DN1242 Numerical Analysis, Supplementary Course 1.5 credits

Numerisk analys, tilläggskurs

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

Establishment

Course syllabus for DN1242 valid from Autumn 2009

Grading scale

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

Education cycle

First cycle

Main field of study

Technology

Specific prerequisites

Language of instruction

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

Intended learning outcomes

The overall goal of this course consists of providing a deeper insight into the mathematical foundations of numerical methods.

After completing the course you are able to

- understand the mathematical background of certain numerical methods,
- investigate critical properties of numerical methods theoretically.

Course contents

Additionally to the material presented in the course DN1240 Numerical Methods Basic Course II, the following topics are introduced: operator calculus, difference equations and their application, optimal polynomial interpolation, fast multipole method, Poisson equation in higher dimensions, numerical methods for the heat equation.

Course literature

To be announced at the web page for the course at least 4 weeks before the course starts.

Examination

- TEN1 - Examination, 1.5 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.

In this course all the regulations of the code of honor at the School of Computer science and Communication apply, see: http://www.kth.se/csc/student/hederskodex/1.17237?l=en_UK.

Other requirements for final grade

All requirements of 2D1240/DN1240 fulfilled, and
computer assignments with oral and written presentation (TEN1; 1,5 university credits).

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.