B.TECH. CURRICULUM

ACADEMIC YEAR: 2026–27

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Undergraduate Rules and Regulations-2026 (URR26)
In accordance with the National Education Policy 2020
w.e.f AY 2026-27

Regulations Governing the
Choice Based Credit System and
Multiple Entry and Multiple Exit Options
with
Competancy-Focused Outcome Based Curriculum (CF-OBC)

KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL – 506 015

TELANGANA

(UGC Autonomous Institute Under Kakatiya University, Warangal)

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

History:

PROGRAM	DESCRIPTION	
	INTAKE	NBA ACCREDITATION
UG in B.Tech. COMPUTER SCIENCE & ENGINEERING	• Started with 60seatsin1994 • Intake increased to 120 in 2002 • Intake increased to 180 in 2015	• First time accreditation: 2008 • Reaccreditation-1: 2014 • Reaccreditation-2: 2016 • Reaccreditation-2: 2018 • Reaccreditation-2: 2020 • Reaccreditation-2: 2022

INSTITUTE VISION AND MISSION

INSTITUTE VISION

To make our students technologically superior and ethically strong by providing quality education with the help of our dedicated faculty & staff and thus improve the quality of human life

INSTITUTE MISSION

M1	■ **To provide latest technical knowledge, analytical & practical skills, managerial competence and interactive abilities to students, so that their employability is enhanced**
M2	■ **To provide strong human resource base to cater to the changing needs of the industry and commerce**
M3	■ **To inculcate a sense of brotherhood and National Integrity**

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING: VISION AND MISSION

VISION

Attaining center of excellence status in various fields of Computer Science and Engineering by offering worth full education, training and research to improve quality of software services for ever growing needs of the industry and society.

MISSION

M1:	Practice qualitative approach and standards to provide students better understanding and profound knowledge in the fundamentals and concepts of computer science with its allied disciplines
M2:	Motivate students in continuous learning to enhance their technical, communicational, and managerial skills to make them competent and cope with the latest trends, technologies, and improvements in computer science to have a successful career with professional ethics.
M3	Involve students to analyze, design and experiment with contemporary research problems in computer science to impact socio-economic, political and environmental aspects of the globe.

PROGRAM EDUCATIONAL OBJECTIVES

PEO1:	Escalate the technical skills within and across disciplines of Computer Science Engineering for productive career by maintaining professional ethics
PEO2:	Develop and exercise their capabilities to demonstrate their creativity in engineering practice and team work with increasing responsibility and leadership
PEO3:	Refine their knowledge and skills to attain professional competence through lifelong learning such as higher education, advanced degrees and professional activities

PEO TO MISSION MAPPING

	M1	**M2**	**M3**
PEO1	3	3	2
PEO2	3	2	3
PEO3	2	2	3

PEO Statements	Mission Statements	Mapping Level	Justification
PEO1	M1	3	A strong foundation in M1 principles is crucial for developing effective and transformational software solutions, which directly aligns with PEO1's objective of applying fundamental knowledge to real-world problems.
	M2	3	Technical expertise requires staying updated with new technologies and methodologies, aligning perfectly with PEO1's goal of leveraging updated knowledge for software development
	M3	2	While M3 is more focused on engaging students in contemporary research challenges and innovative solutions, it still supports the development of technical expertise by exposing students to real-world problems and interdisciplinary applications.
PEO2	M1	3	A Good understanding of core principles in Computer Science is mandatory for a successful career. Mastery of these principles ensures that graduates are well-prepared for various professional roles, higher education, or entrepreneurial endeavors.
	M2	2	Continuous learning and skill enhancement are vital for career success. M2's focus on fostering technical, communication, and managerial skills ensures that students are well-rounded and adaptable, which is crucial for thriving in a dynamic and evolving field.
	M3	3	To address contemporary research challenges and contributing to innovative solutions prepare students for high-impact careers. The ability to solve global issues using advanced technologies of computer science and engineering not only makes students highly employable but also positions them as leaders in their fields, directly supporting the objective of a successful career.
PEO3	M1	2	Understanding core principles also indirectly supports the development of professional ethics and effective communication. This foundational knowledge is essential for team work and problem-solving in professional settings.
	M2	2	The focus on professional ethics and embracing new technologies supports life-long learning and the development of soft skills nCSEssary for effective teamwork and social innovation.
	M3	3	Engaging students in real-world research challenges and encouraging them to address global issues inherently requires teamwork, effective communication, and ethical considerations. This mission strongly supports the development of soft skills and fosters a commitment to life-long learning.

