Project in Experimental and Medical Biosciences

Programme course

30 credits

Projektarbete i experimentell och medicinsk biovetenskap

8MEA20

Valid from: 2019 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 project is that the student should get 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 biomedical problem. One of the courses Project in Experimental and Medical Biosciences, 15 credits, and Project in Experimental and Medical Biosciences, 30 credits, is compulsory in semester one, two or three 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. 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
- Establish hypotheses and aims
- Plan and perform scientific, laboratory experiments and/or data collection
- Describe the contents of the project in a way possible to understand for those not experts in the field

Judgement and approach

- Analyze, interpret, compile and critically evaluate obtained results
- Analyze the scientific problem, the implementation and the results of the project from a social and ethical point of view
- 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, interpretation, and critical assessment of obtained results

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: experimental, laboratory work or other relevant forms of data collection, presence at the presentation of at least seven other students' project presentations apart from the ones critically reviewed, presence at a minimum of four seminars in the seminar series "Life Science" at Linköping University.

Examination
Individual written report and oral presentation and defence of it.
Individual critical review (oral and written) of two other students' projects.

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, 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