



Department of Zoology
Rabindra Mahavidyalaya
Champadanga Hooghly

NOTICE

Date: 18th -August-2023

It is here by informed to all the teachers and students that Syllabus distribution for Zoology Semester 1 classes will be as following.

Baisakhi Saha

Head of Department
Department of Zoology
Rabindra Mahavidyalaya
Champadanga Hooghly

**Syllabus wise distribution of for 3-Year
Degree/4-Year Honours in Zoology under
Curriculum and Credit Framework for
Undergraduate Programmes (CCFUP) AS
PER NEP, 2020 with effect from 2023-2024**

Semester - I

Major (4 Year & 3 Year)

Department Specific Course

OBJECTIVES OF THE STUDY:

The main objective of this syllabus is to acquaint the students about the diversity of animals (invertebrates) of this universe especially their taxonomic position of animal kingdom as well as their physiology and organ system.

COURSE OUTCOMES:

At the end of the syllabus students learn the Systematic and biology of non chordates through their adaptive features and their body organization. Comprehend the identification of species and their evolutionary relationships.

Paper Code and Subject	Unit	TOPICS (Credits:3)	TOTAL NO. LECTURES (45)	Assign Teacher
DSC-100 NON CHORDATE [Theory]	1	Basics of Animal Classification Definition: Classification, Systematics, and Taxonomy, Code of Zoological Nomenclature.	2	Palash Kanti Manna, Eureka Mondal,
	2	Protista and Metazoa Protozoa: General Characteristics and Schematic Classification up to phylum (Levine <i>et al.</i> 1980) Locomotion in Amoeba, Conjugation in Paramecium.	5	Eureka Mondal
	3	Porifera: General characteristics and schematic classification up to order (Hyman, 1951) Canal System and Spicules Of Sponges	5	Eureka Mondal
	4	Cnidaria: General characteristics and schematic classification upto class (Ruppert and Barnes, 1994); Metagenesis of Obelia, Coral Reef Types And Formation	4	Eureka Mondal
	5	Ctenophora: General Characteristics only	1	Eureka Mondal
	6	Platyhelminthes: General characteristics and schematic classification upto class (Ruppert and Barnes 1994)	2	Eureka Mondal
	7	Nematoda: General characteristics and schematic classification upto class (Ruppert and Barnes, 1994)	2	Eureka Mondal
	8	Annelida: General characteristics and schematic classification upto class (Ruppert and Barnes 1994), Metamerism, Nephridia: Structure and Function	4	Palash Kanti Manna
	9	Arthropoda: General characteristics and schematic classification upto class (Ruppert & Barnes, 1994), Vision In Insects, Metamorphosis in Lepidopteran insect	6	Palash Kanti Manna
	10	Onychophora: Evolutionary Significance	2	Palash Kanti Manna
	11	Mollusca: General characteristics and schematic classification upto class (Ruppert and Barnes 1994), Modification Of foot, Nervous system and torsion in Gastropods	5	Palash Kanti Manna
	12	Echinodermata General characteristics and schematic classification up to class (Ruppert and Barnes 1994), Water Vascular System of Asterozoa, Structure Of Tube Feet, Larval forms in Echinodermata	4	Palash Kanti Manna
	13	Hemichordata General characteristics phylum Hemichordata, Relationship of non-chordates and chordates	3	Palash Kanti Manna

Internal

Paper	Syllabus (Unit Wise)	Assign Teacher	Contact Number & Mail id	Marks Weightage
DSC-100 NON CHORDATE [Theory]	Basics of Animal Classification Definition Protista and Metazoa Protozoa, Porifera, Cnidaria, Ctenophora, Platyhelminthes, Nematoda	Eureka Mondal	8250656417, 9476440223 mondal.eureka87@gmail.com	5
	Basics of Animal Classification Definition, Annelida, Arthropoda Onychophora Mollusca, Echinodermata, Hemichordata	Palash Kanti Manna	9732381772, 9382113782 palasmanna84@gmail.com	5
	Total Marks			10

Paper Code and Subject	Unit	TOPICS (Credits:3)	TOTAL NO. LECTURES (15)	Assign Teacher
DSC-101 NON CHORDATE [Practical]	1	Spot Identification of <i>Amoeba</i> , <i>Euglena</i> , <i>Paramecium</i>	1	Piyali Pakhira
	2	Spot Identification of <i>Sycon</i> , Neptune's Cup, <i>Obelia</i> , <i>Pennatula</i> , <i>Fungia</i>	1	Piyali Pakhira
	3	Spot Identification and Significance of adult <i>Taenia solium</i> and <i>Ascaris lumbricoides</i>	1	Piyali Pakhira
	4	Spot identification of the following specimens Annelids- <i>Nereis</i> , <i>Pheretima</i> , <i>Hirudinaria</i> Arthropods- <i>Bombyx</i> , <i>Periplaneta</i> , <i>Apis</i> , <i>Anopheles</i> , <i>Culex</i> . Molluscs- <i>Pila</i> , <i>Lamellidens</i> , <i>Sepia</i> , <i>Octopus</i> , Echinoderms- <i>Pentaceros/Asterias</i> , <i>Ophiura</i> , <i>Echinus</i> , <i>Antedon</i>	6	Piyali Pakhira
	5	Dissection–Digestive system and nervous system of <i>Periplaneta</i> sp.	4	Piyali Pakhira
	6	Mounting Of the following specimens—Mouthparts of cockroach, Whole Mount: Mosquito.	2	Piyali Pakhira

