

Name of UE	Courses and Research Initiation in Bioinformatics
Section(s)	- (30 ECTS) Master en Sciences de l'Ingénieur industriel orientation Life Data Technologies / Cycle 2 Complementary block

Teacher	Hours	Periodes
Aline LEONET	370	Quad 2

Learning activity	Hours	Teacher
Courses and Research Initiation in Bioinformatics	370h	Aline LEONET

Prerequisites	Corequisites

Teaching language
English / French

Prerequisite knowledge and skills

Specific learning achievements
Students will be able to: Understand the key concepts and methodologies of bioinformatics. Acquire practical skills in biological data analysis. Develop the ability to design and conduct bioinformatics research projects. Learn to use bioinformatics tools and software commonly used in the field. Foster critical thinking and the ability to interpret research results.

Content of learning activity
Depending on the type of subject, the student will have to be involved in a research project using: Biological databases: types, use and management. Bioinformatics algorithms and tools: sequence alignment, structure prediction, phylogenetic analysis. Analysis of omics data: genomics, transcriptomics, proteomics and/or metabolomics. Programming for bioinformatics: Python, R, and other relevant languages.

Teaching methods:

Interactive approach, problem-based approach, case studies, use of software

Bibliographic resources:

Related publications: Pubmed/google Scholar/ techniques de l'Ingénieur

Evaluations and weightings

Evaluation	Overall grade for teaching unit
Evaluation language(s)	English/ French
Valuation method	Project reports Oral presentations

Grade carried over from one year to the next for the AA passed in the event of failure of the EU.

Courses and Research Initiation in Bioinformatics : **non**

Academic year: **2024 - 2025**