न हि ज्ञानेन सदृशं पवित्रमिह विद्यते

GHANI KHAN CHOUDHURY INSTITUTE OF ENGINEERING AND TECHNOLOGY

A CENTRALLY FUNDED TECHNICAL INSTITUTE(CFTI) UNDER MINISTRY OF EDUCATION
GOVT OF INDIA

Narayanpur, Malda, West Bengal, India, Pin - 732141

Prospectus

www.gkciet.ac.in

Ghani Khan Choudhury Institute of Engineering and Technology

(A Centrally Funded Technical Institute under the Ministry of Education, Govt. of India)

Narayanpur, Malda, West Bengal – 732141

Institute Prospectus-2023

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WELCOME NOTE

Dear Prospective Students and Families,

Welcome to GKCIET Malda!

Congratulations on your joining the vibrant community of GKCIET Malda. At Ghani Khan Choudhury Institute of Engineering & Technology (GKCIET), Malda, we believe in creating a nurturing and stimulating environment where students can thrive academically, socially, and personally. Our commitment to excellence is reflected in our diverse and inclusive campus culture, our dedicated faculty, and our comprehensive academic programs.

Choosing the right institution for your higher education is a significant decision, and we are here to support you in every step on the way. Our state-of-the-art facilities, innovative curriculum, and numerous extracurricular opportunities provide a well-rounded experience that prepares our students for a successful future.

We encourage you to explore our prospectus and discover the many opportunities that await you at GKCIET Malda. From our cutting-edge research programs to our community engagement initiatives, there is something here for everyone. We are confident that you will find GKCIET
Malda to be a place where you can achieve your highest potential.

GKCIET Malda would be happy to be your home for the next few years. We look forward to welcoming you to our campus and being a part of your academic journey.

Looking forward to meeting you all,
With best wishes,
Director GKCIET Malda

Dear Students,

Welcome to Ghani Khan Choudhury Institute of Engineering & Technology (GKCIET), Malda!

Congratulations on your admission at GKCIET Malda, Centrally Funded Technical Institute, under the Ministry of Education. The Institute is presently offering 3 year Diploma and 4 year B.Tech programs in Civil Engineering, Computer Science and Engineering (Artificial Intelligence and Machine Learning), Electrical Engineering, Food Processing Technology, and Mechanical Engineering. All of the diploma programs are affiliated to the West Bengal State Council of Technical & Vocational Education and Skill Development (WBSCT&VE&SD), and all B.Tech programs are affiliated to the Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal. We are thrilled to have you join our community of innovators, thinkers, and future leaders. You have embarked on a journey that will shape your future and carve the path to your professional success.

We pride ourselves on a rigorous academic curriculum designed to challenge and inspire you. Our distinguished faculty are here to support and guide you every step of the way. Engage in hands-on projects, cutting-edge research, and collaborative learning experiences that will prepare you for the challenges and opportunities of the engineering world. Our institute is not just about academics. We believe in fostering a supportive and inclusive environment where you can grow personally and professionally. Participate in clubs, organizations, and events that enrich your learning experience. Make sure to explore our libraries, laboratories, and recreational facilities. Utilize the student support services available to help you succeed. Take advantage of our academic advising and mentorship programs. Our mentors are here to help you navigate your academic journey.

As you begin this exciting chapter, remember that engineering is not just about solving problems; it's about creating solutions that make a difference. Stay curious, stay passionate, and don't be afraid to take risks. Your time here will be filled with challenges and triumphs, and we are confident that you will rise to the occasion.We look forward to seeing the incredible contributions you will make to our community and beyond.

Best regards,

Prof Kshirod Kumar Dash

Dean Academics

GKCIET Malda

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Ghani Khan Choudhury Institute of Engineering and Technology (GKCIET), Malda is a Centrally Funded Technical Institute (CFTI) under Ministry of Education (MOE), Govt. of India established in 2010 at Narayanpur, Malda, West Bengal. The institute offers courses in Engineering & Technology at different levels (**B.Tech, Diploma and Skill Development**) with a vision to meet current industrial & society needs through its academic facilities. It has a sprawling area of about 103 acres and is situated at a distance of 9 km from Malda Town Railway Station and 0.7 km from NH 34. It is surrounded by green lands and mango trees with beautiful landscapes.

Presently this Institute is offering AICTE approved 3–year Diploma Programs affiliated to the West Bengal State Council of Technical & Vocational Education & Skill Development (WBSCT & VE & SD), Kolkata and AICTE approved 4-year B. Tech programs affiliated to the Maulana Abul Kalam Azad University of Technology (MAKAUT, formerly known as WBUT), West Bengal. The medium of instruction is English.

Institute also conducts "Pradhan Mantri Kaushal Vikas Yojana 4.0(PMKVY4.0) scheme of AICTE under the Ministry of Skill Development and Entrepreneurship (MSDE) implemented by National Skill Development Corporation (NSDC) and Short-Term Training (STT) courses offered by West Bengal State Council of Technical Education and Vocational Education & Skill Development (WBSCT & VE & SD), Kolkata.

Academic Programs	Disciplines	AICTE Approved Intake	Basic Qualifications	Seat Distribution
B. Tech (4 years)	Electrical Engineering	60	Passed 10+2 Examination with Physics & Mathematics as compulsory subjects along with one of the Chemistry/Biotechnology/Biology/Technical Vocational subjects (subject to changes as per AICTE/WBJEE/JoSAA/CSAB/MAKAUT regulations)	• Admission to 50 % seats of all B Tech Courses shall be made through **WBJEE** counseling for the students from West Bengal. Eligibility criteria are as per the WBJEEB. https://wbjeeb.nic.in • Admission to 25 % seats of all B. Tech Courses shall be made through **JEE (Main)** Counseling **(JoSAA/CSAB)** for the students from North East States. Accordingly, eligibility criteria are as per the JEE (Main)/JoSAA/CSAB. https://jeemain.nta.nic.in; https://josaa.nic.in; https://csab.nic.in • Admission to 25 % seats of all B. Tech Courses shall be made through **JEE (Main)** Counseling **(JoSAA/CSAB)** for the students from other states and UT (excluding West Bengal and North East States). Accordingly, eligibility criteria are as per the JEE (Main)/JoSAA/CSAB. https://jeemain.nta.nic.in; https://josaa.nic.in; https://csab.nic.in ➢ Lateral admission into 2nd Year of B.Tech Program through JELET conducted by WBJEEB.
	Food Technology	60		
	Mechanical Engineering	60		
	Civil and Environmental Engineering	60		
	Computer Science and Engineering (AI & ML)	60		

Diploma (3 years)	Civil Engineering	60	Passed 10th Std for admission in 1st Year Diploma. Other regulations as per WBSCT&VE&SD rules.	• Admission to 80 % seats of all diploma courses shall be made through **JEXPO** counselling conducted by **WBSCT&VE&SD** for the students from West Bengal. Accordingly, eligibility criteria are as per the JEXPO, Govt. of West Bengal. https://webscte.co.in • Admission to remaining 20 % seats of all diploma courses is made through **All India GKCIET Entrance Test (GET)** conducted by Ghani Khan Choudhury Institute of Engineering and Technology Malda (GKCIET) for student from other states and UT (excluding West Bengal). www.gkciet.ac.in • Lateral admission into 2nd Year of Diploma Program through VOCLET, Govt. of West Bengal.
	Computer Science & Technology	60		
	Electrical Engineering	30		
	Food Processing Technology	30		
	Mechanical Engineering	30		

These courses are offered free of cost.

GKCIET follows the syllabus of MAKAUT for B. Tech programs (https://makautexam.net/aicte_details/aicteugdetails.html) and the syllabus of State Council for Diploma programs (https://webscte.co.in/Syllabus-part2-part3).

Fee Structure for 4-year B. Tech programs of GKCIET, Malda for A.Y. 2023-24:

Description	***Fees under GKCIET (Rs.)***	***Fees under MAKAUT (Rs.)***	***Remarks***	***Fees/1st Semester***	***Fees/ Odd Semester except 1st Semester***	***Fees/Even Semester***
Caution Money	5,000/-	-	1st Semester/Refundable#	5,000/-	-	-
Admission Fee	605/-	-	Each odd Semester	605/-	605/-	-
Registration Fee	-	500	1st Semester	500/-	-	-
Development Fee	-	2200	1st Semester (Rs. 550/- per year)	2,200/-	-	-
Student's Insurance	145/-	-	Each odd Semester	145/-	145/-	-
Medical Fee	182/-	-	Each Semester	182/-	182/-	182/-
Tuition Fee*	3,630/-	-	Each Semester	3,630/-	3,630/-	3,630/-
Session Charge	6,050/-	-	Each Semester	6,050/-	6,050/-	6,050/-
Examination Fee	330/-	1200	Each Semester	1,530/-	1,530/-	1,530/-
Institute I-Card	72/-	-	1st Semester	72/-	-	-
Library I-Card	72/-	-	1st Semester	72/-	-	-
Library/Magazine/others	1,365/-	-	Each Semester	1,365/-	1,365/-	1,365/-
Book Bank	1,200/-	-	1st Semester	1,200/-	-	-
Students Welfare/Sports/ Extra Curricular Activities	4,720/-	-	1st Semester	4,720/-	-	-
T&P Activity Fund	2,830/-	-	1st Semester	2,830/-	-	-
Overhead Charges	3,017/-	-	Each Semester	3,017/-	3,017/-	3,017/-
Other Fees	As Applicable					
Total				**33,118/-**	**16,524/-**	**15,774/-**

*waived for candidates admitted through TFW scheme

#Caution Money will be refunded after completion of the course

Fee Structure for 3-year Diploma programs of GKCIET, Malda for A.Y. 2023-24:

Description	Fees (Rs.)	Remarks	Fees/1st Semester	Fees/Odd Semester except 1st Semester	Fees/Even Semester
Seat Booking Fee*	500/-	1st Semester	500/-	-	-
Registration Fee#	150/-	1st Semester	150/-	-	-
Admission Fee	200/-	Each odd Semester	200/-	-	200/-
Student's Insurance	120/-	Each odd Semester	120/-	-	120/-
Tuition Fee**	300/-	Each Semester	300/-	300/-	300/-
Caution Deposit	35/-	Each Semester	35/-	35/-	35/-
Session Charge	50/-	Each Semester	50/-	50/-	50/-
Examination Fee	250/-	Each Semester	250/-	250/-	250/-
Institute I-Card	50/-	1st Semester	50/-	-	-
Library I-Card	50/-	1st Semester	50/-	-	-
Other Fees	As Applicable				
		Total	**₹ 1,705/-**	**₹ 635/-**	**₹ 955/-**

*Not applicable, if paid to the Council directly by the Candidates

#Half for the Candidates under Kanyashree scheme

** Exempted for the candidates under the TFW scheme

Hostel Facilities:

Hostel facility inside institute campus is available under supervision of the institute administration. ***100 seated for girls and 447 seated for boys hostel facility is available.***

Hostel Fee Structure

1.	Hostel Caution Deposit	Rs.8,000/- One time (Refundable)
2.	Hostel Rent/Seat	Rs.6,000/- Per semester
3.	Hostel Maintenance charge.	Rs.1,500/- One time.
4.	Mess Advance	Rs.14,400/-Per semester (Tentative)

Financial Assistance/Scholarships:

Financial Assistance/Scholarship is available through scholarship schemes/portals of the State Govt. and Central Govt:

- Kanyashree for West Bengal students
- Post Matric Scholarship Schemes Minorities
- Financial Education to the wards for Beedi//Cine/IOMC/LSDM Post Matric
- Merit cum Means Scholarship for Professional and Technical Courses CS
- Central Sector Scheme of scholarships for college and University Students
- Hon'ble Chief Minister Relief Fund
- West Bengal Student Credit Card
- Others

Training and Placement Cell:

Ghani Khan Choudhury Institute of Engineering & Technology, Malda has a **Training & Placement Section** leading by a senior faculty member of the Institute. This Section is developed mainly to encourage students to participate in internships, industrial training/visit at various industries of the country, and aims to communicate with the industry and other corporate sectors for placement of graduating students. This section facilitates students for developing themselves as per the need of industry and to acquire knowledge to project themselves as entrepreneurs. It is to help students to place in different esteemed companies through on-campus or off-campus and make them self-dependent. The first batch of MAKAUT-affilated 4-year B.Tech courses passed out in 2022-23, while the first WBSCTE-affilated Diploma batch passed out in 2021-22.

The Institute has also executed MoUs with a few industries in order to facilitate trainins/internships.

PLACEMENT DATA

Academic Year	Total number of final year students	Number of students who received placement offers
2020-21	48 (Diploma)	19 Nos. (Diploma)
2021-22	90 (Diploma) 48 (B. Tech.)	9 Nos. (Diploma) 14 Nos. (B. Tech.)
2022-23	112 (Diploma) 66 (B. Tech.)	48 Nos. (Diploma) 49 Nos. (B. Tech.)

Library:

The Institute has a well-equipped library with sufficient titles and volumes of books to cater to the academic needs to the students; additionally, the Institute subscribes to e-journals and has formed an Institute-level NDLI Club.

Student life at GKCIET:

The GKCIET aims to make students disciplined, aware of environment, and a strong human being. Accordingly, the institute provides a pleasant academic environment in a sprawling area of about 101 acres of land at Narayanpur, Malda with Administrative Block, 4 separate Academic Blocks, Workshops, and Library facilities, Canteen, Student Amenities and Common Rooms etc. The institute provides buses for local transport from Malda City to the Main Campus also. The class starts usually at 9:00 AM and continues till 5:30 PM. Faculties extend their hand in teaching-learning process, share experiences of academic issues to the students in growing them into new generation/digital life on completion of their courses. Students also participate in different sports (Inter or Intra) and other co-curricular activities of the Institute.

This is a ragging-free campus with 24/7 CCTV surveillance at sensitive locations.

Facilities:

The major of the facilities for students at Ghani Khan Choudhury Institute of Engineering and Technology, Malda are mentioned below:

Common Room/Gymkhana (separate for girls and boys): Gym equipment, carrom board, chess, other recreation units etc.

Canteen Facility PlayGround

Institute has **Seminar/Smart Class Room**

The sufficient **laboratories** for each of the departments

A big **workshop** and other related facilities

Healthcare facilities including health insurance to every student

Fitness Club

Ek Bharat Sreshtha Bharat (EBSB) Club

Fine Arts Club

Dance & Drama Club

Robotics Club

Photography Club

Space Club

Elocution and Debate Club

Recreation and Extra-curricular activities:

Different committees/clubs have been constituted for coordinating and supervising student related activities at Ghani Khan Choudhury Institute of Engineering & Technology, Malda from time to time includes various co-curricular activities such as International Yoga Day, National Language Day, Sports, Fest, Swachha Bharat Abhiyan, Run for Unity, tree plantation ceremony, etc. These activities are organized by the members of all Committees/Clubs in coordination with students.
Every year, students organize Cultural Fest “Krishtitarang”, Annual Sports “Pratisphardha” and Technical Fest “Techprabha” making the campus vibrant.

Location & accessibility:

The Institute is located at Narayanpur, Malda, and being developed in a sprawling area of about 101 acres of land at a distance of about 10 km from Malda Town railway station and 0.7 km from the National Highway No. 34. Malda is the headquarters of Malda Railway Division and is well-connected to different parts of the country by train. Nearby airports are Bagdogra (Siliguri) and the Netaji Subhash Chandra Bose International Airport (Kolkata). Multiple trains ply between Malda-Siligiri and Kolkata-Malda throughout the day.

GKCIET Faculty:

GKCIET’s teaching fraternity is highly skilled and possesses strong expertise in their profession. Faculties are dedicated towards high-quality teaching, learning, and research projects. Out of 70 teachers, 48 teachers have PhD in their relevant area. Our teaching fraternity, having expertise in their respective fields, ensures a vibrant support and encouragement for our students. Both teachers and students of GKCIET are actively involved in research projects and published their works in reputed journals, conferences, workshops, seminars etc. Details about departmental faculties and infrastructure are available at https://www.gkciet.ac.in
The Institute was included in the Atal Ranking of Institutions on Innovation Achievements (ARIIA) 2021 under the “Promising” band.
A team of girl students of GKCIET ranked 2nd in the 1st Female National Dorotics Ranking 2023 of BIAG & ASFU.

