

Faculty of Applied Sciences



INMA2491 Operations research for production and logistics

[30h+22.5h exercises] 5 credits

This course is taught in the 2nd semester

Teacher(s): Yves Pochet, Laurence Wolsey
Language: French
Level: Second cycle

Aims

Present a systematic approach to the solution of a variety of production planning, logistics and supply chain management problems, based on recent deterministic and stochastic operations research methods.

Main themes

The course treats operations research models and methods related to the two principal application areas of operations management. These applications are studied in the general context of supply chain management covering the two areas:
 Multi-product, multi-period, multi-level production planning
 Logistics management (location and distribution)

Content and teaching methods

Each part (production and logistics) includes

1. a general introduction to the modelling and classification of the operations research models related to the area
2. solution methods
3. a study of articles covering specific applications
4. the analysis and solution of a case study

The specific contents (approaches and articles) will vary from year to year.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

The students must have at least taken a basic course in optimization covering modelling and linear programming. Some additional reading matter will be provided for those who have not followed a course in Integer Programming/Discrete Optimization.

Other credits in programs

ECGE3DS/SC	Diplôme d'études spécialisées en économie et gestion (Master in business administration) (Supply Chain Management)	(5 credits)	Mandatory
MAP23	Troisième année du programme conduisant au grade d'ingénieur civil en mathématiques appliquées	(5 credits)	