Program Details

B.Sc. (General) ZBC [Zoology, Botany, Chemistry] - 3 years program Scheme: 2023-26

Summary of Credits

Summary of credits	For 3 years
Discipline Core Courses	72
Discipline Specific Electives for Specialization	8
Generic Electives (Math/Chemistry/Physics/Economics/ Computer Science/Forensic Science)	24
Multi-Disciplinary Courses	7
Ability Enhancement Courses	8
Skill Enhancement Courses	10
Value Added Courses	6
Industrial/Academic Internship	2
Dissertation	-
Total	137

Curriculum Structure B.Sc. (General) Zoology, Botany, Chemistry (ZBC)

		SEMES'	TER I				
S. No	Course Code	Course Name	Category of Course	L	T	P	Credits
1.	Couc	Fundamentals of Cell Biology	Discipline 1; Core Course 1	3	0	1	4
2.		Biochemistry & Physiology	Discipline 2; Core Course 1	4	0	0	4
3.		Basic Concepts and Aliphatic Hydrocarbons	Discipline 3; Core Course 1	4	0	0	4
4.		Generic Elective (Forensic Science/Math/Chemistry /Physics/Economics/ Computer Science)	Generic Electives - 1				4
5.		Ecology and Environment	Ability Enhancement course-1	2	0	0	2
6.		Introduction to Python programming	Skill Enhancement course- 1	1	0	1	2
7.		Health and Nutrition	Value Added Course-1	2	0	0	2
			TOTAL				22
		SEMEST	TER II				
S. No.	Course Code	Course Name	Category of Course	L	T	P	Credits
1.		Diversity of Non- Chordates and Chordates	Discipline 1; Core Course 2	4	0	0	4
2.		Microbiology & Plant Pathology	Discipline 2; Core Course 2	3	0	1	4
3.		Chemical Thermodynamics and Equilibrium	Discipline 3; Core Course 2	3	0	1	4
4.		Generic Elective (Forensic Science/Math/Chemistry /Physics/Economics/ Computer Science)	Generic Electives - 2				4
5.		Logical Communication	Ability Enhancement Course-2	1	0	1	2

		E (1 CITETE 1	01 '11	1	0	1	
6.		Essentials of IT Tools	Skill	1	0	1	2
			Enhancement				
7		A - 4 - GII	course- 2	2	0	0	2
7.		Art of Happiness	Value Added	2	0	0	2
			Course-2				
			TOTAL				22
		SEMEST	ER III				
S.	Course	Course Name	Category of	\mathbf{L}	T	P	Credits
No.	Code		Course				
1.		Archegoniates & Plant	Discipline 1;	3	0	1	4
		Architecture	Core Course 3				
2.		Fundamentals of	Discipline 2;	4	0	0	4
2.		Molecular Biology	Core Course 3	•	O		•
		Wiolecular Biology	Core course 3				
3.		Phase Equilibria and	Discipline 3;	3	0	1	4
		Chemical Kinetics	Core Course 3				
4.			Generic Electives				4
		Generic Elective	- 3				
		(Forensic					
		Science/Math/Chemistry					
		/Physics/Economics/					
		Computer Science)					
5.		Critical Thinking &	Ability	2	0	0	2
		Writing	Enhancement				
			course-3				
6.		Introduction to Artificial	Skill	2	0	0	2
		Intelligence	Enhancement				
			course- 3				
7.		NCC/NSS/Social	Value Added	2	0	0	2
		Internship/Vedic	Course-3				
		Mathematics					
	I						22
			TOTAL				
		SEMEST	ER IV				
S.	Course	SEMEST Course Name	ER IV Category of	L	Т	P	Credits
No.	Course Code	Course Name	ER IV Category of Course				Credits
			Category of Course Discipline 1;	L 3	T	P	
No. 1.		Concept of Immunology	Category of Course Discipline 1; Core Course 4	3	0	1	Credits 4
No.		Course Name Concept of Immunology Gene Technology and	Category of Course Discipline 1; Core Course 4 Discipline 2;				Credits
1. 2.		Course Name Concept of Immunology Gene Technology and Human Welfare	Category of Course Discipline 1; Core Course 4 Discipline 2; Core Course 4	3	0	1	Credits 4 4
No. 1.		Course Name Concept of Immunology Gene Technology and Human Welfare Halogen and Oxygen	Category of Course Discipline 1; Core Course 4 Discipline 2; Core Course 4 Discipline 3;	3	0	1	Credits 4
1. 2.		Course Name Concept of Immunology Gene Technology and Human Welfare Halogen and Oxygen Containing Functional	Category of Course Discipline 1; Core Course 4 Discipline 2; Core Course 4	3	0	1	Credits 4 4
1. 2. 3.		Course Name Concept of Immunology Gene Technology and Human Welfare Halogen and Oxygen Containing Functional Groups	Category of Course Discipline 1; Core Course 4 Discipline 2; Core Course 4 Discipline 3; Core Course 4	3	0	1	Credits 4 4 4
1. 2.		Course Name Concept of Immunology Gene Technology and Human Welfare Halogen and Oxygen Containing Functional Groups Generic Elective	Category of Course Discipline 1; Core Course 4 Discipline 2; Core Course 4 Discipline 3; Core Course 4 Generic Electives	3	0	1	Credits 4 4
1. 2. 3.		Course Name Concept of Immunology Gene Technology and Human Welfare Halogen and Oxygen Containing Functional Groups Generic Elective (Forensic	Category of Course Discipline 1; Core Course 4 Discipline 2; Core Course 4 Discipline 3; Core Course 4	3	0	1	Credits 4 4 4
1. 2. 3.		Course Name Concept of Immunology Gene Technology and Human Welfare Halogen and Oxygen Containing Functional Groups Generic Elective	Category of Course Discipline 1; Core Course 4 Discipline 2; Core Course 4 Discipline 3; Core Course 4 Generic Electives	3	0	1	Credits 4 4 4

