DISTRIBUTION OF COURSES, CREDITS AND CONTACT HOURS
Programme: B.Sc. Chemistry
Supportive Disciplines: Mathematics / Computer Science and Physics

Part	Type of Courses	Total No. of Courses	Credits per Course	Total Contact Hours	Total Credits	Percentage
I	Language: Tamil / Hindi	4	3	16	12	8.57
II	English	4	3	16	12	8.57
III	**Core (Compulsory)**					72.86
	Generic / Cluster Theory	5	4	25	20	
	Discipline Centric Core Theory	7	4	35	28	
	Discipline Centric Practical	6	2	24	12	
	Field Work / Field Projects	1	2		2	
	Internship	1	2		2	
	Research Projects	1	5	5	5	
	Elective (Optional)					
	Generic / Cluster Elective	1	4	4	4	
	Discipline Centric Elective : Theory	2	4	8	8	
	Discipline Centric Elective : Practical / Practice	1	2	4	2	
	Open (Inter disciplinary) Elective Theory	1	3	3	3	
	Supportive / Allied (Compulsory)					
	Theory	4	3	16	12	
	Practical / Practices	2	2	8	4	
IV	**Ability (Skill) Enhancement**					7.14
	Life Skills	2	1	2	2	
	Soft Skills	2	1	2	2	
	Technical Skills	2	1	2	2	
	Foundational					
	Compulsory Course	1	2	2	2	
	Optional Course	1	2	2	2	
V	Co-curricular Activities	1	1	Extra	1	2.86
	Extracurricular Activities	1	1	Extra	1	
	Extension Activities	1	1	Extra	1	
	Community Engagement	1	1	Extra	1	
	Total	52	54	180	140	100

Programme: B.Sc. Chemistry

Semester-wise Distribution of Courses, Credits and Contact Hours

Sem	Part	Course Type	Course Code	Course Title	Contact Hrs.	Credits	Marks		Total Marks
							Int.	Ext.	
I	I	Language Tamil	24UGT101	Tamil Illakkiya Varalaru-I	6	3	25	75	100
	II	English	24UGE201	General English - I	6	3	25	75	100
	III	Core Course I	24UCS401	General Chemistry I	4	4	25	75	100
		Core Laboratory I	24UCH551	Volumetric and Applied Volumetric Analysis	4	2	40	60	100
		Allied Course I	-	Choose any one first allied course offered by either the Computer Science or Mathematics departments.	4	4	25	75	100
		Allied Laboratory I	-	Choose an allied laboratory from the selected department	4	-	40	60	-
	IV	Foundation Course	24UFO901	Value Education	2	2	25	75	100
Total					**30**	**18**	**-**	**-**	**600**
II	I	Language Tamil	24UGT102	Tamil Illakkiya Varalaru – II	6	3	25	75	100
	II	English	24UGE202	General English - II	6	3	25	75	100
	III	Core Course II	24UCS402	General Chemistry II	4	4	25	75	100
		Core Laboratory II	24UCH552	Inorganic Qualitative Analysis Lab	4	2	40	60	100
		Allied Course II	-	Choose the second allied course from the selected department	4	3	25	75	100
		Allied Laboratory I	-	Choose an allied laboratory from the selected department	4	2	40	60	100
			24UCH591	Field Work	-	2	40	60	100
	IV	Foundation Course	24UFC905	Environmental Studies	2	2	25	75	100
Total					**30**	**21**	**-**	**-**	**800**
III	I	Language Tamil / Hindi	24UGT103	Tamilaga Varalarum Panpadum	6	3	25	75	100
	II	English	24UGE203	General English - III	6	3	25	75	100
	III	Core Course III	24UCS403	General Chemistry III	4	4	25	75	100
		Generic/ Cluster Elective I	-	Choose a generic elective course	4	4	25	75	100

