



People's Democratic Republic of Algeria
 الجمهورية الجزائرية الديمقراطية الشعبية
 وزارة التعليم العالي والبحث العلمي
 Ministry of Higher Education and Science
 اللجنة الوطنية لميدان العلوم و التكنولوجيا
 National Science and Technology Education Committee



MASTER ACADEMIC HARMONIZES

Programme National

Updated 2022

Field	Sector	Specialty
Sciences and Technologies	Process Engineering	Environmental Process Engineering



الشعبية الديمقراطية الجزائرية الجمهورية
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مواعمة

ماسر أكاديمي

الميدان	الشعبة	التخصص
علوم و تكنولوجيا	هندسة الطرائق	هندسة الطرائق للبيئة

Updated 2022

I - Master's identity card

Access conditions

Sector	Harmonized Master's	Bachelor's degrees providing access to the Master's degree	Classification according to the compatibility of licence	Coefficient assigned to the Bachelor's degree
Process Engineering	Materials Process Engineering	Process Engineering	1	1
		Materials Engineering	2	0.8
		Materials chemistry (Field SM)	3	0.7
		Physics of materials (Field SM)	3	0.7
		Inorganic chemistry (Field SM)	4	0.65
		Other ST domain licenses	5	0.6

II – Semester-wise organization sheets for the specialty's courses

Semester 1: Environmental Process Engineering

Course Unit	Subjects	Credits	Coefficient	Hourly volume weekly			Volume Schedule Biannual (15sem.)	Work Complem entary in Consultat ion (15 sem.)	Mode of evaluation	
				Course	Guided work(TD)	Practical Work(TP)			continuous control	Exam
EU Fundamental Code: UEF 1.1.1 Credits: 8 Coefficients: 4	Water Chemistry	4	2	1h30	1h30		45h00	55h00	40%	60%
	Air Pollution	4	2	1h30	1h30		45h00	55h00	40%	60%
EU Fundamental Code: UEF 1.1.2 Credits: 10 Coefficients: 5	Unit Operations in Fluid-Fluid (extraction, distillation, absorption, and stripping)	6	3	3h00	1h30		67h30	82h30	40%	60%
	Heat exchangers	4	2	1h30	1h30		45h00	55h00	40%	60%
EU Methodology Code: EMU1.1 Credits: 9 Coefficients: 5	TP Water Chemistry	2	1			1h30	22h30	27h30	100%	
	TP Unit Operations in Fluid-Fluid	2	1			1h30	22h30	27h30	100%	
	TP Heat exchangers	2	1			1h30	22h30	27h30	100%	
	Engineering simulators of Processes	3	2	1h30		1h00	37h30	37h30	40%	60%
UE Découverte Code : UED 1.1 Crédits : 2 Coefficients: 2	Elective Subject	1	1	1h30			22h30	2h30		100%
	Elective Subject	1	1	1h30			22h30	2h30		100%
Transversal Teaching Unit Code: UET 1.1 Credits: 1 Coeff: 1	Technical English and Terminology	1	1	1h30			22h30	2h30		100%
Total Semester 1		30	17	13h30	6h00	5h30	375h00	375h00		

