Code: 1735 **Environmental Pollution**
Degree: 1st cycle – Environmental Engineering
Curricular Year: 2nd **Semester Course: 2nd**
Credits: 6 ECTS **Compulsory**
Language: Portuguese/English
Responsible: Maria José Antão Pais de Almeida Cerejeira
Other lecturer(s): Fernanda Maria Miranda Cabral
Web mail: http://www.isa.utl.pt/home/node/4012

1. Contact hours:
Lectures 48 **Lecture/Practicals** 14 **Praticals/Laboratory** 14 **Others** 14 **Total** 84

2. Objectives:

To provide students information and training on the main aspects focusing on the effects of different pollutant sources on the ecosystems and its fate in environment pools. Risk and hazard assessment.

3. Programme:

1. Contaminants and pollutants (main differences).
2. Dynamics of the main contaminants and pollutants: sources and causes. Fate of different contaminants. Transport of a contaminant from one medium to another. Manner and extent to which a contaminant is associated to the different media or phases within a local environmental system. Topic and Diffuse Pollution.
3. Effect on ecosystems. Risk and hazard assessment.
- Air pollution; water pollution and soil pollution in rural environment: main sources and causes. Principles of the uptake of contaminants by soil, sediment, fish, and plants, and the partitioning of contaminants between these media. Regulatory frameworks.
- 3 case studies.
- 2 technical visits
- 14 laboratory classes and/or seminars.

4. Bibliography:

Main Bibliography

Schnoor, J. L. (1992) - Fate of Pesticides and Chemicals in the Environment. John Wiley & Sons, 436p.

Schüürmann,,G. & Markert, B. (1998) -Ecotoxicology, Ecological Fundamentals, Chemical Exposure and Biological Effects. John Wiley & Sons, Environmental Sciences and Tecnology, 900p.

Vighi, M. & Funari, E. (1995) - Pesticide Risk in Groundwater. CRC Press/Lewis Publishers, Boca Raton, Florida, 275p.

Other Bibliography

C. Zhang (2007) – Fundamentals of environmental sampling and analysis. John Wiley & Sons, Inc., 436p.

5. Assessment:

Continuous assessment trough 4 small written tests, reports and practical exercises.
There is still the possibility for the students of a final exam if they did not achieve in the continuous assessment a mark equal or higher then 10

6. Estimated Workload:	168	Hours
7. Last Update:	12/7/2010	