NEWSLETTER

EDITION: 2025-26

DEPARTMENT OF BASIC SCIENCE & HUMANITIES

Published: September 2026

REGENT EDUCATION & RESEARCH FOUNDATION GROUP OF INSTITUTIONS

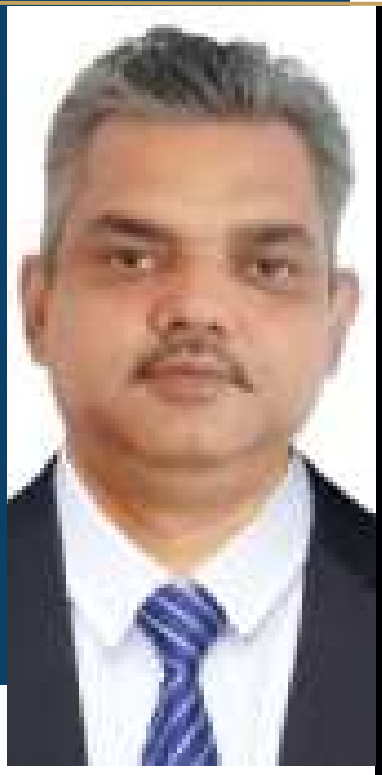
About the Department

The **Basic Science and Humanities (BSH)** Department was established in **2009** and plays a distinctive role in an institute where the culture of Science and Technology prevails. The department is committed to providing high-quality education in the fields of **Applied Sciences** and **Humanities** to undergraduate students across various engineering courses.

ACADEMIC SESSION: 2025 - 2026

Showcasing Academic Excellence, Innovation and Achievements

Editor:
Dr. Kumaresh Halder
Assistant Professor, BSH



Message from the Principal

IIt is a privilege to highlight the significant role of the Department of Basic Science & Humanities in shaping the academic journey of our engineering students. By providing a strong foundation in fundamental sciences and humanities, the department contributes to developing curiosity, critical thinking, effective communication, and a broader perspective essential for professional growth.

The commitment of the faculty to meaningful teaching, academic initiatives, research, and student engagement is truly commendable. Their continued efforts have created a supportive learning environment that encourages students to explore, question, and develop their capabilities. I congratulate the entire department on the accomplishments showcased in this newsletter and wish the faculty and students continued success, innovation, and excellence in the years ahead.

Prof. (Dr.) Moloy Kumar Banerjee
Principal
Regent Education & Research Foundation Group of Institutions

Message from the Desk of HOD

IIt is a pleasure to present the Department of Basic Science & Humanities and its vibrant academic community. The department is supported by a committed team of qualified and experienced faculty members who work collectively towards fulfilling the academic objectives of the institution and ensuring the effective development of our students.

