

DEPARTMENT OF ZOOLOGY**TEACHING PLAN****SESSION 2025**

Unit no.	Unit Name	Lecture	Total Lecture	Detailed Topic	Instructor Name	Tentative Week
Unit-1 (MAJOR)	Cell Biology	7	15	Prokaryotic and Eukaryotic cells, Virus, Viroids, Mycoplasma, Prions	Dr. Pooja Swargiary	4
		8		Various models of plasma membrane structure, Active and Passive transport, Facilitated transport, Cell junctions.	Jaydeep Nath	4
Unit-2 (MAJOR)	Structure and Function of different cell components	8	15	Endoplasmic Reticulum, Golgi Apparatus, Lysosomes, Mitochondria and Peroxisomes, Microtubules, Microfilaments and Intermediate filament	Dr. Pooja Swargiary	6

7				Structure of Nucleus: Nuclear envelope, Nuclear pore complex, Nucleolus, Chromatin: Euchromatin and Heterochromatin and packaging (nucleosome); Cell Division: Mitosis, Meiosis, Cell cycle and its regulation and Cell Signaling: Receptors (types) and signaling molecules	Jaydeep Nath	6
Unit 3 (MAJOR)	Histology	15	15	Structure of epithelium, connective tissue, cartilage, bone, smooth, striped and cardiac muscles, nervous tissue and histology of organs: gonads, liver, lung, pancreas and kidney in mammals. Basic principles of fixation and staining; Classification, Composition and properties of dye, Use of mordants and metachromatic dyes. Principle and procedure of histological staining of carbohydrates, amino acids, proteins, lipids and nucleic acids.	Binong Timung	8
Unit no.	Unit Name	Lecture	Total Lecture	Detailed Topic	Instructor Name	Tentative Week
Unit 1 (MINOR)	Overview of Cells	6	6	Prokaryotic and Eukaryotic cells, Virus, Viroids, Mycoplasma, Prions	Dr. Pooja Swargiary	4

Unit-2 (MINOR)	Cell Organelles	10	25	Endomembrane System, Structure and Functions: Endoplasmic Reticulum, Golgi Apparatus, Lysosomes, Mitochondria: Structure, Semi-autonomous nature, Peroxisomes. Cytoskeleton: Structure and Functions: Microtubules, Microfilaments and Intermediate filaments.	Dr. Pooja Swargiary	8
	Cell Division	15		Nucleus: Structure and Function of Nucleus, Chromatin: Euchromatin and Heterochromatin. Mitosis, Meiosis, Cell cycle and its regulation.	Jaydeep Kr. Nath	10
Unit-3 (MINOR)	Nucleic Acids	14	14	Salient features of DNA and RNA, Watson and Crick model of DNA. DNA Replication: Replication in prokaryotes and eukaryotes, mechanism of DNA replication, Semi-conservative, bidirectional and semi-discontinuous replication. Transcription. RNA polymerase and transcription Unit, mechanism of transcription in prokaryotes and eukaryotes.		10

Unit-1 (SEC)	Introduction: Sericulture	10	10	Definition, history and present status of Mulberry and Non-Mulberry Sericulture; Silk route. Varieties of Silk; Types and distribution of non-mulberry or wild or vanya sericigenous insects in N-E India. Life cycle of silkworm- Eri and Muga. Structure of silk gland and Nature of Silk. Food plants of Eri and Muga Silkworm.	Jaydeep Kr. Nath	8
Unit-2 (SEC)	Rearing Operation	10	10	Rearing house/Site and rearing appliances. Disinfectants: Formalin, bleaching powder. Rearing technology: Early age and Late age rearing. Environmental conditions in rearing-temperature, Humidity, Light and Air. Types of mountages. Harvesting and storage of cocoons. Spinning and Reeling of silk	Binong Timung	8

Unit 3	Pests and Diseases	10	10	<p>Pests of eri and muga silkworm. Pathogenesis of eri and muga silkworm diseases: Protozoan, viral, fungal and bacterial. Prevention and control measures of pests and diseases.</p> <p>Entrepreneurship in Non-Mulberry Sericulture: Varieties of Non-Mulberry Silk products and economics in India</p> <p>Prospectus of Non-Mulberry Sericulture in India: Non-Mulberry Sericulture industry in different states, employment generation and potential</p>	Dr. Pooja Swargiary	8
Unit 1 (VAC)	Definition of Tourism	10	10	<p>Basic Components and types of Tourism: accessibility, attraction and accommodation; Motivation for Tourism; scope; leisure, recreation and tourism, and their interrelationship.</p> <p>Components of Tourist Resources: Tourist oriented resources, resident oriented resources, background of tourism resources and retrieval tourist resources. Tourism Demand and Supply: concept, unique features, constraint and opportunity in creating ideal destination</p>	Dr. Pooja Swargiary	8

Unit 2 (VAC)	Tourism Impacts	10	10	Economic impacts of Tourism: income and employment; Socio-cultural impacts of Tourism; Ecological and Environmental impacts of Tourism; Tourism planning: Concept, nature and type of tourism planning; Tourism policy of Assam; Planning for the development of a tourist destination;	Jaydeep Kr. Nath	8
Unit 3 (VAC)	Tour operator and Travel agency	10	10	Definition and types of Tour operator and Travel agency; Marketing: concept and definition and its significance in tourism industry; Basic concept of need, demand and services. Definition and types of tourist guide, Job description, duties and responsibilities of tourist guide: Importance of tourist guide in tourism industry; Income source of a tourist guide	Binong Timung	8