M.SC. BIOTECHNOLOGY

	Semester-I		Take home credits for students									
						Examination Scheme						
Sr. No.	Course Code	Subject	Periods (in Hours/week)			Theoretical Evaluation			Practical Examination	Credit Scheme			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	BT-111	Cell Biology	4	0	4	80	20	100	40	4	0	2	6
2	BT-112	Biomolecules and Metabolism	4	0	4	80	20	100	40	4	0	2	6
3	BT-113	Microbiology	4	0	4	80	20	100	40	4	0	2	6
4	BT-114	Molecular Biology	4	0	4	80	20	100	40	4	0	2	6
5	BT-115	Choice Based Paper*	4	0	4	80	20	100	40	4	0	2	6
6	BT-116	Communicative Skills	0	0	4	0	100	100	0	0	0	2	2
7	BT-117	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						600	200				33
	*Choice Based Paper: **Biostatistics**/computer applications in Biostatistics												

M.SC. BIOTECHNOLOGY 2011-12

Sr. No.	Course Code	Subject	Semester-II			Take home credits for students							
						Examination Scheme							
			Periods (in Hours/week)			Theoretical Evaluation			Practical Examination	Credit Scheme			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	BT-211	Immunology	4	0	4	80	20	100	40	4	0	2	6
2	BT-212	Bioinformatics	4	0	4	80	20	100	40	4	0	2	6
3	BT-213	Plant Physiology and Developmental Genetics	4	0	4	80	20	100	40	4	0	2	6
4	BT-214	Human Physiology and Developmental Genetics	4	0	4	80	20	100	40	4	0	2	6
5	BT-215	Choice Based Paper*	4	0	4	80	20	100	40	4	0	2	6
6	BT-216	Seminars	0	0	4	0	50	50	0	0	0	2	2
7	BT-217	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
	Total							550	200				33
*Choice Based Paper: Fundamentals of computer programming and algorithms/ Plant Cell Culture/Animal Cell Culture and Vaccinology / **Microbial Technology**													

M.SC. BIOTECHNOLOGY 2011-12

Sr. No.	Course Code	Subject	Semester-III			Take home credits for students						
			Periods (in Hours/week)			Examination Scheme				Credit Scheme		
						Theoretical Evaluation			Practical Examination			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	BT-311	Bioprocess engineering	4	0	4	80	20	100	40	4	0	2	6
2	BT-312	Plant Biotechnology	4	0	4	80	20	100	40	4	0	2	6
3	BT-313	Animal Biotechnology	4	0	4	80	20	100	40	4	0	2	6
4	BT-314	Genetic Engineering	4	0	4	80	20	100	40	4	0	2	6
5	BT-315	Choice based paper*	4	0	4	80	20	100	40	4	0	2	6
6	BT-316	Seminars	0	0	4	0	50	50	0	0	0	2	2
7	BT-317	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						550	200				33

*Choice Based Paper: Drug Design and Chemiinformatics/**Environmental Biotechnology**/Plant stress biology/Diagnostics

M.SC. BIOTECHNOLOGY 2011-12

Sr. No.	Course Code	Subject	Semester-IV Periods (in Hours/week)			Theoretical Evaluation			Practical Examination	Take home credits for students Credit Scheme			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	BT-411	Choice Based Paper-I*	4	0	0	80	20	100	0	4	0	0	4
2	BT-412	Choice Based Paper-II*	4	0	0	80	20	100	0	4	0	0	4
3	BT-413	Dissertation	0	0	36	0	0	0	300	0	0	18	18
		Total						200	300				26
*Choice Based Paper-I: **Management issues in Biotechnology** / Bioentrepreneurship													
*Choice Based Paper-II: **Ethical, Legal, Social issues in Biotechnology**/ IPR and Biotechnology													

