



**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. M.Sc SE
2. B.Sc CS
3. B.Sc AM

1. Curriculum for M.Sc (Software Engineering)

I SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
AECC 1	XGL101	Communication Skills in English	2	0	0	2	2	2	0	0	2	4
LANG	XGL102A / XGL102B	Ariviyal Tamil / Comprehensive English	3	0	0	0	3	3	0	0	0	3
CC-1	YSE103	Computer Fundamentals	4	0	1	0	5	4	0	2	0	6
CC-2	YSE104	Algebra, Calculus & Analytical Geometry	4	1	0	0	5	4	1	0	0	5
CC-3	YSE105	Problem Solving Using C	3	0	2	0	5	3	0	4	0	7
UMAN-1	XUM106	Human Ethics, Values, Rights, and Gender Equality	3	0	0	0	0	3	0	0	0	3
Total			19	1	3	2	20	19	1	6	2	28

II SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
AECC-2	XGL201	English for Effective Communication	2	0	0	2	2	2	0	0	2	4
UMAN-2	XES 202	Environmental Studies	2	0	0	1	0	2	0	0	1	3
CC-4	YSE203	Discrete Mathematics	3	1	0	0	4	3	1	0	0	4
CC-5	YSE204	Data Structures and Algorithms	3	0	2	0	5	3	0	4	0	7
CC-6	YSE205	Computer Organization	3	1	0	0	4	3	1	0	0	4
CC-7	YSE206	Software Engineering	3	1	0	0	4	3	1	0	0	4
Total			18	3	2	3	19	16	3	4	3	26

III SEMESTER

Category	Course Code	Course Name	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
SEC-1	YSE301	Multimedia Systems	2	0	1	3	2	0	2	0	4
CC-8	YSE302	Operating System	3	1	0	4	3	1	0	0	4
CC-9	YSE303	Programming in Java	3	0	2	5	3	0	4	0	7
CC-10	YSE304	Software Design & Architecture	3	1	0	4	3	1	0	0	4
UMAN-3	XUM306	Disaster Management	3	0	0	0	3	0	0	0	3
GE1		*Open Elective - To be chosen by student	3	0	0	3	3	0	0	0	3
Minor Course * Extra Credit	YSE307	Python Programming	1	0	0	1*	1	0	0	0	1*
		Total	17	2	3	19	17	2	6	0	25+1*

IV SEMESTER

Category	Course Code	Course Name	Credits				Hours				
			L	T	P	Total	L	T	P	Total	
SEC-2	YSE401	Software Project Management	2	1	0	3	2	1	0	3	
CC-11	YSE402	Data Base Management System	3	0	1	4	3	0	2	5	
CC-12	YSE403	Computer Networks	3	1	0	4	3	1	0	4	
CC-13	YSE404	. Net Technologies	3	0	1	4	3	0	2	5	
DSE-1	YSE405A	Enterprise Resource Planning	3	0	0	3	3	0	0	3	
	YSE405B	E-Commerce	3	0	0	3	3	0	0	3	
	YSE405C	Digital Image Processing	3	0	0	3	3	0	0	3	
GE-2		*Open Elective - To be chosen by student	3	0	0	3	3	0	0	3	
Minor Course * Extra Credit	YSE407	MongoDB	1	0	0	1*	1	0	0	1*	
		Total	17	2	2	21	17	2	4	23+1*	

V SEMESTER

Category	Course Code	Course Name	Credits				Hours			
			L	T	P	Total	L	T	P	Total
SEC3	YSE501	Mobile Ad hoc Networks	3	0	0	3	3	0	0	3
CC-14	YSE502	Object Oriented Analysis and Design	3	1	1	5	3	1	2	6
CC-15	YSE503	Web Technologies	3	1	1	5	3	1	2	6
CC-16	YSE504	Operation Research	3	1	0	4	3	1	0	4
DSE-2	YSE505A	Network Protocols	3	0	0	3	3	0	0	3
	YSE505B	Unix and Network Programming	3	0	0	3	3	0	0	3
	YSE505C	Wireless Sensor Network	3	0	0	3	3	0	0	3
GE-3		GE-2	3	0	0	3	3	0	0	3
Minor Course * Extra Credit	YSE507	Angular JS	1	0	0	1*	1	0	0	1*
			18	3	2	23	18	3	4	25+1*

