1.	OBJECTIVE	B. Tech (Computer Science and Engineering technically sound professional. The syllabus courses. The mix of these courses has been earlier who are good managers to contribute in a crhealthy balance between theoretical foundat personality that would enable the students to society.	contains courses on basic scient evolved with an aim to produce oss-functional team and have he ion and practical exposure to th	nces, technical ar professionals wh uman values. Bei e present-day wo	ts, humanities & no have knowled ng a professiona orld. The emphas	liberal arts and professional ge not only of Engineering but all programme it ensures a is 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 Mathematics as compulsory subjects along with one of Chemistry/Computer Science/Electronics/ Information Technology/Biology/Informatics Practices/ Biotechnology/Technical Vocational subject/Agriculture/Engineering Graphics/Business Studies /Entrepreneurship. Obtained at least 45% marks (40% marks in case of candidates belonging to reserved category) in the above subjects taken together. OR Passed D.Voc. Stream in the same or allied sector. (The University will offer suitable bridge courses such as Mathematics, Physics,											

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	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 howeversessment.	er, some courses (not more than
12.	STANDARD OF PASSING	corresponding to O (Outstanding) minimum Grade Point of 4 corresponding to O (Outstanding)	relative performance. Maximum Gred to pass both internal and externaling less than 40% absolute marks in a sachieved a minimum CGPA of 4 of	examination separately with a each head of passing will be	
13.	AWARD OF DEGREE		awarded at the end of the semester string a minimum 4.00 CGPA out of		

14. CLASSIFICATION OF CREDITS

Semester	Generic Core	Generic Elective	Specialisation Core	Specialisation Elective	Open Elective	Mandatory Non-Credit Course/s	Non-Credit Audit Course/s	Total
				Common	1			
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] [24
6	12	10	0	0	3	0] [25
7	13	11	0	0	0	0] [24
8	14	0	0	0	0	0] [14
Total	140	24	0	0	6	0] [170
			Optio	nal Additional Cou	irses (Honours)		-	
Total	0	0			0	0] [20

^{*} Satisfactory completion of non credit courses 'Health and Wellness Module I', 'Health and Wellness Module II', 'Vasudhaiva Kutumbakam' and 'Environmental Science' is mandatory for award of degree.

The revised programme structure supersedes the previously approved programme structure dated 11/10/2024 for the programme.



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

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			Specialisation/ Area/	Sc	achir hem urs F	e	E		nation Sc (Marks)	heme	- Total	
Course Code	Code	Course Title	Nature	Department	•	/eek		Prac	ctical	The	eory	Credits	Total
Code					L	Т	La b	СА	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	0707240104	Communication Skills	HS		2	0	0	0	0	20	30	2	50
T7384	0707240105	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	0707240201	Mathematics II	BS		3	1	0	0	0	40	60	4	100
TE7694	0707240202	Chemistry	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 urs F	e	E		ation Sc (Marks)	heme	Total	
Course Code	Code	Course Title	Nature	Specialisation/ Area/ Department	•	eek)		Prac	tical	The	ory	Total Credits	Total
Oode					L	т	La b	СА	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	0	0
				Total	15	2	6	30	45	185	240	20	500
			;	Semester : 3									
			Gene	ric Core Courses				_					
TE7675	0707210301	Discrete Mathematics and Graph Theory	BS		3	1	0	0	0	40	60	4	100
T7996	0707210302	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	0707210304	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
T7513	0707210306	Programming Paradigms Lab	PC		0	0	2	10	15	0	0	1	25
TE7745	0707210307	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



Annexure A

Catalog	Course			Specialisation/ Area/	Sc	chir hem urs F	e	E		nation Sc (Marks)	heme	- Total	
Course Code	Code	Course Title	Nature	Department		eek)		Prac	ctical	The	eory	Credits	Total
Code				•	L	т	La b	СА	ESE	CA	ESE		
T2646	0707210309	Entrepreneurship Venture	HS		1	0	0	0	0	25	0	1	25
T7499	0707210310	Java	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	s 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									
			Gene	ric Core Courses									
TE7170		Engineering Mathematics-III	BS		2	1	0	0	0	30	45	3	75
TEE7022		Natural Language and Responsive Al	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
T7487	0707210404	Data Base Management Systems Lab	PC		0	0	4	20	30	0	0	2	50
T7510	0707210405	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



