

Faculty of Engineering and Architecture

Master of Science in Industrial Engineering and Operations Research -- Sustainable Mobility Analytics

Language of instruction: English

Programme version 2

1 General Courses 36 credits

The main subject Sustainable Mobility Analytics in the Master of Science in Industrial Engineering and Operations Research is part of the [EIT Urban Mobility Master School](#). It can only be followed by students as part of a double degree with one of the interuniversity partners, in accordance with the mobility scheme and subject to the requirements of the entry and exit university.

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E004255 Operations Research Models and Methods <i>El-Houssaine Aghezzaf -- Department of Industrial Systems Engineering and Product Design</i>	6		1	A:1	180
2	E005741 Simulation of Stochastic Systems <i>Stijn De Vuyst -- Department of Industrial Systems Engineering and Product Design</i>	6		1	A:1	180
3	E076951 Engineering Economy <i>Sofie Verbrugge -- Department of Information Technology</i>	6		1	A:1	180
4	E004153 Heuristics and Search Methods <i>Sidharta Gautama -- Department of Industrial Systems Engineering and Product Design</i>	3		1	A:2	90
5	E076341 Information Technology for Industrial Engineering <i>Michiel Vlaminck -- Department of Telecommunications and Information Processing</i>	3		1	A:2	90
6	E018321 Algorithmic Programming <i>Pieter Leyman -- Department of Industrial Systems Engineering and Product Design</i>	6		2	A:1	180
7	E004241 Industrial Systems Modelling and Optimization <i>El-Houssaine Aghezzaf -- Department of Industrial Systems Engineering and Product Design</i>	6		2	A:2	180

2 Courses Related to the Main Subject 61 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C003534 Urban Mobility and Logistics <i>Giovanni Circella -- Department of Geography</i>	5		1	A:1	150
2	E084460 Design of Urban Services <i>Sidharta Gautama -- Department of Industrial Systems Engineering and Product Design</i>	6		1	A:2	180
3	F001022 Dare to Venture <i>Johan Verrue -- Department of Marketing, Innovation and Organisation</i>	4		1	A:2	120
4	E084390 Traffic Flow Modelling <i>Dieter Fiems -- Department of Telecommunications and Information Processing</i>	6		1	A:1	180
5	E084440 Summer School on Transportation	3		2	A:1	90
6	E076471 Dare to Start <i>Wouter Haerick -- Department of Information Technology</i>	3		2	A:2	90
7	E084480 Advanced Topics in Traffic and Logistics <i>Ivana Semajski -- Department of Industrial Systems Engineering and Product Design</i>	4		2	A:2	120
8	E099300 Industry Internship Engineering and Architecture [en, nl] <i>Patrick Segers -- Department of Electronics and Information Systems</i>	6		2	A:J	180

2.1 Master's Dissertation 24 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E091103 Master's Dissertation	24		2	B:J	720

3 Courses Related to the Main Subject

Students subscribe to the courses from one of the tracks below, in accordance with the mobility scheme and subject to the

3.1 Track Data Analytics

5 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	C004177 Spatiotemporal Analysis and Modelling <i>Nico Van de Weghe -- Department of Geography</i>	5		2	A:1	150

3.2 Track Urban Mobility Transitions

7 credits

Nr	Course	CRDT	Ref	MT1	Session	Study
1	E084710 Planning Theory: Contemporary Challenges	4		1	A:2	120
2	E086621 Planning and Transition: Mobility <i>Koos Franssen -- Department of Civil Engineering</i>	3		2	A:1	90

4 Elective Courses

The student subscribes to elective courses from the study programme of the Master of Science in Industrial Engineering and Operations Research, in accordance with the mobility schedule and the conditions of the entry and exit university, under the double degree agreement:

- 18 credit units in the Track Data Analytics
- 16 credit units in the Track Urban Mobility Transitions

Teaching

When a course is not taught (solely) in the programme's language of instruction, the effectively used languages are indicated in square brackets following the course name, using the following ISO codes:

bg: Bulgarian	de: German	es: Spanish	ja: Japanese	pl: Polish	sh: Croatian/Serbian	zh: Chinese
cs: Czech	el: Greek	fr: French	nl: Dutch	pt: Portuguese	sl: Slovene	
da: Danish	en: English	it: Italian	no: Norwegian	ru: Russian	sv: Swedish	

Semester

Semesters are indicated by their number (1 or 2); semester 3 represents the summer period and J indicates a course spanning semesters 1 and 2. When a capital letter precedes a semester number, the course has multiple offerings. The letter indicates the offering concerned.

When a semester is shown in brackets, the course is not offered this year in the specific offering.

The offering frequency and first year of offering are indicated by the following codes:

a: bi-annually	c: annually, from 2026-2027	f: annually, from 2027-2028	i: annually, from 2028-2029
b: tri-annually	d: bi-annually, from 2026-2027	g: bi-annually, from 2027-2028	j: bi-annually, from 2028-2029
	e: tri-annually, from 2026-2027	h: tri-annually, from 2027-2028	k: tri-annually, from 2028-2029