

SCHEME OF STUDIES APPLIED PHYSICS

Batch 2016-17 FIRST YEAR ----- SEMESTER SYSTEM									
Course Code	Course Title	Crd Hrs							
		Th	Pr	T					
Applied Physics									
SPRING	CS-101	Introduction to Computer	2	1	3				
	MT-173	Calculus	3	0	3				
	PH-101	Mechanics & Properties of Matter	3	0	3				
	PH-102	Heat & Thermodynamics	2	0	2				
	CY-115	General Chemistry-I	2	1	3				
	PH-103	Physics Lab-I	0	1	1				
	HS-105	Pakistan Studies OR							
	HS-127	Pakistan Studies (for Foreigners)	2	0	2				
	MT-227	Differential Equations	3	0	3				
	EL-255	Programming Language	2	1	3				
FALL	PH-104	Waves & Oscillations	2	0	2				
	PH-105	Electricity & Magnetism	3	0	3				
	PH-106	Physics Lab-II	0	1	1				
	CY-116	General Chemistry-II	2	1	3				
	HS-104	Functional English	3	0	3				

Batch 2016-17 SECOND YEAR ----- SEMESTER SYSTEM									
Course Code	Course Title	Crd Hrs							
		Th	Pr	T					
Applied Physics									
FALL 17-18	HS-201	Oral Communication	2	1	3				
	PH-201	Optics	2	0	2				
	PH-202	Modern Physics	3	0	3				
	PH-203	Physics Lab-III	0	1	1				
	MT-272	Linear Algebra & Geometry	3	0	3				
	EL-232	Electronics	3	1	4				
	HS-205	Islamic Studies OR							
	HS-209	Ethical Behaviour (for Non-Muslims)	2	0	2				
	PH-205	Classical Mechanics	3	0	3				
	PH-204	Introduction to Material Science	3	0	3				
SPRING 2018	MT-331	Probability & Statistics	3	0	3				
	MT-228	Complex Variables & Fourier Transforms	3	0	3				
	EL-238	Digital Electronics	3	1	4				
	PH-206	Physics Lab-IV	0	1	1				

Batch 2016-17 THIRD YEAR ----- SEMESTER SYSTEM									
Course Code	Course Title	Crd Hrs							
		Th	Pr	T					
Applied Physics									
FALL 2018	PH-301	Quantum Mechanics-I	3	0	3				
	PH-302	Laser Engineering	3	0	3				
	PH-303	Mathematical Physics-I	3	0	3				
	PH-304	Electromagnetic Theory-I	3	0	3				
	PH-305	Vacuum Science	2	0	2				
	HS-301	Business & Organizational Communication	3	0	3				
	PH-311	Physics Lab-V	0	1	1				
	PH-307	Mathematical Physics-II	3	0	3				
	PH-308	Quantum Mechanics-II	3	0	3				
	PH-309	Electromagnetic Theory-II	3	0	3				
SPRING 2019	PH-310	Solid State Physics-I	3	0	3				
	PH-312	Physics Lab-VI	0	1	1				
	PH-313	Cosmology and Theory of Relativity	3	0	3				

Batch 2016-17 FINAL YEAR ----- SEMESTER SYSTEM									
Course Code	Course Title	Crd Hrs							
		Th	Pr	T					
Applied Physics									
FALL 2019	PH-401	Computational Physics	2	0	2				
	PH-409	Atomic & Molecular Physics	2	0	2				
	PH-403	Solid State Physics-II	3	0	3				
	PH-417	Nuclear Physics	2	0	2				
	PH-407	*Applied Physics Project	0	3	3				
	##-###	Elective-1							
	PH-408	Physics Lab-VII	0	1	1				
	PH-415	Statistical Mechanics	2	0	2				
	EL-344	Power Electronics	3	1	4				
	##-###	Elective-2							
SPRING 2020	PH-407	Applied Physics Project	0	3	3				
	PH-412	Introduction to Nanoscience and Nanotechnologies	2	0	2				
	PH-413	Surface Science	2	0	2				

Batch 2016-17 ELECTIVE COURSES									
Materials Group									
MM-401	Material Characterization Techniques	3	1	4					
MY-402	Advance Materials	3	0	3					
Electronics Group									
EL-484	Optoelectronics and Microwave Systems	3	1	4					
EL-333	Integrated Circuits	2	1	3					
Space Group									
PH-416	Space Physics	3	1	4					
PH-411	Applications of Space Physics	3	0	3					