



## INSTITUTE OF MEDICINE

### **MPH231 Advanced course in health economics evaluation, 15 credits**

Hälsoekonomiska utvärderingar: fördjupningskurs, 15 högskolepoäng

*Second Cycle*

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#### **Confirmation**

This course syllabus was confirmed by Institute of Medicine on 2020-02-28 to be valid from 2020-09-01, autumn semester of 2020.

*Field of education:* Medicine 100%

*Department:* Institute of Medicine

#### **Position in the educational system**

The course is given as a part of the Mastersprogram in Public health science but can also be given as a free standing course

The course can be part of the following programme: 1) Master's Programme in Public Health Science (M2PHP)

*Main field of studies*

Public Health Sciences

*Specialization*

A1F, Second cycle, has second-cycle course/s as entry requirements

#### **Entry requirements**

A Bachelor's degree or professional degree qualifications corresponding to at least 180 credits within the main area of health science, social science, science, economics, arts or engineering field of education. Specific entry requirements in English are required, English 6/English B or the equivalence. Taken course in MPH222 Health economics: foundations, areas of application and or equivalent.

#### **Learning outcomes**

On successful completion of the course the student will be able to:

*Knowledge and understanding*

- Describe how the results from cost-effectiveness analyses of trials can inform public health policy and decision-making.
- Explain the rationale for decision analytic modelling in economic evaluations and describe its terminology.
- Describe the methodology used in HTA and what role economic evaluations have in HTA.

*Competence and skills*

- Independently identify and design an economic evaluation alongside trials and use statistical analysis to assess the sampling uncertainties of health economics data from trials.
- Independently structure and analyze decision problems using decision analytic modelling and conduct sensitivity analyses of uncertain model inputs.
- Independently formulate a research question and structure a thesis proposal in the topic of health economic evaluation.

*Judgement and approach*

- Critically reflect on methodological strengths and weaknesses of cost-effectiveness analyses as tools for decision-making in public health policies.
- Based on perspectives from ethics, human rights and sustainability, critically evaluate the use of economic evaluation to inform decision-makers of public health policies.

The course is sustainability-related, which means that at least one of the learning outcomes clearly shows that the course content meets at least one of the University of Gothenburg's confirmed sustainability criteria.

**Course content**

The course covers advanced methods of economic evaluation in public health settings. The course will consist of three major parts:

The first part of the course will go into detail on applications of economic evaluation and health outcomes analyses with individual-level data, and will cover the econometric and biostatistical models necessary for such evaluations. Topics include quality-adjusted survival analysis, analyzing skewed cost, effectiveness, and outcomes data, bootstrapping, etc.

The second part of the course will cover decision analytic modeling, including topics such as decision trees, Markov models, deterministic and probabilistic models, value of information analyses. The second part of the course will also cover methods and topics related to health technology assessments (HTA) and the role of economic evaluation in HTA.

The third part of the course will be to plan and design of a thesis proposal with a public health decision problem where an economic evaluation can answer the problem.

Throughout the three parts in the course, perspectives from ethics, human rights and sustainability will be discussed when critically evaluating the use of economic evaluations as a tool for decision-making of public health policies.

### **Form of teaching**

Lectures, seminars, computer laboratories.

*Language of instruction:* English

### **Assessment**

Examinations:

- Two individual take-home exams
- One individual written assignment (report with thesis proposal)
- 8 compulsory elements (4 seminars och 4 computer laboratories)

Absence from compulsory assignments has to be compensated for with written assignments in accordance with instructions from the course leader.

If a student, who has failed the same examined element on two occasions, wishes to change examiner before the next examination session, such a request is to be submitted to the department in writing and granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

In the event that a course has ceased or undergone major changes, students are to be guaranteed at least three examination sessions (including the ordinary examination session) over a period of at least one year, though at most two years after the course has ceased/been changed. The same applies to work experience and VFU, although this is restricted to just one additional examination session.

### **Grades**

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U). To pass with distinction (VG) a student has to earn VG in the three individual assignments as well as well as G in all eight compulsory elements.

In order to pass the course (G), a student has to pass all three assignments as well as all eight compulsory elements.

### **Course evaluation**

The course evaluation is carried out in writing and orally with the students. The course leader is responsible for analyzing the evaluations and giving propositions for improvement. The analysis and propositions of development is shared with the students through the program council and the learning platform.

The result and potential changes should be shared to both the students who carried out the evaluation and the students that are about to start the course.