

Semestre1License: Thermal conversion

Unité Teaching	Material s Intitule	Credits	Coefficient	Hebdomadal volume			Semicircular Volume (15 weeks)	Work Additional Consultations (15 weeks)	Evaluation mode	
				Cours es	DW	PW			ControlC ontinu	Exam
UE Fundamental Code: UEF1.1 Credits: 18 Coefficients: 9	Mathematics 1	6	3	3:00 AM	1h30		6:30 AM	82:30	40%	60%
	Physics1	6	3	3:00 AM	1h30		6:30 AM	82:30	40%	60%
	Structure of matter	6	3	3:00 AM	1h30		6:30 AM	82:30	40%	60%
Methodological UE Code: UEM 1.1 Credits: 9 Coefficients: 4	Physics PW 1	2	1			1h30	10:30 p.m.	27:30	100%	
	PW of Chemistry1	2	1			1h30	10:30 p.m.	27:30	100%	
	Informatic 1	4	2	1h30		1h30	45:00	55:00	40%	60%
UE Discover Code: UED 1.1 Credits: 1 Coefficients: 1	Levels of science and technology1	1	1	1h30			10:30 p.m.	02:30		100%
UE Transversal Code: UET1.1 Credits: 2 Coefficients: 2	Ethical and deontological dimension	1	1	1h30			10:30 p.m.	02:30		100%
	Language 1 (French)	1	1	1h30			10:30 p.m.	02:30		100%
Total semester 1		30	17	16:00	4:30	4:30	375h00	375h00		

Semestre2License: Thermal conversion

Teaching unit	Intended Materials	Credits	Coefficient	hemispherical time volume			Semestral Volume (15 weeks)	Travel completion in Consultation (15 weeks)	Evaluation mode	
				Courses	WD	PW			Control Continu	Exam
UE Fundamental Code: UEF1.2 Credits: 18 Coefficients: 9	Maths 2	6	3	3:00 AM	1h30		6:30 AM	82:30	40%	60%
	Physics2	6	3	3:00 AM	1h30		6:30 AM	82:30	40%	60%
	Thermodynamic	6	3	3:00 AM	1h30		6:30 AM	82:30	40%	60%
UE Methodology Code: UEM 1.2 Credits: 9 Coefficients: 5	PW Physic2	2	1			1h30	10:30 p.m.	27:30	100%	
	PW Chemistry2	2	1			1h30	10:30 p.m.	27:30	100%	
	Informatic 2	4	2	1h30		1h30	45:00	55:00	40%	60%
	Methodology of presentation	1	1	1h00			15:00	10:00		100%
UE Discover Code: UED1.2 Credits: 1 Coefficients: 1	Levels of science and technology2	1	1	1h30			10:30 p.m.	02:30		100%
UE Transversale Code: UET1.2 Credits: 2 Coefficients: 2	Language 2 (French and English)	2	2	3:00 AM			45:00	05:00		100%
Total semester 2		30	17	16:00	4:30	4:30	375h00	375h00		

Semestre3License:Thermal conversion

Unified education	Materials Titled	Credits	Coefficient	Hebdomadal volume			Semicircular Volume (15 weeks)	Travel completion and consultation (15 weeks)	Evaluation mode	
				Courses	DW	PW			ControlC ontinu	Exam
UE Fundamental Code: UEF2.1.1 Credits: 10 Coefficients: 5	Maths 3	6	3	3:00 AM	1h30		6:30 AM	82:30	40%	60%
	ears and vibrations	4	2	1h30	1h30		45:00	55:00	40%	60%
UE Fundamental Code: UEF2.1.2 Credits: 8 Coefficients: 4	fluid mechanics1	4	2	1h30	1h30		45:00	55:00	40%	60%
	Electrical Fundamental 1	4	2	1h30	1h30		45:00	55:00	40%	60%
UEMethodology Code:UEM 2.1 Credits: 10 Coefficients: 6	Probability and statistics	4	2	1h30	1h30		45:00	55:00	40%	60%
	Informatic3	2	1			1h30	10:30 p.m.	25:00	100%	
	Drawing technique	2	1			1h30	10:30 p.m.	25:00	100%	
	PW Waters and irrigation	1	1			1h00	15:00	10:00	100%	
	PW Electronique et Electrotechnique	1	1			1h30	10:30 p.m.	07:30	100%	
UE Discover Code: UED 2.1 Credits: 1 Coefficients: 1	Metrology	1	1	1h30			10:30 p.m.	02:30		100%
UE Transversal Code: UET2.1 Credits: 1 Coefficients: 1	English Technique 1	1	1	1h30			10:30 p.m.	02:30		100%
Total semester 3		30	17	12:00	7:30	5:30	375h00	375h00		

