



DEPARTMENT OF MEDICINE, SOLNA

K2F6110, Clinical Molecular Bacteriology, 1.5 credits (hec)

Klinisk molekylär bakteriologi, 1,5 högskolepoäng

Third-cycle level / Forskarnivå

Approval

This syllabus was approved by The Committee for Doctoral Education on 2026-02-11, and is valid from autumn semester 2026.

Responsible department

Department of Medicine, Solna, Faculty of Medicine

Prerequisite courses, or equivalent

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

Purpose & Intended learning outcomes

Purpose

The purpose of this course is to introduce students to a variety of topics relating to both clinical and molecular bacteriology and the interaction between clinical and basic research.

Intended learning outcomes

After completing this course, the participant is expected to be able to:

- Summarize a range of different experimental techniques and approaches used in bacteriology research.
- Report ongoing clinical and molecular bacteriology research at Karolinska Institutet / Karolinska University Hospital.
- Describe the forefront of clinical, public health and experimental research in antibiotic resistance and bacterial pathogenesis.

Course content

The focus will be on techniques and approaches used in specific research projects in Clinical and Molecular Bacteriology research and how they may be applicable to the broader field.

Topics will include:

- Molecular pathogenesis of bacteria
- Clinically important bacterial infections and antibiotic resistance
- The role of the bacterial microbiota in health and disease
- Innovation and emerging technologies and techniques in bacteriology

Forms of teaching and learning

Teaching will be in the form of onsite group lectures by researchers working at the forefront of clinical and molecular bacteriology research.

The course will include lab visits at Karolinska University Hospital and Karolinska Institutet and on site small group workshops.

Language of instruction

The course is given in English

Grading scale

Pass (G) /Fail (U)

Compulsory components & forms of assessment

Compulsory components

Mandatory attendance to all scheduled activities. Absence can be compensated with supplementary written task.

Forms of assessment

Students will be assessed based on a written assignment as well as participation in an oral presentation

Course literature

Course literature will consist of a collection of current research articles which will be distributed prior to the lectures.

Other information

Replacing syllabus C4F4215.