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Course: Design Research in Healthcare (5 ECTS)

Course Objectives

The aim of this course is to deepen doctoral students' theoretical and methodological understanding of the application of design research in healthcare. Students will learn to evaluate and apply user-centered design principles and to develop innovative service concepts that are evidence-based and meet the needs of healthcare customers.

Learning Outcomes

Upon completion of the course, students will:

- **Understand the theoretical foundations of design research** and its significance in the development of healthcare services, processes, and products.
- **Master the methodologies of design research**, including design-based research, design thinking, and the double diamond model, and be able to apply these methods in research and development projects.
- **Evaluate and apply user-centered design principles** in the development of healthcare services, processes, and products, considering the needs and experiences of patients and users.
- **Utilize evidence-based methods and tools** in the iterative design process of development projects, in line with co-design principles.
- **Develop innovative service concepts** that address the needs of healthcare clients, leveraging both evidence-based information and user-centered design principles.

Content

The content of the course includes:

1. Theory of Design Research

- Design research is a multidisciplinary field that integrates design, research, and practice, focusing on the understanding and development of design processes, methods, and products.
- **Key Elements:**
 - **User-Centeredness:** The design process considers users' needs and behaviors.
 - **Iterativity:** Emphasizes continuous experimentation and feedback collection.
 - **Multidisciplinarity:** Combines various disciplines to create more comprehensive solutions.
 - **Theoretical Framework:** Based on various theoretical models that help understand the design process and its impacts.
 - **Contextuality:** The context of design, including culture, environment, and technological conditions, significantly influences the design process and outcomes.

2. Methodology of Design Research

- **Design-Based Research:** Emphasizes the close relationship between design and research. Stages: problem definition, design, implementation, evaluation, and iteration.
- **Design Thinking:** Principles and stages (empathy, definition, ideation, prototyping, testing) applied to address challenges in healthcare.
- **Double Diamond Model:** Stages (Discover, Define, Develop, Deliver) applied in healthcare development projects.
- Various research methods: qualitative and quantitative approaches, participatory research, and co-design.

3. User-Centered Development

- Models and practices of user-centered design.
- Patient-centered approaches: considering the needs of patients and users in the design process.

4. Iterative Design Process

- Stages of the iterative design process and their significance in healthcare development.
- Practical work in iterative development: prototyping and testing.

5. Customer Experience

- The importance of customer experience in healthcare.
- Methods for assessing and improving customer experience through design research.

Teaching Methods

- **Lectures and seminars:** Theoretical background on design research and its application in healthcare.
- **Group work:** Collaborative development of new service and product ideas, applying design research theories and methods. Practical exercises in various phases of the design process.

Evaluation: Pass/fail.

- Reading the preliminary materials.
- Learning assignments in Moodle.
- Participation in lectures and group work.
- Group work: developing a new service or product for healthcare.