

**SYLLABUS**

# **Principles of Mathematical Analysis 7.5 credits M7020M**

**Analysens grunder**

**Course syllabus admitted: Autumn 2009 Sp 1 - Spring 2012 Sp 4**

**DECISION DATE  
2009-11-26**

# Principles of Mathematical Analysis 7.5 credits M7020M

## Analysens grunder

### Second cycle, M7020M

**Education level**  
Second cycle

**Grade scale**  
G U 3 4 5

**Subject**  
Matematik

**Subject group (SCB)**  
Mathematics

## Entry requirements

The basic courses in mathematics.

## Selection

The selection is based on 30-285 credits

## Examiner

Lech Maligranda

## Course Aim

The aim of this course is to give a good understanding of some basic concepts in mathematical analysis.

## Contents

The rational and real numbers, the countable and uncountable sets are introduced. Basic topological concepts such as open, closed, bounded and compact sets are introduced. Numerical sequences, series and properties of continuous and differentiable functions are thoroughly discussed. Riemann integral is introduced and its properties are studied. Sequences and series of functions are studied in connection with continuity, integration and differentiation.

## Realization

Lectures.

## Examination

The examination consists of a written examination at the end of the course.

## Overlap

The course M7020M is equal to MAM215

3525

## Literature. Valid from Autumn 2007 Sp 1

The course literature consists the first seven chapters of the textbook:  
W.R. Parzynski and P.W. Zipse: Introduction to Mathematical Analysis, McGraw Hill 1987.

## Course offered by

Department of Engineering Sciences and Mathematics

## Items/credits

Number	Type	Credits	Grade
0001	Written exam	7.5	G U 3 4 5

## Last revised

Kursplanen är fastställd av institutionen för matematik att gälla från H07.

## Syllabus established

by DLBM 2009-11-26