



Semester	Major Disciplinary Course	Minor Disciplinary Course	Multi-Disciplinary courses	Skill Enhancement courses	Ability Enhancement courses	NEP Value added common courses I	Value added common courses II	Summer Internship	Total Credits
		Students have to opt any two from the above options in alternate semester	Students have to opt any 1 of the course in semester I,II and III			Out of 7, only 2 should be opted in Semester - I and II (Only 1 Paper in each semester)			
I	MJ1 Cell Biology 3 (T) + 1 (P)	Subject A Chemistry 3 (T) + 1 (P)	1. Human Rights 2. International Relations 3. Sustainable Development 4. Understanding Self & Others 5. Public Health: Sanitation and Hygiene 6.Science of Tribal Culture 7. Media Studies 8. Language and Personality Development 9. Diversity and Inclusion 10. Art, Culture and Heritage of Jharkhand 11. Yog for Wellness 12. Marketing Skills for Success 3 (T)	Food Science and Technology 2 (T) +1 (P)	English or Hindi 2 (T)	1. Understanding Bharat 2. Citizenship Education 3. Yog for Holistic Development 4. Sports and Fitness 5. Health & Wellness 6. Human Values & Ethics 7. Inclusive Tradition in Ancient Indian Culture 2 (T)	IKS 2 (T)		20
II	MJ2 Microbiology 3 (T) + 1 (P)	Subject B Botany/ Zoology 3 (T) + 1(P)	1. Human Rights 2. International Relations 3. Sustainable Development 4. Understanding Self & Others 5. Public Health: Sanitation and Hygiene 6.Science of Tribal Culture 7. Media Studies 8. Language and Personality Development 9. Diversity and Inclusion 10. Art, Culture and Heritage of Jharkhand 11. Yog for Wellness 12. Marketing Skills for Success 3 (T)	Biofertilizers and Organic farming 2 (T) +1 (P)	English or Hindi 2 (T)	1. Understanding Bharat 2. Citizenship Education 3. Yog for Holistic Development 4. Sports and Fitness 5. Health & Wellness 6. Human Values & Ethics 7. Inclusive Tradition in Ancient Indian Culture 2 (T)	Awareness Module 2 (T)		20
CERTIFICATE IN BIOTECHNOLOGY									

III	MJ3 Molecular Biology 3 (T) + 1 (P)	Subject A Chemistry 3 (T) + 1(P)	1. Human Rights 2. International Relations 3. Sustainable Development 4. Understanding Self & Others 5. Public Health: Sanitation and Hygiene 6.Science of Tribal Culture 7. Media Studies 8 .Language and Personality Development 9. Diversity and Inclusion 10. Art, Culture and Heritage of Jharkhand 11. Yog for Wellness 12. Marketing Skills for Success 3 (T)	Herbal Drug Development 2 (T)+1 (P)	English or Hindi 2 (T)			4 Credits (8 Weeks)	20
	MJ4 Biochemistry 3 (T) + 1 (P)								
IV	MJ5 Immunology 3 (T) + 1 (P)	Subject B Botany/ Zoology 3 (T) + 1(P)			English or Hindi 2 (T)	Environmental Studies 2 (T)			20
	MJ6 Recombinant DNA Technology 3 (T) + 1 (P)								
	MJ7 Analytical Techniques in Biology 3 (T) + 1 (P)								
DIPLOMA IN BIOTECHNOLOGY									
V	MJ8 Industrial Biotechnology 3 (T) + 1 (P)	Subject A Chemistry 3 (T) + 1(P)						20	
	MJ9 Animal Cell Science and Techniques 3 (T) + 1 (P)								
	MJ10 Environmental Biotechnology 3 (T) + 1 (P)								
	MJ11 Enzymology 3 (T) + 1								
VI	MJ 12 Plant Tissue Culture 3 (T) + 1 (P)	Subject B Botany/ Zoology 3 (T) + 1(P)						20	
	MJ 13 Bioinformatics 3 (T) + 1 (P)								
	MJ14 Microbial Biotechnology 3(T)+1(P)								
	MJ15 Biostatistics & Computer Applications in Biology 3 (T) + 1 (P)								
BACHELOR'S DEGREE IN BIOTECHNOLOGY									

VII	MJ16 Research Methodology 4 (T)	Subject A Chemistry 3 (T) + 1(P)	Advanced Major	Research						20
	MJ17 Medical Biotechnology 3(T)+1 (P)		AMJ-1 Structural Biology 4(T)	RC-I Research Proposal: Planning and Technique (4) (50+25+25) Term paper and Internal						
	MJ18 Agricultural Biotechnology 3(T)+1 (P)									
VIII	MJ19 Pharmaceutical Biotechnology 3 (T) + 1 (P)	Subject B Botany/ Zoology 3 (T) + 1(P)	AMJ-2 Molecular Diagnostic and Forensic Science 4(T)	RC-II (8) 50- Synopsis, 100- Thesis, 50- Viva-voce						20
	MJ20 Enterpreneural Development, IPRs, Biosafety and Bioethics 4 (T)		AMJ-3 Genomics and Proteomics 4(T)							
	BACHELOR'S DEGREE IN BIOTECHNOLOGY (HONOURS) / BACHELOR'S DEGREE IN BIOTECHNOLOGY (HONOURS WITH RESEARCH)									



