



Faculty of Medicine

VMFN28, Basic Research Methodology in General Practice, 30 credits

*Grundläggande forskningsmetodik för allmänmedicin, 30
högskolepoäng*

Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by The Master's Programmes Board on 2016-10-11 to be valid from 2017-01-01, spring semester 2017.

General Information

Freestanding course that is searched for medical education at first cycle level and be intended be preparation for third-cycle courses and study programmes at medical faculty. The course is given part-time over three semesters.

Language of instruction: Swedish

Main field of studies

Medicine

Depth of study relative to the degree requirements

A1N, Second cycle, has only first-cycle course/s as entry requirements

Learning outcomes

Knowledge and understanding

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

- account for statistical concepts such as random samples, uncertainty in estimation, position and dispersion measures, statistical strength, confidence interval and p-value,
- account for scientific methodology in quantitative and qualitative research
- account for common principles of study design as well as measure on association and incidence/prevalence

- account for principles of generalizability, causality as well as systematic errors and its consequences
- account for the different effect of variables (modification, intermediary, confounding),
- account for and justify choice of qualitative method at different issues.

Competence and skills

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

- reflect on and account for the all parts with special application to own project of the research project (start, funding, rules etc),
- under supervision plan and carry out an own scientific project and defend and explain his choices of methods
- use descriptive statistics to report data
- justify and with statistical computer program choose and calculate different statistical and epidemiological measures parametric as non-parametric tests as well as carry out assessment of hypotheses when compared of groups,
- apply the bases of qualitative methodology
- make a research presentation for other course participants considering the listener perspective.
- distinguish and analyse non-verbal communication patterns in oral presentations
- give constructive feedback after oral presentation
- reflect in writing with support in literature over how an oral presentation can be structured and be carried out
- make structured literature search with applied reference management,
- analyse and assess project work and scientific articles critically
- present his findings at the scientific level with relevant ethical discussion orally and in writing
- present his findings at a popular level in writing.

Judgement and approach

On completion of the course, the participant should both from an individual and a research perspective be able to:

- reflect on critically review and discuss ethical, scientific and safety problems for research
- reflect on the treatment of individuals in research context in a professional way
- identify his need of additional knowledge and that continuously develop his skills.

Course content

The course includes the following components:

Theory of knowledge

Introduction around the structural and process preconditions and implementation of the research.

The basics of science and theory of knowledge.

Scientific communication

Library science with literature search, reference management, application about research grants.

Scientific communication with structure and structure of scientific medical/health science article, its different sections as well as which information that is included in respective section.

Training to be able to assess and analyse a scientific article critically. Evaluation of research as well as strengths and weaknesses of different research methods.

Oral communication

Verbal and non-verbal communication patterns, listener perspective, voice training, training to carry out a research presentation and to give constructive feedback after an oral presentation.

STATISTICS

Input, validation and documentation of qualitatively and quantitatively data. Introduction and basic use of statistical computer program.

Statistical methods in medical research with biostatistics (descriptive statistics, inference, strength, probability, relationship), epidemiology (study design, sources of errors, risk, prevention, causality).

Analytical methods in qualitative methodology (interview, analytical methods and questionnaire).

Project Work

Implementation and presentation of an own project work

Course design

Theoretical and practical teaching is integrated and takes place continuously in the form of lectures, seminars, exercises and practical work under supervision. The teaching is initially given a half-day in the week. As the theoretical and practical teaching is all time interleaved with the own project work is reached a progress in knowledge and skills.

All teaching components are compulsory. Passing the course requires that submission of all study assignments and active participation in seminars and exercises.

Assessment

The course is examined through three test parts: Written examination, brief-case and research project.

Written examination: In the written examination, theoretical and practical knowledge in statistics, epidemiology and qualitative methodology through a written examination is examined.

Brief-case: In the brief-case, written assignments to each seminar as well as active participation in compulsory components are included.

Research project: Written and oral presentation of own project work as well as critical review on other student's work.

Other forms of examination can be used, if there are special reasons.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass.

Entry requirements

Degree of Bachelor (180 credits) in medically biomedically, or other relevant field in health sciences.

Subcourses in VMFN28, Basic Research Methodology in General Practice

Applies from V17

- 1601 Written Exam, 12,0 hp
Grading scale: Fail, Pass
- 1602 Portfolio, 3,0 hp
Grading scale: Fail, Pass
- 1603 Research Project, 15,0 hp
Grading scale: Fail, Pass