UNIVERSIDADE FEDERAL DE SANTA CATARINA
CENTRO DE CIÊNCIAS FÍSICAS E MATEMÁTICAS
PÓS-GRADUAÇÃO EM MATEMÁTICA PURA E APLICADA

MTM331200 Linear Programming

Pre-requisite: x-x
Weekly lesson hours: 06h

Discipline syllabus: Formulation of unrestricted and restricted optimization problems. Necessary conditions of optimality for unrestricted problems. Unidirectional search methods, basic algorithms of unrestricted nonlinear optimization. Optimality conditions for nonlinear problems with linear constraints. Linear programming problem, simplex method, duality theory and sensitivity analysis. Algorithms of interior points.

BIBLIOGRAPHIC REFERENCES

1. Bazaraa, M. S. and Jarvis, J.J., Linear Programming and Network Flows,   John Wiley and Sons, New York, 1977.
2. Bazaraa, M. S., Sheraly H.D., and Shetty C. M., Nonlinear Programming: theory and algorithms, 2nd Ed., John Wiley and Sons, New York, 1993.
3. Bregalda, P.F., Oliveira, A.A.F., e Bornstein, C.T., Introdução à Programação Linear, Editora Campus, 1988.
4. Chvátal, V., Linear Programming, W. H. Freeman and Company, New York, 1983.
5. Friedlander, A., Elementos de Programação não linear, Editora da Unicamp, 1994.
6. Murty, K. C., Linear Programming, John Wiley and Sons, New York, 1983.
7. Vanderbei, R., Linear Programming – Foundations and Extensions, Kluwer, Boston 1996.