



## 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 the Board of the School of Computer Science, Physics and Mathematics  
2009-12-01

Revised 2010-11-26. Revision made for prerequisites and course evaluation.

The course syllabus is valid from autumn semester 2011

**Prerequisites**

15 credits at G2F-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

A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

## 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.