



School of Engineering and Technology

Bachelor of Technology

CSE (Artificial Intelligence and Machine Learning)

Batch 2025

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	4	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	CSE	4	2-0-2-4
Common Core							
CPSAL1062/71/82	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	4	3-0-1-4
4CHEM1014	Engineering Chemistry	Foundation	FC	BSC	BS	3	1-0-1-2
4ENCE1012	Fundamentals of Electronic Engineering	Foundation	FC	ESC	ECE	4	3-0-1-4
4ENCV1071	Engineering Mechanics	Foundation	FC	ESC	CE	2	2-0-0-2
4CSPL1012	Problem solving using Python	Foundation	FC	ESC	CSE	4	2-0-2-4
Common Core							
CPSAD1013	Design Thinking	PS	-	HSM C	DCCC	2	2-0-0-2
CPSDB1011	Career Preparedness Program - I	PS	-	HSM C	DCC C	2	0-0-1-1
GCSCD1021	Community Service -II (COS - II)	CS	-	SDC	SOET	2	0-0-1-1*
TOTAL						24	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.

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 Electronic Engineering	Foundation	FC	ESC	ECE	4	3-0-1-4
4ENCV1071	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
GCSCD1021	Community Service -II (COS - II)	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							
4MATH1012	Engineering Mathematics with Python Lab - I 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	CSE	6	2-0-2-4
Common Core							
CPSAL1062/71/82	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
CCSCD1011	Community Service Programme - I	CPC	-	SDC	SOET	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 & Numerical Methods	Foundation	FC	PCC	BS	4	3-1-0-4
4CSPL2022	Object Oriented programming using JAVA	Foundation	FC	PCC	CSE	4	2-0-1-3
4CSPL1022	Data Structures	Foundation	FC	PCC	CSE	5	3-0-1-4
4CSGC2092	Computer Organization and Architecture	Foundation	FC	PCC	CSE	3	3-0-0-3
4AIML1011	Introduction to Artificial Intelligence	Foundation	FC	PCC	AIML	2	2-0-0-2
4INTS3010	Internship- I [†]	Foundation	-	PCC	AIML	6	0-0-3-3 [†]
Common Core							
CKSAA1033	Introduction to Philosophical Thoughts	KSC	-	MC	DCCC	1	1-0-0-1
CPSBD1011	Career Preparedness Program-II	PS	-	AECC	DCCC	2	0-0-1-1
GCSCD1031	Community Service -III (COS - III)*	CS	-	SDC	SOET	2	0-0-1-1*
TOTAL						21	18 + 1*+ 3[†]

[†]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
4AMPL1031	Introduction to Machine Learning	Foundation	FC	PCC	CSE/AIML	4	2-0-1-3
4CSGC2022	Database Management Systems	Foundation	FC	PCC	CSE	4	2-0-1-3
4CSGC2043	Operating System	Foundation	FC	PCC	CSE/AIML	3	3-0-0-3
4CSGC2053	Design and Analysis of Algorithms	Intermediate	IC	PCC	CSE	4	2-0-1-3
CPSCS1011	Making with Electronics	PS	-	ESC	ECE	5	1-0-2-3
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
GCSCD1041	Community Service -IV (COS- IV)*	CS	-	SDC	SOET	2	0-0-1-1*
TOTAL						28	22 +1*

† 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							
4AMPL2021	Artificial Neural Networks	Intermediate	IC	PCC	AIML	4	2-0-1-3
4AIML2022	Computer Networks and Security	Intermediate	IC	PCC	AIML	3	3-0-0-3
4AMPL2031	Computer Vision	Intermediate	IC	PCC	AIML	4	2-0-1-3
4XXXXXXX1	Open Elective 1	Elective	IC	OEC	N/A	3	3-0-0-3
4AIML2XX1	Professional Elective 1	Elective	IC	PEC	CSE/AIML	3	x-x-x-3
		Interdisciplinary Elective 1	IDE	OEC		3	x-x-x-3
4INTS3020	Internship- II [†]	Foundation	Internship	PCC	AIML	6	0-0-3-3 [†]
Common Core							
CKSHM1021	Environment and Sustainability	KSC	-	HSMC	DCCC	2	2-0-0-2
CCSAE1011	Disaster Management	KSC	-	HSMC	DCCC	2	2-0-0-2
TOTAL						24	22+3[†]
GPSBD1221	Training and placement	PS	-	AECC	DCCC	2	GR

[†] Internship - II credits are reflected in the VIII Semester.

