Course Descriptions Master 2022-2023

Course Title	Operations Research Applications
Course Code	EBC4187
ECTS Credits	6,5
Assessment	Whole/Half Grades

Period

Period	Start	End	Mon	Tue	Wed	Thu	Fri
5	17-4-2023	9-6-2023	C				

Level	Advanced
Coordinator	Andre Berger For more information:a.berger@maastrichtuniversity.nl
Language of instruction	English
Goals	* Students learn how to understand and present state-of-the-art research articles. * Students learn how to review academic work of other researchers. * Students learn how to model real-life problems within various optimization frameworks. * Students learn how to adapt, develop, implement and analyse algorithms to real-life problems. * Students learn how to work on a practical project in a team.
Description	PLEASE NOTE THAT THE INFORMATION ABOUT THE TEACHING AND ASSESSMENT METHOD(S) USED IN THIS COURSE IS WITH RESERVATION. A RE-EMERGENCE OF THE CORONAVIRUS AND NEW COUNTERMEASURES BY THE DUTCH GOVERNMENT MIGHT FORCE COORDINATORS TO CHANGE THE TEACHING AND ASSESSMENT METHODS USED. THE MOST UP-TO-DATE INFORMATION ABOUT THE TEACHING/ASSESSMENT METHOD(S) WILL BE AVAILABLE IN THE COURSE SYLLABUS. In this course students will learn how to use previously learned advanced techniques from mathematical programming, combinatorial optimisation, and heuristics and search methodologies to specific classes of real-life applications in areas such as logistics, telecommunication, and supply chains. This will be achieved by studying state-of-the-art research articles and current research presentations. Students will understand, adapt, implement and analyse algorithms from these sources in order to test the validity of the approach to specific problems. Students will also work on a larger practical project in a team to learn about the software development life cycle.
Literature	Various recent research articles.
Prerequisites	* Algorithms and Optimisation (EBC4049) * Advanced Operations Research (EBC4051) * problems and techniques from combinatorial optimisation and complexity theory * programming skills * heuristics * search methodologies
Teaching methods	PBL / Presentation / Assignment / Papers / Groupwork / Research / Skills / Coaching
Assessment methods	Final Paper / Assignment / Computer test / 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 - Operations Research	Year 1 Compulsory Course(s)
Master Econometrics and Operations Research	Elective Course(s)