VI SEMESTER

Category	Course Code	Course Name	Credits				Hours			
			L	T	P	Total	L	T	P	Total
SEC-4	YSE601	Requirements Engineering	2	1	0	3	2	1	0	3
CC-17	YSE602	Data Warehousing and Data Mining	3	0	1	4	3	0	2	5
SEC-5	YSE603	Software Metrics	2	1	0	3	2	1	0	3
DSE-3	YSE604A	Client Server Computing	3	0	0	3	3	0	0	3
	YSE604B	XML and Web services	3	0	0	3	3	0	0	3
	YSE604C	Advanced Data Base Management Systems	3	0	0	3	3	0	0	3
DSE-4	YSE605A	Principles of Management	3	0	0	3	3	0	0	3
	YSE605B	Total Quality Management	3	0	0	3	3	0	0	3
	YSE605C	Entrepreneurship Development and Management	3	0	0	3	3	0	0	3
DSE-5	YSE605	Project Work	0	0	4	6	0	0	8	8
			13	2	5	22	13	2	10	25

VII SEMESTER

Category	Course Code	Course Name	Credits				Hours			
			L	T	P	Total	L	T	P	Total
DSE	YSE701	Internship Programme	--	--	--	12	--	--	--	--

VIII SEMESTER

Category	Course Code	Course Name	Credits				Hours			
			L	T	P	Total	L	T	P	Total
CC-18	YSE801	Software Testing and Quality Assurance	3	0	1	4	3	0	2	5
CC-19	YSE802	Big Data Analytics using R	3	0	1	4	3	0	2	5
SEC-6	YSE803	Software Project Reports Preparation	2	1	0	3	2	1	0	3
CC-20	YSE804	Machine Learning Algorithms	3	1	0	4	3	1	0	4
DSE-5	YSE805A	Cloud Computing	3	0	0	3	3	0	0	3
	YSE805B	Pervasive Computing	3	0	0	3	3	0	0	3
	YSE805C	Advanced Computer Architecture	3	0	0	3	3	0	0	3
GE-4		Open Elective	3	0	0	3	3	0	0	3
			17	2	2	21	17	2	4	23

IX SEMESTER

Category	Course Code	Course Name	Credits				Hours			
			L	T	P	Total	L	T	P	Total
CC-21	YSE901	Mobile Application Development	3	0	1	4	3	0	2	5
CC-22	YSE902	Cyber Security	3	0	0	3	3	0	0	3
CC-23	YSE903	Software Reliability	3	0	0	3	3	0	0	3
SEC-7	YSE904	Usability Engineering	3	0	0	3	3	0	0	3
CC-24	YSE905	Internet of Things	3	1	0	4	3	1	0	4
DSE	YSE906	Project Phase I	0	0	3	3	0	0	6	6
			15	1	4	20	15	1	8	24

X SEMESTER

Category	Course Code	Course Name	Credits				Hours			
			L	T	P	Total	L	T	P	Total
DSE	YSE1001	Main Project Phase-II	--	--	--	16	--	--	--	--

Total 193 Credits

CURRICULUM for B. Sc (Computer Science)

I SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
AECC 1	XGL101	Communication Skills in English	2	0	0	2	2	2	0	0	2	4
LANG	XGL102A/ XGL102B	Ariviyal Tamil/ Comprehensive English	3	0	0	0	3	3	0	0	0	3
CC-1	XBC103	Computer Fundamentals	3	0	1	0	4	3	0	2	0	5
CC-2	XBC104	Algebra, Calculus & Analytical Geometry	4	1	0	0	5	4	1	0	0	5
CC-3	XBC105	Problem Solving Using C	3	0	1	0	4	3	0	2	0	5
UMAN-1	XUM106	Human Ethics, Values, Rights, and Gender Equality	2	0	0	1	0	2	0	0	1	3
		Total	17	1	2	3	18	17	1	4	3	25

