DEPARTMENT OF AGRICULTURAL ENGINEERING

Haldia Institute of Technology

(An Autonomous Institute of ICARE)

Haldia, Purba Medinipur 721657

[AICTE ACCREDIATED, **NAAAC (A)** ACCREDIATED, **MAKAUT** AFFILIATED**]**

1. **Year of Establishment:** 2022
2. **Undergraduate Course Offered:** B. TECH **Intake:** 60
3. **Head of the Dept.:** Dr. Amit Biswas **Contact Number:** 9153017084
   Email ID: amitmbiswas@gmail.com
4. **Overview of the Dept. (with symbolic photo)**

   The Agricultural Engineering education integrates Engineering and Agricultural Science knowledge and skills to develop technology and/or process to enhance production and productivity of agriculture and other farm produce through efficient utilization of natural resources and conserving the same for future use. Broadly, the activities include efficient utilization of agricultural inputs through improved techniques of soil and water management (conservation), efficient implements and machinery ensuring precision, timeliness and reduced drudgery in farming operations (mechanization), and improving quality of farm produce (processing and value additions).

   The Department of Agricultural Engineering started in 2022 with just 20 students in B. Tech with the objectives of making competent and dynamic Agricultural Engineers, suitable for global market by imparting best possible training and education.

5. **Major subject area cover:**

- Soil and water Engineering, Smart Irrigation, Remote Sensing and GIS.
- Farm machinery and power, Renewable Energy, Photovoltaic Technology.
- Food Process Engineering, Food Packaging Technology, Food Quality.
- Post-harvest Engineering, Crop Modelling and Simulation, Nano Technology.

6. **Mission**

   M1: To develop human resources with sound knowledge – theory and practical – in the discipline of agriculture and the ability to apply the knowledge to the benefit of the society at large.

   M2: To impart quality education through well-developed laboratories in tune with the challenging modern agricultural needs of the industry.

   M3: To provide a beneficial ambience to generate knowledge and develop technologies in the thrust areas of agricultural engineering.

7. **Vision**

   To attain significant recognition in agricultural engineering education, research and training to meet the growing needs of the society and agricultural industry.

Students with Faculties and Staffs in Agricultural Engineering Department

8. **Program Educational Objectives (PEO):**

   PEO 1: To provide students with a strong foundation in applied science, agriculture science and agricultural engineering fundamentals necessary to analyze the requirements of the farm, understand the technical specifications, design and create innovative agricultural products and solutions for real life problems.

PEO 2: To provide exposure to emerging agricultural technologies, adequate training and opportunities to work as teams on multidisciplinary projects with effective communication skills and leadership qualities.

PEO 3: To prepare the students for a successful professional career as agricultural engineer, scientist, teacher, technocrat, administrator or an entrepreneur and work with values & social concerns bridging the digital divide and meeting the requirements of Indian and multinational agricultural companies.

9. Program Specific Outcomes (PSO):

PSO1: Should be able to clearly understand, analyze and comprehend the different courses of Agricultural Engineering and other interdisciplinary courses and develop a holistic approach for implementation in agriculture field.

PSO2: Should be able to apply the knowledge, techniques and skills acquired to provide solutions to the real world problems related to Agricultural Engineering.

PSO3: Should have the capability to comprehend the advancements in the usage of modern design tools and latest techniques to analyze and design subsystems/processes for a variety of applications in agriculture.

10. Infrastructure Facility/ Major Laboratories:

- Smart Class room
- Soil and Water Engineering Laboratory
- Farm Machinery Lab and Work shop
- Food Process Engineering Lab
- Survey and Levelling Lab
- Fluid Mechanics Lab
- Refrigeration and Air conditioning Lab
- Computer programming Lab

Sieve shaker

Rain-gauge

Chute spillway

Pressure gauge

Liquid limit device

Cutthroat flume

Hydrometer

Weighing Balance

Water level sensor

Current meter

11. Faculty Members:

Sl. No.	Name	Designation	Qualification	Area of Specialization
1	Dr. Amit Biswas	Head of the Department	Ph. D	Soil and Water Engineering
2	Dr. Govinda Pal	Assistant Professor	Ph. D	Farm Machinery and Power
3	Mrs. Ankita Banerjee	Assistant Professor	M. Tech	Farm Machinery and Power
4	Mr. Nimai Das Bairagya	Assistant Professor	M. Tech	Food Process Engineering

