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-2025

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

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न हि ज्ञानेन सदृशं पवित्रमिह विद्यते

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

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-2025

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.

<table>
<tr><th>Academic Programs</th><th>Disciplines</th><th>AICTE Approved Intake</th><th>Basic Qualifications</th><th>Seat Distribution</th></tr>
<tr><td rowspan="4">M.Tech (2-year)</td><td>Data Science</td><td>18</td><td rowspan="4">B.Tech. passed in relevant disciplines</td><td rowspan="4">As per AICTE norms</td></tr>
<tr><td>Power System</td><td>18</td></tr>
<tr><td>Food Technology</td><td>18</td></tr>
<tr><td>Heat Power Engineering</td><td>18</td></tr>
<tr><td rowspan="5">B. Tech (4 years)</td><td>Electrical Engineering</td><td>60</td><td rowspan="5">10+2 passed in Science group</td><td rowspan="5"><table><tr><td>WBJEEB</td><td>50 % West Bengal quota</td></tr><tr><td rowspan="2">JoSAA /CSAB</td><td>25% (North Eastern State): Home State Quota</td></tr><tr><td>25% (All India excluding North Eastern State): Other State Quota</td></tr></table>
Lateral admission into 2nd Year of B.Tech Program through JELET conducted by WBJEEB.
Links: https://wbjeeb.nic.in, https://jeemain.nta.nic.in; https://josaa.nic.in; https://csab.nic.in</td></tr>
<tr><td>Food Technology</td><td>60</td></tr>
<tr><td>Mechanical Engineering</td><td>60</td></tr>
<tr><td>Civil and Environmental Engineering</td><td>60</td></tr>
<tr><td>Computer Science and Engineering (AI & ML)</td><td>60</td></tr>
</table>

Diploma (3 years)	Civil Engineering	60	Passed 10th Std	• Admission to 80%: **WBSCTVESD**. https://webscte.co.in • Admission to remaining 20 %: **All India GKCIET Entrance Test (GET).** 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		

GKCIET follows the syllabus of MAKAUT for M.Tech. and 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 2-year M. Tech programs of GKCIET, Malda for A.Y. 2025-26

Description	Fees under MAKAUT (Rs.)	Remarks	Fees for 1st Semester 2025-26	Fees/ Odd Semester except 1st Semester 2025-26	Fees/Even Semester 2025-26
Caution Money	-	1st Semester/Refundable#	₹ 5,000.00	-	-
Admission Fee	-	1st Semester	₹ 1332.00	-	-
Registration Fee	₹ 500.00	1st Semester	-	-	-
Development Fee	₹ 1,100.00	1st Semester (Rs. 550/- per year)	-	-	-
Student's Insurance	-	First Semester	₹ 320.00	-	-
Medical Fee	-	Each Semester	₹ 200.00	₹ 200.00	₹ 200.00
Tuition Fee	-	Each Semester	₹ 2,172.00	₹ 2,172.00	₹ 2,172.00
Session Charge	-	Each Semester	₹ 3,635.00	₹ 3,635.00	₹ 3,635.00
Examination Fee	₹ 1,200.00	Each Semester	₹ 350.00	₹ 350.00	₹ 350.00
Institute I-Card	-	1st Semester	₹ 79.00	-	-
Library I-Card	-	1st Semester	₹ 79.00	-	-
Library/Magazine/others	-	Each Semester	₹ 1,502.00	₹ 1,502.00	₹ 1,502.00
Book Bank	-	1st Semester	₹ 1,320.00	-	-
Students Welfare/Sports/ Extra Curricular Activities	-	1st Semester	₹ 5,192.00	-	-
T&P Activity Fund	-	1st Semester	₹ 3,113.00	-	-
Overhead Charges	-	Each Semester	₹ 1,806.00	₹ 1,806.00	₹ 1,806.00
Other fees					
		Total	**₹ 26,100.00****	**₹ 9,665.00**	**₹ 9,665.00**

** A one-time registration fee of Rs.500 and development fee of Rs.1100 is to be paid to MAKAUT during admission. Examination fee of Rs.1200 has to be paid to MAKAUT in each semester.

Fee Structure for 4-year B. Tech programs of GKCIET, Malda for A.Y. 2025-26

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	666/-	-	Each odd Semester	666/-	666/-	-
Registration Fee	-	500	1st Semester	500/-	-	-
Development Fee	-	2200	1st Semester (Rs. 550/- per year)	2,200/-	-	-
Student's Insurance	160/-	-	Each odd Semester	160/-	160/-	-
Medical Fee	200/-	-	Each Semester	200/-	200/-	200/-
Tuition Fee*	3,993/-	-	Each Semester	3,993/-	3,993/-	3,993/-
Session Charge	6,655/-	-	Each Semester	6,655/-	6,655/-	6,655/-
Examination Fee	363/-	1200	Each Semester	1563/-	1563/-	1563/-
Institute I-Card	79/-	-	1st Semester	79/-	-	-
Library I-Card	79/-	-	1st Semester	79/-	-	-
Library/Magazine/others	1,502/-	-	Each Semester	1,502/-	1,502/-	1,502/-
Book Bank	1,320/-	-	1st Semester	1,320/-	-	-
Students Welfare/Sports/ Extra Curricular Activities	5,192/-	-	1st Semester	5,192/-	-	-
T&P Activity Fund	3,113/-	-	1st Semester	3,113/-	-	-
Overhead Charges	3,319/-	-	Each Semester	3,319/-	3,319/-	3,319/-
Other Fees	As Applicable					
Total				**35,541/-**	**18,058/-**	**17,232/-**

*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. 2025-26:

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:

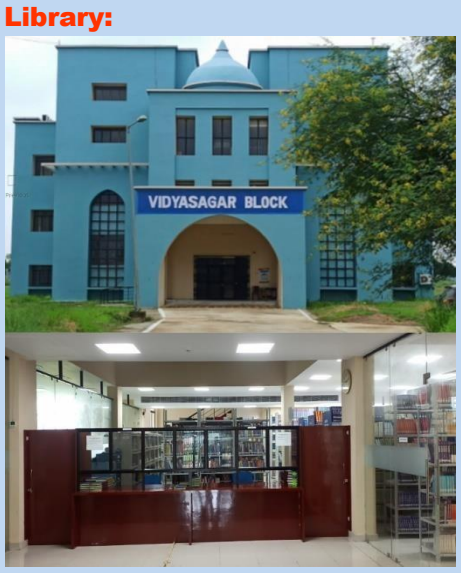
Financial Assistance/Scholarship is available through scholarship schemes/portals of the State Govt. and Central Govt:

- 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.

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.

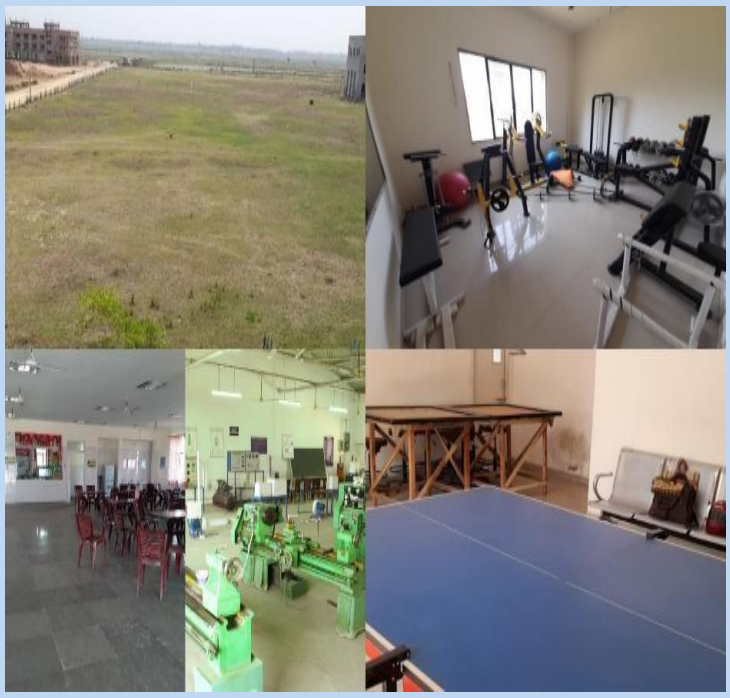
Student life at GKCIET:

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

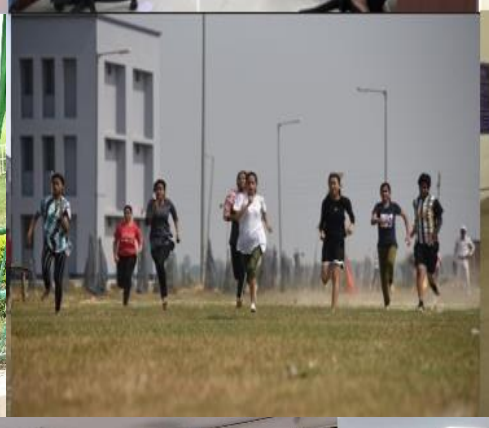
The Institute was included in the Atal Ranking of Institutions on Innovation Achievements (ARIIA) 2021 under the “Promising” band. A team of girl students of GKCIET ranked 2nd in the 1st Female National Dorotics Ranking 2023 of BIAG & ASFU.

Links for videos:

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

Photographs of the Institute:

Teacher's Day Celebration on 5th September, 2024



National Space Day event
on
23rd August 2024

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. 4-years B.Tech program in 'Civil and Environmental Engineering' has commenced from A.Y. 2023-24.

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 & 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**
Faculty profile	**https://www.gkciet.ac.in/faculty/3**

Associate Professor

Dr. Koushik Paul	
PG	**Jadavpur University**
PhD	**Jadavpur University**
Areas of Interest	**Solid Waste Management, Environmental Engineering**
Faculty profile	**https://www.gkciet.ac.in/faculty/4; https://vidwan.inflibnet.ac.in//profile/144329**

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**
Faculty profile	**https://www.gkciet.ac.in/faculty/6**

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**
Faculty profile	**https://www.gkciet.ac.in/faculty/6; https://vidwan.inflibnet.ac.in/profile/568308**

Assistant Professor

Mr. Haradhan Sarkar	
PG	**Indian Institute of Technology Guwahati**
Areas of Interest	**Transportation Engineering**
Faculty profile	**https://www.gkciet.ac.in/faculty/5**

6. Details of the Head of the Department and Admission Coordinator:

Dr. Soumi Bhattacharyya

Asst. Professor & Head

Placement coordinator

In-charge of CE Dept. Admission

soumi@gkciet.ac.in

mob: 9143382169

7. Past recruiters in Diploma:

B.Tech program in *Civil & Environmental Engineering* started in 2023-24 and our first Degree batch is yet to pass out. Some of the recruiters of our Diploma students are illustrated below:

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 Jaw Crusher
Soil Mechanics Laboratory	Mr. Haradhan Sarkar	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 Sand Replacement Apparatus Core Cutter Modified Proctor Compaction Mould
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 Blaine's 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) Los Angeles Abrasion Testing Machine Semi-automatic Compression Testing Machine Penetrometer CBR Test Apparatus Water Bath Marshall Stability Apparatus Bitumen Content Test Apparatus Hot Plate
Surveying Laboratory	Dr. Koushik Paul	Chain Tape Prismatic Compass (150mm dia) Plane table with accessories Auto Level with tripod stand Dumpy Level with Levelling staff Electronic Theodolites Total Station Handheld Garmin GPS Transit Vernier Theodolite Abney's Level Box Sextant Auto Level with Levelling staff Cross staff Ranging rods Optical Square Digital Planimeter Clinometer
Hydraulics & Water Resources Laboratory	Dr. Kiran Yarrakula	Triangular & Rectangular Notch Venturi meter Orifice meter Pitot Tube Apparatus Bernoulli Test Apparatus Pressure Measurement Apparatus Reynold's Apparatus Pipe Friction Apparatus MIKE Software ArcGIS software ENVI software
Environmental Engineering Laboratory	Dr. Koushik Paul	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 open reflux digestion block with 6 holes HACH DRB 200 COD/TOC Block Digestor Kjeldahl Apparatus Hannah Instruments Bench type multi-parameter water quality analyzer Hannah Free and Total Chlorine Meter Muffle Furnace Flame Photometer AAS for measuring Cu, Zn, Fe, As, Mn Zeiss Trionocular Phase Contrast Microscope Stirrer-cum-hot plate Conductivity meter Turbidimeter 220gm capacity 0.1mg resolution analytical balance 220 gm capacity 0.01 mg resolution analytical balance

Computer Laboratory	Dr. Poojari Yugendar	30 computers. Softwares: 1. AUTOCAD 2. ArcGIS 3. ENVI 4. MIKE

9. Research Activities

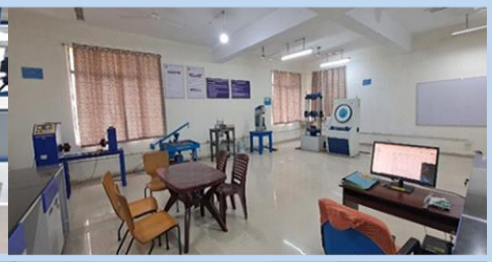
Details about Research Activities	**2021-2022**	**2022-2023**	**2023-2024**	**2024-25**
Total number of publications in peer-reviewed journals	**07**	**06**	**05**	**03**

10. List of recent selected publications:

1. Sundaram, S., Devaraj, S., Yarrakula, K., 2023, Mapping and assessing spatial extent of floods from multi-temporal 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.

