|  |  |
| --- | --- |
| N° ECUE | XA4S612 |
| Title | Aquatic ecology |
| ECTS: 2,5 |  | Lecture(h)CM : 21 |  | Tutorials (h)TD :  |  | Pratical works (h) TP : 15 |  | Project (h) |  |
| DescriptionCourse: Concepts and basic knowledge in ecology. The diversity of the living organisms. Biogeochemical cycles (C, N, P, S cycles). Individuals, populations, communities: Interactions with the environment. Inland water ecosystems. Marine ecosystems. Ecological quality assessment toolsLab work : Observations and identification of animal and plant organisms, necessary for the application of Ecological quality assessment tools (Invertebrate index, macrophyte index, riparian forest etc.); anatomy and physiology of fish.ContentChap 1: Basic Concepts and Knowledge in EcologyEcosystem functioning: energies, primary and secondary production, energy efficiency, food webChap 2: The diversity of lifeBiological diversity and classification. The five kingdoms: Monera, Protista, Fungi, Plantae, AnimaliaChap 3: Biogeochemical CyclesWater cycle. Physicochemical factors. Carbon, nitrogen, phosphorus and sulfur cyclesChap 4: Individuals, populations, population: Interactions with the environmentIndividuals and their environment. Factors structuring a population. Interactions between populations. Community studyChap 5: Inland Water EcosystemsLake systems: Geology and formation. Morphological and physicochemical characteristics. Ecological stratificationRivers: Physico-chemical characteristics. Ecological characteristics. Ecological continuityChap 6: Marine EcosystemsThe environment and its characteristics. Main habitats and biocenoses: Intertidal zone: pre-salt and marine marshes, estuaries, lagoons. Subtidal zone: seagrass beds, kelp forests, coral reefs. Deep benthosChap 7: Diagnostic toolsWater quality assessment. Biological indices |
| Key Words | biogeochemical cycles; biodiversity; ecosystem functioning |
| Type of Evaluation | The final grade is composed of literature research (25%), a lab works (25%) and a final exam (50%). |