Links for videos:

Youtube video of the Institute is available online at https://youtu.be/_AOGU3TR1oM

Photographs of the Institute:

Department
of
CIVIL ENGINEERING

1. About the Department:

Civil Engineering is a versatile branch that deals with the design, construction as well as maintenance of naturally and physically built environments. It is the branch with a lot of diversity from geotechnical sciences to structural engineering, environmental to hydraulics, transportation to hydrology. Civil Engineering Department has been functioning since 2013 as one of the primary Departments of the Ghani Khan Choudhury Institute of Engineering & Technology (GKCIET). Presently the Department of Civil Engineering offers 3-year Diploma program in Civil Engineering. The course is delivered as a combination of lectures, tutorials, practices including industrial visits etc. From the session 2023-24, 4-years B.Tech program in 'Civil and Environmental Engineering' will commence.

2. Vision:

To develop highly qualified Civil Engineering professionals through education, research and innovation so that they can contribute positively towards socio-economic and infrastructure growth of the nation.

3. Mission

- To consolidate the Diploma program currently being offered by the Department and start UG, PG and Ph.D programs at the earliest
- Provide opportunities and resources for academicians and researchers to carry out the state-of-the-art research and development work
- To provide quality technical education in the broad field of Civil Engineering, with emphasis on professional ethics and social commitment
- To nurture innovative ideas, new techniques and methods through basic and applied research in real life problems in the field of Civil Engineering
- To provide effective consultancy services for delivering the output of the research to the society
- To create dynamic, technologically capable Civil Engineering professionals with leadership skills

4. Programmes offered:

3 Years Diploma program in Civil Engineering. The Program is affiliated to West Bengal State Council of Technical & Vocational Education & Skill Development (WBSCVET), Kolkata.

4-year B.Tech program in 'Civil and Environmental Engineering'. This program is affiliated to Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal.

5. Faculty and Areas of Interest

Professor

Dr. Kiran Yarrakula	
PG	**Jawaharlal Nehru Technological University (JNTU), Hyderabad, Telangana**
PhD	**Indian Institute of Technology, Kharagpur (IIT Kharagpur), West Bengal**
Areas of Interest	**Water Resources Engineering**

Associate Professor

Dr. Koushik Paul	
PG	**Jadavpur University**
PhD	**Jadavpur University**
Areas of Interest	**Solid Waste Management**

Assistant Professor

Dr. Soumi Bhattacharyya	
PG	**Bengal Engineering and Science University Shibpur**
PhD	**Indian Institute of Engineering Science and Technology (IIEST) Shibpur**
Areas of Interest	**Structural Engineering**

Assistant Professor

Dr. Poojari Yugendar	
PG	**Indian Institute of Technology (IIT) Delhi, New Delhi**
PhD	**National Institute of Technology Warangal, Telangana**
Areas of Interest	**Transportation Engineering**

Assistant Professor

Mr. Haradhan Sarkar	
PG	**Indian Institute of Technology Guwahati**
Areas of Interest	**Transportation Engineering**

Assistant Professor

Mr. Pinak Ray	
PG	**Bengal Engineering and Science University Shibpur**
Areas of Interest	**Structural Engineering**

6. Details of the Head of the Department, Admission coordinator, and Departmental placement coordinator

Dr. Soumi Bhattacharyya

Asst. Professor & Head

Placement coordinator

In-charge of CE Dept. Admission

soumi@gkciet.ac.in

mob: 9143382169

7. Placement Statistics

Details about placement	2021-2022	2022-2023	2023-2024
Total Number of students	**10**	**30**	**18**
Number of students placed in Industry	**04**	**01**	**10**
Number of students in Higher studies	**01**	**13**	**09**

8. Laboratory facilities

Name of the Laboratory	Faculty In-Charge	Major Equipment
Structure Laboratory	Dr. Soumi Bhattacharyya	Universal Testing Machine Torsion Testing machine Brinell cum Rockwell hardness tester Tile flexure testing machine Tile abrasion testing machine
Soil Mechanics Laboratory	Mr. Pinak Ray	Speedy moisture tester Motorised sieve Shaker Atterberg limit device with counter Standard Proctor Compaction Mould Unconfined compression tester proving ring Electric oven Permeability apparatus Vane shear test apparatus Core cutter
Concrete Laboratory	Dr. Soumi Bhattacharyya	Vicat Apparatus Analogue Compression Testing Machine Slump Test Apparatus Rebound Hammer Needle vibrator Aggregate Crushing Value Apparatus Hot Air Oven Blaines Air Permeability Apparatus Le Chateliers Flask

Highway & Transportation Engineering Laboratory	Mr. Haradhan Sarkar and Dr. Poojari Yugendar	Aggregate Impact Test Apparatus Ductility Testing Machine Ring & Ball Apparatus Standard Tar Viscometer Flash and Fire point Apparatus (pensky) Penetrometer CBR test apparatus Water Bath Marshall Stability Apparatus CBR test apparatus Bitumen content test apparatus
Surveying Laboratory	Dr. Koushik Paul	Chain Tape Prismatic Compass (150mm dia) Plane table with accessories Auto Level with tripod stand Levelling staff Theodolites Total station Handheld Garmin GPS Transit Vernier Theodolite
Hydraulics & Water Resources Laboratory	Dr. Kiran Yarrakula	Triangular & Rectangular Notch Venturi meter Orifice meter Pitot tube apparatus Bernoulli test apparatus Pressure measurement apparatus
Environmental Engineering Laboratory	Dr. Koushik Paul	Automatic pH meter Bench top DO meter Bench top Turbidity meter Double Beam uv-vis spectrometer Double distillation water unit BOD incubator Jar Test Apparatus Bench top Conductivity meter COD digestion block with 6 holes. Muffle Furnace

		Desiccator AAS for measuring Cu, Zn, Fe, As, Mn 220gm capacity 0.1mg resolution analytical balance Stirrer cum hot plate Zeiss phase contrast microscope HACH COD/TOC analyzer Hannah bench type water quality multi parameter analysis
Computer Laboratory	Mr. Haradhan Sarkar and Dr. Poojari Yugendar	30 computers Software 1. Auto-Cad 2. ArcGIS 3. Envi
Geology Laboratory	Dr. Poojari Yugendar and Mr. Pinak Ray	Minerals Rocks Pocket Lens Brinton Compass Polarising Microscope Round Magnets Maps Model showing Strike, Dip, Pitch and Escarpment Model showing Folds, faults, unconformity

9. Research Activities

Details about Research Activities	2021-2022	2022-2023	2023-2024
Total Number of publications in peer-reviewed journal	**07**	**06**	**05**

10. List of Selected Publications

1. Sundaram, S., Devaraj, S., Yarrakula, K., 2023, Mapping and assessing spatial extent of floods from multitemporal synthetic aperture radar images: a case study over Adyar watershed, India, Environmental Science and Pollution Research, 30, 22, 63006-63021, SCI Journal, TR Impact Factor- 5.19. ISSN: 16147499.

2. Suresh.D and Kiran Yarrakula, 2022, Time series SAR interferometry approach for landslide identification in mountainous areas of Western Ghats, India, Journal of Earth System and Science. SCI Journal, TR Impact Factor-2.50, 2022, 131(2), 133. ISSN No: 0973-774X.
3. Suresh.D and Kiran Yarrakula, Assessment of topographical and atmospheric errors in Sentinel 1 derived DInSAR, Geocarto International, TR Impact Factor- 4.889. DOI: 10.1080/10106049.2020.1822926, 2022, 37(8), pp. 2424–2440. ISSN No: 1010-6049.

4. Kumar, V., Yarrakula K. 2022, Environmental impact assessment of limestone quarry using multispectral satellite imagery, Earth Science Informatics, 2022, 15(3), pp. 1905–1923, TR Impact Factor- 2.705. SCI and SCOPUS Indexed Journal.

5. Devaraj, S., Latha, C.J., Priya, M.G., Jesudhas, C.J., Yarrakula, K. 2022, Hydrological modelling for ungauged basins: An overview of the past, present, and future directions, Climate Change Impact on Groundwater Resources: Human Health Risk Assessment in Arid and Semi-Arid Regions, 2022, pp. 313–327. SCOPUS Indexed.

6. Ray P. and Banik A. (2023) “An Analytical Review on Environmental impact and sustainability assessment by Comparative Analysis of Ground Improvement Using Various Admixtures” – accepted as Book Chapter for IGE2023 in Wiley Publication. (SCOPUS)

7. V Kumar, K Yarrakula, 2022, Environmental impact assessment of limestone quarry using multispectral satellite imagery. Earth Science Informatics 15 (3), 1905-1923, SCi Journal. TR Impact Factor- 3.5.

8. S Devaraj, K Yarrakula,TR Martha, GP Murugesan, DS Vakat, 2022,Time series SAR interferometry approach for landslide identification in mountainous areas of Western Ghats, India. Journal of Earth System Science 131 (2), 1-17, TR Impact Factor- 2.0

9. Suresh.D and Kiran Yarrakula, Assessment of topographical and atmospheric errors in Sentinel 1 derived DInSAR, Geocarto International, TR Impact Factor 4.889. DOI: 10.1080/10106049.2020.1822926, 37(8), pp. 2424–2440.

10. S Devaraj, C Jenifa Latha, M Geetha Priya, CJ Jesudhas, K Yarrakula, 2022, Hydrological Modelling for Ungauged Basins: An Overview of the Past, Present, and Future Directions Climate Change Impact on Groundwater Resources, 313-327, Book Chapter.

11. Photo Gallery

Department of

Computer Science and Engineering

Ghani Khan Choudhury Institute of Engineering And Technology

CSE

About

Department Name: Computer Science and Engineering

The Department of Computer Science & Engineering was started in the year 2013. Currently, the department offers a 3-Year Diploma program in Computer Science and Technology (CST) with a total intake of 60 students. The Department also has a 4-year B-tech program in Computer Science and Engineering (Artificial Intelligence and Machine Learning) from A.Y. 2023-24 with a total intake of 60 students. The Diploma program is affiliated with the West Bengal State Council of Technical & Vocational Education & Skill Development (WBSCT&VE&SD), and approved by AICTE. The B-Tech Program is affiliated with Maulana Abul Kalam Azad University of Technology and approved by AICTE. The department is fully equipped with the latest computing facilities and laboratories to support teaching-learning and research.

Vision

We aspire to create a conducive environment for students to acquire quality education and technical skills in the field of computer science and engineering

Mission

- To implement quality educational programs for enhancing the knowledge from fundamental engineering to emerging state of art-based education in the field of Computer Science and Engineering.
- To develop leadership quality among the students and prepare them to take up a variety of jobs in various fields.
- To empower the students with hands-on practical education and to meet the global technological challenges with IT industries.
- To impart job role-based skill education and training for upliftment of the local youth.
- To incorporate moral and ethical values among the students and develop their interpersonal skills to bring a sense of social responsibilities among them.

1. **Programmes offered**

Diploma in Computer Science & Technology.

Affiliated to WB State Council of Technical & Vocational Education & Skill Development (WBSCT & VE & SD), Approved by AICTE.

B. Tech in Computer Science & Engineering [AI & ML]

Affiliated to Maulana Abul Kalam Azad University of Technology (MAKAUT), WB, Approved by AICTE.

2. Faculty and Areas of Interest

Associate Professor

Dr. Babul Prasad Tewari	
PG	Department of Computer Science & Engineering, University of Kalyani.
PhD	University of Calcutta, Research done at Indian Statistical Institute Kolkata.
Areas of Interest	Wireless Networks, Mobile Computing, Cloud Computing.
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/541665

Associate Professor

Dr. Sumanta Ray	
PG	Department of Computer Science & Engineering, Jadavpur University.
PhD	University of Kalyani. Department of Computer Science and Engineering
Areas of Interest	Machine Learning, Computational Biology, Feature Engineering
Vidwan Profile	

Assistant Professor

Dr. Showmik Bhowmik	
PG	Department of Computer Science and Engineering, Jadavpur University
PhD	Department of Computer Science and Engineering, Jadavpur University
Areas of Interest	Machine Learning, Deep Learning, Digital Image Processing
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/143745

Assistant Professor

Dr. Sukhen Das Mandal	
PG	Department of Computer Science and Engineering, Jadavpur University
PhD	Indian Institute of Science Education and Research (IISER) Kolkata
Areas of Interest	Computational Biology, Bioinformatics
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/540731

Assistant Professor

Mr. Subrata Roy	
PG	M.Tech, NITTTR Kolkata
PhD	Pursuing (Indian Institute of Technology Guwahati)
Areas of Interest	Multicore Computer Architecture, Cache Optimization, Network On-Chip
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/174095

Assistant Professor

Dr. Imayanmosha Wahlang	
PG	Department of Information Technology, North-Eastern Hill University
PhD	North-Eastern Hill University
Areas of Interest	Medical Image Processing, Data Mining, Machine Learning
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/540732

Assistant Professor

Mr. Tryambak Kumar Ojha	
PG	M.TECH Supreme Knowledge Foundation
PhD	
Areas of Interest	
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/542190

Senior Trainer

Mr. Nikhil Deo	
PG	North Eastern Regional Institute of Science and Technology
PhD	Pursuing PhD from North Eastern Regional Institute of Science and Technology
Areas of Interest	Computer Organisation, Microprocessor
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/541783

Trainer

Mrs. Debadrita Roy	
PG	Heritage Institute of Technology, Kolkata
PhD	Pursuing PhD from NIT Silchar.
Areas of Interest	Blockchain Technogy, Cryptography
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/140992

Trainer

Mr. Siraj Ud Doulah	
PG	JIS College of Engineering, Kalyani
PhD	
Areas of Interest	Machine Learning, Soft Computing
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/143530

Trainer

Mr. Mahafizur Rahaman	
PG	NIL
PhD	B.P.Poddar Institute of Management & Tech.
Areas of Interest	AI & ML , CyberSecurity.
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/542178

3. **Details of the Head of the Department, Admission coordinator, and Departmental placement coordinator**

	**Dr. Babul Prasad Tewari** Associate Professor HoD (Head of the Department) Email:babul@gkciet.ac.in Contact No:6297479700	
Departmental Admission coordinators		
	**Dr. Showmik Bhowmik** Assistant Professor	**Email: showmik@gkciet.ac.in** **Contact No:7003554814**
	**Dr. Imayanmosha Wahlang** Assistant Professor	**Email: imayanmosha@gkciet.ac.in** **Contact No:9856132335**
Departmental Admission Committee Member		
	**Dr. Sukhen Das Mandal** Assistant Professor	**Email: sukhen@gkciet.ac.in** **Contact No:9083357154**
	**Mr. Tryambak Kumar Ojha** Assistant Professor	**Email: tryambak@gkciet.ac.in** **Contact No:9674211012**
	**Mr. Nikhil Deo** Senior Trainer	**Email: nikhil@gkciet.ac.in** **Contact No:7501373770**
	**Mrs. Debadrita Roy** Trainer	**Email: debadrita@gkciet.ac.in** **Contact No:9475539066**
	**Mr. Mahafizur Rahaman** Trainer	**Email: mahafizur@gkciet.ac.in** **Contact No:9733333286**
	**Mr. Puspajit Sarkar** Technical Assistant	**Email: puspajit@gkciet.ac.in** **Contact No: 8670500720**
	**Mr. Souraneel Mandal** Technical Assistant	**Email:souraneel@gkciet.ac.in** **Contact No:8617318474**
Departmental placement coordinator		
	**Dr. Sukhen Das Mandal** Assistant Professor	**Email:sukhen@gkciet.ac.in** **Contact No:9083357154**

4. **Placement Statistics**

Details about placement	2021-2022	2022-2023	2023-2024
Total Number of students	24	27	24
Number of students placed in Industry	4	5	1
Number of students in Higher studies	14	15	19
Average Salary	**2.04 lakh per year**	**1.33 lakh per year**	**60,000 per year**

5. **Esteemed Recruiters (In this provide the List of Major Recruiters)**

1. Tech Mahindra
2. Adytum Infotech Pvt. Ltd.
3. GenNext
4. NSG Software

6. **List of students qualified for GATE**

2021-2022	2022-2023	2023-2024
NA	**NA**	**NA**

7. **Laboratory facilities**

Name of the Laboratory	Faculty In-Charge	Major Equipment
CSE LAB 01 (Programming & Data Structure Lab)	Dr. Imayanmosha Wahlang	30 PC Computer Systems
CSE LAB 02 (DBMS and Object-Oriented Programming Lab.)	Dr. Sukhen Das Mandal	30 PC Computer Systems
CSE LAB 03 (Networks & Systems Lab.)	Dr. Babul P. Tewari	11 PC Computer Systems
CSE LAB 04 (AI & ML Lab.)	Dr. Showmik Bhowmik	40 PC Computer Systems
Lab 05 CO Lab (In process)	Mr. Subrata Roy	In process.
Tinkering Lab.	Mr. Nikhil Deo	Beginner Arduino Kit Box
MLSB Research Lab.	Dr. Showmik Bhowmik Dr. Sukhen Das Mandal	Raspberry pi Sensor Motor Motor Driver

8. **Achievement/output of the Department (Any Achievement of the student or the Department in the last three years like Hackathon, Awards, or any other outreach activities)**

1) Diploma Final Year Students secured 3rd Position in GKCIET Internal Hackathon Competition in Techprabha 2024.

