

MECHANICAL ENGINEERING AND MATERIALS SCIENCE (GMM) MECHANICAL MODELING 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)		7,5	
	Languages (3 modules for international students)		2	
	Sport		0,5	
	Professional support and guidance	AOP2A	0,5	
	1 course to be chosen in our SHS department - SHS ⁽²⁾		3	
	Numerical statistics and data analysis - IMI	STNUM	1,5	
	MODELING TRACK CORE CURRICULUM		16,5	
	Structural mechanics	MECST	3	
	Fluid mechanics for incompressible flows 1 - GCC	MECA1	1,5	
	Computer-aided design with CATIA	CATIA	1,5	
	Finite element modeling with Abaqus	ABAQU	3	
	Heterogeneous materials and structures	MAHET	3	
	Mechanical behaviour of materials	PMEMA	3	
	Department project modeling track	GMMP1	1,5	
ELECTIVE COURSES TO BE CHOSEN ON A LIST ⁽³⁾		3		
Mechanics of composite materials	MATCO	3		
CFAO with CATIA Part 2	CATI1	1,5		
Fluid mechanics for incompressible flows 2 - GCC	MECA2	1,5		

S8 (Spring)	DEPARTMENT INCEPTION WEEK (mandatory)		1,5	30
	Innovation and Design week	O2SCO	1,5	
	SCHOOL CORE CURRICULUM (mandatory)		10,5	
	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	
	Engineer Internship (short or long)		3	
	MODELING TRACK CORE CURRICULUM		13,5	
	Sustainable engineering design	COECO	3	
	Statistical learning for mechanics	MLMEC	3	
	Introduction to physics of solid state	SOLID	3	
	Department project S4	GMMP2	4,5	
	ELECTIVE COURSES TO BE CHOSEN ON A LIST ⁽³⁾		4,5	
	Courses from other departments		X	
	Smoothed particle hydrodynamics	SPHYD	1,5	
	Numerical simulation of aerodynamics and air quality in urban areas	SATUR	1,5	
Dynamics of Structures and Constructions - GCC	DYSTR	3		
Compressible flows and thermal transfer	AEROD	3		
Knowledge of materials and their production	CONME	3		
Energy production engineering	INRGY	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⁾ 1 course minimum of your choice, chosen in the list below, so as to reach 30 ECTS for the whole semester