Course syllabus for

# Scientific Research Methods, 7.5 credits

Vetenskaplig forskningsmetodik, 7.5 hp
This course syllabus is valid from spring 2021.
Please note that the course syllabus is available in the following versions:
Spring2019 , Spring2021 , Spring2024 , Spring2025

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| Course code | 5HI022 |
| Course name | Scientific Research Methods |
| Credits | 7.5 credits |
| Form of Education | Higher Education, study regulation 2007 |
| Main field of study | Health Informatics |
| Level | AV - Second cycle |
| Grading scale | Fail (F), fail (Fx), sufficient (E), satisfactory (D), good (C), very good (B) or excellent (A) |
| Department | Department of Learning, Informatics, Management and Ethics |
| Decided by | Utbildningsnämnden LIME |
| Decision date | 2019-03-13 |
| Revised by | Education committee LIME |
| Last revision | 2020-08-19 |
| Course syllabus valid from | Spring 2021 |

## Specific entry requirements

A Bachelor's degree or a professional degree equivalent to a Swedish Bachelor's degree of at least 180 credits in healthcare, biomedicine, medical technology, computer and systems sciences, informatics or the equivalent. And proficiency in English equivalent to English B/English 6.

## Objectives

The course aims to provide in-depth knowledge of research design and methodology and to train the student in writing a study plan and critically reviewing scientific litterature.

On completion of the course, the student should be able to:

Knowledge and understanding

- Understand different scientific research designs and methods
- Learn how to set up a research study
- Understand correct ways to refer to and cite from scientific literature

Skills and ability

- Discuss and explain differences between different research methods
- Perform literature reviews and reference relevant scientific literature
- Formulate a research plan

Assessment ability and attitudes

- Critically assess different research designs
- Analyse, set as contrast, compare and review scientific literature
- Discuss own view in relation to the published research

# Content

The course includes:

- Research design
- Literature search and review
- Scientific writing
- Scientific presentation
- Critical scientific review
- Data types and data collection techniques
- Quantitative and qualitative methods and data analyses
- Ethical issues

# Teaching methods

- Lectures
- Self-study
- Teacher-led group activities (workshops)
- Peer assessment

# Examination

Individual assignment (A-F)
Oral presentation of group assignment (Pass/Fail)

The final grade is based on the grades of the individual assignments and an approved oral presentation of the group assignment.

Compulsory participation
The course includes mandatory sessions marked in the course schedule. The examiner assesses if and, in that case, how absence from compulsory parts can be compensated. Before the student has participated in all compulsory parts or has compensated for absence in accordance with the examiner's instructions, the student's results for the moment/course will not be registered in LADOK. Absence from a compulsory part may result in the student having to wait to compensate until the next time the course is given.

Limitation of number of occasions to write the exam
Students who have not passed the regular examination are entitled to participate in five more examinations. If the student has not passed the exam after four participations he/she is encouraged to visit the study councellor. If the student has failed six examinations/tests, no additional examination or new admission is provided.
The number of times that the student has participated in one and the same examination is regarded as an examination session. Submission of a blank examination is regarded as an examination. Delayed

submission affects the possibility to receive a higher grade than C. An examination for which the student registered but not participated in will not be counted as an examination.

If there are special grounds, or a need for adaptation for a student with a disability, the examiner may decide to deviate from the syllabus's regulations on the examination form, the number of examination opportunities, the possibility of supplementation or exemptions from the compulsory section/s of the course etc. Content and learning outcomes as well as the level of expected skills, knowledge and abilities may not be changed, removed or reduced.

# Transitional provisions

Examination will be provided during a time of two years after a possible cancellation of the course. Examination can take
place according to an earlier literature list during a time of one year after the date when a major renewal of the literature
list has been made.

# Other directives

Course evaluation will be carried out in accordance with the guidelines established by the Committee for Higher Education.

The course is given in English.

# Literature and other teaching aids

**Health informatics research methods : principles and practice**
*Layman, Elizabeth; Watzlaf, Valerie J.*

Chicago, Ill. : American Health Information Management Association, c2009. - xiii, 439 p.
ISBN:978-1-58426-181-0 : $85.95  LIBRIS-ID:12452928
Library search

*Denscombe, Martyn.*
**The good research guide : for small-scale social research projects**

4th ed. : Maidenhead : Open University Press, cop.2010. - 373 p.
ISBN:9780335241408 (electronic bk.)  LIBRIS-ID:12194897
Library search

*Glasman-Deal, Hilary*
**Science research writing for non-native speakers of English**

London : Imperial College Press, cop. 2010 - xiii, 257 s.
ISBN:9781848163096 (alk. paper)  LIBRIS-ID:11775837
Library search