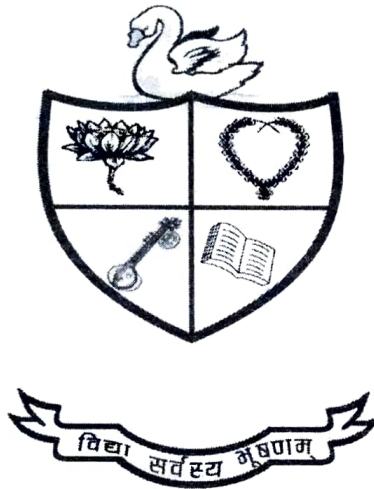


# Department of Biotechnology

## Syllabus M. Sc. Biotechnology



**2021-22**

**Govt. Digvijay Post Graduate (Autonomous) College  
Rajnandgaon (C.G.)**



**M.Sc. in Biotechnology – Semester Examination  
Based on Credit System  
2021-22**

M.Sc. Biotechnology divided in four Semester and each semester contains four papers. This is treated as 16 paper course structure. So, there will be 16 papers in each post graduate examination in Biotechnology containing 80 credits. In I, II, III and IV semester, each paper shall carry 100 marks (80 marks for External and 20 for Internal). All four Semester Including 2 Practical's, each practical's containing 100 marks. There shall be 2400 marks. Candidate shall have the secure 36 marks in aggregate of all papers in order to pass the examination.

First Semester	Paper	Title of Paper	Credit
	1	Cell Biology	4
	2	Genetics	4
	3	Microbial Physiology	4
	4	Bio-molecules	4
	LC-1	Lab Course 1 (Based on paper 1 & 2)	2
	LC-2	Lab Course 2 (Based on paper 3 & 4)	2
			Total 20
Second Semester	5	Biostatistics & Computer Applications in Biotechnology	4
	6	Molecular Biology	4
	7	Plant Biotechnology	4
	8	Macromolecules & Enzymology	4
	LC-3	Lab Course 3 (Based on paper 5 & 6)	2
	LC-4	Lab Course 4 (Based on paper 7 & 8)	2
			Total 20
Third Semester	Paper	Title of Paper	Credit
	9	Genetic Engineering	4
	10	Biology of Immune System	4
	11	Bioprocess Engineering & Technology	4
	12	Environmental Biotechnology	4
	LC-5	Lab Course 5 (Based on paper 9 & 10)	2
	LC-6	Lab Course 6 (Based on paper 11 & 12)	2
			Total 20
Fourth Semester	13	Basic Concept of Bioinformatics & Nanobiotechnology	4
	14	Advanced techniques in Biotechnology	4
	15	Animal Biotechnology	4
	16	Functional Genomics & Proteomics	4
	LC-7	Lab Course 7 (Based on paper 13 & 14)	2
	LC-8	Lab Course 8 (Based on paper 15 & 16)	2
			Total 20
	<b>Or</b>		
	13	Basic Concept of Bioinformatics & Nanobiotechnology	4
	14	Advanced techniques in Biotechnology	4
	LC-7	Lab Course 7 (Based on paper 13 & 14)	2
		<b>and</b>	
		<b>Project Work</b>	10
		<b>Grand Total</b>	<b>80</b>

**Project**

PBTEL-408

Project Work	External	Internal	Total
Dissertation	120	30	150
Seminar based on project	80	20	100
Viva-voce	40	10	50
<b>Total</b>			<b>300</b>

1. A student of IV semester will have the option to opt for project work in lieu of two theory papers and one lab courses.
2. The project has to be carried out in recognized national laboratories or UGC recognized universities or any other organization of public or private concern. The duration of project will be 90 days.
3. The department also gives opportunity to do project work maximum 02 students per faculty based on merit marks obtained in Semester I and II.
4. The valuation of all the projects will be carried out by the external examiner.

The project work should be related to the field of Biotechnology. The project report should include declaration by the candidate, certificate by the supervisor, acknowledgement, title and introduction along with the following points:

1. Introduction
2. Review of Literature
3. Materials and Methods
4. Results & Discussion
5. Summary
6. Bibliography

Signature					Date
<b>Board of Studies</b>	<b>Chairman</b> Dr. Pramod Kumar Mahish (H.O.D.)	<b>Subject Expert</b> Mrs. Soumya Khare	<b>Subject Expert</b> Mrs. Dr. Subha Diwan	<b>Subject Expert</b> Mr. Tarun Patel	06-08-2021