

Syllabus Frame work (UG/PG/M.Phil)

B.Sc. Chemistry

CHOICE BASED CREDIT SYSTEM (Effective from 2014-15)

SCHEME OF EXAMINATIONS

FIRST SEMESTER

S.No.	Course component	Name of course	Sub. Code	Inst.	Credits	Exam Hours	Extern	Interna	Max. marks
1.	Part I	Tamil Paper I		6	3	3	75	25	100
2.	Part II	English Paper I		6	3	3	75	25	100
3.	Part III	Core: Paper 1: General Chemistry –I	142201	5	4	3	75	25	100
4.		Core: Practical – I A* Volumetric Analysis Practical	142203	3	*Examination will be held in II semester				
5.	Allied subject I	Allied Mathematics/ Allied Zoology	142161/ 142361	6/ 4 * *	5/3	3	75	25	100
6.		Allied Zoology Practical-I*	142363	2	*Examination will be held in II semester				
7.	NME – I	Chemistry in the Service of Mankind		2	2	3	75	25	100
8.	Soft skill – I	Essentials of Language communication		2	3	3	60	40	100

* Practical examination will be conducted at the end of second semester.

** Allied subjects involving Practical

Theory – 4 hrs – 3 credits

Practical – 2 hrs – 2 credits

Allied subjects without Practical

Theory – 6 hrs – 5 credits

SECOND SEMESTER

S.No.	Course component	Name of course	Sub. Code	Inst. hours	Credits	Exam Hours	External	Internal	Max. marks
1.	Part I	General Tamil Paper I		6	3	3	75	25	100
2.	Part II	General English Paper II		6	3	3	75	25	100
3.	Part III Core Courses	General chemistry II	142201	5	4	3	75	25	100
4.		Core: Practical – I B Volumetric Analysis Practical I*	142203	3	4	3	60	40	100
5.	Allied subject I	Paper 2: Allied Mathematics/ Allied Zoology	142162/ 142362	6/4* *	5/ 3	3	75	25	100
6.		Allied Zoology Practical-I	142363	2	4	3	60	40	100
7.	NME – 2	Bio Chemistry		2	2	3	75	25	100
8.	Soft skill – 2	Spoken and Presentation skill		2	3	3	60	40	100

THIRD SEMESTER

S.No.	Course component	Name of course	Sub. Code	Inst. hours	Credits	Exam Hours	External	Internal	Max. marks
1.	Part I	General Tamil Paper III		6	3	3	75	25	100
2.	Part II	General English Paper III		6	3	3	75	25	100
3.	Part III	Core: Paper IV: General Chemistry –III	142204	5	4	3	75	25	100
4.		Core: Practical – II A* Qualitative Analysis Practical	142206	3	*Examination will be held in IV semester				
5.	Allied Subject-II	Paper-I :Allied Physics	142661	4	3	3	75	25	100
6.		Allied Physics Practical	142663	2	*Examination will be held in IV semester				
7.	Part – IV	Soft skill – III Personality Enrichment		2	2	3	75	25	100
8.		Environmental Studies		2	*Examination will be held in IV semester				

* Practical examination will be conducted at the end of Fourth semester.

FOURTH SEMESTER

S.No.	Course component	Name of course	Sub. Code	Inst. hours	Credits	Exam Hours	External	Internal	Max. marks
1.	Part I	General Tamil Paper III		6	3	3	75	25	100
2.	Part II	General English Paper III		6	3	3	75	25	100
3.	Part III	Core: Paper V: Inorganic Chemistry –I	142205	5	4	3	75	25	100
4.		Core: Practical – VI- Practical IIB Qualitative Analysis Practical	142206	3	4	3	60	40	100
5.	Allied Subject-II	Paper-II :Allied Physics	142662	4	3	3	75	25	100
6.		Allied Physics Practical	142663	2	4	3	60	40	100
7.	Part – IV	Soft skill – IV		2	2	3	75	25	100
8.		Environmental Studies		2	2	3	75	25	100

FIFTH SEMESTER

S.No.	Course component	Name of course	Sub. Code	Inst. hours	Credits	Exam Hours	External	Internal	Max. marks
1.	Part III – Core courses	Paper-VIII- Organic Chemistry-I	142207	5	4	3	75	25	100
2.		Paper-IX- Physical Chemistry-I	142208	5	4	3	75	25	100
3.		Paper-X- Inorganic Chemistry-II	142209	5	4	3	75	25	100
4.		Paper-XI- Gravimetric, Inorganic Preparation (Practical)*	142210	4	4	3	60	40	100
5.		Paper-XII - Organic analysis and Preparation (Practical)*	142211	4	4	3	60	40	100
6.	Electives-I	Pharmaceutical chemistry	142212	5	5	3	75	25	100
7.	Part-IV	Value Education		2	2	3	75	25	100

* Practical examination will be conducted at the end of sixth semester.

