

**School of Engineering and Technology**

**Bachelor of Technology**

**Computer Engineering**

**Scheme of Teaching and Evaluation (STE)**

**Batch [2025-29]**

### I Semester (Physics Cycle)

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/ Week	Credit Distribution L-T-P-C
<b>Program Core</b>							
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
<b>Common Core</b>							
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*
<b>TOTAL</b>						<b>27</b>	<b>23 + 1*</b>

**\*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
<b>Program Core</b>							
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
<b>Common Core</b>							
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*
<b>TOTAL</b>						<b>26</b>	<b>19 + 1*</b>

† 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

### I Semester (Chemistry Cycle)

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/ Week	Credit Distribution L-T-P-C
<b>Program Core</b>							
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
<b>Common Core</b>							
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*
<b>TOTAL</b>						<b>23</b>	<b>19 + 1*</b>

**\*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
<b>Program Core</b>							
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
<b>Common Core</b>							
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
CPSCDB1011	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*
<b>TOTAL</b>						<b>27</b>	<b>23+ 1*</b>

† 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
<b>Program Core</b>							
4MATH2042	Probability, Statistics and numerical methods	Foundation	FC	PCC	BS	4	3-1-0-4
4ENCE2032	Digital Systems Design using Verilog HDL	Foundation	IC	PCC	ECE	5	2-0-1-3
4CSPL1022	Data structures	Foundation	FC	PCC	CSE	5	3-0-1-4
4CEGC1011	Computer Networks and Circuit Theory	Foundation	FC	PCC	CSE	3	3-0-0-3
4CSGC2092	Computer Organization and Architecture	Foundation	IC	PCC	CSE	3	3-0-0-3
4INTS3010	Internship- I <sup>†</sup>	Foundation	-	PCC	CSE	6	0-0-3-3 <sup>†</sup>
<b>Common Core</b>							
CKSAA1033	Introduction to Philosophical Thoughts	KSC	-	MC	DCCC	1	1-0-0-1
GCSCD1031	Community Service - III (COS-III)*	CS		SDC	SOET	2	0-0-1-1*
CKSAM1051	Indian Constitution	KSC	-	MC	DCCC	2	2-0-0-2
<b>TOTAL</b>						<b>30</b>	<b>20 + 1* + 3<sup>†</sup></b>
GPSBA1022	Carrer Preparedness Program - II	PS			SOET	2	0-0-1-1*

<sup>†</sup> 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
<b>Program Core</b>							
4MATH2051	Discrete Mathematics and Combinatorics	Foundation	FC	BSC	BS	4	3-1-0-4
4CSGC2011	Operating Systems	Foundation	IC	PCC	CSE	4	2-0-1-3
CPSES1013	Making with Electronics	PS	-	ESC	ECE	5	1-0-2-3
4CSGC2031	Advanced Data Structures	Foundation	IC	PCC	CSE	3	3-0-0-3
4CSGC2082	Software Engineering	Foundation	IC	PCC	CSE	3	3-0-0-3
<b>Common Core</b>							
CKSMM1012	Critical Inquiry	CC	-	SDC	DCCC	1	1-0-0-1
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*
<b>TOTAL</b>						<b>23</b>	<b>19 + 1*</b>
GPSBD1211	Branding and Profile Building	PS	-	AECC	DCCC	2	GR
GPSBA1092	Prepare for Aptitude Tests- 2/4	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
<b>Program Core</b>							
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
4CSGC2062	Data Communication & Computer Networks	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†
<b>Common Core</b>							
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
<b>TOTAL</b>						<b>24</b>	<b>22 + 3†</b>
	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
<b>Program Core</b>							
4CSGC3012	Artificial Intelligence	Foundation	AC	PCC	CSE	3	3-0-0-3
4CSPL3013	Python for Data Science	Foundation	IC	PCC	CSE	4	2-0-1-3
4CSGC3032	Mobile Application Development	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
<b>Common Core</b>							
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
<b>TOTAL</b>						<b>25</b>	<b>23</b>
	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.

<b>PROFESSIONAL ELECTIVE-2: DATA SCIENCE</b>	
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
4CSGC3251	Cyber Crime Management
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
<b>Program Core</b>							
4CSPL2041	Introduction to Machine Learning	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†
<b>TOTAL</b>						<b>14</b>	<b>13 + 3†</b>
<b>Common Core</b>							
	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

**VIII Semester**

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours/Week	Credit Distribution L-T-P-C
<b>Program Core</b>							
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
<b>TOTAL</b>						<b>16</b>	<b>21</b>

† 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.