Modeling

Winter

(in German: Modellierung)

Module-ID: FIN-INF-110488

Abbreviation	Credit Points	Semester	Term	Duration	Language	Level
	5	Winter	3.	1 Semester	english	Bachelor

Link:	LSF
Limited accessability:	
Responsibility:	n.b.
Lecturer:	n.b.
Classes:	• Lecture *Modeling* • Exercise *Modeling*
Applicability in curriculum:	- B.Sc. INF (bilingual): Informatik I - Pflicht - B.Sc. INF (bilingual): Informatik Wahlpflicht (SPO 2027)

Intended learning outcomes:
Students ...

- are able to represent systems, data and processes using various modeling techniques.
- can design, present and communicate solutions within the framework of information and communication systems.
- can abstract complex, creative issues and think analytically.
- can design and present concepts for IT solutions and computer-aided solutions in such a way that they can be implemented on this basis.
- can apply the skills they have acquired in abstraction and representation, especially with regard to the mapping of processes, to fulfill tasks at the interface of computer science, business informatics and economics, but also in the context of subject areas outside of

computer science.
- can adapt the representation of their concepts and ideas to the needs of different stakeholders and thus make a valuable contribution to the success of a wide variety of projects in numerous contexts and across different disciplines.

Content:

- Modeling Theory: From the discourse world to formalized information models
- Processes, Workflows, and Business Processes
- Meta-models, Reference Modeling
- Principles of Proper Modeling
- Basics of XML
- Domain Conceptual Modeling with High-level Petri Nets, the Entity-Relationship Method, and BPMN
- Object-Oriented Modeling with UML
- Implementation of Concrete Tasks

Workload:

- Contact hours: 28 semester hours per week (SWS) of lectures + 28 SWS of exercises
- Self study: 54 hours of preparation and follow-up for the lectures + 40 hours of model development for the exercises

Pre-examination requirements:	Type of examination:	Teaching method / lecture hours per week (SWS):
	Graded und ungraded written examination, 120 Min.	• Lecture (2 SWS) • Exercise (2 SWS)

Prerequisites according to examination regulations:	Recommended prerequisites:
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Media:	Literature:
	Kecher, C. (2011): UML 2 – Das umfassende Handbuch. 4. Aufl. Reisig, W. (1998): Systementwurf mit Netzen. Berlin u. a.

Comments:

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