Department of Chemistry
B.Sc Physical Sciences
SCHEME UG A1: UNDERGRADUATE PROGRAMME (MULTIDISCIPLINARY)

Semester 1

Course Code	Course Title	Course ID	L	T	P	L	T	P	Total Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A1	Chemistry-I		3		2	3		1	4	25	50	5	20	100

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A2	Chemistry-II		3		2	3		1	4	25	50	5	20	100

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A3	Chemistry-III		3		2	3		1	4	25	50	5	20	100

Semester 4

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A4	Chemistry-IV		3		2	3		1	4	25	50	5	20	100

Semester 5

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A5	Chemistry-V		3		2	3		1	4	25	50	5	20	100

Internship is to be done during summer break after 4th Semester, Marks will be added in 5th Semester.

Semester 6

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A6	Chemistry-VI		3		2	3		1	4	25	50	5	20	100

The curriculum of semester 7 and 8 will is provided in due course of time.

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Department of Chemistry
B.Sc Physical Sciences
SCHEME UG A2: UNDERGRADUATE PROGRAMME (SINGLE MAJOR)

Semester 1

Course Code	Course Title	Course ID	L (Hrs)	T (Hrs)	P (Hrs)	L Credits	T Credits	P Credits	Total Credits	MARKS TI	MARKS TE	MARKS PI	MARKS PE	MARKS Total
Core Course(s)														
CC-A1	Inorganic Chemistry-I		3		2	3		1	4	25	50	5	20	100
CC-A2	Organic Chemistry-I		3		2	3		1	4	25	50	5	20	100
CC-A3	Physical Chemistry-I		3		2	3		1	4	25	50	5	20	100
Minor/ Vocational Course(s)														
MIC-1	One from Pool		2			2			2	15	35			50
Multidisciplinary Course(s)														
MDC-1	One from Pool		2		2	2		1	3	15	35	5	20	75
Ability Enhancement Course(s)														
AEC-1	One from Pool		2			2			2	15	35			50
Skill Enhancement Course(s)														
SEC-1	One from Pool		2		2	2		1	3	15	35	5	20	75
Value-added Course(s)														
VAC-1	One from Pool								2					50
Total Credits									24					600

Semester 2

Course Code	Course Title	Course ID	L (Hrs)	T (Hrs)	P (Hrs)	L Credits	T Credits	P Credits	Credits	MARKS TI	MARKS TE	MARKS PI	MARKS PE	MARKS Total
Core Course(s)														
CC-A4	Inorganic Chemistry-II		3		2	3		1	4	25	50	5	20	100
CC-A5	Organic Chemistry-II		3		2	3		1	4	25	50	5	20	100
CC-A6	Physical Chemistry-II		3		2	3		1	4	25	50	5	20	100
Minor/ Vocational Course(s)														
MIC-2	One from Pool		2			2			2	15	35			50
Multidisciplinary Course(s)														
MDC-2	One from Pool		2		2	2		1	3	15	35	5	20	75
Ability Enhancement Course(s)														
AEC-2	One from Pool		2			2			2	15	35			50
Skill Enhancement Course(s)														
SEC-2	One from Pool		2		2	2		1	3	15	35	5	20	75
Value-added Course(s)														
VAC-2	One from Pool								2					50

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Total Credits									24					600

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A7	Inorganic Chemistry-III		3		2	3		1	4	25	50	5	20	100
CC-A8	Organic Chemistry-III		3		2	3		1	4	25	50	5	20	100
CC-A9	Physical Chemistry-III		3		2	3		1	4	25	50	5	20	100
Minor/ Vocational Course(s)														
MIC-3	One from Pool		3		2	3		1	4	25	50	5	20	100
Multidisciplinary Course(s)														
MDC-3	One from Pool		2		2	2		1	3	15	35	5	20	75
Skill Enhancement Course(s)														
AEC-3	One from Pool		2			2			2	15	35			50
Total Credits									21					525

Semester 4

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A10	Inorganic Chemistry-IV		3		2	3		1	4	25	50	5	20	100
CC-A11	Organic Chemistry-IV		3		2	3		1	4	25	50	5	20	100
CC-A12	Physical Chemistry-IV		3		2	3		1	4	25	50	5	20	100
Minor/ Vocational Course(s)														
MIC-4	One from Pool		3		2	3		1	4	25	50	5	20	100
Ability Enhancement Course(s)														
AEC-4	One from Pool		2			2			2	15	35			50
Value-added Course(s)														
VAC-3	One from Pool		2			2			2	15	35			50
Total Credits									20					500

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Department of Chemistry
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Semester 5

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A13	Inorganic Chemistry-V		3		2	3		1	4	25	50	5	20	100
CC-A14	Organic Chemistry-V		3		2	3		1	4	25	50	5	20	100
CC-A15	Physical Chemistry-V		3		2	3		1	4	25	50	5	20	100
Minor/ Vocational Course(s)														
MIC-5	One from Pool		3		2	3		1	4	25	50	5	20	100
Skill Enhancement Course(s)														
Internship									4					100
Total Credits									20					500

Semester 6

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
Core Course(s)														
CC-A16	Inorganic Chemistry-VI		3		2	3		1	4	25	50	5	20	100
CC-A17	Organic Chemistry-VI		3		2	3		1	4	25	50	5	20	100
CC-A18	Physical Chemistry-VI		3		2	3		1	4	25	50	5	20	100
Minor/ Vocational Course(s)														
MIC-6	One from Pool		3		2	3		1	4	25	50	5	20	100
MIC-7	One from Pool		3		2	3		1	4	25	50	5	20	100
Ability Enhancement Course(s)														
SEC-3	One from Pool		2		2	2		1	3	15	35	5	20	75
Total Credits									23					575

