Syllabus
Lecture: Foundations of Interactive Systems

Course Description
Advanced information and communication technologies make interactive systems ever-present in the users’ private and business life. They are an integral part of smartphones, devices in the smart home, mobility vehicles as well as at the working place. With the continuous growing capabilities of computers, the design of the interaction between human and computer becomes even more important. This lecture introduces foundations on design processes and principles for interactive systems. The lecture focuses on foundational concepts, theories, practices and methods for the design of interactive systems. The students get the foundational knowledge to guide the design of interactive systems in business and private life.

Course Objectives
The aim of this course is to introduce the foundations of interactive systems. Thereby, the students:
• Have a basic understanding of conceptual and theoretical foundations of interactive systems
• know design processes and techniques for interactive systems
• are able to apply design principles for the design of important classes of interactive systems,

Course Requirements
The course is offered by the Institute of Information Systems and Marketing (IISM) at the Department of Economics and Management of KIT. It is designed for bachelor students in information systems (Wirtschaftsinformatik) and industrial engineering & management (Wirtschaftsingenieurwesen). Students from other disciplines (e.g. computer science, mechanical engineering) are also invited to participate.

Grading
The course has two grading components: Exam (60%) and Capstone Project (40%). First, there will be a 60 minutes closed-book / closed-notes exam consisting of short-answer, multiple-choice and analytical questions covering lecture material and business talks. Second, teams work in a capstone project and design an interactive system. Each team has to deliver a paper (max 10 pages) which presents the activities carried out in the human-centered design project and the resulting prototype. Both grading components need to be passed (grade 4.0 or better). A fail in either the exam or the capstone project results in a fail of the entire course. There is no retake possibility for the capstone project. Thus, if you fail the capstone project, you need to re-take the entire course in the upcoming year.

Registration and Organization
Please register via the learning platform ILIAS to the course. For specific dates and location of the lecture, please check the Website or portal. All questions regarding content, organization, and certificates are answered by the responsible single point of contact for the lecture as documented on the research group Website.

Course Materials
For each course session a dedicated slide deck is provided. Additionally, a list of reference publications (book sections, conference papers, journal articles) is made available for download on the learning platform.
# Course Outline

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## Foundations

- Session 1: Organizational Information (Mädche)
- Session 2: Key Concepts (Mädche)

## Interactive Customer-Centric Systems

- Session 3: Human-Centered Design Process (Mädche)
- Session 4: Design Activities & Techniques (Mädche)
- Session 5: Business Intelligence Systems (Nadj)
- Session 6: Analytical Systems (Nadj)
- Session 7: Digital Customer Channels (Morana)
- Session 8: Conversational User Interfaces (Morana)
- Session 9: Research@ISSD, Summary, Q&A