

### M. Sc. Bioinformatics Course Curriculum (2019-2021)

#### I st SEMESTER (MS1)

S.No.	Subject	L-T-P	Credits
1	Programming, C and C++	3-0-0	3
2	Molecular Genetics and Genomics	3-0-0	3
	Microbial Immunoinformatics	3-0-0	3
3	Research Methodology and Inferential Statistics	3-0-0	3
4	Elements of Bioinformatics	3-0-0	3
6	Introduction to IPR	3-0-0	3
7	Programming, C and C++ Lab	0-0-2	1
8	Elements of Bioinformatics lab.	0-0-2	1
9	Linux and Matlab Lab	0-0-2	1
10	Molecular Genetics and Genomics Lab	0-0-2	1
11	Bioinformatics Database Lab	0-0-2	1
	<b>Total</b>	<b>28</b>	<b>23</b>

#### II nd SEMESTER (MS2)

S.No.	Subject	L-T-P	Credits
1	Computational and Functional Genomics	3-0-0	3
2	Database Design and Development	3-0-0	3
3	Data Mining and Machine Learning	3-0-0	3
4	Perl and Python for Bioinformatics	3-0-0	3
5	Elective -I	3-0-0	3
6	Computational and Functional Genomics Lab	0-0-2	1
7	Database Design and Development Lab	0-0-2	1
8	Data Mining and Machine Learning Lab	0-0-2	1
9	Perl and Python for Bioinformatics Lab	0-0-2	1
10	R Programming Lab	0-0-2	1
11	Masters Research Review Seminar	0-0-2	1
	<b>Total</b>	<b>27</b>	<b>21</b>

#### III rd SEMESTER (MS3)

S.No.	Subject	L-T-P	Credits
1	Web Application Development for Bioinformatics	3-0-0	3
2	Advances in Systems Biology	3-0-0	3
3	Structural Biology and Molecular Modelling	3-0-0	3
4	Elective - II	3-0-0	3
5	Structural Biology and Molecular Modelling lab	0-0-2	1
6	Web Application Development for Bioinformatics Lab	0-0-2	1
7	Masters Research Thesis -I	0-0-8	4
	<b>Total</b>	<b>24</b>	<b>18</b>

#### IV th SEMESTER (MS4)

S. No.	Subject	L-T-P	Credits
1	Project Part - II	0-0-26	13
	<b>Total</b>	<b>26</b>	<b>13</b>

**Electives:** Elective courses would be offered from the exiting approved elective courses of the Department.  
**Total credit Hours: 75.**