



**Karolinska
Institutet**

Course syllabus for

Epidemiological Methods for Outcome Evaluation of Public Health Interventions, 10 credits

Epidemiologiska metoder för effektutvärdering av folkhälsoinsatser, 10 hp

This course syllabus is valid from autumn 2024.

Please note that the course syllabus is available in the following versions:

Autumn2020 , Autumn2021 , Autumn2023 , Autumn2024

Course code	4FH094
Course name	Epidemiological Methods for Outcome Evaluation of Public Health Interventions
Credits	10 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Public Health Sciences
Level	AV - Second cycle
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Global Public Health
Decided by	Utbildningsnämnden PHS
Decision date	2018-11-09
Revised by	Education Committee GPH
Last revision	2024-03-07
Course syllabus valid from	Autumn 2024

Specific entry requirements

A Bachelor's degree or a professional degree equivalent to a Swedish Bachelor's degree of at least 180 credits in public health science, healthcare or other relevant social sciences subject area. And proficiency in English equivalent to English B/English 6.

That the student has completed courses with approved results equivalent of 45 credits on the specific specialisation at the Master's Programme in Public Health Sciences.

In order to qualify for the registration in the course the student should have attended the courses 4FH083, 4FH082 and 4FH086 offered in the program, or should have acquired corresponding knowledge.

Objectives

Overarching goal of the course is to provide the students with theoretical knowledge and practical skills for the evaluation of complex public health interventions related to the sustainable development goals (SDGs). Upon completion of the course, the student should be able to:

- Formulate relevant questions related to outcome evaluation of specific projects/interventions
- Discuss pros and cons of different study designs to be employed in the evaluation, considering scientific robustness (e.g. causal inference), feasibility and costs
- Identify possible sources of bias (especially confounding) in establishing a causal role of the intervention on the chosen outcome
- Identify appropriate sources of information for an evaluation study
- Propose an evaluation plan, including methods for data collection and data analysis, given a specified public health project/intervention of relevance to the SDGs
- Motivate the proposal from the perspective of desired level of inference, validity of the results, decision-makers' need and costs
- Sketch a communication plan for the dissemination of the results of the evaluation in different contexts
- Describe the scientific and policy implications of the evaluation results, and link this to the SDGs

Content

The course is composed of two parts:

1. Part 1 (3 weeks) consists of lectures, seminars, interactive workshops, focusing on the acquisition of theoretical knowledge (learning goals a-d)
2. Part 2 (3 weeks) consists of autonomous or group work with supervision, aiming at the development of an evaluation plan related to a real-life intervention (application case), to which the theoretical knowledge will be applied (learning goals e-h)

The application case consists of one of the following: 1. A planned intervention proposed by the student, 2. An ongoing or completed intervention proposed by the course leader, or 3. A simulation

Examples of public health areas of interest are: communicable diseases; tobacco smoking; hazardous use of alcohol; promotion of physical activity; overweight and obesity; prevention of injuries, reproductive health, mental health.

Teaching methods

A combination of working methods will be used: lectures, seminars, group work, individual work under supervision; literature summaries; study visits; oral presentations.

The assignment during part 2 of the course is developed with discussions in groups, but the written task produced therein is individual (see examination).

Group work, seminars and study visits are compulsory. Absence from compulsory moments is to be compensated through individual tasks with similar learning goals.

Examination

The course is concluded by an individual examination consisting of a written evaluation plan on the application case described above. A formative evaluation will be done during the second half of the course, consisting in short individual exercises, with a subsequent oral presentation in front of teachers and students, allowing an in-depth discussion of methods. The results of this formative evaluation will not be graded, but participation is compulsory.

The examination will be graded as "Not passed" (U); "Passed" (G); or "passed with distinction" (VG).

Compulsory participation

The examiner assesses if, and in that case how absence from compulsory educational elements can be compensated for. Before the student has participated in educational elements or compensated the absence in accordance with the examiner's instructions, the final course results will not be reported. Absence from a compulsory educational component may imply that the student cannot compensate for missed compulsory educational elements 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 advisor. 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. 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 period of two years after a closure of the course. Examination may take place under the previous reading list during a period of one year after the date on which a major revision of the reading list.

Other directives

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

The course language will be English.

Literature and other teaching aids

Compulsory course reading consists of scientific articles, reports and diverse materials related to the topic of the course. The reading material will be distributed during the course.