Photo Gallery







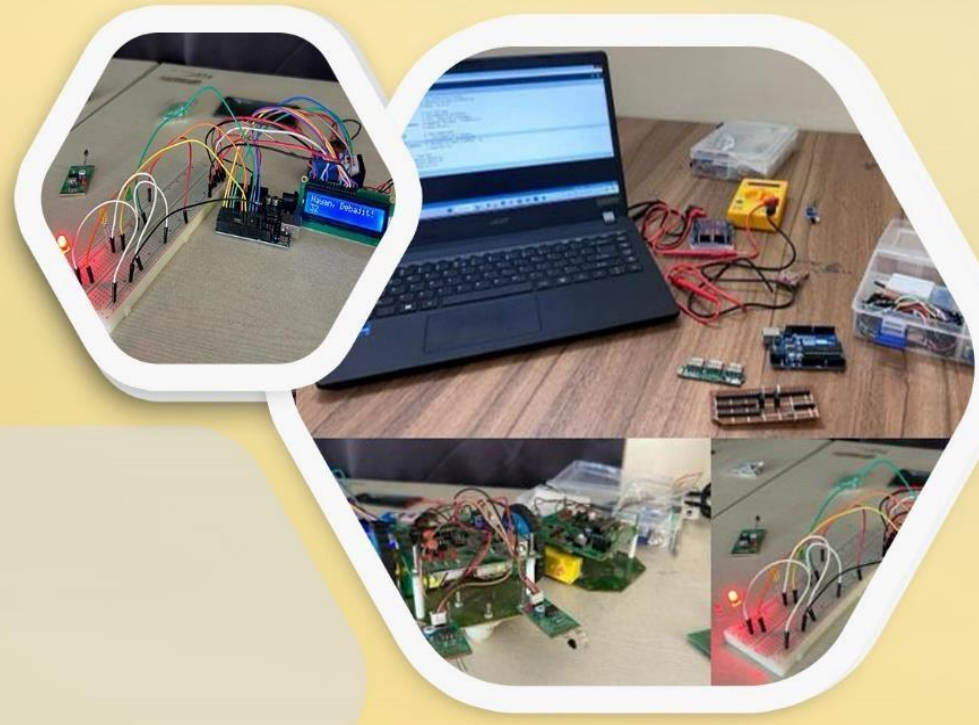





Department of

Computer Science and Engineering

Ghani Khan Choudhury Institute of Engineering And Technology



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, and to develop leadership quality to take up a variety of jobs in various fields.

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.

This program is affiliated with the West Bengal State Council of Technical & Vocational Education and Skill Development (WBSCT & VE & SD) and approved by AICTE. The total intake for this course is 60 students. This program follows the syllabus provided by WBSCT&VE&SD which is mainly focusing on the practical knowledge and also providing the theoretical knowledge based on the needs of industry. 80% of the approved intake is to be filled up through JEXPO Examination conducted by the WBSCT&VE&SD, Kolkata for the candidates of West Bengal and remaining 20% of the approved intake is to be filled up by a separate entrance test (GKCIET Entrance Test/GET) conducted by the Ghani Khan Choudhury Institute of Engineering & Technology (GKCIET), Malda for the candidates from other states (excluding West Bengal) & U.T.

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

The 4 years B-Tech program in Computer Science and Engineering (Artificial Intelligence and Machine Learning) has been started from the academic year 2023-24. This program is affiliated to Maulana Abul Kalam Azad University of Technology (MAKAUT), WB, Approved by AICTE. This Btech program has total intake of 60 students and is affiliated with MAKAUT, and approved by AICTE. This program follows the syllabus provided by MAKAUT. 50% of the approved intake is to be filled up through JOSSA/CSAB Examination and the remaining 50% of the approved intake is to be filled up through WBJEE Examination.

M. Tech in Data Science

The Department of Computer Science and Engineering is introducing Master of Technology (M.Tech) in Data Science from the academic year 2025-26. This program is affiliated with Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal, and approved by AICTE. The total intake for the program is 18. This M.Tech program is designed to meet the growing demand for skilled professionals in data science, machine learning, and artificial intelligence. This new postgraduate program offers a comprehensive curriculum, blending foundational theories and advanced practices in data science. Core subjects include advanced data structures, distributed systems, machine learning, data visualization, and recommender systems, as well as essential modules on research methodologies, intellectual property rights, and technical writing. The syllabus is aligned with the Maulana Abul Kalam Azad University of Technology (MAKAUT) framework. The Department of CSE features experienced faculty specializing in data science and machine learning, supported by modern facilities. The M.Tech in Data Science program aims to produce highly skilled graduates capable of independent research and the development of innovative solutions for complex, data-driven challenges. Graduates will be prepared for roles in sectors such as health informatics, financial analytics, and AI-powered industries.

Curriculum Structure

Sem-I.

Course Number	Subject	SchemeOf StudiesPer Week			Credits
		L	T	P	
PGIT(DS)101	Program Core I Mathematical foundationsof Computer Science	3	0	0	3
PGIT(DS)102	Program Core II AdvancedData Structures	3	0	0	3
PGIT(DS)103A/B/C	Program Elective I Data Science/ Distributed Systems/Data Preparation and Analysis	3	0	0	3
PGIT(DS)104A/B/C	Program Elective II Recommender Systems /Machine Learning/ Data Visualization	3	0	0	3
PGIT(DS)105	Research Methodology and IPR	2	0	0	2
PGIT(DS)106A/B/C/D	Audit Course	2	0	0	0
PGIT(DS)192	Laboratory 1 (Advanced Data Structures)	0	0	4	2
PGIT(DS)193A/B/C/D	Laboratory 2 (Based on Elective1)	0	0	4	2
PGIT(DS)194A/B/C/D	Laboratory 3 (Based on Elective 2)	0	0	4	2
Total Credits:20					

Sem-II

Course Number	Subject	SchemeOf StudiesPer Week			Credits
		L	T	P	
PGIT(DS)201	Program Core III – Advanced Computer Architecture	3	0	0	3
PGIT(DS)202	Program Core IV – Advanced Database	3	0	0	3
PGIT(DS)203A/B	Program Elective III – BigData Analytics/Data Warehouse and Data Mining	3	0	0	3
PGIT(DS)204A/B/C	Program Elective IV – Data Security/ Web Analytics and Development/Knowledge Discovery	3	0	0	3
PGIT(DS)205A/B/C/D	Audit Course	2	0	0	0
PGIT(DS)291	Advanced Computer Architecture Lab	0	0	4	2
PGIT(DS)292	Advanced Database Lab	0	0	4	2
PGIT(DS)293A/B	Big Data Analytics lab/ Data Warehouse and Data Mining lab	0	0	4	2
PGIT(DS)281	Term Paper with Seminar	0	0	4	2
Total Credits:20					

***Students be encouraged to go to Industrial Training/Internship for at least 2-3 months during semester break.**

Sem-III

Course Number	Subject	Scheme of Studies Per Week			Credits
		L	T	P	
PGIT(DS)301A/B/C/D	Program Elective V – GPU Computing/ Cloud Computing/ Distributed Databases/ Deep Learning	3	0	0	03
PGIT(DS)302A/B/C/D/E/F	**Open Elective** A. Business Analytics B. Industrial Safety C. Operations Research D.Cost Management of Engineering Projects E. Composite Materials F. Waste to Energy	3	0	0	03
PGIT(DS)381	Dissertation-I /Industrial Project	0	0	20	10
Total Credits:16					

***Students be encouraged to go to Industrial Training/Internship for at least 2-3 months during semester break.**

Sem-IV

Course Number	Subject	SchemeOf StudiesPer Week			Credits
		L	T	P	
PGIT(DS)481	Dissertation II	0	0	32	16
Total Credits:16					

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

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	-----
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	Robotics
Vidwan Profile	https://vidwan.inflibnet.ac.in/profile/542190

Senior Trainer

Mr. Nikhil Deo	
PG	North Eastern Regional Institute of Science and Technology
PhD	Thesis submitted (North Eastern Regional Institute of Science and Technology)
Areas of Interest	Computer Organization, 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 Technology, 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	Pursuing from IIIT Kalyani
PhD	
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:9475539067**
	**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	2024 - 2025
Total Number of students (Diploma)	24	27	24	12
Number of students placed in Industry	4	5	1	1
Number of students in Higher studies	14	15	19	Final Results Awaited
Average Salary	**2.04 lakh per year**	**1.33 lakh per year**	**60,000 per year**	**1.5 lakh 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 (B. Tech first batch will be from 2027)**

2021-2022	2022-2023	2023-2024	2024 - 2025
NA	**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	20 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	Mr. Subrata Roy	10 No Trainers Kit. Adder, Subtractor, Multiplexer, Encoder & Decoder, Counter, RAM IC A to D and D to A converter
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	2024 – 2025
Total Number of publications in peer-reviewed journal	**16**	**15**	**4**	**5**
Total Number of publications as book chapter	**3**	**2**	**8**	**4**
Total Number of publications as book	**0**	**0**	**2**	**0**
Total Number of patents files	**0**	**0**	**0**	**0**
Total number of conferences/ workshops organized	**1**	**0**	**0**	**0**
Total number of conferences or workshops participated	**13**	**15**	**13**	**5**
Total number of Ph.D. scholars guided				3 (Ongoing)

10. **List of Selected Publications**

1) Nirmalya Mukhopadhyay, Babul P. Tewari Cost and energy aware migration through dependency analysis of VM components in virtual cloud infrastructure. Computing 107(1): 24 (2025)

2) Das Mandal, S., Mukherjee, S. Pan-cancer analysis of cancer-specific transcript isoforms reveals the regulatory impact of isoform switching on the alteration of the interplay between RBPs and miRNAs in cancers. J Biosci 50, 31 (2025).

3) Ghosh S, Das Mandal, S, Thakur S. Biomarker-driven drug repurposing for NAFLD-associated hepatocellular carcinoma using machine learning integrated ensemble feature selection. Front Bioinform. 2025 Apr 17;5:1522401.

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).

5) 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.

6) 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.

7) 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.

8) 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).

9) Bhowmik, S., Kundu, S. & Sarkar, R. BINYAS: a complex document layout analysis system. Multimed Tools Appl 80, 8471–8504 (2021).

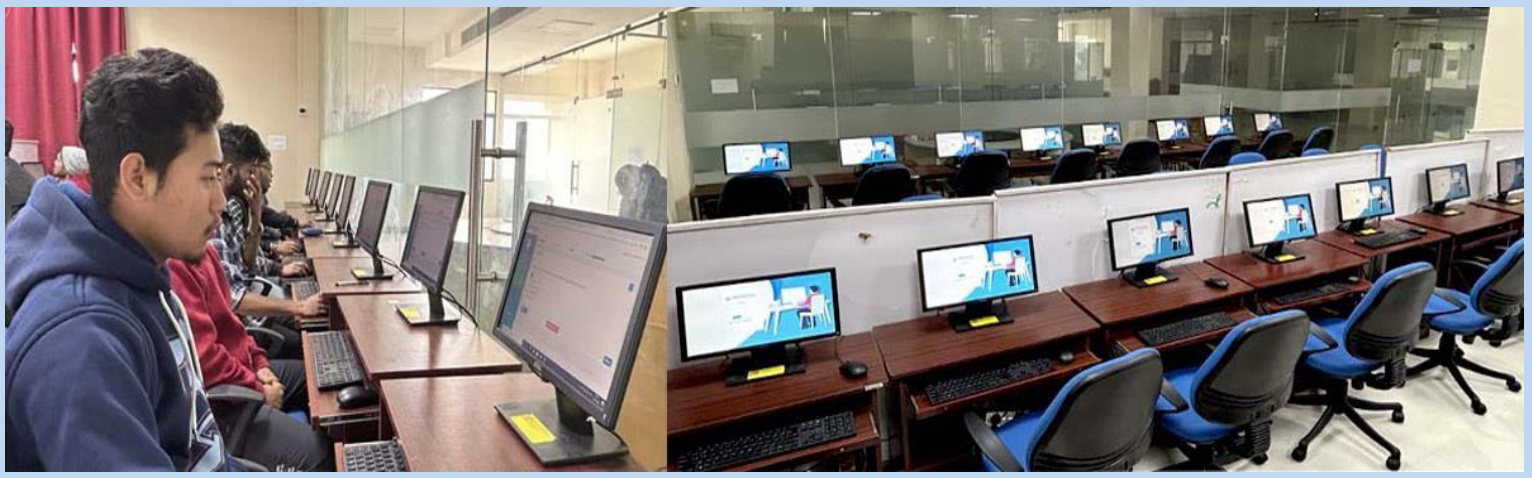
10) Nag, S, Goswami, B., Mandal, S. D., & Ray, P. S. (2022). Cooperation and competition by RNA-binding proteins in

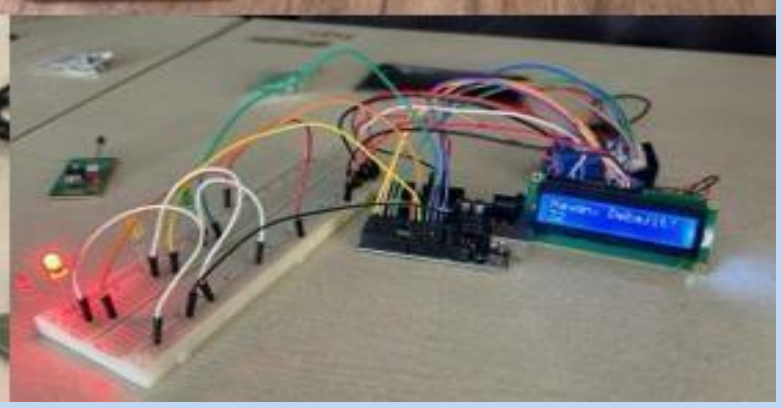
cancer. Seminars in Cancer Biology.

