

## B.Sc. (Hons.) Microbiology 2022

Year	FIRST SEMESTER					SECOND SEMESTER						
	Course Code	Course Name	L	T	P	C	Course Code	Course Name	L	T	P	C
I	BT1101	Diversity of Lower Plants	2	1	0	3	BT1201	Mycology and Plant Pathology	2	1	0	3
	BT1102	Fundamentals of Biotechnology	2	1	0	3	BT1202	Elements of Biochemistry	2	1	0	3
	BT1103	Cell Biology: Structure & Functions	2	1	0	3	BT1211	Cell Biology of Microorganisms	2	1	0	3
	BT1130	Botany Laboratory- I	0	0	2	1	BT1212	Microbial Nutrition and Growth	2	1	0	3
	BT1131	Biotechnology Laboratory-I	0	0	4	2	BT1232	Cell biology and Biochemistry Laboratory	0	0	4	2
	CA1170	Fundamentals of Computer	1	1	0	2	BT1233	Microbiology Laboratory-II	0	0	4	2
	CA1175	Fundamentals of Computer lab	0	0	2	1	*****	GE-II (A)	2	1	0	3
	CY1003	Environmental Science	2	1	0	3	*****	GE-II (A) Lab	0	0	2	1
	LN1106	Communicative English	2	0	0	2	*****	GE-II (B)	2	1	0	3
	*****	GE – I	2	1	0	3	*****	GE-II (B) Lab	0	0	2	1
	*****	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>
II	THIRD SEMESTER					FOURTH SEMESTER						
	BT2101	Fundamentals of Bioinformatics	2	1	0	3	BT2201	Introduction to Biotechniques	2	1	0	3
	BT2111	Microbial Genetics	3	1	0	4	BT2202	Fundamentals of Immunology	2	1	0	3
	BT2112	Virology	3	1	0	4	BT2203	Recombinant DNA Technology and Forensics	3	1	0	4
	BT2133	Biology Laboratory-III	0	0	4	2	BT2211	Food & Dairy Microbiology	2	1	0	3
	BT2134	Microbiology Laboratory-III	0	0	4	2	BT2212	Medical Microbiology	2	1	0	3
	BT2170	Industrial Visit	0	0	0	1	BT2232	Biology Laboratory-IV	0	0	4	2
	*****	GE – III (A)	2	1	0	3	BT2233	Microbiology Laboratory-IV	0	0	4	2
	*****	GE – III (A) Lab	0	0	2	1	*****	DSE – I	3	1	0	4
	*****	GE – III (B)	2	1	0	3	*****	Open Elective				3
	*****	GE – III (B) Lab	0	0	2	1						
			<b>12</b>	<b>5</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>29</b>	<b>Total Contact Hours (L + T + P) + OE</b>					<b>28 + 3 = 31</b>
III	FIFTH SEMESTER					SIXTH SEMESTER						
	BT3111	Industrial Microbiology	2	1	0	3	BT3201	Physiology of Living Systems	2	1	0	3
	BT3114	Molecular Genetics	2	1	0	3	BT3211	Bioprocess Technology	2	1	0	3
	BT3113	Environmental Microbiology	3	1	0	4	BT3203	Applied Plant Biology	2	1	0	3
	BT3132	Microbiology Laboratory-V	0	0	4	2	BT3232	Biology Laboratory-VI	0	0	2	1
	BT3170	DSE-II - Project	0	0	24	8	BT3233	Microbiology Laboratory-VI	0	0	4	2
	*****	DSE – IIIA -MOOC	2	0	0	2	*****	DSE – IV (A)	2	1	0	3

*****	DSE-III B-MOOC	2	0	0	2	*****	DSE – IV (B)	2	1	0	3
						*****	GE – IV	2	1	0	3
						*****	GE – IV Lab	0	0	2	1
						*****	Open Elective				3
		<b>10</b>	<b>4</b>	<b>28</b>	<b>24</b>			<b>12</b>	<b>6</b>	<b>8</b>	<b>25</b>
	<b>Total Contact Hours (L + T + P)</b>	<b>42</b>					<b>Total Contact Hours (L + T + P) + OE</b>	<b>26 + 3 = 29</b>			

<u>Discipline Specific Electives (DSE)</u>	<u>Generic Electives (GE)</u>	<u>Open Electives (OE) offered by the Department</u>
<p><b><u>DSE – I</u></b></p> <ol style="list-style-type: none"> <li>BT2240 Ethical issues and IPR in Biotechnology</li> <li>BT2241 Cell Based Assay</li> </ol> <p><b><u>DSE – II Project</u></b></p> <p><b><u>DSE – III - MOOC</u></b></p> <p><b><u>DSE – IV (A)</u></b></p> <ol style="list-style-type: none"> <li>BT3240 Plant Breeding</li> <li>BT3244 Microbes in Sustainable Development</li> </ol> <p><b><u>DSE – IV (B)</u></b></p> <ol style="list-style-type: none"> <li>BT3243 Expression purification of therapeutic proteins</li> <li>BT3245 Nutraceuticals</li> <li>BT3246 Plant and Animal Tissue Culture</li> <li>BT3247 Sanitation and Sludge Management</li> </ol>	<p><b><u>GE – I &amp; Lab</u></b></p> <ol style="list-style-type: none"> <li>CY1160 General Chemistry- I</li> <li>CY1138 Organic Chemistry Laboratory</li> </ol> <p><b><u>GE – II (A) &amp; Lab</u></b></p> <ol style="list-style-type: none"> <li>CY1260 General Chemistry –II</li> <li>CY1238 Inorganic Chemistry Laboratory</li> </ol> <p><b><u>GE – II (B) &amp; Lab</u></b></p> <ol style="list-style-type: none"> <li>CY1261 General Chemistry –III</li> <li>CY1239 Physical Chemistry Laboratory</li> </ol> <p><b><u>GE – III (A) &amp; Lab</u></b></p> <ol style="list-style-type: none"> <li>CY2160 Analytical Chemistry</li> <li>CY2138 Analytical Chemistry Laboratory</li> </ol> <p><b><u>GE – III (B) &amp; Lab</u></b></p> <ol style="list-style-type: none"> <li>MA2146 Fundamentals of Biostatistics</li> <li>MA2134 Lab on Fundamentals of Biostatistics</li> </ol> <p><b><u>GE – IV &amp; Lab</u></b></p> <ol style="list-style-type: none"> <li>CY3260 Biophysical Chemistry</li> <li>CY3238 Applied Chemistry Laboratory</li> </ol>	<ol style="list-style-type: none"> <li>BT2080 Elements of Bioscience and Biotechnology</li> <li>BT2081 Science of Living Systems</li> </ol>