# Minor in Data in Business

## Description

### The Minor concept

A minor gives you the opportunity of having a second specialization in your degree. The minor is a bundle of three to four electives that can be chosen separately but if chosen together rewards a minor.

### Purpose

The focus of the minor is on Data Analytics in general and strategic, innovative, collaborative, communicative, analytical, governance and regulatory aspects of data usage in business settings. As such, the minor is interdisciplinary with topics drawn from digital economy, computational social science, innovation, communication, governance, regulation, and business analytics. The minor consists of the three courses described below.

### Structure

The below table lists the structure and the ECTS credits of the individual courses. The course descriptions are available in the online course catalogue. Direct links are inserted in the below table.

| Course | ECTS |
|---|---|
| Big Data Analytics | 7.5 |
| Datafication: Regulation, Governance, Security, Privacy and Ethics | 7.5 |
| Innovation and Strategy in the Digital Economy | 7.5 |

### Content

### Big Data Analytics

This course is designed to provide knowledge of key concepts, methods, techniques, and tools of big data analytics from a business perspective.  Course contents will cover issues in and aspects of collecting, storing, manipulating, transforming, processing, analysing, visualizing, and reporting big data in order to create business value.  Course topics are listed below:

- Foundations: Concepts, Lifecycle, Challenges, Opportunities, and Exemplary Cases
- Data: Types, Structures & Tokens

- Data Mining and Machine Learning: Algorithms & Tools
- Visual Analytics: Dashboards & Tools
- Text Analytics: Classification & Clustering
- Predictive Analytics: Correlation, Regression, and Autometrics
- Computational Social Science: Social Set Analytics
- Applications: Private and Public Sectors
- Datafication: Security, Governance, Regulation, Privacy & Ethics

**Datafication: Regulation, Governance, Security, Privacy and Ethics**

The purpose of this course is to give the student a profound understanding of regulatory issues concerning privacy and data protection. Compliance with the EU General Data Protection Regulation is in focus as well as its background, context, and content. Thr course provides an introduction to fundamental legal principles with particular focus on the European Union. The discussions may include aspects relating to privacy, big data, particular technologies, use of personal data for marketing purposes, transfer of personal data, security, and fundamental rights such as the freedom of expression. The course will to a large extent be based on sources of law such as the EU treaties, directives, regulations, and case law.

**Innovation and Strategy in the Digital Economy**

This course will give students an introduction to central issues of innovation and strategy in the digital economy. It forms the background for the study of data in the business context. The growth of the digital economy is predicting a data rich future and a transformation of the business landscape with implications for existing firm, entrepreneurial ventures, and individual workers. In some of the most dynamic sectors of the modern economy, such as, apps for smartphones, video games, scientific and technical problems solving, Internet of Things, blockchain and crypto technologies, companies' overall performance already rely on data, setting requiring a whole new set of skills and organizational capabilities. The course will develop the conceptual foundations, frameworks and methods for analyzing the relationships between firms, crowds, and data. It introduces student to the process of digital transformation. The course gives students a systematic basis for assessing the economic potential of different sorts of data and organizational imperatives to unlocking this potential. The first part of the course introduces business models of the digital economy. The latter part will focus on organizing for innovation in a data rich business context. From this point of departure, the course will develop the conceptual foundations, frameworks, and methods for analyzing the relationships between innovation, strategy, and data in a digital context. The focus will be on how to manage and strategize, how existing organizations adapt to increasing digitization of business and development models. Topics will include:

- Digital economy and innovation
- Digital business models and strategy
- Internet of Things
- The role of crowds in generating innovation and predictions.

- Crowdsourcing, collaborative innovation
- Digital platforms
- Managing organizations in a data rich future
- Data networks and markets
- Crypto technologies & blockchain

**Learning objectives**

After successfully completing the three courses of the Data-in-Business minor, the student should be able to:

**Big Data Analytics**

• Characterize the phenomena of Big Data and Big Data Analytics

• Analyze and apply different visual analytics concepts and tools for a big data sets

• Analyze and apply different concepts, methods, and tools for analyzing big data in organizational contexts

• Understand the linkages between business intelligence and business analytics and the potential benefits for organizations

• Critically assess the ethical and legal issues in Big Data Analytics

**Datafication: Regulation, Governance, Security, Privacy and Ethics**

• Describe and discuss central legal issues relating to the topic

• Identify concrete legal issues in concrete situations and suggest relevant legal solutions

• Analyse legal problems based on relevant sources of law,

• Reflect on the law, its purpose, background, and impact on society

**Innovation and Strategy in the Digital Economy**

• Understand the current debates around: innovation in the digital economy, strategy, as it relates to digital economy and data

• Explain how digital changes and the availability of data transform the business landscape.

• Discuss relevant theories and explain their assumptions, causal dynamics and processes

• Assess the role of data in business innovation and specify success and failure factors.

• Understand central concepts around management in the context of digital businesses

• Discuss ethical issues of the digital economy and organizations' use of data

**Examinations**

The minor consists of the examinations listed below. The learning objectives and the regulations of the individual examinations are prescribed in the online course catalogue. Direct links to the individual examinations are inserted in the table below.

| Exam name | Exam form | Gradingscale | Internal/external exam | ECTS |
|---|---|---|---|---|
| Big Data Analytics | Home assignment - written product | 7-point grading scale | Internal exam | 7.5 |
| Datafication: Regulation, Governance, Security, Privacy and Ethics | Oral exam based on written product | 7-point grading scale | Internal exam | 7.5 |
| Innovation and Strategy in the Digital Economy | Home assignment - written product | 7-point grading scale | Internal exam | 7.5 |

**Further information**

*Minor coordinators*

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*Study Board*

The minor in data analytics is offered by the Study Board for BSc and MSc in Business Administration and Information Systems, MSc in Business Administration and Ebusiness, and MSc in Business Administration and Data Science.

*How to sign up*

If you want to sign up for the Minor: Data in business you have to select CDSCM1011U Minor: Data in business when you sign up for electives. You will then subsequently be signed up for all three courses. You do not have to select all three courses individually.

KAN-CDSCV1900U Big Data Analytics is an elective.

KAN-CDSCO2002U Datafication: Regulation, Governance, Security, Privacy and Ethics is a mandatory course for students enrolled in the MSc in Business Administration and Data Science. The course is also offered as an elective.

KAN-CDSCO2001U Innovation and Strategy in the Data Economy is a mandatory course for students enrolled in the MSc in Business Administration and Data Science. The course is also offered as an elective.