

## Bachelor of Biotechnology (B.Sc. Hons)

Total Credit: 148

FIRST SEMESTER						SECOND SEMESTER					
Code	Course Name	L	T	P	C	Code	Course Name	L	T	P	C
BIO1101	Diversity of Lower Plants	2	1	0	3	BIO1201	Mycology and Plant Pathology	2	1	0	3
BIO1102	Fundamentals of Biotechnology	2	1	0	3	BIO1202	Elements of Biochemistry	2	1	0	3
BIO1103	Cell Biology: Structure & Functions	2	1	0	3	BIO1203	Gymnosperms and Palaeobotany	2	1	0	3
BIO1130	Botany Laboratory- I	0	0	2	1	BIO1204	Essentials of Microbiology	2	1	0	3
BIO1131	Biotechnology Laboratory-I	0	0	4	2	BIO1230	Botany Laboratory- II	0	0	4	2
CAP1170	Fundamentals of Computer	1	1	0	2	BIO1231	Biotechnology Laboratory-II	0	0	4	2
CAP1175	Fundamentals of Computer lab	0	0	2	1	XXXXXX	GE-II (A)	2	1	0	3
CHY1003	Environmental Science	2	1	0	3	XXXXXX	GE-II (A) Lab	0	0	2	1
LLC1106	Communicative English	2	0	0	2	XXXXXX	GE-II (B)	2	1	0	3
XXXXXX	GE – I	2	1	0	3	XXXXXX	GE-II (B) Lab	0	0	2	1
XXXXXX	GE – I Lab	0	0	2	1						
		<b>13</b>	<b>6</b>	<b>10</b>	<b>24</b>			<b>12</b>	<b>6</b>	<b>12</b>	<b>24</b>
<b>Total Contact Hours (L + T + P)</b>		<b>29</b>				<b>Total Contact Hours (L + T + P)</b>		<b>30</b>			
THIRD SEMESTER						FOURTH SEMESTER					
Code	Course Name	L	T	P	C	Code	Course Name	L	T	P	C
BIO2101	Fundamentals of Bioinformatics	2	1	0	3	BIO2201	Introduction to Biotechniques	2	1	0	3
BIO2102	Molecular Biology	2	1	0	3	BIO2202	Fundamentals of Immunology	2	1	0	3
BIO2103	Principles of Genetics	2	1	0	3	BIO2203	Recombinant DNA Technology and Forensics	3	1	0	4
BIO2104	Plant Tissue Culture Techniques	2	1	0	3	BIO2204	Biotechnology in Agriculture	2	1	0	3
BIO2130	Botany Laboratory-III	0	0	2	1	BIO2206	Plant Morphology	2	1	0	3
BIO2131	Biotechnology Laboratory-III	0	0	4	2	BIO2230	Botany Laboratory-IV	0	0	4	2
BIO2132	Plant Tissue Culture Lab	0	0	2	1	BIO2231	Biotechnology Laboratory-IV	0	0	4	2
XXXXXX	GE – III (A)	2	1	0	3	BIOXXX	DSE – I	3	1	0	4
XXXXXX	GE – III (A) Lab	0	0	2	1	XXXXXX	Open Elective				3
XXXXXX	GE – III (B)	2	1	0	3						
XXXXXX	GE – III (B) Lab	0	0	2	1						
		<b>12</b>	<b>6</b>	<b>12</b>	<b>24</b>			<b>14</b>	<b>6</b>	<b>8</b>	<b>27</b>
<b>Total Contact Hours (L + T + P)</b>		<b>30</b>				<b>Total Contact Hours (L + T + P) + OE</b>		<b>28</b>			

FIFTH SEMESTER						SIXTH SEMESTER					
Code	Course Name	L	T	P	C	Code	Course Name	L	T	P	C
BIO3101	Ethnobotany	2	1	0	3	BIO3201	Physiology of Living Systems	2	1	0	3
BIO3102	Fundamentals of Cell Culture	2	1	0	3	BIO3202	Medical Biotechnology	2	1	0	3
BIO3103	Industrial Biotechnology	2	1	0	3	BIO3203	Applied Plant Biology	2	1	0	3
BIO3130	Botany Laboratory-V	0	0	2	1	BIO3230	Botany Laboratory-VI	0	0	4	2
BIO3131	Biotechnology Laboratory-V	0	0	4	2	BIO3231	Biotechnology Laboratory-VI	0	0	2	1
BIO3170	DSE-II - Project	0	0	24	8	BIOXXXX	DSE – IV (A)	2	1	0	3
XXXXXXX	DSE- IIIA MOOC course	2	0	0	2	BIOXXXX	DSE – IV (B)	2	1	0	3
XXXXXXX	DSE- IIIB MOOC course	2	0	0	2	XXXXXXX	GE – IV	2	1	0	3
						XXXXXXX	GE – IV Lab	0	0	2	1
						XXXXXXX	Open Elective				3
		10	3	30	24			12	6	8	25
<b>Total Contact Hours (L + T + P)</b>		<b>43</b>				<b>Total Contact Hours (L + T + P) + OE</b>		<b>26+3</b>			

Discipline Specific Electives (DSE)		
IV	V	VI
<b>Discipline Specific Electives 1</b> <ul style="list-style-type: none"> <li>BIO2240: Ethical issues and IPR in Biotechnology</li> <li>BIO2241: Cell Based Assay</li> </ul>	<b>Discipline Specific Electives 2</b> <ul style="list-style-type: none"> <li>BIO3170: Project</li> </ul> <b>Discipline Specific Electives 3</b> <p>(A)</p> <ul style="list-style-type: none"> <li>BT3148: Gut Check: Exploring Your Microbiome</li> </ul> <p>(B)</p> <ul style="list-style-type: none"> <li>BT3149: Drug Discovery</li> </ul>	<b>Discipline Specific Electives 4</b> <p>(A)</p> <ul style="list-style-type: none"> <li>BIO3240: Plant Breeding</li> <li>BIO3241: System Biology</li> </ul> <p>(B)</p> <ul style="list-style-type: none"> <li>BIO3242: Food Biotechnology</li> <li>BIO3243: Expression Purification of Therapeutic Proteins</li> <li>BIO3247: Sanitation and Sludge Management</li> </ul>

Generic Electives (GE)			
I	II	III	V
<b>Generic Electives 1</b> <ul style="list-style-type: none"> <li>CHY1160: General Chemistry- I</li> <li>CHY1138: Organic Chemistry Laboratory</li> </ul>	<b>Generic Electives 2</b> <ul style="list-style-type: none"> <li>CHY1260: General Chemistry –II</li> <li>CHY1238: Inorganic Chemistry Laboratory</li> </ul> <b>Generic Electives 3</b> <ul style="list-style-type: none"> <li>CHY1261: General Chemistry –III</li> <li>CHY1239: Physical Chemistry Laboratory</li> </ul>	<b>Generic Electives 4</b> <ul style="list-style-type: none"> <li>CHY2160: Analytical Chemistry</li> <li>CHY2138: Analytical Chemistry Laboratory</li> </ul> <b>Generic Electives 5</b> <ul style="list-style-type: none"> <li>MAS2146: Fundamentals of Biostatistics</li> <li>MAS2134: Lab on Fundamentals of Biostatistics</li> </ul>	<b>Generic Electives 6</b> <ul style="list-style-type: none"> <li>CHY3260: Biophysical Chemistry</li> <li>CHY3238: Applied Chemistry Laboratory</li> </ul>

**Open Electives**

**Graded OE**

**Non-Graded OE**

- **BIO2080:** Elements of Bioscience and Biotechnology
- **BIO2081:** Science of Living Systems