Computing for Life Sciences (CS 59000)

Bioinformatics Tools, Algorithms, & Python Programming

Mon/Wed/Fri, 12:30-13:20, Lilly 3102
Instructor: Daisuke Kihara dkihara@purdue.edu

The course will cover concepts, algorithms, tools, and introductory practical Python programming in fascinating field of bioinformatics.

The course is targeted at non-CS majors who are working or interested in bioinformatics field. It does not require programming experience.

This course fulfills the computing course requirement in the Computational Life Science (CLS) program. [http://www.gradschool.purdue.edu/CLS/index.cfm](http://www.gradschool.purdue.edu/CLS/index.cfm)

Course topics

- Python programming
- biological databases
- biological sequence (DNA, protein) sequence alignment & database search
- protein tertiary (3D) structure comparison and modeling
- protein-protein interaction
- biological network analysis
- Comparative genomics
- algorithms for protein docking

The course consists of 2 lectures on bioinformatics concepts and algorithms & 1 lecture in Python programming.


Questions to: dkihara@purdue.edu