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

Course	ECTS
Summer School (June-July)*	3

*Only available for the 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 at least 7 ECTS (EIT students) or at least 10 ECTS (local students) from the Innovation & Entrepreneurship group and 20 ECTS from the Relevant group, available in the specialty they have already chosen. These elective courses have to amount to the 27 ECTS, necessary to pass the year.

Fall semester	ECTS	Spring semester	ECTS
Innovation & entrepreneurship elective courses	At least 7 (EIT) At least 10 (local)	Master's Thesis	30
Relevant elective courses	15-20		

ELECTIVES

Relevant elective courses	ECTS	Innovation & entrepreneurship elective courses	ECTS
1st year (Spring semester)		**1st year**	
Optimization models for transportation networks	5	**Fall semester**	
Railway transport	5	Innovation & entrepreneurship for world challenges	5
Public transport	5	Decision making & economy in urban mobility	5
Transportation system planning & management	5	**Spring semester**	
Mobility & development	5	Project based on an innovation challenge	10
Sustainable mobility	5	**2nd year**	
Traffic simulation models	5	**Fall semester**	
2nd year (Fall semester)		Management & creation of innovative companies in architecture	3
Transport of goods	5	Technology asset management	5
Smart mobility (SMART)	5	Case studies in urban mobility	5
Airport management	5	Product or service development project	4
Port management & maritime transport	5	**Spring semester**	
Traffic	5	Viability of business project	6
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 semester	ECTS	Spring semester	ECTS
Innovation & entrepreneurship elective courses	10	Livable cities & urban mobility	5
Mobility modeling	5	Travel demand & behavioral modeling	5
Operation & management of transport systems	5	Relevant elective courses	10
Data analysis in transport systems	5	Innovation & entrepreneurship elective courses	10
Introduction to supply chain	5		

Course	ECTS
Summer School (June-July)*	3

*Only available for the 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 at least 7 ECTS (EIT students) or at least 10 ECTS (local students) from the Innovation & Entrepreneurship group and 20 ECTS from the Relevant group, available in the specialty they have already chosen. These elective courses have to amount to the 27 ECTS, necessary to pass the year.

Fall semester	ECTS	Spring semester	ECTS
Innovation & entrepreneurship elective courses	At least 7 (EIT) At least 10 (local)	Master's Thesis	30
Relevant elective courses	15-20		

ELECTIVES

Relevant elective courses	ECTS
1st year (Spring semester)	
Data management for transportation	4
Multivariate analysis	6
2nd year (Fall semester)	
For more information contact Prof. Lidia Montero	

Innovation & entrepreneurship elective courses	ECTS
1st year	
Fall semester	
Innovation & entrepreneurship for world challenges	5
Decision making & economy in urban mobility	5
Spring semester	
Project based on an innovation challenge	10
2nd year	
Fall semester	
Management & creation of innovative companies in architecture	3
Technology asset management	5
Case studies in urban mobility	5
Product or service development project	4
Spring semester	
Viability of business project	6