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Integral University, Lucknow
Department of Biosciences
Study and Evaluation Scheme

Program: B.Sc.-ZBC

Semester III

S. No.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Sub. Total	Credit	Total Credits	Attributes							United Nations Sustainable Development Goals (SDGs)
				L	T	P	CT	TA	Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
THEORIES																					
1	BS263	Chordates – “Agnatha to Mammals”	Core	3	1	0	40	20	60	40	100	3:1:0	4					√			  
2	CH221	Inorganic and Physical Chemistry-1	Core	2	1	0	40	20	60	40	100	2:1:0	3	√							  
3	BS222	Angiosperm Morphology and Taxonomy	Core	3	1	0	40	20	60	40	100	3:1:0	4					√			  
4	BS113	Fundamentals of Microbiology	Core	3	1	0	40	20	60	40	100	3:1:0	4	√		√		√			   
5	CH222	Organic and Physical Chemistry-I	Core	3	1	0	40	20	60	40	100	3:1:0	4	√		√					
PRACTICAL																					
6	CH223	Chemistry Practical-III	Practical	0	0	4	40	20	60	40	100	0:0:2	2	√		√					   
7	BS262	Animal Diversity Lab-II	Practical	0	0	6	40	20	60	40	100	0:0:4	4			√		√			   
Total				14	05	10	280	140	420	280	700	24	25								

Semester IV

S. No.	Course Code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Max. Marks	Credit	Total Credits	Attributes								United Nations Sustainable Development Goals (SDGs)	
				L	T	P	CT	TA	Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics			
THEORIES																							
1	BS271	Evolutionary Biology and Wildlife	Core	3	1	0	40	20	60	40	100	3:1:0	4					√			 		
2	BS322	Comparative Anatomy and Developmental Biology	Core	3	1	0	40	20	60	40	100	3:1:0	4			√					  		
3	CH224	Inorganic and Physical Chemistry-II	Core	3	1	0	40	20	60	40	100	3:1:0	4			√							
4	CH225	Organic and Physical Chemistry-II	Core	3	1	0	40	20	60	40	100	3:1:0	4	√		√					 		
5	BS232	Plant Physiology	Core	3	1	0	40	20	60	40	100	3:1:0	4					√			  		
PRACTICAL																							
6	BS272	Cytogenetics and Angiosperm taxonomy Lab	Practical	0	0	6	40	20	60	40	100	0:0:3	3					√					
7	CH226	Chemistry Practical-IV	Practical	0	0	4	40	20	60	40	100	0:0:2	2	√	√	√							
Total				15	05	10	280	140	420	280	700	24	25										



Integral University, Lucknow
Department of Biosciences
Study and Evaluation Scheme

Program: B.Sc.-ZBC

Semester V B.Sc. (Botany, zoology)

(w.e.f. 2024-25)

S. No.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Max. Marks	Credit	Total Credits	Attributes							United Nations Sustainable Development Goals (SDGs)
				L	T	P	CT	TA	Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
THEORIES																					
1	BS321	Plant Anatomy and Embryology	Core	3	1	0	40	20	60	40	100	3:1:0	4								
2	BS366	Plant Ecology, Phytogeography and Economic Botany	Core	2	0	0	40	20	60	40	100	2:0:0	2			√		√			
3	BS302	Plant Biotechnology	Core	3	1	0	40	20	60	40	100	3:1:0	4								
4	BS361	Applied and Economic Zoology	Core	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√		√			
5	BS362	Ecology and Animal Behaviour	Core	3	1	0	40	20	60	40	100	3:1:0	4					√			
6	BS363	Fundamentals of Biomolecules	Core	2	0	0	40	20	60	40	100	2:0:0	2								
PRACTICAL																					
7	BS364	Applied Zoology Lab	Practical	0	0	4	40	20	60	40	100	0:0:2	2	√	√	√		√			
8	BS365	Applied Botany lab	Practical	0	0	4	40	20	60	40	100	0:0:2	2	√	√	√		√			
Total				16	04	08	320	160	480	320	800	24	24								

Semester VI B.Sc. (Botany, Zoology)

S. No.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Max. Marks	Credit	Total Credits	Attributes							United Nations Sustainable Development Goals (SDGs)		
				L	T	P	CT	TA	Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics			
THEORIES																							
1	BS371	Immunology and Toxicology	Core	3	1	0	40	20	60	40	100	3:1:0	4	√		√		√			 		
2	BS376	Horticulture Practices	Elective	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√		√					
3		Soil Science and Plant Pathology										3:1:0	4	√		√		√			 		
4	BS372	Biology of Insecta and Pest Management	Elective	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√							
5	BS374	Biological Techniques and Biostatistics											4	√	√	√							
6	BS331	Computational Sciences and Bioinformatics	Core	3	0	0	40	20	60	40	100	0:0:3	3	√	√	√							
7	BS212	Molecular Biology	Core	3	0	0	40	20	60	40	100	0:0:2	2	√	√	√							
8.	BS375	Botany/Zoology Project	Core	0	0	8	00	00	00	200	200	0:0:4	4	✓	✓	✓			√	√	  		
Total				15	05	08	200	100	300	400	700	24	24										

Semester V B.Sc. (Botany, chemistry)