M.Sc AGRICULTURE BIOTECHNOLOGY

	Semester-I		Take home credits for students			Examination Scheme							
Sr. No.	Course Code	Subject	Periods (in Hours/week)			Theoretical Evaluation			Practical Examination	Credit Scheme			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	ABT-111	Cell Biology	4	0	4	80	20	100	40	4	0	2	6
2	ABT-112	Biomolecules and Metabolism	4	0	4	80	20	100	40	4	0	2	6
3	ABT-113	Microbiology	4	0	4	80	20	100	40	4	0	2	6
4	ABT-114	Molecular Biology	4	0	4	80	20	100	40	4	0	2	6
5	ABT-115	Choice Based Paper*	4	0	4	80	20	100	40	4	0	2	6
6	ABT-116	Communicative Skills	0	0	4	0	100	100	0	0	0	2	2
7	ABT-117	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						600	200				33
	*Choice Based Paper: **Biostatistics**/computer applications in Biostatistics												

M.Sc. AGRICULTURE BIOTECHNOLOGY

Sr. No.	Course Code	Subject	Semester-II	Take home credits for students			Examination Scheme			Practical Examination	Credit Scheme			
			Periods (in Hours/week)			Theoretical Evaluation								
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	ABT-211	Genetic Engineering	4	0	4	80	20	100	40	4	0	2	6
2	ABT-212	Bioinformatics	4	0	4	80	20	100	40	4	0	2	6
3	ABT-213	Molecular Breeding	4	0	4	80	20	100	40	4	0	2	6
4	ABT-214	Plant Molecular Biol.	4	0	4	80	20	100	40	4	0	2	6
5	ABT-215	Choice Based Paper*	4	0	4	80	20	100	40	4	0	2	6
6	ABT-216	Seminars	0	0	4	0	50	50	0	0	0	2	2
7	ABT-217	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						550	200				33

*Choice Based Paper: Fundamentals of computer programming and algorithms/ **Plant Tissue Culture** /Animal Cell Culture and Vaccinology /Microbial Technology

M.Sc. AGRICULTURE BIOTECHNOLOGY

Sr. No.	Course Code	Subject	Periods (in Hours/week)			Theoretical Evaluation			Practical Examination	Credit Scheme			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
			Semester-III							**Take home credits for students**			
						Examination Scheme							
1	ABT-311	Plant Genetic Engineering	4	0	4	80	20	100	40	4	0	2	6
2	ABT-312	Plant Metabolic Engineering and Molecular Farming	4	0	4	80	20	100	40	4	0	2	6
3	ABT-313	Genomics and Proteomics	4	0	4	80	20	100	40	4	0	2	6
4	ABT-314	Biotic and abiotic stress biology	4	0	4	80	20	100	40	4	0	2	6
5	ABT-315	Choice Based Paper*	4	0	4	80	20	100	40	4	0	2	6
6	ABT-316	Seminars	0	0	4	0	50	50	0	0	0	2	2
7	ABT-317	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						550	200				33

*Choice Based Paper: Drug Design and Chemiinformatics/Environmental Biotechnology/ **Industrial & Food Biotech** /Diagnostics

M.SC. AGRICULTURE BIOTECHNOLOGY

	Semester-IV		**Take home credits for students**										
						Examination Scheme							
Sr. No.	Course Code	Subject	Periods (in Hours/week)			Theoretical Evaluation			Practical Examination	Credit Scheme			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	ABT-411	Choice Based Paper-I*	4	0	0	80	20	100	00	4	0	0	4
2	ABT-412	Choice Based Paper-II*	4	0	0	80	20	100	00	4	0	0	4
3	ABT-413	Dissertation	0	0	36	0	0	0	300	0	0	18	18
	Total							200	300				26
*Choice Based Paper-I: **Management issues in Biotechnology**/ Bioentrepreneurship													
*Choice Based Paper-II: **Ethical, Legal, Social issues in Biotechnology/** IPR and Biotechnology													

