

Course offered :

**SCHEME AND SYLLABUS FOR CHOICE BASED CREDIT SYSTEM FOR B.Sc.
HONOURS ZOOLOGY**

Sem	Core Course I4	Ability Enhancement Compulsory Course (2)	Skill Enhancement Course (SEC) (2)	Discipline Specifics Elective DSE (4)	Generic Elective GE (4)
I	Non-chordates I : Protista to Pseudocoelomates	English Communication			GE - 1
	Principles of Ecology				
II	Non-chordates II : Coelomates	Environmental Science / English Communication			GE-2
	Cell Biology				
III	Diversity of Chordates		SEC-1		GE - 3
	Physiology : Controlling and coordinating system				
	Fundamentals of biochemistry				
IV	Comparative anatomy of Vertebrates		SEC-2		GE - 4
	Physiology : Life Sustaining system				
	Biochemistry of metabolic processes				
V	Molecular Biology			DSE - 1	
	Principles of genetics			DSE - 2	
VI	Development biology			DSE - 3	
	Evolutionary Biology			DSE - 4	

Important Notes

- Practical's of each semester Core courses be clubbed together during end semester examinations, but separate marksheets of each practical core course should be prepared.
- Practical's of DSE in each semester (5th / 6th) be clubbed together during end semester examinations for convenience, but separate marksheets of each DSE practical course should be prepared.

Semester wise distribution of courses in B.Sc. Zoology Honours (CBCS)

Semester	Course Code	Course	Course Name	Credits
I		Ability Enhancement Compulsory Course-I	English communications/ Environmental Science	2
	ZC101T	Core course-I	Non-chordates I: Protista to Pseudocoelomates	4
	ZC101P	Core Course-I Practical		2
	ZC102T	Core course-II	Principles of Ecology	4
	ZC102P	Core Course-II Practical		2
	ZG101T	Generic Elective - I Theory	GE-I (T)	4
	ZG101P	Generic Elective - I Practical/Tutorial	GE-I (P)	2
II		Ability Enhancement Compulsory Course-II	English communications/ Environmental Science	2
	ZC203T	Core course - III	Non-Chordates II: Coelomates	4
	ZC203P	Core Course - III Practical		2
	ZC204T	Core course-IV	Cell Biology	4
	ZC204P	Core Course-IV Practical		2
	ZG202T	Generic Elective -2 Theory	GE-2(T)	4
	ZG202P	Generic Elective -2 Practical	GE-2(P)	2
III	ZC305T	Core course-V	Diversity of Chordates	4
	ZC305P	Core Course-V Practical		2
	ZC306T	Core course-VI	Physiology: Controlling and coordinating system	4
	ZC306P	Core Course-VI Practical		2
	ZC307T	Core course-VII	Fundamental of Biochemistry	4
	ZC307P	Core Course-VII Practical		2
	ZS301	Skill Enhancement Course-I	SEC- I :Any one course from I to III I. Apiculture II. Medical Diagnostic III. Sericulture	4

	ZG303T	Generic Elective -3 Theory	GE-3(T)	4
	ZG303P	Generic Elective -3 Practical	GE-3(P)	2
IV	ZC408T	Core course-VIII	Comparative anatomy of Vertebrate	4
	ZC408P	Course-VIII Practical		2
	ZC409T	Core course-IX	Physiology: Life Sustaining systems	4
	ZC409P	Course-IX Practical		2
	ZC410T	Core course-X	Biochemistry of metabolic system	4
	ZC410P	Core Course- X Practical		2
	ZS402	Skill Enhancement Course-2	SEC-2: Any one course from IV toV IV. Aquarium fish keeping V. Research methodology	4
	ZG404T	Generic Elective -4 Theory	GE-4(T)	4
	ZG404P	Generic Elective -4 Practical	GE-4(P)	2
V	ZC511T	Core course-XI	Molecular biology	4
	ZC511P	Core Course-XI Practical		2
	ZC512T	Core course-XII	Principles of genetics	4
	ZC512P	Core Course-XII Practical		2
Discipline Specific Elective: Students may opt any two of the following courses (Two Theory courses along with relevant Practical courses)				
	ZD501T	Discipline Specific Elective -I	DSE-1: Animal behavior and chronobiology	4
	ZD501P	Discipline Specific Elective -I Practical		2
	ZD502T	Discipline Specific Elective -2	DSE-2: Computational Biology	4
	ZD502P	Discipline Specific Elective- 2 Practical/Tutorial		2
	ZD503T	Discipline Specific Elective -3	DSE-3: Endocrinology	4
	ZD503P	Discipline Specific Elective -3 Practical		2

