

**Title: Bioinformatics [1-0-4-6]****Content :**

Biomedical literature and related databases: PubMed, science citation index and current awareness services, electronic journals; Database concepts: protein and nucleic acid databases, structural databases; Pattern matching algorithm basics; Biological background for sequence analysis; Identification of protein sequence from DNA sequence; Searching databases for similar sequences; BLAST: sequence alignment methods, evaluation, scoring, pairwise sequence alignment; Motif discovery and gene prediction; Multiple sequence alignment; Phylogenetic analysis.

**Texts / References:**

1. Mount, D. W. (2005). Bioinformatics: Sequence and Genome Analysis. Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press.
2. Baxevanis, A. D., & Ouellette, B. F. (2001). Bioinformatics: a Practical Guide to the Analysis of Genes and Proteins. New York: Wiley-Interscience.
3. Bourne, P. E., & Gu, J. (2009). Structural Bioinformatics. Hoboken, NJ: Wiley-Liss.