KA1040 Perspectives on Research and Innovation 8.5 credits

Perspektivkurs forskning och innovation

This is a translation of the Swedish, legally binding, course syllabus.

Establishment

Course syllabus for KA1040 valid from Autumn 2013

Grading scale

P, F

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Basic eligibility and special eligibility are required in Mathematics course E, Physics course B, Chemistry course A. In each and every of these subjects, the lowest accepted grade is passed or 3.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

The purpose of the course is to highlight research and innovation in chemistry and chemical engineering. With this you should early form an view of what chemical engineering is. You will get an insight into current research and developments in various fields and see the large range of problems that you in your future profession can contribute to solve. You also get an introduction to the commercialization of research and will actively participate in a research project and practice a project model.

After completing the course, the student should be able to

- Describe an important chemical process from a research and innovation perspective.
- Plan, execute, document and evaluate as a group a project based on the above.
- To report technically, both orally and in written form on the above project for an audience corresponding to students in the same course.
- To be able to discuss and exemplify how research and development can lead to commercialisation.
- To be able to discuss and illustrate how a chemical engineer contributes to research and innovation in a professional capacity and be able to describe this both orally and in written form.
- Orally describe and explain the above projects a ta level and a way appropriate for high school students.

Course contents

The course consists of four parts.The first deals with various professional roles and responsibilities of an engineer in Engineering Chemistry, active in research / development /innovation.The second part deals with entrepreneurship,intellectual property rights and commercialization of research.In the third part the project work is practiced in a small research project at the School of Chemical Science. Finally,in the last part of the course a presentation is designed related to the completed project, which will be adapted for students at secondary level.

Disposition

The course starts in study year two with the first part,then the main part of the course is in study year three .

Examination

- PRO2 - Project 2, 3.0 credits, grading scale: P, F
- PRO1 - Project 1, 1.0 credits, grading scale: P, F

- TEN1 - Examination, 2.0 credits, grading scale: P, F
- PRO3 - Project 3, 2.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

If the course is discontinued, students may request to be examined during the following two academic years.

PRO1 will be examined during year 2

PRO2 and PRO3 will be examined during year 3

TEN1 will be examined during year 3

Other requirements for final grade

Passed projects (PRO1, PRO2 and PRO3) and passed examination (TEN1)

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.