KONGUNADU ARTS AND SCIENCE COLLEGE (AUTONOMOUS)
COIMBATORE – 641 029

Programme Name: **B.Sc. Artificial Intelligence and Machine Learning**

Curriculum and Scheme of Examination under CBCS
(Applicable to the students admitted during the Academic Year 2026-2027)

Semester	Part	Subject Code	Title of the Paper	Instruction hours/cycle	Exam. Marks			Duration of Exam (hours)	Credits
					CIA	ESE	TOTAL		
I	I	26TML101	Language I@	6	25	75	100	3	3
	II	26ENG101	English - I	6	25	75	100	3	3
	III	26UAI101	Core Paper 1 - Python Programming for Machine Learning	5	25	75	100	3	4
	III	26UAI1CL	Core Practical 1 - Python Programming for Machine Learning Lab	5	40	60	100	3	2
	III	26UAI1A1	Allied Paper 1 - Discrete Mathematics and Statistics	6	25	75	100	3	5
	IV	26EVS101	Environmental Studies **	2	-	50	50	3	2
			Total	**30**	**-**	**-**	**550**	**-**	**19**
II	I	26TML202	Language II@	6	25	75	100	3	3
	II	26ENG202	English – II	6	25	75	100	3	3
	III	26UAI202	Core Paper 2 - Java Programming	5	25	75	100	3	4
	III	26UAI2CM	Core Practical 2 - Java Programming Lab	5	40	60	100	3	2
	III	26UAI2A2	Allied Paper 2 - Optimization Techniques and Linear Algebra	6	25	75	100	3	5
	IV	26VED201	Value Education- Moral and Ethics**	2	-	50	50	3	2
			Total	**30**	**-**	**-**	**550**	**-**	**19**
III	I	26TML303	Language III@	6	25	75	100	3	3
	II	26ENG303	English –III	6	25	75	100	3	3
	III	26UAI303	Core Paper 3 – Data Structures and Algorithms	4	25	75	100	3	4
	III	26UAI3CN	Core Practical 3 - Data Structures and Algorithms Lab	4	40	60	100	3	4
	III	26UAI3A3	Allied Paper 3 – Fundamentals of Computer Architecture	6	25	75	100	3	5
	IV	**26UGC3S1**	**Skill Based Subject 1- Cyber Security**	**2**	**100**	**-**	**100**	**3**	**3**
	IV	26TBT301/ 26TAT301/ 26UHR3N1	Basic Tamil* / Advanced Tamil**/Non-major elective- I**	2	-	75	75	3	2
			Total	**30**	**-**	**-**	**675**	**-**	**24**

IV	I	26TML404	Language IV@	6	25	75	100	3	3
	II	26ENG404	English – IV	6	25	75	100	3	3
	III	26UAI404	Core Paper 4 - Data Analytics and Visualization	4	25	75	100	3	4
	III	26UAI4CO	Core Practical 4 - Data Analytics and Visualization Lab	4	40	60	100	3	3
	III	26UAI4A4	Allied Paper 4 – Principles of Operating Systems and DBMS	6	25	75	100	3	5
	IV	**26UAI4SL**	**Skill Based Subject 2 - MongoDB Lab**	**2**	**40**	**60**	**100**	**3**	**3**
	IV	26TBT402/ 26TAT402/ 26UWR4N2	Basic Tamil* / Advanced Tamil**/ Non-major elective- II**	2	-	75	75	3	2
			Total	**30**	**-**	**-**	**675**	**-**	**23**
V	III	26UAI505	Core Paper 5 - Machine Learning Techniques	5	20	55	75	3	4
	III	26UAI5OP	Fundamentals of AI	1	25	-	25	2	1
	III	26UAI506	Core Paper 6 – Deep Learning	5	25	75	100	3	4
	III	26UAI5CP	Core Practical 5 - Machine Learning Techniques Lab	6	40	60	100	3	4
	III	26UAI5CQ	Core Practical 6 - Business Analytics Lab	6	40	60	100	3	4
	III	26UAI5E1	Major Elective Paper 1	5	25	75	100	3	5
	IV	-	**EDC**	**2**	**100**	**-**	**100**	**3**	**3**
	-	**26UAI5IT**	**Internship Training ******	Grade					
			Total	**30**	**-**	**-**	**600**	**-**	**25**
VI	III	26UAI607	Core Paper 7 - Natural Language Processing	5	25	75	100	3	4
	III	26UAI608	Core Paper 8 - Full Stack Web Development	4	25	75	100	3	4
	III	26UAI609	Core Paper 9 – Advanced AI	5	25	75	100	3	4
	III	26UAI6CR	Core Practical 7 - Natural Language Processing Lab	5	40	60	100	3	4
	III	26UAI6E2	Major Elective Paper 2	5	25	75	100	3	5
	III	26UAI6Z1	Project and Viva Voce***	4	20	80	100	-	5
	IV	**26UBI6S3**	**Skill Based Subject 3- Basics of IPR**	**2**	**100**	**-**	**100**	**3**	**3**
			Total	**30**	**-**	**-**	**700**	**-**	**29**
	V	26NCC $ / NSS/YRC /PYE/ECC/ RRC/WEC101#	Cocurricular Activities*	-	50	-	50	-	1
Grand Total				-	-	-	**3800**	-	**140**

Note :

CBCS – Choice Based Credit system, CIA– Continuous Internal Assessment, ESE– End of Semester Examinations

$ For those students who opt NCC under Cocurricular activities will be studying the prescribed syllabi of the UGC which will include Theory, Practical & Camp components. Such students who qualify the prescribed requirements will earn an additional 24 credits.

