



**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 CHEMISTRY
STRUCTURE OF THE PROGRAM CLEARLY INDICATING
COURSES, CREDITS/ELECTIVES
2023-2024 ACADEMIC YEAR
DEPARTMENT OF CHEMISTRY

Programmes

1. B Sc. Chemistry
2. M.Sc. Chemistry

B.Sc. Chemistry Curriculum Reg 2018

SEMESTER V								
Type	Course Code	Course Title	L	T	P	SS	H	C
SEC 3	XCY501	Clinical Chemistry	1	0	2	1	4	2
DSE 1A	XCY502A	Phyto Chemistry	3	1	0	0	4	4
	XCY502B	Forensic Science						
DSE 2A	XCY503A	Analytical Methods in Chemistry	3	1	0	0	4	4
	XCY503B	Agricultural Chemistry						
DSE 3A	XCY504A	Computer Applications in Chemistry	3	1	0	0	4	4
	XCY504B	Programming in C						
GE 3		*Open Elective - To be chosen by student	3	0	0	0	3	3
DSE 1A Lab	XCY505	Organic Qualitative Analysis Practical VA	0	0	4	0	4	2
CC lab	XCY506	Physical Chemistry Practical VB	0	0	4	0	4	2
Minor course 3 *Extra credit	XCY507	Animation Software II (15 Hours)						1*
* Extra credit	XCY508	IPT (21 days)						2*
Total			13	3	10	1	27	21+3*

SEMESTER VI								
Type	Course Code	Course Title	L	T	P	SS	H	C
SEC 4	XCY601	Renewable Energy	1	0	2	1	4	2
DSE 1B	XCY602A	Industrial Chemistry	3	1	0	0	4	4
	XCY602B	Material Chemistry						
DSE 2B	XCY603A	Food Chemistry	3	1	0	0	4	4
	XCY603B	Polymer Chemistry						
DSE2B lab	XCY604	Organic Qualitative Analysis Practical VI	0	0	4	0	4	2
CC lab	XCY605	Physical Chemistry Practical VIA	0	0	4	0	4	2
DSE 3B	XCY606	Project	0	0	0	0	8	6
		NSS/NCC/RRC....						
Total			7	2	10	1	28	20

B.Sc. Chemistry Curriculum Reg 2022

SEMESTER III								
Type	Course Code	Course Name	L	T	P	SS	H	C
Core -8	XCY301	Organic Chemistry I	3	1	0	0	4	4
Core -9	XCY302	Inorganic Chemistry II	3	1	0	0	4	4
Core -10	XCY303	Semi Micro Inorganic Qualitative Analysis Practical III	0	0	4	0	4	2
III Allied -1	XPH304	Fundamental Physics	3	1	0	0	4	4
III Allied -2	XPH305	Fundamental Physics Practical	0	0	4	0	4	2
GS(UMAN3)	XUM003	Disaster Management	1	0	0	0	1	1
GE	OE-1	Open Elective- I	3	0	0	0	3	3
SBE -I	XCY307	Water Quality Analysis	2	0	0	0	2	2
		Mentor / Library/Extension activities					4	
Total			15	3	8	0	26	22

SEMESTER IV								
Type	Course Code	Course Name	L	T	P	SS	H	C
Core - 11	XCY401	Physical Chemistry II	3	1	0	0	4	4
Core - 12	XCY402	Organic Chemistry II	3	1	0	0	4	4
Core - 13	XCY403	Gravimetric Estimation Practical IV	0	0	3	0	3	2
IV Allied -1	XPH404	Modern Physics	3	1	0	0	4	4
IV Allied-2	XPH405	Modern Physics Practical	0	0	3	0	3	2
UVM(UMAN4)	XUM004	Introduction to Entrepreneurship Development	1	0	0	1	2	1
SBE – II	XCY407	Pharmaceutical Chemistry	2	0	0	0	2	2
GE	OE-2	Open Elective- II	3	0	0	0	3	3
		Mentor/Extension activities					1	
Total			16	3	6	0	25	22

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Semester I									
Part	Category	Course Code	Course Name	L	T	P	SS	H	C
I	Language	XGT101/ XFT101	Tamil – I/ Foundational Tamil – I	3	0	0	0	3	3
II	Language	XGE102	English – I	3	0	0	0	3	3
III	CC - 1	XCY103	General Chemistry-I	3	1	0	2	6	4
	CC - 2	XCY104	Quantitative Inorganic estimation (titrimetry) and Inorganic Preparations	0	0	3	0	3	2
	EC-1/ DSC	XMG105	Allied Mathematics -I	3	1	0	2	5	4
	SEC - 1	XCY106	Cosmetics and Personal care Products	2	0	0	0	2	2
	FC	XCY100	Foundation Course	2	0	0	0	2	2
IV	UMAN - 1	XUM001	Human Ethics, Values, Rights and Gender Equality	1	0	0	1	2	1
V	EA		Extension Activities (NSS, NCC, NSO, RRC and YRC)	0	0	0	1	1	0
			Mentoring	0	0	0	1	1	0
			Library/E-Library	0	0	0	1	2	0
Total				17	2	3	8	30	21

