This is the second part of my course on the complex analytic side of algebraic geometry. We will discuss geometric examples, Lefschetz theorems and vanishing theorems, Kodaira's embedding theorem and Chow's theorem, complex Abelian varieties and deformations of complex structures, among other things.

The prerequisite is a very solid understanding of the material covered in 232AR in the Fall semester.

As before, there is no textbook for the course, but I will consult a number of standard sources, like: Griffiths-Harris "Principles of Algebraic Geometry", Huybrechts "Complex Geometry: An Introduction" and Voisin "Hodge Theory and Complex Algebraic Geometry I". Other useful references are: Mumford "Complex Projective Varieties", Hartshorne "Algebraic Geometry", Gunning-Rossi "Analytic functions of several complex variables", Wells "Differential analysis on complex manifolds".

Course structure:

We will meet in person on Monday and Wednesday, 12.00-1.15pm, in SC Hall E (basement).

For those who need a grade, regular attendance is expected, and the evaluation will be done through homework sets. No late homework will be accepted under ordinary circumstances. You are encouraged to collaborate on the homework problems, but you must write your own solutions and properly acknowledge any collaboration, or help you receive from others.

Office hours: 3-4pm on Wednesday, or by appointment

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