SA2000 Modeling and Simulation 7.5 credits

Modellering och simulering

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 SA2000 valid from Spring 2008

Grading scale

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

Education cycle

Second cycle

Main field of study

Physics

Specific prerequisites

Matematics, physics and mechanics on 2nd cycle level.

Language of instruction

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

Intended learning outcomes

The overall objectives of the course are that the students should be able to:

- know classic and novel modeling and simulation methods in selected areas of engineering and science

- apply modeling and simulation methods to new situations

- analyze the results of modeling and simulations methods for a given application

- judge the value of applied modeling and simulation methods for a given application

- display a scientific attitude towards modeling and simulation problems

Course contents

The students practice modeling and simulation in groups and individually, by treating given problems in selected areas of engineering and science. Both classic and novel methods, covering a broad application spectrum, are of interest. Finally, the students give a critical review, by an oral and written presentation, of the modeling and simulations methods applied for a given problem.

Course literature

The course literature consists of current research articles that will be passed out when the course starts.

Examination

- TEN1 - Examination, 7.5 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.

Written and oral 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.