2) Mr. Shantanu Singha Roy under the mentorship of **Dr. Sukhen Das Mandal** was awarded with best paper presentation in the 6th Regional Science & Technology Congress 2024 organized by Govt. of West Bengal.

3) Diploma final year students Aditya Mandal and Sudam Dutta under the mentorship of **Dr. Showmik Bhowmik** secured 3rd position in poster presentation category, in Techprabha – 2024.

4) Diploma final year student Mr. Shantanu Singha Roy under the mentorship of **Dr. Sukhen Das Mandal** secured 2nd position in poster presentation category in Techprabha 2024.

5) Diploma final year students Chaitali Dutta and Arpan Thakur under the mentorship of **Dr. Showmik Bhowmik** secured 3rd position in the demo model presentation.

6) Diploma final year pass-out students under the mentorship of **Dr. Showmik Bhowmik** published a paper in Neural Comput & Applic (2024) Journal, Springer Nature.

7) Diploma students under the mentorship of **Dr. Showmik Bhowmik** published a paper in the international conference CiCBA 2023, Springer Nature.

8) Diploma students under the mentorship of **Dr. Showmik Bhowmik** published a paper in the international conference ICICASEE-2023, CRC Press.

9. **Research Activities**

Details about Research Activities	2021-2022	2022-2023	2023-2024
Total Number of publications in peer-reviewed journal	**16**	**15**	**4**
Total Number of publications as book chapter	**3**	**2**	**8**
Total Number of publications as book	**0**	**0**	**2**
Total Number of patents files	**0**	**0**	**0**
Total number of conferences/ workshops organized	**1**	**0**	**0**
Total number of conferences or workshops participated	**13**	**15**	**13**
Total number of Ph.D. scholars guided			

10. **List of Selected Publications**

1) Babul P. Tewari, ``Frame Aggregation Aware Cluster Based Association Management for Heterogeneous Users,” J. Ambient Intell. Humaniz. Comput, Vol. 14, No. 3, Springer, pp. 2811-2826, 2023.

2) Poulomi Mukherjee, Babul P. Tewari, Tanmay De, ``Joint Resource Allocation and Cluster-Head Selection For Energy-Aware D2D Multi-Casting” Int. J. Ad Hoc Ubiquitous Computing, Vol. 44, No. 3, Inderscience, pp. 131-147, 2023.

3) Nirmalya Mukhopadhyay, Babul P. Tewari, ``Dynamic Cost Effective Solution for Efficient Cloud Infrastructure'' J. of Supercomputing, Vol. 79, No. 6, Springer, pp. 6471-6506, 2023.

4) Bhowmik, S., Risat, S. & Sarkar, B. DSANet: dilated spatial attention network for the detection of text, non-text and touching components in unconstrained handwritten documents. Neural Comput & Applic (2024). https://doi.org/10.1007/s00521-024- 10013-8,

5) Ghosh, S., Hassan, S.K.K., Khan, A.H. et al. Application of texture-based features for text non-text classification in printed document images with novel feature selection algorithm. Soft Comput 26, 891–909 (2022). https://doi.org/10.1007/s00500-021- 06260-9

6) Bhowmik, S., Kundu, S. & Sarkar, R. BINYAS: a complex document layout analysis system. Multimed Tools Appl 80, 8471–8504 (2021). https://doi.org/10.1007/s11042-020-09832-3

7) Nag, S, Goswami, B., Mandal, S. D., & Ray, P. S. (2022). Cooperation and competition by RNA-binding proteins in cancer. Seminars in Cancer Biology. doi:doi.org/10.1016/j.semcancer.2022.02.023. [Impact Factor 17.012]

8) Sharma, R. K., Goswami, B., Das Mandal, S., Guha, A., Willard, B., & Ray, P. S. (2021). Quorum sensing by gelsolin regulates programmed cell death 4 expression and a density-dependent phenotype in macrophages. The Journal of Immunology, 207(5), 1250-1264, https://doi.org/10.4049/jimmunol.2001392.

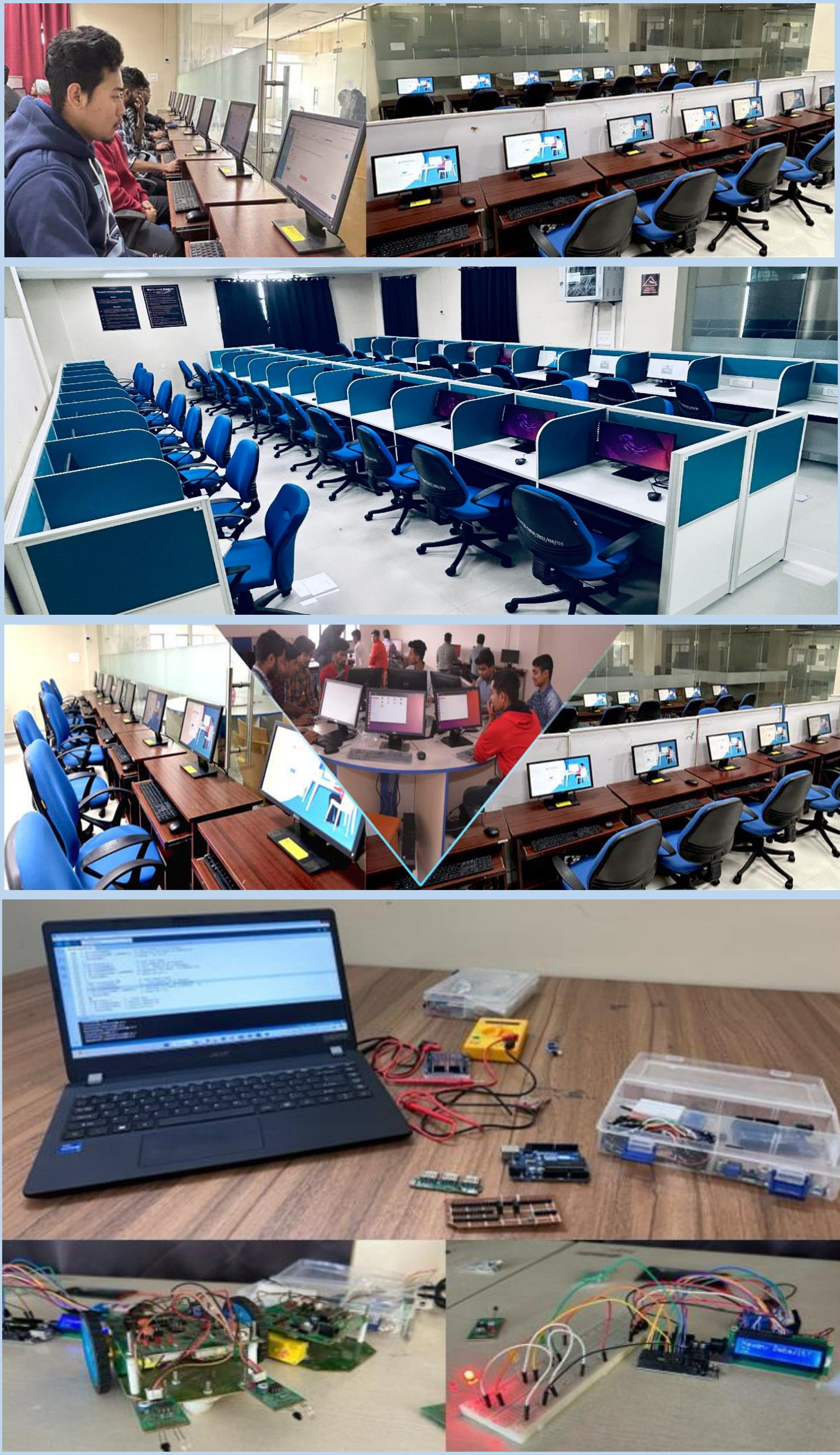
9) Mandal, S. D., & Ray, P. S. (2021). Transcriptom-wide Analysis Reveals Spatial Correlation between n6-methylamine and binding sites of microRNAs and RNA-binding proteins. Genomics.https://doi.org/10.1016/j.ygeno.2020.12.

10) S. Ray*,M. Desai, and S. Pyne, Systematic mining of patterns of polysubstance use in a nationwide population survey, Computers in Biology and Medicine, Volume 151, Part A, December 2022, 106175

11) S. Lall, S. Ray*, S. Bandyopadhyay, LSH-GAN enables in-silico generation of cells for small sample high dimensional scRNA-seq data., Nat. Communication Biology, 577 (2022). https://doi.org/10.1038/s42003-022-03473-y.

12) S. Lall, A. Ghosh, S. Ray*, S. Bandyopadhyay, sc-REnF: An entropy guided robust feature selection for clustering of single-cell RNA-seq data, Briefings in Bioinformatics, bbab517, 2022 https://doi.org/10.1093/bib/bbab517

11. Photo Gallery



Bhaskar Sarkar, from MLSB Research Lab presenting his paper in IC ICASEE 2023 at GKCIET, Malda

Department
Of
FOOD PROCESSING TECHNOLOGY

About the Department

Department of Food Processing Technology was established in 2010 supported by the Ministry of Human Resource Development (MHRD), Government of India. The Department of Food Processing Technology is one of the five constituent departments of the institute. The aim of the department is to generate human resources capable of accepting the current and future challenges of food processing sector of the country. The department is currently offering 3 years Diploma and 4 years B Tech. programs and contemplating the M Tech. and Ph. D program in future.

1. Vision:

To create trained and skilled human resources well versed in technical aspects of food processing to cater the needs of research, industries and society.

2. **Mission**

- To establish itself as the leader in human resource development for the food processing sector across the globe.
- To provide knowledge and skills for better preservation, processing and value To developed the innovate technologies for mechanization of food processing operations.
- To inculcate the knowledge of food safety and security regulations
- To promote research and development for products and processes, and assurance of high quality and safety

3. Programmes offered

- B.Tech. in Food Technology
- Diploma in Food Processing Technology

4. Faculty and Areas of Interest

Professor

Dr. Kshirod Kumar Dash	
PG	IIT Kharagpur
PhD	IIT Kharagpur
Areas of Interest	Dairy and Food Engineering
GKCIET Profile	https://www.gkciet.ac.in/faculty/13

Associate Professor

Dr. Amit Baran Das	
PG	Sant Longowal Institute of Engineering and Technology
PhD	IIT Guwahati
Areas of Interest	Food Rheology, Extrusion Technology
GKCIET Profile	https://www.gkciet.ac.in/faculty/140

Assistant Professor

Dr. Sudip Kumar Das	
PG	University of Calcutta
PhD	University of Calcutta
Areas of Interest	Oil Technology, Chemical Engineering
GKCIET Profile	https://www.gkciet.ac.in/faculty/20
Dr. Mudasir Ahmad Malik	
PG	Sant Longowal Institute of Engineering and Technology
PhD	Sant Longowal Institute of Engineering and Technology
Areas of Interest	Food Engineering and Technology
GKCIET Profile	https://www.gkciet.ac.in/faculty/15
Dr. Sourav Chakraborty	
PG	Tezpur University
PhD	Tezpur University
Areas of Interest	Food Engineering and Technology
GKCIET Profile	https://www.gkciet.ac.in/faculty/92
Dr. Anwesa Sarkar	
PG	G.B.Pant University
PhD	G.B.Pant University
Areas of Interest	Process and Food Engineering,Food Biotech Engineering
GKCIET Profile	https://www.gkciet.ac.in/faculty/85
Dr. Vivek Kumar	
PG	Aligarh Muslim University
PhD	IIT Kharagpur
Areas of Interest	Food Process Engineering; Unit Operations; Food Additives; Post Harvest Engineering; Food Technology
GKCIET Profile	https://www.gkciet.ac.in/faculty/83

5. Details of the Head of the Department, Admission coordinator, and Departmental placement coordinator

Head of the Department	Dr. Amit Baran Das	
Admission coordinator	Dr. Sourav Chakraborty Dr. Anwesa Sarkar	 
Departmental placement coordinator	Dr. Sourav Chakraborty	

6. Placement Statistics

Details about placement	2021-2022	2022-2023	2023-2024
Total Number of students	**9**	**15**	**28**
Number of students placed in Industry	**5**	**9**	**18**
Number of students in Higher studies	**3**	**5**	**11**
Average Salary	**1.9**	**2.10**	**2.15**

7. Esteemed Recruiters

Britannia Industries, Keventer, ParleG, Atop Food Products Pvt. Ltd. (Haldiram)

Pampar Ovenfresh Foods Private Limited, Ambuja Cement, Pepsico, Nestle

Bengal Beverages, Varun Beverages, Anmol Industries Ltd, ITC, Bishfarm

8. **List of students qualified GATE**

2021-2022	2022-2023	2023-2024
-	**Naresh Das**	**Adrita Sarkar** **Vyurru Gudarankamma** **Rizwanul Hosaain** **Bhaskar Gharoi** **Krishnendu Samanta**

9. **Laboratory facilities**

Name of the Laboratory	Faculty In-Charge	Major Equipment
Food Engineering	Dr Kshirod Kumar Dash	**Food Engineering Equipment**
Food Chemistry	Dr. Mudasir Ahmad Malik	**Qulity analysis equipment**
Unit Operation	Dr. Sudip Kumar Das	**Packaging equipment & unit operation lab equipment**
	Dr. Vivek Kumar	
Food Microbiology	Dr. Anwesa Sarkar	**Microbiological analysis equipment**
Computer lab	Dr. Vivek Kumar	**15 work station**
Sophisticated lab	Dr. Sourav Chakraborty	**Sophisticated analytical equipment**
Food Product development	Dr. Amit Baran Das	**Equipment for different food products**

10. Achievement/output of the Department (Any Achievement of student or the Department in the last three years like Hackathon, Awards, or any other outreach activities)

11. Research Activities

Details about Research Activities	2021-2022	2022-2023	2023-2024
Total Number of publications in peer reviewed journal	**36**	**45**	**72**
Total Number of publications as book chapter	**10**	**16**	**18**
Total Number of publications as book	**1**	**2**	**3**
Total Number of patents files	**1**	**2**	**2**
Total number of conferences/ workshops organized	**1**	**1**	**3**
Total number of conferences or workshops participated	**2**	**3**	**3**
Total number of Ph.D. scholars guided	**2**	**1**	**4**

12. List of Selected Publications

- Singh, T., Pandey, V. K., Singh, R., Dash, K. K., Kovács, B., & Mukarram, S. A. (2024). Ultrasound assisted extraction of phytochemicals from Piper betel L. Ultrasonics Sonochemistry, 106, 106894.

- Bhagya Raj, G. V. S., & Dash, K. K. (2022). Comprehensive study on applications of artificial neural network in food process modeling. Critical reviews in food science and nutrition, 62(10), 2756-2783.