PROGRAM SPECIFIC OBJECTIVES

PSO1: (Software Development and Quality assurance)	Transform various legacy or manual systems into computer automated systems using modern programming languages, integrated development environments and apply testing tools for efficient verification and validation of this software systems.
PSO2: (Immediate professional practice)	Work as software practitioner or continue higher education by adopting advanced technologies in various fields of Computer Science and Engineering.

PO/PSO TO PEO MAPPING

PO's		PEO1	PEO2	PEO3
PO1	Engineering Knowledge	3	2	3
PO2	Problem Analysis	3	3	3
PO3	Design/Development of solutions	3	3	3
PO4	Conduct investigations of complex problems	3	3	3
PO5	Modern tool usage	3	3	3
PO6	The engineer and the world	1	3	1
PO7	Ethics	2	3	3
PO8	Individual and Teamwork	3	3	2
PO9	Communication	2	3	3
PO10	Project management and finance	3	3	2
PO11	Lifelong Learning	3	3	3
PSO1	Transform various legacy or manual systems into computer automated systems using modern programming languages, integrated development environments and apply testing tools for efficient verification and validation of this software systems.	3	2	3
PSO2	Work as software practitioner or continue higher education by adopting advanced technologies in various fields of Computer Science and Engineering.	3	3	2

ISO 9001:2015 AICTE-CII: GOLD Category Institute NAAC-'A' Grade Institute (CGPA: 3.21) NIRF-2021 Rank : 197

KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE
Opp : Yerragattu Gutta, Hasanparthy (Mandal), WARANGAL - 506 015, Telangana, INDIA.
काकतीय प्रैद्योगिकी एवं विज्ञान संस्थान, वरंगल - ५०६ ०१५ तेलंगाना, भारत
కాకతీయ సాంకేతిక విజ్ఞాన శాస్త్ర విద్యాలయం, వరంగల్ - ౫౦౬ ౦౧౫ తెలంగాణ, భారతదేశము
Estd-1980 KITSW
(An Autonomous Institute under Kakatiya University, Warangal)
(Approved by AICTE, New Delhi; Recognised by UGC under 2(f) & 12(B); Sponsored by EKASILA EDUCATION SOCIETY)
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URR26: SCHEME FOR I & VIII SEMESTERS
of
B.TECH COMPUTER SCIENCE & ENGINEERING

w.e.f. A.Y. 2026-27

Abbreviations

L	Lecture Hour	E	Total Engagement in Hours
T	Tutorial Hour	C	Credit Assigned
P	Practical Hour		

I SEMESTER (Stream – I)

S. No.	Category	Course Code	Course Title	Lectures / week				Credits
				L	T	P	E	C
-	IKSC	U26IK100	AICTE Mandated Student Induction Programme (Universal Human Values - I)					-
1	BSC	U26MH101	Differential Calculus and Ordinary Differential Equations	2	1	-	3	3
2	BSC	U26PY102D	Engineering Physics (from Pool-I)	2	1	-	3	3
3	ESC	U26CS103	Programming for Problem Solving with C	2	1	-	3	3
4	ESC	U26EE104D	Basic Electrical & Electronics Engineering (from Pool – II)	2	1	-	3	3
5	PCC	U26CS105	Computer Architecture & Oragnization	2	1	-	3	3
6	VAC	U26PY106D	Engineering Physics Lab (from Pool – III)	-	-	2	2	1
7	PCC	U26CS107	Programming for Problem Solving with C Lab	-	-	2	2	1
8	ESC	U26EE108	Basic Electrical & Electronics Engineering Lab (from Pool – IV)	-	-	2	2	1
9	PCC	U26CS109	IT Workshop Laboratory	-	-	2	2	1
10	AEC	U26AE110	IDEA Lab Makerspace	-	-	2	2	1
			Total:	**10**	**5**	**10**	**25**	**20**
Summer/ Inter-sem Bridge Courses (Approved by BoS and Dean,AA): 1 week to 10 days: 1 credit to each Bridge course under additional learning (will be printed on grade sheet)				**NIL**				