Semester II									
Part	Category	Course Code	Course Name	L	T	P	SS	H	C
I	Language	XGT201/ XFT201	Tamil – II/ Foundational Tamil – II	3	0	0	0	3	3
II	Language	XGE202	English – II	3	0	0	0	3	3
III	CC - 3	XCY203	General Chemistry–II	3	1	0	2	6	4
	CC - 4	XCY204	Qualitative Organic Analysis and Preparation of Organic Compounds	0	0	3	0	3	2
	EC -2/ DSC	XMG205	Allied Mathematics -II	3	1	0	2	6	4
	SEC- 2	XCY206	Dairy Chemistry	2	0	0	0	2	2
	SEC-3	XCY207	Role of Chemistry in daily life	2	0	0	0	2	2
IV	UMAN - 2	XUM002	Environmental Studies	1	0	0	1	2	1
		XCY208	Field Visit	0	0	0	0	0	2
V	EA		Extension Activities (NSS, NCC, NSO, RRC and YRC)	0	0	0	1	1	0
			Mentoring	0	0	0	1	1	0
			Library/E-Library	0	0	0	1	1	0
Total				17	2	3	8	30	23

M.Sc. Chemistry Curriculum Reg 2023

SEMESTER - I								
Category	Course Code	Course Name	L	T	SS	P	H	C
Core Course-I	YCY101	Organic Chemistry I	4	1	0	0	5	5
Core Course-II	YCY102	Inorganic Chemistry I	4	1	0	0	5	5
Core Course-III	YCY103	Physical Chemistry I	4	1	0	0	5	5
Core Course-IV (Lab)	YCY104	Inorganic Chemistry Practical I	0	0	0	6	5	3
Core Course-V (Lab)	YCY105	Physical Chemistry Practical I	0	0	0	6	5	3
Elective Core -I	YCYE01	(A) Green Chemistry	3	1	0	0	4	4
	YCYE02	(B) Industrial Chemistry						
	YCYE03	(C) Bio-Inorganic Chemistry						
Total			15	4	0	12	30	25

SEMESTER-II								
Category	Course Code	Course Name	L	T	SS	P	H	C
Core Course-VI	YCY201	Inorganic Chemistry II	4	1	0	0	5	5
Core Course-VII	YCY202	Physical Chemistry II	4	1	0	0	5	5
Core Course-VIII	YCY203	Physical Methods in Chemistry-I	4	1	0	0	5	5
Core Course- IX (Lab)	YCY204	Inorganic Chemistry Practical II	0	0	0	6	5	3
Core Course- X (Lab)	YCY205	Organic Chemistry Practical-I	0	0	0	6	5	3
Elective Core -II	YCYE04	(A) Pharmaceutical Chemistry	3	1	0	0	4	4
	YCYE05	(B) Electro-Organic Chemistry						
	YCYE06	(C) Medicinal Chemistry						
Elective	YCY206	Research Methodology	1	0	1	0	2	1
Total			15	4	0	12	30	26

M.Sc. Chemistry Curriculum Reg 2022

	SEMESTER -III							
Category	Course Code	Course Name	L	T	SS	P	H	C
Core Course - XI	YCY301	Organic Chemistry II	4	1	0	0	5	5
Core Course - XII	YCY302	Physical Methods in Chemistry-II	4	1	0	0	5	5
Core Course – XIII (Lab)	YCY303	Organic Chemistry Practical -II	0	0	0	6	5	3
Core Course – XIV (Lab)	YCY304	Physical Chemistry Practical II	0	0	0	6	5	3
Elective -I	YEC305	Analytical Chemistry	3	1	0	0	4	4
Elective -II	YCYON33	Applications of Nanoscience	1	1	0	0	2	4
Elective Core -III	YCYE05 / YCYE06	(A) Selected topics in Chemistry / (B) Chemistry of Nanoscience and Nanotechnology	3	1	0	0	4	4
Total			15	5	0	12	30	28

	SEMESTER- IV							
Category	Course Code	Course Name	L	T	SS	P	H	C
Course -XV	YCY401	Dissertation – Project work	0	0	0	20	20	10
Elective Core -IV	YCYE07 / YCYE08	(A) Solid State Chemistry / (B) Supramolecular Chemistry	3	1	0	0	4	4
Total			3	1	0	20	24	14