



الجمهورية الجزائرية الديمقراطية الشعبية
 People's Democratic Republic of Algeria
 وزارة التعليم العالي والبحث العلمي
 Ministry of Higher Education and Scientific Research
 اللجنة البيداغوجية الوطنية لميدان العلوم والتكنولوجيا
 National Teaching Committee for Science and Technology



Harmonized Academic Master's Degree

National Program

Update 2022

Field	Sector	Specialization
<i>Sciences and Technologies</i>	<i>Civil engineering</i>	<i>Structures</i>



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مواكمة ماستر أكاديمي

تحيين 2022

الميدان	الفرع	التخصص
علوم وتكنولوجيا	هندسة مدنية	هياكل

I – Master's degree profile

Access Conditions

Sector	Harmonized Master's	Bachelor's Degrees Granting Access to the Master's Program	Ranking According to the Compatibility of the Bachelor's Degree	Coefficient Assigned to the Bachelor's Degree
Civil Engineering	Structures	Civil Engineering	1	1.00
		Public Works	2	0.80
		Mechanical Construction	3	0.70
		Other Bachelor's Degrees in the Field of Science and Technology (ST)	5	0.60

II – Semester Organization Sheets for the Specialized Courses



Semestr 1 : Master's in Structures

Teaching unit	Study modules	Credits	Coefficient	Number of hours per week			Semester Hours (15 weeks)	Complementary work Consultation (15 weeks)	Assessment method	
	Title			Courses	Tutorial	Lab W			Continuous assessment	Exam
Fundamental EU Code : UEF 1.1.1 Crédits : 8 Coefficients : 4	Structural Mechanics	4	2	1h30	1h30		45h00	55h00	40%	60%
	Structural Dynamics 1	4	2	1h30	1h30		45h00	55h00	40%	60%
Fundamental EU Code : UEF 1.1.2 Crédits : 10 Coefficients : 5	Reinforced Concrete Structures 1	4	2	1h30	1h30		45h00	55h00	40%	60%
	Steel Structures	6	3	3h00	1h30		67h30	82h30	40%	60%
EU Methodology Code : UEM 1.1 Crédits : 9 Coefficients : 5	Advanced Programming	4	2	1h30		1h30	45h00	55h00	40%	60%
	Experimental Methods	2	1			1h30	22h30	27h30	100%	
	Innovative Materials and Durability	3	2	1h30		1h00	37h30	37h30	40%	60%
EU Discovery Code : UED 1.1 Crédits : 2 Coefficients : 2	Elective Course	1	1	1h30			22h30	02h30		100%
	Elective Course	1	1	1h30			22h30	02h30		100%
Cross-cutting EU Code : UET 1.1 Crédits : 1 Coefficients : 1	Technical English and Terminology	1	1	1h30			22h30	02h30		100%
Total semestre 1		30	17	15h00	6h00	4h00	375h00	375h00		

Semestr 2 : Master's in Structures

Teaching unit	Study modules	Credits	Coefficient	Number of hours per week			Semester Hours (15 weeks)	Complementary work Consultation (15weeks)	Assessment method	
	Title			Courses	Tutorial	Lab W			Continuous assessment	Exam
Fundamental EU Code : UEF 1.2.1 Crédits : 10 Coefficients : 5	Elasticity	6	3	3h00	1h30		67h30	82h30	40%	60%
	Structural Dynamics II	4	2	1h30	1h30		45h00	55h00	40%	60%
Fundamental EU Code : UEF1.2.2 Crédits : 8 Coefficients : 4	Reinforced Concrete Design II	4	2	1h30	1h30		45h00	55h00	40%	60%
	Foundations & Retaining Structures	4	2	1h30	1h30		45h00	55h00	40%	60%
EU Methodology Code : UEM 1.2 Crédits : 9 Coefficients : 5	Finite Element Methods	5	3	1h30	1h30	1h00	60h00	65h00	40%	60%
	Steel Structures Design Project	4	2	1h30		*1h30	45h00	55h00	*70%	30%
EU Discovery Code : UED 1.2 Crédits : 2 Coefficients : 2	Elective Course	1	1	1h30			22h30	02h30		100%
	Elective Course	1	1	1h30			22h30	02h30		100%
Cross-cutting EU Code : UET 1.2 Crédits : 1 Coefficients : 1	Compliance with ethical standards and integrity regulations	1	1	1h30			22h30	02h30		100%
Total semestre 2		30	17	15h00	7h30	2h30	375h00	375h00		

* The practical sessions ("Lab W") for the "Steel Structures Design Project" course consist of in-person supervised workshops. These sessions will not be counted as conventional practical work sessions for academic credit purposes..



Semestr 3 : Master's in Structures

Teaching unit	Study modules	Credits	Coefficient	Number of hours per week			Semester Hours (15 weeks)	Complementary work Consultation (15weeks)	Assessment method	
	Title			Courses	Tutorial	Lab W			Continuous assessment	Exam
Fundamental EU Code : UEF 2.1.1 Crédits : 10 Coefficients : 5	Prestressed Concrete	6	3	3h00	1h30		67h30	82h30	40%	60%
	Plasticity and Damage Mechanics	4	2	1h30	1h30		45h00	55h00	40%	60%
Fundamental EU Code : UEF 2.1.2 Crédits : 8 Coefficients : 4	Earthquake Engineering	4	2	1h30	1h30		45h00	55h00	40%	60%
	Special Structures	4	2	1h30	1h30		45h00	55h00	40%	60%
EU Methodology Code : UEM 2.1 Crédits : 9 Coefficients : 5	Reinforced Concrete Design Project	6	3	1h30		*3h00	67h30	82h30	*70%	30%
	Structural Modeling	3	2			2h30	37h30	37h30	100%	
EU Discovery Code : UED 2.1 Crédits : 2 Coefficients : 2	Elective Course	1	1	1h30			22h30	02h30		100%
	Elective Course	1	1	1h30			22h30	02h30		100%
Cross-cutting EU Code : UET 2.1 Crédits:1 Coefficients : 1	Literature Review and Thesis	1	1	1h30			22h30	02h30		100%
Total semestre 3		30	17	13h30	6h00	5h30	375h00	375h00		

**The practical sessions (TP) for the "Reinforced Concrete Structures Project" course consist of in-person supervised workshops. These sessions will not be counted as conventional laboratory/practical sessions for academic credit purposes.*

Elective Course Catalog - Discovery Units (UED) (S1, S2, S3)

1. *Building Construction*
2. *Roads and Utility Networks*
3. *Natural and Technological Risks*
4. *Public Procurement Code*
5. *Structural Pathology and Rehabilitation*
6. *Building Thermodynamics*
7. *General Construction Methods*
8. *Project Planning and Management*
9. *Business Organization and Management*
10. *Construction Site Management*
11. *Introduction to Hydraulic Structures*
12. *Principles of Civil and Industrial Construction*

Semestr 4

Industry or Research Laboratory Internship (*Concluded with a Thesis Defense and Written Report*)

	VHS	Coeff	Crédits
Independent Study	550	09	18
Internship (Industry/Research Lab)	100	04	06
Seminars	50	02	03
Other (Supervised Work)	50	02	03
Total Semester 4 Credits	750	17	30

This table is provided for guidance only

Master's Thesis/Final Project Evaluation

- Scientific Rigor (*Jury Assessment*) /6
- Thesis Writing Quality (*Jury Assessment*) /4
- Oral Defense & Q&A Performance (*Jury Assessment*) /4
- Supervisor's Evaluation /3
- Internship Report Presentation (*Jury Assessment*) /3