



**PERIYAR
MANIAMMAI**
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University)
Established Under Sec. 3 of UGC Act, 1956 • NAAC Accredited
think • innovate • transform

Criterion 1 – Curricular Aspects

Key Indicator	1.2	Academic Flexibility
Metric	1.2.2	Percentage of Programmes in which Choice Based Credit System (CBCS)/elective course system has been implemented (Data for the latest completed academic year)

DEPARTMENT OF SOFTWARE ENGINEERING STRUCTURE OF THE PROGRAM CLEARLY INDICATING COURSES, CREDITS/ELECTIVES

Programmes

1. BSc Computer Science
2. B.Sc Animation and Multimedia
3. B.Sc Artificial Intelligence
4. M.Sc Computer Science

CURRICULUM for B. Sc (Computer Science)

REGULATIONS – 2020

(Applicable to the students admitted from the Academic year 2020 - 2021)

I SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
AECC 1	XGL101	Basic English Communication Skills	2	0	0	0	2	2	0	0	2	2+2
AECC 2	XGL102A/ XGL102B	Ariviyal Tamil/ Comprehensive English	2	0	0	0	2	2	0	0	0	2
CC-1A	XBC103	Programming Methodologies	3	1	1	1	6	3	1	3	1	7+1
CC-1B	XBC104	Algebra, Calculus & Analytical Geometry	4	1	0	1	6	4	1	0	1	5+1
CC-1C	XBC105	Computer Fundamentals	3	1	1	1	6	3	1	3	1	7+1
UMAN-1	XUM106	Human Ethics, Values, Rights, and Gender Equality	0	0	0	0	0	2	0	0	1	2+1
		Total	14	3	2	3	22	16	3	6	6	25+6

II SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
AECC 3	XGL201	Advanced English Communication Skills	2	0	0	0	2	2	0	0	2	2+2
AECC 4	XES202	Environmental Studies	2	0	0	0	2	2	0	0	1	2+1
CC- 2A	XBC203	Data Structures	3	1	1	1	6	3	1	3	1	7+1
CC- 2B	XBC204	Discrete Mathematics	3	1	0	2	6	3	1	0	2	4+2
CC- 2C	XBC205	Digital Electronics	3	1	1	1	6	3	1	3	1	7+1
UMAN-2	XUM206	Disaster Management	0	0	0	0	0	3	0	0	0	3
		Total	13	3	2	4	22	16	3	6	7	25+7

III SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
SEC-1B	XBC301	Multimedia Systems	3	0	1	0	4	3	0	2	0	5
CC-3A	XBC302	Operating System	4	1	0	1	6	4	1	0	1	5+1
CC-3B	XBC303	Algorithms	3	1	1	1	6	3	1	3	1	7+1
CC-3C	XBC304	Allied Physics	4	1	0	1	6	4	1	0	1	5+1
GE-1		*Open Elective - To be chosen by student	3	0	0	0	3	3	0	0	0	3
Minor Course * Extra Credit	XBC306	R Programming	1	0	0	0	1*	1	0	0	0	1
		Total	17+1	3	2	3	25+1*	17+1	3	5	3	25+3+1

IV SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
SEC-2B	XBC401	Object Oriented Programming	3	0	1	0	4	3	0	2	0	5
CC - 4A	XBC402	Database Management Systems	3	1	1	1	6	3	1	3	1	7+1
CC - 4B	XBC403	Statistics	4	1	0	1	6	4	1	0	1	5+1
CC - 4C	XBC404	Principles of Management	4	1	0	1	6	4	1	0	1	5+1
GE-2		*Open Elective - To be chosen by student	3	0	0	0	3	3	0	0	0	3
Minor Course *Extra Credit	XBC406	Angular JS	1	0	0	0	1*	1	0	0	0	1
		Total	17+	3	2	3	25+1*	17+	3	5	3	25+3+1

V SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
SEC-3A	XBC501A	MATLAB Programming	3	0	1	0	4	3	0	2	0	5
	XBC501B	Programming in Java	3	0	1	0	4	3	0	2	0	5
	XBC501C	Python Programming	3	0	1	0	4	3	0	2	0	5
DSE-1A	XBC502A	Software Engineering	4	2	0	0	6	4	2	0	0	6
	XBC502B	Computer Ethics	4	2	0	0	6	4	2	0	0	6
	XBC502C	Computer Organization & Architecture	4	2	0	0	6	4	2	0	0	6
	XBC502D	Computer Networks	4	2	0	0	6	4	2	0	0	6
DSE-1B	XBC503A	.NET Technologies	3	2	1	0	6	3	2	3	0	8
	XBC503B	GIMP(GNU Image Manipulation Program)	3	2	1	0	6	3	2	3	0	8
	XBC503C	Theory of Computation	3	2	1	0	6	3	2	3	0	8
DSE-1C	XBC504A	Image Processing	4	2	0	0	6	4	2	0	0	6
	XBC504B	Internet Technologies	4	2	0	0	6	4	2	0	0	6
	XBC504C	System Security	4	2	0	0	6	4	2	0	0	6
	XBC505	IPT 21 Days	0	0	0	0	2	0	0	0	0	0
			14	6	2	0	24	14	6	5	0	25

VI SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
SEC-4A	XBC601A	Web Technologies	3	0	1	0	4	3	0	2	0	5
	XBC601B	Mobile Application Development	3	0	1	0	4	3	0	2	0	5
	XBC601C	Cloud Computing	3	0	1	0	4	3	0	2	0	5
DSE-2A	XBC602A	Internet of Things	4	0	0	2	6	4	0	0	2	4+2
	XBC602B	Data Mining	4	0	0	2	6	4	0	0	2	4+2
	XBC602C	Artificial Intelligence	4	0	0	2	6	4	0	0	2	4+2
	XBC602D	Computer Graphics	4	0	0	2	6	4	0	0	2	4+2
DSE-2B	XBC603A	Machine Learning	4	0	0	2	6	4	0	0	2	4+2
	XBC603B	Human Computer Interface	4	0	0	2	6	4	0	0	2	4+2
	XBC603C	Data Analytics	4	0	0	2	6	4	0	0	2	4+2
DSE-2C	XBC604	Project Work	0	0	6	0	6	0	0	12	0	12
			11	0	7	4	22	11	0	14	4	25+4

**CURRICULUM for B. Sc (Animation and Multimedia)
REGULATION – 2021**

(Applicable to the students admitted from the Academic year 2021 - 2022)

SEMESTER -I

Category	Course Code	Course Name	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
AECC-1	XGL101	Basic English Communication Skills	2	0	0	2	2	0	0	0	2
LAN	XGL102A/ XGL102B	Ariviyal Tamil/ Comprehensive English	3	0	0	3	3	0	0	0	3
CC-1A	XAM103	Foundation Art	3	1	1	5	3	1	2	0	6
CC-1B	XAM104	Principles of Animation	4	1	0	5	4	1	0	0	5
CC-1C	XAM105	Introduction to Computer Graphic Design	3	1	1	5	3	1	2	0	6
UMAN-1	XUMA106	Human Ethics, Values, Rights, and Gender Equality	3	0	0	3	2	0	0	1	2
		Total	18	3	2	23	17	3	4	1	24

II SEMESTER

Category	Course Code	Course Name	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
AECC-2	XGL201	Advanced English Communication Skills	2	0	0	2	2	0	0	0	2
AECC-3	XES202	Environmental Studies	2	0	0	2	2	0	0	0	2
UVM	XVM203	Entrepreneurship Development	2	0	0	2	2	0	0	0	2
CC- 2A	XAM203	Vector Graphics	3	1	1	5	3	1	2	0	6
CC- 2B	XAM204	Digital Photography	3	1	1	5	3	1	2	0	6
CC- 2C	XAM205	Basics of Clay Modeling	3	1	1	5	3	1	2	1	6
		Total	15	3	6	21	15	3	6	1	24

SEMESTER-III

Category	Course Code	Course Name	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
UMAN-2	XUMA301	Disaster Management	3	0	0	3	1	0	0	2	1
SEC-1A	XAM301	Audio & Video Editing	2	0	2	4	2	0	4	0	6
CC-3A	XAM302	Multimedia	3	1	0	4	3	1	0	0	4
CC-3B	XAM303	Character & Environment Sketching	3	0	1	4	3	0	2	0	5
CC-3C	XAM304	2D Animation	3	1	1	5	3	1	2	0	6
GE-1		Generic Elective – 1	3	0	0	3	3	0	0	0	3
Minor Course	XAM306	Digital Matte Painting (* Extra Credit)	0	0	0	1*	-	-	-	1	-
		Total	17	1	4	23	15	1	8	3	25

