

1- Semester 1:

Teaching Unit	Subjects		Credits	Coefficients	Weekly Hourly Volume			VHS (15 weeks)	Others	Assessment Methods	
	Codes	Title			Lectures	Tutorials	Practicals			Continuous Assessment	Examination
Fundamental Teaching Unit Code : UEF 11 Credits: 18 Coefficients : 9	F111	Mathematics 1	6	3	3h00	1h30		67h30	82h30	X	X
	F112	Physics 1	6	3	3h00	1h30		67h30	82h30	X	X
	F113	Structure of Matter	6	3	3h00	1h30		67h30	82h30	X	X
	M111	Practical Work Physics 1	2	1			1h30	10:30 p.m.	12:30 p.m.	X	
Teaching Unit Methodological Code : UEM 11 Credits: 9 Coefficients : 5	M112	Chemistry 1 Practical Work	2	1			1:30 a.m.	10:30 p.m.	12:30 p.m.	X	
	M113	Computer Science 1	4	2	1:30 a.m.		1:30 a.m.	45:00 p.m.	55:00 p.m.	X	X
	M114	Methodology of Writing	1	1	1:00 a.m.			3:00 p.m.	10:00 a.m.		X
	D111	Careers in Science and Technology 1	1	1	1:30 a.m.			10:30 p.m.	2:30 a.m.		X
Cross-Curricular Teaching Unit Code : UET 11 Credits: 2 Coefficients : 2 Total Semester 1	T111	French Language 1	1	1	1h30			22h30	02h30		X
	T112	English Language 1	1	1	1h30			22h30	02h30		X
			30	17	16h00	4h30	4h30	375h00	375h00		

2 - Semester 2:

Teaching Unit	Subjects		Credits	Coefficients	Weekly Hourly Volume			V.H.S (15 weeks)	Others	Assessment Methods	
	Codes	Title			Tutorials	Practicals	Examinations			Continuous Assessment	Examination
Fundamental Unit Code: UEF 21 Credits: 18 Coefficients : 9	F211	Mathematics 2	6	3	3h00	1h30		67h30	82h30	X	X
	F212	Physics 2	6	3	3h00	1h30		67h30	82h30	X	X
	F213	Thermodynamics	6	3	3h00	1h30		67h30	82h30	X	X
Teaching Unit Methodological Code : UEM 21 Credits: 9 Coefficients : 5	M211	Practical Work Physics 2	2	1		1h30		22h30	27h30	X	
	M212	Chemistry 2 Practical Work	2	1		1h30		22h30	27h30	X	
	M213	Computer Science 2	4	2	1h30			45h00	55h00	X	X
	M214	Presentation Methodology	1		1h00			15h00	10h00		X
Discovery Teaching Unit Code : UED 21 Credits: 1 Coefficients : 1	D211	Careers in Science and Technology 2	1	1	1h30			22h30	02h30		X
Cross-Curricular Teaching Unit Code : UET 21 Credits: 2 Weights: 2	T211	French Language 2	1	1	1h30			22h30	02h30		X
	T212	English Language 2	1	1	1h30			22h30	02h30		X
Total Semester 2			30	17	16h00	4h30	4h30	375h00	375h00		

3- Semester 3:

Teaching Unit	Subjects		Credits	Coefficients	Weekly Hourly Volume			V.H.S (15 weeks)	Others	Assessment Methods	
	Codes	Title			Lectures	Tutorials	Practicals			Continuous Assessment	Examination
Fundamental 1 Teaching Unit Code : UEF 31 Credits: 16 Coefficients : 16	F311	Maths 3	04	04	1.5	1.5		45	45	X	X
	F312	General Electricity	06	06	03	1.5	1.5	90	78.75	X	X
	F313	General Electronics	06	06	03	1.5	1.5	90	78.75	X	X
	F321	Metrology and Sensors in Rail Transport Rails	05	3	1.5		1.5	45		X	
Fundamental 2 Teaching Unit Code : UEF 32 Credits: 9 Coefficients : 7	F322	Probability and Statistics	01	01	1.5			22.5	22.5	X	X
	F323	Materials Electrical Engineering in Electric Traction	03	03	1.5			22.5	22.5	X	X
	M311	Transport Engineering	02	02	1.5			22.5	22.5	X	X
Cross-Curricular Teaching Unit Code : UET 31 Credits: 3 Coefficients : 3	T311	Reading Mechanical and Electrical Plans	03	03	1.5		0.75	33.75	22.5	X	X
Total Semester 3			30	28	15	4.5	5.25	371.25 h			

4- Semester 4:

