

## Math 697B - Introduction to Riemann Surfaces - Fall 2006

TuTh 9:30 → 10:45AM LGRT 1234

**Instructor:** Eyal Markman

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**Office hours:** Tuesday 2:00 → 3:30 pm, Thursday 12:40 → 2:00 pm, and by appointment.

**Prerequisites:** Complex Analysis of one complex variable, at the graduate level, comparable to Math 621. Familiarity with basic notions from algebraic topology (fundamental groups and covering spaces) will be *very* helpful, but not necessary. The algebraic topology background is briefly summarized in the text, as the topics come up.

**Texts:** The main textbook will be *Algebraic Curves and Riemann Surfaces*, by Rick Miranda, Graduate Studies in Mathematics, 5. American Mathematical Society, Providence, RI, 1995.

Other recommended texts include:

1. *Lectures on Riemann Surfaces*, by Otto Forster, Springer-Verlag 1981
2. *Algebraic curves*, by W. Fulton 1969.
3. *Complex algebraic curves*, by Frances Kirwan, London Mathematical Society Student Texts, 23. Cambridge University Press, Cambridge, 1992.
4. *Algebraic Geometry*, by R. Hartshorne.

Miranda's and Forster's books are graduate textbook, while Kirwan's and Fulton's books are advanced undergraduate texts. Hartshorne's text is definitely a graduate level textbook and much more advanced than the others. Many other excellent books are available and recommended in Miranda's book.

**Course Plan:** We will cover most of the first 8 chapters of Miranda's book.

**Homework:** Will be assigned regularly. Students will hand in the homework and present their solutions to homework problems in several specially scheduled evening problem sessions. Group work is encouraged, but individual papers should be handed in.

**Grades:** Will be determined by the homework and class participation.