Course: Design Methodology — credits: 2

Course code	ELVH19ADM
Name	Design Methodology
Study year	2022-2023
ECTS credits	2
Language	English
Coordinator	C. Stadig
Modes of delivery	Assignment Lecture Practical / Training
Assessments	Design Methodology - Skills test

Learning outcomes

1. The student can identify which Human Factor elements to address in order to design a suitable interface for a particular application.
1. The student can apply generic Human Factor research & analysis methods at a basic / beginners level.
1. The student can create operational and specific functional requirements based on the results of the Human Factor analysis methods and customer requirements.
1. Student translates all findings of the study into functional main requirements, functional sub-requirements and eventually, where detailed design decisions are made, non-functional sub-requirements, using the tools taught. All requirements are check-able, full-sentenced, unambiguous, testable and well-referenced when needed.
1. The student can create feasible product concepts via a design process incorporating creative, selective, and reflective iterations.
1. The student compares the design against the list of requirements; Identifying critical requirements (CTQ variables and specification limits) and consequences for the designed product, using the tools taught.

Content

This study unit is related to User oriented design,

User oriented design:

Here you will learn and understand how to design a usable interface that is based on the user and the context. That will be done by looking at the following areas:

- User Awareness (Cognitive ergonomics)
- Context Awareness (Context Sensitive System Interactions)

Globally the following subjects will be discussed during the lectures in this study unit:

1. Awareness of the importance of usability;
1. User centred interaction design methods;
1. Product Specification and Integration/validation V-process
1. User requirements as part of Business requirements specification;
1. Deriving product interaction requirements and visual interface design;
1. Usability testing (User requirements verification).
1. Context awareness

Included in programme(s)

Electrical Engineering Major Sensor Technology

School(s)

Institute of Engineering

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