

CIVIL AND STRUCTURAL ENGINEERING (GCC) CLASSIC 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		27
S3	Rock mechanics - MECSR	3
S3	Structural mechanics (elastic structures) - MECST	3
S3	Fluid mechanics for incompressible flows - MECA 1 & 2	3
S3	Building materials and engineering design - CCMAT	3
S3	Introduction to drawings and computer graphics (Rhino, Photoshop) 2 - IDSMO	3
S3	Built works: from project to construction - OUVGC	3
S4	Mechanics of elastic structures 2 - MECS2	1,5
S4	Thermics - TERGC	1,5
S4	Plasticity, limit analysis and yield design - PLAST	3
S4	Dynamics of structures and constructions - DYSTR	3
S4 - April 11th	Accessibility Day - JPACC	0
DEPARTMENT MANDATORY COURSES TO BE CHOSEN IN A LIST Please choose 1 couple of theoretical/application courses among the 2 couples below		6
S4	Structural design (Theoretical part + application) - APST1 & EXPST	3+3
S4	Design of geotechnical structures (theoretical part + application) - APGE & EXPGE	3+3
ELECTIVE COURSES Course to be chosen among the whole school catalogue, including those proposed by GCC department in the list below. You can choose the theoretical part of "Structural design" or "Design of geotechnical structures" if not chosen as department mandatory couple		1 (minimum)
S4	Acoustics - ACOUS	1,5
S4	Building renovation project - REHAB	3
S4	Statistics : practice of learning methods - PRAMA (IMI)	2
S4	Numerical simulation of aeraulics and air quality in urban areas - SATUR (GMM)	1,5
S4	Energy production engineering - INRGY (GMM)	1,5
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, Transportation
 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) DATA SCIENCE 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	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 (to be chosen on a list) 3 courses (9 ects as a minimum) to be chosen in the list below and distributed over the 2 groups : materials and advanced		9
	Materials	
S5	Reinforced and prestressed concrete - BAEP 1 & 2 (GMM)	3
S5	Wooden structures - CASBO	3
S5	Steel construction - CASME	3
	Advanced courses	
S5	Advanced construction dynamics - DYNAV	3
S5	Advanced structural design - COAST	3
S5	Geomechanics and advanced geotechnics - GEOME	3
MANDATORY PROJECT		7,5
S5	Data science project - GCDAT	7,5
MANDATORY COURSES FROM THE DATA MASTER PROGRAMME		13
S5	Machine learning and applications - MSAMA (IMI)	6
S5	Machine learning Operation Research - ROAPA (GI)	2
S5	Deep Learning - DEEPL (IMI)	2
S5	AI in human-machine collaboration - IACHM (GI)	3
ELECTIVE COURSES 1 course to be chosen, on a voluntary basis, among the courses proposed by the department (see below) or among the whole school catalogue, taking into account their compatibility with department mandatory courses		
S5	Civil engineering project management and economics - GEPCO	3
S5	Introduction to Artificial vision (offered by ENS Ulm)	3
S5	Bridge design and construction - COPO1	3
S5	Systems engineering - INSYS (GI)	2
S5	LANGUAGES (mandatory)	4,5
S6	END-OF-STUDY PROJECT (17 weeks at least)	30
TOTAL YEAR 3 (M2)		68,5

* 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 languages and REX
25,5 ects minimum