

**Department of Botany
Sarat Centenary College**

CBCS HONOURS

Teaching Assignment : 2022--2023

Semester-1

Core Course I: Microbiology and Phycology

Name of the teacher : Dr. K. M. Hasib

- Unit 1: Introduction to microbial world
- Unit 2: Viruses
- Unit 3: Bacteria
- Unit 4: Algae
- Unit 5: Cyanophyta and Xanthophyta
- Unit 6: Chlorophyta and Charophyta
- Unit 7: Phaeophyta and Rhodophyta
- Practical

Core Course II: Archegoniate

Name of the teacher : Dr. Quazi Taheruzzaman

- Unit 1: Introduction
- Unit 2: Bryophytes
- Unit 3: Type Studies
- Unit 4: Pteridophytes
- Unit 5: Type Studies- Pteridophytes
- Unit 6: Gymnosperms
- Practical

Semesterr-II

Core Course III: Mycology and Phytopathology

Name of the teacher : Dr. Quazi Taheruzzaman

- Unit 1: Introduction to true fungi
- Unit 2: Chytridiomycota and Zygomycota
- Unit 3: Ascomycota
- Unit 4: Basidiomycota
- Unit 5: Allied Fungi
- Unit 7: Symbiotic associations
- Unit 8: Applied Mycology
- Unit 9: Phytopathology
- Practical
- Plant Pathology
- Practical

Core Course IV: Morphology & Anatomy of Angiosperms

Name of the teacher : Dr. K. M. Hasib

- Unit 1: Introduction and scope of Plant Anatomy
- Unit 2: Structure and Development of Plant Body
- Unit 3: Tissues
- Unit 4: Apical meristems
- Unit 5: Vascular Cambium and Wood
- Unit 6: Adaptive and Protective Systems
- Unit 7: Leaves and Inflorescence

Unit 8: Flower, Fruit and Seed
Practical

Semesterr-III

Core Course 5 : Plant Ecology and Phytogeography

Name of the teacher : Dr. Quazi Taheruzzaman

Unit 1: Introduction
Unit 2: Soil
Unit 3: Water
Unit 4: Light, temperature, wind and fire
Unit 4: Ecosystem
Unit 6: Population ecology
Unit 7: Plant communities
Unit 8: Functional aspects of ecosystem
Unit 9: Phytogeography
Practical

Core Course 6 : Plant Systematics

Name of the teacher : Dr. Quazi Taheruzzaman

Unit 1: Significance of Plant systematics
Unit 2: Taxonomic hierarchy
Unit 3: Botanical nomenclature
Unit 4: Systems of classification
Unit 5: Biometrics, numerical taxonomy and cladistics
Unit 6: Phylogeny of Angiosperms
Practical

Core Course 7 : Economic Botany

Name of the teacher : Dr. K. M. Hasib

Unit 1: Origin of Cultivated Plants
Unit 2: Cereals
Unit 3: Legumes
Unit 4: Sources of sugars and starches
Unit 5: Spices
Unit 6: Beverages
Unit 7: Sources of oils and fats Unit 8: Natural Rubber Para-rubber: tapping, processing and uses.
Unit 9: Drug-yielding plants
Unit 10: Timber plants.
Unit 11: Fibers
Practical

SEC-1

Agricultural Botany

Name of the teacher : Dr. K. M. Hasib

Unit: 1 Plant physiology
Unit: 2 Organic farming
Unit:3 Plant breeding, Tissue culture and Biotechnology
Practical

Semester IV

Core Course 8: Palaeobotany & Palynology

Name of the teacher : Dr. Quazi Taheruzzaman

Unit-1. Introduction
Unit-2. Definition of fossil
Unit-3. Introductory idea
Unit-4. Age of the earth
Unit-5. Microsporogenesis

Unit-6. Ovules; megasporogenesis.

