

SPRING 2013

Computer Science Special Topics

CS 591-1 / CS 438-1

Bioinformatics Algorithms

Monday, Wednesday, Friday
3:00 - 3:50 p.m.
Lindegren 18

Instructor: Dr. Dunren Che

The importance of algorithms to Computer Science can never be overemphasized. This course discusses algorithms in a *down-to-earth practical* way – every algorithmic issue is motivated by a practical compressing Bioinformatical problem. This course *is not simply an application* of existing algorithm design principles to the biological problems, but calls for creative rethinking of many algorithm design issues with novel design ideas. This ONE course *opens a new door* for your future career – Bioinformatics which relates to the great pharmaceutical industry as well.

The course includes a primer of molecular biology and a detailed review of algorithms and complexity. So, *you don't need to worry about your biological background or algorithm knowledge*.

Prerequisites: CS 330 (grade of “C” or better) or approval of instructor.

Textbook: Jones, Neil C. *Introduction to Bioinformatics Algorithms*, 2004, MIT, ISBN 9780262101066.

Special Note to Graduate Students:

- 1) Graduate students cannot register for both CS 438-1 and CS 591-1 this semester, and;
- 2) Graduate students who have previously taken CS 438 cannot register for nor receive credit for CS 591-1 this semester.