Code: 1400 **Management and Conservation of Freshwater Ecosystems**
Degree: 2nd cycle – Natural Resources Management and Conservation
Curricular Year: 1st **Semester Course: 2nd**
Credits: 6 ECTS **Compulsory**
Language: Portuguese/English
Responsible: Maria Teresa Marques Ferreira da Cunha Cardoso
Other lecturer(s): -
Web Site:

1. Contact hours:
Lectures 14 **Lecture/Practicals** 28 **Practicals/Workfield** 10 **Others** 1.5 **Total** 53.5

2. Objectives:

To know the abiotic and biotic compartments of freshwater ecosystems, to understand its interactions, and functioning. To know the types of perturbations resulting from human interference and how to mitigate these, and restore and rehabilitate ecosystems and habitats. To know how to monitor ecological quality and ecosystem health.

3. Programme:

Abiotic freshwater scenarios. Major and minor components, water quality. Thermal stratification. Flora and fauna of the freshwater environment. Organic matter and its cycling. Typology and ecology of aquatic communities in rivers and lakes, temporal and trophic variability. Ecology of freshwater fishes. Ecology and management of riparian woodlands. Water quality and biotic integrity of freshwater ecosystems. Eutrophication and its control in rivers and reservoirs. Regulated rivers, ecology and management. Minimal flow requirements. Fish passes and fish movements. Ecology and control of invasive species. Mining. Ecology of urban rivers. Recovery of aquatic habitats and fish populations. Recovery of fluvial processes and functions.

4. Bibliography:

Main Bibliography

Wetzel, RG. 2001. Limnology, lake and river ecosystems. Academic Press, San Diego.
The Rivers Handbook. Hydrological and ecological principles, Volume 2, edited by Peter Calow and Geoffrey E. Petts, Blackwell Scientific Publications, Oxford, 1994.

Other Bibliography

http://www.isa.utl.pt/waterlobby/courses/

5. Assessment:

Work reports for tasks conducted in the practical classes (5 to 7); bibliographic review and synthesis on a theme or suited case presented and discussed in the classes (1); theoretical tests 2.

6. Estimated Workload:	162	Hours
7. Last Update:	9/3/2011	