



F4H5405 Corrosion Science 7.5 credits

Korrosionslära, doktorandkurs

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 F4H5405 valid from Spring 2009

Grading scale

undefined

Education cycle

Third cycle

Specific prerequisites

The course is intended for graduate students in academic or industrial environments with a background in materials science, chemistry or physics. The introductory lecture covers necessary background information in corrosion science.

Language of instruction

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

Intended learning outcomes

To discuss the underlying chemistry and physics of the most important forms of metal corrosion.

Course contents

Introduction; Repetition of Basic Concepts; Thin Oxide Film Formation; Passivity; Pitting Corrosion; Microbially Influenced Corrosion; Corrosion Protection by Organic Coatings; Crevice Corrosion; Erosion Corrosion; Atmospheric Corrosion; High Temperature Corrosion; Stress Corrosion and Corrosion Fatigue.

Course literature

Selected chapters in "Corrosion Mechanisms in Theory and Practice" Eds. P. Marcus and J. Oudar, Marcel Dekker, Inc., New York (1995); Lecture notes.

Examination

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.

Other requirements for final grade

Take-home problems and written examination.

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.