


TEACHING PLAN (2023-2024)
DR. CHIRANJIT BARUAH
ASSISTANT PROFESSOR
DEPARTMENT OF ZOOLOGY
MADHAB CHOUDHURY COLLEGE, BARPETA


Head of the Dept. Of Zoology
M.C. College, Barpeta


Principal,
Madhab Choudhury College
Barpeta

2023-2024

MADHAB CHOUDHURY COLLEGE, BARPETA		
TEACHING/ LESSON PLAN		
SESSION: 2023-24 ODD SEMESTER		
NAME OF THE TEACHER:	Dr. Chiranjit Baruah	
DEPARTMENT	Zoology	
DESIGNATION:	Assistant Professor	
COURSE :	FYUGP 1 st Semester	
PAPER NAME:	DIVERSITY OF NON-CHORDATES	
PAPER CREDIT:	THEORY (Credits 3 + 1)	
PAPER CODE:	ZOO-1011	
UNIT/ TOPIC	MARKS ASSIGNED:	
Unit 1: General characteristics and classification upto classes of Cnideria Unit 2: General characteristics and classification upto classes of Arthropoda. Unit 3: Polymorphism in Cnideria. Corals and coral reef formation. Vision and respiration in Arthropods	TENTATIVE DATES	August to November 2023
	NUMBER OF CLASSES	9 X 3 = 27
	LEARNING OUTCOMES	Students shall learn about the importance of systematics, taxonomic and structural organization of animals. Understand evolutionary history and relationships of different non-chordates through functional and structural affinities.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	FYUGP 1st Semester	
PAPER NAME:	BASICS IN LIFE SCIENCE	
PAPER CREDIT:	Credit: 3	
PAPER CODE:	Code: -MDC5 (1)	
UNIT/ TOPIC	MARKS ASSIGNED:	0.3
A Unit 3: Basics in Economic Zoology Sericulture: Origin and history; Races and classification of silkworm, economic advantages; scope of sericulture in India. Domesticated and semi domesticated silkworm of NE India and their economic viability. Culture of Silkworm. Propagation of food plants of Silk worm. Sericulture as and entrepreneurship venture. Natural dye of silk.	TENTATIVE DATES	01/08/23 – 25/11/23
	NUMBER OF CLASSES	3
	LEARNING OUTCOMES	Students are able to know about the prospects and advantages of Sericulture in North East India.
	PLANNED ACTIVITIES	Explaining the topics with diagram Participatory Class Periodical assessment Interaction among students through peer teaching, group discussion etc.
	RESOURCE/ MATERIALS	Study materials in google classroom, reference book
	ASSESMENT	Class test, quiz, group discussion
	REFLECTION	
	ACTION TAKEN	Remedial class, question analysis, direct interaction with slow learner

COURSE :	B.Sc. 3 rd Semester (hons)	
PAPER NAME:	DIVERSITY OF CHORDATA THEORY (Credits 4)	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-HC-3016	
UNIT/ TOPIC	MARKS ASSIGNED:	
Unit 1: Introduction to Chordates 2 General characteristics and outline classification	TENTATIVE DATES	August 2023
	NUMBER OF CLASSES	3
	LEARNING OUTCOMES	The students will have a knowledge on various classes of animals ranging from Protista to Pseudocoelomates. Basis of classification of these animals.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 3 rd Semester (hons)	
PAPER NAME:	CORE COURSE VI ANIMAL PHYSIOLOGY: CONTROLLING AND COORDINATING SYSTEMS (THEORY)	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	CODE: ZOO-HC-3026	
UNIT/ TOPIC	MARKS ASSIGNED:	
Unit 3: Nervous System 10 Structure of neuron, resting membrane potential, Origin of action potential and its propagation across the myelinated and unmyelinated nerve fibers. Types of synapse, Synaptic transmission and,	TENTATIVE DATES	September to October 2023
	NUMBER OF CLASSES	8
	LEARNING OUTCOMES	To generate knowledge on co-ordination between various tissue systems of animals and molecular and chemical basis of muscle contraction, nerve impulse transmission and bone development.

