

**Code: 1671 Topics in Algebra Linear****Degree:** 2<sup>nd</sup> cycle – Mathematics Applied to Biological Sciences**Curricular Year:** 1<sup>st</sup>**Semester Course:** 1<sup>st</sup>**Credits:** 8 ECTS**Compulsory****Language:** Portuguese/English**Responsible:****Other lecturer(s):** -**Web Site:** <http://www.isa.utl.pt/home/node/3885>**1. Contact hours:****Lecture/Practicals 84 Others 28 Total 112****2. Objectives:**

To provide the basic knowledge of Linear Algebra required for the rest of the MSc course

**3. Programme:**

Vector spaces.

Linear independence. Bases.

Matrices.

Linear transformations.

Inner products.

Orthogonal projections.

Eigenvalues and eigenvectors.

Diagonalization.

Quadratic forms.

**4. Bibliography:****Main Bibliography**

Carl D. Meyer, Matrix Analysis and Applied Linear Algebra, SIAM

**5. Assessment:**

Final exam

**6. Estimated Workload:**

224

Hours

**7. Last Update:**

15/7/2010