Teaching Unit	Subjects		Credits	Coefficients	Weekly Hourly Volume			V.H.S (15 weeks)	Others	Assessment Methods	
	Codes	Title			Lectures	Tutorials	Practicals			Continuous Assessment	Examination
Fundamental 1 Course Unit Code : UEF 41 Credits: 7 Coefficients: 7	F411	Maths 5	03	03	1.5	0.75		33.75	33.75	X	X
	F412	Combinatorial and Sequential Logic	04	04	1.5		1.5	45	45	X	X
Fundamental 2 Course Unit Code : UEF 41 Credits: 11 Coefficients : 11	F421	Electrical Machines	06	06	03	0.75	1.5	78.75	78.75	X	X
	F422	Electrical Equipment	05	05	2.25	0.75	1.5	67.5	45	X	X
Methodological Tutorial Code : UEM 41 Credits: 7 Coefficients : 7	M411	Supply in Transport Power	04	04	1.5	0.75		33.75	33.75	X	X
	M412	Numerical Methods and Programming	03	03	1.5		3	67.5	33.75	X	X
Discovery Tutorial Code : UED 41 Credits: 2 Coefficients : 2	D411	Rail Transport Infrastructure	02	02	1.5			22.5	22.5	X	X
Cross-Curricular Tutorial Code: UET 41 Credits: 3 Coefficients : 3	T412	Business Management	03	03	1.5			22.5	22.5	X	X
Total Semester 4			30	30	14.5	3	7.5	371.25	360h		

5- Semester 5:

Teaching Unit Codes	Subjects		Credits	Coefficients	Weekly Hourly Volume			V.H.S (15 weeks)	Others	Assessment Methods	
		Title			Lectures	Tutorials	Practicals			Continuous Assessment	Examination
Fundamental 1 Teaching Unit Code: UEF 51 Credits: 10 Coefficients : 9	F511	Mechanical Elements in Railway Rolling Stock	5	4	3	0.75		56.25	67.5	X	X
	F512	Electric Traction Equipment for Urban Transport	5	5	3	1.5		67.5	45	X	X
Fundamental 2 Teaching Unit Code: UEF 52 Credits: 8 Coefficients : 8	F521	Power Electronics	6	6	3	1.5	1.5	90	78.75	X	X
	F522	Energy Storage Elements	2	2	1.5			22.5	22.5	X	X
Methodological Tutoring Unit Code : UEM 51 Credits: 10 Coefficients : 10	M511	Railway Infrastructure Maintenance Management	4	4	1.5	1.5		45	45	X	X
	M512	Power Supply for Urban Rail Vehicles	2	2	1.5			22.5	45	X	X
	M513	Railway Standards and Regulations	4	4	1.5	1.5		45	45	X	X
Cross-Curricular Tutoring Unit Code : UET 51 Credits: 2 Coefficients : 2	T511	Project Management	2	2	1.5			22.5	22.5	X	X
Total Semester 5			30	29	16.5	6.75	1.5	371.25	371h15		

6- Semester 6:

Teaching Unit	Subjects		Credits	Coefficients	Weekly Hourly Volume			VHS (15 weeks)	Others	Assessment Methods	
	Codes	Title			Lectures, Tutorials	Practicals				Continuous Assessment	Examination
Fundamental Teaching Unit Code : UEF 61 Credits: 8 Coefficients : 8	F611	Control and Regulation	6	6	3	1.5	0.75	78.75			
	F612	Signaling System	2	2	1.5			22.5	45	X	X
General Knowledge Teaching Unit Code : UED 61 Credits: 4 Coefficients : 4	D611	Operation of Guided Systems	2	2	1.5			22.5	45	X	X
	D612	Comfort and Safety in Rail Transport	2	2	1.5			22.5	45	X	X
Transversal Teaching Unit Code : UET 61 Credits: 18 Coefficients : 18	T611	End-of-Studies Internship: Preparation of the End-of-Studies Dissertation	18	18				225			
Total Semester 6			30	30	7.5	1.5	0.75	371.25	360 hours		

7- Overall summary of the training:

(Indicate the overall VH separated into courses, TD, for the 6 semesters of teaching, for the different types of UE)

VH \ UE	UEF	UEM	UED	UET	Total
Course	697.5	322.5	45	270	1335
TD	326.25	101.25			427.5
TP	56.25	135	101.25	-	292.5
Personal work	-	-	-	225	225
Other (specify)	-	-	-	-	
Total	1080	558.75	146.25	495	2280
Credits	97	44	15	24	180
% in credits for each UE	53.88%	24.44%	8.33%	13.33%	100%