12. Non-Teaching staff:

Sl. No.	Name	Designation	Qualification	Area of Specialization
1	Ms. Moulina Maiti	Laboratory Assistant	B. Tech,	Food Technology

13. Research Capability:

Faculty members are highly dedicated to the cutting edge areas of research and development such as farm machinery and power, food process engineering and soil and water engineering. Faculties published several research articles, review papers, book chapters in reputed international journals, and also in some national agriculture magazine. One patent has been filed and one consultancy work has been granted to the institute as a result of departmental research outcome. Some multi-disciplinary research work is performed in collaboration with other institutes also.

The department is equipped with following instruments and equipment's for testing and research work such as, sieve shaker, liquid limit apparatus, hydrometer, pan evaporimeter, raingauge, soil shear test apparatus, tri-axial test apparatus, soil moisture sensor etc.

14. Sponsored Project/ Consultancy Information:

Project Title: "IoT based water health monitoring system for Pisciculture"

Funding agency: Consultancy Project (Ms Five Star Logistics Pvt. Ltd. At Talpukur, Bhawanipur, Haldia, West Bengal and Multidisciplinary Research Group & Consultation, Haldia Institute of Technology, Haldia, West Bengal, India)

15. Career Scope:

Assistant Engineer and Sub-Assistant Engineer in Water Resources Investigation and Development Department
Agricultural Consultant
Agricultural Inspector
Food Safety Officer
Agriculture Crop Engineers
Agriculture Engineers at Agro-based Industries
Agriculture Researchers and Scientists
Agricultural Crop Modeler
Farm Managers
Agriculture Specialists in Krishi Vigyan Kendra
Agricultural Professionals in Different Institutes, Colleges and Universities
Food Supervisors

16. Major Recruiter Company/Industries:

Serial no.	Name of the Organization	Working areas
1	Tools Villa	Agricultural equipments
2	Syngenta	Seed production
3	Flipkart	Marketing/Executive
4	AECOM	Infrastructure development
5	Our Food Pvt. Ltd.	Business development (Farmers)
6	UPL Ltd.	New product development
7	Pan seeds Pvt. Ltd.	Seed processing
8	Greenwey Creation Pvt. Ltd.	Horticultural crop management
9	Pradan	Technology transfer
10	IFFCO Kisan Sanchar Ltd.	Fertilizer
11	Muthoot Fincorp Ltd.	Rural development
12	Natural Plant Protection Ltd.	Agricultural crop protection
13	SHRACHI Agrimech.	Agri machinery
14	Indorama India Pvt. Ltd.	Agri sales
15	GREENIC Pure & Organic	Organic farming
16	PRASARI	Natural resource management
17	Hallmark Aquaequipment Pvt. Ltd.	Modern irrigation system developer
18	IRC Agrochemicals Pvt. Ltd.	Agrochemicals
19	Krishak Bharati Cooperation Ltd.	Chemical fertilizer
20	Rallies India	Chemical
21	GSP Crop Science Pvt. Ltd.	Fertilizer
22	Nutrisource	Soil science
23	Dhanuka Agritech Ltd.	Fertilizer company
24	New Holland (India)	Agricultural & Farm Machinery
25	John Deere (US)	Agriculture equipments
26	Netafim	Irrigation equipment
27	Kisan Irrigation	Irrigation equipment
28	EcofloIndia	Irrigation equipment
29	BluRain	Automation of irrigation systems
30	Hindustan Unilever	Food processing
31	Kamal's Ice Cream	Food processing
32	Sonalika Tractor	Farm machinery
33	Mahindra Tractor	Farm machinery
34	Tafe Tractor	Farm machinery
35	Swaraj Tractor	Farm machinery
36	Eicher Tractor	Farm machinery
37	Mahindra EPC Irrigation Ltd.	Irrigation equipment
38	Jain Irrigation Systems Ltd.	Irrigation equipment

17. Student Chapters/ Professional Bodies:

All India Agricultural Students Association (AIASA)

18. Students' Activity

Students in Surveying and Leveling Practical

NSS Activity

NSS session

Class Session

Smart India Hackathon