



People's Democratic Republic of Algeria  
**Ministry of Higher Education and Scientific Research**  
**Sétif 1 University – Ferhat Abbas**

**Faculty** of Technology  
**Department** of civil engineering

## **Training Canvas**

**Engineer Degree in civil engineering**

**Specialty: Construction and Sustainable Development**

• **Semester 1**

Teaching Unit	Subject Titles	Code	Credits	Coefficients	Weekly Hours			VHS	Evaluation Method	
					Course	Directed work	Practical work		Continuous Assessment	Final Exam
Fundamental UE Code: UEF 1.1.1 Credits: 10 Coefficients: 5	Analysis 1	IST.1.1	6	3	1h30	3h00		67h30	40%	60%
	Algebra 1	IST.1.2	4	2	1h30	1h30		45h00	40%	60%
Fundamental UE Code: UEF 1.1.2 Credits: 14 Coefficients: 8	Elements of Chemistry (Structure of Matter)	IST.1.3	7	4	1h30	3h00	1h30	90h00	40% (20% TD + 20% TP)	60%
	Elements of Mechanics (Physics 1)	IST.1.4	7	4	1h30	3h00	1h30	90h00	40% (20% TD + 20% TP)	60%
Methodological UE Code: UEM 1.1 Credits: 4 Coefficients: 4	Probability and Statistics	IST.1.5	2	2	1h30	1h30		45h00	40%	60%
	Computer Structure and Applications	IST.1.6	2	2			3h00	45h00	100%	
Transversal UE Code: UET 1.1 Credits: 2 Coefficients: 2	Ethical Dimension and Deontology (Foundations)	IST.1.7	1	1	1h30			22h30		100%
	Foreign Language 1 (French or English)	IST.1.8	1	1		1h30		22h30	100%	
<b>Total Hourly Volume</b>			<b>30</b>	<b>19</b>	<b>9h00</b>	<b>13h30</b>	<b>6h00</b>	<b>427h30</b>		

• **Semester 2**

Teaching Unit	Subject Titles	Code	Credits	Coefficients	Weekly Hours			VHS	Evaluation Method	
					Course	Directed work	Practical work		Continuous Assessment	Final Exam
Fundamental UE Code: UEF 1.2.1 Credits: 10 Coefficients: 5	Analysis 2	IST.2.1	6	3	1h30	3h00		67h30	40%	60%
	Algebra 2	IST.2.2	4	2	1h30	1h30		45h00	40%	60%
Fundamental UE Code: UEF 1.2.2 Credits: 14 Coefficients: 8	Electricity and Magnetism (Physics 2)	IST.2.3	7	4	1h30	3h00	1h30	90h00	40% (20% TD + 20% TP)	60%
	Thermodynamics	IST.2.4	7	4	1h30	3h00	1h30	90h00	40% (20% TD + 20% TP)	60%
Methodological UE Code: UEM 1.2 Credits: 4 Coefficients: 4	Technical Draughting	IST.2.5	2	2			3h00	45h00	100%	
	Programming (Computer Science 2)	IST.2.6	2	2			3h00	45h00	100%	
Transversal UE Code: UET 1.2 Credits: 1 Coefficients: 1	Foreign Language 2 (English)	IST.2.7	1	1		1h30		22h30	100%	
Discovery UE Code: UED 1.2 Credits: 1 Coefficients: 1	Engineering Professions	IST.2.8	1	1	1h30			22h30		100%
Total Hourly Volume			30	19	7h30	12h00	9h00	427h30		