11) 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.

12) Das Mandal, S., & Ray, P. S. (2021). Transcriptom-wide Analysis Reveals Spatial Correlation between n6-methylamine and binding sites of microRNAs and RNA-binding proteins. Genomics.

11. Photo Gallery





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

Department
Of
FOOD ENGINEERING AND 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

- M.Tech in Food Technology
- 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	
Departmental placement coordinator	Dr. Sourav Chakraborty	

6. Placement Statistics

Details about placement	**2022-2023**	**2023-2024**	**2024-2025**
Total Number of students	**15**	**28**	**39**
Number of students placed in Industry	**9**	**18**	**26**
Number of students in Higher studies	**5**	**11**	**13**
Average Salary	**2.10**	**2.15**	**2.30**

7. **Esteemed Recruiters**

8. **List of students qualified GATE**

2022-2023	2023-2024	2024-25
Naresh Das	**Adrita Sarkar** **Vyurru Gudarankamma** **Rizwanul Hosaain** **Bhaskar Gharoi** **Krishnendu Samanta**	**Ayushi Mondal** **Rani Sen** **Souvik Dhali**

9. **Laboratory facilities**

Nameof the Laboratory	FacultyIn-Charge	Major Equipment
Food Engineering	Dr Kshirod Kumar Dash	**HPLC, GC, Texture analyser**
Food Chemistry	Dr.Mudasir Ahmad Malik	**Vacuum evaporator, dryer, Kjeldahl equipment**
Unit Operation	Dr.Sudip Kumar Das	**Reynolds apparatus, shell and tube heat exchanger**
Unit Operation	Dr.Vivek Kumar	**Bomb calorimeter, Sieve shaker, Viscometer**
FoodMicrobiology	Dr.Anwesa Sarkar	**Fermenter, microscope, spectrophotometer**
Computerlab	Dr.Amit Baran Das	**15 workstations**
Food quality control	Dr.Sourav Chakraborty	**Dryer**
FoodProductDevelopment	Dr.Amit BaranDas	**Grinder, Microwave**

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)**

Rizwanul Hussain, Subhradeep Bera received the level Outstanding Presenter Research Award

Rizwanul Hussain, Subhradeep Bera received the DistrictLevel Outstanding Presenter Award

Monica Das received the State-level Outstanding Presenter Research Award

Monica Das received the District-level Outstanding Presenter Award

Ayendita Mana received the best poster presentation at an international conference

Skill training program for tribal woman

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 patent 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).ImpactofDifferentNaturalDeepEutecticSolventsonDissolutionBehaviour 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).Instantdecompression-inducedswelldrying 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).EffectofEuryaleferoxseedshellextractadditiononthein vitro starch digestibility and predicted glycemic index of wheat-based bread. International Journal of Biological Macromolecules, 226, 1066-1078.
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- 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

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 well 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 worldwide. The department caters internships/trainings– which leads students' to meet the current industrial needs as well as need of the society.

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
M. Tech (Heat Power Engineering)	18	2 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	

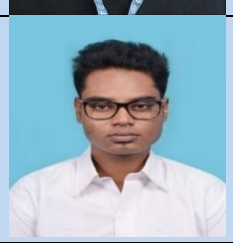
Assistant Professor

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

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

	**Dr. M. Mohan Jagadeesh Kumar**. Head of the Department Mechanical Engineering. Email: me_hod@gkciet.ac.in Tel. No: 8619034984	
Departmental Admission Committee		
	**Mr. Tridib Ranjan Das** Sr. Trainer.	Email: tridib@gkciet.ac.in Tel. No: 9641158076
	**Dr. Hasibur Rahaman** Trainer.	Email: hasibur@gkciet.ac.in Tel. No: 9064449483
	**Mr. Abhinav Kumar** Trainer.	Email: abhinav@gkciet.ac.in Tel. No: 8906669299
	**Mr. Raktim Roy** Trainer.	Email: raktim@gkciet.ac.in Tel. No: 9679040440
	**Mr. Siladitya Mandal** Trainer.	Email: siladitya@gkciet.ac.in Tel. No: 8240796798
	**Mr. Priyam Sen** Technical Assistant	Email: priyam@gkciet.ac.in Tel. No: 9064218652

	**Mr. Soumodip Chatterjee** Technical Assistant	Email: soumodip@gkciet.ac.in Tel. No: 8967361006
	**Mr. Shashi Bhushan Kumar** Technical Assistant	Email: shashibhushan@gkciet.ac.in Tel. No: 7970691409

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	2024-2025
Total Number of students	08	40	26	16
Number of students placed in Industry	08	40	26	16
Number of students in Higher studies	--	06	06	--
Average Salary	2.4 LpA	2.4 LpA	2.4 LpA	2.82 LpA

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

BHARAT GEARS LIMITED Geared for Life	EMMVEE
keventer	Planet Sparks
SYNNOVA®	tega McNALLY MINERALS Delivering Excellence
Merchant Navy	Krishna Maruti Limited, Gujarat, ACS Networks and Technologies, ASC International, Adytuminfotech Softwares Pvt. Ltd. Mando Automotive India Pvt. Ltd., Pie Infocomm Pvt. Ltd, Grifeo. Planet Sparks, Agumentik Group of Companies, High-Technext Engg. Pvt. Ltd

8. List of students qualified GATE

2023-2024	2024-2025
Mr. Surajit Kundu Mr. Parthasarathi Samanta Mr. Mukesh Kumar Murari Mr. Tamojyoti Das Mr. Suparna Dhara	Mr. Dipak Das Mr. Debesh Halder

9. Laboratory facilities

Name of the Laboratory	Faculty In-Charge	Major Equipment
Automobile Lab	Mr. Tridib Ranjan Das	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	Dr. Santosh Kr Dash	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.
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 digital Load Indicator, Two Stage Reciprocating Air Compressor Test Rig, Valve timing diagram using 1-cylinder 4-stroke Diesel engine, Port timing diagram using 1-cylinder 2-stroke petrol engine, Viscosity measurement apparatus, Cloud/Pour point measuring apparatus.
Heat & Mass Transfer Lab	Dr. M. Mohan Jagadeesh Kumar	Measuring Thermal Conductivity of Metal Rod, Measuring heat transfer coefficient in Natural Convection, Measuring heat transfer coefficient in Forced Convection, Shell & Tube Heat Exchanger Apparatus, Emissivity Measuring Apparatus, Heat Transfer through a Pin Fin, Stefan Boltzmann's Apparatus.
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)
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, Kaplan Turbine Test Rig.
Strength of Materials Lab	Dr. Dharmeswar Dash	Izod & Charpy Impact Testing Machine, Universal Testing Machine (UTM), Brinel Hardness Tester, Torsion Test Machine
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.
Computational Lab/ CAD & CAM	Dr. M. M. J. Kumar/Dr. Nitesh Mondal	Personal Computers: 40, Softwares: ANSYS R24, Solid Works
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. Siladitya Mandal	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. Total Number of Publications/Honors/Awards

Name of the Faculty	Journals	Conference Proceedings/ Book Chapter	Program Organized/ Coordinated	Book Publication	Honors/ Awards/ Appreciation
Prof. Dalbir Singh	24	21	3	1	2
Dr. M. Mohan Jagadeesh Kumar	22	26	6	--	--
Dr. Habib Masum	12	6	6	1	8
Dr. Dharmeswar Dash	7	6	2	1	8
Dr. Tanmoy Sarkar	7	6	-	1	-
Dr. Santosh Kumar Dash	14	19	1	1	2

Dr. Nitesh Mondal	24	29/8	2	1	2
Dr. Hasibur Rahaman	4	-	-	-	-

12. Research Activities

Details about Research Activities	2021-2022	2022-2023	2023-2024	2024-2025
Total Number of publications in peer reviewed journal	5	9	12	12
Total Number of publications in international conferences	--	--	--	05
Total Number of publications as book chapter	--	--	--	--
Total Number of publications as book	--	--	--	01
Total Number of patents files	--	--	03	04
Total number of conferences or workshops participated	--	--	01	05
Total number of Ph.D. scholars guided	--	--	04 (ongoing)	05 (ongoing)

13. Patents and Copyrights (2024-25):

S.No.	Name of the Authors (as in patent publication and highlight your name with bold letters)	Title of the Patent	Details of the Patent Publisher	Year of Publication	Status of the Patent
1	1. Dr. Mohammed Asif Kattimani 2. Dr. Shankara C 3. Dr. P R Venkatesh 4. H. S Sushanth 5. **Dr. Habib Masum** 6. Nandini N S 7. Mahadeva Prasad 8. Dr. Gangadharappa S	WiFi Enabled Thermal Imaging Camera	Controller General of Patents, Designs and Trademarks, Ministry of Commerce and Industry, Govt. of India	Year of Application 2025	Application Under Process (awaiting for Technical Examination)
2	1. Prof. Kiran Kumar C M 2. Prof. Nischitha S Y 3. Patil Mangesh Pramodrao 4. Dr. K. Mahesh Dutt 5. Dr. Mahalingegowda H R 6. Dr. Rashmi K R 7. **Dr. Habib Masum** 8. Dr. Vidyadhar Pujar 9. Prakash Kumar	Hand-held Time-domain Reflectometer	Controller General of Patents, Designs and Trademarks, Ministry of Commerce and Industry, Govt. of India	Year of Application 2025	Application Under Process (awaiting for Technical Examination)
3	1. Dr. Shanthala K 2. Abhijith S 3. Suresh Erannagari 4. Dr. Md Saeb Sufyan 5. Dr. Manjula K 6. **Dr. Habib Masum** 7. Dr. Melwyn Rajesh Castelino 8. Dr. Jyothi D N	Precision Module Inclinometer	Controller General of Patents, Designs and Trademarks, Ministry of Commerce and Industry, Govt. of India	Year of Application 2025	Application Under Process (awaiting for Technical Examination)
4	1.Abhinav Kumar, 2. Siladitya Mandal, 3.Santosh Kumar Dash, 4.Smita Anand, 5.Dharmeswar Dash, 6.Rounak Basu, 7.Kushal Ghosh	SMART ELECTRIC BICYCLE	Controller General of Patents, Designs and Trademarks, Department for Promotion of Industry and Internal TradeMinistry of Commerce and Industry, Govt. of India	2025	Granted: Design No.: 437286-001
5	1. Siladitya Mandal , 2. Abhinav Kumar, 3. Santosh Kumar Dash, 4.Dharmeswar Dash , 5.Rounak Basu, 6.Kushal Ghosh	SECURE MOBILITY ASSISTANT SYSTEM	Controller General of Patents, Designs and Trademarks, Department for Promotion of Industry and Internal TradeMinistry of Commerce and Industry, Govt. of India	2024	Published: Application No.: 202431046189
6	1.Abhinav Kumar, 2. Siladitya Mandal, 3.Santosh Kumar Dash, 4.Smita Anand, 5.Dharmeswar Dash, 6.Rounak Basu, 7.Kushal Ghosh, 8. Debasish	MULTIPURPOSE UNIVERSAL OPERATED CONTROL SYSTEM	Controller General of Patents, Designs and Trademarks, Department for Promotion of Industry and Internal TradeMinistry of Commerce and Industry, Govt. of India	2024	Published: Application No.: 437287-001
7	1. **Abhinav Kumar** 2.**Siladitya Manda**l , 3.**Santosh Kumar Dash**, 4.**Dharmeswar Dash**, 5. Smita Anand , 6. Abhijit Mandal, 7. Bhavya Bharti, 8. Sattyajit Barman, 9. Madhab Dutta,10. Bishnu Sil	SMART IoT – BASED SOLUTION FOR LPG GAS LEVEL MONITORING AND LEAKAGE DETECTION	Controller General of Patents, Designs and Trademarks, Department for Promotion of Industry and Internal TradeMinistry of Commerce and Industry, Govt. of India	2024	Published: Application No.: 457545-001

