



MH2504 Industrial Metallurgical Processes 6.0 credits

Industriella metallurgiska processer

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 MH2504 valid from Autumn 2014

Grading scale

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

Education cycle

Second cycle

Main field of study

Specific prerequisites

One or both of the following courses

Advanced Course in Materials Design
Advanced Course in Process Sciences

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 student should be able to:

- Apply theoretical knowledge in the field of materials in industrial and technical problems
- Interact with different functions and roles within industry
- Describe and analyze the practical aspects of the production of various metals
- Write a technical report and explain for different production methods
- Orally present the results for different roles and functions of an industrial company

Course contents

The students are divided into groups. Thereafter, a real industrial problem is assigned them. The problem can be in different areas; process and physical metallurgy, process control, heat treatment, combustion, environment, casting, etc.

To solve the problem the students should be able to use their thermodynamic and kinetic knowledge. The student will need to do a literature survey as well as travelling to the metal industry to be able to understand and solve the problem. If specific data are needed measurements can be made at the industry or at the department's lab. Each group will get a group of advisors consisting of researchers from the Department as well as from the industry. The report will be presented orally at a seminar.

Disposition

Each group will receive a contact person both at the company as well as at KTH for their specific project. Thereafter, the students will form a project group. From here the students will take over as project leaders. Thus, the students will set up meetings with the assigned assistance at KTH as well as the company.

Examination

- PRO1 - Project, 6.0 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.

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.