources. The student does this in preparation for the transformation of the sources to make the data suitable for analysis in the follow-up project.

Data Science

The student can generate business insights from data together with a data scientist and present them to the business. The student does this by collecting and interpreting data from different heterogeneous sources from the first project. The student tries to find answers to the client's question. The student collects the requirements and discusses with the AM students which analysis must be performed to answer the question. The analysis is performed by an AM student. The student then checks whether the prediction comes true and provides steering information for further decision-making. Based on this, the student formulates a recommendation for the business.

Mode of delivery, planned activities and teaching methods

During the minor, you work on the projects for an external client. The first phase focuses on the “Data Integration” project. During this project, you, and a group of 2 or 3 students will unlock sources and load them into a database. You will then clean up the data and assess and check the quality of the sources. You can see these steps as preparation for project 2 “Data Science” in which you will analyze the data. This second project is being carried out together with students from the Applied Mathematics study program in Diemen.

Project meetings are held every week in which the students work on the project, workshops are

held, or guest lectures are given. Testing and assessment takes place based on the two completed projects of "Data Integration" and "Data Science."

In Term 1 (first half of the semester), this course is given in Alkmaar. In Term 2 (second half of the semester), this course is given in Alkmaar and Amsterdam (every other week). Transport costs will be covered.

Prerequisites and co-requisites

Knowledge of databases

Recommended or required reading and/or other learning recourses/tools

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Assessment methods and criteria

For both projects, the students must deliver a product and a final report to be presented in a final presentation. The result is judged by the lecturers and the clients. Lecturers and clients must both approve the result.

Lecturer(s)

Lecturer/coordinator: Erik Ellinger
Business IT and Management lecturers: Bob Montijn and Andries Kooijman
Applied Mathematics lecturer: Vera Hollink