



INSTITUTE OF BIOMEDICINE

BMA053 Applied Laboratory Science (special laboratory diagnostics), 15 credits

Tillämpad laboratorievetenskap (speciell diagnostik), 15 högskolepoäng

First Cycle

Confirmation

This course syllabus was confirmed by Committee for Study Programmes in Medical Diagnostics and Techniques on 2010-08-16 and was last revised on 2020-11-03 by Institute of Biomedicine to be valid from 2020-12-04, autumn semester of 2020.

Field of education: Medicine 100%

Department: Institute of Biomedicine

Position in the educational system

The course is given during the 5th and 6th semester, specialization Laboratory Medicine.

The course can be part of the following programmes: 1) Programme for the Biomedical Laboratory Science (VMLVH) and 2) Programme in Biomedical Laboratory Science (M1BMA)

Main field of studies

Biomedical Laboratory Science

Specialization

G2F, First cycle, has at least 60 credits in first-cycle course/s as entry requirements

Entry requirements

Eligible to the course is a student that has successfully completed all the courses within 1-4th semester with attendance of courses within the 5th semester of the Biomedical Laboratory Science, 180 hec, specialization Laboratory Medicine.

Learning outcomes

The students will increase their technical and practical skills and develop a professional approach.

On successful completion of the course the student will be able to:

Knowledge and understanding

- justify the importance of correct disposal of test materials
- explain the significance of the different steps that secure quality in the activity
- explain how the Swedish Biobank Law is applied
- describe disease categories as well as diagnostic possibilities and methods for treatment follow-up
- explain some specific analyses and examinations including indication and test material, analysis principle, technical processing, result assessment as well as quality assurance

Competence and skills

- apply testing ordinances and cooperate with the patient and relatives
- handle test material in a correct way
- plan and carry out analyses and examinations within given time frames
- process and critically interpret results
- observe and handle deviations
- communicate and collaborate with different work categories or in interprofessional learning activities
- present and discuss activity-related tasks orally and in writing

Judgement and approach

- discuss the medical importance of results attained from analysis and examination
- notice ethical problems
- plan expenditure of materials and correct handling of infectious agents, chemicals and waste
- discuss one's own learning and the need to develop one's competence

The course is sustainability-related, which means that at least one of the learning outcomes clearly shows that the course content meets at least one of the University of Gothenburg's confirmed sustainability criteria.

Course content

Work-integrated education at special sections within two different clinical laboratory specializations part of laboratory medicine, alternatively one of the placements at an outpatient clinic or veterinary clinic.

Organization and distribution of responsibilities: The competence of different labor groups and their areas of responsibility. Communication and cooperation within the

unit and the setting. Interprofessional training.

Quality assurance: Quality manual. Accreditation. Traceability. External control programs. External revision. Internal controls/operational controls. Internal revisions, horizontal and vertical. Evidence of formal qualifications.

Test and referral: Testing, test material and test disposal. Referral management. Biobanking.

Current placements: Disease categories and laboratory examination possibilities.

Specific analyses and examinations within current placements: The clinical importance of analyses. Analysis and methodological principles. Technical processing. Result assessment and measurement uncertainty. Documentation.

Security and environmental aspects: Clothing. Personal protective equipment. Waste disposal. Hygiene. Sustainable development.

Form of teaching

Work integrated training. Lectures and seminars. Interprofessional learning.

Language of instruction: Swedish

Teaching in English can occur.

Assessment

To Pass the course the student is required to participate in all compulsory parts, these are the work integrated education (VFU), written assignments and lectures/seminars. Examination includes assessment of VFU, which is done by a special assessment template and is handled by the supervisor, a written report and an oral presentation of the completed placement.

Not approved mandatory parts will be retaken according to instructions given by the examiner or in the current Study guide.

The examiner can decide that a student may submit supplementary reports for examination. A report that is still not reaching the level Pass after two submitted supplements, will get the grade Fail. The examiner decides that if supplementary work is allowed based on the possibility to reach the grade Pass and decides the dates for an eventual supplementary. A student that get the grade Fail on the module will have to redo the whole module again, next occasion the course is given. A student that already received the grade passed on a report, is not allowed to submit supplementary work in order to get a higher grade.

A student who has taken two exams in a course or part of a course without obtaining a pass grade is entitled to the nomination of another examiner. The student needs to contact the department for a new examiner, preferably in writing, and this should be approved by the department unless there are special reasons to the contrary (Chapter 6 Section 22 of the Higher Education Ordinance)

If a student has received a recommendation from the University of Gothenburg for special educational support, where it is compatible with the learning outcomes of the course and provided that no unreasonable resources are required, the examiner may decide to allow the student to sit an adjusted exam or alternative form of assessment.

Student that failed VFU is entitled to redo the placement again. If satisfactory completion of a course or part of a course requires successful completion of a placement or corresponding training, the number of prescribed periods of placement or corresponding training shall be at least two; see Chapter 6, Section 21 HF. This option should be used sparingly and only in relation to problems with resources.

In the event that a course has ceased or undergone major changes, students are to be guaranteed at least three examination sessions (including the ordinary examination session) over a period of at least one year, but no more than two years, after the course has ceased/been changed. The same applies to placements and professional placements (VFU), although this is restricted to just one additional examination session

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).

In order to get the grade Pass (G) for the full course, the student must receive the grade Pass on all the compulsory parts, the professional placement, the written report and the oral presentation.

In order to get the grade Pass with Distinction (VG) for the full course, the student must receive the grade pass on all the compulsory parts and get the grade Pass with Distinction on at least two of the following components: the professional placement, written report and/or the oral presentation.

Course evaluation

Course evaluation is made in writing with help of a general course evaluation, as well as orally in dialogue with the students. The course coordinator summarises and makes an analysis of the course evaluation and provides suggestions for development of the course. Analysis and suggestions are reconnected to the students and published on the

Gothenburg University's Learning management platform, and presented at the next start of the course.

Additional information

Work integrated training is included in the course. Placement can take place outside Gothenburg, but preferably within the Västra Götaland region, and can entail extra costs for the students.

Hygienic requirements in the health care sector forbid that private clothes as well as rings, bracelets and wristwatches may not be worn during the work integrated training and that work in contact with the patient is always done with short-sleeved protective clothing. See also governing document "Policy and rules on dress, personal decoration or other equipment for teaching, tests, examinations and internships". Dnr G 4705/09.

The examiner can with immediate effect interrupt a student's work integrated training (VFU) or equivalent if the student shows such serious deficiencies in knowledge, skills and attitudes that the patients' trust is at risk of being damaged. When VFU is interrupted in this way, it means that the student fails the current part and that a VFU opportunity is used up. In such cases, an individual action plan must be drawn up, stating which activities and knowledge checks are required before the student is given the opportunity for a new VFU period in this course.