

BARCELONA SCHOOL OF CIVIL ENGINEERING (UPC) - HEC PARIS

Master in Civil Engineering: track for students with BSc Civil Engineering background

SPECIALIZATION IN TRANSPORT ENGINEERING

1st year UPC Student must enroll 60 ECTS at Escola de Camins
 30 ECTS M2. First semester. Mandatory Courses: Computational eng, Structural Eng., Water Eng., Ground Eng., Transportation management and planning
 10 ECTS M3. Specialization in Transport Eng. Mandatory specialization subjects taught in the second semester: HIGH-SPEED LINE MANAGEMENT and ROAD NETWORK PLANNING AND COOPERATION
 15-20 ECTS M3. Specialization in Transport Eng. Electives from other specializations.
 0-15 ECTS M1. Professional stage (max. 15 ECTS to enroll in UPC)

2nd year HEC PARIS Course in general Management - 60 ECTS (only displayed subjects to be recognized at UPC)
 (optional gap year)

3rd year HEC PARIS Specialization Phase. Management. 40 ECTS in courses + 20 ECTS Research paper, 60 ECTS in total (only displayed subjects enrolled at UPC)
 0-30 ECTS M Professional stage. Student must enroll (30- X) ECTS, where X is the number of credits of Professional stage done at UPC

Site university	Semester	University where course is undertaken	Course	Academic track Escola de Camins		ECTS at host institution	First year. Common track	Business Performance Management	Company Law	Corporate Finance	Decision and Data Modeling	Financial Accounting	Financial Economics	Financial Markets	Leading Organisations	Marketing	Methods of Cost Analysis	Operations & Supply Chain Management	Statistics	Strategy	Electives	60	Second year. Specialization	40	20	
				3	3																					6
UPC	Q1 (30 ECTS Mandatory courses)	UPC	Computational Engineering	6																						
		UPC	Structural Engineering	6																						
		UPC	Water Engineering	6																						
		UPC	Geomechanical and Geotechnical Engineering	6																						
		UPC	Planning and Management of Transportation	6																						
UPC	Q2 (Mandatory/electives of especialization)	UPC	High-Speed Rail Line Management (ME)	5																						
		UPC	Road Network Planning and Cooperation (ME)	5																						
		UPC	Elective 1	5																						
		UPC	Elective 2	5																						
		UPC	Elective 3	5																						
UPC	Elective 4 (optional)	5																								
HEC/UPC	Q2 or Q3	UPC or HEC	Electives or Professional stage (max 15 ECTS at UPC)	15	15			3							3					3	6		15			
HEC	Q3-Q4 (stage and Mandatory/electives of especialization)	HEC	Electives or Professional stage	15	15				6							6	3						15			
		HEC	Urban Planning and Urban Service Infrastructure (ME)	5	5						2,5										2,5					
HEC	Q5-Q6 (TFM)	HEC	Urban Mobility (ME)	5	5					0,5								4,5								
HEC			Master Thesis (to be defended at UPC)	25	20																				20	
TOTAL				60	60																					

1) First year of MIM (Master in Management: 60 ECTS general courses). Only displayed subjects to be recognized at UPC
 2) Second year of MIM (Master in Management: 40 ECTS in courses + 20 ECTS Research paper, 60 ECTS in total). Only displayed subjects enrolled at UPC

Mandatory of especialization (ME)

The itinerary includes "other related disciplines" track as alternative to professional stage (subjects as displayed in the table).

BARCELONA SCHOOL OF CIVIL ENGINEERING (UPC) - HEC PARIS

Master in Civil Engineering: track for students with BSc Public Works Engineering background

SPECIALIZATION IN TRANSPORTATION ENGINEERING

1st year UPC Student must enroll 60 ECTS at Escola de Camins
 30 ECTS Further training in science and technology
 30 ECTS Application of advanced science and technology

2nd year HEC PARIS Course in general Management - 60 ECTS (**only displayed subjects to be recognized at UPC**)
 (optional gap year)

3rd year HEC PARIS Specialization Phase. Management. 40 ECTS in courses + 20 ECTS Research paper, 60 ECTS in total (**only displayed subjects enrolled at UPC**)

Site university	Semester	University where course is undertaken	Course	Academic track	ECTS at host institution	First year. Common track													Optional gap year	Second year. Specialization										20								
				Escola de Camins		Business Performance Management	Company Law	Corporate Finance	Decision and Data Modeling	Financial Accounting	Financial Economics	Financial Markets	Leading Organizations	Marketing	Methods of Cost Analysis	Operations & Supply Chain Management	Statistics	Strategy	Electives	OPTIONAL GAP YEAR	Strategic Management	International Finance (Double Degree options: Tsinghua and University of Wisconsin)	Marketing	Quantitative Economics and Finance (joint program with Ecole Polytechnique, ENSAE, ENS Cachan and Paris Sud University)	Managerial and Financial Economics (exchange opportunities with Stockholm School of Economics, Luigi Bocconi University and St.Gallen University)	Corporate Financial Management (exchange opportunities with St.Gallen University, Stockholm School of Economics, Copenhagen Business School, London School of Economics, Bocconi University and Vienna University of Economics and Business)	Entrepreneurship (requires French proficiency, also called "Majeure Entrepreneurs")	Digital (requires French proficiency)	Project Management (requires French proficiency, also called "Majeure Management de Grands Projets")		Research paper							
UPC	Q1 (30 ECTS OBS-mandatory courses)	UPC	Mechanics of Continua	9	0																																	
		UPC	Numerical Modelling	9	0																																	
		UPC	Structural Analysis	7,5	0																																	
		UPC	Hydraulic Infrastructure	4,5	0																																	
UPC	Q2 (30 ECTS OBS-mandatory courses)	UPC	Computational Engineering	6	0																																	
		UPC	Structural Engineering	6	0																																	
		UPC	Water Engineering	6	0																																	
		UPC	Geomechanical and Geotechnical Engineering	6	0																																	
		UPC	Planning and Management of Transportation	6	0																																	
HEC ¹	Q3-Q4 (Mandatory and electives of especialization)	HEC	Electives	15	20																															20		
		HEC	Road Network Planning and Operation (ME)	5	5																																	
		HEC	High-Speed Rail Line Management (ME)	5	5																	2		3														
		HEC	Urban Planning and Urban Service Infrastructure (ME)	5	5																																2,5	
		HEC	Urban Mobility (ME)	5	5																																4,5	
HEC ²	Q5-Q6 (TFM)	HEC	Master Thesis (to be defended at UPC)	25	20																																	
Total				60	60																																	

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