



COURSE SYLLABUS

Laboratory Methods, basic course, 16.5 credits

Laboratoriemetodik, grundläggande, 16,5 högskolepoäng

Course Code: HLG12	Education Cycle: First-cycle level
Confirmed by: Utbildningsrådet Oct 26, 2021	Disciplinary domain: Medicine
Revised by: Director of Education Oct 2, 2023	Subject group: BL1
Valid From: Jan 22, 2024	Specialised in: G2F
Version: 2	Main field of study: Biomedical Laboratory Science

Intended Learning Outcomes (ILO)

After completing the course, the student, in the areas below, must be able to:

Knowledge and understanding

- explain and define basic concepts and methodology in biomedical laboratory methodology
- explain the relationship between analysis results and pathophysiological conditions
- explain the importance of correct sampling techniques and handling of samples.

Skills and abilities

- perform and document basic laboratory work and be able to use adequate laboratory equipment within biomedical laboratory methodology
- perform laboratory tests according to current safety regulations and assess analysis results.

Judgement and approach

- reflect on the upcoming professional role
- reflect on ethical issues in connection with laboratory work
- demonstrate the ability to take a professional approach when handling chemicals
- demonstrate the ability to treat patients professionally.

Contents

- biomedical laboratory methodology
- processing, assessment, evaluation, and reporting of analysis results
- the importance of biomedical analyses for diagnostics and treatment
- professional role; ethics, occupational health, the biobank, patient safety, and quality work
- bedside diagnostic analysis
- sampling technique and sample handling
- academic writing

Type of instruction

The course includes laboratory exercises, lectures, seminars, and clinical training.

The teaching is normally conducted in Swedish, but can occasionally be in English.

Prerequisites

Passed courses of 60 credits (semester 1 and 2) and taken courses of 30 credits (semester 3) within the biomedical laboratory science program focusing laboratory medicine, 180 credits, or the equivalent.

Examination and grades

The course is graded A, B, C, D, E, FX or F.

The course is examined with two written individual exams, laboratory exercises and laboratory reports, practical examination, clinical training and seminars.

The course is examined by a university lecturer.

Registration of examination:

Name of the Test	Value	Grading
Individual written examination 1	4 credits	A/B/C/D/E/FX/F
Individual written examination 2	4 credits	A/B/C/D/E/FX/F
Laboratory exercises and laboratory reports	5 credits	U/G
Practical examination	1 credit	U/G
Clinical training	2 credits	U/G
Seminars	0.5 credits	U/G

Other information

Temporary interruption of a course

The School of Health and Welfare may suspend a student's participation in clinical training or other practical activities during the course if a student demonstrates gross unfitness/incompetence when applying skills. A student whose work-based training or other practical activities have been canceled due to gross inadequacy/incompetence may not continue study before the course director or examiner has verified and approved that the student has the knowledge and skills required. In connection with a decision on suspension, the decision will specify the grounds on which the suspension is based. After the decision, an individual plan will be established for the student where knowledge and skills gaps are specified, the degree of support the student is entitled to, and the terms and date(s) for examination(s).

Limitations on the number of occasions for placement

Interruption of placement or other clinical/practical activities due to gross unfitness/incompetence when applying skills is considered a missed occasion. Students who have failed three placements in the same course must discontinue their studies in the program in question. A student who has been failed three times on their placement will be offered counselling with student counsellor.

Course literature

Cook, D.J., & Warren, P.J. (2015). *Cellular Pathology. An introduction to techniques and applications*. Scion Publishing.

Lundberg, G. A. (2013). *Grundläggande laborieteknik*. Studentlitteratur.

Nilsson-Ehle, P. (Red.). (2018). *Laurells klinisk kemi i praktisk medicin*. Studentlitteratur.

Slätt, J. & Janosik, T. (2012). *Laboratoriesäkerhet: en grundläggande handbok för kemilaboratoriet*. Studentlitteratur.

Tille, P (Ed.). (2021). *Bailey and Scott's Diagnostic Microbiology*. Mosby.

The latest edition of the course literature shall be used.