

Syllabus
for
B.Sc. (Honours) Course in
CHEMISTRY

Choice Based Credit System

Effective from the Session 2016-17

KAZI NAZRUL UNIVERSITY
Asansol
West Bengal

N. Roy

Kazi Nazrul University

Curriculum for B. Sc. Honours Course in Chemistry

Semester - I

Sr. No.	Name of the Subject	Nature	Code	Teaching Scheme in hour per week			Credit
				L	T	P	
1	Inorganic Chemistry- I (Theory)	Core Course - I					6
2	Organic Chemistry - I (Theory)	Core Course - II					6
3	GE - I (Mathematics Theory)	GE					5
4	GE - I (Mathematics Tutorial)	GE					1
5	EVS	AECC					2
Total Credit = 20							

Semester - II

Sr. No.	Name of the Subject	Nature	Code	Teaching Scheme in hour per week			Credit
				L	T	P	
1	Physical Chemistry- I (Theory)	Core Course - III		4			4
2	Physical Chemistry- I (Lab)					2	2
3	Organic Chemistry - II (Theory)	Core Course - IV		4			4
4	Organic Chemistry - II (Lab)					2	2
5	GE - II (Mathematics Theory)	GE					5
6	GE - II (Mathematics Tutorial)	GE					1
7	English	AECC					2
Total Credit = 20							

Semester - III

Sr. No.	Name of the Subject	Nature	Code	Teaching Scheme in hour per week			Credit
				L	T	P	
1	Inorganic Chemistry- II (Theory)	Core Course - V		4			4
2	Inorganic Chemistry- II (Lab)	Core Course - V				2	2
3	Organic Chemistry - III (Theory)	Core Course - VI		4			4
4	Organic Chemistry - III (Lab)	Core Course - VI				2	2
5	Physical Chemistry - II (Theory)	Core Course - VII		4			4
6	Physical Chemistry - II (Lab)	Core Course - VII				2	2
7	GE - III (Mathematics/Physics Theory)	GE					5/4
8	GE - III (Mathematics Tutorial/ Physics Lab)	GE					1/2
9	SEC - I	AEEC - I					2
Total Credit = 26							

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Semester - IV

Sr. No.	Name of the Subject	Nature	Code	Teaching Scheme in hour per week			Credit
				L	T	P	
1	Inorganic Chemistry- III (Theory)	Core Course-VIII		4			4
2	Inorganic Chemistry- III (Lab)	Core Course-VIII				2	2
3	Organic Chemistry - IV (Theory)	Core Course - IX		4			4
4	Organic Chemistry - IV (Lab)	Core Course - IX				2	2
5	Physical Chemistry - III (Theory)	Core Course-X		4			4
6	Physical Chemistry - III (Lab)	Core Course - X				2	2
7	GE - IV (Mathematics/Physics Theory)	GE					5/4
8	GE - IV (Mathematics Tutorial/ Physics Lab)	GE					1/2
9	SEC - II	AEEC - II					2
Total Credit = 26							

Semester - V

Sr. No.	Name of the Subject	Nature	Code	Teaching Scheme in hour per week			Credit
				L	T	P	
1	Organic Chemistry- V (Theory)	Core Course-XI		4			4
2	Organic Chemistry- V (Lab)	Core Course-XI				2	2
3	Inorganic Chemistry - IV (Theory)	Core Course - XII		4			4
4	Inorganic Chemistry - IV (Lab)	Core Course-XII				2	2
5	DSE - I (Theory)	DSE - I					6
6	DSE - II (Theory)	DSE - II					6
Total Credit = 24							

Semester - VI

Sr. No.	Name of the Subject	Nature	Code	Teaching Scheme in hour per week			Credit
				L	T	P	
1	Inorganic Chemistry- V (Theory)	Core Course-XIII		4			4
2	Inorganic Chemistry- V (Lab)	Core Course-XIII				2	2
3	Physical Chemistry.- IV (Theory)	Core Course - XIV		4			4
4	Physical Chemistry - IV (Lab)	Core Course - XIV				2	2
5	DSE - III (Theory)	DSE - III					6
6	DSE - IV (Theory)	DSE - IV					6
Total Credit = 24							

Total Credit = 140

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Syllabus for B.S.c. (Honours) Course in Chemistry
Course Structure

	Paper	Core Subject	Marks	Credit	
SEMESTER – I	BCHEM 0101	Inorganic –I (Theoretical)	50	6	
	BCHEM 0102	Organic – I (Theoretical)	50	6	
SEMESTER – II	Paper	Core Subject	Marks	Credit	
	BCHEM 0201	Physical – I (Theoretical)	50	4	
	BCHEM 0202	Physical – I (Lab)	50	2	
	BCHEM 0203	Organic – II (Theoretical)	50	4	
	BCHEM 0204	Organic – II (Lab)	50	2	
SEMESTER – III	Paper	Core Subject	Marks	Credit	
	BCHEM 0301	Inorganic –II (Theoretical)	50	4	
	BCHEM 0302	Inorganic –II (Lab)	50	2	
	BCHEM 0303	Organic – III (Theoretical)	50	4	
	BCHEM 0304	Organic – III (Lab)	50	2	
	BCHEM 0305	Physical – II (Theoretical)	50	4	
	BCHEM 0306	Physical – II (Lab)	50	2	
		Skill Enhancement Course [SEC] (Any one)			
BCHEM 0307	Industrial Chemistry	50	2		
BCHEM 0308	Pharmaceutical Chemistry	50	2		
SEMESTER – IV	Paper	Core Subject	Marks	Credit	
	BCHEM 0401	Inorganic –III (Theoretical)	50	4	
	BCHEM 0402	Inorganic –III (Lab)	50	2	
	BCHEM 0403	Organic – IV (Theoretical)	50	4	
	BCHEM 0404	Organic – IV (Lab)	50	2	
	BCHEM 0405	Physical – III (Theoretical)	50	4	
	BCHEM 0406	Physical – III (Lab)	50	2	
		Skill Enhancement Course [SEC] (Any one)			
BCHEM 0407	Chemistry of Cosmetics & Perfumes	50	2		
BCHEM 0408	Fuel Chemistry	50	2		
SEMESTER – V	Paper	Core Subject	Marks	Credit	
	BCHEM 0501	Organic –V (Theoretical)	50	4	
	BCHEM 0502	Organic –V (Lab)	50	2	
	BCHEM 0503	Inorganic – IV (Theoretical)	50	4	
	BCHEM 0504	Inorganic – IV (Lab)	50	2	
		Discipline Centric Electives [DCE] (Any Two)			
	BCHEM 0505	Green Chemistry	50	6	
BCHEM 0506	Environmental Chemistry	50	6		
BCHEM 0507	Solid State Chemistry	50	6		
SEMESTER – VI	Paper	Core Subject	Marks	Credit	
	BCHEM 0601	Inorganic – V (Theoretical)	50	4	
	BCHEM 0602	Inorganic – V (Lab)	50	2	
	BCHEM 0603	Physical – IV (Theoretical)	50	4	
	BCHEM 0604	Physical – IV (Lab)	50	2	
		Discipline Centric Electives [DCE] (Any Two)			
	BCHEM 0605	Chemistry of Nanomaterials	50	6	
BCHEM 0606	Dynamic Stereochemistry	50	6		
BCHEM 0607	Quantum Chemistry & Spectroscopy	50	6		

[N.B.: Digital analytical balance (accuracy up to third/fourth decimal) must be used for experiments on inorganic, analytical and physical chemistry.]

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