



DEPARTMENT OF NEUROSCIENCE

C4F4215, Clinical Molecular Bacteriology, 1.5 credits (hec)

Klinisk molekylär bakteriologi, 1,5 högskolepoäng

Third-cycle level / Forskarnivå

Approval

This syllabus was approved by the The Committee for Doctoral Education on 2023-12-01, and was last revised on 2024-02-19. The revised course syllabus is valid from autumn semester 2024.

Responsible department

Department of neuroscience, 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

At the end of the course the students should have a good overview of and will 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

Topics of the course 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

This one week course will consist of lectures/ seminars / workshops by leading researchers/clinicians in the field of Bacteriology as well as group and individual assignments.

Lab visits will be arranged where possible

Active participation is expected in lectures, seminars and group assignments.

Language of instruction

The course is given in English

Grading scale

Pass (G) /Fail (U)

Compulsory components & forms of assessment

Compulsory components

Lectures/seminars have compulsory attendance which may be compensated by a given written assignment in exceptional circumstances.

Forms of assessment

The learning outcomes will be assessed through individual written assignments and group oral presentations. Each student will need to show that all the learning outcomes of the course are achieved.

Course literature

For background: Medical Microbiology, Murray et al, 9th edition, chapters 7-17

Recommended up-to-date reading material relating to each lecture/topic will be made available prior to the lectures