

## Courses in English Course Description

**Department** 09 Engineering and Management

Course title Design Thinking and Human-Centerd-Design

Hours per week (SWS) 4

Number of ECTS credits 4

Course objective

General understanding of the human-centered mindset, process, method and tools:

- Setting up a project• Identify a relevant problem and define a starting point
- Conduct user research• Extract relevant information from different data sources
- · Reframe the initial problem statement if needed
- · Generate ideas based on research and data points
- Use prototypes to communicate and test those ideas
- Use test results to iterate the initial solution further
- Present and pitch final solution towards decision makers / other stakeholders

· Reflect on approach and learnings

Prerequisites Product Management and/or Marketing

Recommended reading Tim Brown (2008): Design ThinkingJeanne Liedtka and Tim Ogilvie (2011): Designing for Growth: A

Design Thinking Tool Kit for Managers

https://www.ideo.com/question/how-can-we-use-ai-to-make-things-better-for-humans

**Teaching methods** Seminarististic class. Group size: max. 30 students

Assessment methods Project

Language of instruction English

Name of lecturer Jennifer Heier (Siemens AG)

Lucas Bock (Siemens AG)
Dr. Bettina Maisch (Siemens AG)

Email

Link

Course content

Project briefing:

How might we develop a delightful, effective and efficient digital companion as a support in an

industrial/business environment?

Project preparation:

We will identify relevant problem/need of an existing (digital) solution or process in an already given business or industry context. This problem will be described in detail (what, why, how, what kind of stakeholders are involved?).

Project application:

Students groups of 3 persons will apply the methods and tools introduced in the seminar along a self-selected project topic.

Module 1 (Fr & Sa): Problem Space

General Intro Human-Centered-Design Principles / Examples from Industry

Intro Understand & Observe (problem space)

Module 2 (Fr & Sa): Solution Space
• Intro Synthesize, Ideate (solution space)

• Intro Prototype & Test

Module 3 (Fr & Sa): Implementation Space
• Test Results & Iterate / Intro: Pitching

• Final presentation and critical review of results and decision taken / Reflect of the HCD process and

its application

Remarks Workload: Presence time: 60 hours

Self-studiespreparation of lectures and examt: 60 hours