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MASTER (M.SC.) DATA MANAGEMENT

Data management is going to become one of the top ten most sought-after skills in the near future. Experts at master level in particular are already in great demand today: As a data manager, you design secure systems that represent added value for your organisation. In the advanced programme in Data Management, you will learn the skills to lead demanding projects where you are required to process and store large amounts of data. You will acquire practical skills in data processing, data storage, data analysis and reporting. You can also specialise in fields like master data handling or cyber security.



Degree

Master of Science (M.Sc.)



Electives

In the Data Management 120 ECTS (60 ECTS) online programme, you can choose electives worth 20 ECTS (10 ECTS) and focus on interesting practical areas.



Study model and accreditation

- Online
- German accredited institution, recognised by ZFU (German Central Office for Distance Learning)



Study start and duration

Official start date: 60 ECTS: 1st September 2023*

120 ECTS: 1st March 2023

Afterwards: Anytime

60 ECTS: 12, 18 or 24 months

120 ECTS: 24, 36 or 48 months



Credits

60 or 120 ECTS

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APPLIED SCIENCES

*This programme is still in the process of accreditation and recognition. We expect approval from the relevant ministry by the programme's official start date. So far, all IU programmes have been accredited and approved successfully and on time.

Study Content (60 or 120 ECTS)

MODULE TITLE	SEMESTER	CREDITS (ECTS)	TEST TYPE
60-ECTS MODEL			
Concepts in Data Management	1	5 ECTS	E
Database Concepts and Technologies		5 ECTS	E
Big Data Technologies		5 ECTS	OA
Data Warehousing, Pipelines and Orchestration		5 ECTS	WACS
Managing Data Projects		5 ECTS	OA
Advanced Research Methods		5 ECTS	WAWA
Seminar: Cloud Providers and Services	2	5 ECTS	WARE
Electives A		10 ECTS	
Master Thesis & Colloquium		15 ECTS	WAMT & PC

MODULE TITLE	SEMESTER	CREDITS (ECTS)	TEST TYPE
120-ECTS MODEL			
Concepts in Data Management	1	5 ECTS	E
Database Concepts and Technologies		5 ECTS	E
Data Query Languages		5 ECTS	OA
NoSQL Databases		5 ECTS	OA
Seminar: Ethic & Societal Considerations in Data Management		5 ECTS	WARE
Advanced Research Methods		5 ECTS	WAWA
Data Engineering	2	5 ECTS	OA
Big Data Technologies		5 ECTS	OA
Data Warehousing, Pipelines and Orchestration		5 ECTS	WACS
Managing Data Projects		5 ECTS	OA
Seminar: Cloud Providers and Services		5 ECTS	WARE
Project: Data Engineering		5 ECTS	PO
Programming with Python	3	5 ECTS	WAWA
Project: Data Analysis in the Cloud		5 ECTS	WAPR
Elective A		10 ECTS	
Elective B		10 ECTS	
Master Thesis & Colloquium	4	30 ECTS	WAMT & PC

CHOOSE YOUR ELECTIVES

Choose one elective from

“Electives A” list:

- Business Analyst
- Data Manager for Internet of Things
- Data Miner
- Data Scientist
- Data Security & Protection Specialist
- Master Data Manager
- Process Management and Operational Application Systems
- Technical Project Lead

Choose one elective from

“Electives A” list:

- Business Analyst
- Data Manager for Internet of Things
- Data Miner
- Data Scientist
- Data Security & Protection Specialist
- Master Data Manager
- Process Management and Operational Application Systems
- Technical Project Lead

Choose one elective from

“Electives B” list:

- Business Analyst
- Data Manager for Internet of Things
- Data Miner
- Data Scientist
- Data Security & Protection Specialist
- Master Data Manager
- Process Management and Operational Application Systems
- Technical Project Lead

ELECTIVES

In the Data Management distance learning programme, you have the opportunity to choose electives amounting to 20 ECTS credits in the 120 ECTS programme and thus specialise in attractive functions and sectors. In the 60 ECTS study programme you choose an elective of 10 ECTS. You can choose from modules such as: Data Manager for Internet of Things, Data Miner, Master Data Manager, Data Security & Protection Specialist, Business Analyst.

BUSINESS ANALYST

Master the basics of business analysis, acquaint yourself with various use cases, and understand the characteristics of relevant types of data. Become accustomed to different techniques for modelling and circulating data. You will work on current topics debated in the business analysis field, and develop real-world solutions based on relevant academic literature.

DATA MINER

In the Data Miner specialisation, you'll get a thorough overview of data mining and its key aspects and methods. Analyse and explore data mining processes, data retrieval strategies and data quality and preparation methods. Find out what are the different types of data sources is learned and gain insights into important data mining and web scraping techniques. To round up your skills, the concepts of data economy and the legal requirements and usage guidelines associated with data mining will be presented.