@ Hindi/Malayalam/ French/ Sanskrit – 26HIN/MLM/FRN/SAN101 - 404

***** - No End-of-Semester Examinations. Only Continuous Internal Assessment (CIA)

******- No Continuous Internal Assessment (CIA). Only End-of-Semester Examinations (ESE)

*** Project Report – 60 marks; Viva voce – 20 marks; Internal-20 marks

&& 4 hours allotted for project will not be allocated to staff work load.

**** The students shall undergo Internship training / field work for a minimum period of 14 working days at the end of the fourth semester during summer vacation and submit the report in the fifth semester which will be evaluated for 100 marks by the concerned guide and followed by an Internal Viva voce by the respective faculty or HOD as decided by the department. According to their marks, the grades will be awarded as given below.

Marks %	Grade
85 – 100	O
70 – 84	D
60 – 69	A
50 – 59	B
40 – 49	C
< 40	U (Reappear)

Major Elective Papers (2 papers are to be chosen from the following 10 papers)

1. Internet of Things
2. Business Analytics
3. Explainable AI
4. Networking and Security
5. Design Thinking
6. Time Series Analysis
7. Data Mining and Warehousing
8. Big Data Analytics
9. Human Computer Interaction
10. Artificial Neural Networks and Fuzzy Logic

Non-Major Elective Papers

1. Human Rights
2. Women's Rights
3. Consumer Affairs

Sub. Code & Title of the Extra Departmental Course (EDC) :

26UAI5XL – Fundamentals of Internet and Web Design Lab

 # List of Cocurricular Activities:

1. National Cadet Corps (NCC)
2. National Service Scheme (NSS)
3. Youth Red Cross (YRC)
4. Physical Education (PYE)
5. Eco Club (ECC)
6. Red Ribbon Club (RRC)
7. Women Empowerment Cell (WEC)

Note: In core/ allied subjects, no. of papers both theory and practical are included wherever applicable. However, the total credits and marks for core/allied subjects remain the same as stated below.

Tally Table:

S.No.	Part	Subject	Marks	Credits
1.	I	Language – Tamil/Hindi/Malayalam/ French/ Sanskrit	400	12
2.	II	English	400	12
3.	III	Core – Theory/Practical	1600	60
	III	Allied	400	20
		Electives/Project	300	15
4.	IV	Basic Tamil / Advanced Tamil (OR) Non-major electives	150	4
		Skill Based subject	300	9
		EDC	100	3
		Environmental Studies	50	2
		Value Education	50	2
5.	V	Cocurricular Activities	50	1
		Total	**3800**	**140**

- 100 % CIA for Cyber Security, EDC and Basics of IPR.
- The students should complete **Health and Wellness Programme (26UHW401)**### in the 4th semester and the completion marks should be submitted through the HOD to the Controller of Examinations. Extra credits will be given to the candidates who have successfully completed.
- The students should complete any **MOOC course available for Online learning platforms like SWAYAM, NPTEL, Course era$$, IIT Bombay Spoken Tutorial, e-Pathshala etc.,** before the completion of the 5th semester and the course completion certificate should be submitted through the HoD to the Controller of Examinations. Appropriate credits will be given to the candidates who have successfully completed.

  $$Note: One course to be taken from course era for all the under graduate students of self finance stream during the even semester of theI year. **Appropriate extra credits** @@@ and certification as applicable shall be awarded to the students who have completed the course.

  @@@**Note :** Course Duration :

Duration	Extra Credits
< 10 hours	0
> =10 hours and < = 20 hours	1
> 20 hours	2

- An **Onsite Training** preferably relevant to the course may be undertaken as per the discretion of the HOD.
- Extra credits shall be awarded for innovative products/ individual paper presentations and publications in reputed national/ international proceedings and in indexed journals by the UG students for their original research contributions.

  - Product development through Technology Readiness Levels:
    - Phase 1 Level (TRL 1-3) : Basic research: 1 credits
    - Phase 2 Level (TRL 4 -6) : Development and validation : 2 credits
    - Phase 3 Level (TRL 7-9) : Deployment : 3 credits
  - National / International level paper presentation in conferences and publications of full papers in reputed Scopus/ web of Science indexed journals
    - National Level : 1 credit/ paper
    - International Level : 2 credits/ paper
    - Open access Journals are not included

- Extra credits shall be awarded to students who prefer to opt any course out of their programme on self learning mode. No internal components. 100% ESE.

