

## MANAGEMENT OF AQUATIC ECOSYSTEMS

Responsible professor: **ANDRÉS COZAR CABAÑAS**

Credits: **5,0 ECTS**

### Brief description of the contents:

- Ecosystem principles for the management of aquatic systems
- Organisation, dynamism and forcing of aquatic ecosystems
- Surveillance and monitoring strategy for aquatic ecosystems
- Integration and analysis of information
- Management of temporary pools
- Management of wetlands
- Management of aquatic invasive species
- River restoration, rehabilitation
- Eutrophication

### Detailed programme:

| LEARNING BLOCK | TOPIC OR ACTIVITY   |
|----------------|---|
| <b>B1</b>      | Ecosystem principles for the management of aquatic systems.   |
| <b>B2</b>      | Organisation, dynamism and forcing of aquatic ecosystems.   |
| <b>B3</b>      | Practical: Organisation and dynamism of aquatic ecosystems I.   |
| <b>B4</b>      | Practical: Organisation and dynamism of aquatic ecosystems II.  |
| <b>B5</b>      | Surveillance and monitoring strategy for aquatic ecosystems I.  |
| <b>B6</b>      | Surveillance and monitoring strategy for aquatic ecosystems II.   |
| <b>B7</b>      | Integration and analysis of information.  |
| <b>B8</b>      | Practical: Integration and analysis of information: food webs.  |
| <b>B9</b>      | Practical: Integration and analysis of information: simulations and projections with dynamic models I.                |
| <b>B10</b>     | Practical: Integration and analysis of information: simulations and projections with dynamic models II.               |
| <b>B11</b>     | Management of coastal wetlands.   |
| <b>B12</b>     | Management of temporary pools.  |
| <b>B13</b>     | Management of biological invasions I: from the introduction of invasive species to the selection of feasible actions. |
| <b>B14</b>     | Management of biological invasions II: control methods in the field.  |
| <b>B15</b>     | Eutrophication: causes and effects.   |
| <b>B16</b>     | Biogeochemical manifestations of eutrophication.  |
| <b>B17</b>     | Preventive and corrective measures for eutrophication.  |
| <b>B18</b>     | Harmful cyanobacterial proliferation.   |
| <b>AAD</b>     | Visit to <i>Los Tollos</i> lagoon.  |

### Evaluation system:

|  | SYSTEM  | WEIGHT  |
|--|---|---------|
|  | <b>Final exam</b>                                     | 40 – 60 |
|  | <b>Written essays</b>                                 | 40 – 60 |
|  | <b>Presentation of exercises, topics and projects</b> | 0 – 30  |
|  | <b>Laboratory practices and/or practice report</b>    | 0 – 30  |