MECHANICAL ENGINEERING AND MATERIALS SCIENCE (GMM)
ENERGY TRACK - 2026 2027

YEAR 2 (M1) OF ENPC MSc IN ENGINEERING

				ECTS
S7 (Fall)	**DEPARTMENT INCEPTION WEEKS (mandatory)**		**3**	**30**
	Maker week	O2SEM[1]	1	
	Department week	O2GMM	0,5	
	ATHENS week	SEP	1,5	
	SCHOOL CORE CURRICULUM (mandatory)		**9**	
	Languages (3 modules for international students)		2	
	Sport		0,5	
	Professional support and guidance	AOP2A	0,5	
	Life cycle analysis - GI[2]	ACV2A	1,5	
	1 course to be chosen in our SHS department - SHS		3	
	Numerical statistics and data analysis - IMI	STNUM	1,5	
	ENERGY TRACK CORE CURRICULUM		**9**	
	Fluid mechanics for incompressible flows 1 - GCC	MECA 1	1,5	
	Fluid mechanics for incompressible flows 2 - GCC	MECA 2	1,5	
	Economics of environment, energy and sustainable dvt - SEGF	ECENV	3	
	Energy : issues & demand-side management - VET	ENERG	3	
	GMM CORE CURRICULUM		**3**	
	Structural mechanics	MECST	3	
	ELECTIVE COURSES TO BE CHOSEN ON A LIST [3]		**6**	
	Department project Design/Modeling	GMMP1	1,5	
	Finite elements modeling with Abaqus	ABAQU	3	
	Environmental and industrial risks - VET	RENIN	3	
	Mechanics of composite materials	MATCO	3	
	Mechanical behaviour of materials	PMEMA	3	
	Heterogeneous materials and structures	MAHET	3	
	Computer-aided design with CATIA	CATIA	1,5	
S8 (Spring)	**DEPARTMENT INCEPTION WEEKS (mandatory)**		**1,5**	**30**
	Design week [O2SCO] OR Hydrogen week [M1EH2] - VET		1,5	
	SCHOOL CORE CURRICULUM (mandatory)		**12**	
	Languages (3 modules for international students)		2	
	Sport		0,5	
	Psychosocial risks		0,5	
	Foresight and uncertainty	PR1CE	1,5	
	Introduction to law	DROA / DROE	3	
	Applications of Machine Learning - IMI	PRAMA	1,5	
	Engineer Internship (short or long)		3	
	ENERGY TRACK CORE CURRICULUM		**7,5**	
	Energy production engineering	INRGY	1,5	
	Data and energy - VET	M1EDE	3	
	Corporate Finance 2 - SEGF	STRA2		
	OR	OR	3	
	Markets, institutions and common goods - SEGF	ECOPU		
	ELECTIVE COURSES TO BE CHOSEN ON A LIST [3]		**9**	
	Department project Design/Modeling	GMMP2	4,5	
	Industrial decarbonation - GI	DECRB	3	
	Knowledge of materials and their production	CONME	3	
	Compressible flows and thermal transfer	AEROD	3	
	Dynamics of Structures and Constructions - GCC	DYSTR	3	
	Introduction to solid state physics	SOLID	3	
	Smooth particle hydrodynamics	SPHYD	1,5	
	Numerical simulation of aeraulics and air quality in urban areas	SATUR	1,5	
	Applied project for Machine Learning - IMI	PROMA	1,5	

[1] This code is the course's code in our online catalogue (https://gede.enpc.fr/Programme/Default.aspx?Langue=en)

[2] These letters stand for the department (other than GMM) which delivers the course :

GCC : Génie Civil et Construction - Civil and Structural Engineering
GI : Génie Industriel - Industrial engineering
IMI : Ingénierie Mathématique et Informatique - 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

[3] Courses to be chosen in the list below so as to reach 30 ECTS for the whole semester