Teaching Pedagogy

Smart ClassRoom/Powerpoint presentation/Seminar/Quiz/Discussion/Flipped Classroom/ Peer Learning/Experimental Learning/Blended learning

Flipped Classroom

Preamble:

- Under flipped classroom model, students review foundational content before class, with class time dedicated to practice, discussion, and problem – solving where the role of the teachers will be facilitating discussions and enabling students to embark on a holistic learning perspectives

Work instructions:

- One flipped session / unit is made mandatory and the course In-charge shall identify and specify the topic to be covered in the flipped session in the lesson plan.
- Detailed session plans must be intimated to all students at least one week in advance.
- Curated content such as LORs, video lectures, animations, and other relevant digital content shall be provided to students in advance to facilitate effective preparation for the flipped classroom session.

Peer Learning

Preamble:

- Peer Assisted learning enables students to learn from each other sharing knowledge in a collaborative learning environment.
- Development of leadership skills and student engagement through student to student academic support.
- Reduce drop out/failure rates of the students and create a supportive academic culture where a high performing or trained student assists peers academically.

Work Instructions:

- Course In-charge shall supervise the programme by periodically reviewing its implementation, conducting review meetings, and monitoring the progress reports.
- Course In-charge shall identify 5 to 6 fast learners based on their academic performance in internal and external examinations.
- Course In-charge shall also identify students who require additional academic support and assign 4 to 5 such students to each fast learner to facilitate peer learning.
- This team will operate remedial classes on a peer learning mode as per the following:
  a) One session / week / course and each session shall be for 30 minutes in duration, with follow-up learning activities.
  b) The faculty In-charge shall review attendance records and monitor the academic progress of the students.

Blended learning

Preamble :

- Blended learning integrates traditional in class instruction with digital tools exposing students to a myriad options for learning from subject experts across the globe
- It is provided with online learning sessions on recorded videos, lecture captured sessions (included under guided library hours), digital resources, and guided sessions facilitated by internal faculty members and external experts through Zoom meets etc.,

Work Instructions:

- For every course, students will be motivated to attend additional webinar/online courses through any interactive learning tools such as, telepresence systems, podcasts, interactive videos etc. with minimum of 2 sessions/course and maximum of 3 sessions/course.

Components of Continuous Internal Assessment

Components		Marks	Total
Theory			
CIA I	75	(75+75 = 150/10)	25
CIA II	75	15	
Objective Capacity Testing */Seminar		5	
Attendance		5	
Practical			
CIA Practical		25	40
Observation Notebook		10	
Attendance		5	
Project			
Review		15	20
Regularity		5	
Theory (External : 55 marks)			
CIA I	55	Converted to 10 (55+55)	20
CIA II	55		
Objective Capacity Testing */Seminar	5		
Attendance	5		

*** Objective Capacity Testing:**

For the first assessment, questions shall be set from 2 ½ units (25 questions) and evaluation for 5 marks. The assessment shall be conducted through any authentic online platform, one week prior to the commencement of I CIA theory examinations.

For the second assessment, questions shall be set from 2 ½ units (25 questions) and evaluation for 5 marks. The assessment shall be conducted through any authentic online platform, one week prior to the commencement of II CIA theory examinations.

The average of the first and second assessment scores shall be considered for the final **5 marks** allocation.

BLOOM'S TAXONOMY BASED ASSESSMENT PATTERN

K1-Remembering; **K2**-Understanding; **K3**-Applying; **K4**-Analyzing; **K5**-Evaluating

1. ESE Theory Examination:

(i) CIA I & II and ESE: 75 Marks

Knowledge Level	Section	Marks	Description	Total
K1 Q1 to 10	A (Answer all)	10 x 1 = 10	MCQ	75
K1 – K5 Q11 to 15	B (Either or pattern)	5 x 5 = 25	Short Answers	
K2 – K5 Q16 to 20	C (Either or pattern)	5 x 8 = 40	Descriptive / Detailed	

(i) CIA I & II and ESE: 55 Marks

Knowledge Level	Section	Marks	Description	Total
K1 Q1 to 10	A (Answer all)	10 x 1 = 10	MCQ	55
K2 – K4 Q11 to 15	B (Either or pattern)	5 x 3 = 15	Short Answers	
K2 – K5 Q16 to 20	C (Either or pattern)	5 x 6 = 30	Descriptive / Detailed	

2. ESE Practical Examination:

Knowledge Level	Section	Marks	Total
K3	Experiments	50	60
K4		10	
K5	Record Work		

3. ESE Project Viva Voce:

Knowledge Level	Section	Marks	Total
K3	Project Report	60	80
K4		20	
K5	Viva voce		

Scheme of Evaluation - Health and Wellness Programme (26UHW401)###

Part	**Description**	**Mark**
A	Report	40
B	Attendance	20
C	Activities (Observation during Practice)	40
Total		**100**

One Point Credit Course:

Part	**Description**	**Mark**
A	Test 1	10
B	Test 2	10
C	Activities (Seminar/ Group discussion)	05
Total		**25**