



Course syllabus

Faculty Board of Science and Engineering
School of Natural Sciences

1KE941 Fysikalisk kemi, 7,5 högskolepoäng
Physical Chemistry, 7.5 credits

Main field of study

Chemistry

Subject Group

Chemistry

Level of classification

First Level

Progression

G1F

Date of Ratification

Approved by Organisational Committee 2009-12-15

The course syllabus is valid from autumn semester 2010

Prerequisites

Basic eligibility as well as 15 credits in General Chemistry (KEA810) or the equivalent

Expected learning outcomes

After completing the course the student is expected to be able to:

- explain and apply thermo-dynamic quantities and the connections between them
- interpret and construct phase diagrams
- draw electro-chemical cells, analyze electro-chemical processes and calculate cell potentials
- apply rate laws and calculate quantities related to these

Content

The course contains the following elements:

- Gas properties
- The first law of thermodynamics
- The second law of thermodynamics
- The third law of thermodynamics
- Phase transitions in pure substances and simple mixtures
- The phase rule and phase diagrams
- Electro-chemistry
- Reaction kinetics

Type of Instruction

The teaching consists of lectures, laboratory work and exercises. Participation in the laboratory work is compulsory.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

The assessment of student performances usually takes place during special examination periods and is written.

Course Evaluation

A written course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The course evaluation will be filed at the department

Required Reading and Additional Study Material

Required reading

Atkins & de Paula, *Physical Chemistry*, Oxford, 8:th edition. 290 pages.