II SEMESTER

Category	Course Code	Course Name	Credits					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
AECC-2	XGL201	English for Effective Communication	2	0	0	2	2	2	0	0	2	4
UMAN-2	XES202	Environmental Studies	2	0	0	1	0	2	0	0	1	3
CC-4	XBC203	Programming in C++	3	0	1	0	4	3	0	2	0	5
CC-5	XBC204	Discrete Mathematics	3	1	0	0	4	3	1	0	0	4
CC-6	XBC205	Computer Architecture	3	1	0	0	4	3	1	0	0	4
CC-7	XBC206	Digital Electronics	3	0	1	0	4	3	0	2	0	5
		Total	16	2	2	3	18	16	2	4	3	25

III SEMESTER

Category	Course Code	Course Name	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
SEC-1	XBC301	Multimedia Systems	3	0	2	5	3	0	2	0	5
CC-8	XBC302	Operating System	3	1	0	4	3	1	0	0	4
CC-9	XBC303	Programming in Java	3	0	2	5	3	0	2	0	5
CC-10	XBC304	Allied Physics	3	1	0	4	3	1	0	0	4
UMAN-3	XUM306	Disaster Management	3	0	0	0	3	0	0	0	3
GE1		*Open Elective - To be chosen by student	3	0	0	3	3	0	0	0	3
Minor Course * Extra Credit	XBC307	R Programming									
		Total	17	2	4	21	17	2	4	0	24

IV SEMESTER

Category	Course Code	Course Name	Credits				Hours				
			L	T	P	Total	L	T	P	Total	
SEC-2	XBC401	Open source software	3	1	0	4	3	1	0	4	
CC-11	XBC402	Data Structures and Algorithms	3	0	1	4	3	0	2	5	
CC-12	XBC403	Computer Networks	3	1	0	4	3	1	0	4	
CC-13	XBC404	. Net Technologies	3	0	1	4	3	0	2	5	
DSE-1	XBC405A	Principles of Management	3	0	0	3	3	0	0	3	
	XBC405B	Total Quality Management	3	0	0	3	3	0	0	3	
	XBC405C	E Commerce	3	0	0	3	3	0	0	3	
GE-2		*Open Elective - To be chosen by student	3	0	0	3	3	0	0	3	
Minor Course * Extra Credit	XBC407	Python Programming									
		Total	17	2	2	22	17	2	4	24	

V SEMESTER

Category	Course Code	Course Name	Credits				Hours			
			L	T	P	Total	L	T	P	Total
SEC3	XBC501	Software Engineering	3	0	0	3	3	0	0	3
CC-14	XBC502	Data Base Management System	3	0	1	4	3	0	2	5
CC-15	XBC503	Data Warehousing and Data Mining	3	1	1	5	3	1	2	6
CC-16	XBC504	Statistics	3	1	0	4	3	1	0	4
DSE-2	XBC505A	Computer Graphics	3	0	0	3	3	0	0	3
	XBC505B	Digital Image Processing	3	0	0	3	3	0	0	3
	XBC505C	Game Programming	3	0	0	3	3	0	0	3
GE-3		GE-3	3	0	0	3	3	0	0	3
	XBC507	IPT 21 Days	0	0	0	2	0	0	0	0
Minor Course * Extra Credit	XBC508	Angular JS								
			18	3	2	22+2	18	3	4	24

