Advanced Database Models

Summer

(in German: Advanced Database Models)

Module-ID: FIN-INF-103805

Abbreviation	Credit Points	Semester	Term	Duration	Language	Level
ADBM	6	Summer	starting at 1.	1 Semester	english	Master

Link:	LSF
Limited accessability:	false
Responsibility:	Gunter Saake
Lecturer:	Eike Schallehn
Classes:	• Lecture *Advanced Database Models* • Exercise *Advanced Database Models*
Applicability in curriculum:	- M.Sc. INF: Informatik - M.Sc. INGINF: Informatik - M.Sc. WIF: Informatik - M.Sc. DKE: Data Processing for Data Science - M.Sc. DE: Methoden der Informatik - M.Sc. VC: Computer Science

Intended learning outcomes:
The students ...

- understand different non-relational database models, their basic concepts, and their historical development
- understand implications of non-relational data models for query processing and application development
- use non-relational DBMS and their specific capabilities

- develop databases and according applications using non-relational databases

Content:

- Overview and history of database models
- NF2-, object-oriented, object-relational, and semi-structured database models
- Application of the database models and design methodologies (extended ERM, UML, ODMG, XML Schema, etc.)
- Foundations of query languages (OQL, SQL:2003, XPath/XQuery, etc.) and query processing for non-relational data models

Workload:
56 h contact hours + 124 h self-study

Pre-examination requirements:	**Type of examination:**	**Teaching method / lecture hours per week (SWS):**
To be eligible to take the exam, you must have completed certain prerequisites. Further details will be announced in the first lecture.	Written exam (120 min)	• Lecture 2 SWS • Exercise 2 SWS

Prerequisites according to examination regulations:	**Recommended prerequisites:**
none	Database introduction course

Media:	**Literature:**

Comments:

Revision #1
Created 2026-10-20 16:58:52 UTC by Fakultät für Informatik
Updated 2026-10-20 16:58:52 UTC by Fakultät für Informatik