- Deka, B., Chakravorty, P., & Das, A. B. (2024). Impact of Different Natural Deep Eutectic Solvents on Dissolution Behaviour and Eutectogel Structure of Jackfruit Seed Starch. Journal of Polymers and the Environment, 32(2), 632-640.
- Sarkar, D., Das, S. K., & Bandyopadhyay, A. (2013). Analysis of bio-sorption of Cr (VI) onto raw rice husk by a hybrid theoretical model using results of batch experiments. Adsorption Science & Technology, 31(8), 747-765.
- Taha, A., Mehany, T., Pandiselvam, R., Anusha Siddiqui, S., Mir, N. A., Malik, M. A., ... & Hu, H. (2022). Sonoprocessing: mechanisms and recent applications of power ultrasound in food. Critical reviews in food science and nutrition, 1-39.
- Malik, M. A., & Saini, C. S. (2019). Heat treatment of sunflower protein isolates near isoelectric point: Effect on rheological and structural properties. Food Chemistry, 276, 554-561.
- Trivedi, D., Gautam, S. P., Abdul, S., Hazarika, M. K., & Chakraborty, S. (2023). Instant decompression-induced swell drying of banana: Machine learning and swarm intelligence embedded modeling and process optimization. Journal of Food Process Engineering, 46(11), e14431.
- Maibam, B. D., Chakraborty, S., Nickhil, C., & Deka, S. C. (2023). Effect of Euryale ferox seed shell extract addition on the in vitro starch digestibility and predicted glycemic index of wheat-based bread. International Journal of Biological Macromolecules, 226, 1066-1078.
- Chakraborty, S., Gautam, S. P., Bordoloi, T., & Hazarika, M. K. (2020). Neural network and computational fluid dynamics modeling for the gelatinization kinetics of instant controlled pressure drop treated parboiled rice. Journal of Food Process Engineering, 43(11), e13534.
- Kate, A. E., Sarkar, A., Shahi, N. C., & Lohani, U. C. (2015). Cracking force analysis for apricot pit decortication based on mathematical model of Hertz's theory. International Journal of Food Properties, 18(11), 2528-2538.
- Kumar, V., & Shrivastava, S. L. (2017). Optimization of vacuum-assisted microwave drying parameters of green bell pepper using response surface methodology. Journal of Food Measurement and Characterization, 11, 1761-1772.
- Kumar, V., Devi, M. K., Panda, B. K., & Shrivastava, S. L. (2019). Shrinkage and rehydration characteristics of vacuum assisted microwave dried green bell pepper. Journal of Food Process Engineering, 42(4), e13030.

13. List of ongoing Research projects or ongoing consultancies

"Design and development of extrusion-based pilot scale continuous process technology for jaggery-making Inbox" sponsored by Department of Science & Technology, Govt of India

14. Photo Gallery











CENTRE OF EXCELLENCE


GOVERNMENT OF INDIA
Azadi Ka Amrit Mahotsav
AMRIT KALASH YATRA
VENUE: GKCIET CAMPUS
TIME: 03:30 PM

Department
Of
MECHANICAL ENGINEERING

About the Department

Mechanical Engineering is one of premier disciplines of this Institute towards fulfilling the vision. Presently it is offering 3 years diploma program affiliated to the West Bengal State Council of Technical & Vocational Education and Skill Development (WBSCT&VE&SD) and 4 years B.Tech program affiliated to the Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal. At present, department is equipped with its laboratories, workshops, computational laboratories & other necessity besides its leading by the active and dynamic faculty and staff members under leadership of the Hon'ble Director, Prof. P. R. Alapati and his administration. It caters Engineering Sciences mainly in Design Engineering, Thermal Engineering, Industrial Engineering and Production & Manufacturing. It has grown steadily since the beginning in all fields especially in teaching, and flourishing in research and publications. Together with teaching & research, it trains its students facilitating learning tools to know about industry, its products & problems, and the technology developing

1. Vision

To be recognized as a centre of excellence in mechanical engineering, for education, research and development and serve the national and international societies with professional ethics

2. Mission

- **M1:** To impart quality technical education in the field of mechanical engineering and get recognition at national and international level.
- **M2:** To enable students, to pursue higher education/professional career/entrepreneurship in mechanical engineering, by inculcating better technical skills and competencies.
- **M3:** To promote conglomeration of research and innovations in the design and manufacturing of advanced mechanical systems.
- **M4:** To encourage students to involve in critical thinking, project development and continuous learning with the motive to solve real time complex issues in the field of mechanical engineering.
- **M5**: To create research-oriented environment and centre of excellence in design, manufacturing and thermal sciences for contributing towards Make in India, Made in India and Atmanirbhar Bharat.

3. Programmes offered

Name of the Course	Intake Capacity	Duration	Affiliating University/ Council
Diploma	30	3 years	WBSCT&VE&SD, Kolkata
B.Tech	60	4 years	MAKAUT (WBUT), WB

4. Faculty and Areas of Interest

Professor

Prof. Dalbir Singh	
PG	Anna University
PhD	Hindustan Institute of Technology and Science
Areas of Interest	Composite materials
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/541530

Associate Professor

Dr. Mandapati Mohan Jagadeesh Kumar	
PG	IIT Delhi
PhD	IIT Kharagpur
Areas of Interest	CFD, Thermal Management, Waste Heat Recovery
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/540979

Assistant Professor (s)

Dr. Dharmeswar Dash	
PG	NERIST, Arunachal Pradesh
PhD	NERIST, Arunachal Pradesh
Areas of Interest	Composite Materials, Non-Conventional Machining, Manufacturing Processes
Vidwan Profile	

Assistant Professor

Dr. Habib Masum	
PG	NIT Durgapur
PhD	IIEST Shibpur
Areas of Interest	Applied Mechanics, Robotics, Bio-mechanics, IoT, Rural Technology
Vidwan Profile	

Assistant Professor

Dr. Tanmoy Sarkar	
PG	BESU, Shibpur
PhD	Jadavpur University, Kolkata
Areas of Interest	Materials Development
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/541183

Assistant Professor

Dr. Santosh Kumar Dash	
PG	NERIST, Arunachal Pradesh
PhD	NERIST, Arunachal Pradesh
Areas of Interest	Renewable energy, Engine combustion and emission, Solar energy
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/539758

Assistant Professor

Dr. Nitesh Mondal	
PG	BESU, Shibpur
PhD	Jadavpur University, Kolkata
Areas of Interest	Fluid Power Control, CFD, Fluid Mechanics, Bio-mechanics
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/541653

Assistant Professor

Sri. Niraj Kumar	
PG	NIT Durgapur
PhD	Persuing Ph.D in NIT Patna
Areas of Interest	CFD, Microfluidic, Renewable energy
Vidwan Profile	

Assistant Professor

Ms. Anisha Pal	
PG	NIT Durgapur
PhD	IIT Kharagpur (ongoing)
Areas of Interest	Operations Research, Operations Management, System Dynamics, Industrial Engineering
Vidwan Profile	

5. Details of the Head of the Department, Admission coordinator, and Departmental placement coordinator

<table>
<tr><td>  </td><td colspan="2">Dr. M. Mohan Jagadeesh Kumar.
Head of the Department
Mechanical Engineering.
Email: me_hod@gkciet.ac.in
Tel. No: 8619034984</td></tr>
<tr><td colspan="3">Departmental Admission coordinators</td></tr>
<tr><td>  </td><td>Dr. Nitesh Mondal
Assistant Professor.</td><td>Email: nitesh@gkciet.ac.in
Tel. No: 9062722980</td></tr>
<tr><td>  </td><td>Ms. Anisha Pal
Assistant Professor.</td><td>Email: anisha@gkciet.ac.in
Tel. No: 8989535402</td></tr>
<tr><td colspan="3">Departmental Admission Committee Member</td></tr>
<tr><td>  </td><td>Mr. Tridib Ranjan Das
Sr. Trainer.</td><td>Email: tridib@gkciet.ac.in
Tel. No: 9641158076</td></tr>
<tr><td>  </td><td>Mr. Soumodip Chatterjee
Technical Assistant.</td><td>Email: soumodip@gkciet.ac.in
Tel. No: 8967361006</td></tr>
</table>

	Mr. Sashi Bhushan Kumar Technical Assistant	
Departmental placement coordinator		
	Dr. Santosh Kumar Dash Assistant Professor.	Email: santosh@gkciet.ac.in Tel. No: 8249272150

6. Placement Statistics

Details about placement	2021-2022	2022-2023	2023-2024
Total Number of students	08	40 (including B.Tech & Diploma)	26 (including B.Tech & Diploma)
Number of students placed in Industry	08	40	26
Number of students in Higher studies	--	06	06
Average Salary	2.4 LpA	2.4 LpA	2.4 LpA

7. Esteemed Recruiters (In this provide the List of Major Recruiters)

- **Bharat Gears Ltd. (BGL),**
- **Krishna Maruti Limited, Gujarat,**
- **Emmvee,**
- **ACS Networks and Technologies,**
- **ASC International,**
- **Keventer,**
- **Adytuminfotech Softwares Pvt. Ltd.**
- **Mando Automotive India Pvt. Ltd.,**
- **Pie Infocomm Pvt. Ltd,**
- **Grifeo.**
- **Synnova Gears,**
- **Planet Sparks,**
- **Agumentik Group of Companies,**
- **High-Technext Engg. Pvt. Ltd**

8. List of students qualified GATE

2021-2022	2022-2023	2023-2024
		Mr. Surajit Kundu Mr. Parthasarathi Samanta Mr. Mukesh Kumar Murari Mr. Tamojyoti Das Mr. Suparna Dhara

9. Laboratory facilities

Name of the Laboratory	Faculty In-Charge	Major Equipment
Applied Mechanics Lab	Dr. Hasibur Rahaman	Universal Force Table, Jib Crane Apparatus, Parallel Forces Apparatus: Overhang Beam Type, Inclined Plane Apparatus, Differential Pulley Block (Model)
Strength of Materials Lab	Mr. Niraj Kumar	Izod & Charpy Impact Testing Machine, Universal Testing Machine (UTM), Brinel Hardness Tester, Torsion Test Machine
Design of Machine Elements Lab	Dr. Habib Masum/Prof. Dalbir Singh	Simple Gear Train Mechanism, Compound Gear Train Mechanism, Wheel and Differential Axle - 30cm (Without weight), Screw Jack, Worm & Worm Wheel.
Machine Dynamics Lab	Dr. Habib Masum	Cam Analysis Apparatus, Motorised Epicyclic Gear Train Apparatus, Static & Dynamic Balancing Apparatus, Motorised Gyroscope Test Rig, Universal Governor Apparatus, Universal Vibration Apparatus.
Fluid Mechanics & Hydraulics Lab	Dr. Nitesh Mondal	Closed Circuit Venturimeter Test Rig, Closed Circuit Pipe Friction Apparatus, Closed Circuit Pitot Tube Apparatus, Pelton Turbine Test Rig, Closed Circuit Single Stage Multispeed Centrifugal Pump Test Rig, Closed Circuit Reciprocating Pump Test Rig.
Computational Lab/ CAD & CAM	Dr. M. M. J. Kumar Dr. Nitesh Kumar	Personal Computers: 40, Softwares: ANSYS R24, Solid Works
Automobile Lab	Sri. Siladitya Mandal	A Model for Mechanical Linkage Type Steering, A Model for Power Steering, A Model for Differential Unit, A Model for Suspension System, A Model for Hydraulic Brake Systems, Exhaust Gas Analyser
Refrigeration & Air Conditioning Lab	Sri. Niraj Kumar	Air Conditioning Test Rig, Window A. C. Test Rig, Water Cooler Test Rig, Ice Plant Test Rig, RAC Control (Model-MISC), Refrigeration Test Rig, Hemispherical Cut-Section of Compressor.
Advanced Thermodynamics & Thermal Engineering Lab	Dr. Santosh Kumar Dash	Single Cylinder 4-Stroke Petrol Engine Test Rig, 4-Cylinder 4- Stroke Petrol Engine Test Rig attached with a Hydraulic Break Dynamometer and igital Load Indicator, Two Stage Reciprocating Air Compressor Test Rig.
Heat & Mass Transfer Lab	Dr. M. Mohan Jagadeesh Kumar	Measuring Thermal Conductivity of Metal Rod, Heat Transfer Phenomena in Natural Convection, Heat Transfer Phenomena in Forced Convection, Shell & Tube Heat Exchanger Apparatus, Emissivity Measuring Apparatus, Heat Transfer through a Pin Fin, Stefan Boltzmann's Apparatus
Machine and Advanced Machine Shop	Dr. Tanmoy Sarkar	Lathes, Shaper M/C, Milling M/C, Surface Grinder, Power Saw, Vertical Drilling M/C, Bench Grinder, CNC Lathe, Electric Discharge Machine.
Fittings & Carpentry Shop	Mr. Raktim Roy	Power saw M/C, Bench grinder M/C, Pillar Drill M/c, Table Mounted Surface Plate, Floor Mounted Surface Plate, Bench Vice, Pipe Vice.
Advanced Carpentry Shop	Mr. Raktim Roy	Wood Turning Lathe, Wood Surface Labelling M/c, Circular Sawing M/c, Multipurpose Wood Working Machine (6-in-1), Make-Wood Master, Model-Wm157, Vertical Drilling M/c, Bench Grinder, Jig Saw Machine 24"
Welding Shop	Mr. Abhinav Kumar	Gas Welding and Cutting, Arc Welding M/c, TIG, MIG, Spot Welding, Double Arc Welding M/c, XP-WM-200A Welding machine Xtra power, Arc welding machine 250 Amps
Smithy & Forging Shop	Dr. Tanmoy Sarkar	Power Hammer, Open Heart Furnace, Anvil, Swage Block, Leg Vice, Bench Grinder.
Foundry and Sheet Metal Shop	Mr. Tridib Ranjan Das	Sheet Bending M/c, Sheet Sharing M/c, Pipe Bending M/c.

Metrology & Material Characterization Lab	Dr. Dharmeswar Dash	Double Disc Polishing Machine, M Trinocular Research Microscope Vision Plus, 01. Outside Micrometer, Sine bar, Depth Micrometer, Dial Gauge indicator, Dial Bore Gauge, Vernier Bevel Protractor, Gear Tooth Vernier Calliper, Digital Vernier Calliper, Magnetic Stand, Radius Gauge, Slip Gauge, Angle Gauge Set

10. Achievement/output of the Department (Any Achievement of student or the Department in the last three years like Hackathon, Awards, or any other outreach activities)

1) A team of girl students of GKCIET ranked **2nd** in **1st Female National DOROTICS Ranking 2023** of BIAG & ASFU.

2) A team of students of GKCIET ranked **3rd** in **2nd National Drone Ranking 2021 2022** of BIAG & ASFU

3) A team of students of GKCIET ranked **2nd** in **1st National Drone Ranking 2021** of International Aviation Games Board (BIAG) and Aviation & Space Federation for Universe (ASFU)

4) A team, namely "***eMON***", participated **National Convention** of **AICTE-Chhatra Vishwakarma Awards 2020** (Category – "Working Conditions; Ensuring Occupational Helth and Safety Issues", Theme – "India's Economy Recovery Post Covid; Reverse Migration and rehabilitation Plan to support "Atmanirbhar Bharat"), ***Title of the project:*** **Development Remotely Operated Lamp for Inaugural Program (ROLIP)**

5) A team, namely "***MECHANIZERS***", participated **National Convention** of **AICTE-Chhatra Vishwakarma Awards 2019** (Category – "Farm and Flock", Theme – "How to Enhance the Income of Village"), ***Title of the project:*** **Development of an Advanced Mango Picking Stick**

6) A team, namely "***GKCTICS***", A team participated **Regional Convention (Eastern)** of **AICTE-Chhatra Vishwakarma Awards 2019** (Category – "Working Conditions; Ensuring Occupational Helth and Safety Issues", Theme – "India's Economy Recovery Post COVID; Reverse Migration and rehabilitation Plan to support "Atmanirbhar Bharat"), ***Title of the project:*** **Automatic Water Parameter Monitoring and Control for Biofloc Fish Farming.**

7) Mr. Debasis Behera, Mr. Kushal Ghosh, Mr. Md Mojahid Hussain and Mr. Rounak Basu, Diploma IV sem students, participated in **JISTECH2K22**, JIS University and presented a model on **"Design and Modelling of a Multi-Purpose Universally Operated Control System"**

8) Our students under the guidance of Dr. Nitesh Mondal participated in 2nd International Conference on Mechanical Engineering, Organised by Department of Mechanical Engineering Jadavpur University Jan 5-6, 2024 and presented the following papers:
   - **Mr. S. Kundu and Mr. P. Samanta on "Design and Numerical Analysis on Scaffold Architecture to Achieve Patient Specific Mechanobiological Environment"**
   - **Mr. S. Mondal and Mr. R. C. Sarkar on "A Computational Analysis of Fluid Flow Around Square Object".**
   - **Mr. P. Samanta, Mr. S. Kundu and Mr. A. Gupta, on "Impact of Mechanical Stimuli on Cellular Response: A Computational Study".**
   - **Mr. R. C. Sarkar, Mr. S. Mondal and Mr. S. Dey on "A Computational Analysis of Fluid Flow Around Triangular Object".**
   - **Mr. S. Laha, Mr. S. K. Dash and Mr. P. Dutta on "Flow Separation of Single-phase Turbulent Flow Through 90° Pipe Bend: A Numerical Analysis"**

9) Mr. Pritam Mahato, Mr. Govind Kumar Singh, Mr. Animesh Mondal and Mr. Subhradip Maity, Diploma V Sem students, participated in 2 days technical certified workshop of Skill in AI with ML Association with KSHITIJ'24 at IIT Kharagpur.

