



**Department of Physics - Physics Degree Plan with a Minor in Medical Physics for
Cohort 2021-2025**

Categories	CR
University Requirements (UR)	6
University Electives (UE)	6
College Requirements (CR)	3
College Electives (CE)	12
Departmental Requirements (DR)	66
Major Electives (AE)	5
Minor Requirements (IR)	24
Total	122

	Course Code	Course Title	Cr.	Pre-Requisite/Co-Requisite*	Cat.
Semester 1 Fall	ARAB1060	Arabic	2		UR
	LANC2058	Communication in Science	3	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604	CR
	MATH2107	Calculus I	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and (FPMT0105 or FPMT0108)	CE
	PHYS2101	General Physics I	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and (FPMT0105 or FPMT0108)	CE
		University Elective	2		UE
	Total		15		

Semester 2 Spring	BIOL2101	General Biology I	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604	IR
	HIST1010 or ISLM1010	Oman & Islamic Civilization or Islamic Culture	2		UR
	MATH2109	Calculus II	3	MATH2107	DR
	PHYS 2102	General Physics II	4	PHYS2101 / MATH2107*	DR
		University Elective	2		UE
	Total		15		

Semester 3 Fall	COMP2101	Introduction to Computer Science	4	FPEL0560 or FPEL0600 or FPEL0601 or FPEL0602 or FPEL0603 or FPEL0604 and FPMT0105 or FPMT0108	CE
	MATH3171	Linear Algebra & Multivariate Calculus for Engineers	3	LANC2058 and MATH2109	DR
	PHYS3103	Physics III	3	LANC2058 and PHYS2102	DR
		Major Elective	3		AE
		University Elective	2		UE
	Total		15		
Semester 4 Spring	BIOL2105	Human Physiology	4	BIOL2101	IR
	PHYS3005	Experimental Methods of Physics I	3	LANC2058 and PHYS2102	DR
	PHYS3110	Computational Physics I	2	LANC2058 and COMP2101 and MATH2107 and PHYS2101 /MATH3171*	DR
	PHYS3101	Theoretical Methods of Physics	3	PHYS3103 and LANC2058 and MATH2109 /MATH3171*	DR
	PHYS3104	Modern Physics	3	LANC2058 and PHYS3103	DR
	Total		15		

Semester 5 Fall	PHYS3001	Dynamics	3	PHYS3101	DR
	PHYS4030	Electromagnetic Theory	3	PHYS3101 and PHYS3103 and MATH3171	DR
	PHYS4105	Experimental Methods of Physics II	3	PHYS3005	DR
	MEDP3000	Ionizing Radiation	3	PHYS3104	IR
	PHYS4018	Thermal & Statistical Physics	4	PHYS3104	DR
	Total		16		

Semester 6 Spring	PHYS3106	Electronics	4	LANC2058 and PHYS2102	DR
	PHYS4101	Quantum Physics I	3	PHYS3101 and PHYS3104	DR
	SOCY1005	State and People	2		UR
	MEDP4000	Biological Effects of Radiation	3	BIOL2105	IR
	MEDP4001	Non-ionizing Radiation	3	PHYS3012 and PHYS3104	IR
	Total		15		

Summer	PHYS5555	Physics Internship	1	Completed 90 Credits	DR
	Total		1		

Semester 7 Fall	PHYS4110	Computational Physics II	3	PHYS3001 and PHYS3110 and PHYS4101	DR
	PHYS5003	Condensed Matter Physics I	3	PHYS4018 and PHYS4101	DR
	PHYS5106	Nuclear Physics	3	PHYS4101	DR
	MEDP4004	Project in Medical Physics I	3		IR
	PHYS5551	Physics Project I	2	PHYS4105 and PHYS4018 OR PHYS4030 OR PHYS4101	DR
	Total		14		

Semester 8 Spring	MEDP4005	Project in Medical Physics II	3		IR
	PHYS4100	Optics & Lasers	3	PHYS4030	DR
	PHYS5105	Experimental Methods of Physics III	3	PHYS3106 and PHYS4105 and /PHYS4100* and PHYS5003*	DR
	PHYS5552	Physics Project II	4	PHYS5551	DR
	*****	Major Elective	2		AE
	MEDP4006	Medical Physics Internship	1	MEDP4001 & MEDP4004	IR
	Total		16		

Prof Issam Ali
Head of Department of Physics
10 March 2024

Dean :Dr.Talal Al Hosni

Date:11.03.2024


