



## Course syllabus

Faculty Board of Science and Engineering  
School of Natural Sciences

1KT901 Grundläggande Kemi, 15 högskolepoäng  
General Chemistry, 15 credits

**Main field of study**

Chemistry

**Subject Group**

Chemistry

**Level of classification**

First Level

**Progression**

GIN

**Date of Ratification**

Approved by Organisational Committee 2009-12-15

The course syllabus is valid from autumn semester 2010

**Prerequisites**

General entry requirements and Chemistry A, Mathematics D and Physics B (Field-specific entry requirements 8).

### Expected learning outcomes

After completing the course the student is expected to have basic knowledge of

- atomic structure
- chemical bonding
- chemical formulae, reactions and stoichiometry
- chemical balances
- acids and bases
- the structure of various organic molecular groups
- the structure of bio molecules (lipids, carbohydrates, proteins, nuclein acids)
- protein synthesis
- metabolism
- photo synthesis
- chemical terminology in both Swedish and English

### Content

The course comprises the following elements

- Basic chemical concepts and nomenclature
- Atomic structure and the periodical system

- Chemical bonding
- Chemical formulae, reactions and stoichiometry
- The physical property of gases
- Solutions
- Chemical balances
- Acids and bases
- Saturated and unsaturated hydrocarbons
- Alcohols, phenols and ethers
- Aldehydes and ketones
- Carboxyl acids and esters
- Amines and amides
- Stereoisometry
- Carbohydrates, lipids and proteins
- Nuclein acids
- Enzymes and metabolism

## Type of Instruction

Lectures, exercises and laboratory work. Information on compulsory elements is provided at the course start.

## Examination

The course is assessed with the grades U,3,4 or 5.

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 may take the form of laboratory work, written assignments and written examinations. The assessment may be both written and oral.

## 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

Ira Blei och George Odian, *General, Organic and Biochemistry*. 787 pages.

Thougaard H, Varlund V, Madsen RM, *Grundläggande Mikrobiologi- med livsmedelsapplikationer*, Studentlitteratur (2006). App. 50 pages/course

Material distributed by the department.