**The curriculum of semester 7 and 8 will is provided in due course of time.*

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Department of Chemistry
B.Sc Physical Sciences
MULTIDISCIPLINARY COURSE (MDC) FROM THE DEPARTMENT FOR POOL OF THE COURSES IN THE UNIVERSITY
(These courses are to be offered to students of different discipline/Subject)

Semester 1

Course Code	Course Title	Course ID	L	T (theory)	P (prac.)	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-1	Introductory Chemistry-I		2		2	2		1	3	15	35	05	20	75

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-2	Introductory Chemistry-II		2		2	2		1	3	15	35	05	20	75

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MDC-3	Introductory Chemistry-III		2		2	2		1	3	15	35	05	20	75

<u>Minor Course from the department for pool of the Courses in the University</u>

(These courses are offered by each department for students of other departments/same department to gain a broader understanding beyond the major discipline)

Semester 1

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MIC-1	Green Chemistry		2			2			2	15	35			50

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MIC-2	Bioinorganic Chemistry		2			2			2	15	35			50

Semester 3

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MIC-3	Chemistry of biomolecules-I		3		2	3		1	4	25	50	5	20	100

Semester 4

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MIC-4	Chemistry of		3		2	3		1	4	25	50	5	20	100

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Department of Chemistry
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	biomolecules-II												

Semester 5

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MIC-5			3		2	3		1	4	25	50	5	20	100

Semester 6

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
MIC-6			3		2	3		1	4	25	50	5	20	100
MIC-7			3		2	3		1	4	25	50	5	20	100

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Department of Chemistry
B.Sc Physical Sciences
SKILL ENHANCEMENT COURSE FROM THE DEPARTMENT FOR POOL OF THE COURSES IN THE UNIVERSITY

(These courses are offered by each department for students of other departments/same department and is designed to provide value-based and/or skill-based knowledge and should contain both theory and lab/hands-on/training/field work.)

Semester 1

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
SEC-1	Chemistry lab operation and safety measures		2		2	2		1	3	15	35	05	20	75

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
SEC-2	Analytical Chemistry		2		2	2		1	3	15	35	05	20	75

Semester 6

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
SEC-3	Food Chemistry		2		2	2		1	3	15	35	05	20	75

VALUE ADDED COURSE FROM THE DEPARTMENT FOR POOL OF THE COURSES IN THE UNIVERSITY

(All the departments will offer value added course for semester 3 for the students of same or different departments. In the first year, students will study (i) Human Values and Ethics and (ii) Envioronmental Studies as value added course)

Semester 1

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-1	Human Values and Ethics Or Environmental Studies		2						2	15	35			50

Semester 2

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Department of Chemistry
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Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-2	Human Values and Ethics OR Environmental Studies		2						2	15	35			50

Semester 4

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VAC-3	Chemistry in everyday life-Soaps, detergents & dyes		2						2	15	35			50

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Department of Chemistry
B.Sc Physical Sciences

ABILITY ENHANCEMENT COURSE FROM THE DEPARTMENT FOR POOL OF THE COURSES IN THE UNIVERSITY

(These courses are offered by department of Indian and Foreign Languages for students of other departments/same department and leads to enhancement in the ability of learn Regional and foreign languages)

Semester 1

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
AEC-1	English Language and Communication: Level-1 OR हिंदी भाषा एव. सम्प्रेषण-1 OR संस्कृत भाषा एव. सम्प्रेषण-1								2					50

Semester 2

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
AEC-2	English Language and Communication: Level-2 OR हिंदी भाषा एव. सम्प्रेषण-2 OR संस्कृत भाषा एव. सम्प्रेषण-2								2					50

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Semester 6

Course Code	Course Title	Course ID	L (Hrs)	T (Hrs)	P (Hrs)	L Credits	T Credits	P Credits	Credits	MARKS TI	MARKS TE	MARKS PI	MARKS PE	MARKS Total
AEC-3	English Language and Communication: 3 OR हिंदी भाषा एव. सम्प्रेषण-3 OR संस्कृत भाषा एव. सम्प्रेषण-3								2					50

Semester 4

Course Code	Course Title	Course ID	L (Hrs)	T (Hrs)	P (Hrs)	L Credits	T Credits	P Credits	Credits	MARKS TI	MARKS TE	MARKS PI	MARKS PE	MARKS Total
AEC-4	English Language and Communication: Level-4 OR हिंदी भाषा एव. सम्प्रेषण-4 OR संस्कृत भाषा एव. सम्प्रेषण-4								2					50

VOCATION COURSE FROM THE DEPARTMENT FOR POOL OF THE COURSES IN THE UNIVERSITY

(These courses are offered by each department for students of other departments/same department and is focused on practical work, preparing students for a particular skilled profession.

Semester 4

Course Code	Course Title	Course ID	L (Hrs)	T (Hrs)	P (Hrs)	L Credits	T Credits	P Credits	Credits	MARKS TI	MARKS TE	MARKS PI	MARKS PE	MARKS Total
VOC-1			3		2	3		1	4	25	50	5	20	100

Semester 5

Course Code	Course Title	Course ID	L (Hrs)	T (Hrs)	P (Hrs)	L Credits	T Credits	P Credits	Credits	MARKS TI	MARKS TE	MARKS PI	MARKS PE	MARKS Total

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VOC-2			3		2	3		1	4	25	50	5	20	100

Semester 6

Course Code	Course Title	Course ID	L	T	P	L	T	P	Credits	MARKS				
			(Hrs)			Credits				TI	TE	PI	PE	Total
VOC-3			3		2	3		1	4	25	50	5	20	100

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