


SBAS		YEAR 2018-2020 (SCHEME OF STUDIES AS PER CBCS)												M.SC. CHEMISTRY		
YEAR	ODD SEMESTER								EVEN SEMESTER							
	SN	COURSE CODE	TITLE	L	T	P	C	SN	COURSE CODE	TITLE	L	T	P	C		
FIRST	1	BSCH701	CHEMISTRY OF D AND F BLOCK ELEMENTS	4	0	0	4	1	BSCH702	CHEMISTRY OF BORON, SILICON AND ORGANOMETALLIC COMPOUNDS	4	0	0	4		
	2	BSCH703	STEREOCHEMISTRY, REACTION MECHANISMS AND INTERMEDIATES	4	0	0	4	2	BSCH704	SPECTROSCOPY OF ORGANIC COMPOUNDS	4	0	0	4		
	3	BSCH705	THERMODYNAMICS AND ELECTROCHEMISTRY	4	0	0	4	3	BSCH706	QUANTUM CHEMISTRY AND CHEMICAL KINETICS	4	0	0	4		
	4	BSMA715	MATHEMATICS	4	0	0	4	4	BSCS714	COMPUTER APPLICATIONS IN CHEMISTRY	4	0	0	4		
	5	BSCH751	INORGANIC CHEMISTRY-I LAB	0	0	4	2	5	BSCH756	INORGANIC CHEMISTRY-II LAB	0	0	4	2		
	6	BSCH753	ORGANIC CHEMISTRY-I LAB	0	0	4	2	6	BSCH754	ORGANIC CHEMISTRY-II LAB	0	0	4	2		
	7	BSCH755	PHYSICAL CHEMISTRY-I LAB	0	0	4	2	7	BSCH752	PHYSICAL CHEMISTRY-II LAB	0	0	4	2		
	<b>TOTAL</b>				<b>16</b>	<b>0</b>	<b>12</b>	<b>22</b>	<b>TOTAL</b>				<b>16</b>	<b>0</b>	<b>14</b>	<b>23</b>
SECOND	1	BSCH801	CO-ORDINATION CHEMISTRY	4	0	0	4	1		ELECTIVE	4	0	0	4		
	2	BSCH803	HETEROCYCLIC, PHOTOCHEMISTRY AND PERICYCLIC CHEMISTRY	4	0	0	4	2		ELECTIVE	4	0	0	4		
	3	BSCH805	POLYMERS	4	0	0	4	3		ELECTIVE	4	0	0	4		
	4	BSCH851	INORGANIC CHEMISTRY-III LAB	0	0	4	2	4		ELECTIVE	4	0	0	4		
	5	BSCH853	ORGANIC CHEMISTRY-III LAB	0	0	4	2	5	BSCH858	DISSERTATION	0	0	0	8		
	6	BSCH855	PHYSICAL CHEMISTRY-III LAB	0	0	4	2									
	<b>TOTAL</b>				<b>12</b>	<b>0</b>	<b>12</b>	<b>18</b>	<b>TOTAL</b>				<b>16</b>	<b>0</b>	<b>0</b>	<b>24</b>

ELECTIVES													
1	BSCH802	CHEMISTRY OF MATERIALS	4	0	0	4	7	BSCH814	BIO-INORGANIC AND SUPRAMOLECULAR CHEMISTRY	4	0	0	4
2	BSCH804	ADVANCED ORGANIC SYNTHESIS	4	0	0	4	8	BSCH816	CHEMISTRY OF LIFE PROCESSES	4	0	0	4
3	BSCH806	BIOPHYSICAL CHEMISTRY	4	0	0	4	9	BSCH818	NANOCHEMISTRY	4	0	0	4
4	BSCH808	ANALYTICAL TECHNIQUES	4	0	0	4	10	BSCH820	GROUP THEORY & SPECTROSCOPY	4	0	0	4
5	BSCH810	MEDICINAL CHEMISTRY	4	0	0	4	11	BSCH822	NATURAL PRODUCT CHEMISTRY	4	0	0	4
6	BSCH812	NUCLEAR CHEMISTRY & PHOTOCHEMISTRY	4	0	0	4	12	BSCH824	SOLID STATE CHEMISTRY	4	0	0	4

<b>TOTAL HOURS: LECT [L]+PRAC [P]+TUT [T] (EXCLUDING NO L, T, S, P COURSES)</b>	<b>98</b>
<b>TOTAL CREDITS [C]</b>	<b>87</b>

  
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# M. Sc. Chemistry

BSCH858	Dissertation	L	T	P	C
Version 1.0		0	0	0	8
Pre-requisites/Exposure	Practical exposure				
Co-requisites	--				

## Course Objectives

1. To learn how to carry out literature survey
2. To be associated with an area of research/research project and contribute towards domain knowledge.
3. To learn the art of technical report writing
4. To learn the art of verbal communication with the help of modern presentation techniques.