14. Faculty Publications (Journal Papers 2024-2025)

S.No.	Name of the Authors (as in journal citation and highlight your name with bold letters)	Title of the Paper	Name of the Journal	Volume	Issue	Year of Publication	Page Numbers From-To
1	Abhisek Gupta, Masud Rana, **Nitesh Mondal**	Determining the optimal design parameters for gyroids using computational fluid dynamics analysis under a non-Newtonian perfusion system https://doi.org/10.1016/j.bea.2025.100153	Biomedical Engineering Advances	9	100153	2025	1-11
2	Rupam Mandal, **Nitesh Mondal,** Anamitra Ghosh, Ankita Mallick, Subhasish Sarkar, Tapendu Mandal, Rajat Subhra Sen, Gautam Majumdar	Estimation of surface roughness upon electroless Ni–Fe–P coatings: experiments, characterization, modelling and optimization. https://doi.org/10.1007/s12008-025-02270-1	International Journal on Interactive Design and Manufacturing (IJIDeM)	--	--	2025	1-15
3	Parthasarathi Samanta, Surajit Kundu, Abhisek Gupta, Masud Rana, **Nitesh Mondal,** Amit Roy Chowdhury	Evaluating the mechanical responses on a cell under fluid perfusion: A multiscale computational method https://doi.org/10.1016/j.rsurfi.2024.100394	Results in Surfaces and Interfaces	18	100394	2025	--
4	Sameer Lamichaney, Rupam Mandal, **Nitesh Mondal,** Subhashish Sarkar, Buddhadeb Oraon, Gautam Majumdar	Impact of Coating Variables on Micro-hardness in Ni–W–P Electroless Coatings: Experimental Assessment, Modelling and Optimization https://doi.org/10.1007/s40032-024-01070-y	J. Inst. Eng. India Ser. C	105	3	2024	595-606.
5	Tarik Hassan, Ankita Mallick, Sameer Lamichaney, Sukhen Das Mandal, Subhasish Sarkar, **Nitesh Mondal,** Gautam Majumdar	Modelling and optimization of corrosion rate of Ni-Co-P coating using box-behnken design, gradient descent with RMSprop & metaheuristic algorithm. https://doi.org/10.1007/s12008-024-02156-8	International Journal on Interactive Design and Manufacturing (IJIDeM)	--	--	2024	1-16
6	C. Durga Prasad, Amit Tiwari, Shubham R. Suryawanshi, B. P. Dileep, Ashwin C. Gowda, **Habib Masum**, K. Mahesh Dutt, S. Sunil Prashanth Kumar & Saravana Bavan	Overview of thermal spray coating on additive manufacturing https://doi.org/10.1007/s40964-024-00869-6	Progress in Additive Manufacturing	--	--	2024	1-21
7	Syed Jabiulla, L. J. Kirthan, G. N. Kumaraswamy, D. B. Keshava Murthy, R. Anandkumar Annigeri, M. Mahantesh Math, P. A. Udaya Kumar & **Habib Masum**	Evaluation of the Reliability of Computational Fracture Mechanics Approaches for Compact Tension Specimen. https://doi.org/10.1007/s40033-024-00697-6	J. Inst. Eng. India Ser. D	--	--	2024	1-10
8	Rahul Samanta, Sandip Kunar, **Habib Masum**, Shamim Haidar, Ziyauddin Seikh, Arijit Sinha & Gurudas Mandal	A Comparative Study on Various Natural Plant Fiber Composites. https://doi.org/10.1007/s40033-024-00819-0	J. Inst. Eng. India Ser. D	--	--	2024	1-10
9	Pritam Kumar Das, Apurba Kumar Santra, Ranjan Ganguly, **Santosh Kumar Dash**, Suresh Muthusamy, MizajShabil Sha, Kishor Kumar Sadasivuni	An extensive review of preparation, stabilization, and application of single and hybrid nanofluids. doi.org/10.1007/s10973-024-13449-1	Journal of Thermal Analysis and Calorimetry	149	17	2024	9523–9557
10	**Santosh Kumar Dash**, **Dharmeswar Dash**, Pritam Kumar Das, Debabrata Barik, Kshirod Kumar Dash, Sreejesh SR Chandran, Milon Selvam Dennison	Investigation on the adjusting compression ratio and injection timing for a DI diesel engine fueled with policy-recommended B20 fuel doi.org/10.1007/s42452-024-06076-w	Discover Applied Sciences	6	8	2024	387
11	Shafat Ahmad Khan, Sourav Chakraborty, Kshirod Kumar Dash, Aamir Hussain Dar, Falak Shawl, **Santosh Kumar Dash**, Sushil Kumar Singh, Madhuresh Dwivedi, Debabrata Barik	Review of Solar Greenhouse Drying Systems in Conjunction with Hybrid Technological Features, Designs, Operations, and Economic Implications for Agro-Food Product Processing Application. https://doi.org/10.1002/ente.202400176	Energy Technology	12	8	2024	2400176
12	**Dharmeswar Dash**, Devarasiddappa Devarajaiah, **Santosh Kumar Dash**, Sutanu Samanta, Ram Naresh Rai	Experimental investigation and machining analysis of Mg/Tic composites during EDM https://doi.org/10.62753/ctp.2024.02.1.1	Composite Theory and Practice	24	1	2024	9-16

15. Conference Publications (2024-25)

S.NO.	Name of the Authors (as in Conference Publication and highlight your name with bold letters)	Title of the Paper	Name of the Conference	Place of the Conference	Duration From-To	Year of Conf.	Page Numbers From-To
1	**Nitesh Mondal,** Tanmoy Sarkar, Santosh Kumar Dash, Rana Saha	Variable Displacement Energy Efficient Pump: Design & Performance Analysis	International conference on Sustainable Energy and Environment (ICSEE) 2025	BITS Pilani, K.K. Birla, Goa Campus, India.	8th -10th March, 2025,	2025	1-6
2	Afzal Hussain, **Nitesh Mondal,** Debasish Roy	Numerical Analysis of Nanofluid Flow Over Microscale Backward-Facing Step	the 11th International and51stNational Conference on Fluid Mechanics and Fluid Power (FMFP 2024)	AMU Aligarh, India.	December 21-23, 2024,	2024	1-5
3	Subhojit Paul, **Nitesh Mondal,** Rana Saha, Dipankar Sanyal	Flow and pressure control of swash plate variable displacement pump with load sensing and pressure compensator – An experimental approach;	2nd International Conference on Recent Innovations and Developments in Mechanical Engineering	NIT Meghalaya, Shillong, India,	November– 14-16, 2024	2024	1-6
4	**Santosh Kumar Dash, Dharmeswar Dash, M Mohan Jagdeesh Kumar and Nitesh Mondal**	Production of Biodiesels and Performance Evaluation in Agricultural Diesel Engine	2nd International Conference on Recent Innovations and Developments in Mechanical Engineering	NIT Meghalaya, Shillong, India,	November– 14-16, 2024	2024	1-6
5	Nitesh Mondal, **Tanmoy Sarkar**, Santosh Kumar Dash, Rana Saha	Variable Displacement Energy Efficient Pump: Design & Performance Analysis	International conference on Sustainable Energy and Environment (ICSEE) 2025	BITS Pilani, K.K. Birla, Goa Campus, India.	8th -10th March, 2025,	2025	1-6
6	**Dharmeswar Dash, Santosh Kumar Dash,** Sayantan Debnath1 and Md. Safder Karim	Design, Assembly and development of Hybrid Vertical Axis Wind Turbine and Solar for Power Generation	International Conference on Sustainable Energy and Environment (ICSEE) 2025	Birla Inst. of Tech. and Science, Pilani, K. K. Birla Goa Campus, Goa, India	8th -10th March, 2025,	2025	1-17

16. Book Publications (2024-25)

S.NO.	Name of the Authors (as in book publication and highlight your name with bold letters)	Title of the Book	Name of the Publisher	Year of Publication	Edition
1	Awinash Kumar, Pradip Lingfa, **Santosh Kumar Dash**, Prafulla kumar Manoharan	Waste Plastic Oil (ISBN: 978-81-978285-2-2)	AHB Press	2025	1
2	**Dr. Dharmeswar Dash, Dr. Tanmoy Sarkar, Mr. Abhinav Kumar, Mr. Siladitya Mandal,**	Fundamentals of Manufacturing Process: Conventional and Modern Manufacturing Techniques, ISBN-978-819841800-5	Guided Self Publishing India	2024	1

17. Refresher Courses, Methodology Workshops, training, teaching-learning Technology Programs, Soft skills development programs, Faculty Development programs, etc. attended by our faculty (2024-25):

S.NO.	Name of the Faculty	Name of the FDP/STTP/Workshop/Seminar Participated	Organized by	Place of Occurance/Online	Date From	Date To
1	Dr. M. Mohan Jagadeesh Kumar	5-Day Residential Capacity Building Program on “Nurturing Future Leadership Program”	Indian Institute of Management Visakhapatnam	Visakhapatnam	06/01/2025	10/01/2025
2	Dr. M. Mohan Jagadeesh Kumar	AICTE Training And Learning (ATAL) Academy Faculty Development Program on Innovative green energy generation and storage technologies	Maharaj Vijayaram Gajapathi Raj College of Engineering, Vizianagaram	Online	02/12/2024	07/12/2024
3	Dr. M. Mohan Jagadeesh Kumar	Five day training on “Hydrological and Hydrodynamic Modelling using MIKE+”	Dept. of Civil Engineering, GKCIET	GKCIET, Malda	06/05/2024	10/05/2024
4	Dr Santosh Kumar Dash	Network Advancements, Issues, and Practices for Sustainable Green Energy Distribution System	Dept. of Electrical Engineering, GKCIET	GKCIET, Malda	22/07/2024	26/07/2024
5	Dr Santosh Kumar Dash	AICTE Training And Learning (ATAL) Academy Faculty Development Program on Sustainable Carbon-Free Technologies for Hydrogen Generation and Storage	National Institute of Technology Tiruchirappalli	National Institute of Technology Tiruchirappalli	24/02/2025	01/03/2025

Photo Gallery

18. Major Equipment of the Department

Thermal Engineering Lab.

Multi-Cylinder Petrol Engine Test Rig

Single-Cylinder Petrol Engine Test Rig

IC Engine Lab.

Air-conditioner Test rig

Water Cooler Test rig

Refrigeration Test rig

Window-Air Conditioning Test rig

Refrigeration and Air Conditioning Lab.

Machine Shop

CNC Lathe

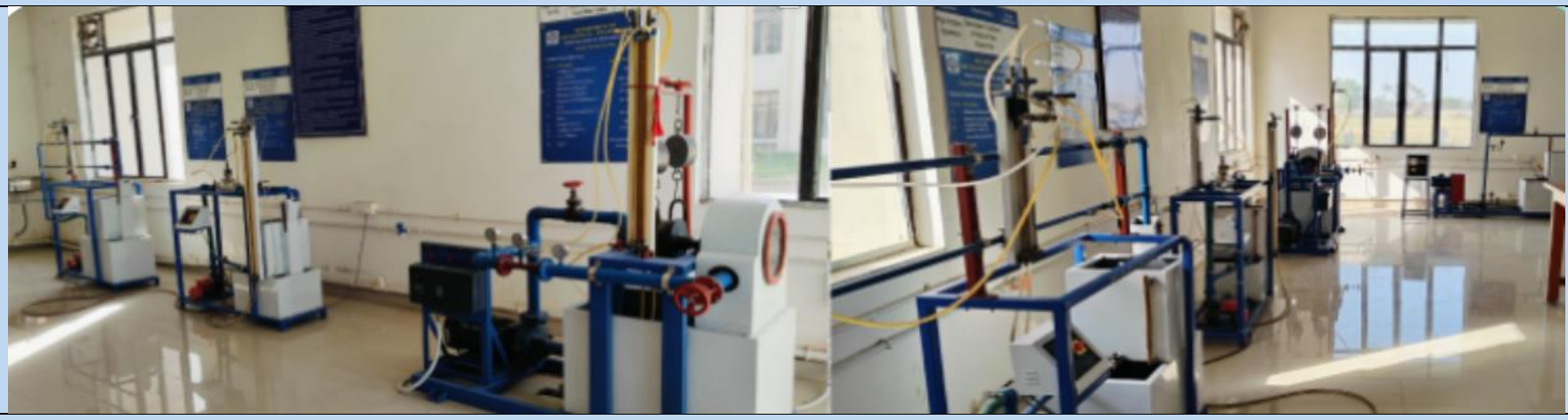
Automobile Lab

Smithy and Forging Lab

Strength Materials Lab

Carpentry shop

Heat Transfer Lab

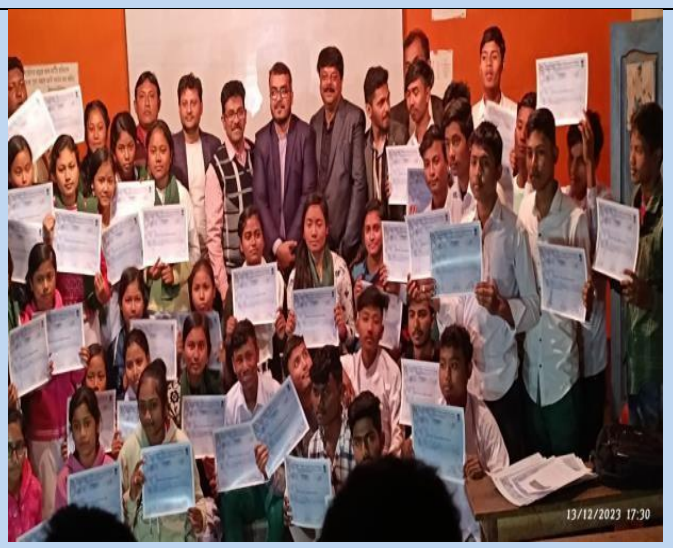


Fluid Machinery Lab

19. Various activities of the Department

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

20. Departmental Faculty Recognition

Dr. M Mohan Jagdeesh Kumar presented a technical paper entitled "" at ENERGYCON-2024 held in Qatar University, Doha, Qatar.