Semestre4License Thermal Conversion

Teaching unit	Materials Intitule	Credits	Coefficient	hemispherical time volume			Volume Hourly Semestriel (15 semaines)	Work Complementary in Consultation (15 weeks)	Evaluation mode	
				Cours es	DW	P W			Control Continu	Exam
UE Fundamental Code: UEF 2.2.1 Credits: 12 Coefficients: 6	Maths 4	4	2	1h30	1h30		45 hours 00	55:00	40%	60%
	Electrical undamental 2	4	2	1h30	1h30		45:00	55:00	40%	60%
	Signal Theory	4	2	1h30	1h30		45:00	55:00	40%	60%
UE Foundation Code: UEF 2.2.2 Credits: 6 Coefficients: 3	Fluid Mechanics 2	4	2	1h30	1h30		45:00	55:00	40%	60%
	Material resistance	2	1	1h30			10:30 p.m.	27:30		100%
UE Methodological Code: UEM 2.2 Credits: 9 Coefficients: 5	Numerical methods 1	4	2	1h30		1h30	45:00	55:00	40%	60%
	PW Fluid Mechanics	1	1			1h00	15:00	10:00	100%	
	Resistance to applied materials	4	2		1h30	1h30	45:00	55:00	100%	
UE Discover Code: UED 2.2 Credits: 2 Coefficients: 2	Energies Renouvelables and environnement	1	1	1h30			10:30 p.m.	2:30		100%
	Materials Sciences	1	1	1h30			10:30 p.m.	2:30		100%
UE Transfer Code: UET 2.2 Credits: 1 Coefficients: 1	Techniques of expression, information and communication	1	1	1h30			10:30 p.m.	02:30		100%
Total semester 4		30	17	15h	7:30	4h	375h 00	375h 00		

Semestre5 License: Thermal conversion

Teaching unit	Materials Intitule	Credits	Coefficient	hemispherical time volume			Volume Hourly Semestriel (15 semaines)	Work Complementary in Consultation (15 weeks)	Evaluation mode	
				Cours es	D W	PW			Control Continu	Exam
UE Fundamental Code: UEF 3.1.1 Credits: 10 Coefficients: 5	Thermal transfer	6	3	3:00 AM	1h30		67 h30	82:30	40%	60%
	Machines Transformers	4	2	1h30	1h30		45:00	55:00	40%	60%
UE Fundamental Code: UEF 3.1.2 Credits: 8 Coefficients: 4	Applied thermodynamics	4	2	1h30	1h30		45:00	55:00	40%	60%
	Potentiel energy renewable	4	2	1h30	1h30		45:00	55:00	40%	60%
UE Methodological Code: UEM 3.1 Credits: 9 Coefficients: 5	Numerical methods 2	4	2	1h30		1h30	45:00	55:00	40%	60%
	PW Energy	1	1			1h00	15:00	10:00	100%	
	Measurements and Instrumentation	4	2	1h30		1h30	45h	55:00	40%	60%
UE Discover Code: UED 3.1 Credits: 2 Coefficients: 1	Photovoltaic systems	1	1	1h30			10:30 p.m.	2:30		100%
	Législation of renewables énergies	1	1	1h30			10:30 p.m.	2:30		100%
UE Transfer Code: UET 3.1 Credits: 1 Coefficients: 1	English Technic 2	1	1	1h30			10:30 p.m.	2:30		100%
Total semester 5		30	17	15:00	6:00 AM	4:00 AM	375h00	375h00		

