1.	OBJECTIVE	B. Tech (Computer Science and Engineering technically sound professional. The syllabus courses. The mix of these courses has been who are good managers to contribute in a cr healthy balance between theoretical foundat personality that would enable the students to society.	s contains courses on basic scient evolved with an aim to produce coss-functional team and have hution and practical exposure to the	ices, technical ar professionals wh uman values. Be e present-day wo	ts, humanities & no have knowled ing a profession or orld. The emphas	liberal arts and professional lege not only of Engineering but all programme it ensures a sis is to develop all round
2.	DURATION (IN MONTHS)	48 (Full Time)				
3.	INTAKE	30				
4.	RESERVATION	I.Within the sanctioned intake	a) SC (In Percentage)	b) ST (In Percentage	e)	c) Differently abled (In Percentage)
			15	7	5	3
		II.Over and above the sanctioned intake	a) Kashmiri Migrants (In Seats)		b) Internation (In Percentage	
			2			20
5.	ELIGIBILITY	Passed 10+2 examination with Physics and Science/Electronics/ Information Technolog subject/Agriculture/Engineering Graphics/B candidates belonging to reserved category) in the above subjects take OR Passed D.Voc. Stream in the same or allied streams.	y/Biology/Informatics Practices dusiness Studies /Entrepreneursh en together.	s/ Biotechnology nip. Obtained at l	/Technical Voca east 45% marks	tional (40% marks in case of





	Indian Students (Amount in INR)		330000	20000	350000
	International Students	NRI/ PIO/ OCI Category (Amount in US\$)	6300	275	6575
	International Students	Foreign National Category (Amount in US\$)	1300	275	1575
11.	ASSESSMENT		nuous Assessment and 60% Term Erts) may have 100% Continuous Ass	nd [University] examination howeve essment.	er, some courses (not more than
12.	STANDARD OF PASSING	corresponding to O (Outstanding) minimum Grade Point of 4 corresponding to O (Outstanding)	. For all courses, a student is require ponding to Grade P. Students securi	relative performance. Maximum Gred to pass both internal and external ng less than 40% absolute marks in s achieved a minimum CGPA of 4 c	examination separately with a each head of passing will be
13.	AWARD OF DEGREE	Bachelor of Technology (Compute consideration the performance of	er Science and Technology) will be all semester examinations after obta	awarded at the end of the semester 8 ining a minimum 4.00 CGPA out of	B examination by taking into E 10 CGPA.



14. CLASSIFICATION OF CREDITS

Semester	Generic Core	Generic Elective	Specialization Core	Specialization Elective	Open Elective	Mandatory Non-Credit Course/s	Non-Letter Grade Audit Course/s	Total
				Commor				
1	19	0	0	0	0	0		19
2	20	0	0	0	0	1		20
3	23	1	0	0	0	1]	24
4	18	2	0	0	0	1	As per the student's choice	20
5	21	0	0	0	3	0	1	24
6	12	10	0	0	3	0	1	25
7	13	11	0	0	0	0	1 [24
8	14	0	0	0	0	0	1	14
Total	140	24	0	0	6	0	1	170

This Programme Structure is aligned with the norms laid down by the University and is approved by the Academic Council and Board of Management.

Hereafter changes (if any) which conform to the policy on "Curriculum Development and Review" would be permissible, subject to revision of the Programme Structure, following the specified processes.

Director - Academics

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Annexure A

Catalog	Course			Specialization/ Area/		chir hem urs F	e	E		nation Sc (Marks)	heme	- Total	
Course Code	Code	Course Title	Nature	Department		eek)		Prac	ctical	The	ory	Credits	Total
Code					L	Т	La b	CA	ESE	CA	ESE		
			,	Semester : 1									
			Gene	ric Core Courses									
TE7680	0707240101	Mathematics-I	BS		2	1	0	0	0	30	45	3	75
TE7684	0707240102	Physics for Computer Engineers	BS		3	0	0	0	0	30	45	3	75
TE7687	0707240103	Physics Lab	BS		0	0	2	10	15	0	0	1	25
T7383		Communication Skills	HS		2	0	0	0	0	20	30	2	50
T7384		Communication skills lab	HS		0	0	2	10	15	0	0	1	25
TE7286	0707240106	Programming and Problem Solving	ES		2	0	0	0	0	20	30	2	50
TE7287	0707240107	Programming and Problem Solving Lab	ES		0	0	2	10	15	0	0	1	25
T7925	0707240108	Engineering Graphics Lab	ES		0	0	4	20	30	0	0	2	50
T6732	0707240109	Critical Thinking	HS		1	0	0	0	0	25	0	1	25
TE7749	0707240110	Software Tools for Computer Science	ES		0	0	2	25	0	0	0	1	25
TE7300	0707240111	Tinker Lab	ES		0	0	4	50	0	0	0	2	50
				Total	10	1	16	125	75	125	150	19	475
			,	Semester : 2									
			Gene	ric Core Courses									
TE7681		Mathematics II	BS		3	1	0	0	0	40	60	4	100
TE7694	0707240202		BS		3	0	0	0	0	30	45	3	75
TE7695	0707240203	Chemistry Lab	BS		0	0	2	10	15	0	0	1	25



