School of Engineering & Technology
B.Tech. Computer Science and Technology

School of Engineering and Technology

Bachelor of Technology

Computer Science and Technology

Scheme of Teaching and Evaluation (STE)

Academic Batch [2025-2029]

Bachelor of Technology
Computer Science and Technology

I Semester (Physics Cycle)

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/ Week	Credit Distribution L-T-P-C
Program Core							
4MATH1012	Engineering Mathematics with Python Lab - I	Foundation	FC	BSC	BS	5	3-0-1-4
4PHYS1013	Engineering Physics	Foundation	FC	BSC	BS	5	3-0-1-4
4ENEE1012	Fundamentals of Electrical Engineering	Foundation	FC	ESC	ECE	3	3-0-0-3
4CSGC1012	Elements of Computer Engineering	Foundation	FC	ESC	CSE	2	2-0-0-2
4CSPL1113	Programming in C	Foundation	FC	ESC	ME	6	2-0-2-4
Common Core							
CPSAL1061/71/81	Hindi/Kannada/English	PS	-	HSMC	DCCC	2	2-0-0-2
CPSAL1121	Active Communication	PS	-	HSMC	DCCC	3	3-0-0-3
CPSSD1061	Creating with AI	PS	-	HSMC	DCCC	1	1-0-0-1
CCSCD1011	Community Service Programme - I	CPC	-	SDC	SOET	2	0-0-1-1*
TOTAL						**27**	**23 + 1***

*The Community Service-I (COS-I) of 30 hours has to be carried out in the I Semester. The corresponding 1 credit and the CIE will be reflected in the VIII Semester.

II Semester (Physics Cycle)

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/ Week	Credit Distribution L-T-P-C
Program Core							
4MATH1022	Engineering Mathematics with Python Lab - II	Foundation	FC	BSC	BS	5	3-1-0-4
4CHEM1014	Engineering Chemistry	Foundation	FC	BSC	BS	3	1-0-1-2
4ENCE1012	Fundamentals of Electronics Engineering	Foundation	FC	ESC	ME	4	3-1-0-4
4ENCV1072	Engineering Mechanics	Foundation	FC	ESC	CE	2	2-0-0-2
4CSPL1012	Problem solving using Python	Foundation	FC	ESC	CSE	6	2-0-2-4
Common Core							
CPSAD1013	Design Thinking	PS	-	HSMC	DCCC	2	2-0-0-2
CPSDB1011	Career Preparedness Program - I	PS	-	HSMC	DCCC	2	0-0-1-1
GCSCD1021	Community Service -II (COS - II)	CS	-	SDC	SOET	2	0-0-1-1*
TOTAL						**26**	**19 + 1***

† Internship- I of 3 credits to be carried out between II and III Semester break. The corresponding 3 credits will be reflected in the VIII Semester.

*The Community Service-II (COS-II) of 30 hours has to be carried out in the II Semester. The corresponding 1 credit and the CIE will be reflected in the VIII Semester.

Bachelor of Technology
Computer Science and Technology

I Semester (Chemistry Cycle)

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/ Week	Credit Distribution L-T-P-C
Program Core							
4MATH1012	Engineering Mathematics with Python Lab - I	Foundation	FC	BSC	BS	5	3-0-1-4
4CHEM1014	Engineering Chemistry	Foundation	FC	BSC	BS	3	1-0-1-2
4ENCE1012	Fundamentals of Electronics Engineering	Foundation	FC	ESC	ME	4	3-1-0-4
4ENCV1072	Engineering Mechanics	Foundation	FC	ESC	CE	2	2-0-0-2
4CSPL1012	Problem solving using Python	Foundation	FC	ESC	CSE	6	2-0-2-4
Common Core							
CPSAD1013	Design Thinking	PS	-	HSMC	DCCC	2	2-0-0-2
CPSSD1061	Creating with AI	PS	-	HSMC	DCCC	1	1-0-0-1
GCSCD1011	Community Service -I (COS - I)	CS	-	SDC	SOET	2	0-0-1-1*
TOTAL						**23**	**19 + 1***

*The Community Service-I (COS-I) of 30 hours has to be carried out in the I Semester. The corresponding 1 credit and the CIE will be reflected in the VIII Semester.

