Course Syllabi

CODE 920

NAME Computational Intelligence

Credits 4.5 ECTS

Period Fall Semester

Course Specifications
The course is based on lectures in which the main ideas of the course are given as specific details of the problems and algorithms to be discussed and applied should be taken from reading the suggested related scientific publications. For each of the topics of the course, a computer-based practice should be carried out together with a report of the work done and the results obtained.

Objectives and contents
The objective of the course is that the students acquire the knowledge and abilities needed in order to choose and apply computational intelligence algorithms for solving real problems in bioinformatics.

Contents:
1. Clustering algorithms application to DNA microarray data.
2. Classification algorithms application for prediction of disease evolution.
3. Evolutive algorithms application to feature selection.
4. Probabilistic algorithms application to sequence detection and alignment.

Assessment
Continuous assessment is based on class participation, on the elaboration of reports and on two partial tests, with which the student can pass the course. A final exam is also possible as an alternative to pass this subject.

Lecturers
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