



**Tripura University**

**(A Central University)**

**Suryamaninagar**

**West Tripura, Tripura – 799022**

**Syllabus for**

**Four Year Under Graduate Programme**

**Subject: Fundamental Zoology**

**(Interdisciplinary Course)**

**(NEP – 2020)**

**Year – 2023**



**Tripura University**  
(A Central University)

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**Course Structure of Fundamental Zoology (UG Programme)**  
**As per NEP-2020 under Tripura University**

**FUNDAMENTAL ZOOLOGY**

**(INTERDISCIPLINARY COURSE)**

Year	Semester	Paper Code	Paper No.	Credits	Marks	Paper Name
1 <sup>st</sup> Year	I	ZL001C	Paper 1 Theory	3	100 IA = 40 + ESE = 60	Animal Diversity
2 <sup>nd</sup> Year	III	ZL002C	Paper 2 Theory	3	100 IA = 40 + ESE = 60	Economic Zoology
	IV	ZL003C	Paper 3 Theory	3	100 IA = 40 + ESE = 60	Genetic Disorders and Pathogenic Diseases

**DETAILED COURSE CONTENT OF**  
**Interdisciplinary Course**  
**[FUNDAMENTAL ZOOLOGY]**

**1<sup>st</sup> year**  
**Semester – I**  
**Paper - 1 (Theory)**  
**ZL001: Animal Diversity**  
**Marks: 100 (IA=40 + ESE= 60) Credit 03**

**Non-chordates**

**Unit - I**

Classification (up to class)

Important features of the phylum with examples

Protozoa, Porifera, Cnidaria, Helminths,

**Unit – II**

Classification (up to class)

Important features of the phylum with examples

Annelida, Arthropoda, Mollusca, and Echinodermata

**Chordates**

**Unit - III**

Classification (up to class)

Important features with examples -

Hemichordates, Cephalochordates, Urochordates,

**Unit – IV**

Classification (up to class)

Important features with examples -

Vertebrates – Cyclostomes, Pisces, Amphibia, Reptilia, Aves, and Mammalia

**Books Recommended:**

- Invertebrates – L.H. Hyman
- Biology of Animals Vol-I by Ganguly, Sinha & Adhikari, New Central Book Agency, Kolkata
- Modern Text Book of Zoology: Invertebrates by R.L. Kotpal, Rastogi Publications
- Invertebrate Zoology by E.L. Jordan & P.S. Verma, S. Chand & Company Ltd.
- Biology of Animals Vol-II by Ganguly, Sinha & Adhikari, New Central Book Agency, Kolkata
- Modern Text Book of Zoology: Vertebrates by R.L. Kotpal, Rastogi Publications
- Vertebrate Zoology by E.L. Jordan & P.S. Verma, S. Chand & Company Ltd.

## **Interdisciplinary Course (Fundamental Zoology)**

### **Semester – III**

#### **Paper – 2 (Theory)**

#### **ZL002: Applied Zoology**

**Marks: 100 (IA=40 + ESE= 60)      Credit 03**

#### **Vermiculture & Vermicomposting**

Principle of vermicomposting, different ecological categories of earthworm (Epigeic, Endogeic, Anesic), importance of vermicomposting, vermitechnology & management.

#### **Sericulture**

Principle, different types of silk moth and their host plants, rearing methods, diseases of silk moth. Management with special reference to local varieties

#### **Apiculture**

Principle, different types of honey bees, rearing methods, diseases of honey bees. Management with special reference to local varieties

#### **Fresh water pisciculture**

Polyculture

Induced breeding technology

Fish seed transportation, fish diseases,

Management

#### **Poultry**

Types of breeds

Methods of rearing

Health, diseases, and their management

#### **Basics of Dairy farming and management**

#### **Books Recommended:**

- Economic Zoology by Shukla and Upadhyay
- Text Book of Applied Zoology: Vermiculture, Apiculture, Sericulture, Lac Culture. By Jabde, P.V.,
- Applied Zoology by T.K.Banerjee, New Central Book Agency, Kolkata
- A Hand Book of Economic Zoology by J. Ahsan & bS.P.Sinha, S.Chand & Company Ltd.
- Kenchor Jeeban Baichitra O Kencho Prajukti by Priya Sankar Chaudhuri, Gyan Bichitra Prakashani, Agartala.
- Comprehensive Sericulture Vol. II: Silkworm Rearing and Silk Reeling by Ganga, G. Oxford and IBH, New Delhi. (2003)
- Elementary Applied Zoology by Debjyoti Chattopadhyay, Book Syndicate Pvt. Ltd.
- Livestock production management by Shastry and Thomas

**Interdisciplinary Course (Fundamental Zoology)**  
**Semester – IV**  
**Paper – 3 (Theory)**  
**ZL003: Genetic Disorders and Pathogenic Diseases**  
**Marks: 100 (IA=40 + ESE= 60) Credit 03**

**Genetic Disorders**

Structure and function of chromosome

ABO Blood groups

Concept on –

Haemophilia, colour-blindness, albinism, thalassemia, sickle cell anaemia, Down's syndrome, Turner's syndrome, Klinefelter's syndrome

**Pathogenic Disease**

Concept of host and parasite

Life cycle and control measures of –

*Plasmodium*, *Entamoeba*, *Giardia*, Liver fluke, Tape worm, Round worm, and *Ascaris*

**Books Recommended:**

- Genetics by M. W. Strickberger, Pearson Education India Ltd.
- Principles of Genetics by E. J. Gardner, M. J. Simmons & D.P. Snustad, Wiley Publishers
- Principle of Genetics, B. D. Singh. Kalyani Publications
- Genetics by P. K. Gupta, Rastogi Publications, Meerut
- Genetics by Verma & Agarwal, S. Chand & Company Ltd.
- Parasitology by K.D. Chatterjee,
- Text Book of Medical Parasitology by P. Chakraborty, New Central Book Agency
- Paniker's Text Book of Medical Parasitology by Paniker, C.K.J., Ghosh, S. Jaypee, New Delhi.
- Medical Parasitology by Dey, N.C., Dey, T.K. and Dey Sinha M. New Central Book Agency, Kolkata (2010)