



## DEPARTMENT OF GLOBAL PUBLIC HEALTH

### **K9F3078, Epidemiology I: Introduction to Epidemiology, 1.5 credits (hec)**

Epidemiologi I: Introduktion till epidemiologi, 1,5 högskolepoäng

*Third-cycle level / Forskarnivå*

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#### **Approval**

This syllabus was approved by The Committee for Doctoral Education on 2023-11-23, and was last revised on 2025-09-16. The revised course syllabus is valid from autumn semester 2025.

#### *Responsible department*

Department of Global Public Health, Faculty of Medicine

#### **Prerequisite courses, or equivalent**

No prerequisite courses, or equivalent, demanded for this course.

#### **Purpose & Intended learning outcomes**

##### **Purpose**

The aim of the course is to give an introduction to epidemiological theory and practice.

##### **Intended learning outcomes**

After successfully completing this course students are expected to be able to:

- discuss the contribution of epidemiology to science and give examples of the advancements in the field,
- reason about classification of exposure, outcome and covariates in epidemiological studies,
- estimate and in a general way interpret measures of disease occurrence and measures of association, and describe how a specific measure is governed by the study design.
- explain strengths and weaknesses of common epidemiological study designs, with a specific focus on cohort studies.
- identify and explain possible sources of bias in epidemiological studies.
- describe theoretical models for causation and discuss the principles of causal mechanisms.
- apply knowledge of epidemiological concepts when critically reviewing scientific literature.

Intended learning outcomes are classified according to Bloom's taxonomy: knowledge, comprehension, application, analysis, synthesis, and evaluation (Bloom, 1956, extended by Anderson and Krathwohl, 2001).

## Course content

The course gives an introduction to epidemiological theory and practice. It comprises basic principles regarding design, interpretation, and analysis of epidemiological studies. It introduces the concept of causation, concepts related to measures of disease occurrence and measures of association, common designs for epidemiological studies (with main focus on cohort studies), and the role of bias.

## Forms of teaching and learning

The course focuses on active learning, i.e. putting knowledge into practice and critically reflecting upon the knowledge, rather than memorising facts. Different strategies for teaching and learning will be used, such as lectures, group discussions and various forms of group exercises on selected topics.

### *Language of instruction*

The course is given in English

## Grading scale

Pass (G) /Fail (U)

## Compulsory components & forms of assessment

### Compulsory components

The individual examination (summative assessment) is compulsory.

### Forms of assessment

To pass the course, the student has to show that the learning outcomes have been achieved. Assessments methods used are group assignments (formative assessments) along with an individual examination (summative assessment). The examination is viewed as contributing to the development of knowledge, rather than as a test of knowledge. Students who do not obtain a passing grade in the first examination will be offered a second chance to resubmit the examination within two months of the final day of the course. Students who do not obtain a passing grade at the first two examinations will be given top priority for admission the next time the course is offered.

## Course literature

Rothman KJ. Epidemiology: An Introduction. 2nd ed. Oxford, UK: Oxford University Press;

2012.

Scientific articles will be distributed before and during the course.