PG Course Structure
Programme: M.Sc., Biotechnology,
Semester-wise Distribution of Courses, Credits and Contact Hours

Part	Type of Course	Course Code	Title of the Course	Contact Hours/ Week	Credits	Marks		Total Marks
						Int	Ext	
SEMESTER–I								
III	Core - Theory I	24PBT101	Advances in Cell and Molecular Biology	4	4	25	75	100
III	Core - Theory II	24PBT102	Advances in Microbiology	4	4	25	75	100
III	Core - Theory III	24PBT103	Advances in Biochemistry	4	4	25	75	100
III	Core Laboratory – I	24PBT301	Advances in Cell and Molecular Biology Practical	4	2	40	60	100
III	Core Laboratory – 1I	24PBT302	Advances in Microbiology and Biochemistry Practical	4	2	40	60	100
III	Elective - Theory I	24PBT201 24PBT204 24PBT207 24PBT210	Introduction to Omics Technology/ Advances in Nanobiotechnology/ Marine Microbiology & Ecology/ Bioremediation Techniques and Applications	4	4	25	75	100
III	Elective - Theory II	24PBT213 24PBT216 24PBT219	Pharmaceutical Biotechnology/ Introduction to Industrial Biotechnology Advances in Food Technology	4	4	25	75	100
III	Core	24PCS601	Research Review on the current trends in Biotechnology	2	2	40	60	100
Total				**30**	**17**	**-**	**-**	**800**
SEMESTER–II								
III	Core - Theory IV	24PBT104	Advances in Immunology & Immunotechnology	4	4	25	75	100
III	Core - Theory V	24PBT105	IPR, Bioethics and Biostatistics	4	4	25	75	100
III	Core - Theory VI	24PBT106	r-DNA Technology	4	4	25	75	100
III	Core Laboratory – III	24PBT303	Advances in Immunology & Immunotechnology lab	4	2	40	60	100
III	Core Laboratory – IV	24PBT304	r-DNA Technology Lab	3	2	40	60	100
III	Elective - Theory III	24PBT202/ 24PBT205/ 24PBT208/ 24PBT211	Tools & Techniques in Bioinformatics/ Tools & Techniques in Nanobiotechnology/ Marine Pharmaceutics & Cosmeceutics / Biofuels and Bioenergy Production	4	4	25	75	100
III	Elective – Theory IV	24PBT214/ 24PBT217/ 24PBT220	Biopharmaceuticals/ Tools and Techniques in Industrial Biotechnology/ Food Microbiology & Safety	4	4	25	75	100

III	Core Article Publication - 1	24PBT602	Research Report	1	-	40	60	CIA
III	Ability (Skills) Enhancement Courses	24PAB451	Innovation Skills	1	1	40	60	100
Total				**30**	**25**	**-**	**-**	**800**
SEMESTER–III								
III	Core - Theory VII	24PBT107	Plant and Animal Biotechnology	5	4	25	75	100
III	Core – Theory VIII	24PBT108	Bioprocess Technology	5	4	25	75	100
III	Core – Theory IX	24PBT109	Research Methodology & Critical Analysis of Classical Papers	5	4	25	75	100
III	Core Laboratory – V	24PBT305	Plant and Animal Biotechnology Lab	4	2	40	60	100
III	Computing Laboratory – VI	24PBT306	Bioprocess Technology Lab	4	2	40	60	100
III	Core	24PBT602	Research Report	2	-	-	-	CIA
III	Application Development	24PBT603	Design, Development and Applications of Biosensors	2	2	40	60	100
III	Ability (Skills) Enhancement Courses	24PBT401	Soft Skills & Quantitative Skills	2	1	40	60	100
Total				**30**	**19**	**-**	**-**	**700**
SEMESTER–IV								
III	Elective - Theory V	24PBT215/ 24PBT218/ 24PBT221	Applications of Computational Biology	4	4	25	75	100
III	Elective – Theory VI	24PBT203/ 24PBT206 / 24PBT209/ 24PBT212	Protein Therapeutics and Drug Delivery System	4	4	25	75	100
III	Core Article Publication I	24PBT602	Research Report	2	2	40	60	100
II	Core: Internship	24PBT604	Industrial Training / Internship	-	2	40	60	-
III	Core: Project	24PBT605	Research Project	19	8	40	60	100
Total				**30**	**20**	**-**	**-**	**400**
Total				**120**	**90**	**-**	**-**	**2700**

Total Credits :26+25+19+20 = 90

Total Marks :800 + 800 + 700 + 400 = 2700