S. No.	Course Code	Course Title		S. No.	Course Code	Course Title
Pool – I				**Pool – III**		
1.	U26PY102A	Engineering Physics (for CE)		1.	U26PY106A	Engineering Physics Laboratory (for CE)
2.	U26PY102B	Engineering Physics (for ME)		2.	U26PY106B	Engineering Physics Laboratory (for ME)
3.	U26PY102C	Engineering Physics (for EEE/ECE/ECV)		3.	U26PY106C	Engineering Physics Laboratory (for EEE/ECE/ECV)
4.	U26PY102D	Engineering Physics (for CS/IT)		4.	U26PY106D	Engineering Physics Laboratory (for CS/IT)
Pool – II				**Pool – IV**		
1.	U26EE104A	Basic Electrical & Electronics Engineering (for CE/ME)		1.	U26EE108A	Basic Electrical & Electronics Engineering Laboratory (for CE/ME)
2.	U26EE104B	Basic Electrical Engineering (for ECE/ECV)		2.	U26EE108B	Basic Electrical Engineering Laboratory (for ECE/ECV)
3.	U26EE104C	Basic Electrical Engineering (for EEE)		3.	U26EE108C	Basic Electrical Engineering Laboratory (for EEE)
4.	U26EE104D	Basic Electrical & Electronics Engineering (for CS/IT)		4.	U26EE108D	Basic Electrical & Electronics Engineering Laboratory (for CS/IT)

II SEMESTER (Stream – I)

S. No.	Category	Course Code	Course Title	Lectures / week				Credits
				L	T	P	E	C
1	BSC	U26MH201	Matrix Theory & Vector Calculus	2	1	-	3	3
2	BSC	U26CY202D	Engineering Chemistry (from Pool – I)	2	1	-	3	3
3	ESC	U26CS203	Data Structures Through C	2	1	-	3	3
4	HSMC	U26MH204	English Communication and Report Writing	2	1	-	3	3
5	PCC	U26CS205	Python Programming	2	1	-	3	3
6	BSC	U26CY206D	Engineering Chemistry Lab (from Pool – II)	-	-	2	2	1
7	ESC	U26CS207	Data Structures Through C Lab	-	-	2	2	1
8	VAC	U26VA208	Sports and Yoga	-	-	2	2	1
9	PCC	U26AE209	Python Programming Laboratory	-	-	2	2	1
10	ESC	U26ME210	Engg. Graphics & CAD*	-	-	2	2	1
			Total:	**10**	**5**	**10**	**25**	**20**

S. No.	Course Code	Course Title		S. No.	Course Code	Course Title
Pool – VII				**Pool – VIII**		
1.	U26CY202A	Engineering Chemistry (for CE)		1.	U26CY206A	Engineering Chemistry Laboratory (for CE)
2.	U26CY202B	Engineering Chemistry (for ME)		2.	U26CY206B	Engineering Chemistry Laboratory (for ME)
3.	U26CY202C	Engineering Chemistry (for EEE/ECE/ECI)		3.	U26CY206C	Engineering Chemistry Laboratory (for EEE/ECE/ECI)
4.	U26CY202D	Engineering Chemistry (for CS/IT)		4.	U26CY206D	Engineering Chemistry Laboratory (for CS/IT)

Bridge Courses for exit:

Successful completion of two subjects (6-Credits) during 2-months internship at the institute

OR

Successful completion of two suitable skill based courses (external) to qualify for Certification

A. After First Year: (UG Certificate in CSE)

(i) The candidate should pass any two of the following additional courses (ITI Level) during the 2-Months internship at institute