	ZD504T	Discipline Specific Elective -4	DSE-4: Biology of insecta	4
	ZD504P	Discipline Specific Elective -4 Practical		2
	ZD505T	Discipline Specific Elective -5	DSE-5: Basic of neuroscience	4
	ZD505P	Discipline Specific Elective -5 Practical		2
VI	ZC613T	Core course-XIII	Developmental Biology	4
	ZC613P	Core Course-XIII Practical/Tutorial		2
	ZC614T	Core course-XIV	Evolutionary Biology	4
	ZC614P	Core Course-XIV Practical/Tutorial		2
Discipline Specific Elective: Students may opt any two of the following courses (Two Theory courses along with relevant Practical courses)				
	ZD606T	Discipline Specific Elective -6	DSE-6: Animal Biotechnology	4
	ZD606P	Discipline Specific Elective -6 Practical/Tutorial		2
	ZD607T	Discipline Specific Elective-7	DSE-7: Fish & Fisheries	4
	ZD607P	Discipline Specific Elective -7 Practical/Tutorial		2
	ZD608T	Discipline Specific Elective -8	DSE-8: Immunology	4
	ZD608P	Discipline Specific Elective -8 Practical/Tutorial		2
	ZD609T	Discipline Specific Elective-9	DSE-9: Parasitology	4
	ZD609P	Discipline Specific Elective -9 Practical/Tutorial		2

	ZD610T	Discipline Specific Elective-10	DSE-10: Reproductive biology	4
	ZD610P	Discipline Specific Elective-10		2
	ZD611T	Discipline Specific Elective-11	DSE-11: Wildlife Conservation and management	4
	ZD611P	Discipline Specific Elective-11		2
			Total:	140

Coding pattern: Z = Zoology, C= Core Course, D = Discipline Specific Elective, G= General Elective, S = Skill Enhancement Course, T = Theory, P = Practical

Generic Electives (GE) courses for the students having honours in discipline other than Zoology

GENERIC ELECTIVE COURSES

GE I	Animal Cell Biotechnology
GE II	Animal Diversity
GE III	Aquatic Biology
GE IV	Environment and Public Health
GEV	Exploring the Brain: Structure and Function
GEVI	Food, Nutrition and Health
GEVII	Human Physiology
GEVIII	Insect Vectors and Diseases

	Discipline Core Course	Ability Enhancement Compulsory Course	Skill Enhancement	Discipline Specific Elective DSE (6)
I	DCC-I, Paper I DCC - 2 (Zoology) Paper I: Animal Diversity DCC 3 : Paper I	(English/ MIL Communication) /Environmental Science		
II	DCC - I paper II DCC 2 (Zoology) Paper II: Comparative Anatomy and developmental Biology of Vertebrates DCC - 3 Paper II	Environmental Science (English/MIL)		
III	DCC-I Paper III DCC -2 (Zoology) Paper III : Physiology and Biochemistry DCC 3 Paper III		SEC - 1	
IV	DCC-I Paper IV DCC -2 (Zoology) Paper IV : Genetics and Evolutionary Biology		SEC- 2	
V			SEC-3	DSE-I, Paper -I DSE- Zoology Paper - I
				DSE-I, Paper -II DSE- Zoology Paper - II
Important Notes				

- a) Practicals of each semester Core courses be clubbed together during end semester examinations, but separate marksheets of each practical core course should be prepared.
- b) Practicals of DSE in each semester (5th / 6th) be clubbed together during end semester examinations for convenience, but separate marksheets of each DSE practical course should be prepared.

Semester wise distribution of courses in B.Sc Zoology Non-Honours (CBCS)			
SEMESTER	COURSE OPTED	COURSE NAME	Credits
I	Ability Enhancement Compulsory	English/MIL communications/	
	Course-I Discipline Core Course -I, Paper- I	Environmental Science	2
	(Theory) Discipline Core Course -I,	DCC-I, Paper -I	4
	Paper -I (Practical)	DCC-I, Paper- I (Practical)	2
	ZNCI01T	Animal Diversity	4
	ZNCI01P	Animal Diversity (Practical)	2
	Discipline Core Course -3, Paper- I (Theory)	DCC-3, Paper- I	4
	Discipline Core Course -3,		
II	Paper- I (Practical)	DCC- 3 Paper-I (Practical)	2
	Ability Enhancement Compulsory	English/MIL communications/	
	Course-II Discipline Core Course -I,	Environmental Science	2
	Paper- II (Theory) Discipline Core Course -I,	DCC-I, Paper -II	4
	Paper -II (Practical) ZNC202T	DCC-I, Paper- II (Practical) Comparative Anatomy and Developmental Biology of	2

