KURSPLAN

Sensorik, perception, människa maskin interaktion, 7,5 högskolepoäng

Sensation, Perception and Human Interaction in Design, 7.5 credits

Kurskod:	TSRS22	**Utbildningsnivå:**	Avancerad nivå
Fastställd av:	VD 2021-03-01	**Utbildningsområde:**	Tekniska området
Reviderad av:	Utbildningschef 2024-10-15	**Ämnesgrupp:**	DE1
Gäller fr.o.m.:	2025-01-01	**Fördjupning:**	A1F
Version:	4	**Huvudområde:**	Produktutveckling

Lärandemål

After a successful course, the student shall;

The course is intended to provide a basic understanding of ergonomic principles and its impact on the design of products, rooms, and systems.

Kunskap och förståelse
- display knowledge of human / machine interaction and human capabilities and limitations.
- display knowledge of cognition, perception and affect and its influence on product format.
- display knowledge of the human mind and its relation to aesthetics.
- demonstrate comprehension of the connection between sensations and design aspects like; form, color, and texture.

Färdighet och förmåga
-demonstrate the ability to explain the ergonomic principles of methods for defining a design project as data collection and analysis, and its impact on the result.

Värderingsförmåga och förhållningssätt
- demonstrate an understanding of how different competences in product development process contributes to the whole of a product
- demonstrate an understanding of aesthetics related to sensory perception, judgment and experience

Innehåll

Literature, lectures and hands on observation will give an in-depth knowledge of human capabilities and limitations and their impact on product design.

The course includes the following elements:
- Ergonomics, concepts and methods
- Customer requirements and analysis

- Idea generation and proposal work
- Study and analysis
- Perception and perception psychology
- Semantics and semiotics

Undervisningsformer

The course is implemented through lectures, supervision, assignments and projects.

Undervisningen bedrivs på engelska.

Förkunskapskrav

The applicant must hold the minimum of a bachelor's degree (i.e., the equivalent of 180 ECTS credits at an accredited university) with at least 90 credits within the major subject Mechanical Engineering or Civil Engineering (with relevant courses in construction and design), and 15 credits Mathematics, or equivalent. Passed the course Advaced CAD 7.5 credits. Proof of English proficiency is required.

Examination och betyg

Kursen bedöms med betygen Underkänd eller Godkänd.

Poängregistrering av examinationen för kursen sker enligt följande system:

Examinationsmoment	Omfattning	Betyg
Inlämningsuppgifter	3 hp	U/G
Projektarbete[I]	4,5 hp	U/G

[I] Bestämmer kursens slutbetyg vilket utfärdas först när samtliga moment godkänts.

Kurslitteratur

The literature list fort the course will be provided eight weeks before the course starts.

The student is provided with relevant literature at the start of the course.