## Course Outcomes

On completion of this course, the students will be able to

CO1. Carry out the extensive literature survey.

CO2. Learn to write and present technical reports/articles.

CO3. Learn to analyze various methods and techniques applicable to the topic to study and contribute to domain knowledge.

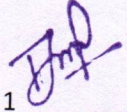
CO4. Learn to analyze/evaluate the result of the experiment carried out and present the results using data visualization methods.

## Catalog Description

1. Students will be divided among faculty members of the Department for the supervision of the research work.
2. In the first week of Semester IV, each faculty member will assign a suitable research topic to the students from the selected topics in the areas of chemical sciences.
3. The student will work on the assigned research topic during semesters IV in regular consultation with his/her assigned faculty.
4. The student will write a dissertation based on the research work carried out during Semesters IV and prepare two copies to be submitted to the office of the Head of the Department duly signed by the student and the supervisor at the end of IV semester or a date decided by the HOD of the department.
5. Before preparing power point presentation and submission of dissertation, each student has to deliver presentation on his/ her research project work on a date fixed by HOD, necessary suggestions has to be incorporated in the final draft of dissertation.
6. The student will make a power point presentation based on the work carried out and mentioned in the dissertation to the board of examiners appointed by the University.

**Modes of Evaluation: Quiz/Assignment/ presentation/ extempore/ Written Examination**

**Examination Scheme:**

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Components	Internal (Interaction of Student with Supervisor)	External			Total
		Relevance of topic (20)	Presentation (20)	viva (10)	
Weightage (%)	50	20	20	10	100

**Relationship between the Course Outcomes (COs) and Program Outcomes (POs)**

Mapping between COs and POs		
	Course Outcomes (COs)	Mapped Program Outcomes
CO1	Carry out the extensive literature survey.	PO5, PSO1, PSO2
CO2	Learn to write and present technical reports/articles.	PO7, PO8, PSO4, PSO5
CO3	Learn to analyze various methods and techniques applicable to the topic to study and contribute to domain knowledge.	PO2, PO4, PO6
CO4	Learn to analyze/evaluate the result of the experiment carried out and present the results using data visualization methods.	PO1, PO3, PO9, PO10

Course Code	Course Title	Apply knowledge of chemistry to	Identify and resolve complex scientific	Scrutinize problems using scientific	Select, plan and apply appropriate	Apply appropriate multi-disciplinary	Adopt green chemistry tools for	Follow the ethical principles and	Effective communication and	Function effectively as an individual,	Enhance employability skills as well as	Advanced knowledge of all aspects of	Understand complex chemical	Appreciate the importance and	Global level research opportunities	Enormous job opportunities in
		P01	P02	P03	P04	P05	P06	P07	P08	P09	PO10	PS01	PS02	PS03	PS04	PS05
BSCH 858	Dissertation	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

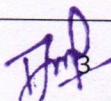
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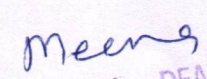
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1=weakly mapped  
 2= moderately mapped  
 3=strongly mapped

Programme and Course Mapping																	
CO	P O 1	P O 2	P O 3	P O 4	P O 5	P O 6	P O 7	P O 8	P O 9	P O 10	PO 11	P S O 1	PS O 2	PSO 3	PS O 4	PS O 5	
CO1		3	3					3		3		3	3				
CO2			3	3				3		3					3	3	
CO3		3	3	3	3	3			3	3						3	
CO4	3	3	3	3				3	3	3							
	1=lightly mapped					2= moderately mapped					3=strongly mapped						

Unit I	Extensive literature survey, write and present technical reports/articles, analyze various methods and techniques applicable to the topic to study and contribute to domain knowledge, analyze/evaluate the result of the experiment carried out and present the results using data visualization methods.
Local	
Regional	
National	National
Global	
Employability	
Entrepreneurship	
Skill Development	Skill Development
Professional Ethics	
Gender	
Human Values	
Environment & Sustainability	

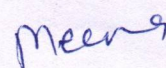
  
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SDG	Universal quality education and lifelong learning (SDG 4.4)
NEP 2020	India's ; India's Higher Education System (9.1- 9.3) Prepare students for more meaningful and satisfying lives (9.1.1)
POE/4 <sup>th</sup> IR	Effective and sustainable learning required for employability/ Learning of structure of compounds with basic concepts which helps them in higher education and research



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