Neuromuscular junction; Reflex action and its types - reflex arc; Physiology of hearing and vision.		
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 3 rd Semester (hons)	
PAPER NAME:	FUNDAMENTALS OF BIOCHEMISTRY THEORY	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-HC-3036	
UNIT/ TOPIC	MARKS ASSIGNED: -	
Unit5: Enzymes 18 Nomenclature and classification; Cofactors; Specificity of enzyme action; Isozymes; Mechanism of enzyme action; Enzyme kinetics; Factors affecting rate of enzyme-catalyzed reactions; Derivation of Michaelis-Menten equation, Concept of Km and Vmax, Lineweaver- Burk plot; Multi-substrate reactions; Enzyme inhibition; Allosteric enzymes and their kinetics; Regulation of enzyme action.	TENTATIVE DATES	October to November, 2023
	NUMBER OF CLASSES	8
	LEARNING OUTCOMES	To generate knowledge on Enzyme classification, mechanism of action, Kinetics and their regulation. To give Practical knowledge on factors associated with enzyme action
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 3 rd Semester (regular)	
PAPER NAME:	CORE COURSE III PHYSIOLOGY AND BIOCHEMISTRY	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-HG/RC-3016	
UNIT/ TOPIC	MARKS ASSIGNED:	
Uni 7: Carbohydrate Metabolism 8 Glycolysis, Krebs Cycle, Pentose phosphate pathway, Gluconeogenesis, Glycogen metabolism, Review of electron transport chain. Unit 10: Enzymes 6 Introduction, Mechanism of action, Enzyme Kinetics, Inhibition and Regulation	TENTATIVE DATES	August to November 2023
	NUMBER OF CLASSES	12
	LEARNING OUTCOMES	The students shall learn about metabolism of Carbohydrate, Lipid and Protein. Develop understanding the mechanism of enzyme action, enzyme kinetics and regulation.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 5 th Semester (hons)	
PAPER NAME:	CORE COURSE XI MOLECULAR BIOLOGY	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-HC-5016	
UNIT/ TOPIC	MARKS ASSIGNED:	
Unit3:Transcription 10 RNA polymerase and transcription Unit, mechanism of transcription in prokaryotes and eukaryotes, synthesis of rRNA and mRNA, transcription factors.	TENTATIVE DATES	August- September, 2023
	NUMBER OF CLASSES	14
	LEARNING OUTCOMES	To generate idea on what is transcription and how does it occur and what are post transcriptional processes.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 5 th Semester (hons)	
PAPER NAME:	CORE COURSE XII CODE: ZOO-HC-5026 PRINCIPLES OF GENETICS	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	CODE: ZOO-HC-5026	
UNIT/ TOPIC	MARKS ASSIGNED:	
Principles of inheritance, Incomplete dominance and co-dominance, Multiple alleles, Lethal alleles, Epistasis, Pleiotropy, Sex-linked, sex-influenced and sex-limited characters inheritance.	TENTATIVE DATES	September to October, 2023
	NUMBER OF CLASSES	12
	LEARNING OUTCOMES	Students will be able to generate idea on Mendelian genetics. Generate idea on sex chromosomal inheritance, Polygenic inheritance. Practical idea on application of Mendel's laws,
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/	Prescribed books and online materials

	MATERIALS	
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 5 th Semester (hons)
PAPER NAME:	ENDOCRINOLOGY THEORY (Credits 4)
PAPER CREDIT:	Credit: 3 (T) + 1 (P)
PAPER CODE:	CODE: ZOO-HE-5036

UNIT/ TOPIC	MARKS ASSIGNED:	
Unit3:Peripheral Endocrine Glands 18 Structure, Hormones, Functions and Regulation of Thyroid gland, Parathyroid, Adrenal, Pancreas, Ovary and Testis Hormones in homeostasis, Disorders of endocrine glands	TENTATIVE DATES	October to November 2023
	NUMBER OF CLASSES	12
	LEARNING OUTCOMES	To make students aware about structure and functions of various endocrine glands, They shall be able to develop idea on regulation of hormone actions. Students will be able to identify different endocrine glands in animals.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 5 th Semester (regular)	
PAPER NAME:	DSE 2 APPLIED ZOOLOGY THEORY (CREDITS 4)	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	CODE: ZOO-RE-5026	
UNIT/ TOPIC	MARKS ASSIGNED:	
Unit 5: Parasitic Helminthes 5 Life history and pathogenicity of Ancylostoma duodenale and Wuchereria bancrofti. Unit 6: Insects of Economic Importance 8 Biology, Control and damage caused by Helicoverpa armigera, Pyrrilla perpusilla and Papilio demoleus, Callosobruchus chinensis, Sitophilus oryzae and Tribolium castaneum.	TENTATIVE DATES	August to November, 2023
	NUMBER OF CLASSES	14
	LEARNING OUTCOMES	To generate an idea about Host-parasite Relationship. To generate a brief on Epidemiology of Diseases and their causing agents. To identify and study the life cycle of different medically and economically important insects.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials. Collection of pests and pest effected plant parts from surrounding areas.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 4 th Semester (hons)	
PAPER NAME:	NON MULBERRY SERICULTURE	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-SE-5014	
UNIT/ TOPIC	MARKS ASSIGNED:	
Various aspects of Non Mulberry Sericulture	TENTATIVE DATES	August to November, 2023
	NUMBER OF CLASSES	

