

Module: Usability / User Experience Design

Level	Bachelor	Short Name	UEX
Responsible Lecturers	Janneck, Monique, Prof. Dr.		
Department, Facility	Electrical Engineering and Computer Science		
Course of Studies	Information Technology and Design, Bachelor		
Compulsory/elective	Compulsory	ECTS Credit Points	5
Semester of Studies	4	Semester Hours per Week	4
Length (semesters)	1	Workload (hours)	150
Frequency	SuSe	Presence Hours	60
Teaching Language	German/English	Self-Study Hours	90

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

Exam Type	Project Work	Exam Language	German/English
Exam Length (minutes)		Exam Grading System	One-third Grades

Learning Outcomes	<p>The course introduces central concepts of Human-Computer Interaction. Students learn about important contributions from basic disciplines (such as psychology and cognitive sciences) and are able to make use of these findings for the analysis and design of software products.</p> <p>Participants get to know terms and concepts such as usability, joy of use, user experience as well as standards, legal principles, design principles, interaction techniques and criteria for different application contexts.</p> <p>Furthermore, the course covers user-centered design methods, including quantitative and qualitative evaluation methods and their application in the different phases of the software development cycle. As a result, students understand the importance of a user-centered approach and will be able to apply usability engineering methods and to plan and carry out an evaluation study.</p> <p>As an outcome, students will be able to evaluate and design interactive products appropriately for a given context of use.</p> <p>Students improve their problem-solving skills and their ability to work in a team through team-based project work, putting the contents of the module into practice.</p>
Participation Prerequisites	–

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

Consideration of Gender and Diversity Issues	<ul style="list-style-type: none"> ✓ Use of gender-neutral language (THL standard) ✓ Target group specific adjustment of didactic methods ✓ Making subject diversity visible (female researchers, cultures etc.)
---	---

Applicability	Compulsory module in the study program Information Technology and Design Elective in other study programs
Remarks	–

Module Course: Usability / User Experience Design (Lecture)

(of Module: Usability / User Experience Design)

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	German/English	Presence Hours	30
Study Achievements ("Studienleistung", SL)		Self-Study Hours	30
SL Length (minutes)		SL Grading System	One-third Grades

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	See general description		
Participation Prerequisites	–		

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

Contents	<p>Fundamentals</p> <ul style="list-style-type: none"> • Human Information Processing • Activity Theory • Errors and security-related behavior • Socio-technical design <p>Interface Design</p> <ul style="list-style-type: none"> • History of Human-Computer Interaction • Norms and standards • Design principles • Interaction paradigms and techniques • Dialogues <p>Usability Engineering und Evaluation</p> <ul style="list-style-type: none"> • Usability Engineering methods (user modeling, Scenario Based Development, prototyping methods etc.) • Expert evaluation methods • User-centric methods • Planning evaluation studies
Literature	<p>Pratt, A., & Nunes, J. (2012). Interactive design: An introduction to the theory and application of user-centered design. Rockport Pub.</p> <p>Norman, Donald (1988). The Psychology of Everyday Things. New York: Basic Books.</p>

Ritter, E. F., Baxter, D. G., & Churchill, F. E. (2014). Foundations for designing user-centered systems: What system designers need to know about people. Springer-Verlag London.

Shneiderman, B. (2022). Human-centered AI. Oxford University Press.

Stanton, N. A., Salmon, P. M., Rafferty, L. A., Walker, G. H., Baber, C., & Jenkins, D. P. (2017). Human factors methods: a practical guide for engineering and design. CRC Press.

ISO 9241 (2010). Ergonomics of human-system interaction. British Standards Institution.

Remarks	–
----------------	---

Module Course: Usability / User Experience Design (Practical Training)

(of Module: Usability / User Experience Design)

Course Type	Practical Training	Form of Learning	Presence
Mandatory Attendance	yes	ECTS Credit Points	3
Participation Limit		Semester Hours per Week	2
Group Size	12	Workload (hours)	90
Teaching Language	German/English	Presence Hours	30
Study Achievements ("Studienleistung", SL)		Self-Study Hours	60
SL Length (minutes)		SL Grading System	Participation

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	During the semester, students work on a user-centered design project in small groups to apply HCI concepts and methods. This includes planning, implementation, documentation and presentation. They are continually supported in their project work by the lecturer.
Literature	See lecture description
Remarks	–