11. Research Activities

Details about Research Activities	2021-2022	2022-2023	2023-2024
Total Number of publications in peer reviewed journal	5	9	12
Total Number of publications as book chapter	--	--	--
Total Number of publications as book	--	--	--
Total Number of patents files			
Total number of conferences/ workshops organized	--	--	--
Total number of conferences or workshops participated	--	--	01
Total number of Ph.D. scholars guided	--	--	04 (ongoing)

12. List of Selected Publications

1. Ankita Mallick, Rupam Mandal, Nitesh Mondal, Subhasish Sarkar, Nisantika Biswas, Barnali Maji, Gautam Majumdar, "Parametric optimization and minimization of corrosion rate of electroless Ni–P coating using Box-Behnken design and Artificial Neural Network", Results in Surfaces and Interfaces, 15, 2024, 100228. https://doi.org/10.1016/j.rsurfi.2024.100228.

2. Parthasarathi Samanta, Surajit Kundu, Abhisek Gupta, Masud Rana, Nitesh Mondal, "Assessment of Mechanical Responses Between Trabecular Bones and Porous Scaffolds Under Static Loading and Fluid Flow Conditions: A Multiscale Approach", International J. for Multiscale Computational Engineering, 22 (4), 2024, pp. 45-55. doi: 10.1615/IntJMultCompEng.2023049206.

3. Yamala Muralikrishna, Seerapu Siva Satyanarayana Reddy, Mithilesh Kumar Sahu, M. Mohan Jagadeesh Kumar, "A numerical study on effect of intra and inter spaced winding configuration on performance of oil forced transformer cooling system", Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2024, doi:10.1177/09576509241227299

4. Mondal, N. "A novel approach to design compensator actuators for a swash plate axial piston pump along with the experimental validation", Int. J. Dynamics and Control, 11, 2023, 2553–2565. https://doi.org/10.1007/s40435-023-01114-8.

5. Yamala Muralikrishna, M. Mohan Jagadeesh Kumar, Balaka Aravind, Mithilesh Kumar Sahu, "Comparative studies on performance of plain, perforated, threaded, and threaded–perforated pin fin: A numerical approach", Heat Transfer (Expanded SCI with CS: 3.8), 52 (4), 2023, pp: 1-20, doi: 10.1002/htj.22830

6. A. Saravanan, Satyajeet Parida, M. Murugan, M. Sreenivasa Reddy, P.V. Elumalai, Santosh Kumar Dash, "Thermal performance prediction of a solar air heater with a C-shape finned absorber plate using RF, LR and KNN models of Machine learning", Thermal Science and Engineering Progress, 38, 2023, 101630. https://doi.org/10.1016/j.tsep.2022.101630

7. Santosh Kumar Dash, Pradip Lingfa, Pritam Kumar Das, A. Saravanan, Dharmeswar Dash, Bhemuni Bharaprasad, "Effect of injection pressure adjustment towards performance, emission and combustion analysis of optimal nahar methyl ester diesel blend powered agricultural diesel engine", Energy, 263, Part C, 2023, 125831, https://doi.org/10.1016/j.energy.2022.125831.

8. Parthasarathy Murugesan, Anh Tuan Hoang, Elumalai Perumal Venkatesan, Dash Santosh Kumar, Dhinesh Balasubramanian, Anh Tuan Le, Van Viet Pham, “Role of hydrogen in improving performance and emission characteristics of homogeneous charge compression ignition engine fueled with graphite oxide nanoparticle-added microalgae biodiesel/diesel blends”, Int. J. Hydrogen Energy, 47 (88), 2022, pp: 37617-37634. https://doi.org/10.1016/j.ijhydene.2021.08.107.

9. M. Parthasarathy, S. Ramkumar, P.V. Elumalai, Sachin Kumar Gupta, R. Krishnamoorthy, S. Mohammed Iqbal, Santosh Kumar Dash, R. Silambarasan, “Experimental investigation of strategies to enhance the homogeneous charge compression ignition engine characteristics powered by waste plastic oil”, Energy Conversion and Management, 236, 2021, 114026. https://doi.org/10.1016/j.enconman.2021.114026

10. Gunisetty Madhulatha, M. Mohan Jagadeesh Kumar, P. Sateesh, “Optimization of tube arrangement and phase change material for enhanced performance of solar air heater- a numerical analysis”, Int. J. Energy Storage (SCI Journal with IF: 10.3), 41, 102876, 2021. doi:10.1016/j.est.2021.102876

13. List of ongoing Research projects or ongoing consultancies

NIL

14. List of Patents

- A multipurpose device integrated with power bank emergency light and music system, by Abhinav Kumar, Siladitya Mandal, Niraj Kumar, published in 31/03/2023 in Intellectual Property India. https://ipindia.nic.in/index.htm

- Secured mobility assistance system, by Dharmeswar Dash, Santosh Kumar Dash, Abhinav Kumar, Siladitya Mandal, filed on 14/06/2024 to Innove Intellects LLP, Ghaziabad.

15. Photo Gallery

Page 1: Major Equipment of the Department

<table>
<tr><td>  </td><td> 
</td></tr>
<tr><td>Machine Shop</td><td>CNC Lathe</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Automobile Lab</td><td>Smithy and Forging Lab</td></tr>
<tr><td>  </td><td> 
</td></tr>
<tr><td>Strength Materials Lab</td><td>Carpentry shop</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Heat Transfer Lab</td><td>Fluid Machinery Lab</td></tr>
</table>

A two weeks training program specially designed for BSF Employee (Technicians) for their in-house vehicle service and maintenance

Techno-entrepreneurial Skill Training Program on “Fundamentals of Robotics” for School students (IX to XII) from 11.12.2023 to 15.01.2024 at different schools

Techno-entrepreneurial Skill Training Program on “Fundamentals of Robotics” for School students (IX to XII) from 11.12.2023 to 15.01.2024 at different schools

Ghani Khan Choudhury Institute of Engineering & Technology

A Centrally Funded Technical Institute (CFTI) under,
Ministry of Education, Govt. of India

न हि ज्ञानेन सदृशं पवित्रमिह विद्यते

Electrical Engineering Department

Brochure (2024-25)

https://www.gkciet.ac.in/department/ee

About Department

Electrical Engineering is one of the core engineering disciplines, that primarily deals with the study and practice of Electrical Power Generation, Transmission, and Distribution but has manifestedextensively in the control of Electrical Power in the last century.Application of Electrical Engineering encompasses almost all the engineering industry such as transportation, metallurgy, process control, etc apart from electrification. In 2010, the institute started offering B.Tech and Diploma in Modular Pattern in Electrical Engineering. In 2014 , the B.Tech program in Electrical Engineering obtained the affiliation from Maulana Abul Kalam Azad University ofTechnology (Formerly WBUT) and the Diploma in Electrical Engineering obtained it's affiliation from West Bengal State Council of Technical and Vocational Education and Skill Development (WBSCTVESD). All the programmes of the department is approved by All India Council of Technical Education (AICTE). There is great employment prospects for Electrical Engineers in government and public sectors like the NTPC, railways, municipalities/urban localbodies, Defense, CPWD/PWD, SETCL and DCL, and different mediumand large scale industry.

Vision

To train the youth of today with modern technology and tools to become world class Electrical Engineering Technocrats of tomorrow, who will be able to develop sustainable green infrastructure for the growth of the nation and beyond.

Mission

M1: To create and sustain an environment, for critical thinking and problem solving. M2: To prepare the students for new challenges and opportunities in the field of electrical engineering. M3: To strive to be at the forefront of Research and maintain intensive interaction with Industry and leading Research Centers, where students can be engaged in Projects, Training and Internships. M4: To undertake collaborative projects and consultancy which offer opportunities for long-term interaction with academia and industry. M5: To stimulate passion and creativity for innovation and to impart leadership quality in individuals for entrepreneurship development.

Pragramme Educational Objectives

PEO 1. (*Social contribution*) - To train the students to solve real world problem through intensive practice, to guide the students to work on industry-oriented projects and to provide support for vocational training and visits to factories which will develop a sense of social contribution among the students and will motivate and inspire them for value addition to the society for each and every Endeavour.

PEO 2. (Tech and ICT skills) - To train the students on fabrication, assembly, operation, maintenance of all kinds of electrical machines and systems as well as on various programming languages as C, C++ so that they are able to develop suitable hardware and software interface to integrate electrical equipment.

PEO 3. (*Communication and professional skills*) - To develop competence in written communication, project documentation and paper writing as well as develop good verbal communication. To help them in developing public speaking skills along with accountability, profitability, values and ethics & professional behavior to survive in a multidisciplinary environment.

PEO 4. (*Industry orientation with social awareness*) - To provide the students with opportunities for vocational training, industry visits, to make them aware of the industry and accustoming them with social concerns and professional responsibility.

PEO 5. (*Higher study and research with lifelong learning*) - To create the opportunity to work in major or minor projects with reputed academicians as well as industry professionals and encourage them for research, continued professional training to make them aware and adaptive to changes in workplace through formal and informal training throughout their lifetime.

Pragramme Offered

Programme	Durationn	Trade/Specialization	Student Intake	Admission Mode
B.Tech	4 Years	Electrical Engineering	60	JEE Mains/ WBJEE
Diploma	3 Years	Electrical Engineering	30	JEXPO &GET
Skill Development Courses	6 Month	Electrical Engineering (various Job Role)	70	Skill India (PMKVY4.0) & WBSCTVESD (STC)

Faculty & Staff Members

Dr. Surajit Chattopadhyay
Associate Professor,
Ph. D, Vidwan Profile

Dr. Sandip Chanda
Associate Professor,
PhD Vidwan Profile

Dr. Tapash Kr. Das
Assistant Professor,
PhD, Vidwan Profile

Dr. Chiranjit Sain
Assistant Professor, PhD
Vidwan Profile

Dr. Amarjit Roy
Assistant Professor, PhD
Vidwan Profile

Dr. Raja Ram Kumar
Assistant Professor, PhD
Vidwan Profile

Mr. Goutam KumarGhorai
Assistant Professor,
MTech Vidwan Profile

Mr. Rajeev Kumar
Assistant Professor,
MTech Vidwan Profile

Mrs. Smita Anand
Assistant Professor,
MTech Vidwan Profile

Mr. Amiungshu Karmakar Senior Trainer B.Tech
Vidwan Profile

Mr. Sankar Mukherjee
Trainer Diploma Vidwan Profile

Mr. Pranab Mandal
Trainer, B.TechVidwan Profile

Mr. Dhaju Mohamad
Trainer, Diploma
Vidwan Profile

Md Mehbub Alam
Senior Technical Assistant, BTech

Er. Ayan Banik
Technical Assistant, MTech

Mr. Amit Koley
Technical Assistant, Diploma

Head of Department

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Dr. Raja Ram Kumar
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Mrs. Smita Anand
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8101866107

Placement Coordinator

Dr. Amarjit Roy
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6297947007

Placement Statistics

Year	Branch	Highest Package	Lowest Package	Average CTC
2021-22	EE	2.4 LPA	2.2LPA	2.34 LPA
2022-23	EE	4 LPA	2.2 LPA	2.94 LPA
2023-24	EE	4.45 LPA	3.12 LPA	3.50 LPA

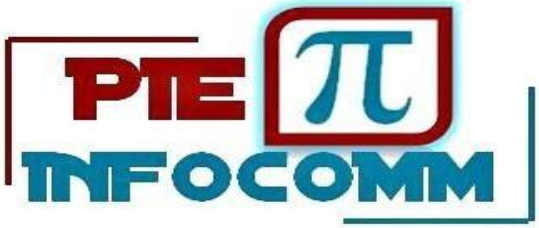
GATE Qualified

2021-2022	2022-2023	2023-2024
03	04	06

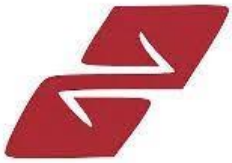
CAT Qualified (2024)

- Korak Sengupta
- Jensen Narzary

Notable Recruiters



Notable Internship/Training Providers



Students in Higher Studies

॥ त्वं ज्ञानमयो विज्ञानमयोऽसि ॥

Our Alumnus Work At

Laboratories

Name of the Laboratory	*Faculty In-Charge*	*Major Equipment*
Machine	**Dr. Raja Ram Kumar ,Mr. Goutam Kumar Ghorai**	**Ansys EM Package software, DC Motors of different ratings, Speed control of DC motor set-up, Different starters of DC motors, Different performance characteristics evaluation of DC compound motor set-up, Different ratings of two-winding single-phase transformers, Single and 3-phase auto- transformers, Different ratings of induction motors, Different performance characteristics evaluation of single-phase and 3-phase induction motors set-up, Different performancecharacteristics evaluation of alternator set-up and Electrical machine winding winder machine**
Power system	**Dr. Tapash Kr. Das**	**A,B,C,D Parameter Analyser, Breakdown strength tester of Solid and Liquid, Over Current Relay, Directional Over Current Relay, On-Off Relay, ETAP(Software: 10 user).**
Power Electronics	**Dr. Sandip Chanda**	**PSIM simulation software, trainer kit of SCR/Triac/Diac to study various characteristics, Hardware kit of ac-dc/dc-dc/dc-ac/ac-ac converter circuits, DSO**
Electric Drives	**Dr. Chiranjit Sain**	**Speed control of AC and DC motor drive using hardware and software, PLC controlled motordrive, PSIM imulation software, v/f control of Induction motor drive, DSO**
Analog,Digit al, Microprocessor & Microcontrol ler	**Dr. Amarjit Roy**	**Digital Trainer Kit, Function Generator, DigitalStorage Oscilloscope, Analog Trainer Kits of (Diode, Transistor Amplifier, Multivibrator), PIC Microcontroller, Microprocessor 8085 KIT,Arduino.**
Basic Electrical	**Mr. Rajeev Kumar**	**Familiarization with various measuring instruments, AC/DC theorem analyzer, singlephase transformer, DC machine**
Circuit Theory	**Mr. Rajeev Kumar**	**Network analyzer, signal generator, analog/digital etwork kits, filter, two-port network analyzer etc.**
Measurement	**Mrs. Smita Anand**	**Filters, different bridge circuits, differentrectifiers, sensors and transducers, signal conditioners, CRO, DSO**
MATLAB	**Mr. Goutam Kumar Ghorai Dr. Raja Ram Kumar**	**35 users**

Student's Achievements

Smart India Hackathon-2020
Organised by Department of Science and Technology
& Ministry of Education, Government of India
Category : Renewal Energy
SIH-2020 **WINNER (RS:1 Lakh Cash Prize)**
Team leader: Mrinmoy Nayek
Mentor: Dr. Tapash Kumar Das

Finalist The Inventors Challenge -2023
Ujjal Ray, Nayan Nirban Boruah, Didhiti Dey, Debdeepta Ghosh
Mentor: Dr.Raja Ram Kumar

AICTE Chhatra Vishwakarma Award 2019
Team: TECHNEXT
Prototype demonstrated at Regional Convention
Smart Village- Using Arduino based Hybrid Renewable Energy Generation

TCS Digital Cracked by Korak Sengupta(2024)

Solar Powered e-Vehicle Project (G-Arkayan)

Unmanned Surface Vehicle For Remote Water Top Pollution Monitoring Project (HANSA-1.1)

Designed& Developed by Electrical Engineering Students

TechPrabha Activities

Media Coverage

The Statesman

3/12

during an acrobatic performance for the 'Charak' festival celebration, in Kolkata, on Saturday .. MOUL

An unmanned solar vehicle to monitor water pollution

HEMANT JACOB
HOOGHLY, 13 APRIL

A group of budding engineers mostly from west Bengal, led by Dr Surajit Chattopadhyay invented an unmanned vehicle Hansa 1.1 (UWV) to monitor pollution at the water surface, powered by Pico grid.

Water pollution monitoring is a big challenge especially in remote areas. It will not only monitor surface water pollution but also serve many other purposes.

The model was launched on 4 April in an exhibition organized by Ghani Khan Choudhury Institute of Engineering and Technology, a centrally-funded technical institute, under the ministry of education.

