



DEPARTMENT OF BOTANY
MORIGAON COLLEGE (AUTONOMOUS)
MORIGAON, ASSAM
PIN- 782105

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Website: www.morigaon.edu.in



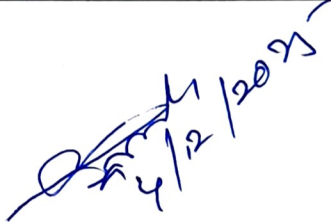
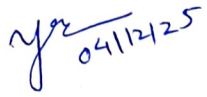
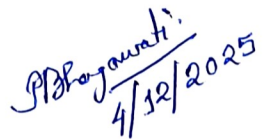
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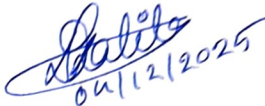
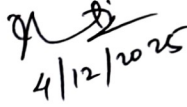
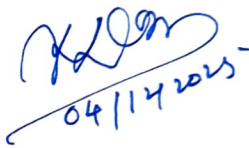
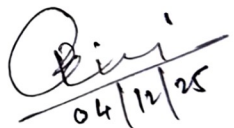
Date: 04-12-2025

DETAILS OF BOARD OF STUDIES MEETING
FOR THE SESSION 2025-26

The board of studies meeting of the Department of Botany and Food Processing (B.Voc), Morigaon College (Autonomous) has been successfully held on 4th December, 2025, at 11.00 am, in the Department of Botany. The meeting was held to plan and design the curriculum of the undergraduate programme in Botany and Food Processing (B.Voc).

The following are the members present during the meeting:

SL. NO.	NAME OF THE MEMBERS	DEGINATION	SIGNATURE
1	Mr. Trideep Chetia	Chairperson of BoS & Head of the Department, Assistant Professor Department of Botany, Morigaon College (Autonomous)	 04/12/2025
2	Prof. Partha Pratim Baruah	Nominated by V.C., Gauhati University Subject Expert (Parent university) Professor, Department of Botany & Head, Department of Environmental Science	 04/12/2025
3	Dr. Farishta Yasmin	Nominated by Academic Council, Morigaon College (Autonomous) Subject Expert (Other University) Associate Professor & Head Department of Botany, Nagaon University, Nagaon	 04/12/25
4	Dr. Prasenjit Bhagawati	Nominated by Academic Council, Morigaon College (Autonomous) Subject Expert (Other University) Assistant Professor & Head Department of Botany Assam Down Town University, Guwahati.	 4/12/2025

5	Mr. Janmoni Mahanta	Nominated by Principal, Morigaon College (Autonomous) Member; Industry/Corporate Sector/allied areas Director, Yangli Farmer Produce Company Manipur, Morigaon	
6	Dr. Debajit Kalita	Nominated by Principal, Morigaon College (Autonomous) Member; Alumnus Managing Director, Khetiyok- Poohar Essence Pvt. Ltd. Guwahati (Assam)	 04/12/2025
7	Dr. Jayanta Borkakoti	Member; Assistant Professor Department of Botany Morigaon College (Autonomous)	 4/12/2025
8	Mr. Kashyap Das	Member; Assistant Professor Department of Botany Morigaon College (Autonomous)	 04/14/2025
9	Mr. Pritul Kashyap	Member; Teaching Associate Department of Botany Morigaon College (Autonomous)	 04/12/25
10	Ms. Rumi Das	Member; Teaching Associate Department of Food processing (B.Voc) Morigaon College (Autonomous)	 04/12/25

First: Board of Studies meeting
Department of Botany, Morigaon College (A)

Date: 04/12/2025

Time: 11 Am.

Venue: Dept. of Botany
Morigaon college (A)

Reference No: MC/BOT/BOS/Meet/01.

Agenda of the meeting: The Agendas for the first Board of Studies meeting organised by the "Department of Botany", Morigaon college are as follows:

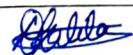
1. Course and curriculum designing for B.Sc Botany (Honours)
2. Curriculum designing for "Skilled Enhancement Course" offered by the department.
3. Implementation of Certificate course "Mushroom Cultivation".
4. Course and curriculum designing for "Food Processing" (B.Voc)
5. Offering "Post-Graduation" programme in Botany
6. Others.

Resolution:

- ① Board recommends changes in the curriculum specially for Minor papers in IVth and Vth semesters. Board has permitted to implement the new syllabus adopted from the G.U syllabus with a few modifications for 1st semester (Diversity in Plant Kingdom) and 2nd semester (Cell Biology and Biomolecules)
- ② Modified syllabus for SEC papers for 1st semester (Nursery & Gardening) and 2nd semester (Biofertilizer) has been accepted for implementation.
- ③ The add on course "Mushroom cultivation" has been decided to be implemented from the next session.
- ④ B.Voc Food Processing department shall continue following the syllabus offered by G.U; NO change recommended.
- ⑤ Board recommends opening of PG programme upon fulfilment of necessary facilities, including addition of faculty members (03 nos) and an additional laboratory technician (01 nos).

