



الجمهورية الجزائرية الديمقراطية الشعبية
Democratic and Popular Republic of Algeria
وزارة التعليم العالي والبحث العلمي
Ministry of Higher Education and Scientific Research
اللجنة الوطنية لميدان العلوم والتكنولوجيا
National Educational Committee for the Science and Technology sector



HARMONIZED ACADEMIC MASTER

National Program

Updated 2022

Domain	Sector	Speciality
<i>Science and Technology</i>	<i>Civil Engineering</i>	<i>Materials in Civil Engineering</i>

I – Master's identity card

Access conditions

Sector	Harmonized Master	Licenses giving access to the master's degree	Ranking by license compatibility	Coefficient assigned to the license
Civil engineering	Materials in civil engineering	Civil Engineering	1	1.00
		Public works	1	1.00
		Hydraulic	2	0.80
		Materials Engineering	2	0.80
		Materials Chemistry (SM Domain)	2	0.80
		Materials Physics (SM Domain)	2	0.80
		Metallurgy	3	0.70
		Other licenses in the ST domain	5	0.60

II – Half-yearly organization sheets for the specialty's teaching

Semester 1 Master : Materials in Civil Engineering

Educating Unit	Materials	Credits	Coefficient	Weekly hourly volume			Semester Hourly Volume (15 weeks)	Additional Work in Consultation (15 weeks)	Evaluation mode	
	Title			Course	DW	PW			Continuous control	Exam
Fundamental Unit Code : UEF 1.1.1 Credits: 8 Coefficients : 4	Elasticity theory	4	2	1h30	1h30		45h00	55h00	40%	60%
	Mineral binders	4	2	1h30	1h30		45h00	55h00	40%	60%
Fundamental Unit Code : UEF 1.1.2 Credits: 10 Coefficients : 5	Concrete technology	4	2	1h30	1h30		45h00	55h00	40%	60%
	Reinforced concrete structures	6	3	3h00	1h30		67h30	82h30	40%	60%
Methodological Unit Code : UEM 1.1 Credits: 9 Coefficients : 5	PW Materials Physics	4	2			3h00	45h00	55h00	100%	
	PW Binders	3	2			2h30	37h30	37h30	100%	
	PW Concrete Technology	2	1			1h30	22h30	27h30	100%	
Discovery Unit Code : UED 1.1 Credits: 2 Coefficients : 2	Construction processes	1	1	1h30			22h30	2h30		100%
	Ecological materials and sustainable development	1	1	1h30			22h30	2h30		100%
Transversal Unit Code : UET 1.1 Credits: 1 Coefficients : 1	Technical English and Terminology	1	1	1h30			22h30	02h30		100%
Total semestre 1		30	17	10h30	7h30	7h00	375h00	375h00		

Semester 2 Master : Materials in Civil Engineering

Educating Unit	Materials	Credits	Coefficient	Weekly hourly volume			Semester Hourly Volume (15 weeks)	Additional Work in Consultation (15 weeks)	Evaluation mode	
	Title			Course	DW	PW			Continuous control	Exam
Fundamental Unit Code : UEF 1.2.1 Credits: 10 Coefficients : 5	Plasticity and damage	6	3	3h00	1h30		67h30	82h30	40%	60%
	Special building materials	4	2	3h00			45h00	55h00		100%
Fundamental Unit Code : UEF 1.2.2 Credits: 8 Coefficients : 4	Innovative concretes 1	4	2	3h00			45h00	55h00		100%
	Metallic frame works	4	2	1h30	1h30		45h00	55h00	40%	60%
Methodological Unit Code : UEM 1.2 Credits: 9 Coefficients : 5	PW Mechanics of materials	2	1			1h30	22h30	27h30	100%	
	Computer science applied to the calculation of reinforced concrete structures	3	2			2h30	37h30	37h30	100%	
	Experimental methods	4	2	1h30		1h30	45h00	55h00	40%	60%
Discovery Unit Code : UED 1.2 Credits: 2 Coefficients : 2	Pathology of constructions	1	1	1h30			22h30	2h30		100%
	Hydration and structuring of cement pastes	1	1	1h30			22h30	2h30		100%
Transversal Unit Code : UET 1.2 Credits: 1 Coefficients : 1	Ethics, professional conduct and intellectual property	1	1	1h30			22h30	02h30		100%
Total semestre 2		30	17	16h30	3h00	5h30	375h00	375h00		

Semester 3 Master : Materials in Civil Engineering

Educating Unit	Materials	Credits	Coefficient	Weekly hourly volume			Semester Hourly Volume (15 weeks)	Additional Work in Consultation (15 weeks)	Evaluation mode	
	Title			Cours e	DW	PW			Continuous control	Exam
Fundamental Unit Code : UEF 2.1.1 Credits: 12 Coefficients : 6	Composite materials	4	2	1h30	1h30		45h00	55h00	40%	60%
	Recycled materials	4	2	1h30	1h30		45h00	55h00	40%	60%
	Prestressed concrete	4	2	1h30	1h30		45h00	55h00	40%	60%
Fundamental Unit Code : UEF2.1.2 Credits: 6 Coefficients : 3	Sustainability of materials	4	2	3h00			45h00	55h00		100%
	Innovative concretes 2	2	1	1h30			22h30	27h30		100%
Methodological Unit Code : UEM 2.1 Credits: 9 Coefficients : 5	Finite element methods	4	2	1h30		1h30	45h00	55h00	40%	60%
	PW Sustainability of materials	2	1			1h30	22h30	27h30	100%	
	PW Innovative concretes	3	2			2h30	37h30	37h30	100%	
Discovery Unit Code : UED 2.1 Credits: 2 Coefficients : 2	Rheology of materials	1	1	1h30			22h30	02h30		100%
	Code and regulations	1	1	1h30			22h30	02h30		100%
Transversal Unit Code : UET 2.1 Credits: 1 Coefficients : 1	Documentary research and dissertation design	1	1	1h30			22h30	02h30		100%
Total semestre 3		30	17	15h00	4h30	5h30	375h00	375h00		