II Semester (Chemistry Cycle)

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/ Week	Credit Distribution L-T-P-C
Program Core							
4MATH1022	Engineering Mathematics with Python Lab - II	Foundation	FC	BSC	BS	5	3-1-0-4
4PHYS1013	Engineering Physics	Foundation	FC	BSC	BS	5	3-0-1-4
4ENEE1012	Fundamentals of Electrical Engineering	Foundation	FC	ESC	ECE	3	3-0-0-3
4CSGC1012	Elements of Computer Engineering	Foundation	FC	ESC	CSE	2	2-0-0-2
4CSPL1113	Programming in C	Foundation	FC	ESC	ME	6	2-0-2-4
Common Core							
CPSAL1061/71/81	Hindi/Kannada/English	PS	-	HSMC	DCCC	2	2-0-0-2
CPSAL1121	Active communication	PS	-	HSMC	DCCC	3	3-0-0-3
CPSDB1011	Career Preparedness Program - I	PS	-	HSMC	DCCC	2	0-0-1-1
CCSCD1021	Community Service Programme - II	CPC	-	SDC	DCCC	2	0-0-1-1*
TOTAL						**28**	**23+ 1***

† Internship- I of 3 credits to be carried out between II and III Semester break. The corresponding 3 credits will be reflected in the VIII Semester.

*The Community Service-II (COS-II) of 30 hours has to be carried out in the II Semester. The corresponding 1 credit and the CIE will be reflected in the VIII Semester.

III Semester

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/Department	Contact Hours/Week	Credit Distribution L-T-P-C
Program Core							
4MATH2042	Probability, Statistics and Numerical Methods	Foundation	FC	PCC	BS	4	3-1-0-4
4CSPL1022	Data structures	Foundation	FC	PCC	CSE	5	3-0-1-4
4CTGC1011	Digital Logic Design	Foundation	FC	PCC	CSE	3	3-0-0-3
4CSGC2092	Computer Organization & Architecture	Foundation	IC	PCC	CSE	4	3-0-0-3
CPSES1013	Making with Electronics	PS	-	ESC	ECE	5	1-0-2-3
4INTS3010	Internship- I†	Foundation	-	PCC	CSE	6	0-0-3-3†
Common Core							
CKSAM1051	Indian Constitution	CC	-	SDC	DCCC	2	2-0-0-2
CPSBD1011	Career Preparedness Program - II	PS	-	AECC	DCCC	2	0-0-1-1
CCSCD1031	Community Service Programme -III	CS			SOET	2	0-0-1-1*
TOTAL						**30**	**22 + 1*+ 3†**
GPSDA1022	Career Preparedness Program - II	PS	-	AECC	DCCC	2	GR

† Internship - I credits are reflected in the VIII Semester.*The Community Service-III (COS-III) of 30 hours has to be carried out in the III Semester. The corresponding 1 credit and the CIE will be reflected in the VIII Semester.

IV Semester

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/Department	Contact Hours/Week	Credit Distribution L-T-P-C
Program Core							
4MATH2051	Discrete Mathematics and Combinatorics	Foundation	FC	BSC	BS	4	3-1-0-4
4CSGC2011	Introduction to IOT	Foundation	IC	PCC	CSE	4	2-0-1-3
4CSGC2053	Design and Analysis of Algorithms	Foundation	IC	PCC	CSE	4	2-0-1-3
4CSGC2022	Database Management Systems	Foundation	IC	PCC	CSE	3	3-0-0-3
4CSPL2021	Object Oriented Programming with Java	Foundation	IC	PCC	CSE	5	3-0-1-4
Common Core							
CKSAM1051	Indian Constitution	KSC	-	MC	DCCC	2	2-0-0-2
GCSCD1041	Community Service -IV (COS - IV)*	CS	-	SDC	SOET	2	0-0-1-1*
CKSMM1012	Critical Inquiry	CC	-	SDC	DCCC	1	1-0-0-1
TOTAL						**25**	**20+ 1***
GPSBA1032	Career Preparedness Program - III	PS	-	AECC	DCCC	2	GR

† Internship- II of 3 credits to be carried out between IV and V Semester break. The corresponding 3 credits will be reflected in the VIII Semester. *The Community Service-IV (COS-IV) of 30 hours has to be carried out in the IV Semester. The corresponding 1 credit and the CIE will be reflected in the VIII Semester.

