

## SYLLABUS FRAME WORK

**B.Sc. Advanced Zoology and Biotechnology**  
**Course Structure under Choice Based Credit System**  
 (For the candidates admitted from the academic year 2014-2015 onwards)

Sem	Course Title	Inst. Hrs. / Week	Credit	Exam Hrs	Marks	
					Int.	Ext
I	Language Course – I	4	3	3	25	75
	English Course – I	4	3	3	25	75
	Invertebrata – <b>Theory</b>	7	4	3	25	75
	<b>Major Practical - I</b>	2	-	*	-	-
	Allied Botany Course I - <b>Theory</b>	7	3	3	25	75
	Allied Botany Course III - <b>Practical</b>	2	-	*	-	-
	Non Major Elective - I	2	2	3	25	75
	Essential of Language and Communication	2	3	3	40	60
II	Language Course – II	4	3	3	25	75
	English Course – II	4	3	3	25	75
	Chordata - <b>Theory</b>	7	4	3	25	75
	<b>Major Practical – I Invertebrata and Chordata</b>	2	4	3	40	60
	Allied Botany Course II- <b>Theory</b>	7	3	3	25	75
	Allied Botany Course III - <b>Practical</b>	2	4	3	40	60
	Non Major Elective – II	2	2	3	25	75
	Essential of Spoken and Presentation skill	2	3	3	40	60

Sem	Course Title	Inst. Hrs. / Week	Credit	Exam Hrs	Marks	
					Int.	Ext
III	Language Course – III	4	3	3	25	75
	English Course – III	4	3	3	25	75
	Cell and Molecular Biology – <b>Theory</b>	6	4	3	25	75
	<b>Major Practical - II</b>	3	-	*	-	-
	Allied Chemistry Course I - <b>Theory</b>	6	3	3	25	75
	Allied Chemistry Course III - <b>Practical</b>	3	-	*	-	-
	Environmental Studies	1	-	*	-	-
Personality Enrichment	3	3	3	40	60	
IV	Language Course – IV	4	3	3	25	75
	English Course – IV	4	3	3	25	75
	Genetics - <b>Theory</b>	6	4	3	25	75
	<b>Major Practical – II-Cell biology and Genetics</b>	3	4	3	40	60
	Allied Chemistry Course II- <b>Theory</b>	6	3	3	25	75
	Allied Chemistry Course III - <b>Practical</b>	3	4	3	40	60
	Environmental Studies	1	2	3	25	75
	Computing Skill	3	3	3	40	60
	Extension Activity	-	1	-	-	-

Sem	Course Title	Inst. Hrs. / Week	Credit	Exam Hrs	Marks	
					Int.	Ext
V	Animal Physiology – <b>Theory</b>	5	4	3	25	75
	Developmental Biology and Immunology – <b>Theory</b>	5	4	3	25	75
	Biostatistics, Computer fundamentals and Bioinformatics – <b>Theory</b>	5	4	3	25	75
	Fundamentals of Biotechnology and Biochemistry – <b>Theory</b>	5	4	3	25	75

	<b>Major Practical - III</b>	2	-	*	-	-
	<b>Major Practical - IV</b>	2	-	*	-	-
	Core Elective Course I –Entomology and Pest Management	5	5	3	-	-
	Value Education	1	2	*	-	-
VI	Environmental Biology and Evolution – <b>Theory</b>	5	4	3	25	75
	Recombinant DNA Technology- <b>Theory</b>	5	4	3	25	75
	Microbiology - <b>Theory</b>	5	4	3	25	75
	<b>Major Practical – III-Animal Physiology, Biochemistry, Developmental biology and Immunology</b>	2	4	3	40	60
	<b>Major Practical – IV- Environmental Biology, Biotechnology and Microbiology</b>	2	4	3	40	60
	Elective Course II-Medical Laboratory technique	5	5	3	25	75
	Elective Course III-Aquaculture	5	5	3	25	75
	Value Education	1	2	3	25	75

\* Examination at the end of even semester

### NON MAJOR ELECTIVE COURSE:

I Semester	II Semester
<b>Non Major Elective I</b>	<b>Non Major Elective II</b>
Applied Zoology	Public Health and Hygiene

### CORE ELECTIVE COURSES:

V Semester	VI Semester
<b>Elective I</b>	<b>Elective II &amp; III</b>

Entomology and Pest Management	Medical Laboratory Technology
	Aquaculture

### **ALIED ZOOLOGY**

(For B.Sc. Chemistry and Botany students)

- 1.Allied Zoology I
- 2.Allied Zoology – II
- 3.Allied Zoology - Practical

## **CURRICULUM FOR M.Sc., ZOOLOGY(2014-15 onwards)**

### **SEMESTER I**

Sl. No.	Core/Elective/EDP	Name of the Course	Credits	Marks	
				Ext	Int
1.	Core	Phylogeny and Diversity of Invertebrates	4	75	25
2.	Core	Phylogeny and Diversity of Chordates	4	75	25
3.	Core	Cell and Molecular Biology	4	75	25
4.	Core	Lab Course I	4	60	40
5.	Elective	Elective I: Biostatistics	3	75	25
6.	Soft Skills -I	Communication Skills	2	75	25

### **SEMESTER II**

Sl. No.	Core/Elective/EDP	Name of the Course	Credits	Marks	
				Ext	Int
7	Core	Genetics	4	75	25
8	Core	Environmental Biology and Evolution	4	75	25
9	Core	Biotechnology	4	75	25
10	Core	Lab Course II	4	60	40
11	Elective	Elective II: Fisheries Science	3	75	25
12	EDP I	Microbiology	2	75	25
13	Soft Skills –II	Spoken English	2	75	25

### **SEMESTER III**

Sl. No.	Core/Elective/EDP	Name of the Course	Credits	Marks	
				Ext	Int
14	Core	Biochemistry and Biophysics	4	75	25
15	Core	Developmental Biology	4	75	25
16	Core	Immunology	4	75	25
17	Core	Lab Course III	4	60	40
18	Elective	Elective III: Entomology	3	75	25
19	EDP II	Toxicology	2	75	25
20	Soft Skills -III	Computer Skills	2	75	25
21		Internship Programme	2		

**\*\* Internship will be carried out during the summer vacation of the first year and marks should be sent to the University by the College and the same will be included in the Third Semester Marks Statement.**

#### **SEMESTER IV**

Sl. No.	Core/Elective/EDP	Name of the Course	Credits	Marks	
				Ext	Int
22	Core	Animal Physiology	4	75	25
23	Core	Research Methodology	4	75	25
24	Core	Lab Course IV	4	60	40
25	Elective	Elective IV: Aquaculture	3	75	25
26	Core	Project/Paper	4	60	40
27	Soft Skills -IV	Personality Development	2	75	25

#### **Electives:**

1. Biostatistics
2. Fisheries Science
3. Aquaculture
4. Entomology

#### **M.Phil (ZOOLOGY)- From 2013 onwards**

Semester	Course	Course Title	Exam Hours	Internal Mark	External Mark	Total Marks
	Paper- I	Research Methodology	3	40	60	100
	Paper-II	Recent Advances in Zoology	3	40	60	100

I	Paper-III	Optional subject	3	40	60	100
II		*Dissertation Evaluation	-	60	100	160
		Viva – voce	-	-	40	40
		<b>Total</b>				<b>500</b>

\* For 200 Marks

**PAPER – III – (GUIDE PAPER - ANY ONE OF THE FOLLOWING PAPER TO BE CHOSEN)**

1. Insect Biology and Pest Management
2. Eco Toxicology
3. Aquaculture and Fisheries
4. Crustacean Endocrinology and Reproduction