

BS Physics

Admissions: Fall

Program Duration: 4 years

Total Semesters: 8

Total Credit Hours: 133

Scheme of Studies:

SEMESTER 1			
Course Code	Course Title	Credit Hour	Course Domain
PHY-501	Introductory Mechanics	3(2-1)	Major
MTH-XXX	Calculus-I	3(3-0)	Major
QRE-501	Quantitative Reasoning-I	3(3-0)	General Education
PHY-503	Natural Science/Fundamental of Physics	3(3-0)	General Education
ENG-501	Functional English	3(3-0)	General Education
ICT-501	Applications of Information and Communication Technologies (ICT)	3(2-1)	General Education
Total Cr. Hrs. = 18			
SEMESTER 2			
Course Code	Course Title	Credit Hour	Course Domain
PHY-502	Wave & Optics	3(2-1)	Major
MTH-XXX	Calculus-II	3(3-0)	Major
QRE-502	Quantitative Reasoning-II	3(3-0)	General Education
ENG-502	Expository Writing	3(3-0)	General Education
PKS-501	Pakistan Studies	2(2-0)	General Education
XXX-XXX	Social Sciences (1-Selected from the pool)	2(2-0)	General Education
ISL-121	Islamic Studies (Ethics for non-Muslims students)	2(2-0)	General Education
Total Cr. Hrs. = 18			
SEMESTER 3			
Course Code	Course Title	Credit Hour	Course Domain
PHY-505	Electricity & Magnetism	3(2-1)	Major
PHY-507	Heat & Thermodynamics	3(2-1)	Major
MTH-XXX	Differential Equations	3(3-0)	Major
MTH-XXX	Linear Algebra	3(3-0)	Interdisciplinary
XXX-XXX	Arts & Humanities (1-Selected from the pool)	2(2-0)	General Education
ICT-501	Ideology and Constitution of Pakistan	2(2-0)	General Education
THQ-501	Translation of Holy Quran	1(0-1)	Compulsory
Total Cr. Hrs. = 17			
SEMESTER 4			

Course Code	Course Title	Credit Hour	Course Domain
PHY-504	Modern Physics	3(2-1)	Major
MTH-XXX	Vector Calculus	3(3-0)	Major
PHY-506	Classical Mechanics	3(3-0)	Major
PHY-508	Environmental Physics	3(3-0)	Interdisciplinary
CCE-501	Civics & Community Management	2(2-0)	General Education
ENT-501	Entrepreneurship	2(2-0)	General Education
THQ-501	Translation of Holy Quran	1(0-1)	Compulsory
Total Cr. Hrs. = 17			
SEMESTER 5			
Course Code	Course Title	Credit Hour	Course Domain
PHY-509	Electronics-I	3(2-1)	Major
PHY-511	Mathematical Methods of Physics-I	3(3-0)	Major
PHY-513	Electromagnetic Theory	3(3-0)	Major
PHY-515	Medical Physics	3(3-0)	Interdisciplinary
PHY-517	Computational Physics	3(2-1)	Interdisciplinary
PHY-519	Scientific inquiry & Research Methods	3(3-0)	Interdisciplinary
Total Cr. Hrs. = 18			
SEMESTER 6			
Course Code	Course Title	Credit Hour	Course Domain
PHY-510	Electronics-II	3(2-1)	Major
PHY-512	Quantum Mechanics-I	3(3-0)	Major
PHY-514	Mathematical Methods of Physics-II	3(3-0)	Major
PHY-516	Electrodynamics & Special Relativity	3(3-0)	Major
PHY-518	Condensed Matter Physics	3(3-0)	Major
Total Cr. Hrs. = 15			
SEMESTER 7			
Course Code	Course Title	Credit Hour	Course Domain
PHY-521	Atomic & Molecular Physics	3(2-1)	Major
PHY-523	Quantum Mechanics-II	3(3-0)	Major
PHY-525	Nuclear Physics	3(2-1)	Major
PHY-XXX	Elective-I	3	Major
PHY-XXX	Elective-II	3	Major
Total Cr. Hrs. = 15			
SEMESTER 8			
Course Code	Course Title	Credit Hour	Course Domain
PHY-520	Statistical Mechanics	3(3-0)	Major
PHY-XXX	Elective-III	3(3-0)	Major
PHY-XXX	Elective-IV	3(3-0)	Major
PHY-522	Artificial Intelligence in Physics	3(2-1)	Interdisciplinary

	Capstone	3(3-0)	Capstone
Total Cr. Hrs. = 15			
Total Credit Hours = 133			

STRUCTURE

Sr.	Categories	No. of courses	Credit Hours
1.	General Education Course (No Choice)	13	32
2.	Major Courses	26	78
3.	Interdisciplinary Courses	6	18
4.	Capstone	1	3
5.	Compulsory	2	2
	Total	46	133

➤ Total numbers of Credit hours	133
➤ Duration	4 Years
➤ Semester duration	4-5 Months
➤ Semesters	8
➤ Course Load per Semester	15-18