	LEARNING OUTCOMES	To gain knowledge on the life history and rearing of non-mulberry silk worms. To develop basic ideas on food of silk worms, diseases and their control. To become acquainted with the food plants of non-mulberry silk worms. Knowledge on employment generation and potential of sericulture.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

EVEN SEMESTER 2023-2024

EVEN SEMESTER 2023-2024

COURSE :	B.Sc.2nd Semester (hons)	
PAPER NAME:	ZOO-HC-2016 NON-CHORDATES II: COELOMATES	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	ZOO-HC-2016	
UNIT/ TOPIC	MARKS ASSIGNED:	
ZOO-HC-2016 NON- CHORDATES II: COELOMATES Unit 3: Arthropoda: General characteristics and Classification upto classes Vision and Respiration in Arthropoda. Metamorphosis in Insects. Social life in bees and	TENTATIVE DATES	February to April 2023
	NUMBER OF CLASSES	10
	LEARNING OUTCOMES	The students will have a knowledge on classes of Arthropoda and Onychophora. Basis of classification of these animals.

termites.

Unit 4: Onychophora:

General characteristics and
Evolutionary significance

Specific characters of these classes of animals. Functional and physiological aspects of these animal groups. Gain knowledge on some special physiological and behavioural aspects of such animal groups.

PLANNED
ACTIVITIES

Class room teaching with audio visual aids along with study materials.

RESOURCE/
MATERIALS

Prescribed books and online materials

ASSESSMENT

Through Quizzes, tests.

REFLECTION

ACTION TAKEN

COURSE :

B.Sc.2nd Semester (hons)

PAPER NAME:

CELL BIOLOGY

PAPER CREDIT:

Credit: 3 (T) + 1 (P)

PAPER CODE:

Code: ZOO-HC-2026

UNIT/ TOPIC

**MARKS
ASSIGNED:**

**Unit 1: Over view of
Cells: Prokaryotic and
Eukaryotic cells, Virus,
Viroids, Mycoplasma,
Prions**

TENTATIVE
DATES

April to May 2024

NUMBER OF
CLASSES

8

LEARNING
OUTCOMES

Students will have an idea of different types of cells and acellular organisms.

PLANNED
ACTIVITIES

Class room teaching with audio visual aids along with study materials.

RESOURCE/
MATERIALS

Prescribed books and online materials

ASSESSMENT

Through Quizzes, tests.

REFLECTION

ACTION TAKEN

COURSE :

B.Sc.2nd Semester (G+R)

PAPER NAME:

**COMPARATIVE ANATOMY AND DEVELOPMENTAL
BIOLOGY OF VERTEBRATES**

PAPER CREDIT:

Credit: 3 (T) + 1 (P)

PAPER CODE:

Code: ZOO-HG/RC-2016

UNIT/ TOPIC	MARKS ASSIGNED:	
Unit 1: Integumentary System 4 Derivatives of integument w.r.t. glands and digital tips Unit 4: Respiratory System 5 Brief account of Gills, lungs, air sacs and swim bladder Unit 8: Sense Organs 3 Types of receptors	TENTATIVE DATES	April to May 2024
	NUMBER OF CLASSES	8
	LEARNING OUTCOMES	Successive stages of modification of specific organs and organ systems in groups of vertebrates i.e. Succession of organs in various groups of vertebrates
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 4 th Semester (hons)	
PAPER NAME:	COMPARATIVE ANATOMY OF VERTEBRATES	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-HC-4016	
UNIT/ TOPIC	MARKS ASSIGNED:	
Unit 1: Integumentary System: Structure, functions and derivatives of integument Unit 2: Skeletal System Overview of axial and appendicular skeleton, Jaw	TENTATIVE DATES	January to May 2024
	NUMBER OF CLASSES	12
	LEARNING OUTCOMES	Students shall develop an overview on different organ systems of vertebrates. They will have an idea about comparative account on different

suspensorium, Visceral arches		organs.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 4 th Semester (hons)
PAPER NAME:	ANIMAL PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
PAPER CREDIT:	Credit: 3 (T) + 1 (P)
PAPER CODE:	Code: ZOO-HC-4026

