Module Name: Information Management	
Module Code	w.BA.XX.2InfoM-WIN.XX
Module Description	Students understand the motivation of information management. They have knowledge of various data models and forms of data representation. They know and understand their similarities and the characteristics which distinguish them. They can design data models, integrate them with one another, and apply them in the context of specific application cases and technologies. In so doing, they know how to utilize the particular features of individual models in a target-oriented way.
Program and Specialization	Business Information Technology
Legal Framework	Academic Regulations BSc dated 29.01.2009, Appendix to the Academic Regulations for the degree programs in Business Administration, Business Information Technology, and Business Law, first adopted on 12.05.2009
Module Category	**Module Type:** Compulsory	**Program Phase:** Main Study Period
ECTS	6
Organizational Unit	W Institut für Wirtschaftsinformatik
Module Coordinator	Alexandre de Spindler (desa)
Deputy Module Coordinator	Philipp Stalder (stlr)
Prerequisite Knowledge	Software Engineering: • Modeling with UML • Data structures • Procedural programming • Object-oriented programming • Programming reactive software • Design and procedure • Use of tools Requirements Engineering: • Conceptual modelling • Model-driven engineering
Contribution to Program Learning Goals (Affected by Module)	§ Professional Competence § Methodological Competence § Self-Competence
Contribution to Program Learning Objectives	Professional Competence § Knowing and Understanding Content of Theoretical and Practical Relevance § Apply, Analyze, and Synthesize Content of Theoretical and Practical Relevance § Evaluate Content of Theoretical and Practical Relevance Methodological Competence § Problem-Solving & Critical Thinking § Work Methods, Techniques, and Procedures § Information Literacy Self-Competence § Learning & Change
Module Learning Objectives	Students... § recognize and understand the requirements of information management: Data representation; Datamapping; Application in information systems § know and understand various data representations: Structured (relational); Semi-structured (XML, JSON); Unstructured (language) § know and understand various data models: XML, JSON, or similar; Entity relationship (ER); Relational model (RM); Object-oriented model (OO) § know and understand the concepts behind the models, their similarities, and their differences: The characteristics of hierarchical, object-oriented, and conceptional models; Basic concepts of unstructured, semi-structured, and structured models; Meta models and their differences. § understand the utilization of modeling steps in the context of interactive and model-driven development processes. § design data models and meta models and implement these using specific technologies. § apply in a selective way individual data presentations and their respective models for the design and implementation of information systems. § integrate models with one another.

	§ define and conduct iterative and model-driven development processes. § compare, select, and apply in a target-oriented way various data representations and their respective data models based on their key concepts and characteristics for the design and implementation of information systems. § acquire knowledge and skills regarding data representations, data models, and their applications independently.
Module Content	§ Knowledge of the requirements of data management. § Knowledge of the various forms of data representation. § Knowledge and application of different data models. § Unterstading of the concepts behind the models, their similarities and differences. § Knowledge and understanding of the characteristics of individual models and their correct, target-oriented application § Integrating models with one another § Application of acquired knowledge and inherited skills to specific technologies § Design, analysis, evaluation, and realization of systems § Application of acquired knowledge in iterative and model-driven development of processes.
Links to other modules	-

Methods of Instruction	§ Lecture § Interactive Instruction § Case Studies § Exercises § Literature Review § Group project	**Social Settings Used:** § Individual Work § Group Work

Digital Resources	§ Teaching Materials § Practice and Application Exercises (with Key) § Case Studies (with Key)

Type of Instruction	**Classroom Instruction**	**Guided Self-Study**	**Autonomous Self-Study**
Large Class	28 h	-	
Small Class	28 h	28 h	
Group Instruction	-	-	
Practical Work	-	-	
Seminar	-	-	
Total	**56 h**	**28 h**	**96 h**

Performance Assessment

End-of-module exam	**Form**	**Length (min.)**	**Weighting**
Oral exam		20	70.00 %
Permitted Resources	Permitted resources to be communicated.		
Others	**Assessment**	**Length (min.)**	**Weighting**
Exercises (4)	Grade	-	30.00 %

Classroom Attendance Requirement	Mandatory Attendance: Other Attendance requirements will be communicated separately.
Language of Instruction/Examination	English
Compulsory Reading	-
Recommended Reading	-
Comments	The module description is based on the assumption that in the fall semester 2021 classes and exams will both take place on campus. Changes affecting the module or type of performance assessment are however possible at short notice if the situation changes due to the pandemic. This is a revised version due to module changes required in the 2020 spring semester.