Semestre6 License: Thermal Conversion

Teaching unit	Materials Intitule	Credits	C o e f f i c i e n t	hemispherical time volume			Volume Hourly Semestriel (15 semaines)	Work Complementary in Consultation (15 weeks)	Evaluation mode	
				Cours es	D W	PW			Control Continu	Exam
UE Fundamental Code: UEF 3.2.1 Credits: 12 Coefficients: 6	Solar thermal systems	4	2	1h30	1h30		45:00	55:00	40%	60%
	Eoliens Systems	4	2	1h30	1h30		45:00	55:00	40%	60%
	Efficiency and Transition Energétic	4	2	1h30	1h30		45:00	55:00	40%	60%
UE Fundamental Code: UEF 3.2.2 Credits: 6 Coefficients: 3	Matériaux Energies Renewables	4	2	1h30	1h30		45:00	55:00	40%	60%
	Biomass and Geothermia	2	1	1h30			10:30 p.m.	27:30		100%
UE Methodological Code: UEM 3.2 Credits: 9 Coefficients: 5	PW Energy Renewables	2	1			2:00 AM	30:00	20:00	100%	
	Project Personnel	2	1			2:00 AM	30 hours	65:00	100%	
	TP Programming and Simulation	5	3	1h30		3:00 AM	45:00	35h	40%	60%
UE Discover Code: UED 3.2 Credits: 2 Coefficients: 1	renewable Energy and durable development	1	1	1h30			10:30 p.m.	2:30		100%
	Regulation and Norms from ER	1	1	1h30			10:30 p.m.	2:30		100%
UE Transfer Code: UET 3.2 Credits: 1 Coefficients: 1	Entrepreneur and business management	1	1	1h30			10:30 p.m.	02:30		100%
Total semester 6		30	17	13:30	6:00 AM	7:00 AM	375h 00	375h 00		

Semestre1Master: Thermal Conversion

Teaching unit	Materials Intitule	Credits	Coefficient	hemispherical time volume			Volume Hourly Semestriel (15 semaines)	Work Complementary in Consultation (15 weeks)	Devaluation Mode	
				Courses	DW	PW			Control Continu	Exam
UE Fundamental Code: UEF 1.1.1 Credits: 10 Coefficients: 5	Advanced Thermal Transfers1	4	2	1h30	1h30		45:00	55:00	40%	60%
	Mechanism of fluid advances	4	2	1h30	1h30		45:00	55:00	40%	60%
	Thermal Machines	2	1	1h30			10:30 p.m.	27:30	40%	60%
UE Fundamental Code: UEF 1.1.2 Credits: 8 Coefficients: 4	Mathematical for physics	4	2	1h30	1h30		45:00	55:00	40%	60%
	Applied statistics	4	2	1h30	1h30		45:00	55:00	40%	60%
UE Methodological Code: UEM 1.1 Credits: 9 Coefficients: 5	Applied energy TP	1	1			1h00	15:00	10:00	100%	
	Normal measurement technique	2	1			1h30	10:30 p.m.	27:30	100%	
	Methods and numbers available 1	2	1			1h30	10:30 p.m.	27:30	100%	
	Maintenance and reliability of rechargeable energy systems	2	1			1h30	10:30 p.m.	27:30	100%	
	Maintenance and regulation	2	1	1h30			10:30 p.m.	27:30		100%
UE Discover Code: UED 1.1 Credits: 2 Coefficients: 2	Communication and project delivery	1	1	1h30			10:30 p.m.	2:30		100%
	Energy Audit	1	1	1h30			10:30 p.m.	2:30		100%
UE Transversal Code: UET 1.1 Credits: 1 Coefficients: 1	English technique and terminology	1	1	1h30			10:30 p.m.	2:30		100%
Total semester 1		30	17	13:30	6:00 AM	5:30	375h00	375h00		

