SF2705 Fourier Analysis 7.5 credits

Fourieranalys

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

Establishment

Course syllabus for SF2705 valid from Autumn 2007

Grading scale

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

Education cycle

Second cycle

Main field of study

Mathematics

Specific prerequisites

5B1303 Analysis or corresponding background.

Language of instruction

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

Intended learning outcomes

To make the students familiar with concepts of Fourier series and Fourier integrals, and to give them some ability to solve applied problems.

Course contents

Fourier series and Fourier integrals in L1 and L2. The Paley-Wiener theorem. Hardy functions. Applications to number theory, physics, probability, signal processing etc.

Course literature

Stein, E. M. and Shakarchi, R., Fourier analysis. An introduction. Princeton University Press 2003.

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.

If the course is discontinued, students may request to be examined during the following two academic years.

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.