

# Syllabus

for course at advanced level

**Method II: quantitative methods in public health sciences**

**7.5 Higher Education**

**Metod II: kvantitativa metoder med inriktning mot folkhälsovetenskap**

**Credits**

**7.5 ECTS credits**

<b>Course code:</b>	PH3001
<b>Valid from:</b>	Spring 2015
<b>Date of approval:</b>	2009-07-01
<b>Changed:</b>	2014-11-17
<b>Department</b>	Department of Public Health Sciences
<b>Main field:</b>	Public Health
<b>Specialisation:</b>	A1N - Second cycle, has only first-cycle course/s as entry requirements

## Decision

The syllabus was approved by the board for Centre for Health Equity Studies (CHES), Stockholm University/Karolinska Institutet 2009-07-01 and last revised 2014-11-05.

## Prerequisites and special admittance requirements

Bachelor's degree (180 ECTS) in Sociology, Psychology, Public Health Sciences, Medicine or similar. English proficiency equivalent to English Course B/English 6.

## Course structure

Examination code	Name	Higher Education Credits
T311	Method II	7.5

## Course content

The aim of the course is to provide the student with an overview of a variety of quantitative methods used in psychology, sociology and epidemiology. The course includes (1) an overview of how to document and archive work with data and how to protect the data; (2) an overview and discussion of techniques of data entering, cleaning and management, as well as use of exploratory and descriptive methods; (3) an introduction to multiple linear regression for continuous variables; (4) a thorough review of logistic regression that includes discussing the issues of confounding and effect modification as well as the ways of assessing model fit; (5) an overview of advanced methods such as survival analysis, factor analysis and structural equation modelling; (6) discussions of choice of quantitative methods with respect to the type of study design.

## Learning outcomes

At the end of this course the student should be able to:

- Apply good strategies of data entering, cleaning and management.
- Perform exploratory data analysis as well as present the results of data analysis by using tables and figures.
- Describe the principles of multiple linear regression.
- Apply logistic regression modelling to analyse data.
- Discuss the issues of confounding and effect modification.
- Use relevant methods to assess confounding and effect modification.
- Motivate the choice of methods of data description, analysis and presentation.
- Recognise, understand and critically view quantitative methods used by other people.

**Education**

Teaching and learning activities of the course include lectures, computer laboratories and individual work. During the lectures the theoretical material will be covered. In the computer laboratories the students will be able to apply their knowledge practically. The individual tasks will include work with the course literature and practical computer exercises.

The course will be given in English.

**Forms of examination**

a) The course will be examined by a written examination and written assignments.

b) The grading is based on a goal-based seven-point grading scale:

A=Excellent

B=Very good

C=Good

D=Satisfactory

E=Sufficient

Fx=Not sufficient

F=Fail

The written examination will be graded according to the seven-point grading scale A-F. The written assignments will be graded according to a two-point grading scale: pass (G) or do not pass (U). Each written assignment with a pass grade will add scores to the written examination.

c) The grading criteria will be distributed at course start.

d) In order to pass on the course, the students are required to get at least the grade E on the written examination.

e) A-E will count as pass on the course. Students who receive Fx or F have the right to undergo additional examination to receive at the lowest the grade E. Students who received the grade E or higher cannot undergo a new examination with the purpose of improving the grade. Students who received the grade Fx or F twice by the examiner have the right to request another examiner to decide upon the grade for the course. The request should be forwarded to the Director of Studies who will appoint a new examiner.

**Interim**

Students can request an examination in accordance to this curriculum up to three terms after it has ceased or been significantly altered.

**Required reading**

A list of the current course literature is found in the course description.