

*Only the german version of the module description as part of the study regulations is legally binding.*

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| Module name                            | <b>Data Management Lab</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Module number                          | INF-25-Ba-P-DM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Responsible lecturer                   | Prof. Dr.-Ing. Wolfgang Lehner<br>wolfgang.lehner@tu-dresden.de                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Qualification objectives               | Students master technical, methodological, practical and interdisciplinary specifics in the thematic environment of the preparation and analysis of large and complex structured data sets , whereby they can evaluate and apply both modeling and system aspects of scalable database systems.                                                                                                                                                                                                                                |
| Content                                | The contents of the module are the research-oriented processing of a scientific topic, problem identification and solution in the areas of database management in a team and in individual analysis. Further content includes methods and techniques in database engineering, for example profiling and cleaning, the efficient realization of individual database operators, the interaction of existing functionalities with a focus on modern execution environments and the use of English-language specialist literature. |
| Teaching and learning methods          | The module comprises practical courses of 4 SWS and self-study. The language of instruction for the practicals is German.                                                                                                                                                                                                                                                                                                                                                                                                      |
| Prerequisites for participation        | The Bachelor's degree program in Computer Science requires the skills acquired in the modules INF-25-Ba-Ma1 Linear Algebra and Analysis, INF-25-Ba-Ma2 Discrete Structures, INF-25-Ba-Prg Programming and RoboLab, INF-25-Ba-AuD Algorithms and Data Structures and INF-25-Ba-SWT Software Technology, in particular knowledge of the basic terms, basic algorithms and architectural concepts of computer science.                                                                                                            |
| Applicability                          | In the Bachelor's degree program in Computer Science, the module is a compulsory elective module of the Bachelor's internship, which must be selected in accordance with the annex to the examination regulations g. The module creates the prerequisites for the modules listed under prerequisites for participation.                                                                                                                                                                                                        |
| Requirements for earning credit points | The credit points are earned if the module examination is passed. The module examination consists of a complex course of 80 hours. The examination language is German.                                                                                                                                                                                                                                                                                                                                                         |
| Credit points and grades               | 6 credit points can be earned through the module. The module grade corresponds to the grade of the examination.                                                                                                                                                                                                                                                                                                                                                                                                                |
| Module frequency                       | The module is offered every semester.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Workload                               | The total workload is 180 hours.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Module duration                        | The module comprises one semester.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Accompanying                           | see also: <a href="http://www.kpdbe.db-tu-dresden.de">http://www.kpdbe.db-tu-dresden.de</a>                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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