Dr. Dharmeswar Dash presented a paper at ICSEE 2025" BITS Pilani, K.K. Birla Goa Campus

Dr. Dharmeswar Dash received appreciation Certificate for significantly contributing towards research and development activities of the institute

A team of Robotics Club members under the mentorship of Dr. Habib Masum ranked 3rd in the 2nd National Drone Ranking 2022 organized by BIAG.

Inauguration of DD Robocon 2023 using ROLiP at Thyagraj Stadium, New Delhi on 17th June 2023 where Dr. Habib Masum is assisting in operating the ROLiP

Dr. Santosh Kumar Dash received Best Paper Presentation award in the 2nd International Conference on Recent Innovations and Development in Mechanical Engineering. NIT Meghalaya.

Dr. Santosh Kumar Dash received appreciation Certificate for significantly contributing towards research and development activities of the institute

Dr. Nitesh Mondal presented a paper at ICSEE 2025" BITS Pilani, K.K. Birla Goa Campus

Dr. Nitesh Mondal presented a research paper in the 2nd International Conference on Recent Innovations and Development in Mechanical Engineering. NIT Meghalaya.

DEPARTMENT OF ELECTRICAL ENGINEERING

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 it has manifested extensively in the control of electrical power in the last century. The 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 of Technology (Formerly WBUT), and the Diploma in Electrical Engineering obtained its affiliation from West Bengal State Council of Technical and Vocational Education and Skill Development (WBSCTVESD). All the programmes of the department are approved by the All-India Council of Technical Education (AICTE). There are great employment prospects for Electrical Engineers in the government and public sectors like the NTPC, railways, municipalities/urban local bodies, Defense, CPWD/PWD, SETCL, and DCL, and different medium and large-scale industries.

➢ 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.

➢ Programme 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.

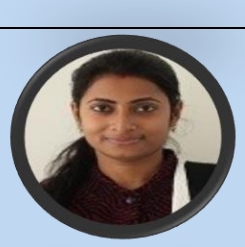
PEO 4. (*Industry orientation with social awareness*) - To provide the students with opportunities for vocational training, industry visits, to make them aware of the industry, and accustom them with social concerns and professional responsibility.

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.

➢ Program Offered

Program	Duration	Trade/Specialization	Student Intake	Admission Mode
M. Tech	2 Years	Power System	18	GATE/nonGATE/PGET
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 roles)	70	Skill India (PMKVY4.0) & WBSCTVESD (STC)
HS Vocational	2 Years	Electrical Maintenance & Installation [ETEM]	30	As per WBSCT&VE&SD (HS VOC EXAM)

➢ 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. Goutam Kumar Ghorai Assistant Professor, P h D Vidwan Profile
	Dr. Chiranjit Sain Assistant Professor, PhD Vidwan Profile
	Dr. Raja Ram Kumar Assistant Professor, PhD Vidwan Profile
	Dr. Amarjit Roy Assistant Professor, PhD Vidwan Profile
	Mr. Rajeev Kumar Assistant Professor, MTech Vidwan Profile
	Mrs. Smita Anand Assistant Professor, MTech Vidwan Profile

	Mr. Amiungshu Karmakar Senior Trainer BTech Vidwan Profile
	Mr. Pranab Mandal Trainer BTech Vidwan Profile
	Mr. Sankar Mukherjee Trainer Diploma Vidwan 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

Dr. Surajit Chattopadhyay, E: surajit@gkciet.ac.in M: 9735353700

➢ Laboratories

Name of the Laboratory	*Faculty In-Charge*	*Major Equipment*
Machine	Dr. Raja Ram Kumar , Dr. 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 performance characteristics evaluation of alternator set-up and Electrical machine winding winder machine
Power system	Dr. Tapash Kr. Das	A, B, C, and D Parameter Analyzer, 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 drive, PSIM simulation software, v/f control of Induction motor drive, DSO
Analog, Digital, Microprocessor & Microcontroller lab	Dr. Amarjit Roy	Digital Trainer Kit, Function Generator, Digital Storage 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, single-phase transformer, DC machine
Circuit Theory	Mr. Rajeev Kumar	Network analyzer, signal generator, analog/digital network kits, filter, two-port network analyzer etc.
Measurement	Mrs. Smita Anand	Filters, different bridge circuits, different rectifiers, sensors and transducers, signal conditioners, CRO, DSO
MATLAB	Dr. Goutam Kumar Ghorai Dr. Raja Ram Kumar	35 users

➢ Notable Recruiters

TECH mahindra	adani Renewables	SYNNOVA GEARS & TRANSMISSIONS PVT. LTD.
PLANETSPARK	PERYCAP	Mando
ASC International	AGUMENTIK	Hiremi
PIE INFOCOMM	BHARAT GEARS LIMITED	EXECUTIVE SHIP MANAGEMENT
Technext	Pinnacle Infotech Construct Certainty, with Technology	VISHAKHA
orbit Diagnostics Pvt. Ltd.	ReVLOCITY Propelling Success	Teachnook

➢ Notable Internship/Training Providers

एनटीपीसी NTPC	WEST BENGAL STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED ESTD 2007 WBSEDCL	Eastern Power
WEST BENGAL STATE ELECTRICITY TRANSMISSION COMPANY LTD. ESTD : 2007 WBSETCL	दामोदर घाटी निगम DVC	भारतीय विमानपत्तन प्राधिकरण AIRPORTS AUTHORITY OF INDIA
ओएनजीसी ONGC	सेल SAIL	भारतीय रेल INDIAN RAILWAYS
THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED	CESC LIMITED	बीएचईएल BHEL
Kolkata Metro	SUNKONNECT	TATA
पावरग्रिड	इंडियनऑयल Indian Oil Corporation Limited	SIEMENS energy

Students in Higher Studies

GATE Qualified

2021-2022	2022-2023	2023-2024	2024-2025
03	04	06	03

➢ FA

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.

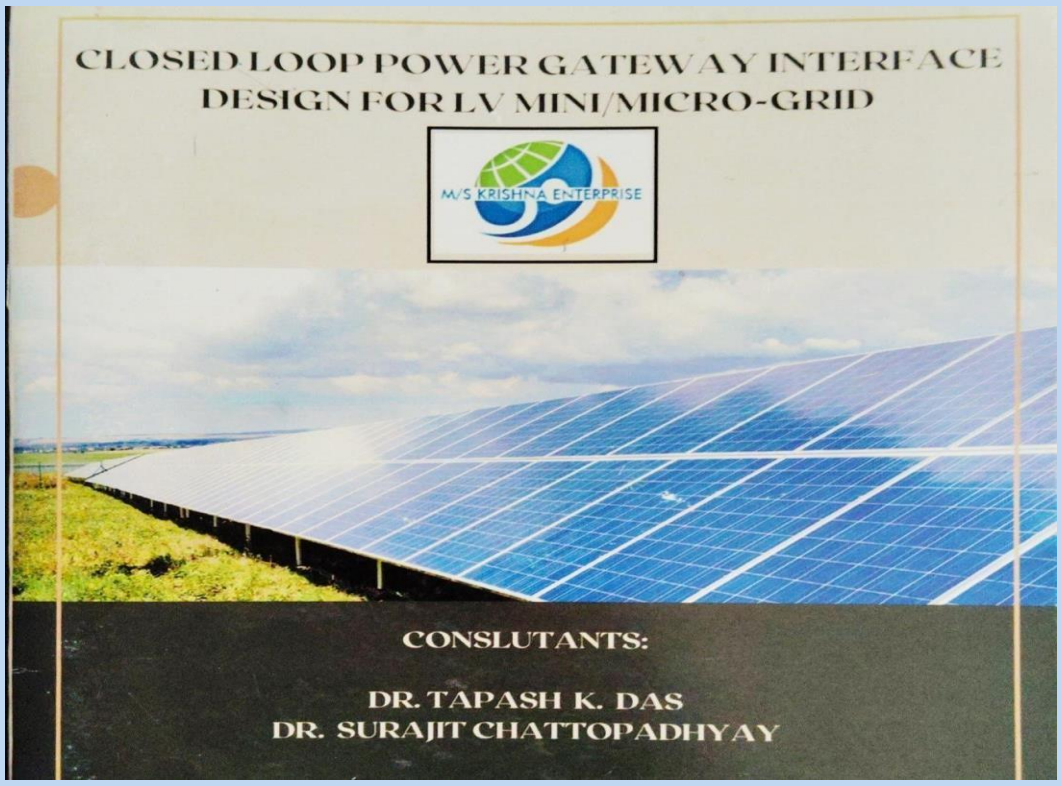
The Hansa team includes Dr Surajit Chattopadhyay, head of the electrical engineering department and his students, namely, Suvajit Ghosh, Subhadeep Mahata, Sudip Murmu, Bikram Das and Bhaskar Roy. All have their origin in West Bengal.

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.



Journals

1. D. Mazumdar., P.K.Biswas., **Chiranjit Sain**., F. Ahmad, T. S. Ustun "Performance Analysis of Drone Sqadron Optimisation based MPPT Controller for Grid Implemented PV Battery System under Partially Shaded Conditions"- Renewable Energy Focus, Elsevier, 49 (2024). [SCI, Impact Factor: 4.2)
2. Debasis Chatterjee, Pabitra Kumar Biswas, **Chiranjit Sain**, Amarjit Roy "SVM Classifier based Energy Management Strategy for Dual-Source Fuel Cell Hybrid Electric Vehicles"- IET Journal of Engineering, 2024. [SCI, Impact Factor: 0.8]
3. Subhapriyo Joarder, Arnab Ghosh, Subrata Banerjee, **Chiranjit Sain**, Furkan Ahmad "Harmonic modelling and control of dual active bridge converter for DC microgrid applications"- Energy Reports, Elsevier, Vol. 12, pp. 52-74, 2024. [SCI, Impact Factor: 4.7]
4. D. Mazumdar., P.K.Biswas., **Chiranjit Sain**., F. Ahmad, L.A Fagih "A comprehensive analysis of the optimal GWO based FOPID MPPT controller for grid-tied photovoltaics system under atmospheric uncertainty"-Energy Reports, Elsevier, Volume 12, pp.1921-1935, 2024. [SCI, Impact Factor: 4.7]
5. D. Mazumdar., P.K. Biswas., **Chiranjit Sain**., F. Ahmad., "Developing a Resilient Framework for Electric Vehicle Charging Stations Harnessing Solar Energy, Standby Batteries, and Grid Integration with Advanced Control Mechanisms"-Energy Science and Engineering., Wiley Publications. [SCI, Impact Factor: 3.5]
6. Vikramgoud Madaram, Pabitra Kumar Biswas, **Chiranjit Sain**, Sudhakar Babu Thanikanti, Shitharth Selvarajan "Optimal electric vehicle charge scheduling algorithm using war strategy optimization approach"- Scientific Reports, Nature, 14, 2024. [SCI, Impact factor: 3.8]
7. Vikramgoud Madaram, Pabitra Kumar Biswas, **Chiranjit Sain**, Sudhakar Babu Thanikanti, Praveen Kumar Balachandran "Advancement of electric vehicle technologies, classification of charging methodologies, and optimization strategies for sustainable development-A comprehensive review"-Heliyon, Vol. 10, Issue-20, pp. 1-21, 2024. [Scopus, Impact Factor: 3.4]
8. Harshita Tiwari, Arnab Ghosh, Subrata Banerjee, Debabrata Mazumdar, **Chiranjit Sain**, Furkan Ahmad and Taha Selim Ustun "Design of a triple port integrated topology for grid-integrated EV charging stations for three-way power flow"- Frontiers in Energy Research, Vol. 12, pp. 1-16, 2024. [SCI, Impact Factor: 2.6]
9. Debabrata Mazumdar, Pabitra Kumar Biswas, **Chiranjit Sain**, Furkan Ahmad, Luluwah Al-Fagih "A robust MPPT framework based on GWO-ANFIS controller for grid-tied EV charging stations"- Scientific Reports, 14, 30955 (2024). https://doi.org/10.1038/s41598-024-81937-3 [SCI, Impact factor: 3.8]
10. D.Mazumdar, T.S.Ustun, **Chiranjit Sain** and A. Onen. "A High-Performance MPPT Solution for Solar DC Microgrids: Leveraging the Hippopotamus Algorithm for Greater Efficiency and Stability"-Energy Science and Engineering., Wiley Publication. (Accepted for publication on 24.02.2025) [SCI, Impact Factor: 3.5]