Professor Parameswar Rao A Alapati, director of the institute, inaugurated the exhibition that showcased

around 26 other inventions.

In his inaugural speech, he encouraged the technical ability of the models and its innovators.

The Hansa team includes Dr Surajit Chattopadhyay, head of the electrical engineering department and his students, namely, Suvajit Ghosh, Subhadeep Mahata, Sudip Murmu, Bikram Das and Bhaskar Roy. All have their origin in West Bengal.

Dr Chattopadhyay pointed out that all the parts of the UWV were made in India. It included a very small DC-DC, DC-AC Pico grid to provide the energy enhancing surveillance run time.

The model can be made available at a low cost.

The Pico grid is portable and it integrates eco-friendly solar photovoltaic-based electricity that can serve other energy needs of the owner.

"Now, as pollution has become an important concern for the sustainable development and growth of the country, this work focuses on monitoring surface water pollution that may occur on top of the water surfaces and at the top layer of water. AI-based cloud computing has been utilized to discriminate against different pollution levels. The model can incorporate an underwater mapping facility. Hope it will meet various needs of both surface water and underwater monitoring," said Dr Chattopadhyay.

EDITION IN | DELHI 22°C

THE TIMES OF INDIA

City | Chennai | Mumbai | Delhi | Bengaluru | Hyderabad | Kolkata | Agra | Agartala | Ahmedabad | Ajmer | Allahabad | Ama

SCHOOL AND COLLEGES | CIVIC ISSUES | CRIME | POLITICS | TAMIL NADU ELECTIONS | CITIZEN REPORTER | VIDEOS | PHOTOS | PHOTOS | WEATHER | PO

NEWS / CITY NEWS / CHENNAI NEWS / IIT Madras Researchers Deploy Buoy To Generate Electricity From Se...

IIT Madras researchers deploy buoy to generate electricity from sea waves

TNN / Updated: Dec 6, 2022, 07:56 IST

32 PTS | SHARE | AA

ARTICLES

- IIT Madras researchers deploy buoy to generate...
- Why IIT Delhi's Project Management programme is...
- Madras HC issues notice to Tamil Nadu on uploading...
- Chennai's wettest hours are when you are fast asleep

https://timesofindia.indiatimes.com/city/chennai/iit-madras-researchers-deploy-buoy-to-generate-electricity-from-sea-waves/articleshow/96016544.cms

২১ অগ্রহায়ণ ১৪২৯ বৃহস্পতিবার ৮ ডিসেম্বর ২০২২

প্রতিদিন

শোনো | কাতারে মহারণ | #ISL9 | মহানগর | রাজ্য | দেশ | ওপার বাংলা | বিদেশ | খেলা | বিনোদন | লাইফস্টাইল | ফটো গ্যালারি | সঙ্কয়

>> বিজ্ঞান ও পরিবেশ

সমুদ্রের ঢেউ থেকে তৈরি হবে বিপুল পরিমাণ বিদ্যুৎ, নতুন যন্ত্র আবিষ্কার করে দাবি IIT মাদ্রাজের

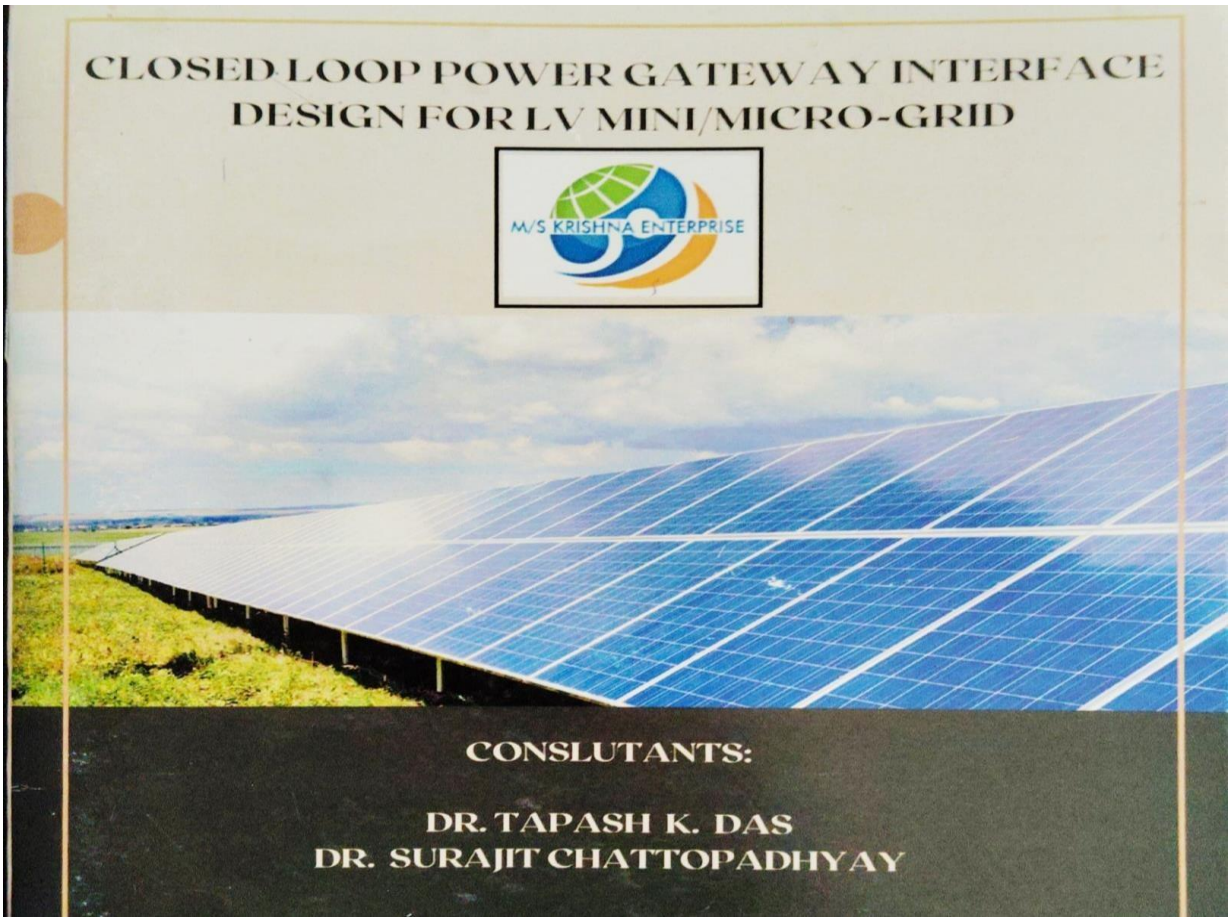
Published by: Anwesha Adhikary | Posted: December 6, 2022 12:43 pm | Updated: December 6, 2022 12:46 pm

https://www.sangbadpratidin.in/science-and-environment/iit-madras-makes-device-to-generate-electricity-from-ocean-tide/#ampf=

Sponsored Project

HANSA 1.0: Unmanned surface vehicle for Remote Water Top Pollution Monitoring Sponsored by IE(I),2022-23

Closed Loop Power Gateway Interface Design For LV Mini/Micro-grid



Major Recent Events

SERB sponsored International Conference on Intelligent Computation and Analytics on Sustainable Energy and Environment on 21-23 Sept, 2023

International Seminar on Electrical Engineering 28.02.2024

Work-Shop and Faculty Development Program on Design, Analysis and Application on Electromagnetic Systems 27-31 May, 2024

Research Activities

Details about Research Activities	2021-2022	2022-2023	2023-2024
Total Number of publications in peer reviewed journal	15	16	27
Total Number of publications as book chapter	3	4	6
Total Number of publications as book	1	2	1
Total Number of patents files	1	3	2
Total number of conferences/ workshops organized	1		2
Total number of conferences or workshops participated	15	16	28
Total number of Ph.D. scholars guided	7 (Ongoing), 1 Awarded	7 (Ongoing)	11 (Ongoing)

Research & Publications

1. Teja Barker, Arnab Ghosh, Chiranjit Sain, Furkan Ahmad, L Al-Fagih "Efficient ANFIS-Driven Power Extraction and Control Strategies for PV-BESS Integrated Electric Vehicle Charging Station"- Renewable Energy Focus,Elsevier, Volume 48, pp. 1-17, 2024.
2. Debabarata Mazumdar; Pabitra Kumar Biswas; Chiranjit Sain; Taha Selim Ustun "GAO Optimized Sliding Mode based Reconfigurable Step size Pb &O MPPT Controller with Grid Integrated EV Charging Station"- IEEE Access, pp.1-8, 2023, DOI: 10.1109/ACCESS.2023.3344275.
3. Harshita Tiwari, Arnab Ghosh, Chiranjit Sain, Furkan Ahmad, Luluwah Al- Fagih "Modified direct torque control algorithm for regeneration capability ofIM driven electric vehicle by using hybrid energy storage system"- Renewable Energy Focus, Elsevier, Vol. 48, pp. 1-14, 2024.
4. D. Mazumdar., P.K.Biswas., C. Sain., F.Ahmad., R.Sarker., and T.S.Ustun., "Optimising MPPT Control for Enhanced Efficiency in Sustainable Photovoltaic Microgrids: A DSO-based Approach". International Transactions on Electrical Energy Systems, Accepted for Publication (In Press), 2024.
5. A. Roy, L. Manam and R.H. Laskar, "Region adaptive fuzzy filter: an approach for removal of random valued impulse noise," IEEE Transactions on Industrial Electronics, vol. 65(9), pp. 7268-7278, 2018, DOI: 10.1109/TIE.2018.2793225.
6. A. Roy, J. Singha, S.S. Devi and R.H. Laskar, "Impulse noise removal using SVM classification based fuzzy filter from grayscale images," Signal Processing, vol. 128, pp. 262-273, 2016, DOI: 10.1016/j.sigpro.2016.04.007 (Elsevier)
7. Debasis Chatterjee, Pabitra Kumar Biswas, Chiranjit Sain, Amarjit Roy, FAhmad, Jagdeep Rahul "Bi-LSTM Predictive Control-based Efficient EnergyManagement System for a Fuel Cell Hybrid Electric Vehicle"-Sustainable Energy, Grids and Networks, Elsevier, March 2024, DOI: .10.1016/j.segan.2024.101348.
8. Raja Ram Kumar, et al. "Performance analysis of dual stator six-phaseembedded-pole permanent magnet synchronous motor for electric vehicle application", volume:13, issue:1, IET Electr. Syst. Transp. e12063 (2023). https://doi.org/10.1049/els2.12063.
9. Raja Ram Kumar et al.; "Design and Characteristic Investigation of Novel Dual-Stator V-Shaped Magnetic Pole Six-Phase Permanent Magnet Synchronous Generator for Wind Power Application" Electric Power Components and Systems, Volume 48, Issue 14-15, pp: 1537-1550, 2020, https://doi.org/10.1080/15325008.2020.1854388.
10. R. R. Kumar et al., "Design and Characteristics Investigation of Novel Dual Stator Pseudo-Pole Five-Phase Permanent Magnet Synchronous Generator for Wind Power Application," in IEEE Access, vol. 8, pp. 175788-175804, 2020.

List Of Filed Patents

1. Surajit Chattopadhyay, Aniruddha Das, Toeplitz Matrix and Wavelet Decomposition-based Damping Quality Indicator for Active Mass Driver used to Control Seismic Structural Vibration, Date of filing of Application:30/11/2023, Publication Date: 19/01/2024, Application No.202331081226 A, The Patent Office Journal No.03/2024 Dated 19/01/2024.
2. S Chattopadhyay, Bhaskar Ray, Unmanned Surface Vehicle based Water Surface Monitor (USV- WSM), Design, 400011-001, applied, 2023.
3. S Chattopadhyay, T K Das, A Banik, A Das, Loss of solar-generator-string (SGS) detector, Indian Patent Journal, 49/2022, 202231070421, published on 09.12.2022.
4. S Chattopadhyay, T K Das, A Banik, A Das, Remote multi-staired wavelet decomposition-based temperature navigation for solar PV arrays, Indian Patent Journal,48/2022, 202231067834, published on 02.12.2022.
5. Tapash Kr. Das et. al, Generation-based Mini-Grid for Rural Applications Intelligent Remote-End Electrical Parameters Scanning and Troubleshooting of Dual fed Indian Patent-Journal,02/2023, 202331001567A, published on 13.01.2023.
6. S Chattopadhyay, T Roy, S Ganguli, A Method to Detect a Road Surface Dependent Mechanical Vibration Generated Short Circuit Fault in An Air Circular Motor Circuit in A Vehicle, 2021106069, AUS, published/grantedon 28.11.2021.

Student Placement Coordinators

Ujjal Ray
M-9647811487
uray8806@gmail.com
Student TPO Coordinator

Ritika Mondal
M-7044687536
ritikamondal0802@gmail.com
Student TPO Coordinator

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Student TPO Co-Coordinator

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Student TPO Co-Coordinator

Contact Us

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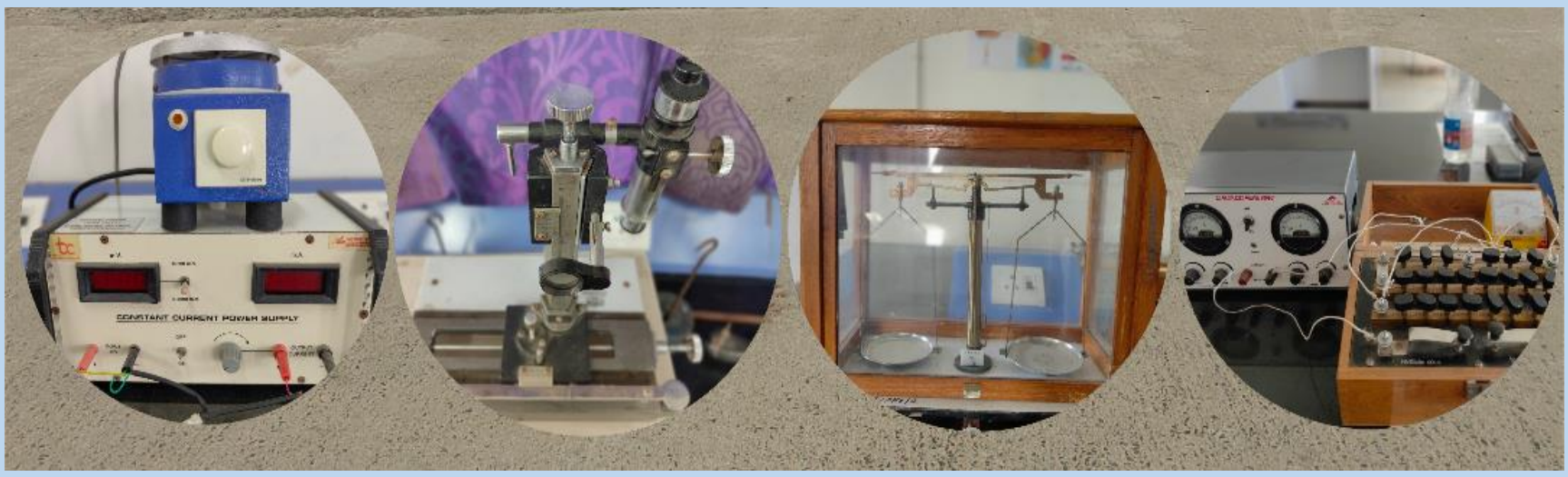
9735353700
ee_hod@gkciet.ac.in
https://www.gkciet.ac.in/department/ee

Department
of
PHYSICS



About the Department

The Department of Physics at GKCIET has been functioning as an independent department since August 2022. It was previously associated with the Department of Applied Sciences. The Department offers courses including Physics-I, Physics-I Lab for B. Tech 1st year students and Applied Physics I, Applied Physics I Lab, Applied Physics II, Applied Physics II Lab for Diploma 1st year students. The Department is equipped with highly compelling B. Tech. and Diploma Physics laboratories. The Department, at present, has one faculty, one technical assistant and one multi-tasking staff. Currently, the Department is actively involved in teaching and research in various areas like Condensed Matter Physics, and Nuclear Physics. Faculty serving here has international publications and are engaged in collaborative work with various universities/institutes. Always innovative but earnestly student-friendly, the staff of the Department have always been trying to keep the matter of teaching and research at par with the current national and international standards.

