Bachelor of Technology in 'Computer Science and Engineering- (2023-24)

Sem	Semester Course Code, Course Name (L-T-P)Credits						GP	Community Services	Hrs. Per week L	T	P	Credits
1	MAL151 Engg Maths-I (3-0-2)4	CSL106 FOCP-I (2-0-4)4	CHL150 Engg Chemistry (2-0-2)3	MEP110 Engineering Graphics & Drawing (1-0-4)3	CSL110 Problem Solving and Design Thinking (2-0-2)3	CSV101 Skill Development (1-0-2)2	CSR118 GP 1 Credit	CSS101 CS-I	11	0	16	19+1 =20
2	MAL152 Engg Maths-II (3-0-2)4	CSL108 FOCP-II (2-0-4)4	PYL150 Engineering Physics (3-0-2)4	MEL160 Basic of Mechanical Engineering (2-0-2)3	ECL110 Basic of Electrical & Electronics Engineering (2-0-2)3	CLL130 Effective Communication-I (1-0-2)2	CSR119 GP 1 Credit	CSS102 CS-II (140 Hrs)** 2 Credits	13	0	14	20+3 =23
Summer												
3	CSL209 Data Structures (3-0-2)4	ECL255 DE & CA (3-0-2)4	CSL240 Computer Networks (3-0-2)4	CSL223 Discrete Mathematics (3-0-0)3	Program Elective - I (2-0-4)4	CLL140 Effective Communication-II (1-0-2)2	CSR218 GP 1 Credit	CSS201 CS-III	15		12	21+1 =22
4	CSL422 Cyber Security (3-0-2)4	CSL214 DBMS (3-0-2)4	CSL230 Analysis and Design of Algorithms (3-0-2)4	Program Elective-2 (2-0-4)4	SML300 Entrepreneurship (3-0-0)3	Open Elective – 1 (MOOC) (3-0-0)3	CSR219 GP 1 Credit	CSS202 CS-IV (140 Hrs)** 2 Credits	17		10	22+3 =25
Summer	CST201 Industrial Training/internship											2
5	CSL236 Introduction to AI & ML / CSL242 AI for Games (3-0-2)4	CSL303 Operating System (3-0-2)4	Program Elective-3 (2-0-4)4	Program Elective-4 (2-0-4)4	Open Elective – 2 (MOOC) (3-0-0)3	CLL120 HVPE (2-0-0-)2	CSR318 GP 1 Credit	CSS301 CS-V	15		12	21+1 =22
6	CSL229 SEPM (3-0-2)4	Program Elective-5 (2-0-4)4	Program Elective-6 (2-0-4)4	CSL318 Theory of Computation (3-0-2)4	Open Elective-3 (3-0-0)3	CSC301 Seminar 1 Credit	CSR319 GP 1 Credit	CSS302 CS-VI (140 Hrs)** 2 Credits	13		12	19+3 =24
Summer	CST301 Industrial Training/ internship											04
7	Program Elective-7 (2-0-4)4	Program Elective-8 (2-0-4)4	CSD401 Project # 1 4 Credits	Open Elective – 4 (MOOC) (3-0-0)3	CHL100 EVS (3-0-0)3	Foreign Language (3-0-0)3		CSS401 CS-VII	13		8	21
8	Liberal Arts Elective (3-0-0-)3	Open Elective – 5 (MOOC) (3-0-0)3	CSD402 Project # 2 /Internship 6 Credits					CSS402 CS-VIII (140 Hrs) 2 Credits	6			12+2 =14
	Total								106	2	80	**160+14= 174**

** Students can utilize the summer/winter break period to complete the remaining 140 Community Service hours every year.

- The University shall conduct introductory sessions in the 1st semester on soft skills, which are a set of transferable skills and key personal traits essential for personality development.
- The University shall conduct special sessions in the 4th semester to reinforce the learnings of introductory training sessions conducted in the first year.
- Two value-added courses over and above the programme scheme shall be offered during the 5th & 6th semesters to impart special skills to students for enhancing their employability.
- Advanced sessions on soft skills shall be conducted in the 7th semester to hone up the preparedness of students for placements and make them industry ready for national and international jobs.

Program Electives for each track

Tracks	Data Science	Cloud Computing	Full Stack	Game Tech	Cyber Security	Blockchain	AI & ML	IoT & 5G	Other Electives
Program Elective-1	CSL 225 Programming for Data Science	CSL225 Programming for Data Science	CSL273 Enterprise Web Applications	CSL243 Game Design & Asset Creation	CSL 281 Secure Communication and Cryptography	CSL239 Mathematics of Modern Cryptography	CSL 225 Programming for Data Science and AI	ECL256 Embedded Systems	MAL270 Numerical Methods
Program Elective-2	CSL227 Applied Computational Statistics	CSL238 Introduction to Cloud Computing	CSL274 Middleware Frameworks and ORM	CSL245 Programing for Games	CSL 283 Secure Coding and Vulnerabilities	CSL247 Intro. to blockchain technologies	CSL227 Applied Computational Statistics	CSL238 Introduction to Cloud Computing	CSL223 Web Development Technologies
Program Elective-3	CSL234 Data Engineering	CSL337 Cloud Architecture	CSL276 No SQL Databases	CSL244 Advanced Programming for Games	CSL 284 Digital Forensics and Malware Analysis	CSL355 Bitcoin and Cryptocurrency Technologies	CSL347 Applied Artificial Intelligence and Expert Systems	ECL252 Micro Controllers & Sensors	MAL280 Linear Algebra and its Applications
Program Elective-4	CSL232 Business Intelligence and Data Visualization	CSL338 Virtualization & Cloud Computing	CSL253 Web Frameworks	CSL343 Designing Human Computer Interfaces	CSL 383 Network security	CSL356 Smart Contracts	CSL348 Reinforcement Learning	ECL316 Wireless & Mobile Communication	MAL260 Probability and Statistics
Program Elective-5	CSL313 Machine Learning	CSL339 Big Data on Cloud	CSL371 Mobile Application Development	CSL246 Cross Platform Game Development	CSL387 Web and Mobile Security	CSL357 Blockchain for Cyber Security	CSL349 Artificial Intelligence for Robotics	ECL352 Design for IOT	
Program Elective-6	CSL311 Big Data	CSL346 Artificial Intelligence & Machine Learning on Cloud	CSL373 Devops	CSL341 AR Development	CSL385 Risk Analysis and Assessment	CSL358 Blockchain Technology in Web Development	CSL312 Deep Learning	ECL367 Introduction to 5G Technologies	
Program Elective-7	CSL316 Introduction to Image Processing and Recognition	CSL445 Cloud Application Development & Deployment	CSL311 Big Data	CSL345 VR Development	CSL384 Cloud Security Essentials	CSL449 Security and Privacy for Big Data Analytics	CSL447 Computer Vision	ECL368 Security in IoT	
Program Elective-8	CSL312 Deep Learning	CSL446 Cloud Security	CSL374 Micro service Based Applications	CSL342 XR Studio	CSL382 Blockchain	CSL455 Cloud Infrastructure and Services	CSL448 Computational Linguistics and Natural Language Processing	ECL482 Mobile Networks	