DEPARTMENT OF BOTANY

CHANDIDAS MAHAVIDYALAYA

A Govt. Aided Degree College Affiliated to the University of Burdwan UGC Accrediated under section 2(f) & 12(B) [1979] * NAAC Accrediated in 2016

Khujutipara, Birbhum, West Bengal, India- 731215.

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Mobile: 7908168568/7679615264 (HOD)

Ref. No.:

Date:

Academic Year 2022-2023

Course Outcome: B.Sc. Botany (General) Programme under CBCS

CORE COURSES (CC)	
Course Name	Course Outcome
Semester- I CC IA: DIVERSITY (Microbes, Algae, Fungi and Archegoniate)	This course includes a theory as well as a practical paper. On completion of the course, students are able to:i) Understand the diversity among Microbes, Algae, Fungi and Archegoniate. ii) Understand the similarities and differences among different plant group by classification. iii) Understand the Life cycle, Ecology and Economic importance of Bacteria, Algae, Fungi, Bryophytes, Bryophytes, Pteridophytes and Gymnosperm.
Semester- II CC IB:PLANT ECOLOGY AND TAXONOMY	This course includes a theory as well as a practical paper. On completion of the course, students are able to: i) Understand basic concepts of general ecology and phytogeography. ii) Learn about the basic principles of ecology and ecosystem. iii) Know about the importance of ecology & Ecosystem and its conservations. iv) Understand about modern approaches in taxonomic studies. v) Comprehend the concepts of plant taxonomy and classification of Angiosperms.
Semester- III CC IC: PLANT ANATOMY AND EMBRYOLOGY	This course includes a theory as well as a practical paper. On completion of the course, the students: i) Will learn about the basic concepts and skills in the field of plant anatomy. ii) Understand the various components of stem and woods during its secondary growth. iii) Be enlightened about the mechanism of pollination and basic structure of the embryo.
Semester- IV CC ID: PLANT PHYSILOGY AND METABOLISM	This course includes a theory as well as a practical paper. On completion of the course, students: i) Will understand and appreciate the plant world we depend on. ii) Know about the basic principles of plant function, metabolism, secondary products, cell physiology and principles of growth & development.



DISCIPLINE SPECIFIC ELECTIVE COURSES (DSE)	
Course Name	Course Outcome
Semester- V DSE 1A: ECONOMIC BOTANY AND BIOTECHNOLOGY	This course includes a theory as well as a practical paper. On completion of the course, students: i) Will learn about the basic concepts on origin of cultivated plants. ii) Will acquire knowledge about selected economic important plants and its uses. iii) Have a clear knowledge of plant tissue culture techniques. iv) Be fully aware of the basics and applications of plant biotechnology. v) Have a basic understanding of the plant genetic transformation methods.
Semester- VI DSE 1B: RESEARCH METHODOLOGY	This course includes a theory as well as a practical paper. On completion of the course, students: i) Will be enabled to know the state of art of research in Botany. ii) To plan and carry out short term research projects. iii) Know how to present the collected data as thesis, publication and seminar presentation and know the value of research.
Course Name	Course Outcome
SEC1: HEBAL TECHNOLOGY	This course only includes a theory paper. After completion of the course the students will be able to: i) Understand the Herbal Technology as well as principles of cultivation of Herbal products. ii) List the major herbs, their botanical names and chemical constituents. iii) Develop the skills for cultivation of plants and their value-added processing, storage and quality control. iv) Acquire the knowledge about how to evaluate the drug adulteration through the biological testing.
SEC2: FLORICULTURE	This course only includes a theory paper. After completion of the course the students will be able to: i) Analise various nursery management practices with routine garden operation. ii) Acquire knowledge about various ornamental Plants and their cultivation. iii) Find out ways to inform about landscaping of public and commercial places for floriculture. iv) Diagnoses various diseases and uses Pests for Ornamental Plants.

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Program Outcomes: B. Sc Botany (General) Programme under CBCS

As per the syllabus of B. Sc Botany (General) Programme, the aims to train the students in all the areas of plant sciences with a unique combination of all papers including SEC with significant interdisciplinary components as per CBCS.

