

Module title		Abbreviation
Data Modelling		12-DM-F-152-m01
Module coordinator		Module offered by
holder of the Chair of Business Analytics		Faculty of 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		
<p>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.</p> <p>Focal points are:</p> <ul style="list-style-type: none"> <li>• Fundamentals and application of semantic data modelling</li> <li>• Fundamentals and application of the relational data model</li> <li>• Fundamentals and application of data query languages</li> <li>• Hypothesis-driven and model-building data analysis</li> <li>• Data analysis processes and their comparison</li> <li>• Supervised and unsupervised learning processes</li> </ul>		
Intended learning outcomes		
<p>Upon completion of the module students are able</p> <ul style="list-style-type: none"> <li>• to design good conceptual and logical data models;</li> <li>• to transform conceptual data models into physical data schemas;</li> <li>• to formulate complex database queries;</li> <li>• to design different applications with databases</li> <li>• perform and interpret hypothesis testing on real data</li> <li>• understand the basics of supervised and unsupervised machine learning</li> </ul>		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + Ü (2)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
<p>a) written examination (approx. 60 minutes) or  b) term paper (approx. 15 pages) or  c) term paper (approx. 10 to 15 pages) and presentation (approx. 10 minutes); (weighted 2:1) or  d) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or  e) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or  f) completion of practical exercises (approx. 20 hours) and written examination (approx. 60 minutes); (weighted 1:1)</p> <p>Language of assessment: German and/or English  creditable for bonus</p>		
Allocation of places		
<p>50 places. (1) The number of places is not restricted for students of the Bachelor's degree subject 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.</p>		

<b>Additional information</b>
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<b>Workload</b>
150 h
<b>Teaching cycle</b>
Teaching cycle: summer semester
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)
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<b>Module appears in</b>
Bachelor's degree (1 major) Business Information Systems (2015) Bachelor's degree (1 major) Business Information Systems (2016) Bachelor's degree (1 major) Business Information Systems (2019)