Asignatura: BIOLOGICAL MONITORING
Código: 32764
Centro: Facultad de Ciencias - UAM
Titulación: Master in Inland Water Quality Assessment
Nivel: Máster
Tipo: Obligatoria-Mandatory
Nº de créditos: 4

1.10. Datos del equipo docente / Faculty data

Docente(s) / Lecturer(s): Dr. Paloma Alcorlo and Dr. Eugenio Rico
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1.11. Objetivos del curso / Course objectives

Two main objectives can be outlined:

1. Students will learn sampling strategies, sampling techniques and sample treatment concerning biological material from lakes and streams.
2. Students will learn how to assess environmental status in lakes and streams based on results from sampling exercises.

After finished studies, students shall be prepared for water management tasks in governmental, regional and/or community administrations *(think of the EU Water Framework Directive and all steps included here)*.

1.12. Contenidos del programa / Course contents

Module 1. Definitions and principles of biological monitoring. Evolution of the concept of quality in aquatic ecosystems. Water Framework Directive in relation to biomonitoring. Organisms used as elements of quality in aquatic ecosystems. Eco-regionalization and reference conditions.

Module 2. Sampling strategies in and lentic aquatic ecosystems. Sampling methodologies for different biological quality elements. Instrumentation and analytical methods for samples in laboratory.

Module 3. Biological Indices. Genesis, typology and evolution. Assessment of the ecological status of aquatic ecosystems through biological monitoring. Implementation of biomonitoring programs in developed countries. Comparison of biological indices.

Module 4. Emerging trends in integrated programs of biomonitoring and management.