



Course syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

4MA112 Distributionsteori, 7,5 högskolepoäng
Distribution Theory, 7.5 credits

Main field of study

Mathematics

Subject Group

Mathematics

Level of classification

Second Level

Progression

A1N

Date of Ratification

Approved by Organisational Committee 2009-12-01

The course syllabus is valid from autumn semester 2010

Prerequisites

General entry requirements and Civics A, Mathematics B and Science studies B (Field-specific entry requirements 15). 15 hec at bachelor-level or equivalent.

Expected learning outcomes

The student should be able to:

- operate with various spaces of distributions
- apply distributions to solve problems
- operate with definitions and central notions of the course in coupling with study of various problems
- operate, communicate and present argumentation using mathematical forms of representation
- present applications of differential equations
- give different examples of distributions.

Content

The course content is:

- various spaces of distributions
- operations with distributions: differentiation, multiplication etc.
- applications of the theory of distributions.

Type of Instruction

Lectures and seminars. Compulsory assignments may be given during the course.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

The student's knowledge is assessed in the form of oral and/or written examination.

Course Evaluation

After the course a written evaluation of the course will take place according to the University guidelines.

Other

On request, a Swedish University course certificate will be awarded upon successful completion of the course.

Required Reading and Additional Study Material

Required reading

Fomin S V och Kolmogorov A N *Introductory Real Analysis*, Dover Publication INC, New York, 1975. 403 pages.

Vladimirov V S *Generalized Functions in Mathematical Physics*, Mir, Moscow, 1976. 300 pages.