18. Structure of the Programme and detail syllabus of each course:

Semester I						
Sr. No.	Course Title	Course Code	CP	EXT	INT	
1	Python Programming	IT11	3	50	25	
2	Data Structure and Algorithms	IT12	3	50	25	
3	Advanced DBMS	IT13	3	50	25	
4	Business Statistics	MT11	3	50	25	
5	Software Engineering and Project Management	IT14	3	50	25	
6	Elective- I (Select any one from following)	EC11				
	Fundamentals of Cloud Computing	EC11-1				
	Web Development	EC11-2	3	50	25	
	Fundamental of Data Science	EC11-3				
	Introduction to Cyber Security	EC11-4				
	*Practical					
7	Practical based on Python and DS	IT11L	3		50	
8	Mini Project	ITC11	3		50	
	Soft Skills and IKS					
9	Soft Skills – I	SS11	1		25	
10	IKS	IK11	1		25	
			26	300	300	
	Semester II					
Sr.	Course Title	Course	CP	EXT	INT	
No.		Code				
No. 1	Java Programming	IT21	3	50	25	
	Java Programming Optimization Techniques		3	50 50	25 25	
1		IT21				
1 2	Optimization Techniques	IT21 MT21	3	50	25	
1 2 3	Optimization Techniques Software Testing and Quality Assurance	IT21 MT21 IT22	3	50 50	25 25	
1 2 3 4	Optimization Techniques Software Testing and Quality Assurance Research Methodology	IT21 MT21 IT22 RM21	3	50 50	25 25	
1 2 3 4	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following)	IT21 MT21 IT22 RM21 EC21	3	50 50	25 25	
1 2 3 4	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security	IT21 MT21 IT22 RM21 EC21 EC21-1	3 3 3	50 50 50	25 25 25	
1 2 3 4	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript	IT21 MT21 IT22 RM21 EC21 EC21-1 EC21-2	3 3 3	50 50 50	25 25 25	
1 2 3 4	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques	IT21 MT21 IT22 RM21 EC21 EC21-1 EC21-2 EC21-3	3 3 3	50 50 50	25 25 25	
1 2 3 4 5	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques Essentials of Cyber Security	IT21 MT21 IT22 RM21 EC21 EC21-1 EC21-2 EC21-3 EC21-4	3 3 3	50 50 50	25 25 25	
1 2 3 4 5	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques Essentials of Cyber Security Elective- III (Select any one from following)	IT21 MT21 IT22 RM21 EC21 EC21-1 EC21-2 EC21-3 EC21-4 EC22	3 3 3	50 50 50	25 25 25	
1 2 3 4 5	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques Essentials of Cyber Security Elective- III (Select any one from following) Essentials of Cloud Computing and Security	IT21 MT21 IT22 RM21 EC21 EC21-1 EC21-2 EC21-3 EC21-4 EC22 EC22-1	3 3 3	50 50 50	25 25 25 25	
1 2 3 4 5	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques Essentials of Cyber Security Elective- III (Select any one from following) Essentials of Cloud Computing and Security Advance Web Development	IT21 MT21 IT22 RM21 EC21 EC21-1 EC21-2 EC21-3 EC21-4 EC22 EC22-1 EC22-1	3 3 3	50 50 50	25 25 25 25	
1 2 3 4 5	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques Essentials of Cyber Security Elective- III (Select any one from following) Essentials of Cloud Computing and Security Advance Web Development Power BI	IT21 MT21 IT22 RM21 EC21-1 EC21-2 EC21-3 EC21-4 EC22 EC22-1 EC22-2 EC22-3	3 3 3	50 50 50	25 25 25 25	
1 2 3 4 5	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques Essentials of Cyber Security Elective- III (Select any one from following) Essentials of Cloud Computing and Security Advance Web Development Power BI Essentials of Information Security	IT21 MT21 IT22 RM21 EC21-1 EC21-2 EC21-3 EC21-4 EC22 EC22-1 EC22-2 EC22-3	3 3 3	50 50 50	25 25 25 25	
1 2 3 4 5	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques Essentials of Cyber Security Elective- III (Select any one from following) Essentials of Cloud Computing and Security Advance Web Development Power BI Essentials of Information Security *Practical Practical based on Java Mini Project	IT21 MT21 IT22 RM21 EC21-1 EC21-2 EC21-3 EC21-4 EC22 EC22-1 EC22-2 EC22-3 EC22-3	3 3 3 3	50 50 50	25 25 25 25 25	
1 2 3 4 5	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques Essentials of Cyber Security Elective- III (Select any one from following) Essentials of Cloud Computing and Security Advance Web Development Power BI Essentials of Information Security *Practical Practical based on Java Mini Project Soft Skills and IKS	IT21 MT21 IT22 RM21 EC21 EC21-1 EC21-2 EC21-3 EC21-4 EC22 EC22-1 EC22-2 EC22-3 EC22-4 IT21L ITC21	3 3 3 3	50 50 50	25 25 25 25 25 25 50 50	
1 2 3 4 5	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques Essentials of Cyber Security Elective- III (Select any one from following) Essentials of Cloud Computing and Security Advance Web Development Power BI Essentials of Information Security *Practical Practical based on Java Mini Project Soft Skills and IKS Soft Skills – II	IT21 MT21 IT22 RM21 EC21 EC21-1 EC21-2 EC21-3 EC21-4 EC22 EC22-1 EC22-1 EC22-2 EC22-3 EC22-4 IT21L ITC21	3 3 3 3 3	50 50 50	25 25 25 25 25 25 25 25	
1 2 3 4 5	Optimization Techniques Software Testing and Quality Assurance Research Methodology Elective- II (Select any one from following) Cloud Computing Management and Security JavaScript Machine Learning Techniques Essentials of Cyber Security Elective- III (Select any one from following) Essentials of Cloud Computing and Security Advance Web Development Power BI Essentials of Information Security *Practical Practical based on Java Mini Project Soft Skills and IKS	IT21 MT21 IT22 RM21 EC21 EC21-1 EC21-2 EC21-3 EC21-4 EC22 EC22-1 EC22-2 EC22-3 EC22-4 IT21L ITC21	3 3 3 3	50 50 50	25 25 25 25 25 25 50 50	

