

SCHEME OF STUDIES (BS PHYSICS)

Course Code	Course Title	Cr. Hrs.	Course Type
SEMESTER-I			
Gen 1001	English-I (Reading and Writing Skills)	3	Comp-1
Gen 1002	Pakistan Studies	2	Comp-2
Gen 1003	Islamic Studies/Ethics	2	Comp-3
Math 1001	Calculus-I	3	Comp-4
Phys 1001	Mechanics	3	Found-1
Phys 1002	Waves and Optics	3	Found-2
Phys 1601L	Physics Lab-I	1	Found-3
Credit Hours		17	
SEMESTER-II			
Gen 1004	English-II (Composition Writing)	3	Comp-5
Math 1002	Calculus-II	3	Comp-6
Phys 1003	Thermal Physics	3	Found-4
Phys 1004	Electricity and Magnetism	3	Found-5
Phys 1602L	Physics Lab-II	1	Found-6
Math 1003	Probability and Statistics	3	Gen-1
Credit Hours		16	
SEMESTER III			
Phys 2003	Chemistry/Natural Science	3	Gen-2
Phys 2001	Quantum Physics	3	Found-7
Math 2003	Differential Equations	3	Gen-3
Math 2004	Analytical Geometry	3	Gen-4
Gen 2005	Introduction to Computing	3	Comp-7
Phys-2603L	Physics Lab-III	1	Found-8
Credit Hours		16	
SEMESTER-IV			
Phys 2002	Modern Physics	3	Found-9
Phys 2003	Basic Electronics	3	Found-10
Phys 2904	Physics Lab-IV	1	Found-11
Math 2005	Linear Algebra	3	Gen-5
Gen 2006/Gen 2007	Humanities/ Social Science	3	Gen-6
Math 2004	Applied Mathematics	3	Gen-7
Credit Hours		16	

Course Code	Course Title	Cr. Hrs.	Course Type
SEMESTER-V			
Phys 3101	Classical Mechanics	3	Maj-1
Phys 3501	Mathematical Methods of Physics-I	3	Maj-2
Phys 3401	Solid State Physics-I	3	Maj-3
Phys 3701	Electronics-I	3	Maj-4
Phys 3605L	Physics Lab-V	2	Maj-5
Phys 3502	Computational Physics-I	3	Maj-6
Credit Hours		17	
SEMESTER-VI			
Phys 3503	Mathematical Methods of Physics-II	3	Maj-7
Phys 3402	Solid State Physics-II	3	Maj-8
Phys 3301	Quantum Mechanics-I	3	Maj-9
Phys 3504	Computational Physics-II	3	Maj-10
Phys 3702	Electronics-II	3	Maj-11
Phys 3606 L	Physics Lab-VI	2	Maj-12
Credit Hours		17	
SEMESTER-VII			
Phys 4302	Quantum Mechanics-II	3	Maj-13
Phys 4403	Statistical Physics	3	Maj-14
Phys 4201	Classical Electrodynamics-I	3	Maj-15
Phys 4303	Nuclear Physics-I	3	Maj-16
Phys xxxx	Elective-I	3	Elective
Phys xxxx	Elective-II	3	Elective
Credits Hours		18	
Semester-VIII			
Phys 4404	Solid State Physics-III	3	Maj-17
Phys 4202	Classical Electrodynamics-II	3	Maj-18
Phys 4304	Nuclear Physics-II	3	Maj-19
Phys 4102	Relativity and Cosmology	3	Maj-20
Phys xxxx	Elective-III	3	Elective
Phys xxxx	Elective-IV	3	Elective
Credit Hours		18	
Total Credit Hours		135	

List of Elective Courses

Elective courses will be offered from the following list by the Department of Physics in view of availability of instructors and related resources. More titles in the list of elective courses can be added from time to time subject to the approval by relevant academic bodies.

Course Code	Course Title	Cr. Hrs.
Elective Subjects		
Phys 4305	Introductory Particle Physics	3
Phys 4306	Relativistic Quantum Mechanics	3
Phys 4405	Topics in Solid State Physics	3
Phys 4406	Advanced Solid State Physics	3
Phys 4308	Quantum Information Theory	3
Phys 4703	Introduction to Photonics	3
Phys 4309	Quantum Solid State Magnetism	3
Phys 4310	Quantum Electronics	3
Phys 4103	Astrophysics	3
Phys 4607	Medical Physics	3