

Degree: Master of Science (M.Sc.)

Big Data & Business Analytics



The amount of structured and unstructured data that companies are providing is rapidly increasing.

Therefore, companies have a high demand for Big Data analysts in companies.

In the Master's programme "Big Data & Business Analytics" at FOM University of Applied Sciences, you will learn to analyse, evaluate large and heterogeneous data sets and use them in a business context. You will acquire analytical skills which you can use specifically for predictions or optimisations, for example in marketing, sales and business development.

The Master's programme "Big Data & Business Analytics" is taught entirely in English and will be completed with the academic degree Master of Science (M.Sc.).

Support for all issues relating to your study

Phone: +49 201 81004 864 WhatsApp: +49 171 3338539

Monday to Friday from 9:00 a.m. to 4:00 p.m. German time

E-Mail: Send us an email to: incomings@fom.de

More information
on the degree programme



Locations

Berlin, Essen, Munich

Duration

4 semester including thesis

Credit Points

120 ECTS

Accreditation

FOM University of Applied Sciences is accredited by the German Council of Science and Humanities and was the first private university in Germany to be system-accredited by FIBAA in 2012. This means that all FOM degree programmes are state and internationally recognised.

Total fee

€23,850
(including examination fee and
immatriculation fee)

Your career prospects

[You can take on the following jobs:](#)

Big Data Manager
Business Analyst
Data Analyst
Data Scientist
Business Development Manager
Big Data Engineer
Chief Data Officer

1 st semester	2 nd semester	3 rd semester	4 th semester
Big-Data-Architecture & -Infrastructure (5 CP) <ul style="list-style-type: none"> Enterprise architecture management (EAM) Technological requirements for big data Vital infrastructures for data-driven business models Complex processing by continuous data sets 	Applied Programming (6 CP) <ul style="list-style-type: none"> Basic principles and application of programming languages for big data: SQL, R and Python Languages and tools for data management Data integration ETL v. ELT (data lake) 	Leadership & Sustainability (6 CP) <ul style="list-style-type: none"> Leadership as part of normative, strategic and operative business management and in the context of diversity management Leadership styles, techniques and instruments Ethics and sustainability 	Master's Thesis and Colloquium/ Defence (25 CP)
Decision Focussed Management (6 CP) <ul style="list-style-type: none"> Traditional decision theory Management decisions from a psychological perspective Decisions in a strategy context 	Analysis of Semi- & Unstructured Data (5 CP) <ul style="list-style-type: none"> Crawling and pre-processing Text mining/web mining Social media analysis Ontologies Semantic and graphic modelling/ technologies 	Ethics & Law (5 CP) <ul style="list-style-type: none"> Ethical aspects of the use of big data Legal aspects of the use of big data Compliance 	Applied Project II (6 CP)
Research Methods in STEM (6 CP) <ul style="list-style-type: none"> The scientific method Research paradigms in business informatics and engineering Research methods in business informatics and engineering 	Project Management of Big-Data-Projects (5 CP) <ul style="list-style-type: none"> Planning, management and control of big data projects Challenges, specific features and success factors of big data project management Architectural and technological features Introduction of big data applications Integration and harmonisation of data sources and planning of data analyses and reporting 	Big-Data-Analysis Project (6 CP) <ul style="list-style-type: none"> Selection of an area of application for the analysis project Project work with first independently produced data analysis 	Academic degree: Master of Science (M.Sc.)
Big Data Analytics (6 CP) <ul style="list-style-type: none"> Data sources and data classification Visual analytics/data discovery/ explorative data analysis AI methods such as machine learning Computational intelligence: fuzzy logic, neuronal networks, evolutionary algorithms 	Area of Application: Business Analytics (5 CP) <ul style="list-style-type: none"> Goals and fields of activity for big data applications Sector and type of data sources Application of processes such as association analysis, decision tree process, neuronal networks, cluster analysis 	Strategic Business Model Development (5 CP) <ul style="list-style-type: none"> Results of big data analyses as drivers of business model development Planning of big data strategy/business analytics strategy Strategy approaches and strategic planning and management instruments Data-based business models and business transformation Open innovation/innovation management 	
Deutsch (6 CP) <ul style="list-style-type: none"> Fundamentals in listening, reading, writing and speaking Basic grammatical skills Application in situations of everyday life 	Quantitative Data Analysis (5 CP) <ul style="list-style-type: none"> Qualitative and quantitative research methods Quantitative data analysis (applications with R, statistical test methods, multivariate processes) 	Applied Project I (6 CP)	
	Information-Security (6 CP) <ul style="list-style-type: none"> Technical Basis Data protection and data privacy Risk analysis / type of threats Attack vectors and scenarios ISMS 		