

Modelling in Decision Aiding - Operational Research

ECTS : 3

Volume horaire : 15

Description du contenu de l'enseignement :

The course aims at presenting the modelling process in Decision Aiding/Operational Research as well as original models for various decision problems.

Compétence à acquérir :

- Definition and roles of models in Decision Aiding/Operational Research. Solution and preference models.
- Description of the modelling process and its different phases.
- Presentation of non trivial models using various modelling frameworks (graphs, linear programming, multiobjective,...).
- The use of 0-1 variables in linear programming
- Presentation of modelling and solving tools (modellers and solvers).

Mode de contrôle des connaissances :

Exam

Bibliographie, lectures recommandées :

- H.P. Williams. Model building in mathematical programming. J. Wiley, New York, 2013. 5th edition
- Ph. Vallin et D. Vanderpooten. Aide à la décision : une approche par les cas. Ellipses, Paris, 2002., 2ème édition
- D. Vanderpooten « Modelling in decision aiding ». In D. Bouyssou, E. Jacquet-Lagrèze, P. Perny, R. Slowinski, D. Vanderpooten, and Ph. Vincke (eds), Aiding Decisions with Multiple Criteria: Essays in Honour of Bernard Roy, pages 195 - 210. Kluwer, 2001.

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