Course Descriptions None 2024-2025

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	Stan van Hoesel, Tom van der Zanden For more information:s.vanhoesel@maastrichtuniversity.nl; t.vanderzanden@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	This course is in transition for the master Business Research. See the Master Education and Examination Regulations for more information. 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. PREREQUISITES: Game theory and Optimization (EBC4188)
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	E&OR Electives
Master Economic and Financial Research - Econometrics	Elective Course(s)
Master Economic and Financial Research - Econometrics	Year 1 Core Course(s)
SBE Non Degree Courses	Master Courses