

SWARNAMOYEE JOGENDRANATH MAHAVIDYALAYA
 DEPARTMENT OF ZOOLOGY
 DEPARTMENTAL TEACHING PLAN FOR SESSION 2023-2024

TEACHERS NAME Tanushree Das

SEMESTER : 3rd sem

SL NO	COURSE NUMBER : DSC-1C (CC-3) TOPIC : Physiology and Bio-chemistry	Approximate number of classes to be taken to complete
THEORY		
1.	Nerve and muscle	5
2.	Digestion	4
3.	Respiration	5
4.	Excretion	3
5.	Cardiovascular system	5
6.	Reproduction and Endocrine glands.	6
7.	Carbohydrate Metabolism	5
8.	Lipid Metabolism	3
9.	Protein Metabolism	3
10.	Enzymes	4
PRACTICAL		
1.	Preparation of hemin and hemochrome crystals.	2
2.	Study of permanent histological sections of Mammalian Pituitary thyroid, pancreas, adrenal gland.	3
3.	Study of Permanent slides of spinal cord, duodenum, liver, lung, kidney bone, cartilage.	3
4.	Qualitative tests to identify functional groups of carbohydrates in given solutions (Glucose, Fructose, Sucrose, Lactose)	4
5.	Estimation of total protein in given solutions by Lowry's method.	2
6.	Study of activity of salivary amylase under optimum conditions.	2

TEACHERS NAME : Tanushree Das

SEMESTER : 3rd sem (GE-3)

SL NO	COURSE NUMBER : DSC - 1C (CC-3) TOPIC : Physiology and Bio-chemistry	Approximate number of classes to be taken to complete
	THEORY	
1.	Aquatic Biomes	10
2.	Freshwater Biology	12
3.	Marine Biology	8
4.	Management of Aquatic Resources	10
	PRACTICAL	
1.	Determine the area of a lake using graphimetric and gravimetric method.	2
2.	Identify the important macrophytes, Phytoplanktons and zooplanktons present in a lake ecosystem.	3
3.	Determine the amount of Turbidity / transparency, Dissolved oxygen, Carbon dioxide, alkalinity in water collected from a nearby lake / water body.	4
4.	Instruments used in limnology (Secchi disc, Van Dorn Bottle, Conductivity meter, Turbidity meter, PONAR grab sampler) and their significance.	2
5.	A project report on a visit to a Sewage treatment plant / Marine bio reserve / Freshwater Institutes.	3

TEACHERS NAME: Tanushree Das

SEMESTER: 4th sem (GE-1)

SL NO	COURSE NUMBER: GE-1 TOPIC: ENVIRONMENT AND PUBLIC HEALTH	Approximate number of classes to be taken to complete
	THEORY	
1.	Introduction.	5
2.	Climate change.	7
3.	Pollution	7
4.	Waste Management Technologies	8
5.	Diseases	7
	PRACTICAL	
1.	To determine pH, Cl, SO ₄ , NO ₃ in soil and water samples from different locations.	10

TEACHERS NAME Tanushree Das

SEMESTER : 4th sem

SL NO	COURSE NUMBER : DSC-1D (CC-1) TOPIC : Genetics and Evolutionary Biology	Approximate number of classes to be taken to complete
1.	Introduction to Genetics.	3
2.	Mendelian Genetics and its Extension.	4
3.	Linkage, crossing over and chromosomal mapping	5
4.	Mutations.	4
5.	Sex Determination.	5
6.	History of Life.	3
7.	Introduction to Evolution Theories.	4
8.	Direct Evidences of Evolution	3
9.	Processes of Evolutionary change	2
10.	Species Concept	3
11.	Macro evolution	2
12.	Extinction	3
PRACTICAL		
1.	Study of Mendelian inheritance and gene interactions (Non-mendelian inheritance) using suitable examples. Verify the results using chi square test.	4
2.	Study of linkage, recombination, gene mapping using the data	3
3.	Study of human karyotypes (normal and abnormal)	3
4.	Study of fossil evidences from plaster cast models and pictures.	2
5.	Study of homology and analogy from suitable specimens/pictures	2
6.	charts	1
7.	visit to Natural History Museum and submission of report.	2