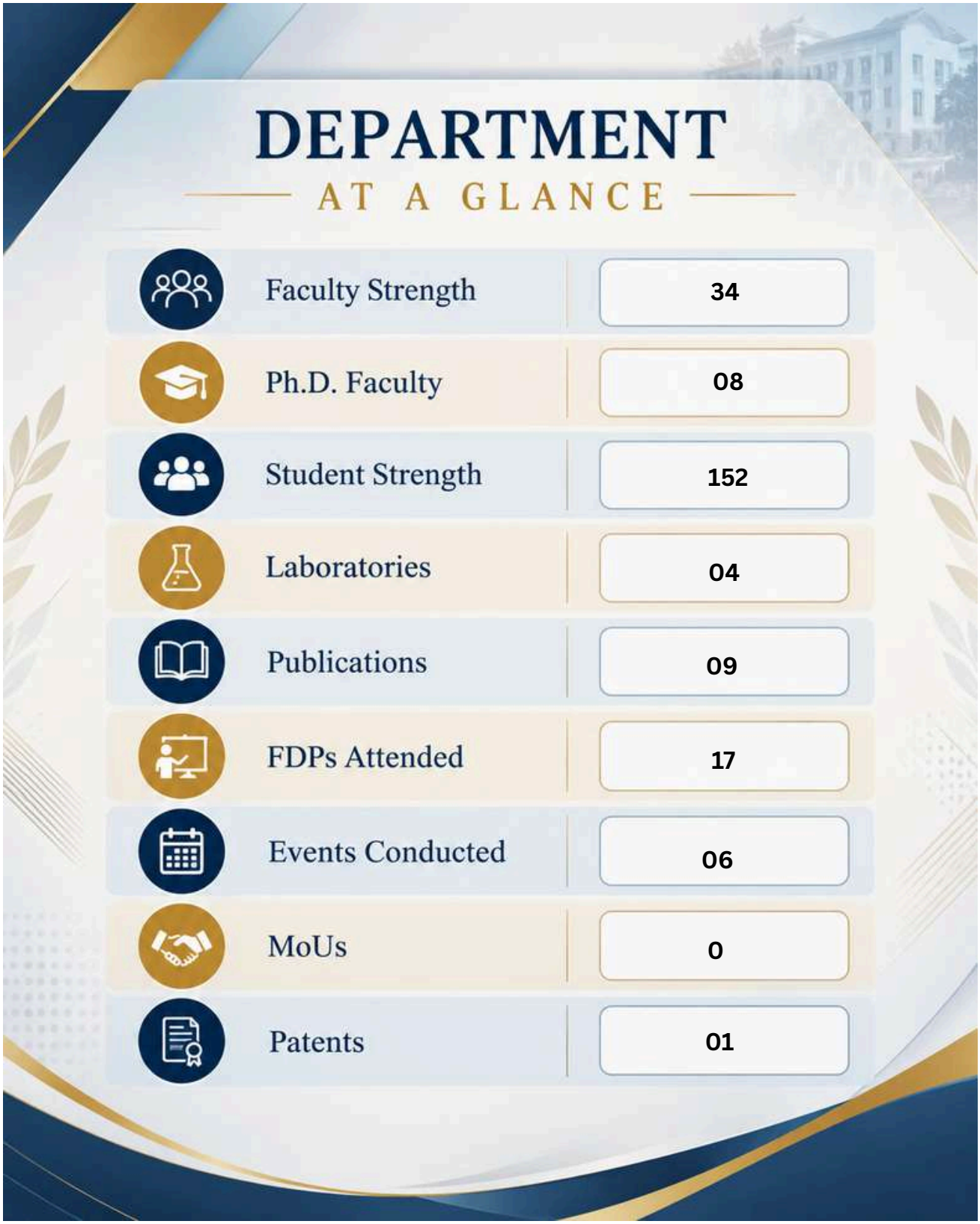
With a healthy blend of experience, expertise, and youthful enthusiasm, the faculty strive to create an engaging and enriching learning environment. Along with strong academic foundations, we encourage students to develop critical thinking, communication, professional competencies, and sound human values that will enable them to face future challenges with confidence.

Through continuous academic engagement and student-centred initiatives, the department remains committed to nurturing well-rounded individuals equipped with the knowledge, skills, and values necessary for meaningful contributions to society and successful professional careers.

Welcome onboard!

Welcome to the
Department of Basic Science & Humanities
at
Regent Education & Research Foundation
Group of Institutions!

Dr. Rajdeep Chakravarty
Head of the Department (HOD)


DEPARTMENT
AT A GLANCE
Faculty Strength
34
Ph.D. Faculty
08
Student Strength
152
Laboratories
04
Publications
09
FDPs Attended
17
Events Conducted
06
MoUs
0
Patents
01

Vision

To establish the Department of Basic Science & Humanities as a centre of academic excellence that nurtures scientifically minded, ethically responsible, innovative, and professionally competent students with strong foundational knowledge and lifelong learning capabilities.

Mission

M1: To provide a strong foundation in basic sciences, humanities, and engineering fundamentals essential for academic and professional growth.

M2: To foster critical thinking, analytical abilities, problem-solving skills, effective communication, and scientific temperament among students.

M3: To promote quality teaching, experiential learning, research, innovation, and interdisciplinary learning through contemporary academic practices.

M4: To nurture ethical values, social responsibility, creativity, and a commitment to lifelong learning.

M5: To support the holistic development of students, enabling them to contribute meaningfully to society and meet the evolving demands of professional careers.

Programme Educational Objectives (PEOs)

PEO1: Fundamental Scientific Knowledge
Graduates will apply concepts of Physics, Chemistry, Mathematics, and Humanities to develop a strong scientific foundation for engineering and technological applications.

