



## KURSPLAN

# Research Methods and Evidence-based Practice, 7,5 högskolepoäng

*Research Methods and Evidence-based Practice, 7.5 credits*

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<b>Kurskod:</b>	HRMS23	<b>Utbildningsnivå:</b>	Avancerad nivå
<b>Fastställd av:</b>	Utbildningsrådet 2023-04-11	<b>Utbildningsområde:</b>	Medicinska området
<b>Gäller fr.o.m.:</b>	2023-08-28	<b>Ämnesgrupp:</b>	MT2
<b>Version:</b>	1	<b>Fördjupning:</b>	A1F
		<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 implementation of research and development outcomes from an evidence-based perspective
- demonstrate an understanding of the structure and key elements of a research proposal.

#### Färdighet och förmåga

- compare different research designs and methodologies used in research related to assistive technologies and identify appropriate designs for different research questions
- develop a concise statement of the problem and rationale based on a critical literature review and justification of research ideas.
- discuss and debate important issues in research ethics, including responsibility for research, data management, ethical vetting, and scientific misconduct
- use different qualitative and quantitative approaches for data analysis
- describe and discuss the interrelationship between research aims/questions, methods, and expected results.

#### Värderingsförmåga och förhållningssätt

- critically assess the need for ethics in research and development
- critically evaluate the quality of published scientific literature in the context of supporting research ideas.

### Innehåll

- foundations of scientific theory and their role in the choice of scientific methods
- effective search strategy
- writing a research proposal
- research ethics
- research design
- scientific rigour and quality

- implementation of evidence-based practice

### Undervisningsformer

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

Undervisningen bedrivs på engelska.

### Förkunskapskrav

The applicant must hold a minimum of a Bachelor degree or equivalent (i.e. the equivalent of 180 credits at an accredited university) in prosthetics and orthotics or mechanical engineering. Proof of English proficiency is required. Also the applicant must have taken the course Co-production in Health and Welfare, 7.5 credits.

### Examination och betyg

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

Examination of the course will be based upon individual written assignment, group presentation and seminars.

A senior lecturer serves as examiner for the course.

Poängregistrering av examinationen för kursen sker enligt följande system:

Examinationsmoment	Omfattning	Betyg
Individual written assignment	1,5 hp	U/G
Group presentation	0,5 hp	U/G
Seminars	5,5 hp	A/B/C/D/E/FX/F

### Kurslitteratur

Creswell, J.W., & Creswell J. D. (2017). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (5th.ed.). SAGE Publications Inc.

Gastel, B., & Day, R. A. (2022). *How to write and publish a scientific paper* (9th.ed.). Greenwood Publishing Group Inc.