# SF2709 Integration Theory 7.5 credits

**Integrationsteori**

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

## Establishment

## Grading scale

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

## Education cycle

Second cycle

## Main field of study

Mathematics

## Specific prerequisites

SF2700 Analysis or corresponding.

## Language of instruction

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

## Intended learning outcomes

To provide an introduction to the Lebesgue integral and abstract measure theory.

## Course contents

Lebesgue measure and Lebesgue integral in Rn. Abstract measure theory and integral. convergence theorems, different types of convergence. The Radon-Nikodym's theorem. Derivation of measures. Product of measures and Fubini's theorem. Lp-spaces.

## Course literature

Announced at the start of the course.

## 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.