SF2737 Commutative Algebra and Algebraic Geometry 7.5 credits

Kommutativ algebra och algebraisk geometri

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

Establishment

Course syllabus for SF2737 valid from Autumn 2010

Grading scale

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

Education cycle

Second cycle

Main field of study

Mathematics

Specific prerequisites

SF2729 Groups and rings.

Language of instruction

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

Intended learning outcomes

After completing the course the students are expected

- to be familiar with fundamental results in commuatative algebra
- to be able to translate algebraic results into geometric statements,
- to be able to translate geometric results into algebraic statements.

Course Goal: After completing the course the students are expected to be confident with basic notions of ring theory, being familiar with the fundamental results for commutative rings. The student is also expected to be able to interpret the algebraic constructions and results in geometric terms, and vice versa.

Course contents

Ring and ideal theory, fraction rings, Noetherian rings, Noethers normalization, Nullstellensats, prime spectrum.

Course literature

Miles Reid "Undergraduate Commutative Algebra"

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.

TEN1 - Examination, 7.5 credits, grade scale: A- F

Other requirements for final grade

Written examn/home assignments (Where slash means and/or, all depending on what we decide to do at a much later stage.)

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.