

CIVIL AND STRUCTURAL ENGINEERING (GCC, with VET) TRANSPORT, MOBILITY & INFRASTRUCTURES TRACK - 2024 2025		
YEAR 2 (M1) OF ENPC MSc IN ENGINEERING		ECTS
ENGINEER INTERNSHIP *		2,5
COACHING AND CAREER GUIDANCE (AOP2A)		0,5
INCEPTION WEEKS (mandatory)		5
September 2024 : 2nd to 6th	Introduction to drawings and computer graphics (Rhino, Photoshop) 1 - O2DMO**	1
September 2024 : 16th to 20th	Introduction to construction materials - O2IMC	1
November 2024 : 18th to 22nd	Week "Construction and biodiversity" - TRENC	1
February 2025 : 3rd to 7th	Week "Engineering geology : principles and practice" - O2GEO	1
March 31st to April 4th 2025	Inter-department week - O2DPT	1
CORE CURRICULUM (mandatory)		9,5
September 2024 : 9th to 13th	Business management - O2GE1	1,5
S3	Numerical statistics and data analysis - STNUM (IMI)	2
S4	Introduction to law - DROA/DROE	3
S3 or S4	Course to be chosen in the Humanities and Social Sciences Department (SHS)	3
DEPARTMENT MANDATORY COURSES		22
S3	Rock mechanics - MECSR	3
S3	Structural mechanics (elastic structures) - MECST	3
S3	Traffic engineering - ITRA 1&2 (VET)	3,5
S3	Operations research - REOP (GI)	3
S4	Mechanics of elastic structures 2 - MECS2	1,5
S4	Design of Geotechnical Works (Theory) - APGE1	3
S4	Applied Design of Geotechnical Works - EXPGE	3
S4	Econometrics of discrete choices - ECCHD (SEGF)	2
S4 - April 11th	Accessibility Day - JPACC	0
DEPARTMENT MANDATORY COURSES TO BE CHOSEN IN A LIST 1 course minimum to be chosen in the list below		
S3	Methods for territorial analysis - MASYT (VET)	4,5
S4	Department seminar - VETSD (VET)	6
DEPARTMENT MANDATORY COURSES TO BE CHOSEN IN A LIST 2 courses minimum to be chosen in the list below		
S4	Structural design (theoretical part) - APST1	3
S4	Dynamics of Structures and Constructions - DYSTR	3
S4	Local public finance and policies - FILOC (VET)	3
S4	Transportation economics - ECOPT (VET)	2
ELECTIVE COURSES Courses to be chosen in the list below or among the whole school catalogue, taking into account their compatibility with mandatory courses		
S3	Built works: from project to construction - OUVGC	3
S3	Urban transport management - TRCUR (VET)	1,5
S3	Introduction to transportation safety and security - ISSTR (VET)	2
S4	Statistics : practice of learning methods - PRAMA (IMI)	2
S4	Plasticity, limit analysis and yield design - PLAST	3
S3 & S4	SPORT (mandatory)	1
S3 & S4	LANGUAGES (mandatory)	7,5
TOTAL YEAR 2 (M1)		60

* The ects of engineer internship will be acquired at the beginning of year 3 (M2)

** This code is the course's code in our online catalogue (<http://gede.enpc.fr/Programme/Default.aspx?Langue=en>)

Letters in brackets stand for the department (other than GCC) which delivers the course :

GMM : Génie Mécanique et Matériaux - Mechanical Engineering and Materials Science
 GI : Génie Industriel - Industrial engineering
 IMI : Ingénierie Mathématique et Informatiques - Applied Mathematics and Computer science
 SEGF : Sciences économiques, Gestion, Finance - Economics, Management, Finance
 VET : Ville Environnement Transport - City, Environment, Transp+B26ortation
 SHS - Sciences Humaines et Sociales - Humanities and Social Sciences

CAUTION

You must validate at least **48,5 ects** in scientific courses (excl.
 Internship, AOP2A, languages and sport)
 to validate your Year 2 (M1)

CIVIL AND STRUCTURAL ENGINEERING (GCC, with VET) TRANSPORT, MOBILITY & INFRASTRUCTURES TRACK - 2024 2025		
YEAR 3 (M2) OF ENPC MSc IN ENGINEERING		ECTS
September 2024 : 5th & 6th	FEEDBACK ON ENGINEER INTERNSHIP - REX* (only for long internships) - 03STA	1,5
	INCEPTION WEEKS (mandatory)	3
September 2024 : 9th to 13th	Week dedicated to Innovative materials in concrete construction - 03ATB** OR Masonry wall : conception, construction and deconstruction - 03ADL OR Building freeforms - 03ATC OR Design of an arch - 03ATT OR Construire en terre - 03ATE	1
September 2024 : 16th to 20th	Future construction technologies : Techniques and Building Information Modeling (BIM) - CHBIM	1
November 2024 : 18th to 22nd	Department week OR ATHENS week - SEP	1
DEPARTMENT MANDATORY COURSES		16,5
S5	Teamwork : Bridges - GCPPO OR Highway - GCPRO OR Marine energy project - EXPHY	7,5
S5	+ Individual project	
S5	Analysis and design of transportation systems - ACOST (VET)	1,5
S5	Reinforced concrete - BAEP 1 (GMM)	1,5
S5	Challenges, sciences and tools for the transition of cities and territories - DSOTV (VET)	3
S5	Life cycle analysis (ACV) - Theory (ANCYV) + Application (ANCGC)	3
DEPARTMENT MANDATORY COURSES 2 courses minimum to be chosen in the list below		
S5	From infrastructure to urban project - CSIUR (VET)	3
S5	Methods for territorial analysis - MASYT (VET)	4,5
S5	Civil engineering project management and economics - GEPCO	3
S5	Finite elements for civil engineering - CALEF	3
ELECTIVE COURSES 1 course to be chosen in the list below or in the whole school catalogue, taking into account their compatibility with GCC department mandatory courses		3
S5	Wooden structures - CASBO	3
S5	Steel construction - CASME	3
S5	Advanced geotechnics - GEOME	3
S5	Advanced construction dynamics - DYNAV	3
S5	Bridge design and construction - COPO1	3
S5	Structures, energy and risks - CORI1	3
S5	Trafic modelization and regulation for public transports in urban areas - SRTTC (VET)	3
S5	Microeconomic Modelization for the Urban Planning - MMAUR (VET)	3
S5	LANGUAGES (mandatory)	4,5
S6	END-OF-STUDY PROJECT (17 weeks at least)	30
TOTAL YEAR 3 (M2)		60

* The 1,5 ects obtained during Feedback of Engineer internship are excluded from the required 25,5 ects

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Scientific courses
excluding sport, languages and REX
25,5 ects minimum