11. Amarjit Roy, **Chiranjit Sain** et al "Implementation of Cloud Server Utilized Transmission Line Fault Detection and Analysis Using Artificial Neural Network Based Model"- International Journal of Embedded Systems, Inderscience Publication. (Accepted for publication on 08.02.2025) [ESCI, Impact Factor: 0.5]
12. D.Mazumdar, H. A. Shuaibu T.S.Ustun, **Chiranjit Sain** "A Novel and Sturdy MPPT Architecture for grid-tied EV Charging Stations using Ali Baba and Forty Thieves Optimization"- *Discover Sustainability, Springer Nature*. (Accepted for publication on 25.03.2025) [SCI, Impact Factor: 2.4)
13. Aveek Chattopadhyaya, Suman Ghosh, Sumangal Bhaumik, **Surajit Chattopadhyay,** "Radial basis neural network and discrete wavelet transform based rms estimation for fault assessment in three phase transmission line", Engineering Review, Accepted on 21.02.2025, ISSN 1330-9587, [ESCI/SCOPUS, IF-0.7, Q3 Journal].
14. S. S. Ghosh, **S. Chattopadhyay** and A. Das, "Identification of an Incipient Snubber Failure in Inverter Employed in Solid Oxide Fuel Cell (SOFC) Fed Microgrid," in *IEEE Transactions on Instrumentation and Measurement*, vol. 74, pp. 1-10, 21 February 2025, Art no. 3511510, doi: 10.1109/TIM.2025.3544391. [SCI/SCOPUS, IF: 5.6, Q1 Journal].
15. S. S. Ghosh, **S. Chattopadhyay,** S. Banerjee, and A. Das, (2025), Study of Budding Snubber Quality Deterioration in Solid Oxide Fuel Cell-Fed Inverter Used in Microgrid Energy Conversion. Energy Technol. 2400568. Print ISSN: 2194-4288, (05 July, 2024), https://doi.org/10.1002/ente.202400568 [SCI/SCOPUS, IF: 3.6, Q1 Journal].
16. S.S. Ghosh, **S. Chattopadhyay**, R.V.V. Krishna, Ranjan Kumar Mahapatra, A. Das, Sudipta Das, Measurement of Very Small Variation of Effective Resistance of MOSFET Deputed in Active Microgrid Inverter Operation, J. Nano-Electron. Phys. 16 No 3, 03029 **ISSN**: **2077-6772** (Print), (June 2024), DOI: https://doi.org/10.21272/jnep.16(3).03029 [SCOPUS, Q3/Q4 Journal].
17. S.S. Ghosh, **S. Chattopadhyay,** S. Das, A. Das, G.R.K. Prasad, A. Das, Identification of GTO Switch Fault in Voltage Source Inverter in PV Integrated Microgrid, J. Nano-Electron. Phys. 16 No 3, 03022, **ISSN**: **2077-6772** (Print), (03 April 2024), DOI: https://doi.org/10.21272/jnep.16(3).03022 [SCOPUS, Q3/Q4 Journal].
18. Anamika Das, Ananyo Bhattacharya, **Sandip Chanda**, "A class DE parallel voltage source inverter based inductive power transfer system with improved efficiency and reduced voltage stress across switches", Volume 119, Part B, Computers and Electrical Engineering, Elsevier, November- 2024, 109599, ISSN 0045-7906, https://doi.org/10.1016/j.compeleceng.Nov,2024.109599. (ESCI)
19. Debasis Chatterjee, Pabitra Kumar Biswas, Chiranjit Sain, **Amarjit Roy** "SVM Classifier based Energy Management Strategy for Dual-Source Fuel Cell Hybrid Electric Vehicles"- ***IET Journal of Engineering***, 2024. [ESCI, Impact Factor: 0.8]
20. Amarjit Roy, Chiranjit Sain et al "Implementation of Cloud Server Utilized Transmission Line Fault Detection and Analysis Using Artificial Neural Network Based Model"- *International Journal of Embedded Systems, Inderscience Publication*. (Accepted for publication on **08.02.2025**) [ESCI, Impact Factor: 0.5].

21. Velpula Vijaya Kumar, Diksha Sharma, Lakhan Dev Sharma, **Amarjit Roy**, Manas Kamal Bhuyan, Sultan Alfarhood, and Mejdl Safran. "Glaucoma detection with explainable AI using convolutional neural networks based feature extraction and machine learning classifiers." *IET Image Processing* 18, no. 13 (2024): 3827-3853 [SCIE, Impact Factor: 2.0].
22. **Ghorai, Goutam** & Nayak, Rohit. (2024). Optimizing Electric Vehicle Performance, Range and Parameter Estimation through NEDC Urban and Suburban Analysis using MATLAB. Engineering and Technology Journal. 9. 10.47191/etj/v9i04.01.

International Conferences:

1. D. Mazumdar, **C. Sain** and P. K. Biswas "Introduction to Novel GWO-FOPID MPPT Approach in Grid Integrated Sustainable PV MPPT Architecture"- 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (IEEE SeFeT 2024) 31 July-03 August, 2024, Hyderabad, India.
2. Debasis Chatterjee, Pabitra Kumar Biswas, **Chiranjit Sain** "Artificial Neural Network Based Holistic Approach in Energy Management Controllers for Fuel Cell Hybrid Electric Vehicles"-2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (IEEE SeFeT 2024) 31 July-03 August, 2024, Hyderabad, India.

3. Roy, A., Basu, A., Saha, D., **Sain, C.,** Sharma, L.D., Ahmed, F. (2024). IoT Integrated Transmission Line Fault Detection Using Cloud Server from Remote Location. In: Advances in Distributed Computing and Machine Learning. ICADCML 2024. Lecture Notes in Networks and Systems, vol 1015. Springer, Singapore. https://doi.org/10.1007/978-981-97-3523-5_32.

4. V. Madaram, **Chiranjit Sain**, P K Biswas, T Sudhakar Babu "Performance Enhancement of Charge Scheduling Algorithm using Greedy Method"- 2024 3rd International Conference on Electrical, Electronics and Computer Engineering (TEECON-2024), 07.11.2024-08.11.2024, Bengaluru, India. (Available in IEEE Xplore digital library)

5**. R. R. Kumar**, R. Mondal, A. Ansary, K. Kumar, S. Rai and R. Shaud, "Characteristics Investigation of Dual Rotor Single Stator 6-Phase Single I-Shaped Magnetic Pole PMSM for Smart Electric Vehicle," *2024 IEEE 1st International Conference on Green Industrial Electronics and Sustainable Technologies (GIEST)*, Imphal, India, 2024, pp. 1-5, doi: 10.1109/GIEST62955.2024.10960113.

6. S. Mondal, S. Ghosh, **R. R. Kumar** and S. Chanda, "Exploring MTPA Technique in Field-Oriented Control of IPMSM Drive for Enhancing Efficiency of Electric Vehicles," *2024 IEEE 1st International Conference on Green Industrial Electronics and Sustainable Technologies (GIEST)*, Imphal, India, 2024, pp. 1-6, doi: 10.1109/GIEST62955.2024.10960136.

7. K. V. V. S. R. Chowdary, K. Kumar, V. Mali and **R. R. Kumar**, "Enhanced Primary Side Control Strategy in Dynamic Wireless Charging Systems for Electric Vehicles," *2024 IEEE 1st International Conference on Green Industrial Electronics and Sustainable Technologies (GIEST)*, Imphal, India, 2024, pp. 1-4, doi: 10.1109/GIEST62955.2024.10960082.

8. N. Rudra, K. Kumar, S. Garlapati and **R. R. Kumar**, "A Comprehensive Study of Various Advanced Control Techniques for PMSM Drive," *2024 IEEE 1st International Conference on Green Industrial Electronics and Sustainable Technologies (GIEST)*, Imphal, India, 2024, pp. 1-6, doi: 10.1109/GIEST62955.2024.10959899.

9. V. K. Saxena, R. Daniel, K. Kumar, **R. R. Kumar**, S. Banerjee and S. Garlapati, "Innovative Glove Design for Enhanced Robotic Hand Control using PWM Techniques," *2024 IEEE 1st International Conference on Green Industrial Electronics and Sustainable Technologies (GIEST)*, Imphal, India, 2024, pp. 1-5, doi: 10.1109/GIEST62955.2024.10959879.

10. **R. R. Kumar**, A. Roy, P. Pal, K. Kumar and S. Rai, "Performance Characteristics Assessment of Dual Rotor Single Stator Five-Phase Surface-Inset PMSG for Hydroelectric Systems," *2024 IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)*, Mangalore, India, 2024, pp. 1-5, doi: 10.1109/PEDES61459.2024.10961549.

11. **Surajit Chattopadhyay,** Sudip Murmu, Ananya Bhattacharya, Saumili Mondal, DWT-based Feature Extraction and Machine Learning Based Bus Fault Diagnosis in Ring Type Power Distribution Network, 39th Indian Engineering Congress, Organized by IE(I), Presentation code: T7R5P4, Kolkata, 20-22 December 2024.

12. **Surajit Chattopadhyay, Goutam Kumar Ghorai, Rajeev Kumar,** Suvajit Ghosh, Aditya Narayan Banerjee, Lisa Coomer, Aritra Chattopadhyaya, Debopoma Kar Ray, Tamal Ray, Maxwell Analysis of an Induction Motor during Inter Phase Short Circuit Fault using Ansys, 39th Indian Engineering Congress, Organized by IE(I), Presentation code: Presentation code: T7R5P8, Kolkata, 20-22 December 2024.

13. **Surajit Chattopadhyay**, Aditya Narayan Banerjee, Aritra Chattopadhyay, Santanu Chattopadhyay, Goutam Dalapati, Quantum Algorithm-based Detection of Internal Fault in a Transformer, 2nd International Conference on Low-Energy Digital Devices and Computing (ICLED-2024), Singapore, 1-4 August 2024.

14. Aditya Narayan Banerjee, Aritra Chattopadhyay, Suvajit Ghosh, **Goutam Kumar Ghorai, Rajeev Kumar, Surajit Chattopadhyay**, Current Signature based Loss of Excitation Detection BLDC Motor, 2nd International Conference on Low-Energy Digital Devices and Computing (ICLED – 2024), SINGAPORE, 1-4 August 2024.

15. **Surajit Chattopadhyay**, Sachin Mondal, A Review on Automatic Speech Recognition System, 2nd International Conference on Low-Energy Digital Devices and Computing (ICLED – 2024), SINGAPORE, 1-4 August 2024.

16. S. Maity, **S. Chanda**, A. K. Srivastava, D. Dey, S. Sasmal and D. Ghosh, "A Closed-Loop Virtual Synchronous Generator for Enhanced Stability in Islanded Solar Power Systems: Advancing Sustainable Energy Transition," *2025 International Conference on Sustainable Energy Technologies and Computational Intelligence (SETCOM)*, Gandhinagar, India, 2025, pp. 1-6, doi: 10.1109/SETCOM64758.2025.10932594.

17. S. Maity, **S. Chanda**, A. K. Srivastava, et al " Leveraging Virtual Synchronous Generators for more stable integration of Wind Energy", 2025 IEEE International Conference on Smart and Sustainable Developments in Electrical Engineering (SSDEE- 2025), 28 Feb-2nd March organised by IIT(ISM) Dhanbad, Publication on process in 2025

18. Debasis Chatterjee, Pabitra Kumar Biswas, **Chiranjit Sain, Amarjit Roy, "**Artificial Neural Network Based Holistic Approach in Energy Management Controllers for Fuel Cell Hybrid Electric Vehicles"-2024 IEEE 4th International Conference on Sustainable Energy and Future Electric.

19. Amarjit Roy et al. "Cloud Server Enabled IoT Integrated Smart Wrist Band for Women's Protection Remotely." *2024 IEEE Region 10 Symposium (TENSYMP)*. IEEE, 2024.

20. **R. Kumar,** P. K. Biswas, and S. Gupta, "Design and Finite Element Analysis of the Forces Developed in Horizontal Repulsive Passive Type Magnetic Bearing by Varying Different Physical Parameters Using ANSYS MAXWELL Software," in *Proc. 9th Int. Conf. on Micro-Electronics, Electromagnetics and Telecommunications (ICMEET-2024)*, STPI, Kolkata, India, Dec. 19–20, 2024.

21. **R. Kumar,** P. K. Biswas, and S. Gupta, "Analysis of the Correlation Between Axial Force and Movement of a Rotor Magnet in a Four-Layered Stack Structured Permanent Magnet Bearing Using the Finite Element Method," in *Proc. 11th IEEE Int. Conf. on Power Electronics, Drives and Energy Systems (PEDES 2024)*, NIT Karnataka, Mangalore, India, Dec. 18–21, 2024.

22. **Tapash Kr.Das,**, Ayan Banik, Bikash Gopal Tewary, Sudarshan Das, and Ayan Das Sarkar. "FFT Based Comparative Performance Study of Electric Vehicle Charging System." In Proceedings of the International Conference on Advanced Innovations in Engineering, Science and Technology (AIEST-2024), October 25-26, 2024. Conference Proceedings Series on Futuristic Intelligent and Smart Technologies (FIST). CRC Press, USA, 2024..

