

Semester S5

Code	Course Unit	ECTS	Code	Course	Coeff	Teacher	Vol	CM	TD	TP
5JUPPN01	Fundamental sciences	10	?	Solid mechanics	0,2	J.-F. Schmitt	36	16	8	12
			5JEPPN11	The basics of thermodynamics	0.2	G. Pernot	36	22	14	0
			5JEPPN12	Tools for electricity	0.2	T. Boileau	36	16	12	8
			5JEPPN13	Electricity and Magnetism - Circuits	0.2	F. Meibody	36	16	12	8
			5JEPPN14	Signals and systems - modeling	0.2	V. Louis-Dorr	36	19	7	10
5JUPPN02	Engineering Sciences 1	5	5JEPPN20	Programming and algorithms	0,4	?	36	11	10	15
			5JEPPN21	Foundations of mathematics for engineers	0,3	V. Lecuyer	49	20	29	0
			5JEPPN22	Transformation & complex analysis	0,3	V. Lecuyer	31	16	15	0
			5JEPPN23	Energy efficiency and sustainable development	pass/fail	T. Boileau	6	6	0	0
5JUPPN03	Humanities 1	5	5JEPPN30	English 1	0,3	S. Gallaire	24	0	24	0
			5JEPPN31	second foreign language-1 English support	0,3	S. Gallaire	24	0	24	0
			5JEPPN35	Project management	0,2	J.-C. Marpeau	10	0	0	10
			5JEPPN32	Communication 1	0,2	A. Thimon	16	0	16	0
			5JEPPN33	Workplace Safety 1	pass/fail	T. Boileau	8	8	0	0
5JUPPN04	S5 Company	10	5JEPPN34	French language clearance 1	pass/fail	A. Quesada	1	0	1	0
				Technical competence						
				Methodological competence						
				Interpersonal skills						
			5JPPN40	Report 1A						

Semester S6

Code	Course Unit	ECTS	Code	Course	Coeff	Teacher	Vol	CM	TD	TP
6JUPPN01	Applied Sciences and Technology	10	?	The basics of continuum mechanics	0.2	C. Laurent	36	22	14	0
			6JEPPN11	Fluid mechanics	0,2	M.Bordron	36	14	10	12
			6JEPPN12	Electrical machines	0,2	D. Netter	36	17	10	9
			6JEPPN13	Power electronics	0,2	S. Rael	36	17	10	9
			6JEPPN14	Systems control	0,2	P. Riedinger	36	13	14	9
6JUPPN02	Engineering Sciences 2	5	6JEPPN20	Object-oriented programming and algorithms	0,4	T. Docquier	36	11	10	15
			6JEPPN22	Probability and statistics	0,2	A. Gueudin	22	10	12	0
			6JEPPN21	Numerical analysis	0,4	V. Lecuyer	31	16	15	0
6JUPPN03	Humanities 2	5	6JEPPN30	English 2	0,3	S. Gallaire	32	0	32	0
			6JEPPN31	second foreign language-2 English support	0,3	S. Gallaire	24	0	24	0
			6JEPPN35	Business environment	0,2	F. Temsamani	10	10	0	0
			6JEPPN31	Communication 2	0,2	A. Thimon	12	0	12	0
			6JEPPN33	Workplace Safety 2	pass/fail	T. Boileau	3,5	3	0	0,5
6JUPPN04	S6 Company	10	6JEPPN34	French language clearance 2	pass/fail	A. Quesada	1	0	1	0
				Technical competence						
				Methodological competence						
				Interpersonal skills						
			6JEPPN40	Defense 1A			0,5	0	0,5	0

Semester S7

Code	Course Unit	ECTS	Code	Course	Coeff	Teacher	Vol	CM	TD	TP
7JUPPN01	Foundation for energy systems modeling	7	7JEPPN10	Dynamics of solids and structures	0,21	J.-F. Schmitt	25	16	9	0
			7JEPPN11	Fluid mechanics	0,21	A. Pereira	25	17	4	4
			7JEPPN12	Static converters and EMC	0,29	S. Pierfederici	40	14	10	16
			7JEPPN13	Transmission of information in an industrial context	0,29	V. Louis-Dorr	50	20	10	20
7JUPPN02	Modeling of energy systems	8	7JEPPN20	Regulation design office	0,12	M.Urbain	20	0	0	20
			7JEPPN21	partial differential equations	0,12	B. Remy	22	10	12	0
			7JEPPN22	Introduction to heat transfers	0,19	S. Didierjean	30	16	8	6
			7JEPPN25	Electric power networks 1	0,12	S. Dufour	20	8	0	12
			7JEPPN23	Electrical Machines	0,19	N. Takorabet	30	10	8	12
7JUPPN03	Humanities 3	5	7JEPPN24	Modeling, simulation and regulation of digital systems	0,25	J. Daafouz	40	14	8	18
			7JEPPN30	English Preparation Certification B2	0,4	C. Corringier	24	0	24	0
			7JEPPN31	second foreign language-3 English support	0,3	C. Corringier	24	0	24	0
7JUPPN06	S7 Company	10	7JEPPN32	Communication 3	0,3	A. Thimon	20	0	20	0
				Technical competence						
				Methodological competence						
				Interpersonal skills						
			7JEPPN60	Report 2A						

