Module title			Abbreviation
Data Management and Analysis			12-DM-F-232-m01
Module coordinator		**Module offered by**	
holder of the Chair of Business Analytics		Faculty of Business Management and Economics	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	undergraduate	--	

Contents

The module teaches on the one hand basics and concepts of modeling data and querying and manipulating databases. Additionally, fundamentals of data analysis as well as data analysis processes are introduced.

Focal points are:

- Fundamentals and application of semantic data modelling
- Fundamentals and application of the relational data model
- Fundamentals and application of data query languages
- Hypothesis-driven and model-building data analysis
- Data analysis processes and their comparison
- Supervised and unsupervised learning processes

Intended learning outcomes

Upon completion of the module students are able
- to design good conceptual and logical data models;
- to transform conceptual data models into physical data schemas;
- to formulate complex database queries;
- to design different applications with databases
- perform and interpret hypothesis testing on real data
- understand the basics of supervised and unsupervised machine learning

Courses (type, number of weekly contact hours, language — if other than German)

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Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or
b) oral examination (approx. 20 minutes) or
c) portfolio (approx. 20 hours)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

50 places.
(1) No restrictions with regard to available places for Bachelor's students of Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits).
(2) Additional places will be allocated to students of other subjects provided there is enough capacity. These additional places will be allocated by lot among all applicants irrespective of their subjects.
(3) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (4) A waiting list will be maintained and places re-allocated by lot as they become available.
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Additional information

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Workload
150 h
Teaching cycle
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Referred to in LPO I (examination regulations for teaching-degree programmes)
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Module appears in
Module studies (Bachelor) Business Management and Economics (2019) Bachelor' degree (1 major) Business Information Systems (2023) Bachelor' degree (1 major) Economathematics (2023) Bachelor' degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2023)