



COURSE SYLLABUS

Theory of Science and Scientific Method, 15 credits

Theory of Science and Scientific Method, 15 högskolepoäng

Course Code: HTSR23	Education Cycle: Second-cycle level
Confirmed by: Utbildningsrådet Apr 12, 2022	Disciplinary domain: Health sciences
Revised by: Director of Education Apr 21, 2023	Subject group: TR1
Valid From: Aug 28, 2023	Specialised in: A1N
Version: 2	Main field of study: Occupational Therapy

Intended Learning Outcomes (ILO)

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

Knowledge and understanding

- differentiate between traditional approaches in theory of science
- describe and assess appropriate qualitative and quantitative research methods in relation to different kinds of research questions
- describe ethical considerations within qualitative and quantitative research methods
- explain what signifies trustworthiness as well as validity and reliability in qualitative and quantitative studies.

Skills and abilities

- problematize and specify research questions in a particular field of study
- apply ethics in research
- perform studies using qualitative and quantitative research methods.

Judgement and approach

- evaluate and discuss approaches in theory of science in relation to a research question
- assess the quality of qualitative and quantitative studies.

Contents

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

- approaches in theory of science

Module 2. Qualitative research methods, 5 credits

- research design using qualitative research methods
- trustworthiness
- research ethics

Module 3. Quantitative research methods, 5 Credits

- research design using quantitative research methods
- validity and reliability

- research ethics

Module 4. Thesis proposal, 2 Credits

- research design using qualitative or quantitative research methods
- trustworthiness or validity and reliability
- research ethics

Type of instruction

The course is given as a web-based course. Learning activities include lectures, seminars, practical exercises, and group discussions.

The teaching is conducted in English.

Prerequisites

Bachelor's degree (i.e., the equivalent of 180 credits) including a passed 15 credit undergraduate thesis within health and social 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

A written group assignment.

Module 2. Qualitative research methods, 5 Credits

An individually written assignments and an oral group assignment.

Module 3. Quantitative research methods, 5 Credits

Two individually written assignments.

Module 4. Thesis proposal, 2 Credits

A written thesis proposal with a qualitative or quantitative research design, an oral defense of the proposal, and an opposition of a proposal.

A university senior lecturer serves as examiner for the course.

Registration of examination:

Name of the Test	Value	Grading
Module 1. Philosophical principles of research and approaches of theory of science	3 credits	A/B/C/D/E/FX/F
Module 2. Qualitative research methods	5 credits	A/B/C/D/E/FX/F
Module 3. Quantitative research methods	5 credits	A/B/C/D/E/FX/F
Module 4. Thesis proposal	2 credits	U/G

Course literature

American Psychological Association. (2019). *Publication manual of the American Psychological Association* (7th ed.). American Psychological Association.

Brinkmann, S., & Kvale, S. (2018). *Doing interviews* (2nd ed.). SAGE Publications Ltd.

Chalmers, A.F. (2013). *What is this thing called science?* (4th ed.). University of Queensland Press.

Creswell, J.W., & Creswell, J.D. (2018). *Research design: qualitative, quantitative, and mixed method approaches* (5th ed.). SAGE Publications Inc.

DePoy, E., & Gitlin, L. N. (2020). *Introduction to research: understanding and applying multiple strategies* (6th ed.). Elsevier.

Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications, Inc.

Gustavii, B. (2017). *How to write and illustrate a scientific paper* (3rd ed.). Cambridge University Press.

Iphofen, R. (Ed.) (2020). *Handbook of research ethics and scientific integrity* (1st ed.). Springer.

The latest edition of the course literature should be used.

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