Course Descriptions None 2026-2027

Course Title	Advanced Operations Research
Course Code	EBC4051
ECTS Credits	6,5
Assessment	Whole/Half Grades

Period

Period	Start	End	Mon	Tue	Wed	Thu	Fri
4	1-2-2027	25-3-2027		X		X	

Level	Advanced
Coordinator	Lissa Melis For more information:lissa.melis@maastrichtuniversity.nl
Language of instruction	English
Goals	Deepen the knowledge on a wide variety of optimization techniques through a detailed study of state-of-the-art academic literature. Students learn to make appropriate design choices in algorithmic development for a broad range of real-life problems. Students can implement their own solution procedure and judge its quality and performance. Students can communicate their results in a professional way and translate numerical results in clear recommendations for the decision makers.
Description	Students learn how to apply state-of-the-art techniques from mathematical programming, combinatorial optimisation, and heuristics and search methodologies to specific classes of problems as well as to real-life applications in these areas. Students will learn how to read state-of-the-art research articles, to understand the technical details, and to give presentations on the subjects.
Literature	Various recent research articles.
Prerequisites	Algorithms and Optimisation (EBC4049); problems and techniques from combinatorial optimisation and complexity theory, programming skills, heuristics and search methodologies.
Transitional Regulations	<ul class="trcohorts"> - Master Business Research - No specialisation [2023-2024 and earlier] - Master Business Research - Operations Research [2023-2024 and earlier] - In 2024-2025 and 2025-2026 education and exam/resit opportunities are offered. - In 2026-2027 exam/resit opportunities are offered. - From 2027-2028 onwards, the course is cancelled. <table><col style="width: 200px;"><col style="width: 120px;"><col style="width: 120px;"><col><thead><tr><th>Academic Year</th><th>Education</th><th>Exam/Resit</th><th>Replacement(s)</th></tr></thead><tbody><tr><td>2024-2025 - 2025-2026</td><td>X</td><td>X</td><td> </td></tr><tr><td>2026-2027</td><td> </td><td>X</td><td> </td></tr><tr><td>2027-2028 onwards</td><td> </td><td> </td><td> </td></tr></tbody></table>
Teaching methods	PBL / Presentation / Lecture / Assignment / Papers / Groupwork / Research / Skills / Coaching
Assessment methods	Final Paper / Attendance / 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 - No specialisation	In transition - Year 2 Methodology Electives
Master Business Research - Operations Research	In transition - Year 1 Compulsory Courses
Master Econometrics and Operations Research	E&OR Electives
Master Economic and Financial Research - Econometrics and Operations Research	Elective Courses
Master Economic and Financial Research - Econometrics and Operations Research	Year 1 Core Courses
SBE Exchange Master	Master Exchange Courses
SBE Non Degree Courses	Master Courses