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. In order to gain the minor certificate on *Data in Business* the bundle of the three courses has to be taken.

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

You will find the learning objectives for each course in the course descriptions in the online course catalgue.

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	Oral exam based on 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	Written sit-in exam on CBS' computers	7-point grading scale	Internal exam	7.5

Prerequisites for registering for the exam – compulsory activities

The following courses have compulsory assignments or requirements about active class participation. Further specifications and regulations are listed in the relevant course description in the online course catalogue, see the below links.

Course	Number of mandatory activities
Big Data Analytics	2

Further information

Minor coordinator

Raghava Mukkamala, Study Director for MSc Data Science

Study Board

The minor in data analytics is offered by the Study Board for Technology & Digitalisation.

How to sign up

The minor is offered to all CBS students. You can see in the positive-negative list on my.cbs, if your study board approves the minor.

If you like 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-CDSCV2401U Innovation and Strategy in the Data Economy is an elective.