Annexure A

Catalog	Course			Specialization/ Area/	Sc	chin hem	e	E		nation Sc (Marks)	heme	- Total	
Course Code	Code	Course Title	Nature	Department	•	eek)		Prac	ctical	The	ory	Credits	Total
Code					L	Т	La b	CA	ESE	CA	ESE		
T7540	0707240204	Basic Electrical and Electronics Engineering	ES		3	0	0	0	0	30	45	3	75
T7593	0707240205	Basic Electrical and Electronics Engineering Lab	ES		0	0	2	10	15	0	0	1	25
TE7288	0707240206	Programming in C	PC		3	0	0	0	0	30	45	3	75
TE7289	0707240207	Programming in C Lab	PC		0	0	2	10	15	0	0	1	25
T6873	0707240208	Creative Thinking	HS		1	0	0	0	0	25	0	1	25
TE7689	0707240209	Statistics and Probability	BS		2	1	0	0	0	30	45	3	75
TE7188	0707240210	Environmental Science			0	0	0	0	0	0	0	Mandat ory Non-Cr edit Course	0
				Total	15	2	6	30	45	185	240	20	500
				Semester : 3									
				eric Core Courses									
TE7675	0707210301	Discrete Mathematics and Graph Theory	BS		3	1	0	0	0	40	60	4	100
T7996		Computer Organization	PC		3	0	0	0	0	30	45	3	75
TE7960	0707210303	Data Structures	PC		3	0	0	0	0	30	45	3	75
TE7959		Data Structures Lab	PC		0	0	2	10	15	0	0	1	25
T7512	0707210305	Programming Paradigms	PC		3	0	0	0	0	30	45	3	75



Annexure A

Catalog	Course			Specialization/ Area/	Sc	chir hem urs F	e	E		ation Sc (Marks)	heme	- Total	
Course Code	Code	Course Title	Nature	Department		eek)		Prac	tical	The	ory	Credits	Total
Code				-	L	т	La b	СА	ESE	CA	ESE		
T7513	0707210306	Programming Paradigms Lab	PC		0	0	2	10	15	0	0	1	25
TE7745		Sensors and Microcontrollers	ES		3	0	0	0	0	30	45	3	75
TE7746	0707210308	Sensors and Microcontrollers Lab	ES		0	0	2	10	15	0	0	1	25
T2646		Entrepreneurship Venture	HS		1	0	0	0	0	25	0	1	25
F0003		Flexi-Credit Course	PC		3	0	0	0	0	75	0	3	75
TH4788	0707210311	Health and Wellness Module I	0		0	0	0	0	0	0	0	Mandat ory Non-Cr edit Course	0
				Total	19	1	6	30	45	260	240	23	575
		Generic Elective	e Course	es Group (Choose Any One Co	urse)					_		
T6872	0707210312	Foundation of Ethics	GE		1	0	0	0	0	25	0	1	25
T6760	0707210313	Introduction to Indian Philosophy	GE		1	0	0	0	0	25	0	1	25
				Total Requir	ed Cr	edits	3	0	0	25	0	1	25
				Semester : 4									
				eric Core Courses									
TE7170		Engineering Mathematics-III	BS		2	1	0	0	0	30	45	3	75
F0004		Flexi-Credit Course	PC		4	0	0	0	0	100	0	4	100
T7907	0707210403	Database Management Systems	PC		3	0	0	0	0	30	45	3	75



