



**Karolinska
Institutet**

Course syllabus for

Scientific Theory and Research Methods, 7.5 credits

Vetenskaplig teori och metod i omvårdnad, 7.5 hp

This course syllabus is valid from spring 2016.

Please note that the course syllabus is available in the following versions:

[Autumn2012](#) , [Autumn2014](#) , [Autumn2015](#) , [Spring2016](#) , [Autumn2017](#) , [Spring2018](#) , [Autumn2018](#) , [Spring2022](#) , [Autumn2022](#) , [Spring2024](#) , [Spring2025](#)

Course code	2AM018
Course name	Scientific Theory and Research Methods
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Nursing
Level	AV - Second cycle
Grading scale	Pass, Fail
Department	Department of Clinical Science and Education, Södersjukhuset
Decided by	Programnämnd 9
Decision date	2012-05-29
Revised by	Programme Committee 9
Last revision	2016-01-19
Course syllabus valid from	Spring 2016

Specific entry requirements

Qualification as a nurse certified by the National Board of Health and Welfare

Objectives

The main aim of the course is that the student should have advanced his knowledge and his understanding in scientific theory, method and research ethics and in application of research in nursing with a specialisation in the expert area. Furthermore, the student should have acquired an advanced scientific, critically reflective and research-ethical attitude.

Module 1: Scientific theory and method (3.5 credits) After completing the course, the student should be able to:

- Account for and integrate science and knowledge concept related to the main field of study nursing with a specialisation in the expert area

- Review and evaluate scientific results of quantitative and qualitative research with relevance for nursing within the expert area critically.

Module 2: Research design (4 credits) After completing the course, the student should be able to:

- Based on an own formulated aim and issues, assess and analyze strengths and weaknesses with different research methods. Apply and evaluate research-ethical aspects within the expert area.
- Apply the research process and good academic custom and reference management at the scientific writing.
- Demonstrate the ability to identify his need of additional knowledge within scientific theory and method
- Demonstrate an understanding of the possibilities and limitations of the science, its role in the society and the responsibility of people for how it is used.

Content

The course consists of two parts:

Scientific theory and method, 3.5 hp

- scientific methods in nursing research related to the expert area
- assessment and values of qualitative and quantitative nursing research (induction, deduction, validity, reliability, transferability, reliability)
- research designs within quantitative (experimental and not experimental research design) and qualitative research and systematic literature studies.

Research design, 4 hp

- research-ethical principles
- good academic custom and reference management at scientific writing
- designs and methods for selection (strategic, randomized) data collection (questionnaire, interviews, observations) and analysis (descriptive and analytical statistics; describing and interpreting qualitative analysis) related to aim and issues

Teaching methods

The teaching is based on a problem-oriented and collaborative approach to learning in which the tasks provide opportunities for the student to take active responsibility for their learning. The used teaching methods are individual assignments, group discussions, seminars and lectures. Participation in seminars is compulsory. Teaching support is given via web-based learning management system.

The education is carried out on 3/4 pace equivalent to 32 hours a week.

The number of physical meetings is limited to at most 3 days for courses on 3/4 pace. Other time is carry out the studies via web-based learning management system. It is required, because you have basic computer science and access to computer with Internet connection. The course coordinator decides if and how absence from training should be compensated.

Before the student has participated in compulsory parts or compensated absence in accordance with the instructions of the course coordinator, the student's results are not registered for the course/parts in LADOK (student registry).

Examination

Module 1: Scientific theory and method (3.5 credits) Nursing with a specialisation in the expert area, theory of knowledge and research methodology and critical review of scientific literature with a specialisation in the expert area are examined through individual reflection log.

Module 2: Research design (4 credits) The examination consists of written individual writing project plan for a scientific orientation degree project within the main field of study nursing and with specialisation within the expert area. And participation in compulsory seminar and written individual examination.

Limitation of the number of examination sessions: Students who do not pass a regular examination are entitled to re-sit the examination on five more occasions. If the student has failed six examinations, no additional examination is given. In case a student is registered for an examination but does not attend, this is not regarded as an examination. Late submissions of examinations are not accepted. Students who have not submitted on time, are referred to re-examination.

Other directives

Course evaluation takes place in accordance with the guidelines established by the Board of Education.

Literature and other teaching aids

Patton, Michael Quinn

Qualitative research & evaluation methods

3. ed. : London : SAGE, cop. 2002 - xxiv, 598, [65] s.

ISBN:0-7619-1971-6 ; £40.00 LIBRIS-ID:5601820

[Library search](#)

Ejlertsson, Göran

Statistik för hälsovetenskaperna

2., moderniserade och utök. uppl. : Lund : Studentlitteratur, 2012 - 303 s.

ISBN:978-91-44-07048-3 LIBRIS-ID:13374003

URL: [Övningsmaterial](#)

[Library search](#)

Hulley, Stephen B

Designing clinical research

2013

LIBRIS-ID:15213039

Johansson, Lars-Göran

Introduktion till vetenskapsteorin

3., [utök.] uppl. : Stockholm : Thales, 2011 - 272 s.

ISBN:9789172350823 LIBRIS-ID:12129388

[Library search](#)

Polit, Denise F.; Beck, Cheryl Tatano

Nursing research : generating and assessing evidence for nursing practice

9.ed. : Philadelphia : Wolters Kluwer Health/Lippincott Williams & Wilkins, cop. 2012 [dvs 2011] - xiv, 802 s.

ISBN:978-1-60547-708-4 (hardback) LIBRIS-ID:12094617

[Library search](#)

Vetenskaplig teori och metod : från idé till examination inom omvårdnad

Henricson, Maria

1. uppl. : Lund : Studentlitteratur, 2012 - 590 s.
ISBN:978-91-44-07135-0 LIBRIS-ID:13537457
[Library search](#)

Vårdvetenskapliga begrepp i teori och praktik

Wiklund Gustin, Lena; Bergbom, Ingegerd

1. uppl. : Lund : Studentlitteratur, 2012 - 512 s.
ISBN:978-91-44-07104-6 LIBRIS-ID:12642778
[Library search](#)

Teoretiska grunder för vårdande

Arman, Maria; Dahlberg, Karin; Ekebergh, Margaretha

1. uppl. : Stockholm : Liber, 2015 - 307 s.
ISBN:9789147114115 LIBRIS-ID:18031934
[Library search](#)

Ludvigsson, Jonas F.

Att börja forska - inom medicin, bio- och vårdvetenskap Att börja forska

Lund : Studentlitteratur, 2002 - 352 s.
ISBN:91-44-01644-1 LIBRIS-ID:8402720
[Library search](#)