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| <b>ID</b>                | 3361  |
| <b>Curricular Unit</b>   | Mathematics II  |
| <b>Regent</b>            | Maria Margarida de Oliveira Moz Carrapa   |
| <b>Learning Outcomes</b> | Providing solid bases for learning of linear algebra; differential calculus in $R^n$ , as well as optimization of functions of several variables.   |
| <b>Syllabus</b>          | <p>Matricial calculus:<br/>           Vectors and matrices.<br/>           Determinants and matrix inversion.<br/>           Linear Independence of vectors and linear systems of equations.<br/>           Differential calculus in :<br/>           Partial derivatives.<br/>           Quadratic forms.<br/>           Derivatives of functions defined implicitly.<br/>           Multivariable optimization:<br/>           Unconstrained optimization.<br/>           Constrained optimization.</p> |
| <b>Evaluation</b>        | Theoretical-practical lectures, and sessions for discussing problems. The assessment consists in a written individual examination (70% of the final grade, subject to a minimum score) and written intercalary tests (30% of the final grade).  |
| <b>Bibliography</b>      | Sydsaeter, Knut and Peter Hammond, (1995). Essential Mathematics for Economic Analysis, Prentice Hall.  |