Exit Option to Qualify UG Certificate in CSE: Any Two (02) Courses during the 2 - Months internship									
S. No.	Category	Course Code	Course Title	L	T	P	O	E	C
1	PCC	U26CS211X	Java Programming	2	-	2	-	4	3
2	PCC	U26CS212X	Database Management	2	-	2	-	4	3
3	PCC	U26CS213X	Operating System	2	-	2	-	4	3
4	PCC	U26CS214X	Computer Aided Software Engineering	2	-	2	-	4	3
5	PCC	U26CS215X	Web Designing	2	-	2	-	4	3
6	PCC	U26CS216X	Any other course approved by BoS Chair and Dean AA	2	-	2	-	4	3

(OR)

(ii) Any two suitable skill based courses to qualify for Certification.

Exit Option to Qualify UG Certificate in CSE: Any Two (02) Skill based Courses -:									
S. No.	Category	Course Code	Course Title	L	T	P	O	E	C
1	SEC	U26SE211X	Advanced Excel (NSIC Course)	-	-	6	-	6	3
2	SEC	U26SE212X	Web Development (NSIC course)	-	-	6	-	6	3
3	SEC	U26SE213X	Linux (NSIC course)	-	-	6	-	6	3
4	SEC	U26SE214X	Oracle SQL/PLSQL Programming (NSIC course)	-	-	6	-	6	3
5	SEC	U26SE215X	CCNA: Computer Networks Essentials	-	-	6	-	6	3
6	SEC	U26SE216X	Power BI (NASSCOM futureskills course)	-	-	6	-	6	3
7	SEC	U26SE217X	Foundational Course in Cyber Security (NASSCOM futureskills course)	-	-	6	-	6	3
8	SEC	U26SE218X	Any other skill-based course approved by BoS Chair and Dean AA	-	-	6	-	6	3

III SEMESTER (FOR CE, ME, CSE, IT, CSN, CSO)

S. No.	Category	Course Code	Course Title	Lectures / week				Credits
				L	T	P	E	C
1	PCC	U26CS301	Software Engineering	2	1	-	3	3
2	PCC	U26CS302	Theory of Computation	2	1	-	3	3
3	PCC	U26CS303	Advanced Data Structures	2	1	-	3	3
4	PCC	U26CS304	Operating Systems	2	1	-	3	3
5	PCC	U26CS305	Object Oriented Programming through JAVA	2	1	-	3	3
6	VAC	U26CY306	Environmental Studies	2	-	-	2	1
7	PCC	U26CS307	Advanced Data Structures Laboratory	-	-	2	2	1
8	PCC	U26CS308	JAVA Programming Laboratory	-	-	2	2	1
9	PCC	U26CS309	Programming Skill Development Lab-1	-	-	2	2	1
10	VAC	U26VA306	Soft & Interpersonal Skills	-	-	2	2	1
			Total:	**12**	**5**	**8**	**25**	**20**
Summer/ Inter-semBridge Courses (Approved by BoS and Dean,AA): 1 week to 10 days: 1 credit to each Bridge course under additional learning (will be printed on grade sheet)				"Programming in C" bridge course for Non-CS/IT Lateral Entry students				

IV SEMESTER (FOR CSE, IT, CSN, CSO)

S. No.	Category	Course Code	Course Title	Lectures / week				Credits
				L	T	P	E	C
1	BSC	U26MH401A	Discrete Mathematics and Probability Statistics *(for CSE)*	2	1	-	3	3
2	PCC	U26CS402	Web programming	2	1	-	3	3
3	PCC	U26CS403	Database Management Systems	2	1	-	3	3
4	PCC	U26CS404	Artificial Intelligence	2	1	-	3	3
5	PCC	U26CS405	Computer Networks	2	1	-	3	3
6	PCC	U26CS406	Compiler Design	2	1	-	3	3
7	PCC	U26CS407	Web programming Laboratory	-	-	2	2	1
8	PCC	U26CS408	Database Management Systems Laboratory	-	-	2	2	1
9	PCC	U26CS409	Compiler Design Laboratory	-	-	2	2	1
Total:				**12**	**6**	**6**	**24**	**21**
Summer/ Inter-semBridge Courses (Approved by BoS and Dean,AA): 1 week to 10 days: 1 credit to each Bridge course under additional learning (will be printed on grade sheet)				**NIL**				