Annexure A

Catalog	Course			Specialization/ Area/	Sc	chir hem urs F	e	E		nation Sc (Marks)	heme	- Total	
Course Code	Code	Course Title	Nature	Department		eek)		Prac	tical	The	ory	Credits	Total
Code				-	L	т	La b	CA	ESE	CA	ESE		
T7487	0707210404	Data Base Management Systems Lab	PC		0	0	4	20	30	0	0	2	50
T7510		Operating Systems	PC		3	0	0	0	0	30	45	3	75
T7511	0707210406	Operating Systems Lab	PC		0	0	2	10	15	0	0	1	25
TE7290		Project Based Learning -I	PIS		0	0	4	50	0	0	0	2	50
TH4789	0707210408	Health and Wellness Module II	0		0	0	0	0	0	0	0	Mandat ory Non-Cr edit Course	0
				Total	12	1	10	80	45	190	135	18	450
		Generic Electiv	ve Course	es Group (Choose Any One Co	ourse								
T6184	0707210409	Basic German I	GE		2	0	0	0	0	50	0	2	50
T6186	0707210410	Basic French I	GE		2	0	0	0	0	50	0	2	50
T6188	0707210411	Basic Spanish I	GE		2	0	0	0	0	50	0	2	50
				Total Requir	ed Cr	edits	3	0	0	50	0	2	50
				Semester : 5									
				eric Core Courses									
F0004		Flexi-Credit Course	PC		4	0	0	0	0	100	0	4	100
T8000		Service Learning	HS		0	0	8	100	0	0	0	4	100
T7908	0707210503	Computer Networks	PC		3	0	0	0	0	30	45	3	75



Annexure A

Catalog	Course			Specialization/ Area/	Sc	achir hem urs F	e	E		ation Sc (Marks)	heme	- Total	
Course Code	Code	Course Title	Nature	Department	•	eek)		Prac	tical	The	ory	Credits	Total
Code					L	Т	La b	CA	ESE	CA	ESE		
T7482	0707210504	Computer Networks Lab	PC		0	0	2	10	15	0	0	1	25
T7909	0707210505	Design and Analysis of Algorithms	PC		3	0	0	0	0	30	45	3	75
T7491	0707210506	Design and Analysis of Algorithms Lab	PC		0	0	2	10	15	0	0	1	25
TE7299	0707210507	Theory of Computation	PC		3	0	0	0	0	30	45	3	75
T6774	0707210508	Principles of Economics	HS		2	0	0	0	0	50	0	2	50
				Total	15	0	12	120	30	240	135	21	525
		Open Elective	Courses	Group (Choose Any One Cou	ırse)								
TE7677	0707210509	Financial Mathematics	OE	Applied Science	3	0	0	0	0	30	45	3	75
TE7700	0707210510	Smart Materials	OE	Applied Science	3	0	0	0	0	30	45	3	75
TE7223	0707210511	Smart Urban Planning	OE	Civil Engineering	3	0	0	0	0	30	45	3	75
TE7240	0707210512	Water Resource Planning and Management	OE	Civil Engineering	3	0	0	0	0	30	45	3	75
T7499	0707210513	Java	OE	Computer Science and Technology	3	0	0	0	0	30	45	3	75
TE7952	0707210514	User Interface and Experience Design	OE	Computer Science and Technology	3	0	0	0	0	30	45	3	75
TEE7018	0707210515	Engineering Simulation and Modeling Tools	OE	Electronics & Tele-communication Engineering	3	0	0	0	0	30	45	3	75



Annexure A

Catalog	Course			Specialization/ Area/	Sc	chir hem urs F	e	E		nation Sc (Marks)	heme	Total	
Course Code	Code	Course Title	Nature	Department		eek)		Prac	tical	The	ory	Credits	Total
Code					L	Т	La b	СА	ESE	CA	ESE		
TE7428	0707210516	Introduction to Image Processing	OE	Electronics & Tele-communication Engineering	3	0	0	0	0	30	45	3	75
TE7810	10/0//1051/	Industrial Revolution and Introduction of Industry 5.0	OE	Mechanical Engineering	3	0	0	0	0	30	45	3	75
T7650	0707210518	Six sigma	OE	Mechanical Engineering	3	0	0	0	0	30	45	3	75
TE7948	0707210519	Introduction to Cloud Computing	OE	Computer Science and Technology	3	0	0	0	0	30	45	3	75
				Total Requir	ed Cr	edits	5	0	0	30	45	3	75
				Semester : 6									
			Gene	eric Core Courses									
TE7008	100000	Distributed Systems and Resource Management	PC		3	0	0	0	0	30	45	3	75
F0003	0707210602	Flexi-Credit Course	PC		3	0	0	0	0	75	0	3	75
T6749	0707210603	Design Thinking	HS		2	0	0	0	0	50	0	2	50
TE7291	0707210604	Project Based Learning-II	PIS		0	0	4	50	0	0	0	2	50
T7802	0707210605	Capstone Course	PC		2	0	0	0	0	50	0	2	50
				Total	10	0	4	50	0	205	45	12	300
				es Group (Choose Any One Co	urse)			,					
T2585	0707210606	Organizational Behaviour	GE		2	0	0	0	0	50	0	2	50