1. Vision

To provide young talents with a foundation in the essential principles of Physics on which engineering is based, and to develop a leading teaching Department in Physics by encouraging a commitment to conducting research in the field of Applied Physics.

2. Mission

- To develop a strong scientific foundation in theoretical and experimental aspects through fundamental principles of physics, enabling them to apply the knowledge across various engineering disciplines.
- To provide most current and relevant education to the students by offering innovative and purposeful lectures, along with state-of the-art laboratory facilities.
- To train the students to apply basic principles of Physics in real world situations
- To foster a dedication to engaging in research within the realm of applied physics, promoting a sustained commitment to advancing knowledge and innovation in this specific scientific domain.

3. Faculty and Areas of Interest

Assistant Professor

Dr. Rakesh Das	
PG	IIT Delhi
PhD	IIT Kharagpur
Areas of Interest	Condensed Matter Physics
Vidwan Profile	

4. Details of the Head of the Department

Dr. Rakesh Das
Assistant Professor & HoD
Department of Physics
Ghani Khan Choudhury Institute of Engineering & Technology (GKCIET)
P.O.: Narayanpur, District: Malda, W.B., PIN: 732141
Email: physics_hod@gkciet.ac.in

rakesh@gkciet.ac.in
Contact No: +91 89720 75917

5. Laboratory facilities

Name of the Laboratory	Faculty In-Charge	Major Equipment
Physics Laboratory (B. Tech.)	Dr. Rakesh Das	Band gap using four probe, Hall effect, Planck's constant, Solar cell characteristics, e/m by Thomson's method, Carey Foster bridge, Young's modulus, Rigidity modulus, Stefan's constant
Optics Laboratory	Dr. Rakesh Das	Wavelength of laser by Grating Diffraction, Dispersive power of prism material
Physics Laboratory (Diploma)	Dr. Rakesh Das	Flywheel, Post Office Box, P-N Junction diode, Viscosity of Liquid by Stoke's law, Specific gravity

6. List of Selected Publications

- **Das, Rakesh and Srivastava, S.K. (2024). Magnetocaloric effect in Ce(Fe0.975Cr0.025)2 compound, Bulletin of Materials Science 47, 110**

- **Das, Rakesh** and Srivastava, S.K. (2024). First-principles Study of Electronic Structure of $Fe_{50}Rh_{50}$ alloy, *CRC Press (Taylor & Francis)* (In press).

- **Das, Rakesh** and Srivastava, S.K. (2017). Prospects of quantum phase transition in $Ce(Fe_{1-x}Ni_x)_2$ compounds, *Solid State Communications* 261, 50.

- **Das, Rakesh**, Gupta, Mukul, and. Srivastava, S. K. (2017). Magnetic instability and *f-d* hybridization in $CeFe_2$ on substituting Cr, Ag, and Au for Fe, *Journal of Magnetism and Magnetic Materials* 433, 162.

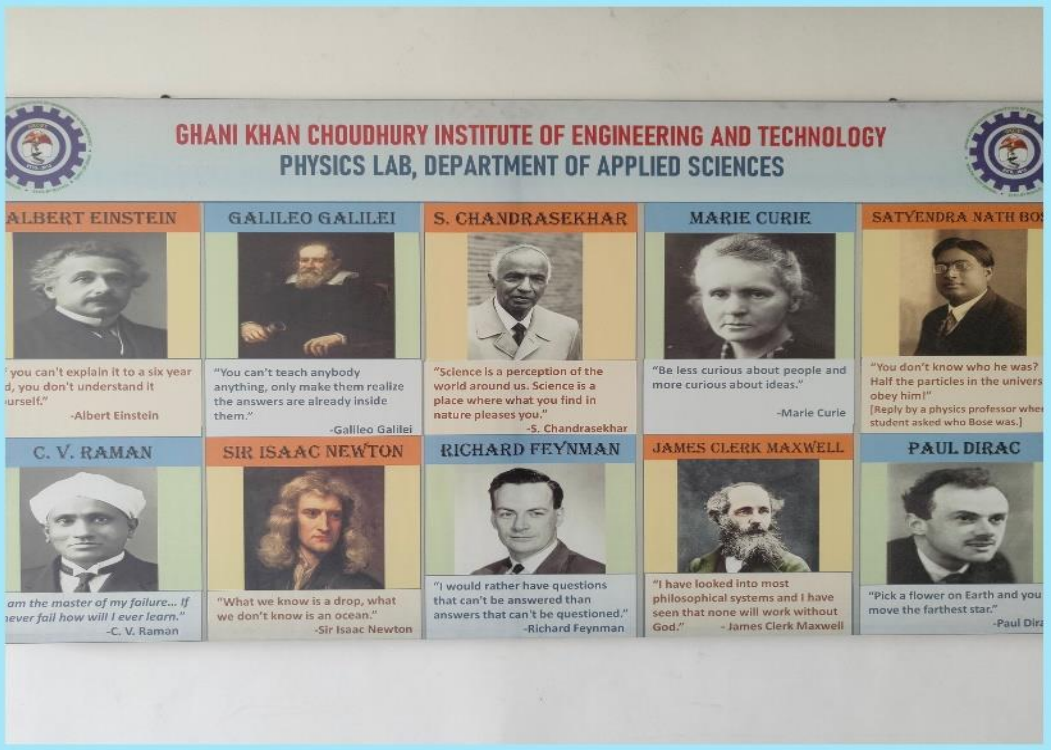
- **Das, Rakesh**, Das G. P., and Srivastava, S. K. (2016). Electronic structure and local magnetism of 3*d*-5*d* impurity substituted $CeFe_2$, *Journal of Physics D: Applied Physics* 49, 165004.

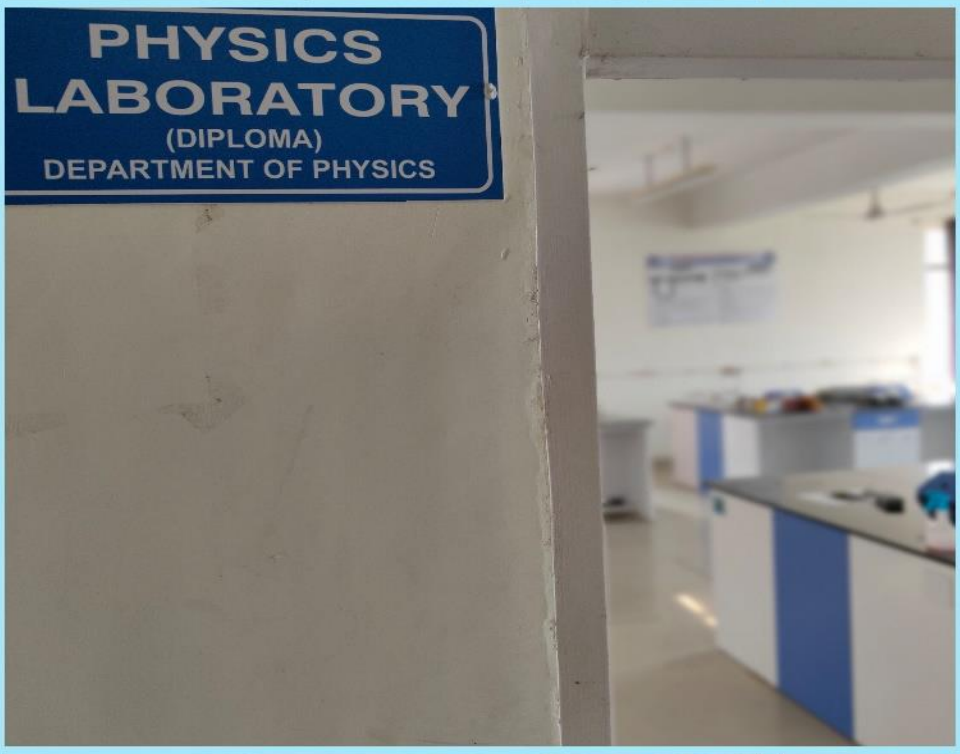
- Dey, C. C., **Das, Rakesh**, Srivastava, S. K., (2015). Electric field gradients at ^{181}Ta probe in ZrNi: Results from perturbed angular correlation and first-principles calculations, *Journal of Physics and Chemistry of Solids* 82, 10.

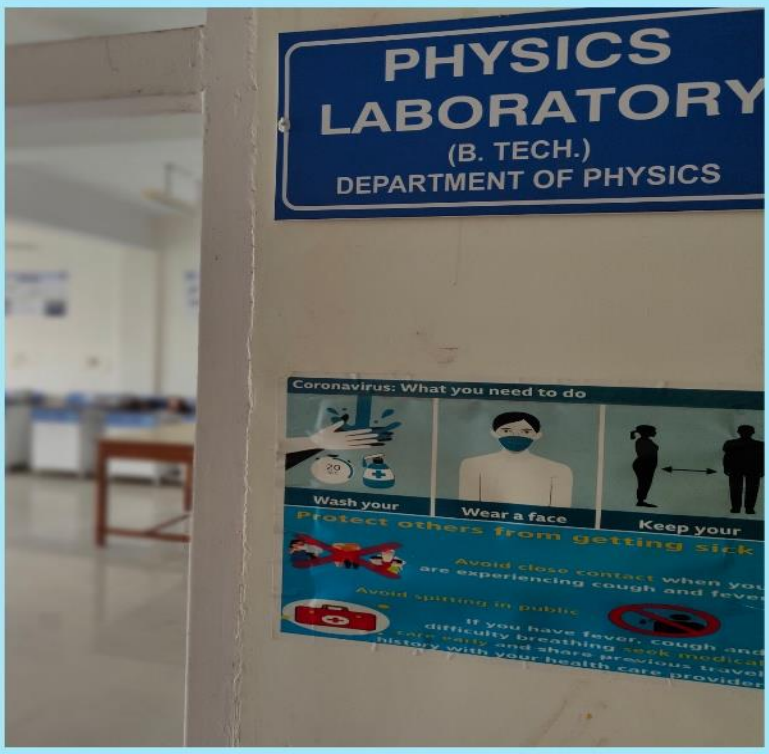
- **Das, Rakesh**, and Srivastava, S. K. (2015). Study of Al impurity induced magnetic instability in $CeFe_2$, *AIP Conference Proceedings* 1661, 070002-1.

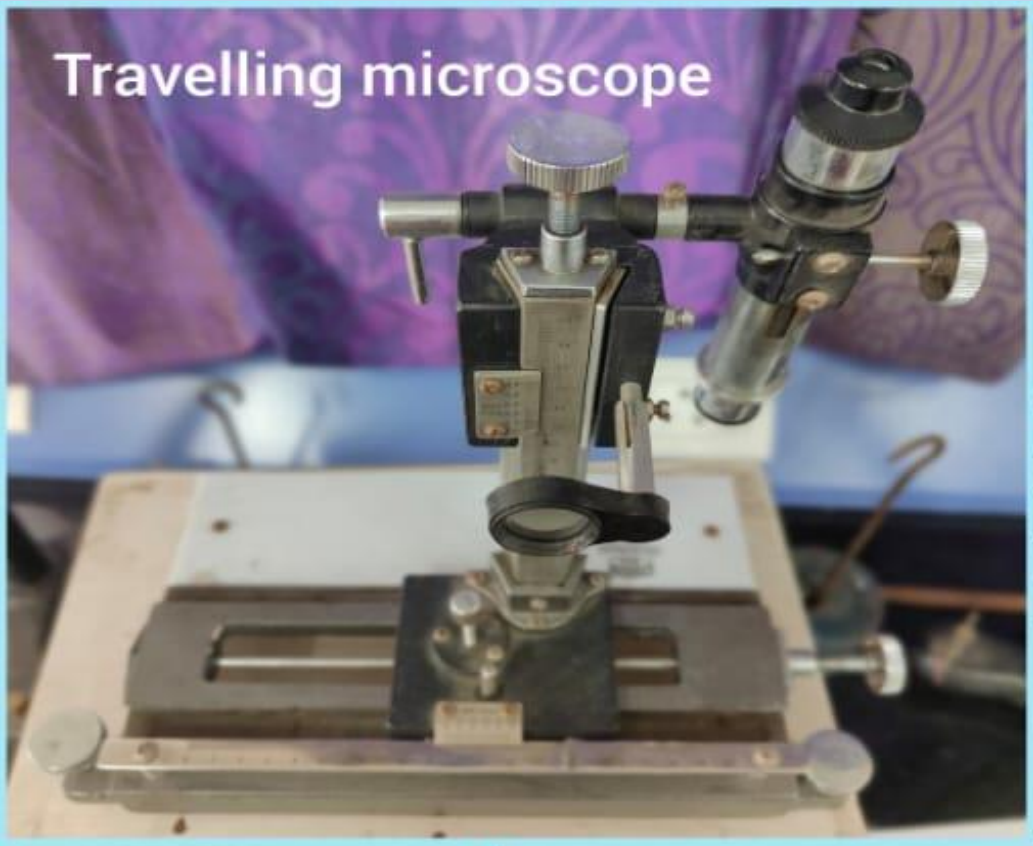
- **Adhikari, Anik**, *et. al.* (2022). Experimental evidences of shape co-existence in ^{154}Ho, *Nuclear Physics A* 1027, 122495