SEMESTER-IV

Category	Course Code	Course Name	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
SEC-2B	XAM401	Script Writing and Story Board Designing	4	0	0	4	4	0	0	0	4
CC - 4A	XAM402	Compositing Techniques	4	1	0	5	4	1	0	0	5
CC - 4B	XAM403	3D Animation	3	0	2	5	3	0	4	0	7
CC - 4C	XAM404	Fundamentals of Cinematography	3	1	1	5	3	1	2	0	6
GE-2		Generic Elective – 2	3	0	0	3	3	0	0	0	3
Minor Course	XAM406	Online Content Creation (*Extra Credit)	0	0	0	1*	-	-	-	1	0
		Total	17	2	3	22	17	4	4	1	25

SEMESTER-V

Category	Course Code	Course Name	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
SEC-3A	XAM501A	3D Modeling	3	0	1	4	3	0	2	0	5
	XAM501B	Motion Capturing									
	XAM501C	Paint Effects & Dynamics									
DSE-1A	XAM502A	Virtual Reality and Augmented Reality	3	0	2	5	3	0	4	0	7
	XAM502B	Rigging , Lighting & Rendering									
	XAM502C	UX Design									
	XAM502D	Character Design For Animation									
DSE-1B	XAM503A	Media Aesthetics	4	1	0	5	4	1	0	0	5
	XAM503B	Media Technologies									
	XAM503C	E-Publishing									
DSE-1C	XAM504A	Web Designing	3	0	2	5	3	0	4	0	7
	XAM504B	Acting For Animators									
	XAM504C	Advanced 3D Animation									
	XAM505	IPT 21 Days	-	-	-	2	-	-	-	2	-
		Total	13	1	5	21	13	1	10	2	24

SEMESTER- VI

Category	Course Code	Course Name	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
UMAN-3	XAM601A	Cyber Security	3	0	0	3	3	0	0	0	3
SEC-4A	XAM602A	Digital Television Production	2	0	2	4	2	0	4	0	6
	XAM602B	Film Making									
	XAM602C	Advertisement Film Making									
DSE-2A	XAM603A	Miniatures For Low Budget Filming	3	0	1	4	3	0	2	0	5
	XAM603B	Texturing& Shading									
	XAM603C	Rotoscoping									
	XAM603D	Image Editing Skills									
DSE-2B	XAM604A	Media Law and Ethics	4	1	0	5	4	1	0	0	5
	XAM604B	Introduction to Advertising									
	XAM604C	Introduction to Journalism									
DSC	XAM605	Project Work	0	0	6	6	0	0	6	0	6
			12	1	9	22	12	1	12	0	25

**CURRICULUM for B. Sc (Artificial Intelligence)
REGULATIONS – 2022**

(Applicable to the students admitted from the Academic year 2022 - 2023)

I SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
LAN	XGT101 /XFT101	Tamil – I / Foundation Tamil-I	2	1	0	0	3	2	1	0	0	3
AECC-1	XGE102	English – I	2	1	0	0	3	2	1	0	0	3
CC-1A	XAI103	Programming Methodologies	4	1	0	0	5	4	1	0	0	5
CC-1B	XAI104	Algebra, Calculus & Analytical Geometry	4	1	0	0	5	4	1	0	0	5
CC-1C	XAI105	Principles of Statistics	3	0	0	0	3	3	0	0	0	3
CC-1A-Lab	XAI106	Programming Methodologies Lab	0	0	1	0	1	0	0	3	0	3
CC-1C-Lab	XAI107	Principles of Statistics Lab	0	0	1	0	1	0	0	3	0	3
UMAN-1	XUMA001	Human Ethics, Values, Rights, and Gender Equality	1	0	0	0	1	1	0	0	0	1
Extension Activites NSS,NCC,NSO,RRC and Swatch Bharath)												2
Mentor Hour												1
Library Hour												1
Total			18	4	2	0	24	18	4	4	0	30

II SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
AECC 3	XGT201/ XFT201	Tamil – II/ Foundational Tamil - II	2	1	0	0	3	2	1	0	0	3
AECC 4	XGE202	English – II	2	1	0	0	3	2	1	0	0	3
CC- 2A	XAI203	Data Structures	4	1	0	0	5	4	1	0	0	5
CC- 2B	XAI204	Discrete Mathematics	4	1	0	0	5	4	1	0	0	5
CC- 2C	XAI205	Python Programming	3	1	0	0	4	3	1	0	0	4
CC2A-P	XAI206	Data Structures Lab	0	0	1	0	1	0	0	3	0	3
CC2C-P	XAI207	Python Programming Lab	0	0	1	0	1	0	0	2	0	2
UMAN-2	XUMA002	Environmental Studies	1	0	0	0	1	1	0	0	0	1
Extension Activites NSS,NCC,NSO,RRC and Swatch Bharath)											2	2
Mentor Hour												1
Library Hour												1
Total			16	5	2	0	23	13	4	8	2	30

III SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Tot	L	T	P	S S	Tot
SEC-1B	XAI 301	Algorithms	3	1	0	0	4	3	1	0	0	4
CC-3A	XAI 302	Foundations of Artificial Intelligence With R Programming	3	0	0	0	3	3	0	0	0	3
CC-3B	XAI 303	Database Management Systems	3	0	0	0	3	3	0	0	0	3
CC-3C	XAI 304	Auxillary Physics	4	0	0	0	4	4	0	0	0	4
CC-3A-P	XAI 305	Artificial Intelligence Lab	0	0	1	0	1	0	0	3	0	3
CC-3B-P	XAI306	Database Management Systems Lab	0	0	1	0	1	0	0	2	0	2
CC-3C-P	XAI307	Allied Physics Lab	0	0	1	0	1	0	0	2	0	2
GE-1		*Open Elective - To be chosen by student	3	0	0	0	3	3	0	0	0	3
UMAN 3	XUMA003	Disaster Management	1	0	0	0	1	1	0	0	0	1
Minor Course	XAI 309	Micro Processor (* Extra Credit)	1	0	0	0	1*	1	0	0	0	1
Extension Activities NSS,NCC,NSO,RRC and Swatch Bharath)											2	2
Mentor Hour												1
Library Hour												1
Total			18	1	3	0	22+1*	18	1	7	2	30

IV SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	S S	Total
SEC-2B	XAI 401	Operating System	3	1	0	0	4	3	1	0	0	4
CC - 4A	XAI 402	Internet of things	3	0	0	0	3	3	0	0	0	3
CC - 4B	XAI 403	Machine Learning With Real time Applications	3	0	0	0	3	3	0	0	0	3
CC - 4C	XAI 404	Computer Networks	3	1	0	0	4	3	1	0	0	4
CC -4A-P	XAI 405	Internet of things Lab	0	0	1	1	2	0	0	3	0	3
CC -4B-P	XAI 406	Machine Learning With Real time Applications Lab	0	0	1	1	2	0	0	3	0	3
GE-2		*Open Elective - To be chosen by student	3	0	0	0	3	3	0	0	0	3
UMAN4	XUMA004	Introduction to Entrepreneurship Development	1	0	0	0	1	1	0	0	1	2
Minor Course	XAI 409	Prolog (* Extra Credit)	1*	0	0	0	1*	1	0	0	0	1
Extension Activities NSS,NCC,NSO,RRC and Swatch Bharath)											2	2
Mentor Hour												1
Library Hour												1
Total			16	2	2	0	22+1*	17	2	6	3	30

V SEMESTER

Category	Course Code	Course Name	Credits					Hours					
			L	T	P	SS	T ot al	L	T	P	SS	T ot al	
SEC-3A	XAI 501A	.NET Technologies											
	XAI 501B	Programming in Java	3	0	0	0	3	3	0	0	0	0	3
	XAI 501C	Open source software											
DSE-1A	XAI502A	Neural Networks											
	XAI502B	Pattern Recognition	3	1	0	0	4	3	1	0	0	0	4
	XAI502C	Image Processing											
	XAI502D	Fuzzy logic											
DSE-1B	XAI503A	Natural Language Processing											
	XAI503B	Computer Vision Open CV	2	1	0	0	3	2	1	0	0	0	3
	XAI503C	Sentiment Analytics											
DSE-1C	XAI504A	System Security											
	XAI504B	Network Security	3	1	0	1	5	3	1	0	1	1	5
	XAI504C	Ethics of AI											
DSE-1A-P Lab	XAI505A	Natural Language Processing Lab											
	XAI505B	Computer Vision Open CV Lab	0	0	2	0	2	0	0	4	0	0	4
	XAI505C	Semantic Analytics Lab											
DSE -1B-P Lab	XAI 506A	.NET Technologies Lab											
	XAI 506B	Programming in Java Lab	0	0	1	0	1	0	0	2	0	0	2
	XAI 506C	Open source software Lab											
GE-3		*Open Elective - To be chosen by student	3	0	0	0	3	3	0	0	0	0	3
UMAN5	XUMA005	Cyber Security	1	0	0	0	1	1	0	0	1	1	2
Extension Activities (NSS,NCC,NSO,RRC and Swatch Bharath)											2		2
Mentor Hour													1
Library Hour													1
	XAI508	IPT 21 Days	0	0	0	0	2	0	0	0	0	0	0
		Total	15	3	3	1	24	14	3	8	2		30