UNIT/ TOPIC	MARKS ASSIGNED:	
Unit 1: Physiology of Digestion: Structural organization and functions of gastrointestinal tract and associated glands; Mechanical and chemical digestion of food; Absorptions of carbohydrates, lipids, proteins, water, minerals and vitamins; Hormonal control of secretion of enzymes in Gastrointestinal tract.	TENTATIVE DATES	January to May 2024
	NUMBER OF CLASSES	12
	LEARNING OUTCOMES	Knowledge on physiology of digestion.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 4 th Semester (hons)	
PAPER NAME:	BIOCHEMISTRY OF METABOLIC PROCESSES	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-HC-4036	
UNIT/ TOPIC	MARKS ASSIGNED:	
Unit 2: Carbohydrate	TENTATIVE DATES	March to May 2024

Metabolism: Sequence of reactions and regulation of glycolysis, Citric acid cycle, Phosphate pentose pathway, Gluconeogenesis, Glycogenolysis and Glycogenesis.	NUMBER OF CLASSES	
	LEARNING OUTCOMES	Basic ideas on sequence of reactions and regulation of carbohydrate, lipid and protein metabolism. Idea on ATP generation through ETS. Practical knowledge on activity of different enzymes.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 4 th Semester (hons)	
PAPER NAME:	NON MULBERRY SERICULTURE	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-SE-4014	
UNIT/ TOPIC	MARKS ASSIGNED:	
Various aspects of Non Mulberry Sericulture	TENTATIVE DATES	March to May 2024
	NUMBER OF CLASSES	
	LEARNING OUTCOMES	To gain knowledge on the life history and rearing of non-mulberry silk worms. To develop basic ideas on food of silk worms, diseases and their control. To become acquainted with the food plants of non-mulberry silk worms. Knowledge on employment generation and potential of sericulture.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.

	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 4 th Semester (regular)	
PAPER NAME:	CORE COURSE IV GENETICS AND EVOLUTIONARY BIOLOGY	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-HG/RC-4016	
UNIT/ TOPIC	MARKS ASSIGNED:	20
Unit 2: Mendelian Genetics and its Extension 8 Principles of Inheritance, Chromosome theory of inheritance, Incomplete dominance and codominance, Multiple alleles, Lethal alleles, Epistasis, Pleiotropy, sex linked inheritance, extra-chromosomal inheritance Unit 5: Sex Determination 4 Chromosomal mechanisms, dosage compensation Unit 8: Direct Evidences of Evolution 5 Types of fossils, Incompleteness of fossil record, Dating of fossils, Phylogeny of horse	TENTATIVE DATES	January to May 2024
	NUMBER OF CLASSES	20
	LEARNING OUTCOMES	To develop ideas about genetics and its different aspects. To develop basic ideas about the causes of evolution. To develop knowledge on genetic mechanism related to evolutionary changes.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 6 th Semester (hons)	
PAPER NAME:	DEVELOPMENTAL BIOLOGY	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-HC-6016	
UNIT/ TOPIC	MARKS ASSIGNED:	10
Unit 5: Implications of Developmental Biology 8 Teratogenesis: Teratogenic agents and their effects on embryonic development; In vitro fertilization, Stem cell (ESC), Amniocentesis	TENTATIVE DATES	February to March 2024
	NUMBER OF CLASSES	10
	LEARNING OUTCOMES	Students will also acquire knowledge on implications of developmental biology like Teratogenesis, Invitro fertilization and Stem cell, and Amniocentesis.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 6 th Semester (hons)	
PAPER NAME:	CORE COURSE XIV EVOLUTIONARY BIOLOGY	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-HC-6026	
UNIT/ TOPIC	MARKS ASSIGNED:	10
Unit3: (10) Evidences of Evolution Fossil record (types of fossils, transitional forms, geological time scale, evolution of horse, Molecular (universality of genetic code and protein synthesising machinery, three	TENTATIVE DATES	March to May 2024
	NUMBER OF CLASSES	18
	LEARNING OUTCOMES	Generate idea about the origin of life. Be able to understand and analyse the various evidences of evolution. Understand the role of variation in evolution.

