

Code: 1753 Pattern Recognition**Degree:** 2nd cycle – Mathematics Applied to Biological Sciences**Curricular Year:** 1st/2nd**Semester Course:** 2nd/1st**Credits:** 3 ECTS**Optional****Language:** Portuguese/English**Responsible:** Manuel Lameiras de Figueiredo Campagnolo**Other lecturer(s):** -**Web Site:** <http://www.isa.utl.pt/home/node/3901>**1. Contact hours:****Lecture/Practicals 35 Others 7 Total 42****2. Objectives:**

Many applications in Biological Sciences involve recognition of patterns in data. In this course, different techniques for pattern recognition will be described and applied to a variety of datasets and, in particular, to images.

3. Programme:

1. Introduction;
2. Bayes' decision rule;
3. Parameter estimation;
4. Nonparametric techniques;
5. Linear discriminant functions;
6. Neural networks
7. Decision trees;
8. Comparing classifiers;
9. Image segmentation.

4. Bibliography:**Main Bibliography**

Pattern Classification, Second Edition, by Duda, Hart, and Stork, Wiley 2001

5. Assessment:

Assignments

Final exam

6. Estimated Workload:

84	Hours
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7. Last Update:

15/7/2010
