



DEPARTMENT OF MICROBIOLOGY, TUMOR AND CELL BIOLOGY

C1F2690, Basic Laboratory Safety, 1.8 credits (hec)

Grundläggande laboratoriesäkerhet, 1,8 högskolepoäng

Third-cycle level / Forskarnivå

Approval

This syllabus was approved by the The Committee for Doctoral Education on 2023-11-01, and was last revised on 2024-09-18. The revised course syllabus is valid from spring semester 2025.

Responsible department

Department of Microbiology, Tumor and Cell Biology, Faculty of Medicine

Prerequisite courses, or equivalent

Experience of and/or education in laboratory work.

Purpose & Intended learning outcomes

Purpose

The purpose of the course is to enable the students to obtain an understanding of risks and of principles in safety measures in the medical science laboratory, as well as a consciousness about general and individual responsibilities for the planning and execution of applicable safety measures. The purpose is also to develop skills in performing risk analyses and writing up risk assessments.

Intended learning outcomes

After completing the course, you should be able to:

- Describe the regulatory framework that governs laboratory safety, including the chain of responsibilities.
- apply the KI rules and routines for laboratory work.
- apply the KI routines for waste management and transport.

- demonstrate risk awareness by assessing the risks associated with experiments involving chemicals, microbiological agents, cell cultures and human blood/tissues in the laboratory and applying appropriate safety measures.

Course content

Theoretical and practical aspects of chemical and biological laboratory safety. Topics will deal with writing risk assessments, chemical health risks including allergy, cancer and flammable agents, handling and storage of dangerous chemicals, handling of microorganisms and cell cultures including human blood and tissue samples, laboratory acquired infections, biosafety measures including personal protection devices, ventilated workplaces, genetically modified microorganisms, biosecurity and dual use, transport of dangerous goods and waste management.

Forms of teaching and learning

The mandatory "KI's Laboratory Safety Introduction for laboratory personnel" is an integral part of this course. In addition, the course consists of lectures, group discussions, practical sessions, web-tutorials, quizzes workshops and mentimeter exercises. The course is six days in total.

Language of instruction

The course is given in English

Grading scale

Pass (G) /Fail (U)

Compulsory components & forms of assessment

Compulsory components

- Completion, with certificate, of "KI's Laboratory Safety Introduction for laboratory personnel".
- Completion of mandatory self-tests/quizzes and assignments
- Presence during course activities, marked as mandatory in the schedule. Students cannot compensate

Forms of assessment

The student's certificate of "KI's Laboratory Safety Introduction for laboratory personnel" needs to be uploaded in the Canvas platform of the course. The examination is based on an individual written examination and a risk assessment assignment.

Course literature

Recommended literature:

*Arbetsmiljöverkets Författningssamling/Provision (AFS 2023:10) – Risker i arbetsmiljön / Hazards in the Working Environment

*Arbetsmiljöverkets Författningssamling/Provision (AFS 2023:13) – Risker vid vissa typer av arbeten / Hazards associated with certain types of work

*Arbetsmiljöverkets Författningssamling/Provision (AFS 2023:14) – Gränsvärden för luftvägsexponering i arbetsmiljön / Exposure limits for airborne contaminants in the work environment

*<https://staff.ki.se/laboratory-safety>