## **Coefficients and ECTS Credits**

5<sup>th</sup> Term, First year of the Engineering master degree 2023 - 2024

## **Coefficients and ECTS Credits** 6<sup>th</sup> Term, First year of the Engineering master degree 2023 - 2024

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			lectures and	Coeff.	Credits	1			Hours of lectures and	Coeff.	Credits
	Curriculum unit	Courses	tutorials	S5	S5		Curriculum unit	Courses	tutoriais	S6	S6
ı	THEORETICAL, GENERAL AND INORGANIC CHEMISTRY (R. Gautier)	Atomistic and chemical bonding	28 + 6	2,5	7		GENERAL, INORGANIC AND ANALYTICAL CHEMISTRY (D. Hauchard)	Thermodynamics	12	1	
		Molecular symmetry	20 + 4	2				Nuclear chemistry	12	1	
		Ternary phase diagrams	16 + 4	1,5		VI		Crystallography & crystallochemistry of materials.	16	1,5	5
		Inorganic chemistry Lab I	21	1				Quantitative analysis	12	1	
II	ANALYTICAL CHEMISTRY AND PHYSICO- CHEMISTRY (Y. Trolez)	Chromatography	12	1			. ,	Electrochemistry Lab	28	1,5	
		Chemical kinetics and heteregenous catalysis	12	1			ANALYSIS AND CHARACTERIZATION OF MATTER (L. Lemiègre)	Spectroscopy and mass spectrometry	32h40	2,5	
		Complexation and chemistry in solution	10,66	1	6 V			Coordination chemistry	10h	1	7
		Electrochemistry	18,66	1,5		VII		Radiation Matter Interaction	18h40	1,5	
		Analytical chemistry Lab	21	1				Interfaces et dispersed matter I	11h30	1	
ш	ORGANIC AND BIOLOGICAL CHEMISTRY (V. Ferrières)	Organic Chemistry	33 +6	3				Organic chemistry Lab II	25	1,5	
		Polymers : synthesis and caracterizations	9h20	1	7		CHEMICAL ENGINEERING AND ENVIRONMENT I (S. Giraudet)	Mass Balancing and flowsheeting	11	1	
		Biological chemistry	11	1				Process dynamics and automatisation	10h50	1	
		Organic chemistry Lab I	28	1		VIII		Lab training on Process Dynamics and Logical control	20	1	5
IV	CHEMICAL ENGINEERING (D. Wolbert)	Fluid Mechanics	10h40	1	5	IX		Cycle of Industrial waters	9h30	1	
		Mass Transfer	11	1				Water chemistry Lab	20	1	
		Heat Transfer	11	1	5		FOREIGN LANGUAGES AND BUSINESS TRAINING	English language	18	2	
		Chemical Engineering Lab I	24	1,5				Innovation Project	15 + 15	2	4
v	FOREIGN LANGUAGES AND BUSINESS TRAINING (M. Videlo)	English language	18	2			(P. Briend)	Attendance and conduct		2	
		Introduction to management	18	1,5	5		DIGITAL CULTURE	Statistics for Engineers and Data analysis	17h20	2	
		Safety & Introduction to a business life	30h conf.	1				Experimental Design	10h40	1	
	•			•	v	AND	Algorithmics and programming	6h40 lec.+7h30 tut.	2	7	
TOTALS for an Engineering student				27,5	30	^	METHODOLOGICAL TOOLS (D. Wolbert)	Programming training Lab	18	1	· ·
								Digital culture	12	1	
								Scientific culture Project	30	2	
Nb of additional credits per month of work placement exceeding academic period 5						XI	WORK PLACEMENT	8 week placement : Discovery of a company			2

TOTALS for an Engineering student 33,5 30