

Annotation to the subject:

“Biological databases and basic methods of bioinformatics”

Requirements for the initial level of knowledge

For the successful learning of the subject to have basic knowledge of biochemistry and molecular biology, knowledge of computer technology (for example: excel, touch typing) is required. On the top of that, students need to know elementary level of English.

Objectives of the discipline

The purpose of teaching the discipline is obtaining the knowledge and skills in working with modern biological databases, as well as an understanding methods of analysis of biological macromolecules (amino acid and nucleotide sequences). It is also important to have ability for competently extracting and using the necessary information from a huge massive and variety of biological databases.

Objectives:

- Own several methods of comparison and analysis of protein and nucleotide sequences (various modifications of BLAST, Dotplot) to find homologous macromolecules or domains,
- Use various multiple alignment algorithms to analyse evolutionary hierarchy of biological macromolecules.