Unit-7. Pollination

Practical

Core Course 9 : Biomolecules and Cell Biology

Name of the teacher : Dr. K. M. Hasib

Unit 1: Biomolecules

Carbohydrates, Lipids, Proteins & Nucleic acids

Unit 2: Bioenergetics

Unit 3: Enzymes

Unit4: The cell

Unit 5: Cell wall and plasma membrane

Unit 6: Cell organelles

Unit 7: Cell division

Practical

Core Course 10 : Molecular Biology

Name of the teacher : Dr. K. M. Hasib

Unit 1: Nucleic acids: Carriers of genetic information

Unit 2. The Structures of DNA and RNA / Genetic Material lectures)

Unit 3: The replication of DNA

Unit 4: Central dogma and genetic code lectures)

Unit 4: Transcription

Unit 5: Processing and modification of RNA

Unit 6: Translation

Practical

SEC-2: Biofertilizers

Name of the teacher : Dr. Quazi Taheruzzaman

Unit 1: General account

Unit 2: *Azospirillum*:

Unit 3: Cyanobacteria

Unit 4: Mycorrhiza

Unit 5: Organic farming

Semester V

Core Course 11 : Plant Physiology

Name of the teacher : Dr. Quazi Taheruzzaman

Unit 1: Plant-water relations

Unit 2: Mineral nutrition

Unit 3: Nutrient Uptake

Unit 4: Translocation in the phloem

Unit 5: Plant growth regulators

Unit 6: Physiology of flowering

Unit 7: Phytochrome , cryptochromes and phototropins

Practical

Core Course 12 : Plant Metabolism

Name of the teacher : Dr. K. M. Hasib

Unit 1: Concept of metabolism

Unit 2: Carbon assimilation

Unit 3: Carbohydrate metabolism

Unit 4: Carbon Oxidation

Unit 5: ATP-Synthesis

Unit 6: Lipid metabolism

Unit 7: Nitrogen metabolism

Practical

Discipline Specific Elective

DSE 1: Reproductive Biology of Angiosperms

Name of the teacher : Dr. Quazi Taheruzzaman

Unit 1: Introduction

Unit 2: Reproductive development

Unit 3: Anther and pollen biology

Unit 4: Ovule

Unit 5: Self incompatibility

Unit 6: Embryo, Endosperm and Seed

Units 7: Polyembryony and apomixis

Practical

DSE- 2 : Biostatistics

Name of the teacher : Dr. K. M. Hasib

Unit 1: Biostatistics

Unit 2: Collection of data primary and secondary

Unit 3: Measures of central tendency

Unit 4: Correlation

Unit 5: Statistical inference

Practical

Semester VI

Core Course 13 : Genetics & Plant Breeding

Name of the teacher : Dr. K. M. Hasib

Unit 1: Mendelian genetics and its extension

Unit 2: Extrachromosomal Inheritance

Unit 4: Variation in chromosome number and structure

Unit 5: Gene mutations

Unit 6: Fine structure of gene

Unit 7. Population and Evolutionary Genetics

Unit-8 : Plant Breeding

Unit 9: Methods of crop improvement

Unit 10: Inbreeding depression and heterosis

Unit 11: Crop improvement and breeding

Practical

Core Course 14: Plant Biotechnology

Name of the teacher : Dr. Quazi Taheruzzaman

Unit 1: Plant Tissue Culture

Unit 2: Recombinant DNA technology

Unit 3: Gene Cloning

Unit 4: Methods of gene transfer

Unit 5: Applications of Biotechnology

Practical

DSE-3 : Plant Evolution and Biodiversity

Name of the teacher : Dr. Quazi Taheruzzaman

Unit 1: Earliest forms of plant life

Unit 2: Evolutionary trends

Unit 3: Phylogeny of plants

Unit 4: Evolutionary theories:

Unit 5: Plant diversity

Practical

DSE-4 : Horticultural Practices and Post-Harvest Technology

Name of the teacher : Dr. K. M. Hasib

Unit 1: Introduction

Unit 2: Ornamental plants
Unit 3: Fruit and vegetable crops
Unit 4: Horticultural techniques
Unit 5: Landscaping and garden design
Field trip and Practical
Unit 6: Floriculture
Unit 8: Disease control and management
Unit 7: Post-harvest technology
Unit 9: Horticultural crops - conservation and management
Field trip and Practical

Botany