domains of life, neutral theory of molecular evolution, molecular clock, example of globin gene family, rRNA/cyt c	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials.
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	

COURSE :	B.Sc. 6 th Semester (hons)	
PAPER NAME:	DCE 3 AQUATIC BIOLOGY	
PAPER CREDIT:	Credit: 3 (T) + 1 (P)	
PAPER CODE:	CODE: ZOO-RE-6016 THEORY	
UNIT/ TOPIC	MARKS ASSIGNED:	
UNIT 1: Aquatic Biomes Biomes Brief introduction of the aquatic biomes: Freshwater ecosystem (lakes, wetlands, streams and rivers), estuaries, intertidal zones, oceanic pelagic zone, marine benthic zone and coral reefs. UNIT 3: Marine Biology Origin and classification, Lake as an Ecosystem, Lake morphometry, Physico-chemical Characteristics: Light, Temperature, Thermal stratification, Dissolved Solids, Carbonate, Bicarbonates, Phosphates and Nitrates. UNIT 3: Marine Biology Salinity and density of Sea water, Continental shelf, Adaptations of deep sea organisms, Coral reefs, Sea weeds.	TENTATIVE DATES	-
	NUMBER OF CLASSES	
	LEARNING OUTCOMES	To familiarize the students about Aquatic resources. Management of aquatic resources. Understand pollution of aquatic resources and their control measures.
	PLANNED ACTIVITIES	Class room teaching with audio visual aids along with study materials.
	RESOURCE/ MATERIALS	Prescribed books and online materials.
	ASSESSMENT	Through Quizzes, tests.
	REFLECTION	
	ACTION TAKEN	


TEACHING PLAN, 2023-2024

Runu Swargiary

Assistant Professor

Department Of Zoology

Madhab Choudhury College, Barpeta


Head of the Dept of Zoology
M.C. College, Barpeta

Y-3

Principal,
Madhab Choudhury College
Barpeta

ODD SEMESTER:

MADHAB CHOUDHURY COLLEGE, BARPETA		
TEACHING/ LESSION PLAN		
SESSION: 2023-24		
NAME OF THE TEACHER:	Runu Swargiary	
DEPARTMENT	Zoology	
DESIGNATION:	Assistant Professor	
COURSE :	FYUGP 1 st Semester	
PAPER NAME:	Core A1: DIVERSITY OF NON-CHORDATES	
PAPER CREDIT:	3 (T) + 1 (P)	
PAPER CODE:	Code: ZOO-1011	
UNIT/ TOPIC	MARKS ASSIGNED:	2.4
Unit 1: General characteristics and Classification up to classes of Protista Unit 2: General characteristics and classification up to classes of Annelida, Metamerism. Unit 3: Locomotion and Reproduction in Protista. Excretion in Annelida Practical : 1. Study of whole mount of Euglena, Amoeba and Paramoecium collected from different water sources. 2. Study of minimum of two representatives	TENTATIVE DATES	4 th August to 17 th November
	NUMBER OF CLASSES	35
	LEARNING OUTCOMES	Students are able to learn the - -classifying characteristics and structural organization of different classes of protista and annelida - the different locomotory organelles and modes of locomotion found in Protists. - the different types of reproduction processes found in protists. - metamerism in annelida - the identifying characteristics of Euglena, Amoeba and Paramoecium - developed teamwork culture and communication skills.
	PLANNED ACTIVITIES	- make students to recall their previous knowledge about the topics.

(specimen/slide/model) Of each phylum of non-chordates. 4.T.S through pharynx, gizzard and typhlosolar intestine of earthworm.		<ul style="list-style-type: none"> - explaining the topics with examples and diagrams during the class. - making the class students participatory. - adopting periodical assessment measures.
	RESOURCE/ MATERIALS	Study materials are provided in Google Classroom.
	ASSESSMENT	Through class tests, presentation, group discussion and oral questions etc.
	REFLECTION	
	ACTION TAKEN	Engaging students in thinking abilities, question analysis, interactive discussions, revision class.

