



2020-2021

Subjects, units, and hours (First stage)

Subject Name	Units	Hours		Course code	Stage
		Practical	Theoretical		
Mechanics	3	0	3	PHYS102	1 st
Arabic	2	0	2	PHYS103	
Human Rights	2	0	2	PHYS104	
Electricity	3	0	3	PHYS105	
Computer science I	3	2	2	COMP127	
Mathematics I	3	0	3	MATH129	
Practical Physics I (Mechanics ,Electricity)	3	6	0	PHYS106	
General Chemistry	3	2	2	CHEM131	
Material Properties	3	0	3	PHYS107	
English	2	0	2	PHYS110	
Democracy	2	0	2	PHYS109	
Magnetism	3	0	3	PHYS108	
Computer science II	3	2	2	COMP128	
Mathematics II	3	0	3	MATH130	
Practical Physics II (Mechanics, electricity)	3	6	0	PHYS111	
Geology	3	2	2	GEO101	
	44	20	34	Total	



Subjects, units, and hours (Second stage)

Subject Name	Units	Hours		Course code	Stage
		Practical	Theoretical		
Thermodynamics	2	0	2	PHYS201	2 nd
Analog Electronics	3	0	3	PHYS202	
Geometrical Optics	2	0	2	PHYS203	
Modern Physics I	2	0	2	PHYS204	
Mathematics III	3	0	3	MATH229	
Astronomy I	2	0	3	PHYS205	
Practical Physics I (atomic, thermal, analog)	4.5	9	0	PHYS206	
Health Culture	1	0	1	PHYS111	
Statistical Mechanics	2	0	2	PHYS207	
Digital Electronics	3	0	3	PHYS208	
Geometrical Optics II	2	0	2	PHYS209	
Modern Physics II	2	0	2	PHYS210	
Mathematics IV	3	0	3	MATH230	
Astronomy II	2	0	3	PHYS210	
Practical Physics II (atomic, thermal, analog)	4.5	9	0	PHYS211	
Philosophy of Science	1	0	1	PHYS212	
	39	18	32	Total	



Subjects, units, and hours (Third stage)

Subject Name	Units	Hours		Course code	Stage
		Practical	Theoretical		
Analytical Mechanics I	3	0	3	PHYS301	3 rd
Mathematics and Modeling I	3	2	2	PHYS302	
Laser Physics	2	0	2	PHYS303	
Plasma Physics	2	0	2	PHYS304	
Crystallography	2	0	2	PHYS305	
Physical Optics I	2	0	2	PHYS306	
Practical Physics I	1.5	3	0	PHYS307	
Analytical Mechanics II	3	0	3	PHYS308	
Mathematic and Modeling II	3	2	2	PHYS309	
Laser Applications	2	0	2	PHYS310	
Molecular Physics	2	0	2	PHYS311	
Material Science	2	0	2	PHYS312	
Physical Optics II	2	0	2	PHYS313	
Practical Physics II	1.5	3	0	PHYS314	
	31	10	26	Total	



Subjects, units, and hours (Fourth stage)

Subject Name	Units	Hours		Course code	Stage
		Practical	Theoretical		
Quantum Mechanics I	3	0	3	PHYS401	4 th
Electromagnetism I	3	0	3	PHYS402	
Nuclear Physics I	3	0	3	PHYS403	
Solid State Physics I	3	0	3	PHYS404	
Elective I (Solar Energy)	2	0	2	PHYS405	
Practical Physics I (Nuclear, Solid)	3	6	0	PHYS406	
Quantum Mechanics II	3	0	3	PHYS407	
Electromagnetism II	3	0	3	PHYS408	
Nuclear Physics II	3	0	3	PHYS409	
Solid State Physics II	3	0	3	PHYS410	
Elective II (Nano Physics)	2	0	2	PHYS411	
Practical Physics II (Nuclear, Solid)	3	6	0	PHYS412	
Project Research	2	0	2	PHYS413	
	36	12	30	Total	



Total units and hours required for graduation from the Physics

Department for the four stages

Number of units	Number of hours		Number of hours
	practical	Theoretical	
44	20	34	First
39	18	32	Second
29	10	26	Third
36	12	30	Fourth
148	60	122	Total
	182		