Branch Specific Mathematics (Pool - XIV)		
S. No.	**Course Code**	**Course Title**
1.	U26MH401A	Discrete Mathematics and Probability Statistics ***(for CSE, IT, CSO,CSN)***

Bridge Courses for exit:

Successful completion of two subjects (6-Credits) during 2-months internship at the institute

OR

Successful completion of two suitable skill based courses (external) to qualify for Certification

B. After Second Year: (UG Diploma in CSE)

(i) The candidate should pass any two of the following additional courses (Diploma Level) during the 2-Months internship at institute

Exit Option to Qualify UG Diploma in CSE: Any Two (02) Courses during the 2 - Months internship									
S. No.	Category	Course Code	Course Title	L	T	P	O	E	C
1	PCC	U26EC411X	Data Analytics	2	-	2	-	4	3
2	PCC	U26EC412X	Machine Learning Fundamentals	2	-	2	-	4	3
3	PCC	U26EC413X	Essentials of Network security	2	-	2	-	4	3
4	PCC	U26EC414X	Introduction to Internet of Things	2	-	2	-	4	3
5	PCC	U26EC415X	Algirthm Analysis	2	-	2	-	4	3
	PCC	U26CS214X	Any other course approved by BoS Chair and Dean AA	2	-	2	-	4	3

(OR)

(ii) Any two suitable skill-based courses to qualify for Diploma.

Exit Option to Qualify UG Diploma in CSE: Any Two (02) Skill based Courses -:									
S. No.	Category	Course Code	Course Title	L	T	P	O	E	C
1	SEC	U26SE416X	Software Testing with Selenium (NSIC Course)	-	-	6	-	6	3
2	SEC	U26SE417X	Dot Net Programming (NSIC Course)	-	-	6	-	6	3
3	SEC	U26SE418X	Android App Development (NSIC Course)	-	-	6	-	6	3
4	SEC	U26SE419X	CCNA: Switching Routing and Wireless essentials	-	-	6	-	6	3
5	SEC	U26SE420X	Tableau: Data Analytics (NASSCOM futureskills course)	-	-	6	-	6	3
6	SEC	U26SE421X	IoT Foundation (NASSCOM futureskills course)	-	-	6	-	6	3
7	SEC	U26SE422X	Any other course approved by BoS Chair and Dean AA	-	-	6	-	6	3

V SEMESTER (STREAM -I)

S. No.	Category	Course Code	Course Title	Lectures / week				Credits
				L	T	P	E	C
1	OE	U26OE501X-SEB	Open Elective –SE (From Pool -XV)	2	1	-	3	3
2	PCC	U26CS502	Machine Learning	2	1	-	3	3
3	PCC	U26CS503	Full Stack Development	2	1	-	3	3
4	PCC	U26CS504	Cryptography & Network Security	2	1	-	3	3
5	PCC	U26CS505	Design and Analysis of Algorithms	2	1	-	3	3
6	IKSC	U26IK506A	Universal Human Values – II	2	-	-	2	2
7	HSMC	U26MH507	English Language Lab	-	-	2	2	1
8	PCC	U26CS508	Machine Learning Laboratory	-	-	2	2	1
9	PCC	U26CS509	Full Stack Development Laboratory	-	-	2	2	1
10	ELC	U26AI510	Seminar	-	-	2	2	1
			Total:	**12**	**5**	**8**	**25**	**21**
Additional Learning@: Maximum credits allowed for Honours/Minor				-	-	-	-	5
Total credits for Honours/Minor students:				-	-	-	-	26
Summer/ Inter-semBridge Courses (Approved by BoS and Dean,AA): 1 week to 10 days: 1 credit to each Bridge course under additional learning (will be printed on grade sheet)				**NIL**				

