



Faculty of Health, Science and Technology
Public Health Science

Syllabus

Course Approval

The syllabus was approved by the Faculty Board of Health, Science and Technology on 8 May 2013, and is valid from the Spring semester of 2014 at Karlstad University.

Course Code: FHAE41

Quantitative Scientific Methodology, 7.5 ECTS Credits
(Kvantitativ vetenskaplig metod, 7.5 Swedish credit points)

Degree Level: Master

Progressive Specialisation: A1N (Second cycle, has only first-cycle course/s as entry requirements)

Language of Instruction

The language of instruction is mainly English, but some parts and some of the course literature may be in Swedish and/or another Scandinavian language.

Prerequisites

Bachelor's degree of at least 180 ECTS credits with optional major plus upper secondary school level Swedish B/Swedish as a second language B. The course is open to all students who meet the admission requirements stated above.

Major Field of Study

Learning Outcomes

Knowledge and understanding

Upon completion of the course, students should be able to:

- describe the underlying questions and overriding purpose of quantitative epidemiological method,
- describe central concepts in quantitative method and epidemiology,
- give an account of descriptive and analytical statistics,
- discuss the design of and advantages and disadvantages with different qualitative designs,
- explain the steps and formal hypothesis testing in quantitative research process.

Competence and skills

Upon completion of the course, students should be able to:

- select a quantitative method and approach based on the problem formulation, context, and type of collected data,
- use statistical and epidemiological concepts to analyse both quantitative and qualitative health related data,
- analyse and critically review science literature.

Judgement and approach

Upon completion of the course, students should be able to:

- independently and critically assess the research process and their own considerations as well those of others,
- demonstrate good research ethics.

Content and Form of Instruction

Instruction is in the form of distance learning through a web-based platform and in the form of two brief periods on campus at the beginning and towards the end of the course. The campus meetings are obligatory and consist of lectures, group assignments, and seminars.

The structure and form of the course is based on the problem-based and participatory learning methods. By independent information retrieval combined with hand-in assignments, presentations, and discussions the students are provided opportunities for critical evaluation and problem solving. If students have gathered data of their own, it is suitable to use this as a basis for the group assignments.

The course contains the following elements:

- Introduction to quantitative method including descriptions of epidemiological terminology.
- Analysis and interpretation of data
- The different stages of the research process, with a focus on quantitative approach, data gathering, analysis of data, and research documentation.
- Critical evaluation of scientific articles in the field of epidemiology.

Reading List

See separate document.

Examination

Assessment is based on individual, written assignments and presentations in seminars.

Grades

One of the grades Fail (U), Pass (G), or Distinction (VG) is awarded in the examination of the course.

Quality Assurance

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course assessment is based on student views and experiences as reported in written course evaluations and/or group discussions. Students will be informed of the result of the evaluation and of the measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional Information

Students who enrolled before 1 July 2007 will complete their studies in accordance with the requirements of the earlier admission. Upon completion students may request degree and course certificates to be issued under the current ordinance if they meet its requirements.

Risk Management programme course. First approved on 3 Dec 2008.

The local regulations for studies at the Bachelor's and Master's levels at Karlstad University stipulate the obligations and rights of students and staff.

The course is a mandatory part of the Master program in Societal Risk Management (SARIS; dnr FAK3 2007/311).

Karlstads universitet 651 88 Karlstad, Sweden
Tel +46-54-700 10 00 Fax +46-54-700 14 60
information@kau.se www.kau.se