Internal

Paper	Syllabus (Unit Wise)	Assign Teacher	Contact Number & Mail id	Marks Weightage
DSC-100 NON CHORDATE [Practical]	Spot Identification of <i>Amoeba, Euglena, Paramecium,</i>	Piyali Pakhira	8961185116, 7718534071 tukupakhira@gmail.com	3
	Spot Identification of <i>Sycon, Neptune's Cup, Obelia, Pennatula, Fungia</i>			
	Spot Identification and Significance of adult <i>Taenia solium</i> and <i>Ascaris lumbricoides</i>			
	Spot identification of the following specimens <i>Annelids-Nereis, Pheretima, Hirudinaria</i>			
	<i>Arthropods- Bombyx, Periplaneta, Apis, Anopheles, Culex.</i> <i>Molluscs-Pila, Lamellidens, Sepia, Octopus,</i> <i>Echinoderms-Pentaceros/Asterias, Ophiura, Echinus, Antedon</i>			
	Dissection–Digestive system and nervous system of <i>Periplaneta</i> sp.			2
	Mounting Of the following specimens— Mouthparts of cockroach, Whole Mount: Mosquito.			
Total Marks				5

Skill Enhancement Course

Objectives of the Course:

Vermiculture is the study Commercial application of technologies that utilize earthworms for degrading waste organic materials for sanitation and agricultural re-use. Earthworms degrade organic waste materials and convert them into vermicompost. The main objective of this course is to provide the students with knowledge of vermitechnology and its application in agriculture as well as entrepreneurship.

Course Outcomes:

1. The Course Has A Broad scope for Employability.
2. Students will gather knowledge on soil earthworms; their characteristic features, occurrence, and their influence on soil fertility and solid waste management are included.
3. Students will gather knowledge on Vermicomposting technology in respect of the global level as well as the Indian perspective.
4. Application of Vermiculture products and their benefits in agriculture practice.

Paper Code and Subject	Unit	TOPICS (Credits:2)	TOTAL NO. LECTURES (30)	Assign Teacher
(SEC-I) VERMICULTURE [Theory]	1	Earthworm Morphology and Anatomy: Taxonomic Position, external features, internal anatomy.	3	Dr. Baisakhi Saha
	2	Habitat Ecology and reproduction: Burrowers, casts, nocturnal, poikilothermic, ecological grouping, Epigeic sp., Endogenics., Anecics.	3	Dr. Baisakhi Saha
	3	Description of some important earthworm sp: <i>Eiseniafetida</i>, <i>Eudriluseugeniae</i>, <i>Lumbricus rubellus</i>.	3	Dr. Baisakhi Saha
	4	Importance Of Earthworm In Agriculture: Role Of earthworm to increase fertility of soil.	3	Dr. Baisakhi Saha
	5	Vermitechnology and Vermiculture: Definition, History At Different countries and India.	3	Dr. Baisakhi Saha
	6	Vermiculture: Methods, wormery, breeding technique, indoor outdoor culture, mono-and Polyculture And Merits and Demerits	5	Dr. Baisakhi Saha
	7	Vermicomposting Of Wastes: Different Methods, storage. Vermiwash: preparation and application	3	Dr. Baisakhi Saha
	8	Diseases and Predators/pathogen of earthworm. Maintenance Wormeries.	3	Dr. Baisakhi Saha
	9	Marketing and Future perspective: Marketing the products of Vermiculture, quality control, marketing techniques, demand study, advertisement, packing and transport, and financial support.	4	Dr. Baisakhi Saha

Internal

Paper	Syllabus (Unit Wise)	Assign Teacher	Contact Number & Mail id	Marks Weightage
(SEC-1) VERMICULTURE	Unit 1-9	Dr. Baisakhi Saha	9433315086, 9477549801 baisakhisaha08@gmail.com, baisakhisaha08@gmail.com	10

Paper Code and Subject	Unit	TOPICS (Credits:1)	Marks Weightage	Assign Teacher
(SEC-1) VERMICULTURE [Practical]	1	Visit pharmlab and report submission	6	Dr. Baisakhi Saha
	2	Viva-voce	4	Dr. Baisakhi Saha

Minor

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	2	Protista and Metazoa Protozoa: General Characteristics and Schematic Classification up to phylum (Levine <i>et al.</i> 1980) Locomotion in Amoeba, Conjugation in Paramecium.	5	Eureka Mondal
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Total Marks				10

Paper Code and Subject	Unit	TOPICS (Credits:1)	TOTAL NO. LECTURES (15)	Assign Teacher
DSC-101 NON CHORDATE [Practical]	1	Spot Identification: Either from museum specimen or from photograph Group I: <i>Amoeba, Euglena, Paramecium, Sycon, Obelia, Physalia, Aurelia, Taenia solium, Ascaris lumbricoides, Nereis, Hirudinaria</i> Group II: <i>Macrobrachium, Scylla, Carcinoscopus, Trioniulus, Chiton, Patella, Loligo, Sepia, Pentaceros Ophiura, Echinus, Balanoglossus</i>	7	Piyali Pakhira
	2	Dissection–Digestive system and nervous system of <i>Periplaneta</i> sp.	4	Piyali Pakhira
	3	Mounting of the following specimens—Mouthparts of cockroach, Whole Mount: Mosquito.	2	Piyali Pakhira
	4	Temporary staining and mounting of any zooplankton	2	Piyali Pakhira

Internal

Paper	Syllabus (Unit Wise)	Assign Teacher	Contact Number & Mail id	Marks Weightage
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	Dissection–Digestive system and nervous system of <i>Periplaneta</i> sp.			
	Mounting of the following specimens—Mouthparts of cockroach, Whole Mount: Mosquito.			
	Temporary staining and mounting of any zooplankton			
Total Marks				5