V Semester

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/Week	Credit Distribution L-T-P-C
Program Core							
4CSGC2073	Cloud Computing	Foundation	IC	PCC	CSE	3	3-0-0-3
4CSPL2013	Web Development using Python and Django	Foundation	IC	PCC	CSE	4	2-0-1-3
4CTGC2041	Computer Vision and Image Processing	Foundation	IC	PCC	CSE	4	2-0-1-3
4CSGC1XX1	Open Elective 1	Elective	IC	OEC	N/A	3	3-0-0-3
4CSGC2XX1	Professional Elective 1	Elective	IC	PEC	CSE	3	3-0-0-3
		Interdisciplinary Elective1	IDE	OEC		3	3-0-0-3
4INTS3020	Internship- II†	Foundation	Internship	PCC	CSE	6	0-0-3-3†
Common Core							
CKSHA1011	Indian Traditions: Values and Critical Inquiry	KSC	-	HSMC	DCCC	2	2-0-0-2
CCSAE1011	Disaster Management	KSC	-	HSMC	DCCC	2	2-0-0-2
TOTAL						**24**	**22 + 3†**
	Training and Placement	PS	-	AECC	DCCC	2	GR

† Internship - II credits are reflected in the VIII Semester

PROFESSIONAL ELECTIVE–1: DATA SCIENCE

4CSPL3021	Advanced Python for AI (MOOC)
4CSGC3081	Data Mining
4CSPL3031	R Language(MOOC)

PROFESSIONAL ELECTIVE–1: CYBER SECURITY

4CSGC3041	Cryptography (MOOC)
4CSGC3051	Software Security(MOOC)
4CSGC3061	Secure Coding

PROFESSIONAL ELECTIVE–1: APPLICATION DEVELOPMENT

4CSPL3041	Advanced Java
4CSPL3051	Scripting Languages (MOOC)
4CSPL3061	Kotlin (OO+Functional)(MOOC)

PROFESSIONAL ELECTIVE–1: ARTIFICIAL INTELLIGENCE

4CSGC3211	Introduction to DevOps and Microservice Architecture
4CSGC3221	Human Computing Interface with IOT
4CSGC3231	Creative AI and No-Code Automation

OPEN ELECTIVE–1

4ENME2131	Fundamentals of Robotics and Applications
4ENCV2101	Remote Sensing & Applications
4ENCC1021	Introduction to Digital Image Processing

VI Semester

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/Week	Credit Distribution L-T-P-C
Program Core							
4CTGC3022	Quantum computing in AI	Foundation	AC	PCC	CSE	3	3-0-0-3
4CTGC3011	IOT Applications and Data Analytics	Foundation	IC	PCC	CSE	4	2-0-1-3
4CTGC3031	Android Application development (Kotlin)	Foundation	AC	PCC	CSE	5	3-0-1-4
4CSGC1XX2	Open Elective 2	Elective	IC	OEC	N/A	3	3-0-0-3
4CSGC2XX1	Professional Elective 2	Elective	IC	PEC	CSE	3	3-0-0-3
		Interdisciplinary Elective 2	IDE	OEC		3	3-0-0-3
Common Core							
CKSAM1021	Environment and Sustainability	CS	-	HSMC	DCCC	2	2-0-0-2
CSSAE10XX	Contributing to Society (Elective)	CS	-	HSMC	DCCC	2	2-0-0-2
TOTAL						**25**	**23**
	Training and Placement	PS	-	AECC	DCCC	2	GR

† Internship- III of 3 credits to be carried out between VI and VII Semester break. The corresponding 3 credits will be reflected in the VIII Semester.

PROFESSIONAL ELECTIVE–2: DATA SCIENCE	
4CSGC3121	Soft Computing (Fuzzy, Genetic, Ontologies) (MOOC)
4CSPL3091	No-SQL Databases
4CSPL3101	Applied Machine Learning (MOOC)

PROFESSIONAL ELECTIVE–2: CYBER SECURITY	
4CSGC3131	System Security
4CSGC3141	Ethical Hacking (MOOC)
4CSGC3151	Malware analysis (MOOC)

PROFESSIONAL ELECTIVE–2: APPLICATION DEVELOPMENT	
4CSPL3111	Object Oriented Analysis Design
4CSPL3121	Web Technology Frameworks (MOOC)
4CSPL3131	Application Development using MERN Stack (MOOC)

