



# KE1185 Chemical Engineering Systems 7.5 credits

Kemitekniska system

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

## Establishment

Course syllabus for KE1185 valid from Spring 2016

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

First cycle

## Main field of study

Technology

## Specific prerequisites

The course assumes knowledge from courses in thermodynamics, transport processes and reaction engineering and mathematics during the first years of the education in Chemical Technology (or the equivalent).

## Language of instruction

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

## Intended learning outcomes

After the course, the students should be able to:

- be able to review and apply different technologies for design of a flow diagram
- describe and be able to use relevant symbols in a flow diagram
- design, evaluate and analyse the entire systems consisting of several different unit operations and processes, multiple raw materials and products, from both material - and the energy balance perspective as with an equilibrium - and reaction kinetics perspective
- know and use different strategies to solve (material and energy balances) for these systems, for example through equation solution or with a sequential solution method
- know and carry out the solution to the systems with computer support by means of commercial programs of the type EES (Engineering Equation Solver), the AspenPlus etc
- know and be able to describe relevant steering and regulation controls for chemi-technical systems

## Course contents

The course Chemi-technical Systems aims to give the student necessary knowledge and tools to be able to design, evaluate and analyse complicated process systems i.e. the type of system that one finds everywhere in society and industry.

## Course literature

Will be described later

## Examination

- INL1 - Assignment, 3.0 credits, grading scale: P, F
- TEN1 - Written exam, 4.5 credits, grading scale: A, B, C, D, E, FX, 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.

Examination, 4.5 credits, A-F

Written assignment, 3 credits, P/F + possible bonus points

## Other requirements for final grade

The final grade is based on the examination result and possible bonus points on hand-in assignments

## 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.