|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| N° ECUE | XA4S612 | | | | | | | | |
| Title | Aquatic ecology | | | | | | | | |
| ECTS: 2,5 |  | Lecture(h)  CM : 21 |  | Tutorials (h)  TD : |  | Pratical works (h) TP : 15 |  | Project (h) |  |
| Description  Course: 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 tools  Lab 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.  Content  Chap 1: Basic Concepts and Knowledge in Ecology  Ecosystem functioning: energies, primary and secondary production, energy efficiency, food web  Chap 2: The diversity of life  Biological diversity and classification. The five kingdoms: Monera, Protista, Fungi, Plantae, Animalia  Chap 3: Biogeochemical Cycles  Water cycle. Physicochemical factors. Carbon, nitrogen, phosphorus and sulfur cycles  Chap 4: Individuals, populations, population: Interactions with the environment  Individuals and their environment. Factors structuring a population. Interactions between populations. Community study  Chap 5: Inland Water Ecosystems  Lake systems: Geology and formation. Morphological and physicochemical characteristics. Ecological stratification  Rivers: Physico-chemical characteristics. Ecological characteristics. Ecological continuity  Chap 6: Marine Ecosystems  The 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 benthos  Chap 7: Diagnostic tools  Water 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%). | | | | | | | | |