



# MH2600 Combustion in industrial Processes 9.0 credits

Förbränning i industriella processer

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

## Establishment

On 15/10/2019, the Dean of the ITM School has decided to establish this official course syllabus to apply from spring term 2020 (registration number M-2019-2232).

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

## Specific prerequisites

Good knowledge in thermodynamics and Transport phenomena corresponding to the courses MH1027 Thermodynamics of Materials and MH1018 Transport Phenomena.

## Language of instruction

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

# Intended learning outcomes

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

- Prepare methodology to solve technical problems in combustion chemistry and thermodynamics
- Analyse and compare industrial combustion and aerodynamics in different furnaces and processes
- Evaluate existing furnaces and processes and propose and explain alterations to these to decrease fuel consumption, and particle and CO<sub>2</sub> emissions
- Evaluate and justify for the best available combustion technology (BAT) for industrial processes
- Explain and analyse the process 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.

Home assignments.

Laboratory exercises

## Examination

- PRO1 - Project Assignment, 3.0 credits, grading scale: P, F
- LAB1 - Practicals, 1.5 credits, grading scale: P, F
- TEN2 - Written exam, 2.5 credits, grading scale: A, B, C, D, E, FX, F
- INL1 - Assignment, 2.0 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.

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

Students who have not passed written assignment (ÖVN1) according to previous official course syllabuses are assessed on INL1 in current official course syllabus.

## 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.