

ANNEX 1

DEGREE PROGRAM DIDACTIC REGULATIONS TRANSPORTATION ENGINEERING AND MOBILITY CLASS LM-23

School: Polytechnic and Basic Sciences

Department: Civil, Building and Environmental Engineering

Didactic Regulations in force since the academic year 2024 -2025

STUDY PLAN

KEY

Type of Educational Activity (TAF):

B = Characterising
C = Related or Supplementary
D = At the student's choice
E = Final examination and language knowledge
F = Further training activities

Disciplinary areas:

B1 = Infrastructures
B2 = Transportation Networks and Mobility
B3 = Positioning and navigation
C1 = Measures, analyses, decision support
C2 = Enabling ICT and industrial technologies

Year I									
Title Course	SSD	Module	ETCs	hours	Type Activities (lectures, workshops, etc.)	Course Modalities (in-person, by distance)	TAF	Disciplinary area	Mandatory/ optional
Language Skills		single	3		MOOC – Fed. Web L.	By Distance	F		Mandatory
Positioning and location-based services	ICAR/06	single	9	72	Lectures	By Distance	B	B3	Mandatory
Electric Systems in Transportation	ING-IND/33	single	9	72	Lectures	By Distance	C	C2	Mandatory
Systems and Control Fundamentals	ING-INF/04	single	9	72	Lectures	By Distance	C	C2	Mandatory
Road Safety	ICAR/04	single	9	72	Lectures	In-person	B	B1	Mandatory
Machine Learning and Big Data	ING-INF/05	single	9	72	Lectures	In-person	C	C1	Mandatory
Modeling Transportation and Mobility	ICAR/05	single	9	72	Lectures	In-person	B	B2	Mandatory
Lab		single	2		Workshops / Labs	In-person	F		Mandatory

Year II									
Title Course	SSD	Module	ETCS	h	Type Activities (lectures, workshops, etc.)	Course Modalities (in- person, by distance)	TAF	Disciplinary area	Mandatory/ optional
Digital maps and geological 3D models	GEO/05	single	9	72	Lectures	In-person	C	C1	1 choice out of 3 options
Safety of excavations for infrastructures	ICAR/07	single		72		In-person	C		
Structural Health Monitoring for Infrastructures	ICAR/09	single		72		In-person	C		
Sustainable road materials	ICAR/04	single	18	72	Lectures	In-person	B	B1 / B2	2 choices out of 6 options
Intelligent Transportation Systems	ICAR/05	single		72		In-person	B		
Transport Planning and Appraisal	ICAR/05	single		72		In-person	B		
Traffic Control	ICAR/05	single		72		In-person	B		
Railway and Transit services	ICAR/05	single		72		In-person	B		
Freight and logistics	ICAR/05	single		72		In-person	B		
Autonomous choice (elective subjects)			15			In-person	D		Mandatory
Lab / Internship			7		Lab or internship activities	In-person	F		Mandatory
MSC Thesis			12			In-person	E		Mandatory

Elective subjects automatically recognized as consistent with the training objectives of the degree Program

(within the MSc-TEAM study Program)

Title Course	SSD	Module	ETCS
Energy Management for Transportation	ING-IND/32	single	9
Real-time Systems	ING-INF/05	single	9
Unmanned Aircraft Systems for Transportation and Mobility	ING-IND/05 + ICAR/05	double	6
Resilience of Geotechnical Systems	ICAR/07	single	6
Resilience of Transportation Systems	ICAR/05	single	6
Testing and Validation of automated road vehicles	ICAR/05	single	9

(available from outside of the MSc-TEAM Study Program)

Title Course	SSD	Module	ETCS	From Study Program
Statistical Lab for Industrial Data Analysis	SECS-S/02	single	9	INGEGNERIA GESTIONALE
Infrastructure-Building Information Modeling	ICAR/04	single	9	INGEGNERIA DEI SISTEMI IDRAULICI E DI TRASPORTO

List of propaedeuticities:

Course	Propedeutic Subjects
Intelligent Transportation Systems	Modeling Transportation and Mobility
Transport Planning and Appraisal	Modeling Transportation and Mobility
Traffic Control	Modeling Transportation and Mobility
Railway and Transit services	Modeling Transportation and Mobility
Freight and logistics	Modeling Transportation and Mobility
Energy Management for Transportation	Electric Systems in Transportation