SIXTH SEMESTER

S.No.	Course component	Name of course	Sub. Code	Inst. hours	Credits	Exam Hours	External	Internal	Max. marks
1.	Part III – Core courses	Paper-XIII- Organic Chemistry-II	142213	5	4	3	75	25	100
2.		Paper-XIV- Physical Chemistry-II	142214	5	4	3	75	25	100
3.		Paper-XV-Analytical Chemistry	142215	5	4	3	75	25	100
4.		Paper-XVI –Physical Chemistry Practical	142216	4	4	3	60	40	100
5.	Elective II	Industrial chemistry	142217	5	5	3	75	25	100
6.	Elective III	Agricultural Chemistry	142218	5	5	3	75	25	100
7.	Part- V	Extension Activities		1	1				

* Practical examination will be conducted at the end of sixth semester.

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COURSE OF STUDY AND SCHEME OF EXAMINATIONS

The scheme of examinations for different semesters shall be as follows:

FIRST SEMESTER

Course Components	Subject Code	Subjects	Inst. Hours	Credits	Exam hours	Max. Marks		Total
						CIA	External	
Core Paper-I	155201	Inorganic Chemistry - I	6	4	3	25	75	100
Core Paper-II	155202	Organic Chemistry - I	6	4	3	25	75	100
Core Paper-III	155203	Physical Chemistry - I	6	4	3	25	75	100
Core Paper-IV Practical-I	155204	Physical Chemistry practical	6	4	6	40	60	100
Elective I	155205	Bio-Chemistry	4	3	3	25	75	100
Soft skills-I	155231	Communication skills	2	2	-	25	75	100

Practical Examinations shall be conducted at the end of even semester.

SECOND SEMESTER

Course Components	Subject Code	Subjects	Inst. Hours	Credits	Exam hours	Max. Marks		Total
						CIA	External	
Core Paper-V	155206	Inorganic Chemistry-II	5	4	3	25	75	100
Core Paper-VI	155207	Organic Chemistry - II	5	4	3	25	75	100
Core Paper-VII	155208	Physical Chemistry - II	5	4	3	25	75	100
Core Paper-VIII Practical-I	155209	Organic Chemistry practical	6	4	6	40	60	100
Elective II	155210	Chemistry of Nanomaterials	4	3	3	25	75	100
Elective-Extra Disciplinary - I	155211	Computer for Chemists	3	3	3	25	75	100
Soft skills-II	155232	Spoken English	2	2	-	25	75	100

Practical Examinations shall be conducted at the end of even semester.

* Internship will be carried out during the summer vacation of the second semester and the report will be evaluated by the two examiners within the Department of College/Institution. The marks should be sent to the Controller of Examinations and the same will be included in the Third semester marks statement.

THIRD SEMESTER

Course Components	Subject Code	Subjects	Inst. Hours	Credits	Exam hours	Max. Marks		Total
						CIA	External	
Core Paper-IX	155212	Inorganic Chemistry-III	5	4	3	25	75	100
Core Paper-X	155213	Organic Chemistry - III	5	4	3	25	75	100
Core Paper-XI	155214	Physical Chemistry- III	5	4	3	25	75	100
Core Paper-XII Practical-III	155215	Inorganic Chemistry practical	6	4	6	40	60	100
Elective III	155216	Instrumental methods of Analysis in Chemistry	4	3	3	25	75	100
Elective-Extra Disciplinary - II	155217	Green Chemistry	3	3	3	25	75	100
Internship*		Internship	-	2	-	-	-	-
Soft skills-III	155233	Computer skills	2	2	-	25	75	100

Practical Examinations shall be conducted at the end of even semester.

FOURTH SEMESTER

Course Components	Subject Code	Subjects	Inst. Hours	Credits	Exam hours	Max. Marks		Total
						CIA	External	
Core Paper-XIII	155218	Organic Chemistry-IV	6	4	3	25	75	100
Core Paper-XIV	155219	Physical Chemistry-IV	6	4	3	25	75	100
Core Paper-XV Project	155220	Project Work	6	4	6	40	60	100
Elective IV	155221	Bioinorganic Chemistry	5	3	3	25	75	100
Elective-V	155222	Chemistry of Petroleum and Petro products	5	3	3	25	75	100
Soft skills-IV	155234	Personality Development	2	2	-	25	75	100

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SCHEME OF EXAMINATION
Part-I (First Semester)

Course Component	Subject	Inst.Hours	Credit	Exam Hours	Max Marks		Total
					CIA	External	
Paper -I	Scientific Research And Methodology	12	10	3	25	75	100
Paper-II	Advanced Instrumental Methods of Chemical Analysis	12	10	3	25	75	100
Paper-III	Field of Specialization	6	5	3	25	75	100

Second Semester Credits

	<i>Credit</i>	<i>Marks</i>
Dissertation Evaluation	<i>10</i>	<i>150</i>
Viva-voce	<i>05</i>	<i>50</i>
Total	15	200

Viva-voce

The external examiner who valued the Dissertation and the Research Adviser shall conduct the Viva-Voce for the candidate for a maximum of 50 marks. A Candidate shall be declared to have passed Part – II of the examination if he secures not less than 50% of the marks prescribed for Dissertation and 50% of the marks in the aggregate of the marks secured in viva-voce test and Dissertation valuation. A student can undertake project in the second semester whether or not he /she has passed the I semester.