PEO2: Analytical and Problem-Solving Ability
Graduates will demonstrate analytical thinking, quantitative reasoning, and problem-solving skills for addressing multidisciplinary engineering and societal challenges.

PEO3: Communication and Professional Competency
Graduates will develop effective communication skills, ethical awareness, teamwork, and professional competence for successful careers and higher studies.

PEO4: Lifelong Learning and Adaptability
Graduates will engage in lifelong learning, research orientation, and adaptation to emerging technologies and interdisciplinary developments.

Program Specific Outcomes (PSOs)

PSO1: Scientific and Mathematical Competence
Apply principles of Physics, Chemistry, and Mathematics to analyse, model, and solve engineering and scientific problems.

PSO2: Communication, Ethics, and Human Values
Demonstrate effective communication skills, ethical responsibility, teamwork, and understanding of societal and human values through Humanities and English studies.

PSO3: Interdisciplinary and Research-Oriented Approach
Integrate scientific fundamentals, computational methods, and interdisciplinary knowledge to support innovation, research, and emerging technological applications.

Basic Science & Humanities (B.S.H)

Faculty Members

Teaching | Research | Innovation | Holistic Development

Knowledge People Possibilities

Sl.	Name	Designation	Qualifications	Area of Interest / Specialization
1	Ms. ABHILASHA SHAW	ASST PROFESSOR	M.A.	English
2	Ms. AMRITA CHAKRABORTY	ASST PROFESSOR	M.A.	English Literature
3	Dr. ANINDITA DAS	ASSOCIATE PROFESSOR	Ph.D.	Nanoelectronics
4	Ms. ANUPA NANDI	ASST PROFESSOR	M.Tech., M.Sc.	Physical chemistry
5	Ms. APARNA DAS	ASST PROFESSOR	M.A.	English Literature & Language
6	Mr. ARIJIT DAS SHARMA	ASST PROFESSOR	M.Sc, B.Ed., Ph.D (Pursuing)	Human Physiology, Biotechnology, Bioinformatics
7	Mr. AVIK GHOSH DASTIDAR	ASST PROFESSOR	MSc, MCA	Electronics
8	Dr. CHIRANJIB CHAKRABARTI	ASSOCIATE PROFESSOR	Ph.D.	Physics
9	Mr. CHIRANJIT ROY	ASST PROFESSOR	M.Sc.	ENVS, Botany
10	Mr. DEBOPAM DUTTA	ASST PROFESSOR	M.Sc.	Physics
11	Ms. DIPALI MAITY	ASST PROFESSOR	M.A.	Political Science
12	Mr. GOURAB DUTTA	ASST PROFESSOR	M.Sc.	Physics
13	Mr. HAMIDUR RAHMAN	ASST PROFESSOR	M.Sc.	Mathematics
14	Mr. HIRAK MISHRA	ASST PROFESSOR	M.Sc.	Biology
15	Dr. INDRAJIT DEBNATH	ASST PROFESSOR	M.Sc., Ph.D. (persuing)	Pure Mathematics
16	Ms. IPSITA BOSE	ASST PROFESSOR	M.Sc	Chemistry
17	Dr. KUMARESH HALDER	ASST PROFESSOR	PhD (Physics)	Molecular Dynamic Simulation of Atomistic samples, Composites, Nanomaterials
18	Mr. MAINAK CHAKRABORTY	ASST PROFESSOR	M.Sc.	Physics
19	Mr. MRINMOY GHOSH	ASST PROFESSOR	M.Sc.	Chemistry
20	Dr. NIBEDITA MUKHERJEA	PROFESSOR	Ph.D.	Chemistry
21	Ms. PARAMITA DUTTA	ASST PROFESSOR	M.Sc	Applied Mathematics
22	Ms. PIYALI PAUL	ASST PROFESSOR	M.Sc.	Applied Geology
23	Ms. PRITAM CHAKRABORTY	ASST PROFESSOR	M.Sc.	Biology
24	Dr. RAJDEEP CHAKRAVARTY	PROFESSOR	Ph.D.	Inorganic Chemistry
25	Dr. RAM CHANDRA MANNA	ASST PROFESSOR	Ph.D.	Mathematics
26	Ms. SAHELI GHOSH MUKHOPADHYAYA	ASST PROFESSOR	M.Com.	Accountancy
27	Ms. SOMA SARKAR	ASST PROFESSOR	M.C.A.	Computer Application
28	Mr. SUBHANKAR SEN	ASST PROFESSOR	M.Sc.	Physics
29	Dr. SUBHRA SARKAR	PROFESSOR	M.Sc.	Chemistry
30	Mr. SYED MASUD AL HASSAN	ASST PROFESSOR	M.A.	English
31	Dr. BITHIKA SARKAR	ASST PROFESSOR	Ph.D.	Inorganic Chemistry
32	Ms. DIPALI KIRTANIA	ASST PROFESSOR	M.A., M.Muse., Ph.D.	English
33	Ms. MAUSUMI SUTRADHAR	ASST PROFESSOR	M.Sc., Ph.D. (pursuing)	Economics
34	Ms. MANISHA CHOWDHURY	ASST PROFESSOR	M.Sc.	Physics