• **Semester 3**

Teaching Unit	Subject Titles	Code	Credits	Coefficients	Weekly Hours			VHS	Evaluation Method	
					Course	Directed work	Practical work		Continuous Assessment	Final Exam
Fundamental UE Code: UEF 3.1 Credits :11 Coefficients: 6	Applied Mathematics	IGC3.1	6	3	1h30	3h00		67h30	40%	60%
	Waves and vibrations	IGC3.2	5	3	1h30	1h30	1h30	67h30	40% (20% TD + 20% TP)	60%
Fundamental UE Code: UEF 3.2 Credits: 14 Coefficients: 8	Strength of materials 1	IGC3.3	6	3	1h30	3h00		67h30	40%	60%
	Building materials 1	IGC3.4	3	2	1h30		1h30	45h00	40%	60%
	Fluid mechanics	IGC3.5	5	3	1h30	1h30	1h30	67h30	40% (20% TD + 20% TP)	60%
Methodological UE Code: UEM 3.1 Credits: 2 Coefficients :2	Computer Science 3	IGC3.6	2	2	1h30		1h30	45h00	40%	60%
Discovery UE Code: UED 3.1 Credits: 2 Coefficients: 2	General Construction Procedures	IGC3.7	1	1	1h30			22h30		100%
	Geology	IGC3.8	1	1	1h30			22h30		100%
Transversal UE Code: UET 3.1 Credits: 1 Coefficients: 1	Technical English	IGC3.9	1	1		1h30		22h30	40%	60%
Total Hourly Volume			30	19	12h00	10h30	6h00	427h30		

• **Semester 4**

Teaching Unit	Subject Titles	Code	Credits	Coefficients	Weekly Hours			VHS	Evaluation Method	
					Course	Directed work	Practical work		Continuous Assessment	Final Exam
Fundamental UE Code: UEF 4.1 Credits: 16 Coefficients: 9	Soil mechanics 1	IGC4.1	5	3	1h30	1h30	1h30	67h30	40% (20% TD + 20% TP)	60%
	Reinforced concrete 1	IGC4.2	6	3	1h30	3h00		67h30	40%	60%
	Strength of materials 2	IGC4.3	5	3	1h30	1h30	1h30	67h30	40% (20% TD + 20% TP)	60%
Fundamental UE Code: UEF 4.2 Credits: 9 Coefficients: 5	Topography 1	IGC4.4	3	2	1h30		1h30	45h00	40%	60%
	General hydraulics	IGC4.5	4	2	1h30	1h30		45h00	40%	60%
	Metal frame 1	IGC4.6	2	1	1h30			22h30		100%
Methodological UE Code: UEM 4.1 Credits: 3 Coefficients :3	Numerical methods	IGC4.7	2	2	1h30		1h30	45h00	40%	60%
	Computer-aided Draughting	IGC4.8	1	1			1h30	22h30	100%	
Discovery UE Code: UED 4.1 Credits: 1 Coefficients: 1	Norms and regulations	IGC4.9	1	1	1h30			22h30		100%
Transversal UE Code: UET 4.1 Credits 1 Coefficients: 1	Information, expression and communication techniques	IGC4.10	1	1		1h30		22h30	40%	60%
<b>Total Hourly Volume</b>			<b>30</b>	<b>19</b>	<b>12h00</b>	<b>9h00</b>	<b>7h30</b>	<b>427h30</b>		

• **Semester 5**

Teaching Unit	Subject Titles	Code	Credits	Coefficients	Weekly Hours			VHS	Evaluation Method	
					Course	Directed work	Practical work		Continuous Assessment	Final Exam
Fundamental UE Code: UEF 5.1 Credits: 14 Coefficients :7	Reinforced concrete 2	CDD 5.1	4	2	1h30	1h30		45h00	40%	60%
	Structures Analysis	CDD 5.1	6	3	1h30	3h00		67h30	40%	60%
	Metal frame 2	CDD 5.2	4	2	1h30	1h30		45h00	40%	60%
Fundamental UE Code: UEF 5.2 Credits: 9 Coefficients: 5	Building materials 2	CDD 5.3	4	2	1h30		1h30	45h00	40%	60%
	Soil mechanics 2	CDD 5.4	5	3	1h30	1h30	1h30	67h30	40% (20% TD + 20% TP)	60%
Methodological UE Code: UEM 5.1 Credits: 5 Coefficients: 5	Topography 2	CDD 5.5	2	2	1h30		1h30	45h00	40%	60%
	Computer-aided draughting 2	CDD 5.6	2	2			3h00	45h00	100%	
	Organization and Management of Worksite	CDD 5.7	1	1	1h30			22h30		100%
Discovery UE Code: UED 5.1 Credits: 1 Coefficients: 1	Environment and waste management	CDD 5.8	1	1	1h30			22h30		100%
Transversal UE Code: UET5.1 Credits :1 Coefficients :1	Technical English	CDD 5.9	1	1	1h30			22h30		100%
<b>Total Hourly Volume</b>			<b>30</b>	<b>19</b>	<b>13h30</b>	<b>7h30</b>	<b>7h30</b>	<b>427h30</b>		

