



Royal School of Applied and Pure Sciences

Department of Chemistry

B.Sc. Chemistry

Based on NEP 2020

COURSE STRUCTURE

STRUCTURE OF THE SYLLABUS FOR 4 YEAR UG PROGRAMME

SCHOOL NAME - Royal School of Applied & Pure Sciences (RSAPS)

DEPARTMENT NAME - Chemistry

PROGRAMME NAME - B.Sc.

1 st SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	CHY012M10 1	General Chemistry-I	100	3	3-0-0
	CHY012M11 2	Chemistry Lab-I	100	3	0-0-3
Minor	CHY012N10 1	Fundamentals of Chemistry	100	3	3-0-0
Interdisciplinary (IDC)	IKS992K101	Introduction to Indian Knowledge System - I	100	3	3-0-0
Ability Enhancement course (AEC)	CEN982A101	Communicative English - I	100	2	2-0-0
	BSH982A102	Behavioural Science-I			
Skill Enhancement Course (SEC)	CHY012S111	Preparation and Estimation Techniques	100	3	3-0-0
Value Added Course (VAC)	VAC-1	Basket Course	100	3	3-0-0
		Swayam/MOOCs	100	4/5/6	
TOTAL CREDIT FOR 1st SEMESTER				20 + 4/5/6	
2 nd SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	CHY012M20 1	General Chemistry-II	100	3	3-0-0
	CHY012M21 2	Chemistry Lab-II	100	3	0-0-3
Minor	CHY012N20 1	General Chemistry Lab-I	100	3	0-0-3
IDC	IDC-2	Introduction to Indian Knowledge System - II	100	3	3-0-0
AEC	AEC982A201	Communicative English and Behavioural Science- II	100	2	2-0-0
SEC	CHY012S211	Basic Preparative Techniques in Chemistry and Food Analysis	100	3	3-0-0
VAC	VAC-2	Basket Course	100	3	3-0-0
		Swayam/MOOCs	100	4/5/6	
TOTAL CREDIT FOR 2nd SEMESTER				20 + 4/5/6	

3 rd SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	CHY012M30 1	Organic Chemistry-I	200	4	4-0-0
	CHY012M31 1	Chemistry Lab - III	200	4	0-0-4
Minor	CHY012N30 1	Physical & Organic Chemistry	200	4	4-0-0
IDC	IDC-3	Basket Course	200	3	3-0-0
AEC	AEC982A301	Communicative English and Behavioural Science- III	200	2	2-0-0
SEC	CHY012S311	Analytical Laboratory Methods	200	3	3-0-0
		Swayam/MOOCs	200	4/5/6	
TOTAL CREDIT FOR 3 rd SEMESTER				20 + 4/5/6	
4 th SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	CHY012M40 1	Inorganic Chemistry-I	200	4	4-0-0
	CHY012M40 2	Physical Chemistry-I	200	4	4-0-0
	CHY012M11 3	Chemistry Lab-IV	200	4	0-0-4
Minor	CHY012N40 1	Organic & Inorganic Chemistry	200	3	3-0-0
	CHY012N41 2	General Chemistry Lab-II	200	3	0-0-3
AEC	AEC982A401	Communicative English and Behavioral Science- IV	200	2	2-0-0
		Swayam/MOOCs	200	4/5/6	
TOTAL CREDIT FOR 4 th SEMESTER				20 + 4/5/6	
5 th SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	CHY012M50 1	Organic Chemistry-II	300	4	4-0-0
	CHY012M50 2	Inorganic chemistry II	300	4	4-0-0
	CHY012M52 3	Physical chemistry II	300	4	4-0-0
Minor	CHY012N50 1	Inorganic & Physical Chemistry	300	4	4-0-0
Internship			300	4	0-0-0
TOTAL CREDIT FOR 5 th SEMESTER				20	

6 th SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	CHY012M601	Spectroscopy	300	4	4-0-0
	CHY012M602	Quantum Chemistry	300	4	4-0-0
	CHY012M603	Introduction to environmental and Green Chemistry	300	4	4-0-0
	CHY012M624	Analytical Chemistry	300	4	4-0-0
Minor	CHY012N601	Concepts of Analytical Chemistry	300	4	4-0-0
TOTAL CREDIT FOR 6 th SEMESTER				20	
7 th SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	CHY012M701	Organic Chemistry III	400	4	4-0-0
	CHY012M702	Physical Chemistry III	400	4	4-0-0
	CHY012M703	Inorganic Chemistry-III	400	4	4-0-0
	CHY012M704	Name reactions & Reagents in Organic Chemistry	400	4	4-0-0
Minor	CHY012N701	Chemistry in Everyday Life	400	4	4-0-0
TOTAL CREDIT FOR 7 th SEMESTER				20	
8 th SEMESTER					
COMPONENT	COURSE CODE	COURSE TITLE	LEVEL	CREDIT	L-T-P
Major (Core)	CHY012M801	Advanced Instrumental Techniques	400	4	4-0-0
Research Methodology	CHY012M802	Research Methodology	400	4	4-0-0
Dissertation /Research Project	CHY012M823	Research Project	400	12	0-0-0
Or 400 level advanced course Core (in lieu of Dissertation/Research project)	CHY012M804	Industrial and Polymer Chemistry	400	4	4-0-0
	CHY012M805	Material Chemistry	400	4	4-0-0
	CHY012M806	Biochemistry and Natural Products	400	4	4-0-0
TOTAL CREDIT FOR 8 th SEMESTER				20	