



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)



**Approved by AICTE, Recognized by UGC & Affiliated to Anna
University Accredited by NBA-AICTE, NAAC-UGC with 'A++' Grade**

Saravanampatti , Coimbatore -641035

CURRICULAM AND SYLLABI
REGULATION 2023
CHOICE BASED CREDIT SYSTEM

**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND
MACHINE LEARNING**

B.TECH – ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution, Affiliated to Anna University Chennai)



COIMBATORE-35

UG (B.E. / B. Tech) REGULATIONS 2023

CHOICE BASED CREDIT SYSTEM REGULATION 2023

CURRICULUM AND SYLLABI

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND
MACHINE LEARNING

Semester /	I	II	III	IV	V	VI	VII	VIII	Total Credits
Humanities and Social Science including Management Courses [HSMC]	4	3	-	2	-	-	2		11
Basic Science Courses [BSC]	8	8	5	5	-	-	-		26
Engineering Science Courses [ESC]	8	9	-	-	-	-			17
Professional Core Courses [PCC]			15	16	13	11	6		61
Professional Elective Courses [PEC]					3	3	3	6	15
Open Elective Courses [OEC]					3	3	3		09
Project/Technical Seminar/Internship [EEC]	3	1	3	1	5	3		12	30
Mandatory Course [MC]	✓	✓				✓			-
Total Credits	23	21	23	24	24	20	16	18	169

S.No	AREAS	AICTE	R 2023
1.	Humanities and Social Sciences including Management course [HSMC]	10*	11
2.	Basic Science Courses [BSC]	16*	26
3.	Engineering Science Courses including workshop, drawing, basics of Electronics /Mechanical/ Computer etc., [ESC]	08*	17
4.	Professional Core Courses [PCC]	71*	61
5.	Professional Elective Courses relevant to chosen specialization/ branch [PEC]	16*	15
6.	Open Elective - Emerging Courses from Parent and Other Programme [OEC]	06*	09
7.	Project Work, Seminar and Internship/ Industrial Training [EEC]	38*	30
8.	Mandatory Courses [Environmental Science, Induction Program, Indian Constitution, Essence of Indian Traditional Knowledge. Heritage of Tamils, Tamils and Technologies]	0	0
		165*	169

SEMESTER I										
S No.	Course Code	Course	L	T	P	Contact hrs/week	Credit	Int/Ext	Category	Pre-Requisites
Theory Courses										
1	23MAT101	Matrices and Calculus	3	1	0	4	4	40/60	BSC	-
2	23ENT101	Communicative English	3	0	0	3	3	40/60	HSMC	-
3	23CHT101	Engineering Chemistry	3	0	0	3	3	40/60	BSC	-
4	23CST101	Problem Solving and C Programming	3	0	0	3	3	40/60	ESC	-
5	23GET102	Basic Civil and Mechanical Engineering	3	0	0	3	3	40/60	ESC	-
6	23GET103	Heritage of Tamils / தமிழர்மரபு	1	0	0	1	1	40/60	HSMC	-
Theory Integrated Practical Courses										
7	23GEB101	Design Thinking and Innovation	1	0	4	5	3	50/50	EEC	-
Practical Courses										
8	23CHP101	Chemistry Laboratory	0	0	2	2	1	60/40	BSC	-
9	23CSP101	C Programming Laboratory	0	0	4	4	2	60/40	ESC	-
Mandatory Courses										
10	23HST103	Indian Constitution	2	0	0	2	0	100/0	MC	-
Total			19	1	10	30	23			

SEMESTER II										
S No.	Course Code	Course	L	T	P	Contact hrs/week	Credit	Int/Ext	Category	Pre-Requisites
Theory Courses										
1	23MAT103	Differential Equations and Transforms	3	1	0	4	4	40/60	BSC	-
2	23PYT102	Physics for Engineers	3	0	0	3	3	40/60	BSC	-
3	23EET103	Electric Circuit & Electron Devices	3	0	0	3	3	40/60	ESC	-
4	23GET104	Tamils and Technology /தமிழரும் தொழில்நுட்பமும்	1	0	0	1	1	40/60	HSMC	-
Theory Integrated Practical Courses										
5	23MEB101	Engineering Graphics	1	0	2	3	2	50/50	ESC	-
Practical Courses										
6	23ENP101	Professional Communication	0	0	4	4	2	60/40	HSMC	-
7	23PYP101	Physics Laboratory	0	0	2	2	1	60/40	BSC	-
8	23ITP102	Python Programming	0	0	4	4	2	60/40	ESC	-
9	23GEP101	Workshop Practices	0	0	4	4	2	60/40	ESC	-
10	23AMP101	Internship - I	2 Weeks				1	100/0	EEC	-
Mandatory Courses										
11	23CHT103	Environmental Science and Sustainability	2	0	0	2	0	100/0	MC	-
Total			13	1	16	30	21			-

SEMESTER III										
S No.	Course Code	Course Name	L	T	P	Contact hrs/week	Credit	Int/Ext	Category	Pre-Requisites
Theory Courses										
1	23MAT202	Discrete Mathematics	3	0	0	3	3	40/60	BSC	
2	23ITT201	Data Structures	3	0	0	3	3	40/60	PCC	23CST101
3	23AMT201	Foundations of Artificial Intelligence	3	0	0	3	3	40/60	PCC	-
4	23GET275	VQAR-I	2	0	0	2	2	40/60	BSC	
Theory Integrated Practical Courses										
5	23ECB222	Digital Principles and Computer Organization	3	0	2	5	4	50/50	PCC	
6	23CSB201	Object Oriented Programming	3	0	2	5	4	50/50	PCC	23CST101
Practical Courses										
7	23ITP201	Data Structures Laboratory	0	0	2	2	1	60/40	PCC	23CST101
8	23AMP201	Mini Project-I	0	0	2	2	1	100/0	EEC	
9	23GEP275	Personal branding	0	0	4	4	2	60/40	EEC	
	Total		17	0	12	29	23			