Semester	Major Disciplinary Course	Minor Disciplinary Course	Multi-Disciplinary courses	Skill Enhancement courses	Ability Enhancement courses	NEP Value added common courses I	Value added common courses II	Summer Internship	Total Credits
		Students have to opt any two from the above options in alternate semester	Students have to opt any 1 of the course in semester I,II and III			Out of 7, only 2 should be opted in Semester - I and II (Only 1 Paper in each semester)			
I	MJ1 Cell Biology 3 (T) + 1 (P)	Subject A Chemistry 3 (T) + 1 (P)	1. Human Rights 2. International Relations 3. Sustainable Development 4. Understanding Self & Others 5. Public Health: Sanitation and Hygiene 6.Science of Tribal Culture 7. Media Studies 8. Language and Personality Development 9. Diversity and Inclusion 10. Art, Culture and Heritage of Jharkhand 11. Yog for Wellness 12. Marketing Skills for Success 3 (T)	Food Science and Technology 2 (T) +1 (P)	English or Hindi 2 (T)	1. Understanding Bharat 2. Citizenship Education 3. Yog for Holistic Development 4. Sports and Fitness 5. Health & Wellness 6. Human Values & Ethics 7. Inclusive Tradition in Ancient Indian Culture 2 (T)	IKS 2 (T)		20
II	MJ2 Microbiology 3 (T) + 1 (P)	Subject B Botany/ Zoology 3 (T) + 1(P)	1. Human Rights 2. International Relations 3. Sustainable Development 4. Understanding Self & Others 5. Public Health: Sanitation and Hygiene 6.Science of Tribal Culture 7. Media Studies 8. Language and Personality Development 9. Diversity and Inclusion 10. Art, Culture and Heritage of Jharkhand 11. Yog for Wellness 12. Marketing Skills for Success 3 (T)	Biofertilizers and Organic farming 2 (T) +1 (P)	English or Hindi 2 (T)	1. Understanding Bharat 2. Citizenship Education 3. Yog for Holistic Development 4. Sports and Fitness 5. Health & Wellness 6. Human Values & Ethics 7. Inclusive Tradition in Ancient Indian Culture 2 (T)	Awareness Module 2 (T)		20
CERTIFICATE IN BIOTECHNOLOGY									

III	MJ3 Molecular Biology 3 (T) + 1 (P)	Subject A Chemistry 3 (T) + 1(P)	1. Human Rights 2. International Relations 3. Sustainable Development 4. Understanding Self & Others 5. Public Health: Sanitation and Hygiene 6.Science of Tribal Culture 7. Media Studies 8 .Language and Personality Development 9. Diversity and Inclusion 10. Art, Culture and Heritage of Jharkhand 11. Yog for Wellness 12. Marketing Skills for Success 3 (T)	Herbal Drug Development 2 (T)+1 (P)	English or Hindi 2 (T)			4 Credits (8 Weeks)	20
	MJ4 Biochemistry 3 (T) + 1 (P)								
IV	MJ5 Immunology 3 (T) + 1 (P)	Subject B Botany/ Zoology 3 (T) + 1(P)			English or Hindi 2 (T)	Environmental Studies 2 (T)			20
	MJ6 Recombinant DNA Technology 3 (T) + 1 (P)								
	MJ7 Analytical Techniques in Biology 3 (T) + 1 (P)								
DIPLOMA IN BIOTECHNOLOGY									
V	MJ8 Industrial Biotechnology 3 (T) + 1 (P)	Subject A Chemistry 3 (T) + 1(P)						20	
	MJ9 Animal Cell Science and Techniques 3 (T) + 1 (P)								
	MJ10 Environmental Biotechnology 3 (T) + 1 (P)								
	MJ11 Enzymology 3 (T) + 1								
VI	MJ 12 Plant Tissue Culture 3 (T) + 1 (P)	Subject B Botany/ Zoology 3 (T) + 1(P)						20	
	MJ 13 Bioinformatics 3 (T) + 1 (P)								
	MJ14 Microbial Biotechnology 3(T)+1(P)								
	MJ15 Biostatistics & Computer Applications in Biology 3 (T) + 1 (P)								
BACHELOR'S DEGREE IN BIOTECHNOLOGY									

VII	MJ16 Research Methodology 4 (T)	Subject A Chemistry 3 (T) + 1(P)	Advanced Major	Research						20
	MJ17 Medical Biotechnology 3(T)+1 (P)		AMJ-1 Structural Biology 4(T)	RC-I Research Proposal: Planning and Technique (4) (50+25+25) Term paper and Internal						
	MJ18 Agricultural Biotechnology 3(T)+1 (P)									
VIII	MJ19 Pharmaceutical Biotechnology 3 (T) + 1 (P)	Subject B Botany/ Zoology 3 (T) + 1(P)	AMJ-2 Molecular Diagnostic and Forensic Science 4(T)	RC-II (8) 50- Synopsis, 100- Thesis, 50- Viva-voce						20
	MJ20 Enterpreneural Development, IPRs, Biosafety and Bioethics 4 (T)		AMJ-3 Genomics and Proteomics 4(T)							
BACHELOR'S DEGREE IN BIOTECHNOLOGY (HONOURS) / BACHELOR'S DEGREE IN BIOTECHNOLOGY (HONOURS WITH RESEARCH)										160 + 4 =164