



KE2355 Resource recovery from waste 7.5 credits

Resursåtervinning från avfall

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

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

Establishment

Course syllabus for KE2355 valid from Spring 2019

Grading scale

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

Education cycle

Second cycle

Main field of study

Chemical Science and Engineering

Specific prerequisites

Admission requirements for programme students at KTH:

At least 150 credits from years 1 and 2, and bachelor's work must be completed, within a programme that includes:

75 university credits (hp) in chemistry or chemical engineering, 20 university credits (hp) in mathematics and 6 university credits (hp) in computer science or corresponding.

Admission requirements for independent students:

75 university credits (hp) in chemistry or chemical engineering, 20 university credits (hp) in mathematics and 6 university credits (hp) in computer science or corresponding. Documented proficiency in English corresponding to English B.

Language of instruction

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

Intended learning outcomes

Creating economically and environmentally sustainable processes for resource recovery from primary and secondary raw materials is one of the challenges in realizing a circular economy. This course covers novel processes and techniques for resource recovery. This includes using biochemical tools for resource recovery from waste(-water) and hydrometallurgy for recovery of valuable elements from consumer products (e.g. NiMH batteries) and industrial waste (e.g. red mud).

Course contents

- Bio methane generation
- Bio-hydrogen generation
- Biofuel production
- Volatile fatty acid production
- Bioplastic production
- Nutrient recovery
- Feedstock recovery
- Resource recovery from consumer products and mining waste

Course literature

TBD

Examination

- PRO1 - Project assignment, 2.0 credits, grading scale: P, F
- TEN1 - Written exam, 5.5 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.

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.