TECHNICAL PROJECT LEAD

If you're considering a career that combines technical knowledge with managerial skills, then this specialisation is the right choice for you. Here, you'll develop the skill set required for owning and managing IT projects across different industries.

You'll start by learning the basic principles of project management, and how they apply to IT projects. You'll then be acquainted with common challenges faced by IT managers, how to identify them and what solutions to offer. You'll round out your expertise by exploring IT project organisation and planning, cost management and staffing and team leadership topics.

CAREER OUTLOOK

A Master's degree in Data Management provides you with an extensive knowledge to undertake demanding tasks in data-driven projects. You are able to implement such projects with different technologies. Your skills are not limited to sub-areas of data storage and data processing; you also have the ability to holistically and efficiently design data-intensive systems. With this expertise, you will become a much sought-after specialist who will be able to make a career as a database expert, data engineer or cloud solution architect.

ADMISSION

ADMISSION REQUIREMENTS FOR 60-ECTS

- Completed undergraduate degree with 240 ECTS
- Your degree must be from a state or state-recognised higher education institution/university
- You must have achieved a final grade of at least "satisfactory" or Grade C equivalent in your previous undergraduate degree
- Proof of at least one year's professional work experience completed prior to the start of study programme. Work experience must have been gained after completion of your undergraduate studies

ADMISSION REQUIREMENTS FOR 120-ECTS

- Completed, undergraduate degree with 180 ECTS with a focus on **Data Science, Business Informatics, Computer Science, Big Data Management, Digital Business**
- Your degree must be from a state or state-recognised higher education institution/university
- You must have achieved a final grade of at least "satisfactory" or Grade C equivalent in your previous undergraduate degree

FURTHER ADMISSION OPPORTUNITIES

For the 60 ECTS programme:

Depending on your previous education, the following entry options are applicable for the **60-ECTS** Master's degree:

- undergraduate degree with 210 ECTS: you can bridge the gap of 30 ECTS with the proof of one year qualified work experience
- undergraduate degree with 180 ECTS: you can bridge the gap of 60 ECTS with the proof of two years qualified work experience

Recognition of knowledge and abilities acquired outside of higher education is possible in principle.

8 STEPS TO COMPLETE YOUR STUDIES

Is your undergraduate degree not in the required subject field for this programme's **120 ECTS points variation admission** requirements? You can still apply! You'll have to take 2 specific courses at the start of your studies, and pass them successfully in order to continue with your studies. That way, you don't have to take an entrance examination, and can prove your skills while earning ECTS points as part of your studies.

WORK EXPERIENCE

For the 60 ECTS programme:

- Proof of at least one year's qualified work experience completed prior to the start of the study programme (the work experience must be gained after the completion of your undergraduate studies).
- Don't have a year's worth of qualified work experience? Don't worry! With the Scholarship Programme, you can start your studies right away, and gain your professional experience alongside your studies. You'll need to achieve the one year's worth of experience before you complete your Scholarship Programme.
- You can provide us a translation of your employment contract and your pay slip or you can ask your company to fill out this form in English, sign it, apply the company stamp and send it to us.

SCHOLARSHIP PROGRAMME

Start in our scholarship programme as a participant with immediate access to 50% of your courses. Once admission and the courses are completed, you can finish your degree.

- To start a 120-ECTS degree, you will need a minimum of 180 ECTS credits from your previous studies.
- To start a 60-ECTS degree, you will need a minimum of 240 ECTS credits from your previous studies but can "bridge" up to 60 ECTS with 2 years of professional experience.

Questions? Speak to one of our study advisors, they will guide you through every step of the process.

PROOF OF ENGLISH LANGUAGE SKILLS

We therefore ask for proof of your English language skills*. If English is your native language or you graduated from an English-speaking school/university, you don't need to prove your English skills.

Accepted certifications:

- English Courses (complimentary when signing up with IU)**
- TOEFL (min. 80 points) or
- IELTS (min. Level 6.0 out of 9 points) or
- Duolingo English test (min. 95 points) or
- Cambridge Certificate (min. B grade overall) or
- Equivalent proof

1

Register and apply online

2

Choose your course

3

Download your study scripts

4

Work independently with study scripts

5

Take part in Q&A sessions

6

Prepare for exams and take them either:

- directly online, or
- at an IU examination centre (remember to register in time).

7

Master thesis and colloquium

8

Complete your studies with certificate

*Proof must be provided before the start of the study and must not be older than five years.

**Please note that English Courses aren't accepted as a language certificate for on campus study programmes.