	ZNC202P	Vertebrates Comparative Anatomy and Developmental Biology of	4
	Discipline Core Course -3,	Vertebrates (Practical)	2
	Paper- II (Theory) Discipline Core Course -3,	DCC-3, Paper- II	4
III	Paper- II (Practical) Discipline Core Course -I,	DCC- 3 Paper-II (Practical)	2
	Paper- III (Theory) Discipline Core Course -I,	DCC-I, Paper -III	4
	Paper -III (Practical)	DCC-I, Paper- III (Practical)	2
	ZNC303T ZNC303P	Physiology and Biochemistry Physiology and Biochemistry	4
	Discipline Core Course -3,	(Practical)	2
	Paper- III (Theory) Discipline Core Course -3,	DCC-3, Paper- III	4
	Paper- III (Practical)	DCC- 3 Paper-III (Practical)	4
IV	ZNS30I Discipline Core Course -I,	(I). Medical Diagnostics	2
	Paper- IV (Theory) Discipline Core Course -I,	DCC-I, Paper -IV	4
	Paper -IV (Practical) ZNC404T	DCC-I, Paper- IV (Practical) Genetics and Evolutionary	2

	ZNC404P	Biology Genetics and Evolutionary	4
	Discipline Core Course -3,	Biology (Practical)	2
	Paper- IV (Theory) Discipline Core Course -3,	DCC-3, Paper- IV	4
	Paper- IV (Practical) ZNS402 Students may opt any one course	DCC- 3 Paper-IV (Practical) (II) Aquarium Fish Keeping	2
V	from (II) to (III)	(III) Apiculture	2
	ZNS503	(IV) Sericulture	2
	Discipline Specific Elective- I Paper- I Discipline Specific Elective - I	DSE- I Paper -I	4
	Paper -I (Practical) ZND50IT Students may select any one course	DSE- I Paper -I (Practical) (I) Applied Zoology (II) Animal Biotechnology	2
	from (I) to (III) ZND50IP Students will select one relevant practical course based on theory course.	(III) Aquatic Biology Practical (I) Applied Zoology (II) Animal Biotechnology	4
		(III) Aquatic Biology	2
	Discipline Specific Elective -3 Paper -I Discipline Specific Elective - 3	DSE- 3 Paper- I	4
	Paper- I (Practical)	DSE- 3 Paper I (Practical)	2

VI	ZNS604	(V) Freshwater Aquaculture	2
	Discipline Specific Elective-I Paper- II	DSE- I Paper -II	4
	Discipline Specific Elective - I Paper -II (Practical)	DSE- I Paper -II (Practical)	2
	ZND602T Students may select any one course from (IV) to (VII)	(IV) Immunology (V) Reproductive Biology (VI) Insect, vector and diseases	4
	ZND602P Students will select one relevant practical course based on theory course.	(VII) Dissertation/Project Practical (IV) Immunology (V) Reproductive Biology	(4+2 =6)
	Discipline Specific Elective - 3 Paper- II	(VI) Insect, vector and diseases	2
	Discipline Specific Elective-3 Paper -II (Practical)	DSE-3 Paper- II DSE-3 Paper II (Practical)	4 2

Total Credits

120

***CODING PATTERN:**

***ZNC= ZOOLOGY NON-HONS. CORE COURSE**

***ZNS= ZOOLOGY NON-HONS. SKILL ENHANCEMENT COURSE**

***ZND= ZOOLOGY NON-HONS. DISCIPLINE SPECIFIC ELECTIVE COURSE**

***DCC= DISCIPLINE CORE COURSE**

***DSE= DISCIPLINE SPECIFIC ELECTIVE**

***SEC= SKILL ENHANCEMENT COURSE**

Details of Courses

Discipline Core Courses (DCC) Zoology:

- I. Animal Diversity
- 2 Comparative Anatomy and Developmental Biology of Vertebrates
- 3 Physiology and Biochemistry
- 4 Genetics and Evolutionary Biology

Discipline Specific Electives (DSE) Zoology: (Any two)

- I. Applied Zoology
- II. Animal Biotechnology
- III. Aquatic Biology
- IV. Immunology
- V. Reproductive Biology
- VI. Insect, Vector and Diseases
- VII. Dissertation/Project

Skill Enhancement Courses (SEC) Zoology: (Any four)

- I. Medical Diagnostics
- II. Aquarium Fish Keeping
- III. Apiculture
- IV. Sericulture
- V. Freshwater Aquaculture