

Doctoral School: **Biology Doctoral School**
Doctoral Program: Neuroscience and Human Biology

Subject code: **BIO/7/39**

Subject title: **Neuroinformatics: basic principles and neurobiological applications L**

Teacher and Neptun code: **Dr. Négyessy László (VHHNJD)**

Credits: 4

Class hours: 2 hours/week, lecture

Aim of the course

The lecture provides an overview on analysis possibilities of the data generated during neuroscience research, with special regard to the problems related to large amounts of data and IT methods.

Course content

Overviewing the major consequences of the increased computational capacity in experimental neuroscience (larger and more detailed datasets, retrieving more information from the data, fast processing, building databases).

Overviewing the techniques of structuring large datasets in the neuroscience.

Introduction into datamining techniques and network analysis in brain research.

Introduction and use of different softwares applied in different fields of the neuroscience for processing and analyzing data and for computational modelling.

Discussing the problems of technical approaches requiring large computational capacity in the neuroscience.

Requirements

written exam

Literature

material provided by the lecturer of each topic

