

## Syllabus

*Mat 351/Cbs 598, Mathematical Methods for Genetic Analysis  
Spring 2006*

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*In this course we discuss mathematics which is used in genetic analysis. In particular, we will discuss alignment algorithms, hidden Markov models and mapping problems.*

### Books:

- Durbin, Eddy, Krogh, Mitchison, *Biological sequence analysis*.
- D. Gusfield, *Algorithms on strings, trees, and sequences*.

In addition notes are available online. I also recommend the following additional books:

- Neil C. Jones, Pavel A. Pevzner, *An Introduction to Bioinformatics Algorithms*.
- Jonathan Pevsner, *Bioinformatics and functional genomics*.

**Homework and Quizzes:** There will be regular homework assignments and will be approximately every two weeks a quiz will be given. Homework problems will be available online. No make-up quizzes will be given under any circumstances.

**Tests:** There will be two in-class tests. No make-up test will be given unless a student has notified the instructor before the test date. Tests' dates are:

- Test 1, March 02.
- Test 2, April 20.

**Final:** The date of the final is May 04, 7:40-9:30.

**Grading:** Your final grade will be computed as follows: Quizzes: 20 %, Final 30 % and Tests 50 %.

**Grading scale:** A: above 92%, B: 80% - 90 %, C: 68% - 78%, D:60%-69%.