Semester S8										
Code	Course Unit	ECTS	Code	Course	Coeff	Teacher	Vol	CM	TD	TP
8JUPPN01	Energy networks	7	8JEPPN10	Mechanical and thermal storage, fluid energy conversion	0,36	<i>O. Caballina</i>	40	20	4	16
			8JEPPN11	Electric power networks 2	0,29	<i>J.-P. Martin</i>	30	12	10	8
			8JEPPN12	Industrial automation - control and supervision	0,36	<i>S. Maza</i>	40	16	8	16
8JUPPN02	Modeling and control of energy systems	7	8JEPPN20	Numerical analysis for mechanics	0,21	<i>B. Remy</i>	20	4	4	12
			8JEPPN21	Thermodynamics of machines and systems	0,24	<i>S. Didierjean</i>	20	10	10	0
			8JEPPN22	Power Electronics 2 and Drive	0,29	<i>T. Boileau</i>	40	14	14	12
			8JEPPN23	Computer application design	0,29	<i>YQ Song</i>	30	10	8	12
8JUPPN03	Humanities 4	6	8JEPPN31	Dynamic presentations	0,33	<i>C. Corringier</i>	24	0	24	0
			8JEPPN32	second foreign language-4 English support	0,33	<i>C. Corringier</i>	24	0	24	0
			8JEPPN30	Financial Management and Accounting	0,33	<i>J.-C. Marpeau</i>	40	22	18	0
8JUPPN04	S8 Company	10	Technical competence Methodological competence Interpersonal skills							
			8JEPPN40	2A Defense						

Semester S9										
Code	Course Unit	ECTS	Code	Course	Coeff	Teacher	Vol	CM	TD	TP
9KUAPP01	Advanced Methods for Energy Systems	10	9KEPPN11	Advanced energy transfers	?	N. Rimbert	35	22	0	13
			9KEPPN13	Sizing of energy systems	?	D. Netter	20	0	0	20
			9KEPPN14	Electric power networks 3	?	S. Pierfederici	30	18	4	8
			9KEPPN15	Sources and means of storing electrical energy	?	S. Rael	20	5	0	15
			9KEPPN17	Vision and Robotics	?	D. Wolf	30	15	15	0
			9KEPPN18	Internet networks	?	YQ Song	20	10	0	10
9KUAPP29	Specializations for energy systems	8	?	9_4 Control in the face of transport and conversion challenges	0,25	J. Kreiss	30	0	30	0
			?	9_4 Nuclear automation and control design office	0,25	J.-F. Pétin	30	6	2	22
			?	9_1 Risk analysis and functional security	0,25	N. Brinzei	30	18	4	8
			?	9_1 Monitoring and Diagnostics	0,25	S. Maza	30	20	10	0
			9KEPP111	9-2 Inverse Problems, Decompositions, Parsimony	0,17	R. Ranta	20	10	10	0
			9KEPP141	9_6 Analytical modeling and optimization of electrical machines	0,25	D. Netter	30	0	0	30
			9KEPP143	9_6 Optimization and design of electrical machines	0,25	N. Takorabet	30	16	2	12
			9KEPP181	9_10 P-HIL - tools and techniques	0,25	E. Jamshidpour	30	10	0	20
			9KEPP182	9_10 P-HIL Project	0,25	C.-H. Bonnard	30	0	10	20
			?	9_14 Materials Science	0,17	M.Bordron	20	8	4	8
			?	9_14 Mechanical behavior of materials	0,33	C. Laurent	40	14	6	20
			?	9_13 Methodology for characterizing	?	A. Labergue	20	20	0	0
			?	9_13 Experimental characterization	?	G. Pernot	20	0	0	20
			?	9_13 Numerical simulations and applications	?	O. Caballina	20	0	0	20
9KUAPP02	Humanities 5	2	9KEPPN21	English Interacting Professionally	1	C. Corringier	24	0	24	0
			9KEPPN25	Validation of international experience	pass/fail	L. Traut	1	0	1	0
			9KEPPN24	Management	pass/fail	F. Temsamani	6	0	6	0
S9 Company		10	Technical competence Methodological competence Interpersonal skills							

Semester S10										
Code	Course Unit	ECTS	Code	Course	Coeff	Teacher	Vol	CM	TD	TP
OKUAPP01	S10 Company	30		Report and defense 3A	1					