

Sustainable Urban Mobility Transitions Track

Objectives:

The Sustainable Urban Mobility Transitions (SUMT) program is a Master's degree program within the EIT Urban Mobility Master School.

The Master School is a highly prestigious Urban Mobility Engineering and Science education provider on advanced level with a business minor focused on Innovation and Entrepreneurship (I&E). These students will be an elite group of forthcoming Urban Mobility planners, engineers, operators, innovators, and any other relevant professionals

The program on Sustainable Urban Mobility Transitions (SUMT) focuses on the holistic approach in study, design, development and evaluation of sustainable, inclusive, resilience urban environment.

This track can also be studied fully at UPC-BarcelonaTech, outside the EIT Urban Mobility Master School.




YEAR 1 (UPC as entry university)

During the 1st year, students must enrol at least 20 ECTS from the Innovation & Entrepreneurship group, and at least 10 ECTS from the Relevant Elective group belonging to the track of choice.

Fall courses	ECTS	Segon quadrimestre	ECTS
Innovation & entrepreneurship elective courses	10	Livable cities & urban mobility	5
Introduction to supply chain	5	Travel demand & behavioral modeling	5
Mobility modeling	5	Relevant elective courses	10
Operation & management of transport systems	5	Innovation & entrepreneurship elective courses	10
Data analysis in transport systems	5		

Course	ECTS
Summer School (June-July)*	3

*Only available for EIT Urban Mobility Master

	Mandatory courses
	Innovation & entrepreneurship elective courses
	Relevant elective courses

YEAR 2 (UPC as exit university)

During the second year, students must choose 2 to 3 elective courses from the Innovation & Entrepreneurship group (at least one of them must be worth 5 ECTS) and 3 to 4 from the Relevant group, available in the specialty they have already chosen. These elective courses have to amount to the 26 ECTS, necessary to pass the year.

Fall courses	ECTS	Segon quadrimestre	ECTS
Product or service development project	4	Master's Thesis	30
Innovation & entrepreneurship elective courses (1 of at least 5 ECTS)	6-11		
Relevant elective courses	15-20		

ELECTIVES

Relevant Elective Courses	ECTS	Innovation & Entrepreneurship Elective Courses	ECTS
Year 1		Year 1	
Optimization models for transportation networks	5	Innovation & entrepreneurship for world challenges (Q1)	5
Railway transport	5	Decision making & economy in urban mobility (Q1)	5
Public transport	5	Project based on an innovation challenge (Q2)	10
Transportation system planning & management	5	Year 2	
Mobility & development	5	Management & creation of innovative companies in architecture	3
Sustainable mobility	5	Viability of business project	6
Traffic simulation models	5	Technology asset management	5
Year 2		Case studies in urban mobility	5
Transport of goods	5		
Smart mobility (SMART)	5		
Airport management	5		
Port management & maritime transport	5		
Traffic	5		
Vehicle routing models	5		

Smart Mobility Data Science & Analytics track

Objectives:

The Smart Mobility Data Science & Analytics track is a Master's degree program within the EIT Urban Mobility Master School.

The Master School is a highly prestigious Urban Mobility Engineering and Science education provider on advanced level with a business minor focused on Innovation and Entrepreneurship (I&E). These students will be an elite group of forthcoming Urban Mobility planners, engineers, operators, innovators, and any other relevant professionals

This track can also be studied fully at UPC-BarcelonaTech, outside the EIT Urban Mobility Master School.

YEAR 1 (UPC as entry university)

During the 1st year, students must enrol at least 20 ECTS from the Innovation & Entrepreneurship group, and at least 10 ECTS from the Relevant Elective group belonging to the track of choice.

Fall courses	ECTS	Segon quadrimestre	ECTS
Innovation & entrepreneurship elective courses	10	Livable cities & urban mobility	5
Introduction to supply chain	5	Travel demand & behavioral modeling	5
Mobility modeling	5	Relevant elective courses	10
Operation & management of transport systems	5	Innovation & entrepreneurship elective courses	10
Data analysis in transport systems	5		

Course	ECTS
Summer School (June-July)*	3

*Only available for EIT Urban Mobility Master

 Mandatory courses
 Innovation & entrepreneurship elective courses
 Relevant elective courses

YEAR 2 (UPC as exit university)

During the second year, students must choose 2 to 3 elective courses from the Innovation & Entrepreneurship group (at least one of them must be worth 5 ECTS) and 3 to 4 from the Relevant group, available in the speciality they have already chosen. These elective courses have to amount to the 26 ECTS, necessary to pass the year.

Fall courses	ECTS	Segon quadrimestre	ECTS
Product or service development project	4	Master's Thesis	30
Innovation & entrepreneurship elective courses (1 of at least 5 ECTS)	6-11		
Relevant elective courses	15-20		

ELECTIVES

Relevant Elective Courses	ECTS	Innovation & Entrepreneurship Elective Courses	ECTS
Year 1		Year 1	
Data management for transportation	4	Innovation & entrepreneurship for world challenges (Q1)	5
Multivariate analysis	6	Decision making & economy in urban mobility (Q1)	5
Year 2		Project based on an innovation challenge (Q2)	10
Semantic data management	6	Year 2	
Algorithmics for data mining	6	Management & creation of innovative companies in architecture	3
Information retrieval	6	Viability of business project	6
Machine learning	6	Technology asset management	5
Traffic simulation models	5	Case studies in urban mobility	5
Big data management	6		
Data management for transport Apps	3		