



**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

<b>Key Indicator</b>	1.2	<b>Academic Flexibility</b>
<b>Metric</b>	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**  
**2022-23 ACADEMIC YEAR**

### Programmes

1. B.Sc
2. M.Sc

## B.Sc Chemistry Curriculum

SEMESTER III								
Type	Course Code	Course Title	L	T	P	SS	H	C
SEC 1	XCY301	Water Quality Analysis	1	0	2	1	4	2
CC7	XPG302	Fundamental Physics	3	1	0	0	4	4
CC 8 (DSC 2C)	XCY303	Inorganic Chemistry II	3	1	0	0	4	4
CC 9 (DSC 3C)	XCY304	Organic Chemistry II	3	1	0	0	4	4
GE 1		*Open Elective - To be chosen by student	3	0	0	0	3	3
CC7 lab	XPG 305	Fundamental Physics Practical	0	0	4	0	4	2
UMAN 2	XUM306	Disaster Management	0	0	0	3	3	0
CC 8 Lab	XCY307	Semi Micro Inorganic Qualitative Analysis Practical III	0	0	4	0	4	2
Minor course 1 *Extra credit		Office Automation (15 Hours)						1*
<b>Total</b>			<b>13</b>	<b>3</b>	<b>10</b>	<b>4</b>	<b>30</b>	<b>21+1*</b>

SEMESTER IV								
Type	Course Code	Course Title	L	T	P	SS	H	C
SEC 2	XCY401	Pharmaceutical Chemistry	1	0	2	1	4	2
CC10	XPG402	Modern Physics	3	1	0	0	4	4
CC 11 (DSC 2D)	XCY403	Physical Chemistry II	3	1	0	0	4	4
CC 12 (DSC 3D)	XCY404	Inorganic Chemistry III	3	1	0	0	4	4
GE 2		*Open Elective - To be chosen by student	3	0	0	0	3	3
CC10 lab	XPG405	Modern Physics Practical	0	0	4	0	4	2
CC11 Lab	XCY406	Inorganic Quantitative Analysis Practical IV	0	0	4	0	4	2
Minor course 2 *Extra credit		Animation Software I (15 Hours)						1*
<b>Total</b>			<b>13</b>	<b>3</b>	<b>10</b>	<b>1</b>	<b>27</b>	<b>21+1*</b>

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		Animation Software II (15 Hours)						1*
* Extra credit	–	IPT (21 days)						2*
<b>Total</b>			<b>13</b>	<b>3</b>	<b>10</b>	<b>1</b>	<b>27</b>	<b>21+3*</b>
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 3 B	XCY606	Project	0	0	0	0	8	6
	–	NSS/NCC/RRC....						
<b>Total</b>			<b>7</b>	<b>2</b>	<b>10</b>	<b>1</b>	<b>28</b>	<b>20</b>

## M.Sc Chemistry – Curriculum (2022-2023)

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						
		Library					1	
<b>Total</b>			<b>15</b>	<b>4</b>	<b>0</b>	<b>12</b>	<b>30</b>	<b>25</b>

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	YCYE03	(A) Pharmaceutical Chemistry/	3	1	0	0	4	4
	YCYE04	(B) Electro-Organic Chemistry						
		Library					1	
<b>Total</b>			<b>15</b>	<b>4</b>	<b>0</b>	<b>12</b>	<b>30</b>	<b>25</b>

SEMESTER III								
Type	Course Code	Course Title	L	T	SS	P	H	C
CCVI	YCY301	Organic Chemistry II	4	1	0	0	5	5
CCVII	YCY302	Physical Methods in Chemistry-I	4	1	0	0	5	5
CPV	YCY303	Organic Chemistry Practical -I	0	0	0	6	6	3
ECIIA ECIIB	YCYE03/ YCYE04	(A) Pharmaceutical Chemistry/ (B) Electro-Organic Chemistry	4	1	0	0	5	5
ECIC	YEC305	Analytical Chemistry	4	1	0	0	5	5
<b>Total</b>			<b>16</b>	<b>4</b>	<b>0</b>	<b>6</b>	<b>26</b>	<b>23</b>

SEMESTER IV								
Type	Course Code	Course Title	L	T	SS	P	H	C
CCVIII	YCY401	Physical Methods in Chemistry-II	4	1	0	0	5	5
CCVI	YCY402	Organic Chemistry Practical -II	0	0	0	6	6	3
ECIIIA ECIIB	YCYE05/ YCYE06	(A) Green Chemistry/ (B) Industrial Chemistry	4	1	0	0	5	5
ECIVA ECIVB	YCYE07/ YCYE08	(A) Selected topics in Chemistry/ (B) Chemistry of nanoscience and nanotechnology	4	1	0	0	5	5
Project	YCY405	Dissertation –Project work	0	0	0	12	12	6
<b>Total</b>			<b>12</b>	<b>3</b>	<b>0</b>	<b>18</b>	<b>33</b>	<b>24</b>