Semester 2: Environmental Process Engineering

Course Unit	Subjects	Credits	Coefficient	Hourly volume weekly			Volume Schedule Biannual (15sem.)	Work Complementary in Consultation (15 sem.)	Mode of evaluation	
				Course	Guided work(TD)	Practical Work(TP)			continuous control	Exam
EU Fundamental Code: UEF1.2.1 Credits: 10 Coefficients: 5	Drinking Water Production	6	3	3h00	1h30		67h30	82h30	40%	60%
	Management and Processing of solid waste	4	2	1h30	1h30		45h00	55h00	40%	60%
EU Fundamental Code: UEF 1.2.2 Credits: 8 Coefficients: 4	Adsorption Processes and Membrane Separation	4	2	1h30	1h30		45h00	55h00	40%	60%
	Physicochemical Treatment of Wastewater	4	2	1h30	1h30		45h00	55h00	40%	60%
EU Methodology Code: EMU1.2 Credits: 9 Coefficients: 5	Porous and Dispersed Media	3	2	1h30	1h00		37h30	37h30	40%	60%
	TP Water Treatment and Adsorption Processes and Membrane Separation	2	1			1h30	22h30	27h30	100%	
	Treatment and Conditioning of Process Water	4	2	1h30	1h30		45h00	55h00	40%	60%
UE Découverte Code : UED1.2 Crédits :2 Coeff:2	Elective Subject	1	1	1h30			22h30	2h30		100%
	Elective Subject	1	1	1h30			22h30	2h30		100%
Transversal Unit Code: UET 1.2 Credits: 1 Coeff: 1	Compliance with Standards and Rules of Ethics and Integrity	1	1	1h30			22h30	2h30		100%
Total Semester 2		30	17	15h00	8h30	1h30	375h00	375h00		

Semester 3: Environmental Process Engineering

Course Unit	Subjects	Credits	Coefficient	Hourly volume weekly			Volume Schedule Biannual (15sem.)	Work Complementary in Consultation(15sem.)	Mode of evaluation	
				Course	Guided work(TD)	Practical Work(TP)			continuous control	Exam
EU Fundamental Code: UEF 2.1.1 Credits: 8 Coefficients: 4	Theoretical basis and biological treatment waste water	4	2	1h30	1h30		45h00	55h00	40%	60%
	Treatment of Gaseous Effluents	4	2	1h30	1h30		45h00	55h00	40%	60%
EU Fundamental Code: UEF2.1.2 Credits: 10 Coefficients: 5	Technical Thermodynamics	4	2	3h00	1h30		45h00	55h00	40%	60%
	Multiphase Reactors and Bioreactors	6	3	1h30	1h30		67h30	82h30	40%	60%
EU Methodology Code: EMU2.1 Credits: 9 Coefficients: 5	TP / Practical work on Biological Treatment of wastewater/bioreactors	2	1			1h30	22h30	27h30	100%	
	Process Intensification	2	1				22h30	27h30		
	Treatment of Polluted Soils	2	1				22h30	27h30		
	Experimental Design	3	2	1h30		1h00	37h30	37h30	40%	60%
UE Découverte Code : UED 2.1 Crédits : 2 Coefficients: 2	Elective Subject	1	1	1h30			22h30	2h30		100%
	Elective Subject	1	1	1h30			22h30	2h30		100%
Transversal Teaching Unit Code: UET 2.1 Credits: 1Coeff: 1	Documentary research and memory design	1	1	1h30			22h30	2h30		100%
Total Semester 3		30	17	16h30	6h00	2h30	375h00	375h00		

General guidance on the selection of discovery materials:

1. Technical and economic evaluation of processes
2. Environmental management
3. Environmental audit and impact assessment
4. Ecology and biodiversity
5. Renewable energies
6. Industrial risks and natural disasters
7. chemical and biochemical sensors
8. Climate change
9. Environmental changes and biological invasion
10. Biopiles
11. Sonochemical
12. Activation process
13. Energy storage
14. Biomass and biofuels
15. Environmental standards and conventions
16. process control and control
17. process modelling and optimisation
18. Microbiology and environmental biochemistry

Semester 4

Internship in a company or research laboratory culminating in a thesis and a defense.

	SHV	Coefficient	Crédits
Work Personal	550	09	18
Internship in a company or in a laboratory	100	04	06
Seminars	50	02	03
Other (Framing)	50	02	03
Total Semester 4	750	17	30

This table is for information purposes

Evaluation of the Master's Cycle End Project

- Scientific value (Jury assessment) /6
- Writing the Brief (Jury's assessment) /4
- Presentation and answers to questions (Jury assessment) /4
- Assessment of the coach /3
- Presentation of the internship report (Evaluation by the jury) /3