M.SC. BIOINFORMATICS-2011-12

Sr. No.	Course Code	Subject	Take home credits for students — Periods (in Hours/week)			Examination Scheme — Theoretical Evaluation			Practical Examination	Credit Scheme			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	BIN-131	Cell Biology	4	0	4	80	20	100	40	4	0	2	6
2	BIN-132	Biomolecules and Metabolism	4	0	4	80	20	100	40	4	0	2	6
3	BIN-133	Microbiology	4	0	4	80	20	100	40	4	0	2	6
4	BIN-134	Molecular Biology	4	0	4	80	20	100	40	4	0	2	6
5	BIN-135	Choice Based Paper*(P.E.)*	4	0	4	80	20	100	40	4	0	2	6
6	BIN-136	Communicative Skills (O.E.)	0	0	4	0	100	100	0	0	0	2	2
7	BIN-137	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						600	200				33

*Choice Based Paper: **Biostatistics**/computer applications in Biostatistics

M.SC. BIOINFORMATICS 2011-12

| Sr. No. | Course Code | Subject | Semester-II | | | Take home credits for students | | | | Examination Scheme | | | |
| | | | Periods (in Hours/week) | | | Theoretical Evaluation | | | Practical Examination | Credit Scheme | | | |
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	BIN-231	Immunology	4	0	4	80	20	100	40	4	0	2	6
2	BIN-232	Bioinformatics	4	0	4	80	20	100	40	4	0	2	6
3	BIN-233	Human Physiology and Developmental Genetics	4	0	4	80	20	100	40	4	0	2	6
4	BIN-234	Biophysics	4	0	4	80	20	100	40	4	0	2	6
5	BIN-235	Choice Based Paper*	4	0	4	80	20	100	40	4	0	2	6
6	BIN-236	Seminars	0	0	4	0	50	50	0	0	0	2	2
7	BIN-237	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						550	200				33
*Choice Based Paper: Fundamentals of Computer Programming and Algorithms/ Plant Cell Culture/Animal Cell Culture**Microbial Technology**													

M.SC. BIOINFORMATICS 2011-12

Sr. No.	Course Code	Subject	Periods (in Hours/week)			Theoretical Evaluation			Practical Examination	Credit Scheme			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	BIN-331	Genomics & Proteomics	4	0	4	80	20	100	40	4	0	2	6
2	BIN-332	Object oriented and relational databases	4	0	4	80	20	100	40	4	0	2	6
3	BIN-333	Tools and techniques for biological data-mining	4	0	4	80	20	100	40	4	0	2	6
4	BIN-334	Biological databases and data analysis	4	0	4	80	20	100	40	4	0	2	6
5	BIN-335	Choice Based Paper* (P.E.)	4	0	4	80	20	100	40	4	0	2	6
6	BIN-336	Seminars	0	0	4	0	50	50	0	0	0	2	2
7	BIN-337	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						550	200				33

Semester-III — Take home credits for students — Examination Scheme

*Choice Based Paper: **Drug Design and Chemiinformatics**/Environmental Biotechnology/Plant stress biology/Diagnostics

Practical Examination will be conducted in two phases: Phase 1 shall include the practical evaluation of Cell Biology; Bimolecules and Metabolism and Choice Based paper: Phase 2 shall include Microbiology and Molecular Biology

M.SC. BIOINFORMATICS 2011-12

Sr. No.	Course Code	Subject	Take home credits for students — Periods (in Hours/week)			Examination Scheme — Theoretical Evaluation			Practical Examination	Credit Scheme			
Semester-IV			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	BIN-431	Choice Based Paper-I*	4	0	0	80	20	100	0	4	0	0	4
2	BIN-432	Choice Based Paper-II*	4	0	0	80	20	100	0	4	0	0	4
3	BIN-433	Dissertation	0	0	36	0	0	0	300	0	0	18	18
		Total						200	300				26

*Choice Based Paper-I: **Management issues in Biotechnology**//Bioentrepreneurship

*Choice Based Paper-II**: Ethical, Legal, Social issues in Biotechnology** IPR and Biotechnology