		Computer Science)					
		<u> </u>	A 1.:1:4	2	0	0	2
5.		Disaster Management	Ability Enhancement	2	0	0	2
			Course-4				
6.		Cyber Sphere &	Skill	2	0	0	2
0.		Security Global Concern	Enhancement		U	U	2
		Security Global Concern	Course- 4				
7.		Bioinstrumentation &		3	0	0	3
/.		Biotechniques	Disciplinary			U	
		Biotechniques	Course 1				
			TOTAL				23
		SEMEST					
S.	Course	Course Name	Category of	L	Т	P	Credits
No.	Code		Course	_		_	Credits
1.	0000	Flowering Plants	Discipline 1;	3	0	1	4
		Identification &	Core Course 5				
		Aesthetic Characteristics					
2.		Inheritance Biology	Discipline 2;	3	0	1	4
			Core Course 5				
3.		Co-ordination	Discipline 3;	3	0	1	4
		Chemistry	Core Course 5				
4.		Research Methodology	Multi-	4	0	0	4
		and Ethics	Disciplinary				
			Course 2				
5.		Generic Elective	Generic Elective -				4
		(Forensic	5				
		Science/Math/Chemistry					
		/Physics/Economics/					
		Computer Science)					
6.		Internship	Industrial/Acade	0	0	2	2
			mic Internship				
		CEN FEGG	TOTAL				22
G		SEMEST		-	an a	-	G 114
S.	Course	Course Name	Category of	L	T	P	Credits
No.	Code	Eaglagy Ethology	Course	1	0	Λ	4
1.		Ecology, Ethology, Environmental Science	Discipline 1; Core Course 6	4	0	0	4
		and Wildlife	Core Course o				
2.		Chronobiology	Discipline 2;	3	0	1	4
۷٠		Cinononology	Core Course 6		0	1	-
3.		Organometallic	Discipline 3;	3	0	1	4
].		Chemistry	Core Course 6			1	'
4.		DSE from Gp. 1	DSE-1				4
5.		DSE from Gp. 1	DSE-2				4
6.		Generic Elective	Generic Electives				4
]		(Forensic	- 6				'
		Science/Math/Chemistry					
		/Physics/Economics/					
		Computer Science)					

7.		One choic		the	List of	Skill Enhancement Course- 5	2	0	0	2
						TOTAL				26
After 3 years, Students will get the degree of B.Sc. (General) ZBC with Total Credits = 137										

Choices for Skill Enhancement Course- 4/5

Subject	L	T	P	Credits
Testing of cosmetics and hygienic products	1	0	1	2
Innovation and Entrepreneurship	2	0	0	2
Statistics with R	1	0	1	2
Electronic Product Testing	1	0	1	2
Fundamentals of Clinical Research	2	0	0	2
Social Media Crimes and Awareness	2	0	0	2
Graphical Tools	1	0	1	2
Latex writing	1	0	1	2

