CS6379 - Biological Database Systems and Data Mining

CS 6379 Biological Database Systems and Data Mining (3 semester hours) Relational data models and database management systems; theories and techniques of constructing relational databases to store biological data, including sequences, structures, genetic linkages and maps, and signal pathways. Introduction to a relational database query language (SQL) with emphasis on answering biologically important questions. Summary of current biological databases. Data integration from various sources and security. Novel data mining methods in bioinformatics with an emphasis on protein structure prediction, homology search, genomic sequence analysis, gene finding and gene mapping. Future directions for biological database development. Prerequisites: BIOL6373/ BMEN 6391, BIOL 5381, and CS 5343 or consent of the instructor. (3-0) T (2016-02-05 21:18:55)