



## INSTITUTE OF BIOMEDICINE

### **BMA115 One year master thesis in Biomedical Laboratory Science, 15 credits**

Examensarbete i biomedicinsk laboratorievetenskap, 15 högskolepoäng  
*Second Cycle*

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#### **Confirmation**

This course syllabus was confirmed by Institute of Biomedicine on 2022-08-08 to be valid from 2023-01-16, spring semester of 2023.

*Field of education:* Medicine 100%

*Department:* Institute of Biomedicine

#### **Position in the educational system**

The course is offered as a free standing course. Can be included in a Master of Science (one year) degree.

#### *Main field of studies*

Biomedical Laboratory Science

#### *Specialization*

A1E, Second cycle, contains degree project for Master of Arts/Master of Science (60 credits)

#### **Entry requirements**

To be eligible for the course the student needs to have a Bachelor's degree, 180 hec, with a major in the field of Health Science education, for example Biomedical Laboratory Science, Medical or equivalent. In addition 30 hec completed courses on second cycle level are required, including at course of at least 7,5 hec Scientific methods in the field of Health Science education.

Swedish 3/B and English 6/B are also required.

#### **Learning outcomes**

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

*Knowledge and understanding*

- justify the choice of laboratory and examination methodology

*Competence and skills*

- apply appropriate terms and concepts in the area of question
- plan and, with adequate methods, accomplish an experimental or methodological project according to ethical rules and guidelines
- document the daily work in the form of laboratory diary
- use reference management systems
- present, both orally and in writing, an independent work according to scientific standards
- critically discuss experimental design, obtained results and interpretation of results
- communicate new facts in issues with those active outside the current research area
- critically examine and assess one's own and others' work

*Judgement and approach*

- reason good ethics in the role of researcher
- identify one's own need for additional knowledge

**Course content**

The experimental work should be documented in the form of a so-called laboratory diary.

Information skills: Literature search, databases, peer-review system, reference management;

Ethics: Ethic rules and guidelines, good research practice;

The research process: design, project planning, research funding

Experimentally and/or method-oriented science project: elaboration of a project plan, documentation of daily work, data collection, processing and interpretation of data, written report in accordance with standards for scientific documentation. Oral presentation and defense of the work.

Critical examination and opposition of another student's thesis.

**Form of teaching**

Teaching is mainly project-based teaching where the student under supervision individually completes, and also individually report a project. In addition, there are

course introduction, teamwork where students in groups process study material to follow up at a subsequent seminar, workshop for literature search, written individual assignments (project plan and lab. diary)

Language of instructions is English and Swedish.

### **Assessment**

The course is examined by a written report and oral presentation of a project work and defense of the work as well as opposition of another student's thesis.

To pass the course the student needs to participate in the following compulsory parts;

- Course introduction
- Workshop and literature search
- Group task and actively contributing at one seminar

In addition, to pass the course the following parts are required;

- an approved project plan
- an approved lab. diary presented as a written assignment

If a student who has twice received a failing grade for the same examination component wishes to change examiner ahead of the next examination session, such a request should be made to the department in writing and 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 study support for students with disabilities, the examiner may, where it is compatible with the learning outcomes of the course and provided that no unreasonable resources are required, decide to allow the student to sit an adjusted exam or alternative form of assessment.

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 internships 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).  
To get the grade Pass on the entire course, all examinations and the compulsory

elements must be passed as well as the project plan and the lab. diary.

To get the grade Pass with Distinction (VG) for the entire course, a VG is required on the written report and on the oral examination and the rest of the examinations and the compulsory elements must be passed. In addition to this, the project plan and the lab diary must be passed.

### **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 analyses 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**

Since the course has elements of digital parts, the student needs to have access to computer and internet.