23. **Goutam kumar Ghorai**, Rohit Nayak,Chandra kumar Adak, Avijit Mondal,Soujanna Ballav, "Optimizing Electrical Vehicle Performance by using MATLAB for NEDC Urban and Suburban Drive cycle" in 1st International Conference on Advanced Innovations in Engineering,Science and Technology(AIEST), organised by Abacus Institute of Engineering & Management, West Bengal, held on October 28th & 29yh,2024.

- **BOOKS**

  Amarjit Roy, Chiranjit Sain, Raja Ram Kumar, Sandip Chanda, Valentina Emilia Balas, Saad Mekhilef," Intelligent Computation and Analytics on Sustainable Energy and Environment, Proceedings of the 1st International Conference on Intelligent Computation and Analytics on Sustainable Energy and Environment,GKCIET,Malda, West Bengal, ISBN 9781032888903, 489 Pages,Published November 18, 2024 by CRC Press UK

- **List Of Filed Patents Last Year**

1. Design Application Number & Title: 442578-001- Prosthetic Leg (Filed on 31.12.2024), Applicants: Dr. Chiranjit Sain, Dr. Amarjit Roy, Nayan Nirban Baruah, Rituraj Boruah, Ujjal Ray

2. A method and system for passing encrypted messages through text. (Filed by Dr. Sandip Chanda et al)

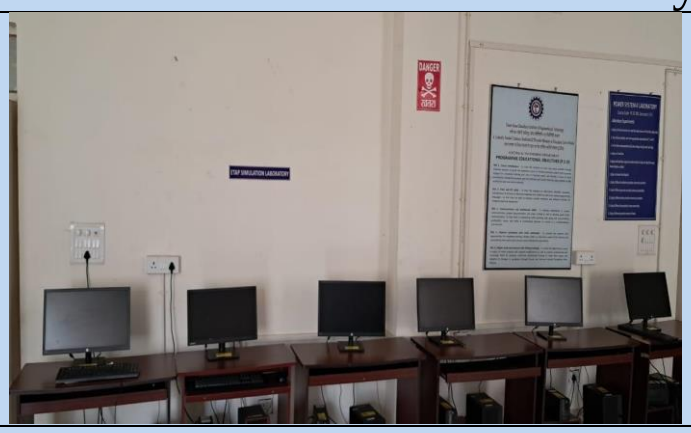
3. Machine learning based real-time optimization and efficiency enhancement system and method for hybrid power generation (Filed by Dr.Sandip Chanda et al)

4. Double head laser cutting machine (granted) (Dr. Sandip Chanda et al)

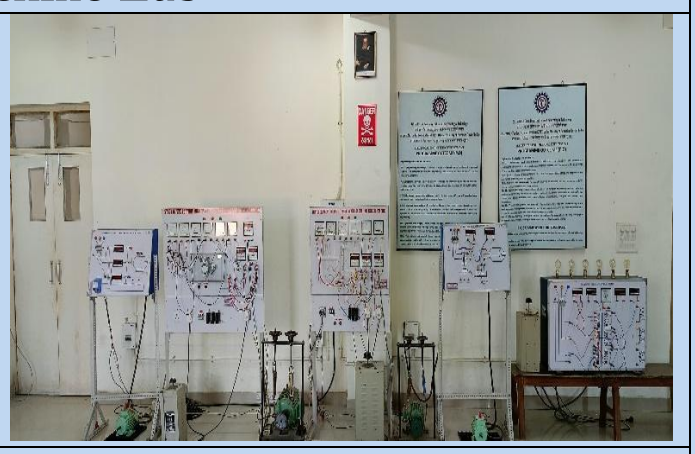
5. Iot IoT-based DC power supply. (granted)(Dr.Sandip Chanda et al)

6. Smart meters for measuring electrical parameters and data logging. (granted)(Dr. Sandip Chanda et al)

Power System Lab



Electrical Machine Lab



Power Electronics & Drives Lab

Circuit Theory Lab

Analog and Digital and Microprocessor Lab

Basic Electrical Lab, Electrical and Electronics Measurement Lab

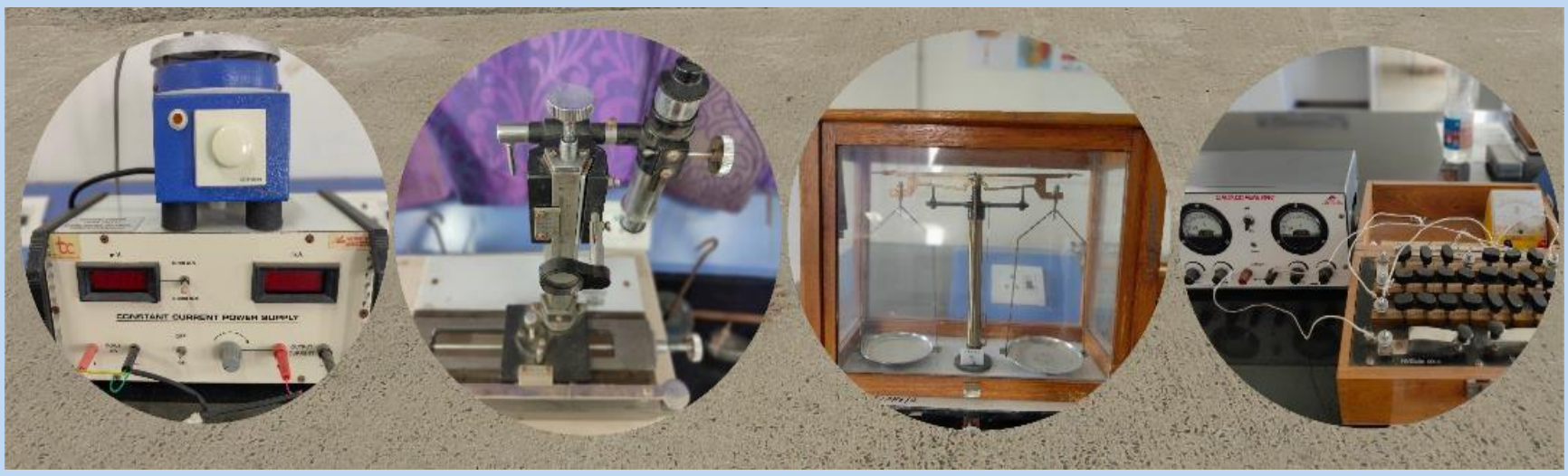
Control System Lab

Tinkering Lab

Contact Us

GKCIET, Ramanujan Block
M: 9735353700, email: 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	https://vidwan.inflibnet.ac.in/profile/540733

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, Dielectric 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, Specific Gravity, Spring Constant, Focal length.

6. List of Selected Publications

- **Das, Rakesh** and Srivastava, S.K. (2024). Magnetocaloric effect in $Ce(Fe_{0.975}Cr_{0.025})_2$ 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.

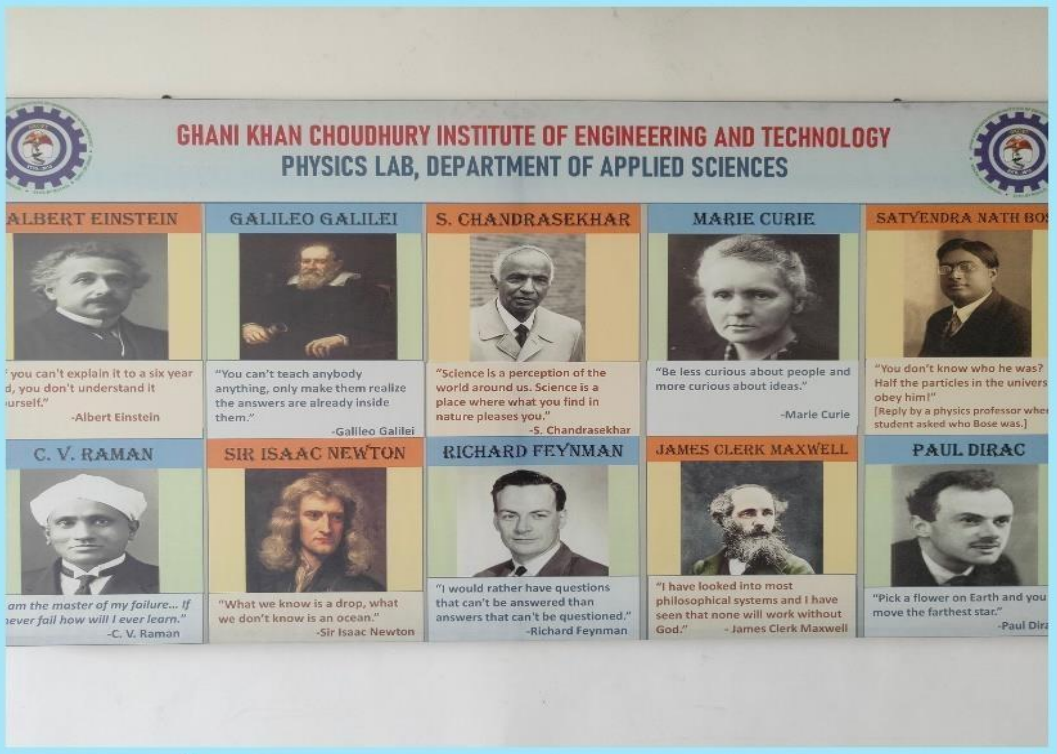
- **Das, Rakesh**, Das G. P., and Srivastava, S. K. (2016). Electronic structure and local magnetism of 3*d*-5*d* impurity substituted $CeFe_2$, *Journal of Physics D: Applied Physics* 49, 165004.

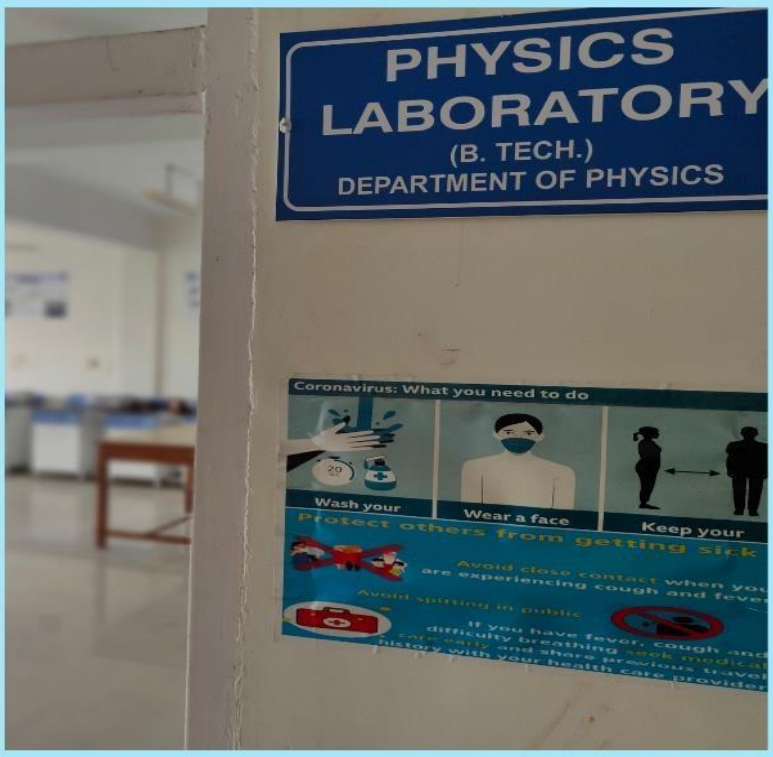
- Dey, C. C., **Das, Rakesh**, Srivastava, S. K., (2015). Electric field gradients at ^{181}Ta probe in ZrNi: Results from perturbed angular correlation and first-principles calculations, *Journal of Physics and Chemistry of Solids* 82, 10.

