

CS 329E: Elements of Computing: Algorithms for Bioinformatics  
Professor Tandy Warnow

Location: Ernest Cockrell Jr. Hall (ECJ) 1.204

Time: TuTh 12:30-2:00

Grading scheme:

- Class participation: 10%
- Class presentation: 10%
- HW: 30% (seven homeworks will be given, each worth 5% but the worst will be dropped; no late homeworks accepted – all are due, in class, by 12:45 PM on the due date.)
- Quizzes: 30% (four short quizzes will be given, each worth 10%; the worst will be dropped)
- Final: 20%

Textbook: An introduction to Bioinformatics Algorithms, by Neil C. Jones and Pavel A. Pevzner, MIT Press.

Office Hours: to be determined.

To reach me: please send email, to [tandy@cs.utexas.edu](mailto:tandy@cs.utexas.edu).

Class web page: [www.cs.utexas.edu/users/tandy/329E-2008.html](http://www.cs.utexas.edu/users/tandy/329E-2008.html)

## Lectures and Quizzes

- (Jan 15) Introduction
- (Jan 17) Algorithms and problems
- (Jan 22-34) Induction and recurrences
- (Jan 29-31) Combinatorial Counting
- (Feb 5-7) Running times and Big-Oh notation. First quiz given on February 7.
- (Feb 12-21) Computational complexity (NP-hardness), approximation algorithms, and heuristics for NP-hard optimization problems. Second quiz given on February 22.
- (Feb 26-Mar 6) Molecular sequence alignment. Third quiz given on March 6.
- (Mar 18-Apr 3) Phylogenetic estimation. Fourth quiz given on April 3.
- (Apr 8-10) Sequence assembly
- (Apr 15-24) Student Presentations