Annexure A

Catalog	Course			Specialisation/ Area/		achir hem urs F	e	E		nation Sc (Marks)	heme	- Total	
Course Code	Code	Course Title	Nature	Department		eek)		Prac	ctical	The	eory	Credits	Total
Code					L	Т	La b	CA	ESE	CA	ESE		
TE7290	0707210407	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
SMC001	0707210412	Vasudhaiva Kutumbakam *			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 Elective	e Course	es Group (Choose Any One Co	urse)			_				_	
T6184		Basic German I	GE		2	0	0	0	0	50	0	2	50
T6186		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	5	0	0	50	0	2	50
				Semester : 5									
	T	I=		eric Core Courses			_	-				Τ.	
F0004	[0707210501	Flexi-Credit Course	PC		4	0	0	0	0	100	0	4	100



SIU

Symbiosis Institute of Technology, Hyderabad Bachelor of Technology (Computer Science and Technology) Programme Structure 2024-28

Annexure A

Catalog	Course			Specialisation/ Area/	Sc	achir 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	СА	ESE	CA	ESE		
T8000	0707210502	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
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
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 and Telecommunication Engineering	3	0	0	0	0	30	45	3	75

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Annexure A

Catalog	Course			Specialisation/ 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	СА	ESE	CA	ESE		
TE7428	0707210516	Introduction to Image Processing	OE	Electronics and Telecommunication Engineering	3	0	0	0	0	30	45	3	75
TE7810	0707210517	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	0707210513	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	0707210601	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
		Generic Electi	ve Cours	es Group (Choose Any One Co	urse)								
T2585	0707210606	Organizational Behaviour	GE		2	0	0	0	0	50	0	2	50



Annexure A

Catalog	Course			Specialisation/ Area/		chir hem urs F	e	E		ation 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		
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	up A	to (C)					
		Ger	eric Ele	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
			eric 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
		Ger	eric 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
			eric Ele	ctive Courses Group - D									
T7473	0707210614	Artificial Intelligence	PE		3	0	0	0	0	30	45	3	75
TE7014	0707210615	Artificial Intelligence Lab	PE		0	0	2	10	15	0	0	1	25
			eric 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
		Ger	neric Ele	ctive Courses Group - F									



Annexure A

Catalog	Course			Specialisation/ Area/	Sc	chir hem urs F	e	E		ation Sc (Marks)	heme	- Total	
Course Code	Code	Course Title	Nature	Department		eek)		Prac	ctical	The	ory	Credits	Total
Code					L	Т	La b	СА	ESE	CA	ESE		
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
			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	0707210623	Intelligent Transportation Management	OE		3	0	0	0	0	30	45	3	75
TE7297	0707210624	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
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	ed Cr	edits	5	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



Annexure A

Catalog Course Code	Course Code	Course Title	Nature	Specialisation/ Area/ Department	Teaching Scheme (Hours Per Week)			Examination Scheme (Marks)				- Total	
								Practical		Theory		Credits	Total
Code					L	Т	La b	СА	ESE	CA	ESE		
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 Elective	Courses	s 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 Required Credits 0 0 30 45							3	75				
		Generic Elective Courses	Group -	II (Choose any one Group from	n Gro	up A	to [D)					
			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
Generic Elective Courses Group - B													
TE7261		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
Generic Elective 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



Annexure A

Catalog	Course			Consisting Area	Teaching Scheme (Hours Per			Examination Scheme (Marks)				- Total	
Course Code	Code	Course Title	Nature	Specialisation/ Area/ Department	•	eek)		Prac	ctical	The	ory	Credits	Total
Code					L	Т	La b	CA	ESE	CA	ESE		
			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
		Ge	neric Ele	ective Course Group - E									
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
		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
	_	Ger	neric Ele	ctive 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	ric Core Courses									
T7912	0707210801	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



Abbreviations (Nature)	Description
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

SIU 30/10/2025

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