



COURSE SYLLABUS

Theory of Science and Scientific Method, 15 credits

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Course Code: HTSR25	Education Cycle: Second-cycle level
Confirmed by: Utbildningsrådet Feb 16, 2015	Disciplinary domain: Health sciences
Revised by: Department head Mar 19, 2019	Subject group: TR1
Valid From: Aug 26, 2019	Specialised in: A1N
Version: 5	Main field of study: Occupational Therapy
Reg number: Department of Rehabilitation	

Intended Learning Outcomes (ILO)

Upon completion of the course, the student will be able to:

Knowledge and understanding

- thoroughly describe the progression of knowledge based on different approaches in the theory of science
- describe appropriate quantitative, qualitative and combined research methods for different kinds of research questions
- compare design, methods of data collection and data analysis related to different research methods
- describe ethical considerations within different research approaches
- explain what signifies validity and reliability, as well as trustworthiness and credibility in quantitative as well as qualitative studies.

Skills and abilities

- under supervision perform studies using different research approaches
- apply descriptive and analytical statistics
- conduct interviews and data analysis using a qualitative research approach
- compile and present findings from quantitative, qualitative or combined methods studies
- apply ethical considerations within research.

Judgement and approach

- evaluate and discuss approaches in theory of science related to research design
- evaluate different research methods in relation to chosen research questions
- evaluate the quality of scientific studies using different design approaches in addition to conclusions drawn.

Contents

Philosophical principles of research and approaches of theory of science

- approaches in theory of science
- critical review of scientific articles
- research ethics

Research approaches

- research design within quantitative research methods
- research design within qualitative research methods
- data collection, analysis and presentation using a quantitative, qualitative or combined research methods

Type of instruction

The course is given as a web-based distance course.

The teaching is conducted in English.

Prerequisites

Bachelor's degree (i.e the equivalent of 180 ECTS credits at an accredited university) within health and caring sciences, behavioural science, social work, or educational sciences (or the equivalent).

Examination and grades

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

Module 1. Philosophical principles of research and approaches of theory of science, 3 Credits

One written group assignment.

Module 2. Quantitative research methods, 5 Credits

Two individually written assignments.

Module 3. Qualitative research methods, 5 Credits

One written group assignment and one individually written assignment.

Module 4. Thesis proposal, 2 Credits

An assignment and a presentation of a thesis proposal with a quantitative, qualitative or combined research method.

Examination by assistant professor.

Registration of examination:

Name of the Test	Value	Grading
Philosophical principles of res. and appr. of theor. science	3 credits	A/B/C/D/E/FX/F
Quantitative research methods	5 credits	A/B/C/D/E/FX/F
Qualitative research methods	5 credits	A/B/C/D/E/FX/F
Thesis proposal	2 credits	U/G

Other information**Attendance requirements**

Mandatory attendance at online seminars.

Course literature

American Psychological Association. (2009). *Publication Manual of the American Psychological Association*. Washington, D.C.: The Association cop.

Brinkmann, S. & Kvale, S. (2018). *Doing interviews*. Thousand oaks: SAGE (E-book).

Chalmers, A. (2013). *What is This Thing Called Science?* Maidenhead: Open university press.

Creswell, J.W. (2018). *Research design*. London: SAGE Publications Inc.

Field, A. (2017). *Discovering statistics using IBM SPSS statistics: and sex and drugs and rock'n' roll*. Los Angeles: London: Sage.

Gustavii, B. (2017). *How to Write and Illustrate a Scientific Paper*. Cambridge: Cambridge University Press.

Oliver, P. (2010). *The Student's Guide to Research Ethics*. United Kingdom: Open University Press.

Portney, G. L., & Watkins, M. (2013). *Foundations of Clinical Research*. United Kingdom: Pearson Education.

Latest edition of textbooks to be used.

In addition: scientific articles and reports depending on main area and chosen research method.