• Semester 6

Teaching Unit	Subject Titles	Code	Credits	Coefficients	Weekly Hours			VHS	Evaluation Method	
					Course	Directed work	Practical work		Continuous Assessment	Final Exam
Fundamental UE Code: UEF 6.1 Crédits:12 Coefficients:7	Reinforced Concrete 3	CDD 6.1	5	3	1h30	3h00		67h30	40%	60%
	Foundations and Geotechnical Structures	CDD 6.2	4	2	1h30	1h30		45h00	40%	60%
	Reinforced Concrete Project	CDD 6.3	3	2			3h00	45h00	100%	
Fundamental UE Code: UEF 6.2 Credits: 12 Coefficients :7	Metal frame 3	CDD 6.4	5	3	1h30	3h00		67h30	40%	60%
	Construction Sustainable Development	CDD 6.5	4	2	1h30	1h30		45h00	40%	60%
	Metal Frame Project	CDD 6.6	3	2			3h00	45h00	100%	
Methodological UE Code: UEM 6.1 Credits: 5 Coefficients :4	Highways And Miscellaneous External Networks	CDD 6.7	2	2	1h30	1h30		45h00	40%	60%
	Internship 1	CDD 6.8	1	1	Hours exceeding quota (average 100 hours) Tutoring: 1.5 hours of practical work per week				100%	
	Computer-aided Design	CDD 6.9	2	1			3h00	45h00	100%	
Transversal UE Code: UET 6.1 Credits :1 Coefficients :1	Entrepreneurship and corporate management	CDD.6.10	1	1	1h30			22h30		100%
Total Hourly Volume			30	19	9h00	10h30	9h00	427h30		

• **Semester 7**

Teaching Unit	Subject Titles	Code	Credits	Coefficients	Weekly Hours			VHS	Evaluation Method	
					Course	Directed work	Practical work		Continuous Assessment	Final Exam
Fundamental UE Code: UEF 7.1 Credits: 10 Coefficients: 5	Structural Design (BA/CM)	CDD71	6	3	3h00	1h30		67h30	40%	60%
	Structures Dynamic 1	CDD 7.2	4	2	1h30	1h30		45h00	40%	60%
Fundamental UE Code: UEF 7.2 Credits: 10 Coefficients: 5	Continuum Mechanics 1	CDD 7.3	6	3	3h00	1h30		67h30	40%	60%
	Reinforcement and Structures Rehabilitation (Design and Calculation)	CDD 7.4	4	2	1h30	1h30		45h00	40%	60%
Methodological UE Code: UEM 7.1 Credits: 6 Coefficients: 5	Experiment design	CDD 7.5	2	2	1h30		1h30	45h00	40%	60%
	Numerical Calculation in Civil Engineering	CDD 7.6	2	2			3h00	45h00	100%	
	Professional personal project	CDD 7.7	2	1	Hourly volume outside quota				100%	
Discovery UE Code: UED 7.1 Credits: 3 Coefficients: 3	Secondary trades	CDD 7.8	1	1	1h30			22h30		100%
	Heating and Air Conditioning	CDD.7.9	2	2	1h30	1h30		45h00	40%	60%
Transversal UE Code: UET 7.1 Credits: 1 Coefficients: 1	Measurement and Price Estimation	CDD7.10	1	1	1h30		1h30	45h00	40%	60%
<b>Total Hourly Volume</b>			<b>30</b>	<b>19</b>	<b>15h00</b>	<b>7h30</b>	<b>6h00</b>	<b>427h30</b>		



