# SF2739 Partial Differential Equations 7.5 credits

## Partiella differentialekvationer

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 SF2739 valid from Autumn 2011

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Mathematics

## Specific prerequisites

SF1628, Complex analysis
SF1629, Differentialequations and Transforms II

SF2713, Foundations of Analysis

## Language of instruction

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

## Intended learning outcomes

## Course contents

The course treats first order equations. The wave equation: equation in one or several space coordinates, Huyghen's principle. The Laplace equation: fundamental solutions, Green's function, Dirichlet's problem, the maximum principle, Dirichlet's principle, introduction to Sobolev rooms. The heat eqation: initial value problem, fundamental solutions, the maximum principle.

## 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.

## 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.