Pool -XV **Startups & Entrepreneurship Basket (OE - S&EB)**		
S. No.	**Course Code**	**Course Title**
1.	**U26OE501A-SEB**	Design Thinking
2.	**U26OE501B-SEB**	Innovative Product Design and Development
3.	**U26OE501C-SEB**	Entrepreneurship
4.	**U26OE501D-SEB**	Design Studio
5.	**U26OE501Z-SEB**	Any other course approved by BoS Chair and Dean AA

VI SEMESTER (STREAM-I)

S. No.	Category	Course Code	Course Title	Lectures / week				Credits
				L	T	P	E	C
1	OE	U26OE601X-MB	Open Elective – MB (from Pool -XVII)	2	1	-	3	3
2	PEC	U26CS602	Program Elective –I / MOOCs-I	2	1	-	3	3
3	PCC	U26CS603	Data Science Essentials	2	1	-	3	3
4	PCC	U26CS604	Internet of Things	2	1	-	3	3
5	PCC	U26CS605	Deep Learning	2	1	-	3	3
6	IKSC	U26IK606B	Essence of Indian Traditional Knowledge	2	-	-	2	2
7	PCC	U26CS607	Data Science Laboratory	-	-	2	2	1
8	PCC	U26CS608	Internet of Things Laboratory	-	-	2	2	1
9	PCC	U26CS609	**Programming Skill Development Laboratory**	-	-	2	2	1
10	ELC	U26CS610	Mini Project	-	-	2	2	1
			Total:	**12**	**5**	**8**	**25**	**21**
Additional Learning@:Maximum credits allowed for Honours/Minor				-	-	-	-	5
Total credits for Honours/Minor students:				-	-	-	-	26
Summer/ Inter-semBridge Courses (Approved by BoS and Dean,AA): 1 week to 10 days: 1 credit to each Bridge course under additional learning (will be printed on grade sheet)				**NIL**				

Pool -XVIII **Management Courses Basket (OE-MB)**		
S. No.	**Course Code**	**Course Title**
1.	U26OE601A-MB	Management Economics and Accountancy
2.	U26OE601B-MB	Engineering Finance
3.	U26OE601C-MB	Organisational Behaviour
4.	U26OE601D-MB	E-Commerce and Digital Marketing
5.	U26OE601Z-MB	Any other course approved by BoS Chair and Dean AA

Bridge Courses for exit:

Successful completion of two subjects (6-Credits) during 2-months internship at the institute

OR

Successful completion of two suitable skill based courses (external) to qualify for Certification

C. After Third Year: (B. Tech (Vocational) in CSE)

(i) The candidate should pass any two of the following additional courses (Degree Level) during the 2-Months internship at institute

Exit Option to Qualify B. Voc in CSE: Any Two (02) Courses during the 2 - Months internship									
S. No.	Category	Course Code	Course Title	L	T	P	O	E	C
1	PCC	U26CS610X	Cloud computing Essentials	2	-	2	-	4	3
2	PCC	U26CS611X	Data Visualization with R programming	2	-	2	-	4	3
3	PCC	U26CS612X	Industrial IoT	2	-	2	-	4	3
4	PCC	U26CS613X	DevOps Development						
4	PCC	U26CS614X	Any other course approved by BoS Chair and Dean AA	2	-	2	-	4	3

(OR)

(ii) Any two suitable skill based courses to qualify for B.Voc in CSE Degree.

Exit Option to Qualify B. Voc in CSE: Any Two (02) Skill based Courses -:									
S. No.	Category	Course Code	Course Title	L	T	P	O	E	C
1	SEC	U26SE614X	Data Visualization using R Language (NSIC Course)	-	-	6	-	6	3
2	SEC	U26SE615X	AMOZON Web Services (NSIC Course)	-	-	6	-	6	3
3	SEC	U26SE616X	Augmented & Virtual Reality (NSIC Course)	-	-	6	-	6	3
4	SEC	U26SE617X	CCNA: Enterprise networking, security & automation	-	-	6	-	6	3
5	SEC	U26SE618X	Block Chain Application Developer (NASSCOM Futureskills course)	-	-	6	-	6	3
6	SEC	U26SE619X	Any other course approved by BoS Chair and Dean AA	-	-	6	-	6	3