VI SEMESTER

Category	Course Code	Course Name	Credits				Hours			
			L	T	P	Total	L	T	P	Total
SEC-4	XBC601	Cloud Computing	2	1	0	3	2	1	0	3
CC-17	XBC602	Web Technologies	3	0	1	4	3	0	2	5
SEC-5	XBC603	Ethical Hacking	2	1	0	3	2	1	0	3
DSE-3	XBC604A	Internet of Things	3	0	0	3	3	0	0	3
	XBC604B	Client Server Computing	3	0	0	3	3	0	0	3
	XBC604C	Artificial Intelligence	3	0	0	3	3	0	0	3
DSE-4	XBC605A	Software Testing and Quality Assurance	3	0	0	3	3	0	0	3
	XBC605B	System Analysis and Design	3	0	0	3	3	0	0	3
	XBC605C	Management Information System	3	0	0	3	3	0	0	3
DSE-5	XBC606	Project Work	0	0	4	6	0	0	8	8
			13	2	5	22	13	2	10	25

Total Credits : 125

2. Curriculum for B.Sc. Animation and Multimedia

Semester I

Category	Course Code	Course Name	Credit					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
AECC 1	XGL101	Communication Skills in English	2	0	0	0	2	2	0	0	0	2
LANG	XAM102A / XAM102B	Ariviyal Tamil / Comprehensive English	3	0	0	0	3	3	0	0	0	3
CC1-(DSC 2A)	XAM103	Animation Art	2	1	1	0	4	2	1	2	0	5
CC2	XAM104	Principles of animation	4	1	0	0	5	4	1	0	0	5
CC3-(DSC 3A)	XAM105	Graphics Design	4	0	1	0	5	4	0	2	0	6
UMAN 1	XUM106	Human Ethics, Values, Rights and Gender Equality	2	0	0	1	0	2	0	0	1	2
Total			18	2	2	1	19	18	2	4	0	23

Total Credits: 19

Semester II

Category	Course Code	Course Name	Credit					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
AECC2	XGL201	English for Effective Communication	2	0	0	0	2	2	0	0	0	2
AECC 3	XES202	Environmental Studies	2	0	0	1	0	2	0	0	1*	2
CC4	XAM203	Digital Art and Designing	3	0	2	0	5	3	0	4	0	7
CC5-(DSC2B)	XAM204	Digital Photography	3	0	2	0	5	3	0	4	0	7
CC6-(DSC3B)	XAM205	Visual Design	4	1	0	0	5	4	1	0	0	5
Total			14	1	4	1	17	14	1	8	1*	23

Total Credits: 17

Semester III

Category	Course Code	Course Name	Credit					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
SEC1	XAM301	Digital Imaging Skills	1	0	1	0	2	1	0	2	0	3
CC7	XAM302	Character & Environment Sketching	2	1	1	0	4	2	1	2	0	5
CC8-(DSC2C)	XAM303	Audio & Video Editing	4	0	1	0	5	4	0	2	0	6
CC9-(DSC3C)	XAM304	2D Animation	2	0	2	0	4	2	1	2	0	5
GE 1		*Open Elective - To be chosen by student	3	0	0	0	3	3	0	0	0	3
UMAN II	XUM306	Disaster Management	0	0	0	3	0	0	0	0	3*	0
Minor Course * Extra Credit		Drawing skills				0	1*				0	
		Total	12	1	5	3	18+1*	12	20	8	3*	22

Total Credits: 18+1*

Semester IV

Category	Course Code	Course Name	Credit					Hours				
			L	T	P	SS	Total	L	T	P	SS	Total
SEC2	XAM401	Image Editing Skills	0	0	2	0	2	0	0	4	0	4
CC10	XAM402	Compositing Techniques	3	0	2	0	5	3	1	2	0	6
CC11-(DSC2D)	XAM403	Basics of Clay modelling	3	0	2	0	5	3	1	2	0	6
CC12-(DSC3D)	XAM404	Fundamentals of Cinematography	3	0	2	0	5	3	1	2	0	6
GE 2		Open Elective - To be chosen by student	3	0	0	0	3	3	0	0	0	3
Minor Course * Extra Credit		Digital Matte Painting				0	1*				0	
		Total	12	0	8	0	20+1*	12	0	16		25

Total Credits: 20+1*

	RC/YRC											
	TOTAL	9	0	5	0	20	9	0	10	0	25	

Total Credits: 20

Total Credits: 113+5* Credits