PROFESSIONAL ELECTIVE–1: ARTIFICIAL INTELLIGENCE	
4CSGC3241	Game Theory
4CTGC3041	Generative AI
4CSGC3261	Cyber Hub & Kali Linux

OPEN ELECTIVE–2	
4ENME2141	Advanced Robotics: Integration of Control, Programming, and AI
4ENCV2111	Geographic Information System & Applications
4ENCC1021	Advance Digital Image Processing

VII Semester

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/ Week	Credit Distribution L-T-P-C
Program Core							
4CTGC3041	Deep Learning for NLP	Foundation	IC	PCC	CSE	4	2-0-1-3
4CSGC3XX1	Professional Elective 3	Elective	AC	PEC	CSE	3	3-0-0-3
4CSGC3XX1	Professional Elective 4	Elective	AC	PEC	CSE	3	3-0-0-3
CPSHS1021	Business Management for Engineers	PS	-	HSMC	SOM	1	1-0-0-1
		Inter disciplinary Elective 3	IDE	OEC		3	3-0-0-3
4CAPS4010	Capstone Project Phase I	Foundation	Capstone Project Phase I	PROJ	CSE	6	
4INTS4010	Internship- III†	Foundation	Internship	PCC	CSE	6	0-0-3-3†
TOTAL						**14**	**13 + 3†**
Common Core							
	Training and Placement	PS	-	AECC	DCCC	2	GR

† Internship - III credits are reflected in the VIII Semester

PROFESSIONAL ELECTIVE–3,4: DATA SCIENCE	
4CSPL4021	Deep Learning (MOOC)
4CSPL4031	Big Data and Analytics (MOOC)
4CSPL4041	Robotic Process Automation (MOOC)
4CSPL4051	Natural Language Processing

PROFESSIONAL ELECTIVE–3,4: CYBER SECURITY	
4CSPL4061	Mobile Computing Security (MOOC)
4CSPL4071	Digital Forensics (MOOC)
4CSPL4081	Cloud Computing Security (MOOC)
4CSPL4091	Web Security

PROFESSIONAL ELECTIVE–3,4: APPLICATION DEVELOPMENT	
4CSPL4101	J2EE Technologies (MOOC)
4CSPL4111	.NET Technologies (MOOC)
4CSPL4121	JavaScript
4CSPL4131	Microservices (MOOC)

PROFESSIONAL ELECTIVE–3,4: ARTIFICIAL INTELLIGENCE & NETWORKING	
4CSPL4141	Software Defined Networks
4CSPL4151	Storage Area Networks (MOOC)
4CSPL4161	Virtualization & Cloud Computing (MOOC)
4CSPL4171	Network Administration (MOOC)
4CSGC3271	Image and Video Forensics
4CSGC3281	Introduction to Quantum Computing
4CSGC3291	Introduction to Block Chain Technologies

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VIII Semester

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/Week	Credit Distribution L-T-P-C
Program Core							
4CAPS4010	Capstone Project Phase II	Foundation	Capstone	PCC	CSE	16	0-0-8-8
4INTS3010	Internship- I†	Foundation	Internship	PCC	CSE	-	0-0-3-3
4INTS3020	Internship- II†	Foundation	Internship	PCC	CSE	-	0-0-3-3
4INTS4010	Internship- III†	Foundation	Internship	PCC	CSE	-	0-0-3-3
CCSCD1011	Community Service Programme –I*	CS	-	SDC	SOET	-	0-0-1-1
CCSCD1021	Community Service Programme –II*	CS	-	SDC	SOET	-	0-0-1-1
CCSCD1031	Community Service Programme –III*	CS	-	SDC	SOET	-	0-0-1-1
CCSCD1041	Community Service Programme –III*	CS	-	SDC	SOET	-	0-0-1-1
TOTAL						**16**	**21**

† The credits of Internship - I taken up after the II Semester is reflected in the VIII Semester
† The credits of Internship - II taken up after the IV Semester is reflected in the VIII Semester
† The credits of Internship - III taken up after the VI Semester is reflected in the VIII Semester
* The credit of Community Service - I (COS-I) / Community Service - II (COS-II) / Community Service - III (COS-III) / Community Service - IV(COS-IV) of 30 hours each that was carried out in the I / II / III and IV Semesters respectively is reflected in the VIII Semester.