

<b>ID</b>	3216
<b>Curricular Unit</b>	Mathematics II
<b>Regent</b>	Ana Maria Fité Alves Diniz
<b>Learning Outcomes</b>	<p>(i) To provide students with complementary mathematical tools at the level of Linear Algebra and Mathematical Analysis, necessary for other subjects;</p> <p>(ii) To develop in students logical thinking, fundamental for scientific studies;</p> <p>(iii) To pass on to students the relevance of mathematics in eventual areas of interest, both for their studies and for their professions.</p>
<b>Syllabus</b>	<p>1. Complements of linear algebra</p> <p>1.1. Determinants</p> <p>1.2. Eigenvalues and eigenvectors</p> <p>2. Functions of several variables</p> <p>2.1. Partial derivatives</p> <p>2.2. Extremes</p> <p>3. Linear differential equations</p> <p>3.1. First order equations</p> <p>3.2. Second order equations with constant coefficients</p>
<b>Evaluation</b>	<p>Teaching methodology: Classes operate on a theoretical-practical level to ensure students that the practical component is always present. In general, together with the theoretical exposition of each subject a practical illustration is made with real situations.</p> <p>Assessment: Four or five mini-tests during term time plus a final test or Final exam.</p> <p>The final grade in the course is obtained via a process which may be seen in <a href="http://www.fmh.ulisboa.pt/pt/doc/1o-ciclo/disciplinas/2766-metodos-de-avaliacao-matematica/file">http://www.fmh.ulisboa.pt/pt/doc/1o-ciclo/disciplinas/2766-metodos-de-avaliacao-matematica/file</a></p>
<b>Bibliography</b>	<p>Ferreira, J. Campos. Introdução à Análise Matemática, Fundação Calouste Gulbenkian, Lisboa.</p> <p>Apostol, Tom M. Calculus, Blaisdell Publishing Company, Massachusetts.</p>