



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 2019

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 the degree program in Engineering Chemistry(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, and including consideration of societal goals concerning sustainable development
- 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 how to 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 Chemical Engineering 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

Analysis, Synthesis and Design of Chemical Processes, fourth edition

Richard Turton et al., Prentice Hall

ISBN13: 9780132618120

ISBN10: 0-13-261812-5

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.