



**Karolinska
Institutet**

Course syllabus for

Degree Project in Molecular Life Science, Second Cycle, 30 credits

Examensarbete inom molekylära livsvetenskaper, avancerad nivå, 30 hp

This course syllabus is valid from spring 2025.

Course code	5MT016
Course name	Degree Project in Molecular Life Science, Second Cycle
Credits	30 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Molecular Life Science
Level	AV - Second cycle
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Medicine, Huddinge
Decided by	Programme committee for study programmes in biomedicine
Decision date	2024-10-10
Course syllabus valid from	Spring 2025

Specific entry requirements

60 credit points from the Master's Programme in Molecular Techniques in Life Science.

Objectives

On completion of the course, the student should be able to:

Regarding knowledge and understanding

* Demonstrate basic scientific knowledge and proven experience in the chosen subject area, as well as an in-depth understanding of current research and development activities and advanced methodological knowledge.

Regarding skills and abilities

* Demonstrate the ability to holistically, critically and systematically, search, collect and integrate knowledge as well as identify their need of additional knowledge

* Demonstrate the ability to identify, analyse, evaluate and handle complex phenomena, issues and situations even with limited information

* Demonstrate the ability to plan and with adequate methods carry out qualified assignments within given time frames as well as to evaluate this work

* Show such skills that are required for participation in research and development work, or to work independently in some other qualified capacity

* Demonstrate the ability in speech and writing to report clearly and discuss their conclusions and the knowledge and arguments on which they are based in dialogue with different audiences.

With respect to judgement and approach

* Demonstrate the ability to make assessments considering relevant scientific, societal and ethical aspects.

Content

The course starts with a project plan that is prepared by the student together with the supervisor. Individual project work is carried out based on the project plan. The work is presented in a written report as well as orally at a seminar. The student is required to publicly discuss another student's degree project at the seminar. The work is also summarised in a popular science summary.

Teaching methods

The teaching consists of supervision and seminars. During the course the student has the right to 20 hours of supervision sessions of which at least 7 hours shall be given individually.

Examination

Examination takes place through written and oral presentation as well as critical review of a fellow student's written report. A project plan, a scientific report and a popular science summary are included in the written presentation.

The grading criteria for the course are distributed at the start of the course.

The examiner sets the grade after consultation with the supervisor and the expert evaluator, based on the student's implementation and performance of the project, and the final presentation of the work.

If submission of the written thesis report occurs later than the set deadline the student loses the opportunity to obtain the grade of pass with distinction for the course

Students who have passed the examination may not participate in a new examination for the purpose of obtaining a higher grade.

Compulsory participation

Participation in seminars is compulsory.

The examiner assesses if and, in that case, how absence from compulsory components can be compensated. The student must participate in all compulsory parts, or compensate for absence in accordance with the examiner's instructions, in order to pass the course. Absence from a compulsory activity may result in the student not being able to compensate the absence until the next time the course is given.

Limit to the number of examination sessions

A student who does not pass the written and oral presentation at their first attempt is entitled to participate in five additional examination sessions. If the student has failed six examinations, no additional examination sessions are provided.

Physically attending or otherwise commencing an examination is regarded as an examination session. An examination, for which the student registered but did not participate, is not counted as an examination session.

The examiner may terminate a student's practical training or equivalent at a placement with immediate effect if the student shows such serious deficiencies in knowledge, skills or approach that the safety of

the student and/or other personnel, equipment or valuable reagents/material at the placement are at risk. If a placement requires termination in this way, the student fails the practical work. In such cases, an individual action plan must be drawn up, stating the actions that are required before the student is permitted to perform a new practical placement.

A student who does not pass the practical work (as specified in the assessment criteria) at their placement at their first attempt should perform practical work at a new placement. If the student fails the practical work twice, no additional examination sessions are provided, and the student may not register for future course occasions.

If there are special grounds, or a need for adaptation for a student with a disability, the examiner may decide to deviate from the syllabus's regulations on the examination form, the number of examination opportunities, the possibility of supplementation or exemptions from the compulsory section/s of the course etc. Content and learning outcomes as well as the level of expected skills, knowledge and abilities may not be changed, removed or reduced.

Other directives

The course is given in English.

The course is carried out in collaboration with Stockholm University and KTH Royal Institute of Technology within the scope of the joint Master's Programme in Molecular Techniques in Life Science (120 credits). Equivalent course syllabi for the degree project are established at the other higher education institutions.

Literature and other teaching aids

An individual reading list will be established by the supervisor and student for the specific degree project.