

Course Descriptions Master 2024-2025 DRAFT

Course Title	Algorithms and Optimisation							
Course Code	EBC4049							
ECTS Credits	6,5							
Assessment	Whole/Half Grades							
Period	Period	Start	End	Mon	Tue	Wed	Thu	Fri
	2	28-10-2024	15-12-2024	X			X	
Level	Advanced							
Coordinator	Lars Rohwedder For more information:l.rohwedder@maastrichtuniversity.nl							
Language of instruction	English							
Goals	Students learn how to recognize NP-hard optimization problems, and to formulate them. Moreover, the students learn to select appropriate exact and/or heuristic methods to solve the problems.							
Description	We introduce complexity theory. We discuss exact optimization algorithms as well as approximate algorithms for NP-hard problems. Students learn how standard techniques from mathematical programming, combinatorial optimisation, and heuristics and search methodologies work, and learn to read research articles and to give presentations on the subjects.							
Literature	* L.A. Wolsey Integer Programming (2nd edition, 2021), Edmund K. Burke and Graham Kendall (eds.) Search Methodologies, Springer, Boston, MA, 2014 * Various research articles							
Prerequisites	<p>This course is in transition for the master Business Research. See the Master Education and Examination Regulations for more information.</p> <p>The following rule applies to master Business Research students who started the programme prior to academic year 2024-2025. TRANSITIONAL REGULATION (EBC4049): The master Business Research has been discontinued. Courses of the Business Research master's programme will continue to be offered until and including academic year 2025-2026 with exam opportunities running until and including 2026-2027.</p> <p>PREREQUISITES: Game theory and Optimization (EBC4188)</p>							
Teaching methods	PBL / Presentation / Lecture / Papers / Groupwork / Coaching							
Assessment methods	Attendance / Presentation							
Evaluation in previous academic year	For the complete evaluation of this course please click http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM							
This course belongs to the following programme / specialisation	Master Business Research - No specialisation		Transitional Regulation					
	Master Business Research - Operations Research		Transitional Regulation					
	Master Econometrics and Operations Research		Elective Course(s)					
	Master Economic and Financial Research - Econometrics		Year 1 Core Course(s)					
	SBE Non Degree Courses		Master Courses					