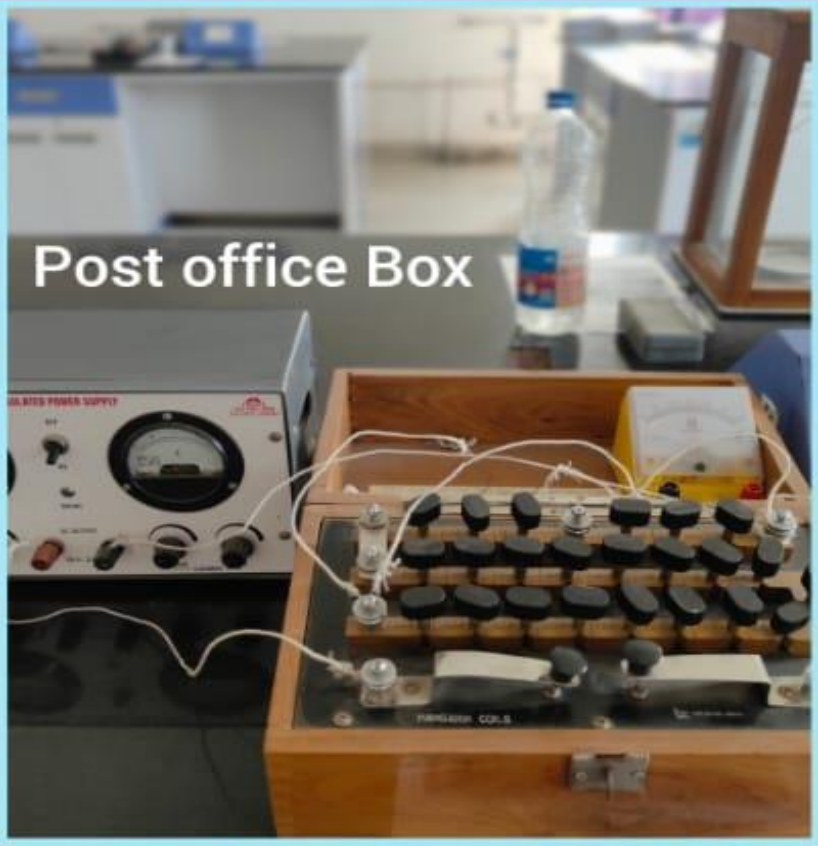
7. Photo Gallery



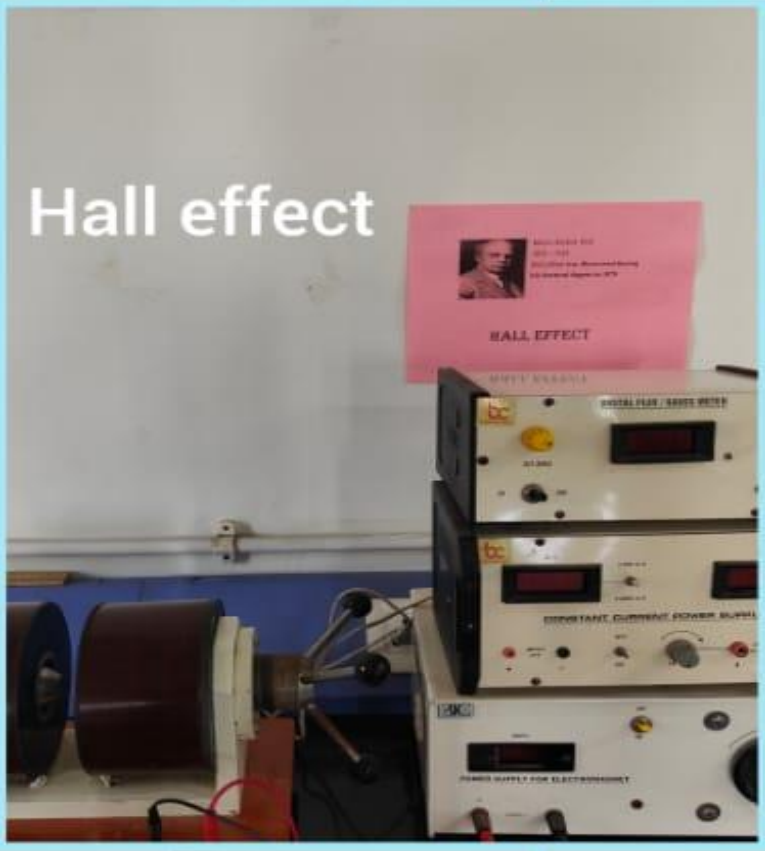




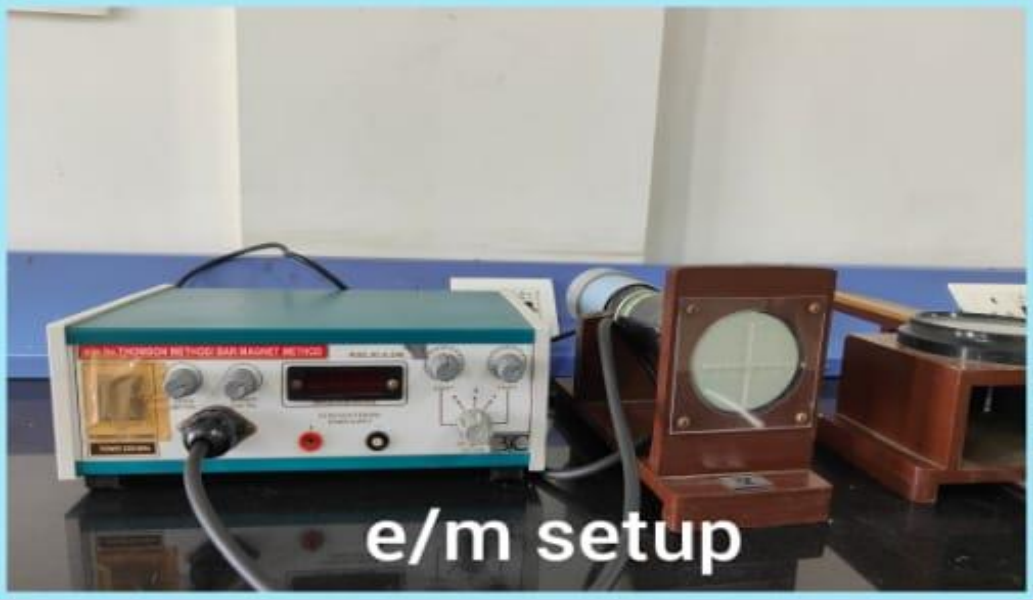

Travelling microscope


Post office Box


CONSTANT CURRENT POWER SUPPLY
Four probe


Hall effect
HALL EFFECT


Analytical balance


e/m setup


Carey Foster bridge

Department
of
CHEMISTRY

About the Department

The Department of Chemistry was started in the year 2022. Previously, it was associated with Department of Applied Sciences. The students of 1st year of B. Tech and Diploma, irrespective of any discipline, are under the supervision of this department. The department is devoted to nurture the fundamental principles of chemistry required for the development of the students' basic understanding of engineering. The faculties and staffs of the Department have always been trying to keep the matter of teaching and research on a par with the current international standards. Well-equipped B. Tech and Diploma Laboratories supplement the zeal of the teachers to break new grounds. The highly effective teaching-learning system of the department helps the students to excel academically, personally and professionally

1. Vision

The department of Chemistry is committed to inculcate strong scientific knowledge and analytical skills in the students in the field of basic sciences and technology so that they can think critically & logically. The department is dedicated for preparing sincere and responsible students to thrive and contribute to an ever- changing global society

2. Mission

- To develop a strong scientific knowledge through fundamental principles of chemistry to pursue a successful engineering carrier and to train the students to apply these basic principles in real world situation.
- To impart knowledge, leading to understanding the relationship between engineering and basic Chemistry.
- To provide students the basic analysis tools, as well as the knowledge of the principles on which engineering is based.

To inculcate extraordinary analytical skill in students to make them ready for industry-oriented job.

- To motivate students to think in a new way and apply new ideas of research in fundamental science and technology

3. Programmes offered

NIL

4. Faculty and Areas of Interest

Associate Professor

Dr. Suranjan Sikdar	
PG	**UNIVERSITY OF NORTH BENGAL**
PhD	**UNIVERSITY OF GOUR BANGA**
Areas of Interest	**Inorganic Chemistry, Nano chemistry, Material Chemistry**
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/539866

1. Assistant Professor

Dr. Abhijit Mandal	
PG	**Guru Ghasidas University**
PhD	**UNIVERSITY OF GOUR BANGA**
Areas of Interest	**Organic Chemistry, DFT, Sensors**
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/540441

Dr.Soutick Nandi	
PG	**Banaras Hindu University**
PhD	**Indian Institute of Technology Guwahati**
Areas of Interest	**Inorganic Chemistry, Metal Organic Frameworks, Sensing, Fluorescence**
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/540468

5. Details of the Head of the Department

	**Dr. Suranjan Sikdar** Email: suranjan@gkciet.ac.in Mobile: 9733181024

6. Laboratory facilities (data need to be given as per 2024)

Name of the Laboratory	Faculty In-Charge	Major Equipment
Chemistry Laboratory (B. Tech)	Dr. Abhijit Mandal	2. Conductivity Meter 3. Digital pH meter 4. Pocket pH meter 5. Potentiometer 6. Hot Air Oven 7. Heating Mantle 8. Water Bath 9. Viscometer 10. Stalagmometer 11. Digital Weighing balance
Chemistry Laboratory (Diploma)	Dr. Soutick Nandi	12. Conductivity Meter 13. Digital pH meter 3. Pocket pH meter 4. Muffle Furnace 5. Heating Mantle 6. Water Bath 7. Magnetic Stirrer 8. Ultrasonic Cleaner 9. Digital Weighing Balance 10. UV Cabinet 11. Hot plate

7. Research Activities

Details about Research Activities	2021-2022	2022-2023	2023-2024
Total Number of publications in peer reviewed journal	1	7	5
Total Number of publications as book chapter	Nil	Nil	01
Total Number of publications as book	Nil	Nil	Nil
Total Number of patents files	Nil	Nil	Nil
Total number of conferences/ workshops organized	Nil	Nil	Nil
Total number of conferences or workshops participated	1	3	2
Total number of Ph.D. scholars guided	Nil	Nil	2 (Thesis submitted) 3 (persuing)

8. List of Selected Publications

- Ali, S., Sikdar, S., Basak, S., Mondal, M., Tudu, A., Roy, D., … Roy, M. N. (2024). Multienzyme mimicking cascade Mn3O4 catalyst to augment reactive oxygen species elimination and colorimetric detection: A study of phase variation upon calcination temperature. *Inorganic Chemistry*, *63*(23), 10542–10556. doi:10.1021/acs.inorgchem.4c00883

- Barman, S., Sikdar, S., Biswas, A., Islam, A., & Das, R. (2022). Green synthesis of Mn_xZn_(1−x)O nanostructure using Azadirachtaindica leaf extract and its microstructural and optical study. *PhysicaScripta*, *97*(4), 045002. doi:10.1088/1402-4896/ac520c

- Mandal, A., Goswami, T., & Chowdhury, S. (2023). A computational exploration of exohedrally transition metal doped Si94-superatom based magnetic MSi9M' clusters (M, M' = Sc(II) to cu(II)). *The Journal of Physical Chemistry. A*, *127*(47), 9885–9894. doi:10.1021/acs.jpca.3c03883

- Saha, B., Bhattacharjee, M., Boruah, S. R., N Dutta Purkayastha, R., M Gomila, R., Chowdhury, S., … Frontera, A. (2023). Synthesis, structural characterization, DNA interaction, dye adsorption properties and theoretical studies of copper (II) carboxylates. *Journal of Molecular Structure*, *1272*(134104), 134104. doi:10.1016/j.molstruc.2022.134104

- Banu, A., Sinha, B., &Sikdar, S. (2024). Synthesis of polymeric 2D-graphitic carbon nitride (g-C3N4) nanosheets for sustainable photodegradation of organic pollutants. *Heliyon*, (e33354), e33354. doi:10.1016/j.heliyon.2024.e33354

- Basak, S., Haydar, M. S., Sikdar, S., Ali, S., Mondal, M., Shome, A., … Roy, M. N. (2023). Phase variation of manganese oxide in the MnO@ZnO nanocomposite with calcination temperature and its effect on structural and biological activities. *Scientific Reports*, *13*(1), 21542. doi:10.1038/s41598-023-48695-0

- Basak, S., Sikdar, S., Ali, S., Mondal, M., Roy, D., Dakua, V. K., & Roy, M. N. (2022). Synthesis and characterization of Mo_{*x*}Fe_{1−*x*}O nanocomposites for the ultra-fast degradation of methylene blue *via* a Fenton-like process: a green approach. *New Journal of Chemistry*. doi:10.1039/d2nj02720h

- Banu, A., Barman, S., Sinha, B., &Sikdar, S. (2023). Synthesis of tetragonal SnO₂ photocatalyst for Micro-structural analysis and visible light driven Fenton-like degradation of Methylene Blue. *ChemistrySelect*, *8*(18). doi:10.1002/slct.202204796

- Ghosh, S., Nagarjun, N., Nandi, S., Dhakshinamoorthy, A., & Biswas, S. (2022). Two birds with one arrow: a functionalized Al(iii) MOF acts as a fluorometric sensor of dopamine in bio-fluids and a recyclable catalyst for the Biginelli reaction. *Journal of Materials Chemistry. C, Materials for Optical and Electronic Devices*, *10*(17), 6717–6727. doi:10.1039/d2tc00022a

- Rana, A., Nandi, S., & Biswas, S. (2022). Sulfonic acid functionalized zirconium-based metal–organic framework for the selective detection of copper(ii) ions. *New Journal of Chemistry*, *46*(21), 10477–10483. doi:10.1039/d2nj01068b

9. Photo Gallery

Muffle Furnace

Laboratory drying oven

Digital Colourimeter

UV-VIS Spectrophotometer

Digital Colourimeter

Students are performing practical in Chemistry Lab

Department
of
MATHEMATICS

About the Department

Department of Mathematics is engaged in providing Engineering Mathematics courses required for both the Diploma and B.Tech program. Students should develop mathematical independence and experience open-ended inquiry so that they have the competence and confidence to build their knowledge base. Department is also planning to provide tutorial classes informally for GATE aspirants from various engineering departments for their higher studies. Department have a vision for the students so that they appreciate the beauty, fun, and power of mathematics and be able to articulate what mathematics is about and what mathematicians do.

1. Vision

The department aims to provide the highest quality education to students at all levels, from undergraduate to graduate. The department recognizes the importance of collaborating with other disciplines, such as engineering and computer science, to solve real-world problems. The department aims to engage with the broader community through outreach activities, such as workshops, seminars, and public lectures, to promote the importance and relevance of mathematics. Overall department is focused on advancing the field of mathematics and promoting its applications in various fields, while also providing a high-quality education to students and engaging with the broader community

2. Mission

Advancing the field of mathematics and promoting its applications in various fields, while also providing a high-quality education to students and engaging with the broader community

3. Programmes offered

- Engineering Mathematics-I; Course Code:BS101/M-I (Diploma 1st Semester : CST,ME,EE,CE FPT)
- Engineering Mathematics-II; Course Code:BS102/M-II (Diploma 2nd Semester: CST,ME,EE,CE FPT)
- Mathematics-IB; Course Code: BS-M102 (B.Tech 1st Semester: EE, ME, FT, CE)
- Mathematics-IIB; Course Code: BS-M202 (B.Tech 2nd Semester: EE, ME, FT,CE)
- Mathematics-I A; Course Code: BS-M101 (B.Tech 1st Semester: CSE AI-ML)
- Mathematics-III ; Course Code: BS-M301 (B.Tech 3rd Semester: EE)
- Mathematics-III ; Course Code: BS-M301 (B.Tech 3rd Semester: ME)
- Linear Algebra(BS) ; Course code: BSCAIML 301 (B.Tech 3rd Semester, CSE-AIML)

4. Faculty and Areas of Interest

Associate Professor

Dr. Goutam Haldar	
PG	IIT Madras
PhD	University of Kalyani
Areas of Interest	Value distribution theory of Nevanlinna, Entire Solution of Fermat type Equations
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/541855/NTQxODU1

Assistant Professor

Dr Bikarna Tarafdar	
PG	University of Gour Banga
PhD	University of Gour Banga
Areas of Interest	MHD flow, Nanofluid, Differential Calculus, numerical Analysis
Vidwan Profile	Vidwan-ID: 541950

Assistant Professor

Dr. Debasish Ghorui	
PG	Jadavpur University
PhD	Jadavpur University
Areas of Interest	Complementarity Problem ang Game theory
Vidwan Profile	Vidwan-ID : 542078

Assistant Professor

Dr. Raj Kumar Nayak	
PG	Jadavpur University
PhD	Jadavpur University
Areas of Interest	Functional Analysis, Linear Algebra, Operator Theory
Vidwan Profile	Vidwan ID-542031

5. Head of the Department

Dr. Bikarna Tarafdar

Email: bikarna@gkciet.ac.in

6. Departmental Research Activities

Details about Research Activities	2021-2022	2022-2023	2023-2024
Total Number of publications in peer reviewed journal	12	08	08
Total Number of publications as book chapter	0	0	0
Total Number of publications as book	0	0	0
Total Number of patents files	0	1	0
Total number of conferences/ workshops organized	0	0	0
Total number of conferences or workshops participated	01	02	05
Total number of Ph.D. scholars guided	0	0	0

7. List of Selected Publications

- Abhijit Banerjee & Goutam Haldar, On entire solutions of different variants of Fermat-type partial delay differential equa-tions in several complex variables, Rocky Mountain Journal of Mathematics, Accepted

- Goutam Haldar, On entire solutions of systems of Fermat type difference and differential-difference equations, The Journal of Analysis, 32(1) DOI: 10.1007/s41478-023-00702-3, 2024

- Goutam Haldar, On entire solutions of system of Fermat type difference and partial differential-difference equations in C^n, Rendiconti del Circolo Matematico di Palermo Series 2, DOI: 10.1007/s12215-023-00997-y, 2024

- Modeling convective transport in a reactive fluid near a vertical pervious plate influenced by intense magnetic forces, induced magnetic field, Hall current and thermo-diffusion. International Journal of Modern Physics B.

- Influence of rotational buoyancy on magneto-radiation-convection near a rotating vertical plate. European Journal of Mechanics - B/Fluids.

- Hall effects on unsteady MHD rotating flow past a periodically accelerated porous plate with slippage. European Journal of Mechanics - B/Fluids.

- R. K. Nayak, Advancement of Numerical Radius Inequalities of Operators and Product of Operators, Iranian Journal of Science, (2024), https://doi.org/10.1007/s40995-024-01603-1.

- R. K. Nayak, Weighted numerical radius inequalities for operator and operator matrices, Acta Scientiarum Mathematicarum, (2023) https://doi.org/10.1007/s44146-023-00103-9.

- Completely Mixed Strategies for Generalized Bimatrix and Switching Controller Stochastic Game; Dynamic Games and Application; December 2017, Volume 7, Issue 4, pp 535-554 (jointly with S K Neogy and D Dubey) Published.

- Completely Mixed Strategies for Two Structured Classes of Semi-Markov Games, Principal Pivot Transform and Its Generalizations; Applied Mathematics and Optimization; December 2017, Volume 76, Issue 3, pp 593-619(jointly with P Mondal, S K Neogy and S Sinha): Published

8. List of ongoing Research projects or ongoing consultancies

NIL

9. List of Filed Patents

Forearm Wound Protector-Cum-Healer

10. Photo Gallery

(Mathematics Day 2023 Celebration)

3.