VII SEMESTER (STREAM -I)

S. No.	Category	Course Code	Course Title	Lectures / week				Credits
				L	T	P	E	C
1	OE	U26OE701X -SDG	Open Elective –SD (From Pool-VII)	2	1	-	3	3
2	PEC	U26CS702	Program Elective - II/ MOOCs-II	2	1	-	3	3
3	PCC	U26CS703	Cloud Computing	2	1		3	3
4	PCC	U26CS704	Generative AI	2	1	-	3	3
5	PCC	U26CS705	Quantum Computing Essentials	2	1	-	3	3
6	PCC	U26CS706	Cloud Computing Laboratory	-	-	2	2	1
7	PCC	U26CS707	Mobile Application Development Laboratory	-	-	2	2	1
8	ELC	U26CS708	Internship Evaluation	-	-	2	2	1
9	ELC	U26CS709	Major Project Phase-1 / Industrial Internship -1	-	-	8	8	4
Total:				**10**	**5**	**14**	**29**	**22**
Additional Learning@:Maximum credits allowed for Honours/Minor				-	-	-	-	4
Total credits for Honours/Minor students:				-	-	-	-	26

Pool - VII **Sustainable Development Goals Basket (OE - SDGB)**		
S. No.	**Course Code**	**Course Title**
1.	U26OE701A	Sustainable Waste Management and Circular Economy (Offered by CE Dept.)
2.	U26OE701K	Embedded System for Sustainable Innovation (Offered by ECE Dept.)
3.	U26OE701O	AI Ethics (Offered by CSE(AI&ML) Dept.)
4.	U26OE701S	Software Testing and Quality Assurance (Offered by IT Dept.)
5.	U26OE701W	Network Automation (Offered by CSN Dept.)
6.	U26OE701	Any other course approved by BoS Chair and Dean AA

VIII SEMESTER

S. No.	Category	Course Code	Course Title	Lectures / week				Credits
				L	T	P	E	C
1	PEC	U26CS801	Program Elective - III / MOOCs-III	2	1	-	3	3
2	PEC	U26CS802	Program Elective - IV / MOOCs-IV	2	1	-	3	3
3	PCC	U26CS803	Blockchain Technologies	2	1	-	3	3
4	ELC	U26AI804	Major Project, Phase – 2 / Industrial Internship – 2	-	-	12	12	6
			Total:	**6**	**3**	**12**	**21**	**15**
Additional Learning@:Maximum credits allowed for Honours/Minor				-	-	-	-	4
Total credits for Honours/Minor students:				-	-	-	-	19

@ List of courses for additional learning through MOOCs towards Honours/Minor in Engineering shall be prescribed by the department under Honours/ Minor Curricula

B. Tech Honours with Research

Students opting for B. Tech Honours with Research, shall Publish a research paper in reputed journal indexed by SCI / SCOPUS/Web of Science (4 Credits).

SUMMARY

SEMESTER	I	II	III	IV	V	VI	VII	VIII	TOTAL
CREDITS FOR STREAM-I	21	20	19	21	21	21	22	15	160

PROGRAM ELECTIVE COURSES (PEC)

There are four slots allotted to Program Elective Courses (PECs).

