inholland
university of
applied sciences

Data Science for Business IT

Course guide 2026-2027

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 EC	30

Subjects

Subject title	EC	Course code
Data Science for Business IT	30	1922DSBITA

Content subjects

During the course, students work on a data science problem for an existing company or organisation. For example, in previous years students have worked for the Royal Navy, Hoogheemraadschap Hollands Noorderkwartier (water authority), Enza Zaden (seed industry), Theatre De Vest, and SAIL Amsterdam 2025. The clients for next year will be known in the summer. The minor consists of two parts: data integration and data science.

Part 1: Data Integration

In the first part of the project, you will work in a student group of approximately 3–4 students from Business IT and Management. First, you analyse the client's problem. What is the business need? What data is required to answer the client's question? You will collect data from heterogeneous sources and design and implement an architecture for storing this data. The data will be prepared and structured in such a way that it can be used effectively by a data scientist.

Part 2: Data Science

In the second part of the project, the student groups will be expanded with students from Applied Mathematics – Data Science (AM) in Amsterdam. You will translate the client's question into an analytical question for the AM students. After they have completed their analysis, you will translate their findings into results and insights that the client can understand and use.

Learning outcomes

Data Integration

The student identifies and unlocks heterogeneous data sources in order to load them into a database. An appropriate architecture is designed for this purpose. The student cleans the data and assesses and validates the quality of the sources. This is done in preparation for transforming the data so that it is suitable for analysis in the second part of the project.

Data Science

The student is able to generate business insights from data in collaboration with a data scientist and present these insights to the business. This is achieved by collecting and interpreting data from different heterogeneous sources originating from the first part of the project. The student aims to find answers to the client's question, gathers requirements, and discusses with the AM students which analyses need to be performed. The analyses are carried out by the AM students. The results are then evaluated to determine whether the predictions hold true and to provide steering information for further decision-making. Based on these results, the students formulate recommendations for the business.

Mode of delivery, planned activities and teaching methods

During the minor, you work on a project for an external client. The first phase focuses on the *Data Integration* part. In this phase, student groups unlock data sources and load them into a database. Subsequently, the data is cleaned and the quality of the sources is assessed and validated. These steps serve as preparation for the second phase of the project, *Data Science*,

in which the data is analysed.
Project meetings are held weekly, during which students work on the project, participate in workshops, or attend guest lectures. In Term 1 (the first half of the semester), project meetings take place in Alkmaar. In Term 2 (the second half of the semester), project meetings take place in both Alkmaar and Amsterdam on an alternating weekly basis.
The project groups will also work at least one day a week at the client's office, to be in close contact with them.

Prerequisites and co-requisites

Knowledge of databases.

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

Depends on the assignment.

Assessment methods and criteria

For both parts of the project, the students must deliver a product and a report to be presented in a presentation. The result is judged by the lecturers and the clients. Lecturers and clients must both approve the result. Testing and assessment takes place based on the delivered products and the professional attitude and development during the project.

Lecturer(s)

Lecturer/coordinator: Frank Schreurs
Business IT and Management lecturers: Bob Montijn and Frank Schreurs
Applied Mathematics lecturer: Vera Hollink