

## BS in Biotechnology

Course Title	Course Code	Course Type	Credit Hour
<b>Semester 1</b>			
Botany (Theory + Practical)	NBOT-110	General	<u>3</u>
Functional English	GENG-101	General	<u>3</u>
Civics and Community Engagement	GCCE-101	General	<u>2</u>
Islamic Studies / Ethics (for Non-Muslims)	GISL-101 / GETH-101	General	<u>2</u>
Elements of Biotechnology	BT. 101	Major	<u>3</u>
Cell Biology (Theory + Practical)	BCBT-101	Major	<u>3</u>
Fehm-e-Quran	HQ-001N	Compulsory	<u>0</u>
			<b>Total Credit Hours 16</b>
<b>Semester 2</b>			
Introduction to the Topics of The Qur'ān (AH)	AISL-100	General	<u>2</u>
Quantitative Reasoning (I)	GQR-101	General	<u>3</u>
Entrepreneurship	GENT-101	General	<u>2</u>
Ideology and Constitution of Pakistan	GICP-101	General	<u>2</u>
Biochemistry I	BT-102	Major	<u>3</u>
Principles of Genetics	BCBT-102	Major	<u>3</u>
Tarjuma-e-Quran	HQ-002	Compulsory	<u>1</u>
Biosafety, Biosecurity & Bioethics	BT.-104	Major	<u>2</u>
			<b>Total Credit Hours 18</b>
<b>Semester 3</b>			
Applications of Information and Communication Technologies	GICT-201	General	<u>3</u>
Expository Writing	GENG-201	General	<u>3</u>
Agriculture Biotechnology	BT-201	Major	<u>3</u>
Microbiology	BCBT-203	Major	<u>2</u>
Molecular Biology	BCBT-201	Major	<u>3</u>
Tarjuma-e-Quran	HQ-003	Compulsory	<u>0</u>
Pakistan Studies.	GPST-201	General	<u>2</u>
Microbiology (Lab)	BCBT203L	Major	<u>1</u>
			<b>Total Credit Hours 17</b>
<b>Semester 4</b>			
<u>GEN(SS)</u>		General	<u>2</u>
Quantitative Reasoning (II)	GQR-202	General	<u>3</u>
Industrial Biotechnology	BT-206	Major	<u>3</u>
Health Biotechnology	BT-204	Major	<u>3</u>
Recombinant DNA Technology	BT-202	Major	<u>3</u>
Tarjuma-e-Quran	HQ-004	Compulsory	<u>1</u>
Internship	BT-200	Major	<u>3</u>
			<b>Total Credit Hours 18</b>
<b>Semester 5</b>			
Bioinformatics	Bt-303	Major	<u>3</u>
Ecology and Biodiversity		Interdisciplinary	<u>3</u>
Biostatistics	BCBT-301	Major	<u>3</u>
Biochemistry – II	BT-305	Major	<u>3</u>
Analytical Chemistry & Instrumentation	BT-301	Major	<u>3</u>
Tarjuma-e-Quran	HQ-005	Compulsory	<u>0</u>
			<b>Total Credit Hours 15</b>
<b>Semester 6</b>			
Biophysics		Interdisciplinary	<u>3</u>
Principles of Biochemical Engineering	BT-306	Major	<u>3</u>
Methods in Molecular Biology	BT-304	Major	<u>3</u>
Immunology	BCBT-302	Major	<u>3</u>
Genomics & Proteomics	BT-302	Major	<u>3</u>
Tarjuma-e-Quran	HQ-006	Compulsory	<u>1</u>
			<b>Total Credit Hours 16</b>
<b>Semester 7</b>			
Environmental Biotechnology	BT-407	Major	<u>3</u>
Artificial Intelligence in Biotechnology	BT-405	Major	<u>2</u>
Scientific Inquiry and Research Methods	BCBT-401	Major	<u>3</u>
Microbial Biotechnology	BT-401	Major	<u>3</u>
Capstone	BT-480	Major	<u>3</u>
Tarjuma-e-Quran	HQ-007	Compulsory	<u>0</u>
Elective Course-I		Major	<u>3</u>
			<b>Total Credit Hours 17</b>
<b>Semester 8</b>			
Elective Course-IV		Major	<u>3</u>
Elective Course-III		Major	<u>3</u>
Elective Course-II		Major	<u>3</u>
Nanobiotechnology	BT-404	Major	<u>3</u>
Food Biotechnology	BT-402	Major	<u>3</u>
Tarjuma-e-Quran	HQ-008	Compulsory	<u>1</u>
			<b>Total Credit Hours 16</b>

