



**Karolinska
Institutet**

Course syllabus for

Applied Biomedical Laboratory Science 2 - Clinical Microbiology, 7.5 credits

Tillämpad biomedicinsk laboratorievetenskap 2 - klinisk mikrobiologi, 7.5 hp

This course syllabus is valid from autumn 2013.

Course code	1BA111
Course name	Applied Biomedical Laboratory Science 2 - Clinical Microbiology
Credits	7.5 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Biomedical Laboratory Science
Level	G2 - First cycle 2
Grading scale	Pass, Fail
Department	Department of Laboratory Medicine
Decided by	Programnämnd 6 (Biomedicinska analytikerprogrammet och Röntgensjuksköterskeprogrammet)
Decision date	2013-05-28
Course syllabus valid from	Autumn 2013

Specific entry requirements

Passed courses about at least 105 credits from semester 1-4 at Biomedical laboratory science programme Specialization Laboratory Medicine including the courses; Analytical Chemistry and biomedical methodology, Cell and molecular biology 2, Microbiology - methodology and diagnostics, and passed in Applied biomedical laboratory science 1 from semester 5 in biomedical the laboratory science education or the equivalent knowledge.

Objectives

The aim of the course is that the student in a laboratory should have the opportunity to test / apply theoretical and practical knowledge using existing methods The aim is also that the course should contribute to development of professional identity, to reflect and further understanding of the profession.

Knowledge and understanding On completion of the course the student should be able to:

- show knowledge about relevant techniques in the field and of relevant legislation.
- acquire knowledge through a variety of sources, critically evaluate this, and use existing knowledge to describe new conditions in a professional context.

Skill and ability On completion of the course the student should be able to:

- show ability to collect, process and critically interpret analysis and findings, notice and manage deviations and orally and in writing account for and discuss the results with concerned parties and in accordance with relevant legislation document these.
- show ability to teamwork and collaboration with other professionals.
- show ability to critically analyse, evaluate and use relevant information and to discuss new facts, phenomena and issues with different groups and thus contribute to the development of the profession and the activities.
- show ability to identify their need of additional knowledge and that continuously develop their skills.
- show ability to independently identify, formulate and solve problems and to perform assignments within given time frames.
- manage technology to collect data and document these data according to professional context.
- analyse and process collected data in a professional context.

Judgement and approach On completion of the course the student should be able to:

- demonstrate skills in the main field of study for the education make judgements with respect to relevant to scientific, social and ethical aspects.
- demonstrate an understanding of one's own professions role and significance for the health care.

Content

The students must attend the entire course of practical work under supervision in a laboratory, and there apply different methods and technologies that are used. The student should identify the steps in the laboratory process that can influence the analytical result. It implies that the student through practical work and theoretical studies deepen their knowledge of analytical principles, the technical performance and outcome assessment from both technical and medical point of view. The student should also describe the quality assurance that the laboratory conducts.

Literature studies are included as an integrated part throughout the whole course. Students document their work in a workbook that will be approved by the responsible supervisor in the laboratory. The workbook and the laboratory report also constitute basis for the final examination.

The course is divided into two modules.

1. Methods in Laboratory, practical training & theoretically, 4.5 hp The students must attend the entire course of practical work under supervision in a laboratory, and there apply different methods and technologies that are used. The student should acquire knowledge of the steps in the laboratory process that may influence the result of the analysis. It implies that the student through practical work and theoretical studies acquires knowledge of analysis principles, the technical carrying-out and result assessment. **2. Integration of theory and practical training., 3 hp** The student shall demonstrate the ability to collect, process and critically interpret analysis- and findings, notice and manage deviations and orally and in writing account for and discuss the results with concerned parties, in accordance with relevant legislation document these. The student should be able to describe orally and in writing and understand the analyses that are performed in the laboratory.

Teaching methods

The student perform laboratory work in a laboratory, with access to external supervisor in the laboratory as well as teachers from Karolinska Institutet. The documentation of the work takes place continuously in the form of a workbook and a laboratory report and literature studies are carried out throughout the course according to instruction of supervisor / teachers.

Examination

The examination includes two modules: Examination Module 1: the student's practical skills are assessed continuously throughout the clinic-based duty (by the responsible supervisor) Grade: Fail/Pass Examination Module 2: the written workbook and laboratory report and orally through presentation of the analyses performed in the laboratory. Grade: Fail/Pass

For the grade Pass in the whole course, pass in all modules is required.

Attendance is mandatory for the entire course. In case of absence, the supervisor in consultation with the teacher/director of studies at Karolinska Institutet determine how compensation should be done.

A student who has failed the whole course has the opportunity to take the course once more. Student who has failed the final examination has the opportunity to further examination opportunities in connection with the course and during an examination period in August.

The examiner may, with immediate effect, interrupt a student's clinical placement (or equivalent) if the student demonstrates such serious deficiencies in knowledge, skills or attitude that patient safety or patient confidence in healthcare is at risk. If a clinical placement is interrupted in this way the student is deemed to have failed that element and to have used up one clinical placement opportunity. In such cases, an individual action plan should be set up stating which activities and tests are required before the student is qualified for a new clinical placement on the course.

Transitional provisions

Examination according to this syllabus will be provided during one year after the decision to terminate the course or revision of the syllabus.

Other directives

The course evaluation will be carried out in accordance with the guidelines established by the Board of Higher Education.

Literature and other teaching aids

Murray, Patrick R.; Rosenthal, Kenneth S.; Pfaller, Michael A.

Medical microbiology

7th ed. : Philadelphia : Elsevier Saunders, 2012 - 874 s.

ISBN:978-0-323-08692-9 (pbk.) : £56.99 LIBRIS-ID:13614662

[Library search](#)

Turgeon, Mary Louise; Linné, Jean Jorgenson.; Ringsrud, Karen Munson.

Linné & Ringsrud's clinical laboratory science Clinical laboratory science : the basics and routine techniques.

6. ed. : Maryland Heights, MO : Elsevier/Mosby, [2011], cop. 2012 - xv, 659 p.

ISBN:978-0-323-06782-9 (pbk.) LIBRIS-ID:12298230

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