



DEPARTMENT OF BIOLOGICAL AND ENVIRONMENTAL SCIENCES

BIO725 Degree Project in Physiology and Cell Biology, 30 higher education credits

Fysiologi och cellbiologi, examenskurs, 30 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by Department of Biological and Environmental Sciences on 2017-02-20 to be valid from 2017-02-20, autumn semester of 2017.

Field of education: Science 100%

Department: Department of Biological and Environmental Sciences

Position in the educational system

The course consists of a degree project in biology at second cycle level, of 30 credits (hec), and is included in the Ecophysiology profile in the Master's (120 credits) program in biology. It may be included in the course requirements for a Master degree (120 credits) in biology or molecular biology.

The course can be applied to as a free-standing course.

The course can be part of the following programmes: 1) Molecular Biology, Master's Programme (N2MBI) and 2) Biology, Master's Programme (N2BIO)

Main field of studies

Molecular Biology

Biology

Specialization

A2E, Second cycle, contains degree project for Master of Arts/Master of Science (120 credits)

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Entry requirements

Passed basic courses in biology of 60 credits as well as at least one one relevant advanced course (at least 15 credits) in biology needs to be passed. In addition, a passed degree project at first cycle level of at least 15 credits in a biological subject is required.

Learning outcomes

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

- show deepened general theoretical knowledge in the degree subject and for the subject relevant scientific methodology, included understanding in safety, environmental and ethical aspects
- in detail describe the theoretical background of the chosen project in the degree subject
- independently search and evaluate relevant information for the project
- on a scientific basis analyse and critically interpret other studies in the subject
- under supervision independently plan and with adequate methods carry out as well as evaluate an experimental or theoretical scientific study
- carry out assignments within given time frames
- orally and in writing present and discuss acquired data and conclusions using a scientific language and adequate terminology as well as adapt a presentation to a given audience
- put the acquired results in a larger context and thereby take consideration to relevant scientific, social and ethical aspects of research and development

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

The course aims to give an in-depth contact with research and research methodology in the subject area, both practically by independent data collection and analytical work and theoretically by studies of scientific literature in the subject area as well as participation in seminars and group meetings

The project is usually carried out within one of the ongoing research projects at the department but external (e.g. at other departments, industry or public authorities) projects are also possible. The specialisation of the project is decided in consultation between the student and supervisor, and the work-load should correspond to full-time studies (40 h/week) during one semester. For registration, it is required that the project is approved by examiner.

The work should result in an academic thesis written in English according to guidelines that are made available at the beginning of the course. The thesis should contain a popular summary in Swedish or English.

The course is concluded with a seminar where all course participants present and defend their work. All students are expected to review one other student's work (at second cycle level) during the course. A draft of the thesis should be ready before the oral presentation, the final version is to be handed in after the presentation at the end of the course.

Form of teaching

The majority of the course time is devoted to practical work where the student works independently under supervision. The practical work includes collection, analysis as well as synthesis of data. The student has the right to on an average at least 45 min of supervision per week throughout the course. Students who do not finish the project within the set time can only in exceptional cases expect continued supervision to any larger extent.

Initially, the student should write a study plan that includes a short scientific background of the project, a well delimited aim, general description of planned methods as well as a realistic time plan. The study plan should also state to which extent the student is expected to participate in seminars or other meetings. The study plan should be approved by the supervisor and examiner within circa 2 weeks from the start of the course.

The student is expected to independently search and read necessary relevant literature during the course to understand the theoretical background of the project, and when necessary, to propose relevant changes in e.g. methodology or experimental set-up.

Language of instruction: English and Swedish

Assessment

Examination of the course is based on the written and oral presentation of the work as well as assessment of the performance during the whole project. Approximate date for presentation and submission are determined at the start of the course. A student who cannot attend the presentation session will be given the possibility to participate at the next regular occasion. The final version of the thesis is normally submitted after the presentation.

The assessment follows the guidelines determined by the Faculty of Science and includes the following five main criteria: 1. Understanding, 2. Implementation, 3. Results, analysis and interpretation, 4. Oral presentation and communication as well as 5. Written presentation. These are weighted against each other by additional subcriteria, all assessed according to the scale 0 (Non-existent) to 4 (Excellent), where 2 (Sufficient) are equivalent to passed.

The evaluation should take into consideration the student's ability to follow given guidelines and own initiative drive the project and keep deadlines. The quality of achieved results *per se* must not affect the assessment, unless the quality can be linked to the manner in which the project was carried out.

Detailed assessment criteria as well as guidelines for written and oral presentation is available for the students via University of Gothenburg's learning management system (GUL).

If a student, who has failed the same exam twice, wishes to change examiner before the next examination, a written application shall be sent to the department responsible for the course and shall be granted unless there are special reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance).

In cases where a course has been discontinued or has undergone major changes, the student shall normally be guaranteed at least three examination occasions (including the ordinary examination) over a period of at least one year from the last time the course was given.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U). The degree project is graded by the appointed examiner after consultation with the supervisor. The final grade is decided by the total score for the five general assessment criteria (see Forms for assessment above). For the grade Pass (G) on the course as a whole the student must satisfy the requirements for pass for all five main criteria, to Pass with distinction (VG), the total sum should correspond to at least 85% of the maximal sum.

Course evaluation

On completion of the course, a written and/or oral course evaluation is carried out. A compilation of the course evaluation is sent to the "Biology student office" where it is available as a public document. The course evaluation is also distributed to all teachers that have participated in the course and should be taken into consideration when planning the next course. A summary of the course evaluation as well as highlighting of potential changes that have been done should be presented at the introduction next time the course is given.

Additional information

The course may contain compulsory laboratory work that include animals.

Travels to and from field stations can present costs for the student.