SEMESTER IV											
S. No	Course Code	Course Name	L	T	P	Contact hrs/week	Credit	Int/Ext	Category	Pre-Requisites	
Theory Courses											
1	23MAT206	Probability and Statistics	3	0	0	3	3	40/60	BSC		
2	23CST201	Database Management Systems	3	0	0	3	3	40/60	PCC		
3	23CST202	Operating Systems	3	0	0	3	3	40/60	PCC		
4	23GET276	VQAR-II	2	0	0	2	2	40/60	BSC	23GET275	
Theory Integrated Practical Courses											
5	23ITB201	Design and Analysis of Algorithms	3	0	2	5	4	50/50	PCC	23ITT201	
6	23AMB201	Machine Learning	3	0	2	5	4	50/50	PCC		
7		Language Elective	1	0	2	3	2	50/50	HSMC		
Practical Courses											
8	23CSP202	Database Management Systems Laboratory	0	0	2	2	1	60/40	PCC		
9	23CSP203	Operating Systems Laboratory	0	0	2	2	1	60/40	PCC		
10	23AMP202	Internship- II	2 Weeks					1	100/0	EEC	
	Total		18	0	10	28	24				

SEMESTER V										
S No.	Course Code	Course	L	T	P	Contact hrs/week	Credit	Int/Ext	Category	Pre-requisite
Theory Courses										
1	23AMT301	Soft Computing	3	0	0	3	3	40/60	PCC	23AMB201
2	23AMT302	Computer Networks and Security	3	0	0	3	3	40/60	PCC	
3	23AMExxx	Professional Elective - I	3	0	0	3	3	40/60	PEC	-
4	23xxxxx	Open Elective - I	3	0	0	3	3	40/60	OEC	-
Theory Integrated Practical Courses										
5	23GEBxxx	Career Course I, Career Course II	2	0	4	4	4	50/50	EEC	-
6	23AMB301	Data Analytics	3	0	2	5	4	50/50	PCC	23MAT206
Practical Courses										
7	23AMP301	AI and Robotics Laboratory	1	0	3	4	2	60/40	PCC	-
8	23AMP302	Computer Networks and Security Laboratory	0	0	2	2	1	60/40	PCC	-
9	23AMP303	Mini Project II	0	0	2	2	1	100/0	EEC	-
Total			18	0	13	29	24			

SEMESTER VI											
S No.	Course Code	Course	L	T	P	Contact hrs/week	Credit	Int/Ext	Category	Pre-requisite	
Theory Courses											
1	23AMT303	Deep Learning	3	0	0	3	3	40/60	PCC	23AMT301	
2	23AMT304	Full Stack AI	3	0	0	3	3	40/60	PCC		
3	23AMExxx	Professional Elective - II	3	0	0	3	3	40/60	PEC		
4	23xxxxxx	Open Elective - II	3	0	0	3	3	40/60	OEC	-	
Theory Integrated Practical Courses											
5	23GEBxxx	Career Course III	1	0	2	4	2	50/50	EEC	-	
6	23AMB302	Natural Language Processing	3	0	2	5	4	50/50	PCC	-	
Practical Courses											
7	23AMP304	Full Stack AI Laboratory	0	0	2	2	1				
8	23AMP305	Internship- III	2 Weeks					1	100/0	EEC	
Mandatory Courses											
9	23HST105	Essence of Indian Traditional Knowledge	2	0	0	2	0	100/0	MC	-	
Total			18	0	6	25	20				

SEMESTER VII										
S No.	Course Code	Course	L	T	P	Contact hrs/week	Credit	Int/Ext	Category	Pre-requisite
Theory Courses										
1	23AMT401	Software Engineering for AI System	3	0	0	3	3	40/60	PCC	-
2	23AMT402	Embedded Systems and IoT	3	0	0	3	3	40/60	PCC	23ECB222
3	23AMExxx	Professional Elective - III	3	0	0	3	3	40/60	PEC	-
4	23xxxxxx	Open Elective - III	3	0	0	3	3	40/60	OEC	-
5	23GET401	Universal Human Values	2	0	0	2	2	40/60	HSMC	-
Practical Courses										
6	23AMP401	Project- I	0	0	4	4	2	60/40	EEC	-
Total			14	0	4	18	16			

SEMESTER VIII										
S No.	Course Code	Course	L	T	P	Contact hrs/week	Credit	Int/Ext	Category	Pre-requisite
Theory Courses										
1	23AMExxx	Professional Elective - IV	3	0	0	3	3	40/60	PEC	-
2	23AMExxx	Professional Elective - V	3	0	0	3	3	40/60	PEC	-
Practical Courses										
3	23AMP402	Project- II	0	0	24	24	12	60/40	EEC	-
Total			6	0	24	30	18			-

Professional Elective

S.No	Course Code	Courses Offered	L	T	P	C
Professional Elective I						
1	23AME301	AI and Cloud Computing	3	0	0	3
2	23AME302	Genomics Data Science	3	0	0	3
3	23AME303	Introduction to High Performance Computing	3	0	0	3
4	23AME304	Decision Support Systems	3	0	0	3
5	23AME305	Ethics of AI	3	0	0	3

Open Electives offered to Other Department

S.No	Course Code	COURSES OFFERED	L	T	P	C
1	23AMO301	Basics of Artificial Intelligence	3	0	0	3
2	23AMO302	Industrial Machine Learning	3	0	0	3
3	23AMO303	Machine Learning with Python	3	0	0	3