Signatures

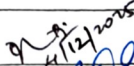
F. Yasmin



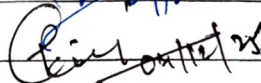
Prithvikanthi




Chair
04/12/2025


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DEPARTMENT OF BOTANY
Four Year Undergraduate Programme (FYUGP)
Syllabus: B. Sc. Botany



MORIGAON COLLEGE (AUTONOMOUS)
MORIGAON, ASSAM: 782105

List of Courses for B. Sc. Botany (Major)

Semester	Course Name	Course Code
I	Diversity in Plant Kingdom	BOT-CORE-(MJ)-MC-0100104
II	Cell Biology and Biomolecules	BOT-CORE-(MJ)-MC-0200104
III	Laboratory and Field Techniques in Plant Science	
	Plant Physiology	
IV	Mycology and Phytopathology	
	Morphology and Anatomy of Angiosperms	
	Microbiology	
	Plant Resources and Economic Botany	
V	Genetics	
	Plant Ecology and Climate Change	
	Plant Systematics	
VI	Molecular Biology	
	Reproductive Biology of Angiosperm	
	Plant Metabolism and Biochemistry	
	Applied Plant Biology	

List of Courses for B. Sc. Botany (Minor)

Semester	Course Name	Course Code
I	Diversity in Plant Kingdom	BOT-CORE-(MN)-MC-0100104
II	Cell Biology and Biomolecules	BOT-CORE-(MN)-MC-0200104
III	Plant Resources and Analytical Techniques	
IV	Economic Botany	
V	Plant Ecology and Climate Change	
VI	Horticulture and Post-Harvest Technology	

Semester : First
Major/Minor 1
Course Name: Diversity in Plant Kingdom
Course Code: BOT-CORE-(MJ/MN)-MC-0100104
Total Credit: 04; Total Lectures: 75

Section A: Theory (Credit: 03; Lectures: 45)

Unit 1 : Bacteria and Viruses (Lectures 08)

Bacteria: General features; Reproduction in bacteria; Introduction to Archaeobacteria; Economic importance of bacteria.

Viruses: General features, Bacteriophages (Lytic and Lysogenic life cycles); RNA virus (TMV), DNA virus (Cauliflower Mosaic Virus).

Unit 2: Algae (Lectures 06)

Algae: General features; Range of thallus structure; Reproduction; Classification; Economic importance; Brief account on *Nostoc*, *Chara*, *Oedogonium*.

Unit 3: Fungi and Lichens (Lectures 07)

Fungi: General features; Reproduction and Classification; Economic importance; Brief account on *Mucor*, *Agaricus*, *Ascombolus*.

Lichens: General features; Types; Economic importance.

Unit 4 : Bryophytes (Lectures 10)

Bryophytes: General features; Adaptation to land habits; Sporophytic evolution; Brief account on *Marchantia* and *Polytrichum*.

Unit 5 : Pteridophytes

Pteridophytes: General features; Reproduction; Stellar evolution; Sporangia development; Brief account on *Lycopodium*, *Selaginella* and *Adiantum*.

Unit 6 : Gymnosperms and Angiosperms (Lectures 11)

Gymnosperms: General features; Reproduction; Evolutionary trends; Brief account on *Cycas*; Affinities of *Gnetum* with angiosperms.

Angiosperms: General features; Concept of artificial, natural and phylogenetic system of classifications; Floral parts and inflorescence.

Section B: Practical (Credit: 01; Lectures: 30)

1. Study of structure of TMV and Bacteriophage (electron micrographs/models).
2. Study of morphology of *Nostoc*, *Chara* (Temporary preparation of slides).
3. Study of *Mucor*, *Agaricus* (Temporary preparation of slides)
4. Study of vegetative and reproductive parts of *Marchantia* and *Polytrichum*.
5. Study of *Lycopodium*/ *Selaginella* (morphology, strobilus, and spores), *Adiantum*/ *Pteris* (morphology).
6. Study of *Cycas*/ *Pinus* and *Gnetum* (morphology, leaf/ needle, megasporophyll and microsporophyll)
7. Study of leaf venations in dicots and monocots (at least two specimens each)
8. Study of different types of inflorescences and fruits.

Suggested References:

- Bhatnagar SP, Moitra A (1996) Gymnosperms. New Delhi, Delhi: New Age International (P) Ltd Publishers.
- Campbell NA, Reece JB (2008) Biology, 8th edition, Pearson Benjamin Cummings, San Francisco.
- Evert RF, Eichhorn SE (2012) Raven Biology of Plants, 8th edition, New York, NY: W.H. Freeman and Company.
- Ingrouille M, Eddie B (2006) Plants: Evolution and Diversity. Cambridge University Press.
- Kumar HD (1999) Introductory Phycology, 2nd edition. Delhi, Delhi: Affiliated East-West. Press Pvt. Ltd.
- Parihar NS (1991) An Introduction to Embryophyta. Vol. II. Pteridophytes. Prayagraj: U.P.: Central Book Depot.
- Pelczar MJ (2001) Microbiology, 5th edition. New Delhi, Delhi: Tata McGraw-Hill Co.
- Puri P (1985) Bryophytes. New Delhi, Delhi, Atma Ram and Sons.
- Sethi IK, Walia SK (2018) Text book of Fungi and Their Allies. 2nd Edition, Med tech Publishers, Delhi.
- Singh G (2019) Plant Systematics: An Integrated Approach. 4th edition. CRC Press, Taylor and Francis Group.
- Singh V, Pandey PC, Jain DK (2001) A Text Book of Botany. Meerut, UP: Rastogi and Co.
- Tortora GJ, Funke BR, Case CL (2007) Microbiology. San Francisco, U.S.A: Pearson Benjamin Cummings.
- Vashishta PC, Sinha AK, Kumar A (2010) Pteridophyta. New Delhi, Delhi: S. Chand & Co Ltd.
- Webster J, Weber R (2007) Introduction to Fungi. Cambridge, Cambridge University Press.

