



Faculty of Science

KEMP50, Organizing Molecular Matter: Project Work, 15 credits

Nanokemi: Projektarbete, 15 högskolepoäng
Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2008-04-29 and was last revised on 2008-04-29. The revised syllabus applies from 2008-04-30, autumn semester 2008.

General Information

The course is an optional second-cycle course for a degree of Master of Science, main field of study Organizing Molecular Matter.

Language of instruction: Swedish and English
When necessary, the course in full is given in English.

Main field of studies

Organizing Molecular Matter

Depth of study relative to the degree requirements

A1F, Second cycle, has second-cycle course/s as entry requirements

Learning outcomes

The aim of the project is to give the students the opportunity to gain highly specialised knowledge within a subject-specific area, to give training in advanced research methodology, as well as in independently running and implementing a research project of limited scope.

On completion of the project, students shall be able to

- demonstrate good theoretical knowledge, understanding and problem solving abilities which, all together, mean subject-specific specialisation
- demonstrate good experimental skills in practical laboratory work or theoretical calculations, as well as possess good skills in the planning and documentation of experimental work
- carry out risk assessments for subject-specific chemical work, and be familiar with the laws and ordinances that regulate such work, as well as being able to reflect

on and discuss the ethical aspects and social significance of such work and research

- demonstrate great familiarity with the scientific method's work methodology and critical approach. This includes being able to scientifically test hypotheses, having the capability to assess the quality of both their own and others' results, and being able to read, understand and critically review scientific primary publications
- demonstrate good abilities in using and conveying their knowledge in different forms in their area, including everything from report writing to oral presentations

Course content

The focus of the project work and its format are decided in consultation with the supervisor. The project work can be carried out at a unit within the Chemistry Department but may, after agreement with the examiner/grading committee, be carried out at another higher education department or outside the university. The work shall comprise literature studies that survey the background to the selected research task and contain laboratory and/or theoretical tasks.

Course design

The student carries out literature studies, establishes a project plan and performs a subject-specific research task under supervision. The project work concludes with a written report and a public oral presentation in the presence of the supervisor and examiner/grading committee.

The written report must contain an introduction to the research work with relevant, complete references to the underlying literature, a material and methods section that enables the experiment to be repeated, as well as a presentation and limited discussion of the results achieved.

If the examiner considers that the work as submitted cannot be awarded a passing grade, the student will be given the opportunity to complete the work for further assessment.

Assessment

Grades

Marking scale: Fail, Pass, Pass with distinction.

To pass the course, students must pass the written project report and the oral presentation.

The examiner/grading committee determines the grade after consultation with the supervisor. The final grade is decided through weighting the assessment of the project's implementation and the written and oral presentations.

Entry requirements

To be eligible for the course students must have basic eligibility, English B and

- completed courses comprising at least 105 credits in a relevant subject
- completed second-cycle courses in Organizing Molecular Matter comprising at least 15 credits

Equivalent knowledge that has been gained in another way also provides eligibility for the course.