VERTICAL / PROFESSIONAL ELECTIVE	PROFESSIONAL ELECTIVE1 (PE1)	PROFESSIONAL ELECTIVE1 (PE2)	PROFESSIONAL ELECTIVE1 (PE3)	PROFESSIONAL ELECTIVE1 (PE4)
VERTICAL 1: Artificial Intelligence	**U26CS602A: Computer Vision & Image Processing**	**U26CS702A: Agentic AI**	**U26CS801A: Responsible AI**	**U26CS801A: Robotic Process Automation**
	(OR)			
	Equivalent MOOC approved by BoS Chair and Dean AA			
VERTICAL 2: Data Science	**U26CS602B: Data Mining**	**U26CS702B: Big Data Analytics**	**U26CS801B: Social Network Analysis**	**U26CS802B: Data Visualization**
	(OR)			
	Equivalent MOOC approved by BoS Chair and Dean AA			
VERTICAL 3: Cloud Computing	**U26CS602C: DevOps Engineering**	**U26CS702C: Parallel Computing Algorithms**	**U26CS801C: High Performance Computing**	**U26CS802C: Augmented Reality**
	(OR)			
	Equivalent MOOC approved by BoS Chair and Dean AA			
VERTICAL 4: Cyber Security	**U26CS602D: Cyber Security Essentials**	**U26CS702D: Ethical Hacking**	**U26CS801D: Digital Forensics**	**U26CS802D: Web & Database Security**
	(OR)			
	Equivalent MOOC approved by BoS Chair and Dean AA			
VERTICAL 5: Internet of Things	**U26CS602E: IoT Communication Protocols**	**U26CS702E: Edge & Fog Computing**	**U26CS801E: Industrial IoT**	**U26CS802E: Privacy & Security in IoT**
	(OR)			
	Equivalent MOOC approved by BoS Chair and Dean AA			

SUMMARY OF CURRICULUM COMPONENTS

S.NO.	CATEGORY	COURSE COMPONENT	TOTAL COURSES	TOTAL CREDITS	CURRICULUM CONTENT (%OF CREDITS)
1	**HSMC**	Humanity, Social Sciences and Management Courses	02	03	1.875
2	**BSC**	Basic Science Courses	07	17	10.625
3	**ESC**	Engineering Science Courses	07	15	9.375
4	**PCC**	Program Core Courses	37	82	51.25
5	**PEC**	Program Elective Courses	04	12	7.5
6	**MOPEC**	Multidisciplinary Open Elective Courses	03	09	5.625
7	**ELC**	Experiential Learning Courses	05	13	8.125
8	**IKSC**	Indian Knowledge System Courses	02	04	2.5
9	**VAC**	Value Added Courses	03	03	1.875
10	**SEC**	Skill Enhancement Courses	01	01	0.625
11	**AEC**	Ability Enhancement Courses	01	01	0.625
Total			**72**	**160**	**100**

The curriculum supports approximately 60% of Theory and 40 % of Lab including PW. Online courses are optional.

14. SEMESTER WISE COURSE / CREDIT DISTRIBUTION

Semester	Number of Courses / Number of Credits (Course Category wise) - Stream -I											
	BSC	**ESC**	**HSMC**	**PCC**	**MOPEC**	**PEC**	**SEC**	**VAC**	**ELC**	**AEC**	**IKSC**	**TOTAL**
I	3/7	4/9	-	1/3	-	-	-	1/1	-	1/1	-	10/21
II	3/7	3/6	1/2	1/3	-	-	1/1	1/1	-	-	-	10/20
III	-	-	-	8/18	-	-	-	1/1	-	-	-	9/19
IV	1/3	-	-	8/18	-	-	-	-	-	-	-	9/21
V	-	-	1/1	6/14	1/3	-	-	-	1/1	-	1/2	10/21
VI	-	-	-	6/12	1/3	1/3	-	-	1/1	-	1/2	10/21
VII	-	-	-	5/11	1/3	1/3	-	-	2/5	-	-	9/22
VIII	-	-	-	1/3	-	2/6	-	-	1/6	-	-	4/15
Total	**7/17**	**7/15**	**2/3**	**36/82**	**3/9**	**4/12**	**1/1**	**3/3**	**5/13**	**1/1**	**2/4**	**72/160**
% Weightage of Course Category	10.625 % (17/160)	9.375 % (15/160)	1.875 % (3/160)	51.25 % (83/160)	5.625 % (9/160)	7.5 % (12/160)	0.625 % (1/160)	1.875 % (3/160)	8.125 % (13/160)	0.625 % (1/160)	2.5 % (4/160)	100 % (160/160)

* Seminar- 1 C , Mini Project- 1 C, Intership Evalution-1 C, Major Project : 4+6