COURSE :	FYUGP 1 st Semester	
PAPER NAME:	Basics in Life Sciences	
PAPER CREDIT:	3	
PAPER CODE:	Code: MDC -5 (1)	
UNIT/ TOPIC	MARKS ASSIGNED:	0.8
Unit 3: Basics in Economic Zoology 3.1Aquaculture:Basic principles of aquaculture, Objectives of aquaculture, Principles of Aquaculture, Advantages, Prospects & Challenges of Aquaculture in North Eastern States, Diversification of Aquaculture, Induced breeding, Larval rearing, Integrated Fish Farming, Composite Fish Farming, Pearl Culture, Prawn culture, Crustacean and Crab Culture, Postharvest Technology, Fish preservation:	TENTATIVE DATES	10 th August to 8 th December
	NUMBER OF CLASSES	09
	LEARNING OUTCOMES	Students are able to learn about - -the aim and objectives of aquaculture practices. - Advantages, Prospects & Challenges of Aquaculture in North Eastern States -aquaculture diversification -Postharvest Technology, -Fish preservation: principle & practices etc.
	PLANNED ACTIVITIES	- Explaining the topics with examples and diagrams during the class. - Making the class students participatory.

principle & practices		- Adopting periodical assessment measures.
	RESOURCE/ MATERIALS	Study materials are provided in Google Classroom.
	ASSESSMENT	Through class tests, presentation, group discussion and oral questions etc.
	REFLECTION	
	ACTION TAKEN	Engaging students in thinking abilities, question analysis, interactive discussions, revision class.

COURSE :	FYUGP 1 st Semester	
PAPER NAME:	Skill enhancement course: Apiculture	
PAPER CREDIT:	2(T)+1(P)	
PAPER CODE:	Code: SEC	
UNIT/ TOPIC	MARKS ASSIGNED:	0.7
Unit 2: Rearing of Bees Beehives – Newton and Langstroth, Bee Pasturage, Selection of Bee Species for Apiculture, Methods of Extraction of Honey (Indigenous and Modern)	TENTATIVE DATES	20 th August to 1 st December
	NUMBER OF CLASSES	08
	LEARNING OUTCOMES	Students are able to learn about - -the different types of beehives, Bee Pasturage. - selection criteria of Bee Species for Apiculture. - Honey extracting methods.
	PLANNED ACTIVITIES	- Explaining the topics with diagrams. - Making the class students participatory. - Adopting periodical assessment measures.
	RESOURCE/ MATERIALS	Study materials are provided in Google Classroom.
	ASSESMENT	Through class tests, presentation, group discussion and oral questions etc.
	REFLECTION	
	ACTION TAKEN	Engaging students in thinking abilities, question analysis, interactive discussions,

		revision class.
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COURSE:	B.Sc. 3 rd Semester (Honours)	
PAPER NAME:	Diversity of Chordata	
PAPER CREDIT:	4(T)+2(P)	
PAPER CODE:	ZOO-HC-3016	
UNIT/ TOPIC	MARKS ASSIGNED:	1.3
Unit 5: Pisces General characteristics of Chondrichthys and Osteichthys, Classification upto order, Migration, Osmoregulation and parental care in fishes. Unit 6: Amphibia Origin of Tetrapoda, General characters and classification upto order, Parental care in Amphibia. Practical: Study of specimens – Agnatha -Petromyzone, Myxine Fishes- Scoliodon to Flat fish Mounting of Weberian ossicles of fish.	TENTATIVE DATES	1 st August to 25 th October
	NUMBER OF CLASSES	25
	LEARNING OUTCOMES	Students are able to learn - - the general and classifying characteristics of Pisces and Amphibia - the migration, osmoregulation found in fishes, parental care in fishes and amphibians etc. - the identify the species with their distinctive character study, enhancement of drawing ability - able to dissect Weberian ossicles, learn the mounting procedures, - developed teamwork culture and communication skills.
	PLANNED ACTIVITIES	- Make students to recall their previous knowledge about the fishes and amphibians. - Explaining the topics with examples and diagrams during the class. - Making the class students participatory. - Adopting periodical assessment measures. - Displaying the specimens systematically. - Demonstration of the dissecting and mounting procedure of Weberian ossicles of fish

RESOURCE/ MATERIALS	Reference books, providing study materials in the Google Classroom.
ASSESSMENT	Through class tests, presentation, group discussion and oral questions etc.
REFLECTION	
ACTION TAKEN	Engaging students in thinking abilities, question analysis, interactive discussions, revision class. Students are made to redraw and rewrite for perfection.