No.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Max. Marks	Credit	Total Credits	Attributes							United Nations Sustainable Development Goals (SDGs)
				L	T	P	CT	TA	Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
THEORIES																					
1	BS321	Plant Anatomy and Embryology	Core	3	1	0	40	20	60	40	100	3:1:0	4								
2	BS366	Plant Ecology, Phytogeography and Economic Botany	Core	2	0	0	40	20	60	40	100	2:0:0	2					√			
3	BS302	Plant Biotechnology	Core	3	1	0	40	20	60	40	100	3:1:0	4								
4	CH314	Advance Inorganic Chemistry	Core	3	1	0	40	20	60	40	100	2:1:0	3	√							
5	CH315	Advance Organic Chemistry	Core	2	1	0	40	20	60	40	100	2:1:0	3	√	√						
6	CH319	Basics of Chromatographic Techniques	Core	3	1	0	40	20	60	40	100	3:1:0	4								
PRACTICAL																					
7	CH316	Chemistry practical-V	Practical	0	0	4	40	20	60	40	100	0:0:3	2	√	√	√		√			
8	BS365	Applied Botany Lab	Practical	0	0	4	40	20	60	40	100	0:0:2	2			√		√			
Total				14	05	10	320	160	480	320	800	24	24								

Semester VI B.Sc. (Botany, chemistry)

S. No.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Max · Mar ks	Credi t	Tot al Cre dits	Attributes							United Nations Sustainable Development Goals (SDGs)	
				L	T	P	CT	TA	Total	ESE				Empl oyability	Entrepre neurship	Skill Develop ment	Gender Equalit y	Environme nt & Sustainabil ity	Human Value	Profess ional Ethics		
THEORIES																						
1	CH308	Spectroscopic Techniques	Core	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√						
2	CH309	Chemical Process Industry	Elective	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√				√	   	
3	CH317	Chemistry of Polymers		3	1	0	40	20	60	40				√	√	√				√		
4	BS376	Horticulture Practices	Elective	3	1	0	40	20	60	40	100	3:1:0	4									
5	BS373	Soil Science and Plant Pathology		3	1	0	40	20	60	40								√				 
6	BS331	Computational Sciences and Bioinformatics	Core	3	1	0	40	20	60	40	100	3:1:0	4	√		√						
7	BS212	Molecular Biology	Core	3	0	0	40	20	60	40	100	3:1:0	4									
8	CH318	Chemistry Project	Core	0	0	8	00	00	00	200	200	0:0:4	4	✓	✓	✓					 	
	BS375	Botany/Zoology Project	Core	0	0	8	00	00	00	200	200	0:0:4	4	✓	✓	✓					  	
Total				15	05	08	200	100	300	400	700	24	24									

Semester V B.Sc. (Zoology, chemistry)

S. No.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Max. Marks	Credit	Total Credits	Attributes							United Nations Sustainable Development Goals (SDGs)
				L	T	P	CT	TA	Total	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics	
THEORIES																					
1	BS361	Applied and Economic Zoology	Core	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√		√			
2	BS362	Ecology and Animal Behaviour	Core	2	1	0	40	20	60	40	100	2:1:0	4					√			
3	BS363	Fundamentals of Biomolecules	Core	2	1	0	40	20	60	40	100	2:1:0	2								
4	CH314	Advance Inorganic Chemistry	Core	3	1	0	40	20	60	40	100	3:1:0	4	√							
5	CH315	Advance Organic Chemistry	Core	2	1	0	40	20	60	40	100	2:1:0	3	√	√						
6	CH319	Basics of Chromatographic Techniques	Core	2	1	0	40	20	60	40	100	2:1:0	3	√	√	√		√			
Practicals																					
7	CH316	Chemistry practical-V	Practical	0	0	6	40	20	60	40	100	0:0:2	2								
8	BS364	Applied Zoology Lab	Practical	0	0	4	40	20	60	40	100	0:0:2	2	√	√	√		√			
Total				14	05	10	320	160	480	320	800	24	24								

Semester VI B.Sc. (Zoology, chemistry)

S. No.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Max. Marks	Credit	Total Credits	Attributes							United Nations Sustainable Development Goals (SDGs)	
				L	T	P	CT	TA	Total	ES E				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics		
THEORIES																						
1	BS371	Immunology and Toxicology	Core	3	1	0	40	20	60	40	100	3:1:0	4	√		√		√			 	
2	CH308	Spectroscopic Techniques	Core	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√						
3	CH309	Chemical Process Industry	Elective	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√				√		
4	CH317	Chemistry of Polymers		20	60	40	√	√	√							√						
5	BS372	Biology of Insecta and Pest management	Elective	3	1	0	40	20	60	40	100	3:1:0	4									
6	BS374	Biological Techniques and Biostatistics		20	60	40	√	√	√													
7	BS212	Molecular Biology	Core	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√						
8	CH318	Chemistry Project	Core	0	0	8	00	00	00	200	200	0:0:4	4	✓	✓	✓					 	
	BS375	Botany/Zoology Project	Core	0	0	8	00	00	00	200	200	0:0:4	4	✓	✓	✓					  	
Total				15	05	08	200	100	300	400	700	24	24									