Semestre2Master: Thermal Conversion

Teaching unit	Materials Intitule	Credits	Coefficient	hemispherical time volume			Volume Hourly Semestriel (15 semaines)	Work Complete consultation (15 years.)	Evaluation mode	
				Courses	D W	PW			Control Continu	Exam
UE Fundamental Code: UEF 1.2.1 Credits: 10 Coefficient: 5	Advaced ThermalTransfers 2	4	2	1h30	1h30		45:00	55:00	40%	60%
	heating and air conditioning	4	2	1h30	1h30		45:00	55:00	40%	60%
	Thermal storage	2	1	1h30			10:30 p.m.	55:00	40%	60%
UE Fundamental Code: UEF .1.2.2 Credits: 8 Coefficients: 4	Transfer Heat and mass - fine volumes	4	2	1h30	1h30		45:00	55:00	40%	60%
	Advanced Energetic Potentiel	4	2	1h30	1h30		45:00	55:30	40%	60%
UE Methodological Code: UEM 1.2 Credits: 9 Coefficients: 5	Methods and numbers available 2	2	1			1h30	10:30 p.m.	15:00	100%	
	PW thermal solar sensor	2	1			1h00	10:30 p.m.	15:00	100%	
	PW Energy Eolienne	2	1			1h00	10:30 p.m.	15:00	100%	
	mathematical optimization	2	1	1h30		1h00	45:00	27:30	40%	60%
	PW Thermal Machines	1	1			1h00	15:00	15:00	100%	
UE Discover Code: UED 1.1 Credits: 2 Coefficients: 2	Political aspects, economics and social energy renewables	1	1	1h30			10:30 p.m.	2:30		100%
	Marine Energy	1	1	1h30			10:30 p.m.	2:30		100%
UE Transversal Code: UET 1.2 Credits: 1 Coefficients: 1	Respect of t the norms, rules, culture and integrity	1	1	1h30			10:30 p.m.	2:30	40%	60%
Total semester 2		30	17	13:30	06:00	05:30	375h00	375h00		

Semestre3Master: Thermal Conversion

Unité Teaching	Materials Intitule	Credits	Coefficient	hemispherical time volume			Volume Horaire Semestriel	Work Completion and consultation (15 years)	Evaluation mode	
				Cours es	DW	PW			Continuo us control	Exam
UE Fondamental Code: UEF 2.1.1 Credits: 10 Coefficients: 5	Thermal solarConversion– theory, systems and performances	4	2	1h30	1h30		45:00	55:00	40%	60%
	Concentration solar conversion Theory and Systems	4	2	1h30	1h30		45:00	55:00	40%	60%
	Habitat and thermal energy	2	1	1h30			10:30 p.m.	27:30	40%	60%
UE Fondamental Code: UEF 2.1.2 Credits: 8 Co-workers: 4	EolienEnergy– Conversion and systems	4	2	1h30	1h30		45:00	55:00	40%	60%
	Applications at different temperatures	4	2	1h30	1h30		45:00	55:00	40%	60%
UE Methodology Code: UEM 2.1 Credits: 9 Coefficients: 5	PW Photovoltaic Energy	1	1			1h00	15:00	10:00	100%	
	Modeling – Simulation	4	2	1h30		1h30	45:00	55:00	40%	60%
	Hydrogen technology and combustible Pile	4	2	1h30		1h30	45:00	55:00	40	60%
UE Discover Code: UED 2.1 Credits: 2 Coefficients: 2	solar frost	1	1	1h30			10:30 p.m.	2:30		100%
	Ecological industry and durable development	1	1	1h30			10:30 p.m.	2:30		100%
UE Transfer Code: UET 2.1 Credits: 1 Coefficients: 1	Read the bibliography and review	1	1	1h30			10:30 p.m.	2:30		100%
Total semester 3		30	17	15:00	6:00 AM	4:00 AM	375h00	375h00		