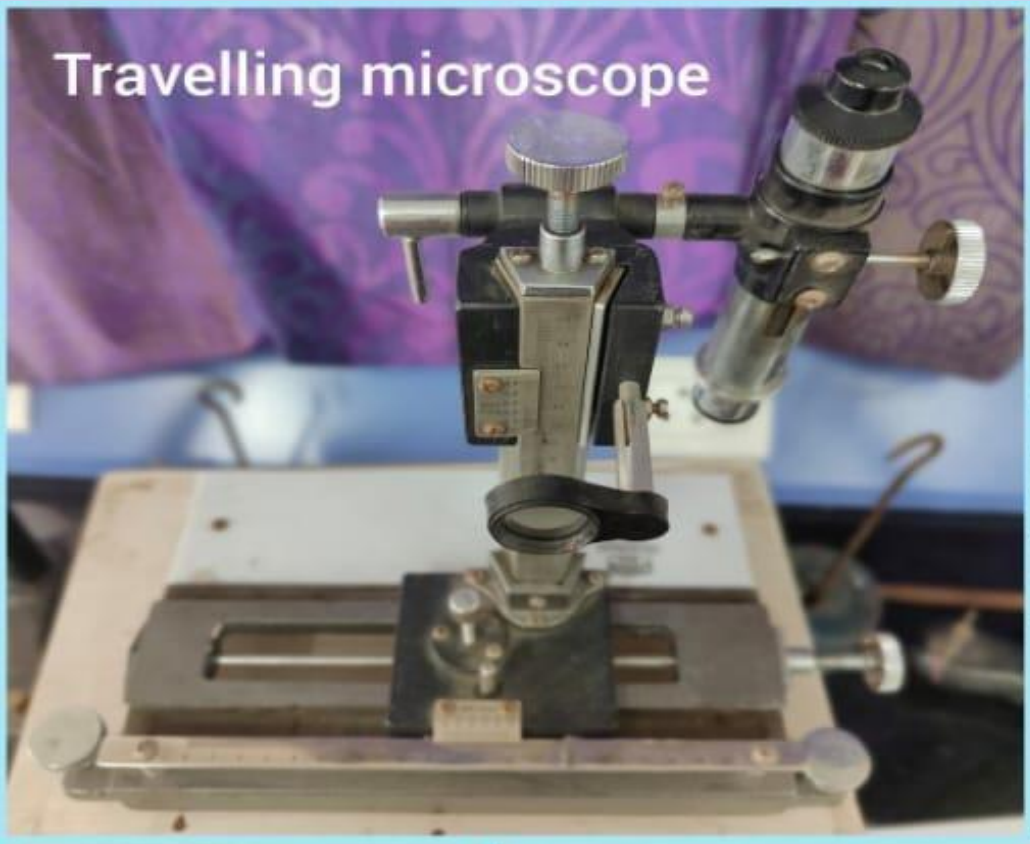
- **Das, Rakesh**, and Srivastava, S. K. (2015). Study of Al impurity induced magnetic instability in $CeFe_2$, *AIP Conference Proceedings* 1661, 070002-1.

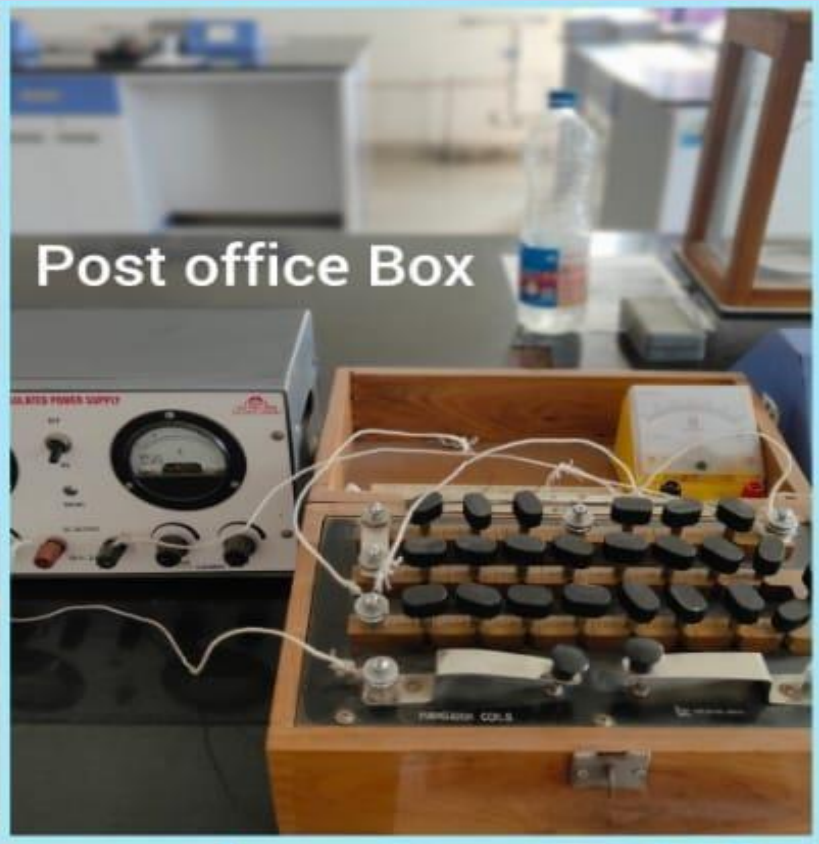
- **Adhikari, Anik**, *et. al.* (2022). Experimental evidences of shape co-existence in ^{154}Ho, *Nuclear Physics A* 1027, 122495

7. Photo Gallery

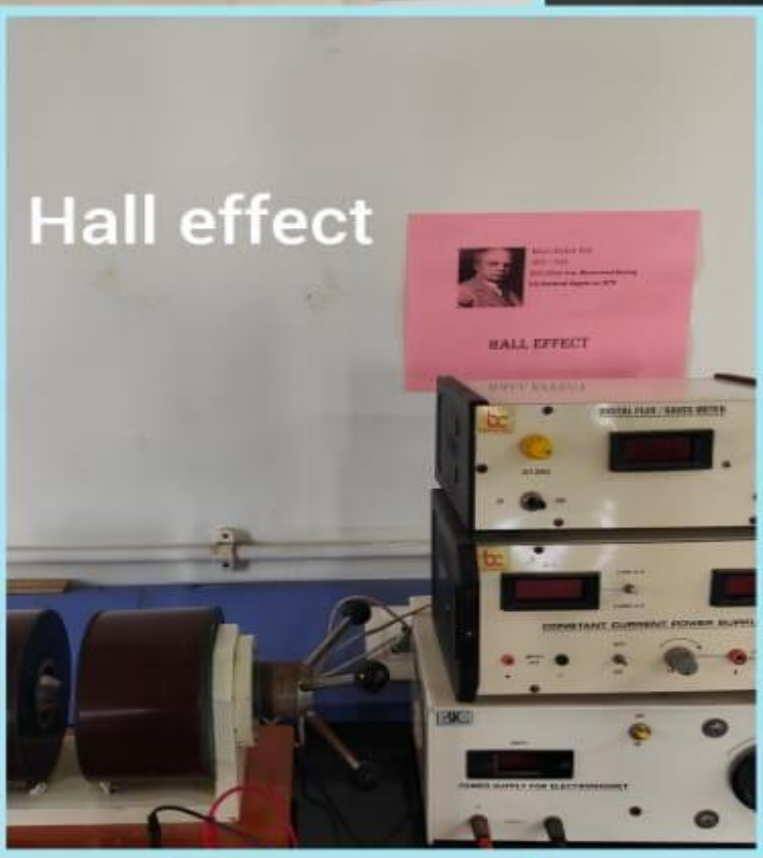


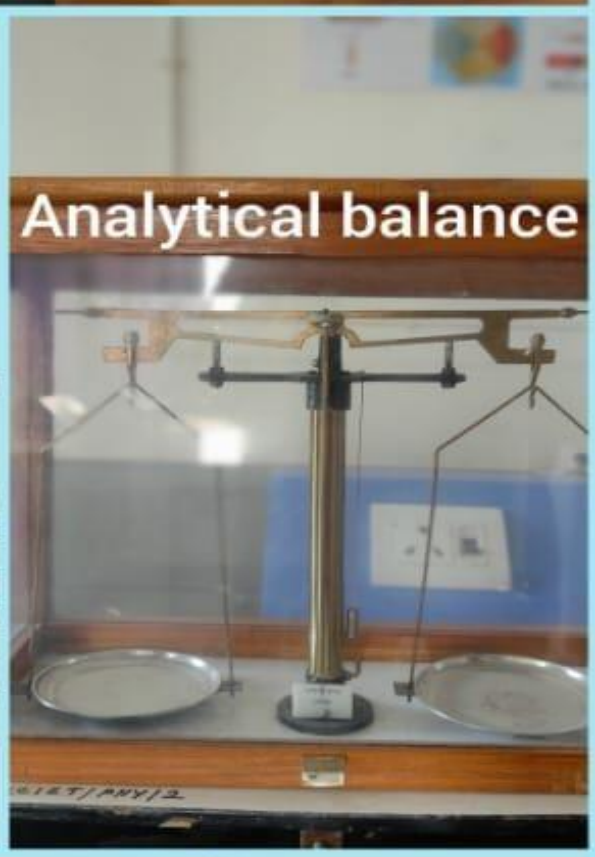


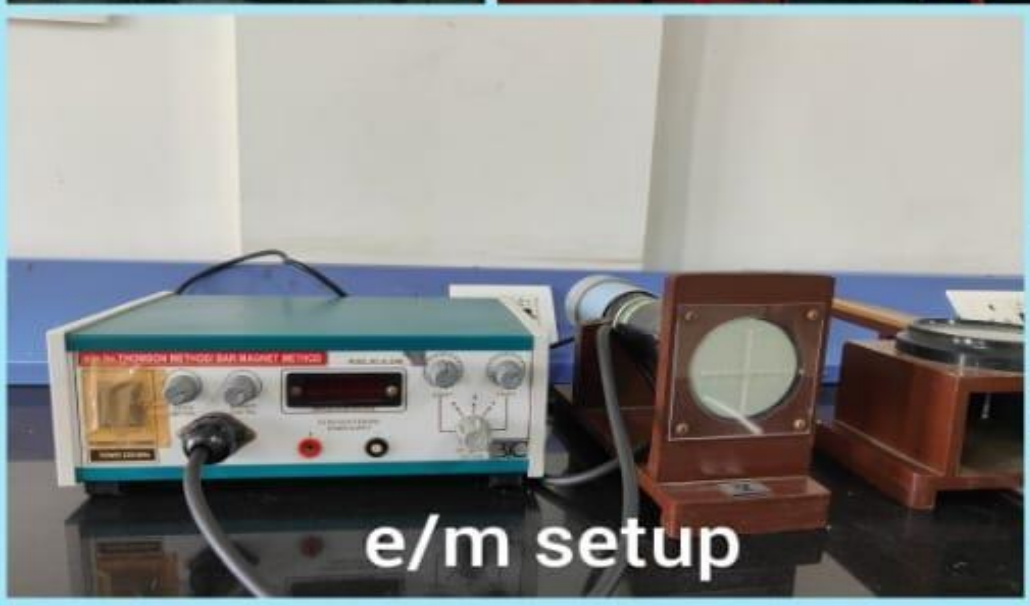

Travelling microscope


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

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. Details of Head of the Department

Dr. Bikarna Tarafdar

Assistant Professor & HoD Department of Mathematics
Ghani Khan Choudhury Institute of Engineering & Technology (GKCIET)
P.O.: Narayanpur, District: Malda, W.B., PIN: 732141
Email: math_hod@gkciet.ac.in
bikarna@gkciet.ac.in Contact No: +91 9800595253

5. 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, Heat Transfer, 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

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.

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- 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

(Some Events organized/Participated by the Department)


Ghani Khan Choudhury Institute of Engineering
Celebrating
Mathematics Week
18th -24th December, 2023
To Commemorate the Contribution of Srinivasa Ram
Programs : Quiz, Poster Presentation, Film Show,
Come Join Us !


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RELATIONSHIP BETWEEN MATH AND ART
PLATO
PYTHAGORAS
THE VITRUVIAN MAN

Department of Humanities and Social Science

About the Department

The Department of Humanities and Social Sciences at GKCIET, Malda serves as a hub for skill development, research, and academic instruction, encompassing a diverse range of disciplines such as English, Economics, Indian Traditional Knowledge, Linguistics, Management, and Entrepreneurship Development. The department is dedicated to fostering communication abilities, managerial competence, entrepreneurial mindset, and overall skill enhancement among students. The English faculty focuses on equipping Diploma and B.Tech engineering students with strong written and spoken English communication skills. This is achieved through the use of the language lab and advanced technological tools aimed at enhancing professional competencies. The Economics and Management faculty introduces students to the practical applications of economic principles in engineering-related decisions. It also nurtures managerial acumen and professional ethics, enabling students to make informed decisions and manage industrial tasks efficiently.
The Sociology faculty encourages students to cultivate a sense of ethical responsibility towards society and sustainable development. This helps them understand their role in the broader social context and apply sociological perspectives in future academic and project work.

Faculty Profile

	**Dr. Priyanka Sahu** **Head of the Department** Assistant Professor Specialization in Open Macro Monetary Economics, Econometrics and Labour Economics
	**Dr. Shib Shankar Chowdhury** Assistant Professor Specialization: Anglo-American Popular Culture
	**Dr. Chhandita Das** Assistant Professor Specialization: English (Spatial Literary Studies, Environmental Humanities, Gender Studies, Postcolonial Literature)
	**Mr. Anirban Saha** Assistant Professor Specialization: Sociology

Language Lab Facility


Language Laboratory at GKCIET is basically a pedagogy driven and machine aided laboratory which supports different kinds of effective language instructions as well as teaching activities at the institute. Among the various teaching activities, most importantly Communication Skill development courses for both Diploma and B.Tech level students are conducted in this language laboratory. Remedial classes for both programs are also partially conducted in this laboratory. The entire laboratory is well equipped with audio-visual teaching aids and all the computers have acquired language learning software. This smart class set up in this laboratory provides an advanced language teaching/learning experience.

41 PCs with Language lab software (Orell), 01 LCD Projector, 26 Headphones, 24 Web Cams and 1 Sound System

Lab in - charge: Dr. Shib Shankar Chowdhury.