



# MUGBERIA GANGADHAR MAHAVIDYALAYA

P.O.—BHUPATINAGAR, Dist.—PURBA MEDINIPUR, PIN.—721425, WEST BENGAL, INDIA

NAAC Re-Accredited B+Level Govt. aided College

CPE (Under UGC XII Plan) & NCTE Approved Institutions

DBT Star College Scheme Award Recipient

E-mail : mugberia\_college@rediffmail.com // www.mugberiangadharmahavidyalaya.ac.in

## Project details for Environmental Studies (AECC Course)

### Department of Chemistry

**MUGBERIA GANGADHAR MAHAVIDYALAYA**  
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Date: 20.08.2023

**Notice**

**Department of Chemistry**

**Project Titles for Environmental Studies (AECC Course) - Semester II, B.SC (Hons)**

This is to notify all the students of Semester II, B.Sc (Chemistry Hons) that their project titles on Environmental Studies for the AECC course are listed in the following table. Each student will be required to submit the project report before 31/08/2023.

*[Signature]*  
20.8.23  
HOD  
Department of Chemistry

**MUGBERIA GANGADHAR MAHAVIDYALAYA**  
H.O.D.  
Department & Chemistry

## Syllabus of Project

The dissertation project will be performed on research/review work on research papers. For project work, one class will be held in every week. UG SEM-2

The dissertation project will be performed on research/review work on research papers. For project work, one class will be held in every week. Marks are divided into the following: Project Work-25, Presentation-15, and Viva-10. The project work of each student will be evaluated by the concerned internal teacher/supervisor and one External Examiner. The external examiner must be present on the day of evaluation.

### **Ability Enhancement Compulsory Course (AECC – Environmental Studies)**

#### **• Environmental Studies**

**Credits: 4**

#### **Unit 1: Introduction to environmental studies (2 lectures)**

- Multidisciplinary nature of environmental studies;
- Scope and importance; Concept of sustainability and sustainable development.

#### **Unit 2: Ecosystems (6 lectures)**

- What is an ecosystem? Structure and function of ecosystem; Energy flow in an ecosystem: food chains, food webs and ecological succession. Case studies of the following ecosystems:
  - a) Forest ecosystem
  - b) Grassland ecosystem
  - c) Desert ecosystem
  - d) Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

#### **Unit 3: Natural Resources: Renewable and Non-renewable Resources(8 lectures)**

- Land resources and land use change; Land degradation, soil erosion and desertification.
- Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. Joint forest management.
- Water: Use and over-exploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state).
- Energy resources: Renewable and non renewable energy sources, use of alternate energy sources, growing energy needs, case studies.

#### **Unit 4: Biodiversity and Conservation(8 lectures)**

- Levels of biological diversity: genetic, species and ecosystem diversity; Bio-geographic zones of India; Biodiversity patterns and global biodiversity hot spots
- India as a mega-biodiversity nation; Endangered and endemic species of India
- Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.
- Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.

#### **Unit 5: Environmental Pollution (8 lectures)**

- Environmental pollution: types, causes, effects and controls; Air, water, soil and noise pollution
- Nuclear hazards and human health risks
- Solid waste management: Control measures of urban and industrial waste.
- Pollution case studies.
- Noise pollution.

**Unit 6: Environmental Policies & Practices** (8 lectures)

- Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture
- Environment Laws: Environment Protection Act; Air (Prevention & Control of Pollution) Act; Water (Prevention and control of Pollution) Act; Wildlife Protection Act; Forest Conservation Act. International agreements: Montreal and Kyoto protocols and Convention on Biological Diversity (CBD).
- Nature reserves, tribal populations and rights, and human wildlife conflicts in Indian context.
- Environmental policy and gender issues.

(7 lectures)

**Unit 7: Human Communities and the Environment**

- Human population growth: Impacts on environment, human health and welfare.
- Resettlement and rehabilitation of project affected persons; case studies.
- Disaster management: floods, earthquake, cyclones and landslides.
- Environmental movements: Chipko, Silent valley, Bishnois of Rajasthan.
- Environmental ethics: Role of Indian and other religions and cultures in environmental conservation.
- Environmental communication and public awareness, case studies (e.g., CNG vehicles in Delhi).

(6 lectures)

**Unit 8: Field work**

- Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc.
- Visit to a local polluted site---Urban/Rural/Industrial/Agricultural.
- Study of common plants, insects, birds and basic principles of identification.
- Study of simple ecosystems---pond, river, Delhi Ridge, etc.
- Disaster management.
- Coastal ecosystem.

**List of Projects of UG 2<sup>ND</sup> SEM, Department of Chemistry – 2023**

Sl. No.	Name of student	Roll No.	Guide/Mentor	Project title

1	Amiya Mandal	1121129-220002	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects
2	Rajkumar Kamila	1121129-220015	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects
3	Bebi Das	1121129-22007	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Fish
4	SangitaKhatua	1121129-220019	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Fish
5	Swapan Das	1121129-220039	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects
6	SuparnaMakur	1121129-220034	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Fish
7	SoumiliGhorai	1121129-220028	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Fish
8	Sanjana Jana	1121129-220020	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Fish

9	Mampi Adak	1121129-220011	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Birds
10	Pampi Adak	1121129-220012	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Birds
11	Rama Pattanayak	1121129-220016	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Birds
12	MallikaJasmin	1121129-220010	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Birds
13	Sreyasri Jana	1121129-220030	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Birds
14	PriyankaBarik	1121129-220014	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Birds
15	PoulamiGiri	1121129-220013	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Fish
16	Anusuya Das	1121129-220017	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects & Plants
17	SumitraGhorai	1121129-220033	Dr. Bidhan Chandra Samanta	Study of

			Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Common Plants
18	AbhikGiri	1121129-220001	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects
19	SumanMaity	1121129-220032	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects
20	SurjyaSekhar Panda	1121129-220036	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects
21	Amit Kumar Barik	1121129-220004	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects
22	Saikat Pradhan	1121129-220018	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects
23	SubhenduBhunia	1121129-220031	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects
24	KoushikMaity	1121129-220009	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects

			Dept. of Chemistry MugberiaGangadharMahavidyalaya	Insects
25	Saraswati Das	1121129-220024	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Plants
26	Sonalijana	1121129-220027	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Plants
27	Suvangi Pal	1121129-220038	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Plants
28	Sagar Das	1121129-220017	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects
29	SantuMaity	1121129—220022	Dr. Bidhan Chandra Samanta Associate Professor Dept. of Chemistry MugberiaGangadharMahavidyalaya	Study of Common Insects



*S. S. S. S.*  
08.09.2023  
Principal  
Mugberia Gangadhar Mahavidyalaya