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Annexure A

Catalog	Course			Specialization/ Area/		chir hem urs F	e	E		nation So (Marks)	cheme	- Total	
Course Code	Code	Course Title	Nature	Department		eek)		Prac	ctical	The	eory	Credits	Total
Code					L	Т	La b	CA	ESE	CA	ESE		
TE7438	0707210607	History of Science and Technology	GE		2	0	0	0	0	50	0	2	50
				Total Requir	ed Cr	edits	5	0	0	50	0	2	50
		Generic Elective Courses	Group -	II (Choose any one Group from	n Gro	u p A	to (C)					
	_	Ger		ctive Courses Group - A								_	
TE7255	0707210608	Data Warehousing and Mining	PE		3	0	0	0	0	30	45	3	75
TE7013	0707210609	Data Warehousing and Mining Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	S	10	15	30	45	4	100
		Ger	neric Ele	ctive Courses Group - B									
TE7101	0707210610	Internet of Things	PE		3	0	0	0	0	30	45	3	75
TE7262	0707210611	Internet of Things Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	5	10	15	30	45	4	100
		Ger	neric Ele	ctive Courses Group - C									
TE7916	0707210612	Cloud Computing Tools and Techniques	PE		3	0	0	0	0	30	45	3	75
TE7949	0707210613	Cloud Computing Tools and Techniques Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	S	10	15	30	45	4	100
		Generic Elective Courses	Group -	III (Choose any one Group fror	from Group D to F)								
		Ger	neric Ele	ctive Courses Group - D									
T7473	0707210614	Artificial Intelligence	PE		3	0	0	0	0	30	45	3	75



Annexure A

Catalog	Course			Specialization/ Area/	Sc	chir hem urs F	e	E		ation Sc (Marks)	heme	- Total	
Course Code	Code	Course Title	Nature	Department	•	eek)		Prac	tical	The	ory	Credits	Total
Coue					L	Т	La b	CA	ESE	CA	ESE		
TE7014	0707210615	Artificial Intelligence Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	S	10	15	30	45	4	100
		Ge	neric Ele	ctive Courses Group - E									
TE7328	0707210616	Image Processing	PE		3	0	0	0	0	30	45	3	75
TE7329	0707210617	Image Processing Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	S	10	15	30	45	4	100
		Ge	neric Ele	ctive Courses Group - F							_		
TE7953	0707210618	Information and Network Security	PE		3	0	0	0	0	30	45	3	75
TE7947	0707210619	Information and Network Security Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	S	10	15	30	45	4	100
		Open Elective	Courses	Group (Choose Any One Cou	rse)								
TE7698	0707210620	Nanotechnology	OE		3	0	0	0	0	30	45	3	75
TE7676	0707210621	Executive Corporate Communication For Impact	OE		3	0	0	0	0	30	45	3	75
TE7195	0707210622	GIS Applications	OE		3	0	0	0	0	30	45	3	75
TE7203		Intelligent Transportation Management	OE		3	0	0	0	0	30	45	3	75
TE7297		Software Testing Tools	OE		3	0	0	0	0	30	45	3	75
TE7756	0707210625	Open Source Technologies	OE		3	0	0	0	0	30	45	3	75

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Annexure A

Catalog	Course			Specialization/ Area/		chir hem urs F	e	E		ation Sc Marks)	Total		
Course Code	Code	Course Title	Nature	Department		eek)		Prac	tical	The	ory	Credits	Total
Coue					L	т	La b	СА	ESE	CA	ESE		
T7584	0707210626	Printed Circuit Board (PCB) Design	OE		3	0	0	0	0	30	45	3	75
TE7334	0707210627	Introduction to Mechatronics	OE		3	0	0	0	0	30	45	3	75
TE7804	0707210628	Design Optimization Techniques	OE		3	0	0	0	0	30	45	3	75
TE7351	0707210629	3D Printing and Prototyping	OE		3	0	0	0	0	30	45	3	75
				Total Requir	red Cr	edits	S	0	0	30	45	3	75
				Semester : 7							•		
			Gene	ric Core Courses									
T7804	0707240701	Project	PIS		0	0	8	40	60	0	0	4	100
TE7751	0707240702	Compiler Construction	PC		3	0	0	0	0	30	45	3	75
T7478	0707240703	Compiler Construction Lab	PC		0	0	2	10	15	0	0	1	25
F0003	0707240704	Flexi-Credit Course	PC		3	0	0	0	0	75	0	3	75
T7674	0707240705	Cyber Security	PC		2	0	0	0	0	20	30	2	50
				Total	8	0	10	50	75	125	75	13	325
		Generic Elect	ive Courses	Group - I (Choose Any One C	ourse	:)							
TE7955	0707240706	Introduction to AR/VR	PE		3	0	0	0	0	30	45	3	75
TE7259	0707240707	Human Computer Interface	PE		3	0	0	0	0	30	45	3	75
TE7954	0707240708	Introduction to Information Retrieval	PE		3	0	0	0	0	30	45	3	75
			-	Total Requir	red Cr	edits	5	0	0	30	45	3	75
		Generic Elective Cours	es Group -	II (Choose any one Group from	n Gro	up A	to [D)		_	_	_	



