COURSE SYLLABUS

Fundamentals in Assistive Technology, 7.5 credits

Fundamentals in Assistive Technology, 7,5 högskolepoäng

Course Code:	HFAR20	**Education Cycle:**	Second-cycle level
Confirmed by:	Utbildningsrådet May 14, 2020	**Disciplinary domain:**	Medicine
Revised by:	Utbildningsrådet Apr 9, 2024	**Subject group:**	MT2
Valid From:	Aug 26, 2024	**Specialised in:**	A1N
Version:	2	**Main field of study:**	Prosthetics and Orthotics

Intended Learning Outcomes (ILO)

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

Knowledge and understanding

- describe current laws, policies, guidelines and regulations governing production and provision of assistive technologies
- 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 assistive technology
- argue for the importance of maintaining a patient perspective in the design and prescription of assistive technologies
- demonstrate an understanding of how design characteristics of devices may need to change in different contexts.

Skills and abilities

- work in 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.

Judgement and approach

- demonstrate an appreciation of the importance of communication between disciplines.

Contents

- definitions of assistive devices
- 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

- laws and policies guiding production and provision of assistive technologies
- medical device regulation
- overview of research and development related to assistive technologies
- usability, user experience and user-centred design
- evaluating outcomes of assistive technology provision

Type of instruction

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

The teaching is conducted in English.

Prerequisites

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 and grades

The course is graded A, B, C, D, E, FX or 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.

Registration of examination:

Name of the Test	Value	Grading
Individual written assignment	5 credits	A/B/C/D/E/FX/F
Seminar	2.5 credits	U/G

Course literature

Relevant journal articles will be used.