DISCIPLINE
KNOWLEDGE
PROGRESS

A Vibrant Learning Community

SCIENCE
HUMANITIES
SOCIETY

DEPARTMENT OF BASIC SCIENCE & HUMANITIES (BSH)

— RERF —
SEMINAR SERIES

A SEMINAR ON

Health Hygiene and Well Being

AWARENESS | PREVENTION | HEALTHIER TOMORROW

Date
15th October 2023

Venue
RERF Seminar Hall

Number of Participants
50+

RESOURCE PERSON

Dr. Arindam Chaudhury

Assistant Professor
Department of Radiation Oncology
AIIMS (Kalyani)

Key Highlights

- Understanding cancer: types, risk factors and current trends
- Importance of early detection and regular screening
- Role of healthy lifestyle, hygiene and preventive care
- Addressing common myths and misconceptions
- Interactive discussion and Q&A with participants

Outcome

- Enhanced awareness about cancer and its prevention.
- Students and faculty gained insights into healthy habits, hygiene and well-being.
- Motivated participants to adopt proactive health practices and regular health check-ups.
- Encouraged open dialogue on cancer-related concerns, reducing fear and stigma.

DEPARTMENT OF BASIC SCIENCE & HUMANITIES (BSH)

STUDENT INDUCTION PROGRAMME (SIP)

Debate and Group Discussion

IDEAS | PERSPECTIVES | CONFIDENCE | GROWTH

Date
20th September, 2025

Time
10:00 a.m.

Venue
RERF Seminar Hall

SIP was started with Debate and Group Discussion session with new students. It offered a range of benefits for the students. The competition was judged by **Dr. Rajdeep Chakravarty** and **Dr. Nibedita Mukherjea**. Each group presented their opinion regarding the topic. This activity helped the students to become more confident and improve their speaking skills.

Judges

Dr. Rajdeep Chakravarty
Professor
Department of Basic Science & Humanities (BSH)

Dr. Nibedita Mukherjea
Professor
Department of Basic Science & Humanities (BSH)

Key Highlights

- Active participation by new students
- Engaging debates and group discussions on contemporary topics
- Each group presented their well-structured opinions
- Constructive feedback and guidance from the judges
- A vibrant and interactive learning environment

Outcome / Benefits

- Enhanced confidence and communication skills
- Improved public speaking and critical thinking abilities
- Exposure to diverse perspectives and respectful discussion
- Encouraged collaborative learning and teamwork
- A positive start to the Student Induction Programme (SIP)

"Different Minds Brighter Perspectives"

DEPARTMENT OF BASIC SCIENCE & HUMANITIES (BSH)

