

## Degree Project in Medical biology

Självständigt arbete (examensarbete) inom medicinsk biologi  
30 credits

Programme course

8MEA31

Valid from: 2024 Autumn semester

<b>Determined by</b>	<b>Main field of study</b>	
Chairman of The Board for First and Second Cycle Programmes	Medical Biology	
<b>Date determined</b>	<b>Course level</b>	<b>Progressive specialisation</b>
2012-12-07	Second cycle	A2E
<b>Revised by</b>	<b>Disciplinary domain</b>	
	Medicine	
<b>Revision date</b>	<b>Subject group</b>	
2014-10-06; 2021-05-03; 2023-06-30	Medical Biology	
<b>Offered first time</b>	<b>Offered for the last time</b>	
Spring semester 2014		
<b>Department</b>	<b>Replaced by</b>	
Institutionen för biomedicinska och kliniska vetenskaper		

## Specific information

The course is compulsory semester three and/or four in the Master's Programme in Experimental and Medical Biosciences.

## Course offered for

- Master's Programme in Experimental and Medical Biosciences

## Entry requirements

For entrance to the course Degree Project in Medical biology, at least 60 credits within the programme including the courses Laboratory Techniques in Experimental Biosciences, Research methodology in biomedicine, and Project in Experimental and Medical Bioscience, 15 or 30 credits, must be completed

## Intended learning outcomes

By the end of the course the students will be able to:

### Knowledge and understanding

- Show advanced theoretical and methodological knowledge within an area of the biomedical field

### Competence and skills

- Identify scientific questions related to current biomedical research, and formulate hypotheses and aims
- Independently plan, define, and perform scientific, laboratory experiments and/or other relevant forms of data collection
- Compile the results obtained in report written in the form of a manuscript for a scientific journal, including oral presentation, discussion and defense of the report at an open seminar
- Summarize a project in a way that a layman can understand

### Judgement and approach

- Analyze, interpret, critically evaluate, and assess obtained results
- Critically review and give constructive feedback on reports and oral presentations of other students' and with a clear scientific approach argue for and against analyses and results
- Analyze and reflect upon aspects of sustainability and ethics in a scientific project

## Course content

The course contains deepened theoretical, methodological and practical studies within the field of medical biology. The student works with a high degree of independence within a supervised scientific project, and applies and deepens previously acquired knowledge on a biomedical question. The course also contains mentor meetings (in full-class and individual) where the focus is on the professional development and scientific approach. More specifically the following is included in the course:

- Formulation of scientific hypothesis and planning of scientific experiments
- Experimental laboratory work and/or other forms of data collection
- Analysis and processing of obtained results
- Interpretation, critical evaluation and assessment of obtained results
- Sustainable development and ethics
- Popular scientific summary

## Teaching and working methods

Within the Faculty of Medicine, student-centered and problem-based learning forms the basis of teaching. The student takes personal responsibility for the learning through an active and processing approach to the learning tasks. The working methods challenge the students to independently formulate questions for learning, to seek knowledge and to assess and evaluate acquired knowledge in dialogue with others.

Students in this course work independently under supervision leading to a degree project. Seminars and mentor meetings are also included.

## Examination

The examination in this course consists of:

- Individual written report in the form of a manuscript for a scientific journal, including oral presentation and defense of this report
- Individual oral and written opposition
- Individual written report of auscultations
- Individual written reflection on sustainability and ethical aspects

Active participation in the compulsory parts is necessary to pass the course. Active participation includes giving individual contributions and/or reflections with relevance to the learning tasks. The compulsory part of this course is practical, laboratory work or other type of data collection.

If special circumstances prevail, and if it is possible with consideration of the nature of the compulsory component, the examiner may decide to replace the compulsory component with another equivalent component.

### **Application for examination**

Instructions on how to apply for examinations are given prior to the beginning of each course.

### **Re-examination**

The date for re-examination should normally be announced by the date of the regular examination at latest; in which case the scope must be the same as at the regular examination.

### **Examination for students with disabilities**

If the LiU coordinator for students with disabilities has granted a student the right to an adapted examination for a written examination in an examination hall, the student has the right to it.

If the coordinator has recommended for the student an adapted examination or alternative form of examination, the examiner may grant this if the examiner assesses that it is possible, based on consideration of the course objectives.

An examiner may also decide that an adapted examination or alternative form of examination if the examiner assessed that special circumstances prevail, and the examiner assesses that it is possible while maintaining the objectives of the course.

### **Nomination of another examiner**

A student who has taken two examinations in a course or a part of a course without obtaining a pass grade is entitled to the nomination of another examiner, unless there are special reasons to the contrary.

## **Grades**

Two-grade scale, U, G

## **Course literature**

List of relevant literature is available at least 2 months prior to the start of the course as decided by the programme board. There is no mandatory literature in the course.

## Other information

Planning and implementation of the course is to be based on the wordings in the course syllabus. A course evaluation is compulsory for each course and should include how the course is in agreement with the course syllabus. The course coordinator will analyse the course evaluation and propose appropriate development of the course. The analysis and proposal will be returned to the students, the Director of Studies, and as needed to the Education Board, if related to general development and improvement.

The course is conducted in such a way that there are equal opportunities with regard to sex, transgender identity or expression, ethnicity, religion or other belief, disability, sexual orientation and age.

If the course is cancelled or undergoes major changes, examination is normally offered under this course syllabus, at a total of three occasions, within/in connection to the two following semesters, of which one in close proximity to the first examination.

If special circumstances prevail, the vice-chancellor may in a special decision specify the preconditions for temporary deviations from this course syllabus, and delegate the right to take such decisions.