COURSE:	B.Sc 3rd Semester (Honours)	
PAPER NAME:	Animal Physiology: Controlling and Coordination System	
PAPER CREDIT:	4(T)+2(P)	
PAPER CODE:	ZOO-HC-3026	
UNIT/ TOPIC	MARKS ASSIGNED:	1.2
Unit 4: Muscle Histology of different types of muscle; Ultra structure of skeletal muscle; Molecular and chemical basis of muscle contraction, Characteristics of muscle twitch, Motor unit, summation and tetanus. Practicals: Study of permanent slides	TENTATIVE DATES	26 th October to 8 th November
	NUMBER OF CLASSES	6
	LEARNING OUTCOMES	Students are able to learn about- -different types of muscle found in animals. - ultra structure of skeletal muscle and its physiology of contraction etc. - identification characteristics of the slides of mammalian skin, cartilage , bone, T.S of endocrine glands etc.
	PLANNED ACTIVITIES	- Make students to recall their previous knowledge about muscles. - Explaining the topics with examples and diagrams during the class. - Making the class students participatory. - Adopting periodical assessment measures.
	RESOURCE/ MATERIALS	Reference books, providing study materials in the Google Classroom.

	ASSESSMENT	Through class tests, presentation, group discussion and oral questions etc.
	REFLECTION	
	ACTION TAKEN	Engaging students in thinking abilities, question analysis, interactive discussions, revision class. Students are made to redraw and rewrite for perfection.

COURSE:	B.Sc 3rd Semester (Honours)	
PAPER NAME:	Fundamentals of Biochemistry	
PAPER CREDIT:	4(T)+2(P)	
PAPER CODE:	ZOO-HC-3036	
UNIT/ TOPIC	MARKS ASSIGNED:	0.8
Unit 2: Lipids Structure and significance, Physiologically important saturated and unsaturated fatty acids, Tri-acylglycerols, Phospholipids, Glycolipids, Steroids.	TENTATIVE DATES	10 th November to 20 th November
	NUMBER OF CLASSES	4
	LEARNING OUTCOMES	Students are able to know about different types of Lipids and its importance in human health.
	PLANNED ACTIVITIES	<ul style="list-style-type: none"> - Make students to recall their previous knowledge about lipids. - Explaining the topics elaborately with examples. - Making the class students participatory. - Adopting periodical assessment measures.
	RESOURCE/ MATERIALS	Reference books, providing study materials in the Google Classroom.
	ASSESSMENT	Through class tests, presentation, group discussion and oral questions etc.
	REFLECTION	
	ACTION TAKEN	Engaging students in thinking abilities, question analysis, interactive discussions, revision class.

COURSE:	B.Sc. 3 rd Semester (RE+GE)	
PAPER NAME:	Physiology and Biochemistry	
PAPER CREDIT:	4(T)+2(P)	
PAPER CODE:	ZOO-RC-3016	
UNIT/ TOPIC	MARKS ASSIGNED:	1.3
Unit 1: Nerve and Muscle Ultra-structure of skeletal muscle, Molecular and chemical basis of muscle contraction. Unit 3: Respiration Pulmonary ventilation, Respiratory volumes and capacities, Transport of oxygen and carbon dioxide in blood. Practicals: Study of permanent histological sections Study of permanent slides	TENTATIVE DATES	5 th August to 10 th November
	NUMBER OF CLASSES	13
	LEARNING OUTCOMES	Students are able to know about - -ultrastructure of skeletal muscle . -molecular and chemical basis of muscle contraction. - respiratory process of human being.
	PLANNED ACTIVITIES	- Make students to recall their previous knowledge about the nerves, muscles and respiration. - Explaining the topics with examples and diagrams during the class. - Making the class students participatory. - Adopting periodical assessment measures.
	RESOURCE/ MATERIALS	Reference books, providing study materials in the Google Classroom.
	ASSESMENT	Through class tests, presentation, group discussion and oral questions etc.
	REFLECTION	
	ACTION TAKEN	Engaging students in thinking abilities, question analysis, interactive discussions, revision class.