



MH2601 Combustion in Industrial Processes 6.0 credits

Förbränning i industriella processer

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

Establishment

The official course syllabus is valid from autumn semester 2026 as decided by the Director of First and Second Cycle Education. Decision date: 2026-04-20

Grading scale

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

Education cycle

Second cycle

Main field of study

Materials Science and Engineering

Specific prerequisites

At least 90 credits in engineering.

Intended learning outcomes

After passing the course, the student should be able to:

- Solve problems in combustion thermodynamics

- Evaluate combustion and aerodynamics in industrial furnaces
- Redesign existing furnaces to decrease fuel consumption, and particle and CO₂ emissions
- Suggest the best available combustion technology (BAT) for industrial processes
- Describe the procedure for smoke gas measurement at combustion

Course contents

Basic knowledge of combustion chemistry, thermodynamics and aerodynamics. Combustion of gaseous, liquid and solid fuels. Clean combustion to preserve the environment. Design of combustion processes.

Examination

- LAB1 - Laboratory Work, 1.5 credits, grading scale: P, F
- INL1 - Assignment, 2.0 credits, grading scale: P, F
- PRO2 - Project, 2.5 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.

Students who have not passed project task (PRO1) with previous set of assessment modules are assessed in the module INL1.

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.