TEACHERS NAME: Tanushree Das

SEMESTER: 4th sem (SEC2)

SL NO

COURSE NUMBER: SEC-2

TOPIC: AQUARIUM FISH KEEPING

Approximate number
of classes to be
taken to complete

THEORY

- | | | |
|----|--|---|
| 1. | Introduction to Aquarium fish keeping. | 5 |
| 2. | Biology of Aquarium fishes. | 6 |
| 3. | Food and feeding of Aquarium fishes. | 4 |
| 4. | Fish Transportation. | 1 |
| 5. | Maintenance of Aquarium. | 5 |

SHARNAMOYEE JOGIENDRANATH MAHAVIDYALAYA
 DEPARTMENT OF ZOOLOGY
 DEPARTMENTAL TEACHING PLAN FOR SESSION 2023-2024

TEACHERS NAME: Tanushree Das

SEMESTER: 2nd SEM

SL NO	COURSE NUMBER - MAJOR B1 TOPIC: DIVERSITY OF ANIMAL WORLD	APPROXIMATE number of classes to be taken to complete
THEORY		
1.	Animal architecture and the Bauplan concept.	7
2.	Basics of systematics and classification	7
3.	Protists	5
4.	Diversity in non chordates.	16
5.	Diversity in Hemichordata and lower chordates.	5
6.	Diversity in vertebrates	16
PRACTICAL		
1.	Basic requirements for Laboratory work; knowledge about the parts of microscope with their function and setting of microscope.	2
2.	Idea of fixatives and preservatives for preparation to study the museum specimen.	2
3.	Study of animals through identification of models, photographs, slides and museum specimens.	2
4.	Study of animals in nature.	2
5.	Preparation of key for identification of venous and non-venomous snakes.	2
6.	Assessment of relationship by constructing a cladogram using any five animals	2

TEACHERS NAME : Tanushree Das
SEMESTER : 2nd MAJOR BI (SEC)

SL NO	COURSE NUMBER : SEC-2 TOPIC: AQUARIUM FISH KEEPING	Approximate number of classes to be taken to complete
1.	Identification of fresh water indigenous and exotic ornamental fishes. Identification of marine indigenous and exotic aquarium fishes.	5
2.	Construction and installation of Modern age aquahome.	4
3.	Studies of Aquarium plants.	4
4.	Feed formation and preparation of pelleted diet for aquarium fishes. Live fish food organism for ornamental fishes.	4
5.	Ornamental fish breeding practice.	5
6.	Studies on different disease of ornamental fishes.	5
7.	Field visit to an ornamental fish farm and preparation of a field report.	4

TEACHERS NAME : Tanushree Das
 SEMESTER : 2nd sem (Minor-II)

SL NO	COURSE NUMBER : MINOR-II TOPIC : INSECT VECTOR AND DISEASE	Approximate number of classes to be taken to complete
<u>Theory</u>		
1.	Introduction to insects.	5
2.	vector and vector bionomics.	7
3.	Insects as vectors	7
4.	Dipteran as Disease vectors	9
5.	siphonaptera as Disease vectors.	7
6.	siphunculata as Disease vectors.	7
7.	Hemiptera as Disease vectors.	7
8.	vector management	7
<u>Practical</u>		
1.	Study of mouth parts of different Insects.	2
2.	Study of following insect vectors through permanent slides or photographs.	3
3.	Study of different disease transmitted by above insect vectors	3
4.	Submission a project report on any one of the insect vectors and disease transmitted.	3

Tanushree Das
 13/10/23
PRINCIPAL
 Principal

Swarnamoyee Jogendranath Mahavidyalaya
 Amdabad :: Purba Medinipur :: Pin-721650.

T. Das 13.10.23

Head of the Department,
JOD
 Department of Zoology
 Swarnamoyee Jogendranath Mahavidyalaya
 Amdabad, P.S.- Nandigram, Purba Medinipur, Pin- 721650