COURSE SYLLABUS

Scientific Methods and Statistics, 7.5 credits

Scientific Methods and Statistics, 7,5 högskolepoäng

Course Code:	HSCG10	**Education Cycle:**	First-cycle level
Confirmed by:	Utbildningsrådet May 9, 2018	**Disciplinary domain:**	Medicine
Revised by:	Department head Jul 1, 2021	**Subject group:**	MT2
Valid From:	Aug 30, 2021	**Specialised in:**	G1N
Version:	2	**Main field of study:**	Prosthetics and Orthotics
Reg number:	Avdelningen för rehabilitering		

Intended Learning Outcomes (ILO)

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

Knowledge and understanding

- describe and discuss various quantitative research and analysis methods
- describe and discuss various qualitative research and analysis methods.

Skills and abilities

- critically evaluate research methods in relation to a well-defined aim
- determine and apply appropriate statistical tests for different types of empirical data
- determine and apply appropriate methods for analysis of qualitative data
- use statistical packages (e.g. SPSS and Excel) and apply common statistical tests.

Judgement and approach

- appreciate the importance of research ethics
- develop independent thinking for critically analysing research reports.

Contents

- research ethics
- qualitative data collection methods
- common methods for analysing qualitative data
- quantitative research design
- data management and descriptive statistics
- hypothesis testing (including tests between two or more groups)
- measurement error
- reliability and validity
- statistical power

Type of instruction

The course is conducted in the form of online instructional content, lectures and tutorials.

The teaching is conducted in English.

Prerequisites

General entry requirements.

Examination and grades

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

The course examination will be based upon a two-part individual examination (one part is conducted using statistical analysis software).

A university lecturer will serve as examiner for this course.

Registration of examination:

Name of the Test	Value	Grading
Examination	7.5 credits	A/B/C/D/E/FX/F

Course literature

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design?: choosing among five approaches*. Sage Publications.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics: and sex and drugs and rock 'n' roll.* Los Angeles: Sage.

Greenhalgh, T. (2019). *How to read a paper?: the basics of evidence-based medicine and healthcare.* John Wiley & Sons Ltd.

The most recent editions of the course literature should be used.
Additional relevant journal articles will be used.