List of Discipline Specific Electives (DSE)

Infectious Microbiology Specialization

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Category of Course	Subject	L	Т	P	Credits
Elective-1	Parasitology	4	0	0	4
Licetive 1	Virology	4	0	0	4
Elective-2	Toxicology and Vector Biology	3	0	1	4
Elective-2	Bacteriology	3	0	1	4
Elective-3	Pharmaceutical Microbiology	4	0	0	4
Elective-4	Genomics	4	0	0	4
	Phycology and Mycology	3	0	1	4
Elective-5	Metagenomics	3	0	1	4
	Food and Dairy Microbiology	3	0	1	4
Elective-6	Medical Microbiology	3	0	1	4

Parasitology Specialization

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Subject	L	Т	P	Credits			
Parasitology	4	0	0	4			
Virology	4	0	0	4			
Toxicology and Vector Biology	3	0	1	4			
Bacteriology	3	0	1	4			
Genetic disorders	4	0	0	4			
Plant Pathology	3	0	1	4			
Genomics	4	0	0	4			
Phycology and Mycology	3	0	1	4			
Metagenomics	3	0	1	4			
Epigenetics and Chromatin Biology	4	0	0	4			
	Subject Parasitology Virology Toxicology and Vector Biology Bacteriology Genetic disorders Plant Pathology Genomics Phycology and Mycology Metagenomics	Subject Parasitology Virology Toxicology and Vector Biology Bacteriology Genetic disorders Plant Pathology Genomics Phycology and Mycology 3	SubjectLTParasitology40Virology40Toxicology and Vector Biology30Bacteriology30Genetic disorders40Plant Pathology30Genomics40Phycology and Mycology30Metagenomics30	Subject Parasitology 4 0 0 Virology 4 0 0 Toxicology and Vector Biology 3 0 1 Bacteriology 3 0 1 Genetic disorders Plant Pathology 3 0 1 Genomics 4 0 0 1 Hycology and Mycology 3 0 1 Figenetics and Chromatin Biology 4 Figenetics and Chromatin Biology Figenetics and Chromati			

Medical Biochemistry Specialization

Category of Course	Subject	L	T	P	Credits
Elective-1	Clinical correlations of disease	4	0	0	4
Elective-2	Toxicology and Vector Biology	3	0	1	4
	Medical Biochemistry	3	0	1	4
Elective-3	Genetic disorders	4	0	0	4
Elective-4	Genomics	4	0	0	4
	Biochemistry of Metabolism	4	0	0	4
Elective-5	Metagenomics	3	0	1	4
	Bioorganic and Medicinal Chemistry	3	0	1	4
Elective-6	Epigenetics and Chromatin Biology	4	0	0	4
	Hormones: Biochemistry and Function	4	0	0	4

List of Generic Electives (GE)

S.No.	Semeste r	Code	Course name	L	T	P	C	Discipline
1.	I		Fundamentals of Cell Biology	3	0	1	4	Life Sciences
2.	II		Biochemistry & Physiology	4	0	0	4	Life Sciences
3.	III		Introduction to Microbial World	3	0	1	4	Life Sciences
4.	IV		Fundamentals of Molecular Biology	3	0	1	4	Life Sciences
5.	V		Concept of Immunology	3	0	1	4	Life Sciences
6.	VI		Gene Technology and Human Welfare	3	0	1	4	Life Sciences
7.	VII		Microbial Physiology and Metabolism	4	0	0	4	Microbiology
8.	VIII		Microbial Genetics and Genomics	3	0	1	4	Microbiology
9.	VII		Human Physiology- I	3	0	1	4	Biomedical Science
10.	VIII		Human Physiology -II	4	0	0	4	Biomedical Science
11.	VII		Biochemistry of Metabolism	4	0	0	4	Biochemistry
12.	VIII		Bioorganic and Medicinal Chemistry	3	0	1	4	Biochemistry
13.	VII		Diversity of Non- Chordates, Parasitology and Economic Zoology	3	0	1	4	Zoology
14.	VIII		Diversity of Chordates and Comparative Anatomy	3	0	1	4	Zoology