Degree Project

Programme course

30 credits

Examensarbete

8MEA30

Valid from: 2020 Autumn semester

Determined by
The Board for First and Second Cycle Programmes at the Faculty of Health Sciences

Date determined
2012-12-07

Revision date
2014-10-06

Main field of study
Medical Biology

Course level
Second cycle

Advancement level
A2E

Course offered for
- Master's Programme in Experimental and Medical Biosciences

Specific information
The aim of the course is that the student should acquire advanced theoretical, methodological and practical knowledge within the field of medical biology. Under supervision, the student works independently with a scientific project, and applies and deepens acquired knowledge on a problem with a clear medical perspective. The course is compulsory semester three and/or four in the Master's Programme in Experimental and Medical Biosciences.

Entry requirements
The special eligibility requirement is the possession of the Degree of Bachelor of Sciences in a major subject area with relevance for biomedical sciences. This could include previous studies at faculties of medicine, technology/natural sciences, odontology or veterinary medicine. A major part of courses included in the Bachelor degree should be in subjects such as biochemistry, cell biology, molecular biology, genetics, gene technology, microbiology, physiology, immunology, histology, anatomy, and pathology.

For entrance to the course Degree Project (Master Thesis), at least 60 credits including the courses Laboratory Techniques in Experimental Biosciences, Analytical Techniques in Experimental Biosciences, and Project in Experimental and Medical Bioscience, 15 or 30 credits, must be completed.

Applicants must also have documented skills in English corresponding to the level of English in Swedish upper secondary education (English B). For applicants who have not studied in Swedish upper secondary education, skills in English are normally attested to by means of an international language test.

Intended learning outcomes

By the end of the course the students will be able to:
Knowledge and understanding

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

Competence and skills

- Identify scientific questions and make connections to current research within the area, and establish hypotheses and aims
- Plan and perform scientific, laboratory experiments and/or other relevant forms of data collection
- Compile the results obtained in a scientific report written according to the instructions of a selected scientific journal and present, discuss and defend the report orally at an open seminar
- Reflect on and evaluate the costs of a scientific project
- Reflect on and evaluate the need of an ethical application for a given project

Judgement and approach

- Analyze, interpret, and critically evaluate obtained results
- Critically review reports and oral presentations of other students' work and argue for and against analyses and results

Course content

- Planning of scientific experiments
- Experimental laboratory work and/or other relevant forms of data collection
- Analyses and processing of obtained results
- Interpretation and critical evaluation of obtained results
- Financing of scientific research
- Ethical issues and ethical permissions

Teaching and working methods

General: Linköping University Master's Programme in Experimental and Medical Biosciences applies student-centered learning among which Problem Based Learning (PBL) is one pedagogical philosophy and method. To prepare the students for future employment, practical and experimental work in laboratory settings are important parts of the programme in courses as well as in individual projects.

Examination

Compulsory items
Active participation in the compulsory parts is necessary to pass the course, and assessment of them is carried out continuously. Compulsory parts in this course are: planning document for the project; experimental, laboratory work or other relevant forms of data collection; half time evaluation in the form of a poster; seminar on ethical issues; presence at the presentation of at least seven other students' Degree Project presentations apart from the ones critically reviewed.

Examination
Individual written report in the form of a manuscript to a scientific journal within the area of the project, as well as and oral presentation and defence of it.
Individual critical review (oral and written) of two other students' Degree Projects.
Individual statement of costs for the project in the form of an application for grant.

Scope of re-examination
The extent of a re–examination shall be similar to the regular examination

Change of examiners
Students who have failed the course or part of the course twice are entitled to request another examiner for the following examination occasion, unless specific reasons are present.

Registration for examination
The procedure for registration should be stated prior to the commencement of each course. In other respects, regulations concerning examination and examiners are applied in accordance with Linköping University policy.

Grades

Two grade scale, older version, U, G

Other information

The planning and implementation of a course must take its starting point in the wording of the course plan. The course evaluation included in each course must therefore take up the question how well the course agrees will the course plan.

The course is carried out in such a way that both men's and women's experience and knowledge is made visible and developed.

If the course is withdrawn, or is subject to major changes, examinations according to this course plan are normally offered on a total of three occasions within one year, one of them in close connection to the first examination.

Department

Institutionen för biomedicinska och kliniska vetenskaper