

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
MINISTRY OF HIGHER EDUCATION
AND SCIENTIFIC RESEARCH

TRAINING OFFER
L.M.D

Educational program

3rd year Fundamental Physics

Semester 1

Teaching unit	VHS	Weekly Hours			Autre* (14-16 sem)	Coeff	Credits	Evaluation Method	
	14-16 sem	C	TD	TP				Continu	Exam
Fundamental Unit									
UF11	202h30	09h00	4h30			9	18		
Mathematics 1/ Analysis & Algebra 1	67h30	03h00	1h30		45h00	3	6	x	x
Physics 1/ Mechanics of a point	67h30	03h00	1h30		45h00	3	6	x	x
Chemistry 1/ Structure of Matter	67h30	03h00	1h30		45h00	3	6	x	x
Methodology Unit									
UEM11	90h00	1h30	-	4h30		4	8		
Mechanics practical work	22h30		-	1h30	45h00	1	2	x	x
Chemistry practical work	22h30		-	1h30	45h00	1	2	x	x
Computer Science 1/ Office & Web Technologies (7 weeks) + Introduction to Algorithms (8 weeks)	45h00	1h30	-	1h30	45h00	2	4	x	x
Discovery Unit									
UED11	22h30	1h30	-	-		1	2		
Discovery of University Study Methods	22h30	01h30	-	-	45h00	1	2	x	x
Environment									
Biotechnology									
Transversal Unit									
UET11	1h30	-	-	-		1	2		
Foreign Languages 1	1h30	-	-	-	45h00	1	2	x	x
Total Semester 1	337h30	12h00	4h30	4h30		15	30		

Semester 2

Teaching unit	VHS	Weekly Hours			Autre* (14-16 sem)	Coeff	Credits	Evaluation Method	
	14-16 sem	C	TD	TP				Continu	Exam
Fundamental Unit									
UF21	202h30	09h00	4h30			9	18		
Mathematics 2/ Analysis & Algebra 2	67h30	03h00	1h30		45h00	3	6	x	x
Physics 2 / Electricity 2	67h30	03h00	1h30		45h00	3	6	x	x
Chemistry 2/ Thermodynamics & Chemical Kinetics	67h30	03h00	1h30		45h00	3	6	x	x
Methodology Unit									
UEM21	90h00	1h30	-	4h30		4	8		
Electricity practical work	22h30	-	-	1h30	45h00	1	2	x	x
Chemistry Practical Work 2	22h30	-	-	1h30	45h00	1	2	x	x
Informatique 2/Programming Language	45h00	1h30	-	1h30	45h00	2	4	x	x
Discovery Unit									
UED21	22h30	1h30	-	-		1	2		
Business Economics	22h30	01h30	-	-	45h00	1	2	x	x
History of Science									
Renewable Energies									
Transversal Unit									
UET21	1h30	-	-	-		1	2		
Foreign Languages 2	1h30	-	-	-	45h00	1	2	x	x
Total Semester 2	337h30	12h00	4h30	4h30		15	30		

Semester 3

Teaching Unit	SHV	WEEKLY VOLUME			Else* (14-16 week)	Coeff	Credits	Evaluation method	
	14-16week	C	TD	TP				14-16 week	C
Fundamental Teaching Unit									
FTU3(O/P)	225h00	9h00	6h00		275h00	10	20	33%	67%
Series & Differential Equations	67h30	3h00	1h30	-	82h30	3	6	33%	67%
Analytical Mechanics	67h30	3h00	1h30	-	82h30	3	6	33%	67%
Vibrations & Waves	45h00	1h30	1h30	-	55h00	2	4	33%	67%
Geometric Optics & Physics	45h00	1h30	1h30	-	55h00	2	4	33%	67%
Methodology Teaching Unit									
MTU3(O/P)	90h00	1h30		4h30	85h00	4	7	50%	50%
Practical Work on Vibrations & Waves	22h30	-	-	1h30	27h30	1	2	50%	50%
Practical Work on Geometric Optics & Physics	22h30	-	-	1h30	27h30	1	2	50%	50%
Numerical Methods and Programming	45h00	1h30	-	1h30	30h00	2	3	50%	50%
Discovery Teaching Unit									
DTU3(O/P)	45h00	1h30	1h30		5h00	2	2		100%
One subject to be chosen among:									
Probability & Statistics	45h00	1h30	1h30	-	5h00	2	2	-	100%
Physical crystallography									
History of Physics									
Inorganic Chemistry									
Transversal Teaching Unit									
TTU(O/P)	15h00	1h00			10h00	1	1		100%
Foreign languages 3	15h00	1h00	-	-	10h00	1	1	-	100%
Total Semester 1	375h00	13h00	7h30	4h30	375h00	17	30		

*Other = Complementary work in semester consultation (personal work of the student)

