FSF3612 Complex Algebraic Geometry 7.5 credits

Komplex algebraisk geometri

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

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus valid from Spring 2020.

Grading scale

P, F

Education cycle

Third cycle

Specific prerequisites

Master degree in mathematics, or equivalent.

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 student should be able to

- prove properties of fundamental concepts in complex algebraic geometry; and
- draw conclusions about compact complex manifolds using techniques and theorems.

Course contents

- complex manifolds, meromorphic functions, holomorphic vector bundles
- projective space, blow-ups, complex tori
- cohomology of complex manifolds
- some central theorems (such as Serre duality, Lefschetz (1,1)-theorem, Kodaira's embedding theorem)

Examination

- ÖVN1 - Exercises, 7.5 credits, grading scale: P, 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.

The course is examined through homework exercises.

Other requirements for final grade

Assignments completed.

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.