Course Objective:

This paper will explain the origin of life, the diversity of Bacteria, Viruses, Algae, Fungi & Lichen, Bryophytes, Pteridophytes, Gymnosperms, and Angiosperms on the planet, and how they may be related to each other. The emphasis will also be on the hands-on approach and laboratory techniques for identification of the plant and microbial groups using various morphological features.

Learning Outcomes:

On successful completion of the course, students will have:

1. Knowledge with the concept of different kingdoms and the theories behind how life began.
2. Basic understanding of the characteristics, distribution, classification, reproduction, and current status of various microbial and plant communities.
3. Good understanding of virus, algae, fungus, bryophyte, and pteridophyte cell structures, dicotyledonous and monocotyledonous leaf venation patterns, and inflorescence and fruit features.
4. Knowledge to identify various groups of organisms in the laboratory through morphological analysis.

DEPARTMENT OF BOTANY
Four Year Undergraduate Programme (FYUGP)
Syllabus: Skill Enhancement Course



MORIGAON COLLEGE (AUTONOMOUS)
MORIGAON, ASSAM: 782105

List of Courses

Semester	Course Name	Course Code
I	Nursery and Gardening	SEC-BOT-MC-0100103
II	Biofertilizer	SEC-BOT-MC-0200103
III	Environmental Ethics	

Semester: First
SEC 1
Course Name: Nursery and Gardening Techniques
Course Code: SEC-BOT-MC-0100103
Total Credit: 03

Section A: Theory (Credit: 02)

Unit 1: Introduction to Nursery and Gardening

Nursery: Definition, objectives, and general scope; Gardening: Definition, objectives, and different types; Essential Tools: Identification and basic uses of gardening tools; Nursery Structures: Infrastructure like seed beds, Green house, shade nets, irrigation system etc.

Unit 2: Seed Propagation

Understanding seeds, seedlings, and the concept of plant life cycle; Seed Sowing: Seed bed preparation; Sowing seeds; Raising and transplanting seedlings; Testing seed viability; Seed dormancy (causes and breaking methods); Vegetative propagation: Basics of stem cutting (e.g. Money plant, *Hibiscus*), layering, budding and grafting.

Unit 3: Care and Maintenance

Growing Media: Basic soil mixtures, use of compost, sand, and coco-peat.; Plant Care: Watering methods and the importance of sunlight and drainage; Maintenance: Weeding, basic manuring, vermicomposting, identification of common pests.

Section B: Practical (Credit: 01)

This is a strictly hands-on component designed for immediate skill application.

1. Identification and demonstration of essential garden tools.
2. Preparation of a standard potting mix using soil, sand, and organic matter (compost).
3. Preparation of a seed bed or pot and sow seeds of a common, fast-growing vegetable (e.g., Chrysanthemum, Marigold, Flox etc.).
4. Hands-on practice on watering techniques and removal of weeds from a designated garden plot.
5. Visit to a local nursery or garden, identification of observed plants and preparation of a brief report.

Suggested References:

- *Plant Propagation Principles and Practices* by Hartmann and Kester.
- *Gardening* by N. Passi.
- *Commercial Nursery Management* (course material available from Krishna Kanta Handiqui State Open University at kkhsou.ac.in).
- Relevant resources can be found on the Gauhati University Syllabus Portal.

Course Objectives:

- To introduce the basic concepts of plant propagation and cultivation.
- To equip students with hands-on skills for setting up small-scale gardens and nurseries.
- To foster an appreciation for plants and basic horticultural practices.

Learning Outcomes:

Upon completion, students will be able to:

1. Understand and describe the fundamentals of Nursey and gardening including definitions, objectives, importance, scope and basic components.
2. Identify and classify commonly used gardening and nursery structures like greenhouses, shade nets, glasshouses and irrigation systems
3. Recognize and correctly handle essential gardening tools understanding their uses and application in routine nursery operations.
4. Demonstrate knowledge and practical skills in seed propagation including seed sowing, dormancy breaking techniques, seedling raising, transplanting and establishing.
5. Apply creative propagation skills to develop new shapes, forms and varieties of plants with desired traits.
6. Apply routine plant care practices such as watering, fertilization, pruning and paste/weed management to maintain plant health.