

**BS Physics:**

<b>Semester I</b>		<b>Credit Hrs.</b>	
		<b>Theory</b>	<b>Lab</b>
Gen Ed/ Language	Functional English-I	3	
Non-Disp/Math	Calculus and Analytical Geometry-I	3	
Non-Disp/CS	Introduction to Computing	3	
Phy	Mechanics	3	
Non-Disp/Che	Chemistry-I	2	1
Gen Ed/Culture	Islamic Studies/Ethics	2	
Phy	Lab I - Mechanics		1
Qur'an	Qur'an Translation I (Imaniaat)	1	
<b>Total</b>		<b>17</b>	<b>2</b>

<b>Semester II</b>		<b>Credit Hrs.</b>	
		<b>Theory</b>	<b>Labs</b>
Gen Ed/Language	Technical Report Writing	3	
Non-Disp/Math	Calculus and Analytical Geometry-II	3	
Phy	Electricity & Magnetism	3	
Phy	Heat & Thermodynamics	3	
Gen Ed/Culture	Pakistan Studies	2	
Non-Disp/Che	Chemistry-II	2	1
Phy	Lab II - Electricity & Magnetism		1
<b>Total</b>		<b>16</b>	<b>2</b>

<b>Semester III</b>		<b>Credit Hrs.</b>	
		<b>Theory</b>	<b>Labs</b>
Gen Ed/Language	Communication and Presentation Skills	3	
Non-Disp/Math	Linear Algebra	3	
Phy	Waves & Oscillations	3	
Phy	Modern Physics	3	
Non-Disp/Eco	Economics	3	
Phys	Lab III – Heat, waves, and sound		1
Qur'an	Qur'an Translation I (Ibadaat)	1	
<b>Total</b>		<b>16</b>	<b>1</b>

<b>Semester IV</b>		<b>Credit Hrs.</b>	
		<b>Theory</b>	<b>Lab</b>
Non-Disp/Math	Differential Equations	3	
Non-Disp/Statistics	Probability & Statistics	3	
Phy	Optics	3	
Non-Disp/CS	Introduction to Programming	3	
Gen Ed/Mgt	Project Management	3	
Gen Ed/Soc	Introduction of Psychology	2	
Phy	Lab IV – Optics		1
<b>Total</b>		<b>17</b>	<b>1</b>

Semester V		Credit Hrs.	
		Theory	Labs
Phy	Mathematical Methods of Physics-I	3	
Phy	Electrodynamics-I	3	
Phy	Classical Mechanics	3	
Phy	Electronics-I	3	
Gen Ed/Soc	Professional Ethics	2	
Phy	Lab V – Electronics		2
Qur'an	Qur'an Translation I (Mua'amlaat)	1	
<b>Total</b>		<b>15</b>	<b>2</b>

Semester VI		Credit Hrs.	
		Theory	Labs
Phy	Mathematical Methods of Physics-II	3	
Phy	Electrodynamics-II	3	
Phy	Quantum Mechanics-I	3	
Phy	Electronics-II	3	
Phy	Statistical Physics	3	
Phy	Lab VI – Modern physics, spectroscopy		2
Qur'an	Qur'an Translation I (Ikhlaiqiaat)	1	
<b>Total</b>		<b>16</b>	<b>2</b>

Semester VII		Credit Hrs.	
		Theory	Lab
Phy	Quantum Mechanics-II	3	
Phy	Atomic & Molecular Physics	3	
Phy	Solid State Physics-I	3	
Phy	Nuclear Physics	3	
Phy	Elective-I	3	
Phy	Lab VII – Atomic physics, solid state physics,		2
<b>Total</b>		<b>15</b>	<b>2</b>

Semester VIII		Credit Hrs.	
		Theory	Labs
Phy	Solid State Physics-II	3	
Phy	Elective-II	3	
Phy	Elective-III	3	
Phy	Elective-IV	3	
Phy	Research Project	3	
<b>Total</b>		<b>15</b>	
<b>Program Total Credit Hours(139)</b>		<b>127</b>	<b>12</b>

**List of elective courses:** All following courses are 3+0 credit hours.

Techniques of Experimental Physics, Computational Physics, Laser Physics, Plasma Physics, Introduction to Quantum Information and Computation, Condensed Matter Physics, Particle Physics, High Energy Physics, Introduction to Material Science, Introduction to Photonics, Radiation Physics, Nanoscience and Nanotechnology, Environmental Physics.