		Core Laboratory III	24UCH553	Organic Qualitative Analysis and Preparation Lab	4	2	40	60	100
		Allied Course III	24UPH301	General Physics	3	3	25	75	100
	IV	Ability Enhancement	24UAB361	Life Skills Management	2	2	25	75	100
	V		24UHW951	Health & Wellness	1	1	-	-	100
Total					**30**	**21**	**-**	**-**	**800**
IV	I	Language Tamil	24UGT104	Tamilum Ariviyalum	6	3	25	75	100
	II	English	24UGE204	General English - IV	6	3	25	75	100
	III	Core Course IV	24UCS404	General Chemistry IV	4	4	25	75	100
		Core Laboratory IV	24UCH554	Gravimetric Analysis Lab	4	2	40	60	100
		Allied Course IV	24UPH302	Applied Physics	4	3	25	75	100
		Allied Laboratory II	24UPH351	Allied Physics - Lab	4	2	40	60	100
			24UCH592	Internship	-	2	40	60	100
	IV	Ability Enhancement	24UAB371	Soft and Quantitative Skills	2	2	25	75	100
Total					**30**	**21**	**-**	**-**	**800**
V	III	Core Course V	24UCH501	Carbonyl and Nitrogen Compounds, Reagents and Rearrangements	4	4	25	75	100
		Core Course VI	24UCH502	Coordination and Organometallic Chemistry	4	4	25	75	100
		Core Course VII	24UCH503	Fundamental Concepts in Physical Chemistry	4	4	25	75	100
		Core Course VIII	24UCS405	Analytical Chemistry	4	4	25	75	100
		Core Laboratory V	24UCH555	Physical Chemistry Non-Electrical Lab	4	2	40	60	100
		Discipline Centric Elective I	-	Choose a knowledge course from any one track	4	4	25	75	100
		Discipline Centric Elective Laboratory I	-	Choose a skill course from the selected track	4	2	40	60	100
	IV	Ability Enhancement	24UCH381	UV and FT-IR Spectroscopic Techniques	2	2	40	60	100
Total					**30**	**26**	**-**	**-**	**800**
VI	III	Core Course IX	24UCH504	Heterocyclic Compounds and Natural Products	4	4	25	75	100

		Core Course X	24UCH505	Bioinorganic Compounds and Polymers	4	4	25	75	100
		Core Course XI	24UCH506	Electrochemistry and Spectroscopy	4	4	25	75	100
		Core Course XII	24UCH507	Nanotechnology	4	4	25	75	100
		Core Laboratory VI	24UCH556	Physical Chemistry Electrical Lab	4	2	40	60	100
		Discipline Centric Elective II	-	Choose a professional course from the selected track	4	4	25	75	100
			22UCH593	Project	3	5	40	60	100
		Open (Interdisciplinary) Elective I	-	Courses offered by any other department	3	3	25	75	100
Total					**30**	**30**	**-**	**-**	**800**
	V			Co-curricular Activities	-	1			-
				Extra-curricular Activities	-	1			-
				Extension Activities	-	1			-
					-	3			-

TOTAL CREDITS: 18+21+21+21+26+30+3 = 140 Credits

TOTAL MARKS: 600+800+800+800+800+800 = 4600 Marks

Elective Courses (Optional)

Allied Courses

Computer Science

- 24UCS301: C Programming
- 24UCS302: Principles of Information Technology
- 24UCS351: Programming in C – lab

Mathematics

- 24UMA305: Algebra, Analytical Geometry (3D) and Trigonometry
- 24UMA306: Applied Mathematics
- 24UMA353: Calculus and Fourier Series Practice

Generic Elective Courses (Choose anyone course)

- 24UCS601: Polymer Chemistry
- 24UCS602: Forensic Science
- 24UCS603: Industrial Chemistry
- 24UCS604: Pharmaceutical Chemistry

Discipline Centric Elective Courses (Choose anyone track)

Track 1: Higher Studies

- 24UCH701: Advanced Concepts in Chemistry
- 24UCH751: Essential Laboratory Techniques
- 24UCH702: Theoretical and Applied aspects of Chemistry

Track 2: Employment - Quality Control

- 24UCH703: K: Chemical Analysis and Quality Assurance
- 24UCH752: S: Laboratory Techniques for Quality Control
- 24UCS704: P: Chemical Quality Control and Compliance

Track 3: Employment - Laboratory Assistance

- 24UCH705: K: Fundamentals of laboratory Equipment and Instrumentation
- 24UCH753: S : Analytical, Maintenance and Calibration Techniques
- 24UCH706: P: Laboratory Management and Professional Responsibilities

Track 4: Employment - Production Chemistry

- 24UCH707: K: Good Manufacturing Practices
- 24UCH754: S: Manufacturing and Processing Techniques
- 24UCH708: P: Process Safety Management

Track 5: Teaching

- 24UGP791: K: Educational Psychology
- 24UCS755: S: Teaching of Chemistry
- 24UGL792: P: Teaching, Learning and Assessment

Track 6: Entrepreneurship

- 24UCH709: K: Upskilling
- 24UCH756: S: Incubation
- 24UCH710: P: Start-up

****K: Knowledge; S: Skill; P: Professional;**

Open (Interdisciplinary) Elective Theory

- 24UCH801: Food Chemistry
- 24UCH802: Role of Chemistry in Daily Life
- 24UCH803: Dairy Chemistry
- 24UCH804: Pesticide Chemistry