Annexure A

Catalog	Course			Specialization/ Area/	Teaching Scheme (Hours Per			Examination Scheme (Marks)				- Total	
Course Code	Code	Course Title	Nature	Department		eek)		Prac	ctical	The	eory	Credits	Total
Code					L	Т	La b	CA	ESE	CA	ESE]	
		Gen	eric Ele	ctive Courses Group - A		•		•		•	•	•	
TE7253	0707240709	Data Science	PE		3	0	0	0	0	30	45	3	75
TE7254	0707240710	Data Science Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	3	10	15	30	45	4	100
		Gen	eric Elec	ctive Courses Group - B									
TE7261	0707240711	Internet of Things	PE		3	0	0	0	0	30	45	3	75
TE7262	0707240712	Internet of Things Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	3	10	15	30	45	4	100
		Gen	eric Ele	ctive Courses Group - C									
TE7282	0707240713	Optimization Techniques and Algorithms	PE		3	0	0	0	0	30	45	3	75
TE7283	0707240714	Optimization Techniques and Algorithms Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	3	10	15	30	45	4	100
		Gen	eric Ele	ctive Courses Group - D							_		
TE7552	0707240715	Big Data Analytics	PE		3	0	0	30	45	0	0	3	75
TE7554	0707240716	Big Data Analytics Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	5	40	60	0	0	4	100
		Generic Elective Courses	Group -	III (Choose any one Group fror	n Gro	up E	to (3)					
		Gei	neric Ele	ective Course Group - E									



Annexure A

Catalog	Course			Specialization/ Area/	Sc	ichin hem urs F	e	E		ation Sc (Marks)	heme	- Total	LIATAL
Course Code	Code	Course Title	Nature	Department	` W	eek)		Prac	ctical	The	ory	Credits	Total
Coue					L	Т	La b	СА	ESE	CA	ESE		
T7529	0707240717	Machine Learning	PE		3	0	0	0	0	30	45	3	75
TE7105	0707240718	Machine Learning Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	5	10	15	30	45	4	100
		Ge	neric Ele	ective Course Group - F									
TE7103	0707240719	Natural Language Processing	PE		3	0	0	0	0	30	45	3	75
TE7106	0707240720	Natural Language Processing Lab	PE		0	0	2	10	15	0	0	1	25
				Total Requir	ed Cr	edits	3	10	15	30	45	4	100
		Ger	neric Ele	ective Course Group - G									
TE7951	0707240721	DevOps	PE		2	0	0	0	0	20	30	2	50
TE7950	0707240722	DevOps Lab	PE		0	0	4	20	30	0	0	2	50
				Total Requir	ed Cr	edits	3	20	30	20	30	4	100
				Semester : 8									
			Gene	eric Core Courses									
T7912		Internship	PIS		0	0	24	120	180	0	0	12	300
T7802	0707210802	Seminar	PIS		0	0	4	20	30	0	0	2	50
				Total	0	0	28	140	210	0	0	14	350



Annexure A

Abbreviations (Nature)

- BS Basic Sciences
- ES Engineering Sciences
- HS Humanities and Social Sciences
- OE Open Electives
- PC Professional Core
- PE Professional Elective
- PIS Project, Internship, Seminar
- PD Professional Development Course
- MC Mandatory Course
- L Lecture
- T Tutorial
- CA Continuous Assessment
- **ESE** End Semester Examination
- GE Generic Elective



Semester	Continuous Assessment	Term End Examination	Total Credits	Total Marks
		Common		
Semester 1	4	15	19	475
Semester 2	1	19	20	500
Semester 3	5	19	24	600
Semester 4	8	12	20	500
Semester 5	10	14	24	600
Semester 6	11	14	25	625
Semester 7	3	21	24	600
Semester 8	0	14	14	350
Total	42	128	170	4250

