



## KURSPLAN

# Fundamentals in Assistive Technology, 7,5 högskolepoäng

## *Fundamentals in Assistive Technology, 7.5 credits*

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<b>Kurskod:</b>	HFAR20	<b>Utbildningsnivå:</b>	Avancerad nivå
<b>Fastställd av:</b>	Utbildningsrådet 2020-05-14	<b>Utbildningsområde:</b>	Medicinska området
<b>Gäller fr.o.m.:</b>	2020-08-17	<b>Ämnesgrupp:</b>	MT2
<b>Version:</b>	1	<b>Fördjupning:</b>	A1N
<b>Diarienummer:</b>	Department of Rehabilitation	<b>Huvudområde:</b>	Ortopedteknik

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### Lärandemål

Upon completion of the course the student should have the ability to:

#### Kunskap och förståelse

- describe current laws, policies, guidelines and regulations governing production and provision of assistive technologies both nationally and internationally
- discuss the role of assistive technologies as mediators and moderators for achieving the sustainable development goals
- critically evaluate research-based evidence related to the effectiveness of assistive technologies
- demonstrate an understanding of the engineering, medical, and social aspects associated with the design, development, and use of assistive technology
- argue for the importance of maintaining a patient perspective in the design and prescription of assistive technologies
- compare how design characteristics of devices may need to change in different national and international contexts.

#### Färdighet och förmåga

- work as a team to analyse usability goals for an assistive device
- apply appropriate tools to evaluate and document outcomes associated with use of an assistive device.

#### Värderingsförmåga och förhållningssätt

- develop the capability to communicate between disciplines

### Innehåll

- what is an assistive device, what is not an assistive device
- the global need for assistive technologies
- assistive technologies and the Sustainable Development Goals
- assessing individual needs for assistive technology
- assistive technology design and development from an engineering perspective
- assistive technology design and development from a medical and social perspective
- national and international laws and policies guiding production and provision of assistive

technologies

- medical device regulation (e.g. CE marking and FDA approval)
- health, safety and environmental protection standards
- overview of research and development related to assistive technologies
- usability, user experience and user-centred design
- evaluating outcomes of assistive technology provision

### **Undervisningsformer**

The course is implemented through lectures, case studies, written assignments, group work.

Undervisningen bedrivs på engelska.

### **Förkunskapskrav**

The applicant must hold the minimum of a Bachelor's degree or equivalent (i.e. the equivalent of 180 ECTS credits at an accredited university) in Prosthetics and Orthotics or Mechanical engineering. Proof of English proficiency is required.

### **Examination och betyg**

Kursen bedöms med betygen A, B, C, D, E, FX eller F.

Examination of the course will be based upon one individual written assignment and one seminar.

A senior lecturer serves as examiner for the course.

Poängregistrering av examinationen för kursen sker enligt följande system:

Examinationsmoment	Omfattning	Betyg
Individual written assignment	5 hp	A/B/C/D/E/FX/F
Seminar	2,5 hp	U/G

### **Kurslitteratur**