TECHNISCHE HOCHSCHULE LÜBECK

Module: Human-Machine Interaction

Level		**Short Name**	HMI
Responsible Lecturers	Denys Matthies, Sophie Jent		
Department, Facility	Electrical Engineering and Computer Science		
Course of Studies	Information Technology, Bachelor		
Compulsory/elective	Elective	**ECTS Credit Points**	5
Semester of Studies	(Unspecified)	**Semester Hours per Week**	4
Length (semesters)	1	**Workload (hours)**	150
Frequency	(Flexible)	**Presence Hours**	60
Teaching Language	English	**Self-Study Hours**	90

The following section is filled only if there is **exactly one** module-concluding exam.

Exam Type	Written Exam	**Exam Language**	English
Exam Length (minutes)	120	**Exam Grading System**	One-third Grades
Learning Outcomes	The students get an overview of the interdisciplinary science of Human-Machine Interaction and its central concepts, definitions, and research areas. They acquire knowledge regarding the foundations of HCI and learn how to apply this knowledge to the analysis and design of interactive products. They study and analyze different HCI models and interaction concepts and learn how to design dialogues for different use contexts. Furthermore, they get to know usability evaluation methods and machine learning aspects.		
Participation Prerequisites	/		

The previous section is filled only if there is **exactly one** module-concluding exam.

Consideration of Gender and Diversity Issues	✔ Use of gender-neutral language (THL standard) ✔ Target group specific adjustment of didactic methods ✔ Making subject diversity visible (female researchers, cultures etc.)
Applicability	
Remarks	

03.02.2022

Module Course: Human-Machine Interaction (Lecture)

(of Module: Human-Machine Interaction)

Course Type	Lecture	**Form of Learning**	Presence
Mandatory Attendance	no	**ECTS Credit Points**	2
Participation Limit		**Semester Hours per Week**	2
Group Size		**Workload (hours)**	60
Teaching Language	English	**Presence Hours**	30
Study Achievements ("Studienleistung", SL)		**Self-Study Hours**	30
SL Length (minutes)		**SL Grading System**	

The following section is filled only if there is a course-specific exam.

Exam Type		**Exam Language**	
Exam Length (minutes)		**Exam Grading System**	
Learning Outcomes			
Participation Prerequisites			

The previous section is filled only if there is a course-specific exam.

Contents	- Basic Terms - History and Future - Foundations of HCI - HCI Models & Interaction Concepts - Norms and legal requirements - The Usability Engineering Lifecycle - Accessibility - User Experience
Literature	Carroll, J. M. (2003). HCI Models, Theories and Frameworks: Toward a Multidisciplinary Science. San Francisco u.a.: Morgan Kaufman. Norman, D. (1988). The Psychology of Everyday Things. New York: Basic Books. (deutsch: Dinge des Alltags, Frankfurt: Campus) Shneiderman, B., Plaisant, C. (2010). Designing the user interface. Strategies for effective human-computer interaction. Addison-Wesley. Boston, 5th edition. ISO 9241: Ergonomics of Human-Computer Interaction. International Organization for Standardization.
Remarks	

Module Course: Human-Machine Interaction (Exercise)

(of Module: Human-Machine Interaction)

Course Type	Practical Training	**Form of Learning**	Presence
Mandatory Attendance	no	**ECTS Credit Points**	3
Participation Limit		**Semester Hours per Week**	2
Group Size		**Workload (hours)**	90
Teaching Language	English	**Presence Hours**	30
Study Achievements ("Studienleistung", SL)		**Self-Study Hours**	60
SL Length (minutes)		**SL Grading System**	

The following section is filled only if there is a course-specific exam.

Exam Type		**Exam Language**	
Exam Length (minutes)		**Exam Grading System**	
Learning Outcomes			
Participation Prerequisites			

The previous section is filled only if there is a course-specific exam.

Contents	• Analyzing information systems according to HMI principles • Design and prototypical implementation of HMI systems • Practical evaluation of usability engineering methods
Literature	Carroll, J. M. (2003). HCI Models, Theories and Frameworks: Toward a Multidisciplinary Science. San Francisco u.a.: Morgan Kaufman. Norman, D. (1988). The Psychology of Everyday Things. New York: Basic Books. (deutsch: Dinge des Alltags, Frankfurt: Campus) Shneiderman, B., Plaisant, C. (2010). Designing the user interface. Strategies for effective human-computer interaction. Addison-Wesley. Boston, 5th edition. ISO 9241: Ergonomics of Human-Computer Interaction. International Organization for Standardization.
Remarks	

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