Semester 4

Teaching Unit	SVH	WEEKLY VOLUME			Other* (14-16 week)	Coeff	Credits	Evaluation method	
	14-16 week	C	TD	TP				14-16 week	C
Fundamental Teaching Unit									
FTU4(O/P)	202h30	7h30	6h00		247.30	9	18		
Thermodynamics	67h30	3h00	1h30	-	82h30	3	6	33%	67%
Function of the Complex Variable	45h00	1h30	1h30	-	55h00	2	4	33%	67%
Quantum Mechanics	45h00	1h30	1h30	-	55h00	2	4	33%	67%
Electromagnetism	45h00	1h30	1h30	-	55h00	2	4	33%	67%
Methodology Teaching Unit									
MTU4(O/P)	112h30	3h00		4h30	87h30	5	8		
Practical work in Thermodynamics	22h30	-		1h30	27h30	1	2	50%	50%
Fluid Mechanics	45h00	1h30		1h30	30h00	2	3	50%	50%
General Electronics	45h00	1h30		1h30	30h00	2	3	50%	50%
Discovery Teaching Unit									
DTU4(O/P)	45h00	1h30	1h30		30h00	2	3		
One subject to be chosen among: Atomic & Nuclear Physics									
Concept of Astronomy and Astrophysics	45h00	1h30	1h30	-	30h00	2	3		100%
Spectroscopy									
Analysis Techniques									
Transversal Teaching Unit									
TTU4(O/P)	15h00	1h00			10h00	1	1		
Foreign languages 4	15h00	1h00	-	-	10h00	1	1		100%
Total Semester 4	375h00	13h00	7h30	4h30	375h00	17	30		

Semester 5

Teaching Unit	SVH	WEEKLY VOLUME			Other* (14-16 week)	Coeff	Credits	Evaluation method	
	14-16 week	C	TD	TP				14-16 week	C
Fundamental Teaching Unit									
FTU1(O/P)									
Quantum Mechanics II	67h30	3h00	1h30	-	82h30	3	6	33%	67%
Statistical Physics	67h30	3h00	1h30	-	82h30	3	6	33%	67%
Special Relativity	45h00	01h30	01h30	00h		2	4	33%	67%
Mathematical Methods for Physics	45h00	1h30	1h30	-	55h00	2	4	33%	67%
Methodology Teaching Unit									
MTU4(O/P)									
Mathematical Methods for the Physics of Semiconductors	45h00	01h30	00h	01h30		2	4	50%	50%
Numerical Physics	45h00	1h30		1h30	30h00	2	4	50%	50%
Data analysis	45h00	1h30		1h30	30h00	2	4	50%	50%
Discovery Teaching Unit									
DTU4(O/P)	45h00	1h30	1h30		30h00	2	3		
One subject to be chosen among:									
Particle Physics	45h00	01h30	00h	00h		1	1		100%
The Energies									
Biophysics									
Accoustics									
Differential Geometry									
Didactic Processes									
Transversal Teaching Unit									
TTU(O/P)	15h00	1h00			10h00	1	1		
Foreign languages 1	15h00	1h00	-	-	10h00	1	1		100%
Total Semester 5	352h30	14h30	06h00	03h00		16	30		

Semester 6

Teaching Unit	SVH	WEEKLY VOLUME			Other* (14-16 week)	Coeff	Credits	Evaluation method	
	14-16 week	C	TD	TP				14-16 week	C
Fundamental Teaching Unit									
UEF1(O/P)									
Solid State Physics	67h30	03h00	01h30	00h		3	6	33%	67%
Nuclear Physics	45h00	01h30	01h30	00h		2	4	33%	67%
Heat Transfer	45h00	01h30	01h30	00h		2	4	33%	67%
Atomic Physics	45h00	01h30	01h30	00h		2	4	33%	67%
Methodology Teaching Unit									
UEM1(O/P)	112h30	3h00		4h30		5	8		
TP Nuclear Physics	22h30	00h	00h	01h30		2	4	50%	50%
TP Atomic Physics	22h30	00h	00h	01h30		2	4	50%	50%
TP of Physical Optics	22h30	00h	01h30	01h30		2	4	50%	50%
TP Solid State Physics									
Discovery Teaching Unit									
Ethics and Deontology	22h30	01h30	00h	00h		1	1		
UED2(O/P)One subject to be chosen among:	45h00	1h30	1h30			2	3		
Plasma Physics	45h00	1h30	00	-		2	2		100%
Nanotechnologie									
Laser									
Optoelectronics									
Solar Photocell									
NouveauxMatériaux									
Transversal Teaching Unit									
UET1(O/P)									
Scientific English II	15h00	1h00	-	-	10h00	1	1		100%
Total Semester 6	307h30	11h30	06h00	06h00		17	30	307h30	