COURSE SYLLABUS

Trends in Human-Computer Interaction, 7.5 credits

Trender inom Human-Computer Interaction, 7,5 högskolepoäng

Course Code:	THCN13	**Education Cycle:**	First-cycle level
Confirmed by:	Dean Oct 15, 2022	**Disciplinary domain:**	Technology
Valid From:	Jan 1, 2023	**Subject group:**	IF1
Version:	1	**Specialised in:**	G2F
		Main field of study:	Informatics

Intended Learning Outcomes (ILO)

After a successful course, the student shall

Knowledge and understanding
- display knowledge of current trends in the field of human-computer interaction.
- show familiarity with the use of various human-computer interaction concepts, theories, and principles

Skills and abilities
- demonstrate the ability to identify relevant human-computer interactions concepts, theories, and principles.
- demonstrate the ability to contrast the use of concepts, theories, and principles in human-computer interaction to formulate own research designs

Judgement and approach
- demonstrate the ability to critically assess and reflect on human-computer interaction concepts, theories, and principles.
- demonstrate the ability to identify the own need of further knowledge and to take responsibility for further knowledge development.

Contents

The purpose of this course is to provide the students with an overview of current research and themes in Human-Computer Interaction (HCI). The students shall then identify, critically assess and use concepts, theories and principles from this research to formulate their own research designs.

Inspirational lectures and assignments drawing from contemporary, state-of-the-art content presented on conferences and in recent publications in the field of HCI. Topics of interest within HCI may include, but not limited to, the following:
- *Context-aware computing*
Activity analysis, Embodied and Wearable Computing, Smart Spaces, Location-aware systems,

Privacy technologies, Affective Computing.
- *Perceptual Interface*
Virtual reality (VR) and Augmented reality (AR), Vision-based interfaces, Conversational interfaces
- *Collaboration and Learning*
Tutorial and instruction systems, Crowdsourcing, Pattern-based authoring tools, Learning at scale, Remote group collaboration technologies, Citizen science
- *Digital Design and Fabrication*
Prototyping tools, DIY and Maker Culture, Computational Design, Creativity-support tools, Sensing technologies
- *Human-Centered Artificial Intelligence*
Human-robot interaction, Explainable AI, Interactive Machine Learning, Responsible AI, Multimedia retrieval and understanding, Recommender Systems
- *Computational Social Science*
Automated information extraction, Social network analysis, Geospatial analysis, Complexity modeling, Social simulation models.

Type of instruction

Lectures, seminars, tutoring and written assignments.

The teaching is conducted in English.

Prerequisites

General entry requirements and completed courses 60 credits in first cycle, including Introduction to Human-Computer Interacion, 7,5 credits, Web and User Interface Design, 15 credits and User Experience Design, 7,5 credit (or the equivalent).

Examination and grades

The course is graded 5,4,3 or Fail.

Registration of examination:

Name of the Test	Value	Grading
Assignment[I]	5 credits	5/4/3/U
Seminars	2.5 credits	U/G

[I] Determines the final grade of the course, which is issued only when all course units have been passed.

Course literature

The literature list for the course will be provided 8 weeks before the course starts.

No specific course materials upfront. It will be hand outs during the lectures.