



## DEPARTMENT OF MEDICINE, HUDDINGE

### **H7F6111, IVI's International Vaccinology Course, 1.5 credits (hec)**

IVI:s internationella kurs i vaccinologi, 1,5 högskolepoäng

*Third-cycle level / Forskarnivå*

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#### **Approval**

This syllabus was approved by The Committee for Doctoral Education on 2026-02-12, and is valid from autumn semester 2026.

#### *Responsible department*

Department of Medicine, Huddinge, Faculty of Medicine

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

No prerequisite courses or equivalent are required for this course.

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

##### **Purpose**

The main purpose of this International Vaccine Institute (IVI) five-day course is to provide participants with a broad and practical introduction to vaccinology, highlighting how fundamental scientific principles translate into real-world vaccine development.

Additionally, the participants will develop critical thinking, engage with contemporary challenges, and reflect on how the principles learned can inform their own research or professional practice through a combination of lectures and interactive case studies presented and facilitated by world-renowned experts from academia, industry, government, and non-governmental organizations. The course also supports the development of key academic skills such as interpreting scientific evidence, resolving real-world problem scenarios, and contributing to multidisciplinary teams.

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

After the course, the participants should be able to:

- Explain the basics of the process of developing vaccines, from lab to clinic.

- Discuss different types of vaccines and technologies to produce and deploy them.
- Explain social science aspects of vaccines, including vaccine hesitancy, communication, behavioral science, and health economics.
- Outline the process of implementing vaccination from epidemiology and effectiveness studies to deployment of vaccination campaigns.

## Course content

This course offers a five-day program of lectures and case studies that provide a comprehensive overview of vaccinology from the laboratory to policy. The topics include immunology and epidemiology relevant to vaccines, as well as vaccine discovery, development, evaluation, implementation and delivery. Additional aspects such as vaccine hesitancy and policy considerations will also be covered. The course brings together experts who contribute both scientific depth and applied perspectives, enabling participants to connect foundational knowledge with real-world challenges in vaccinology.

## Forms of teaching and learning

The course is split into different sessions, including traditional lectures given by international experts in the field, case studies and a site visit. Extra time for group work is included for students to prepare for a presentation on the final day of the course.

### *Language of instruction*

The course is given in English

## Grading scale

Pass (G) /Fail (U)

## Compulsory components & forms of assessment

### Compulsory components

Students must attend all lectures and complete the examination. Compensation for absence in the form of a written essay can be discussed with course leaders. More than one of absence cannot be compensated for.

### Forms of assesment

The examination includes group work in groups of 3-4. Groups are required to prepare a presentation on vaccines for different infectious agents. Groups should:

1. Choose an infectious disease with a significant burden in Low and Middle Income Countries (not included in course curriculum).
2. Research and document the impact of the chosen disease, including prevalence, morbidity, and mortality rates.
3. Analyze the current state of vaccine development for the selected disease. Include

information on existing vaccines, those in development, and any technological advancements. Mention the bottlenecks for their development.

4. Determine the availability of R&D funding - find at least one potential call for funding (may be closed).

On the final day of the course the group will give a 10-minute presentation on the vaccine landscape for the selected infectious agent. Each student will actively present. Based on the presentation and following discussion, the student should show that they have reached all learning outcomes.

## **Course literature**

Hand-outs provided by the lecturers.

## **Other information**

Replacing syllabus H7F6000.