Semester III					
Sr. No.	Course Title	Course Code	СР	EXT	INT
1	Organizational Behaviour	IT31	3	50	25
2	Design and Analysis of Algorithm	IT32	3	50	25
3	Elective- IV (Select any one from following)	EC31			
	Cloud API's and Services	EC31-1			
	Mobile Application Development	EC31-2	3	50	25
	Tableau	EC31-3			
	End -Point Security	EC31-4			
4	Elective- V (Select any one from following)	EC32			
	Cloud Migration and Management	EC32-1			
	MERN Stack Development	EC32-2	3	50	25
	Deep Learning	EC32-3			
	Ethical Hacking	EC32-4			
5	Elective- VI (Select any one from following)	EC33	-		
	Enterprise Resource Planning (ERP)	EC33-1			
	E-Commerce	EC33-2	3	50	25
	Social media Marketing	EC33-3			
	Innovation and Entrepreneurship Development	EC33-4			
	*Practical				
6	Practical based on Electives IV and V	IT31L	3		50
7	Research Project	RP31	6		100
	Soft Skills				
8	Soft Skills- III	SS31	1		25
			25	250	300

Semester IV					
Sr.	Course Title	Course	CP	EXT	INT
No.		Code			
1	Internship/Project Work (FP/OJT)	IT41	12	300	150
2	MOOC- I	MC41	3		50
3	MOOC- II	MC42	3		50
			18	300	250

Semester	Credit Points	UE	IE
Semester I	26	300	300
Semester II	26	300	300
Semester III	25	250	300
Semester IV	18	300	250
Total	95	1150	1150
Total Marks			2300