V1 SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
SEC-4A	XAI601A	Web Technologies	2	1	0	0	3	2	1	0	0	3
	XAI601B	Mobile Application Development										
	XAI601C	Game Programming for AI										
DSE-2A	XAI602A	Human Computer Interface	3	1	0	0	4	3	1	0	0	4
	XAI602B	Web Mining & Recommender Systems										
	XAI602C	AI and Expert Systems										
	XAI602D	AI With Robotic										
DSE-2B	XAI603A	Data Analytics	2	1	0	0	3	2	1	0	0	3
	XAI603B	Edge Computing										
	XAI603C	Cloud Computing										
DSE-2A-P Lab	XAI604A	Human Computer Interface Lab	0	0	1	0	1	0	0	2	0	2
	XAI604B	Web Mining & Recommender Systems Lab										
	XAI604C	AI and Expert Systems Lab										
	XAI604D	AI With Robotic Lab										
SEC-4A-P Lab	XAI605A	Web Technologies Lab	0	0	1	0	1	0	0	2	0	2
	XAI605B	Mobile Application Development Lab										
	XAI605C	Game Design with AI Lab										
DSE-2C	XAI606	Project Work	0	0	6	4	10	0	0	12	0	12
Extension Activities (NSS,NCC,NSO,RRC and Swachh Bharath)											2	2
Mentor Hour												1
Library Hour												1
Total			7	3	10	0	22	7	3	16	2	30

CURRICULUM for M. Sc. (Computer Science)
REGULATIONS – 2021
 (Applicable to the students admitted from the Academic year 2021 - 2022)

Semester-I

Sub.Code	Subject Name	Credits				Hours			
		L	T	P	Total	L	T	P	Total
YCS101	Advanced Operating System	4	1	0	5	4	1	0	5
YCS102	Internet of Things	3	1	0	4	3	1	0	4
YCS103	Advanced Computer Architecture	3	1	0	4	3	1	0	4
YCS104	Advanced Database Management System	3	1	1	5	3	1	2	6
YCS105	Web Technologies	3	1	1	5	3	1	2	6
	Total	16	5	2	23	16	5	4	25

Semester-II

Sub.Code	Subject Name	Credits				Hour			
		L	T	P	Total	L	T	P	Total
YCS201	Virtual and Augmented reality	4	1	0	5	4	1	0	5
YCS202	Advanced Java Programming	3	1	1	5	3	1	2	6
YCS203	Machine Learning	3	1	1	5	3	1	2	6
Elective-1									
YCS204A	Human Computer Interactions	3	1	0	4	3	1	0	4
YCS204B	Pattern Recognition	3	1	0		3	1	0	
YCS204C	Artificial Intelligence	3	1	0		3	1	0	
Elective-2									
YCS205A	Parallel Processing	3	1	0	4	3	1	0	4
YCS205B	Soft Computing	3	1	0		3	1	0	
YCS205C	Pervasive Computing	3	1	0		3	1	0	
	Total	16	5	2	23	16	5	4	25

Semester-III

Sub.Code	Subject Name	Credits				Hours			
		L	T	P	Total	L	T	P	Total
YCS301	Deep Learning	4	1	0	5	4	1	0	5
YCS302	Wireless Networks	3	1	1	5	3	1	2	6
YCS303	Big Data and Analytics	3	1	1	5	3	1	2	6
Elective-3									
YCS304A	Network Security	3	1	0	4	3	1	0	4
YCS304B	Mobile Ad Hoc Networks	3	1	0		3	1	0	
YCS304C	Block Chain Management	3	1	0		3	1	0	
Elective-4									
YCS305A	Computer Simulation and Modeling	3	1	0	4	3	1	0	4
YCS305B	Natural Language Processing	3	1	0		3	1	0	
YCS305C	Embedded System	3	1	0		3	1	0	
	Total	16	5	2	23	16	5	4	25

Semester-IV

Sub.Code	Subject Name	L	T	P	Credits	L	T	P	Hours
YCS401	Project Work	-	-	-	16	-	-	-	-