Program Outcomes (POs):

- Students should acquire the skills to deal with various forms of plants, their preservation techniques and future commercialization.
- To acquire knowledge about different Flora.
- The graduates should have developed positive attitudes and ethical values towards environment.
- ❖ To developed skills on mushroom cultivation, biofertilizer production, horticulture, floriculture etc.
- After completing a B.Sc. degree in Botany, the students besides opting for higher education can make their career as: i) Plant explorer, ii) Conservationist, iii) Ecologist, iv) Environment consultant, v) Farming consultant, vi) Horticulturist, vii) Plant biochemist, viii) Nursery manager, ix) Genetics, molecular biologist, taxonomist, plant pathologist, tissue culture etc.

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Programme Specific Objectives/Outcomes under CBCS Three Year General Degree Course in Botany

Disciplinary knowledge: Capable of demonstrating comprehensive knowledge and understanding of one or more disciplines that form a part of an undergraduate programme of study.

Communication Skills: Ability to express thoughts and ideas effectively in writing and orally; Communicate with others using appropriate media; confidently share one's views and express herself/himself; demonstrate the ability to listen carefully, read and write analytically, and present complex information in a clear and concise manner to different groups.

Critical thinking: Capability to apply analytic thought to a body of knowledge; analyse and evaluate evidence, arguments, claims, beliefs on the basis of empirical evidence; identify relevant assumptions or implications; formulate coherent arguments; critically evaluate practices, policies and theories by following scientific approach to knowledge development.

Problem solving: Capacity to extrapolate from what one has learned and apply their competencies to solve different kinds of non-familiar problems, rather than replicate curriculum content knowledge; and apply one's learning to real life situations. Analytical reasoning: Ability to evaluate the reliability and relevance of evidence; identify logical flaws and holes in the arguments of others; analyse and synthesise data from a variety of sources; draw valid conclusions and support them with evidence and examples, and addressing opposing viewpoints.

Research-related skills: A sense of inquiry and capability for asking relevant/appropriate questions, problematizing, synthesising and articulating; Ability to recognise cause-and-effect relationships, define problems, formulate hypotheses, test hypotheses, analyse, interpret and draw conclusions from data



establish hypotheses, predict cause-and-effect relationships; ability to plan, execute and report the results of an experiment or investigation.

Cooperation/Team work: Ability to work effectively and respectfully with diverse teams; facilitate cooperative or coordinated effort on the part of a group, and act together as a group or a team in the interests of a common cause and work efficiently as a member of a team.

Scientific reasoning: Ability to analyse, interpret and draw conclusions from quantitative/qualitative data; and critically evaluate ideas, evidence and experiences Reflective thinking: Critical sensibility to lived experiences, with self-awareness and reflexivity of both self and society.

Information/digital literacy: Capability to use ICT in a variety of learning situations, demonstrate ability to access, evaluate, and use a variety of relevant information sources; and use appropriate software for analysis of data.

Self-directed learning: Ability to work independently, identify appropriate resources required for a project, and manage a project through to completion.

Multicultural competence: Possess knowledge of the values and beliefs of multiple cultures and a global perspective; and capability to effectively engage in a multicultural society and interact respectfully with diverse groups.

Moral and ethical awareness/reasoning: Ability to embrace moral/ethical values in conducting one's life, formulate a position/argument about an ethical issue from multiple perspectives, and use ethical practices in all work. Capable of demonstrating the ability to identify ethical issues related to one's work, avoid unethical behaviour such as fabrication, falsification or misrepresentation of data or committing plagiarism, not adhering to intellectual property rights; appreciating environmental and sustainability issues; and adopting objective, unbiased and truthful actions in all aspects of work.

Leadership readiness/qualities: Capability for mapping out the tasks of a team or an organization, and setting direction, formulating an inspiring vision, building a team who can help achieve the vision, motivating and inspiring team members to engage with that vision, and using management skills to guide people to the right destination, in a smooth and efficient way.

Lifelong learning: Ability to acquire knowledge and skills, including learning how to learn, that are necessary for participating in learning activities throughout life, through self-paced and self-directed learning aimed at personal development, meeting economic, social and cultural objectives, and adapting to changing trades and demands of work place through knowledge/skill development/reskilling.

Source: https://www.ugc.gov.in/pdfnews/4598476_LOCF-UG.pdf

Khujulipara, Birbhum

