Materia 4_07: Optimization methods

Materia:	Optimization methods	**ECTS:**	10
Descriptores	• Dynamic Programming. Search and Backspace. Voracious Algorithms. Branching and Pruning • Prescriptive Analytics, Mathematical Programming, Linear Optimization, Integer Optimization, Multicriteria optimization.		
Objetivos generales	This subject has the objective of achieving the basic knowledge necessary to be able to develop applications in the field of OR		
Competencia específica	CE [4-07]: Know the fundaments, paradigms, and techniques typical of the operations research and to design informatics applications that use those techniques in any application environment.		
Resultados de aprendizaje	• To evaluate the computational complexity of a problem, know the algorithmic strategies able to solve it, and recommend, develop, and implement the one that provides the best performance according to the requirements. • Formulate MILP models. • Solve linear and integer programming problems using optimization software. Properly interpret the results obtained when solving these models. • Describe how a multicriteria model differs from single objective models and what happens with solution goodness in a multicriteria scenario. Discuss how to choose the solution for this kind of model.		
Métodos de evaluación	• Evaluation: Student participation, project, written test and academic work. • Assessment instruments: rubrics, checklists and assessment scales.		