PROFESSION ELECTIVE – 1 - DATA SCIENCE	
4AIML2111	Introduction to data science
4AIML2121	Data Mining
4AIML2131	Bigdata Technologies

PROFESSION ELECTIVE – 1 - NETWORKING	
4AIML2211	Foundation to IoT
4AIML2221	Mobile Communication

4AIML2231	Introduction to Smart Sensing Technology
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PROFESSION ELECTIVE – 1 - CYBER SECURITY	
4AIML2311	Cryptography
4AIML2321	Web Application Security
4AIML2331	Foundation to Threat Intelligence

PROFESSION ELECTIVE – 1 - CLOUD	
4AIML2411	Cloud Computing
4AIML2421	Mobile Computing
4AIML2431	Cloud Infrastructure and Services

VI Semester

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/Department	Contact Hours / Week	Credit Distribution on L-T-P-C
Program Core							
4AIML2031	Software Engineering	Intermediate	IC	PCC	AIML	3	3-0-0-3
4AMPL2041	Natural language Processing	Intermediate	IC	PCC	AIML	4	2-0-1-3
4XXXXXX1	Open Elective 2	Elective	IC	OEC		3	3-0-0-3
4AIML2XX1	Professional Elective 2	Elective	IC	PEC	CSE/ AIML	3	x-x-x-3
		Interdisciplinary Elective 2	IDE	OEC		3	x-x-x-3
Common Core							
CKSHA1011	Indian Traditions: Values and Critical Inquiry	CC	-	HSMC	DCCC	2	2-0-0-2
CCSAE1041	Contributing to Society(Elective)	CC	-	HSMC	DCCC	2	2-0-0-2
TOTAL						20	19
	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.

PROFESSION ELECTIVE – 2 - DATA SCIENCE	
4AIML2141	Data Visualization
4AIML2141	Data Warehousing and Business Intelligence
4AIML2141	Data Engineering

PROFESSION ELECTIVE – 2 – NETWORKING	
4AIML2241	Adhoc & Sensors Networks
4AIML2251	Network Operating System
4AIML2261	Sensors & Robotics Technology

PROFESSION ELECTIVE – 2 - CYBER SECURITY	
4AIML2341	Block Chain Technology
4AIML2351	AI in cyber security
4AIML2361	Cloud Security

PROFESSION ELECTIVE – 2 - CLOUD	
4AIML2441	Soft computing
4AIML2451	Quantum Computing
4AIML2461	Virtualization and Cloud Computing

VII Semester

Course Code	Course	CMRU Category	CMRU Subcategory	AICTE Category	School/ Department	Contact Hours / Week	Credit Distribution L-T-P-C
Program Core							
4AIML4011	Generative AI	Advanced	AC	PCC	AIML	3	3-0-0-3
4AMPL3011	Deep Learning (P)	Intermediate	IC	PCC	AIML	5	2-0-1-3
4AIML3XX1	Professional Elective 3	Elective	AC	PEC	CSE	3	x-x-x-3
4AIML3XX1	Professional Elective 4	Elective	AC	PEC	CSE	3	x-x-x-3
CPSAE1011	Business Management for Engineers	PS	-	HSMC	Mgmt	1	1-0-0-1
		Inter disciplinary Elective 3	IDE	OEC		3	x-x-x-3
4INTS4010	Internship-III†	Foundation	Internship	PCC	CSE	6	0-0-3-3
TOTAL						18	16
Common Core							
	Training and Placement	PS	-	AECC	DCCC	2	GR
Audit Course:							

† Internship -III credits are reflected in the VIII Semester

PROFESSION ELECTIVE – 3,4 - DATA SCIENCE	
4AIML3111	Information Retrieval System (MOOC)
4AIML3121	Web and Social Media Analytics
4AIML3131	Predictive Analytics
4AIML3141	Spatial and Multimedia Databases
PROFESSION ELECTIVE – 3,4 - NETWORKING	
4AIML3211	Distributed system
4AIML3221	Software defined Network

4AIML3231	High-Performance Systems
4AIML3241	Network Design and Management

PROFESSION ELECTIVE – 3,4 - CYBER SECURITY	
4AIML3311	Huma Computer Interface
4AIML3321	Digital Forensics (MOOC)
4AIML3331	Information Security (MOOC)
4AIML3341	Cyber Security and Frauds (MOOC)

PROFESSION ELECTIVE – 3,4 - CLOUD	
4AIML2441	Soft computing
4AIML2451	Quantum Computing
4AIML2461	Virtualization and Cloud Computing
4AIML2471	Cloud Architecture

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 Work	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
GCSCD1011	Community Service -I (COS - I)*	CS	-	SDC	SOET	-	0-0-1-1
GCSCD1021	Community Service -II (COS - II)*	CS	-	SDC	SOET	-	0-0-1-1
GCSCD1031	Community Service -III (COS - III)*	CS	-	SDC	SOET	-	0-0-1-1
GCSCD1041	Community Service -IV (COS - IV)*	CS	-	SDC	SOET	-	0-0-1-1
TOTAL							21
Audit Course							
Common Core (Non-Credit) - Graduate Requirement: Career Preparedness Courses † + Community Service ††							

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.