M.SC. MEDICAL BIOTECHNOLOGY 2011-12

	Semester-I		Take home credits for students			Examination Scheme							
									Practical Examination	Credit Scheme			
Sr. No.	Course Code	Subject	Periods (in Hours/week)			Theoretical Evaluation							
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	MBT-131	Cell Biology	4	0	4	80	20	100	40	4	0	2	6
2	MBT-132	Biomolecules and Metabolism	4	0	4	80	20	100	40	4	0	2	6
3	MBT-133	Microbiology	4	0	4	80	20	100	40	4	0	2	6
4	MBT-134	Molecular Biology	4	0	4	80	20	100	40	4	0	2	6
5	MBT-135	Choice Based Paper*	4	0	4	80	20	100	40	4	0	2	6
6	MBT-136	Communicative Skills	0	0	4	0	100	100	0	0	0	2	2
7	MBT-137	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						600	200				33
	Choice Based Paper: **Biostatistics**/computer applications in Biostatistics												

M.SC. MEDICAL BIOTECHNOLOGY 2011-12

Sr. No.	Course Code	Subject	Semester-II			Examination Scheme				Credit Scheme			
			Take home credits for students										
			Periods (in Hours/week)			Theoretical Evaluation			Practical Examination				
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	MBT-231	Immunology	4	0	4	80	20	100	40	4	0	2	6
2	MBT-232	Bioinformatics	4	0	4	80	20	100	40	4	0	2	6
3	MBT-233	Human Physiology and Developmental Genetics	4	0	4	80	20	100	40	4	0	2	6
4	MBT-234	Genetic Engineering	4	0	4	80	20	100	40	4	0	2	6
5	MBT-235	Choice Based Paper*	4	0	4	80	20	100	40	4	0	2	6
6	MBT-236	Seminars	0	0	4	0	50	50	0	0	0	2	2
7	MBT-237	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						550	200				33

Choice Based Paper: Fundamentals of computer programming and algorithms/ Plant Cell Culture/**Animal Cell Culture and Vaccinology** / Microbial Technology

M.SC. MEDICAL BIOTECHNOLOGY 2011-12

Sr. No.	Course Code	Subject	Semester-III Periods (in Hours/week)			Examination Scheme Theoretical Evaluation			Practical Examination	Credit Scheme			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	MBT-331	Biology of Infectious diseases	4	0	4	80	20	100	40	4	0	2	6
2	MBT-332	Stem Cell Biology and somatic and germ cell engineering	4	0	4	80	20	100	40	4	0	2	6
3	MBT-333	Human Genetics and Genomics	4	0	4	80	20	100	40	4	0	2	6
4	MBT-334	Molecular Modelling and Drug Designing	4	0	4	80	20	100	40	4	0	2	6
5	MBT-335	Choice Based Paper*	4	0	4	80	20	100	40	4	0	2	6
6	MBT-336	Seminars	0	0	4	0	50	50	0	0	0	2	2
7	MBT-337	Self Study paper	0	0	4**	0	0	0	0	0	0	1	1
		Total						550	200				33
		Choice Based Paper: Drug Design and Chemiinformatics/Environmental Biotechnology/Plant stress biology/**Diagnostics**											

Note: header shows "Take home credits for students" above Periods columns and "Examination Scheme" spanning.

Practical Examination will be conducted in two phases: Phase 1 shall include the practical evaluation of Taxonomic and Phylogenetic analysis; Comparative Genomics and Proteomics and Tools and techniques for biological data-mining. Phase 2 shall include Databases and data analysis and Choice Based Paper.

M.SC. MEDICAL BIOTECHNOLOGY 2011-12

	Semester-IV		**Take home credits for students**										
						Examination Scheme							
Sr. No.	Course Code	Subject	Periods (in Hours/week)			Theoretical Evaluation			Practical Examination	Credit Scheme			
			Lecture	Tutorial	Practicals	Theory	Internal assessment	Total	Total	Lecture	Tutorial	Practicals	Total
1	MBT-431	Choice Based Paper-I*	4	0	0	80	20	100	0	4	0	0	4
2	MBT-432	Choice Based Paper-II*	4	0	0	80	20	100	0	4	0	0	4
3	MBT-433	Dissertation	0	0	36	0	0	0	300	0	0	18	18
		Total						200	300				26

*Choice Based Paper-I: **Management issues in Biotechnology**/ Bioentrepreneurship

* Choice Based Paper-II**: Ethical, Legal, Social issues in Biotechnology**/ IPR and Biotechnology