• **Semester 8**

Teaching Unit	Subject Titles	Code	Credits	Coefficients	Weekly Hours			VHS	Evaluation Method	
					Course	Directed work	Practical work		Continuous Assessment	Final Exam
Fundamental UE Code: UEF 8.1 Credits: 14 Coefficients: 7	Prestressed Concrete	CDD8.1	6	3	3h00	1h30		67h30	40%	60%
	Structures Dynamic 2	CDD 8.2	4	2	1h30	1h30		45h00	40%	60%
	Mix structures (steel-concrete)	CDD 8.3	4	2	1h30	1h30		45h00	40%	60%
Fundamental UE Code: UEF 8.2 Credits: 9 Coefficients: 5	Continuum Mechanics 2	CDD 8.4	4	2	1h30	1h30		45h00	40%	60%
	Finite Element Methods	CDD 8.5	5	3	1h30	1h30	1h30	67h30	40% (20% TD + 20%TP)	60%
Methodological UE Code: UEM 8.1 Credits: 4 Coefficients: 4	Structures Modeling	CDD 8.6	2	2			3h00	45h00	100%	
	Internship 2	CDD 8.7	1	1	Hours exceeding quota (average 100 hours) Tutoring: 1.5 hours of practical work per week				100%	
	Geotechnical Study 1	CDD 8.8	1	1			1h30	22h30	100%	
Discovery UE Code: UED 8.1 Credits: 2 Coefficients: 2	Building Information Modeling (BIM)	CDD 8.9	2	2	1h30		3h00	67h30	40%	60%
Transversal UE Code: UET 8.1 Credits: 1 Coefficients: 1	Respect for norms and rules of ethics and deontology	CDD.8.10	1	1	1h30			22h30		100%
<b>Total Hourly Volume</b>			<b>30</b>	<b>19</b>	<b>12h00</b>	<b>7h30</b>	<b>9h00</b>	<b>427h30</b>		

• **Semester 9**

Teaching Unit	Subject Titles	Code	Credits	Coefficients	Weekly Hours			VHS	Evaluation Method	
					Course	Directed work	Practical work		Continuous Assessment	Final Exam
Fundamental UE Code: UEF 9.1 Credits: 9 Coefficients: 4	Formwork and Shoring Dimensioning	CDD 9.1	4	2	1h30	1h30		45h00	40%	60%
	Special structures	CDD 9.2	5	2	1h30	1h30		45h00	40%	60%
Fundamental UE Code: UEF 9.2 Credits: 10 Coefficients: 5	Plastic Design of Structures	CDD 9.3	4	2	1h30	1h30		45h00	40%	60%
	Rheology of Materials	CDD 9.4	6	3	1h30	3h00		67h30	40%	60%
Methodological UE Code: UEM 9.1 Credits: 7 Coefficients: 6	Soil-Structure Interaction	CDD 9.5	3	3	1h30	1h30	1h30	67h30	40% (20% TD + 20% TP)	60%
	FABLAB/ Prototyping	CDD 9.6	2	2			3h00	45h00	100%	
	Geotechnical Study 2	CDD 9.7	2	1			1h30	22h30	100%	
Discovery UE Code: UED 9.1 Credits: 3 Coefficients: 3	Public Tenders Code	CDD 9.8	1	1	1h30			22h30		100%
	Project management	CDD 9.9	1	1	1h30			22h30		100%
	Smart Buildings	CDD.9.10	1	1	1h30			22h30		100%
Transversal UE Code: UET 9.1 Credits: 1 Coefficients: 1	Documentary research and memory design	CDD 9.11	1	1	1h30			22h30		100%
<b>Total Hourly Volume</b>			<b>30</b>	<b>19</b>	<b>13h30</b>	<b>9h00</b>	<b>6h00</b>	<b>427h30</b>		

### **Semester 10 Specialty Engineer:**

The PFE must be done in conjunction with a company or within the framework of decree 1275 (startup) sanctioned by a dissertation and a defense.

	VHS	Coeff	Credits
Personal Work	277	10	18
Company internship	50	05	06
Seminars	50	02	03
Other (supervision)	50	02	03
Total Semester 10	<b>427</b>	<b>19</b>	<b>30</b>

### **Engineering End-of-Cycle Project Evaluation**

- Scientific value (Jury assessment) /6
- Writing the Dissertation (Jury Assessment) /4
- Presentation and answer to questions (Jury assessment) /4
- Assessment of the supervisor /3
- Presentation of the internship report (Jury assessment) /3