A CULTURAL PROGRAMME

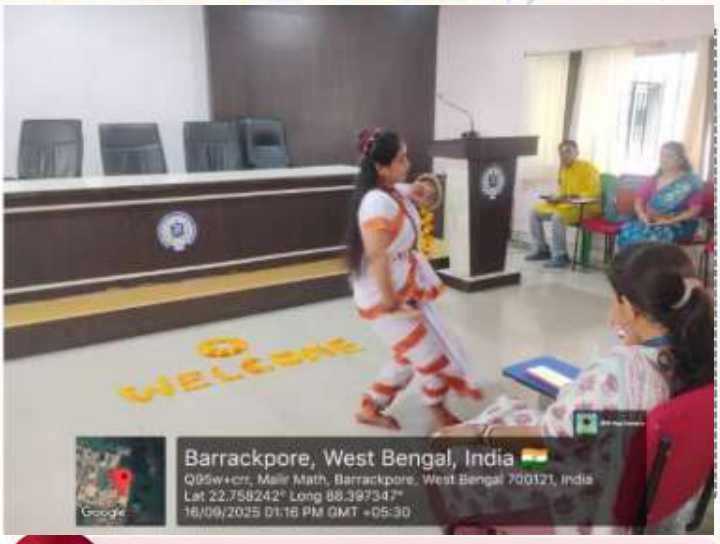
Celebrating Talent and Togetherness

MUSIC | DANCE | RECITATION | CREATIVITY | COMMUNITY

Date
16th September, 2025

Time
10:00 a.m.

Venue
RERF Seminar Hall



About the Event

A cultural programme was organised on 16th September, 2025 to provide a platform for the students to showcase their diverse talents. The event featured a variety of performances including music, dance, recitation and other creative presentations.
It brought together students from different departments and created an atmosphere of enthusiasm, creativity and unity.

Key Highlights

- Energetic participation from students across departments
- Wide range of performances (music, dance, recitation, etc.)
- Showcase of creativity, talent and cultural diversity
- Enthusiastic audience and a lively atmosphere
- Strengthened bonding among students and faculty

Outcome / Benefits

- Boosted confidence and stage presence of students
- Encouraged creative expression and cultural engagement
- Fostered teamwork and interdepartmental interaction
- Created a sense of belonging and community spirit
- Enriched the vibrant campus culture of RERF

Art Culture Expression Unity

"Same Campus Many Talents One Community"

DEPARTMENT OF BASIC SCIENCE & HUMANITIES (BSH)

INDOOR GAMES COMPETITION

Indoor Games Competition

PLAY | COMPETE | LEARN | GROW TOGETHER

Date
16th October, 2025

Time
10:00 a.m.

Venue
RERF Seminar Hall

About the Event

An Indoor Games Competition was scheduled for the students of B.Tech. first year. Sports helped students to develop essential life skills including teamwork, leadership, time management, and resilience. It not only contribute to the physical and mental health of students but also play a crucial role in building a supportive and vibrant college community.

Prize Distribution

At the end of the competition, a prize distribution ceremony was conducted by **Mr. Chinmay Majumder (Convener, Sports Committee)**. Medals were distributed among the students who performed exceptionally well. It acknowledged the hard work, talent, and dedication of the students and teams who excelled in the competition.

Key Highlights

- Participation from B.Tech. first year students
- Exciting indoor games and competitive spirit
- Promotion of teamwork, leadership and time management
- Active involvement and enthusiasm from students
- Successful prize distribution ceremony

Outcome / Benefits

- Enhanced physical and mental well-being
- Development of essential life skills
- Stronger peer interaction and team spirit
- Boosted confidence and resilience
- A more vibrant and supportive college community

TEAMWORK Stronger Together | **DISCIPLINE** Builds Character | **HEALTH** Happier Minds | **LEADERSHIP** Creates Opportunities | **COMMUNITY** Faculty | Students | One Team

Play Today Lead Tomorrow

DEPARTMENT OF BASIC SCIENCE & HUMANITIES (BSH)

RESEARCH & INNOVATION

IDEAS | KNOWLEDGE | COLLABORATION | IMPACT

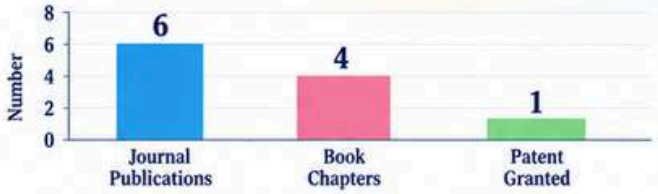
KEY ACHIEVEMENTS (2025 - 2026)

06 Journal Publications

04 Book Chapters

01 Patent Granted

SUMMARY STATISTICS



JOURNAL PUBLICATIONS (06)

Sl. No.	Title of paper	Name of author(s)	Name of Journal	Year, Volume & Page No.	ISSN	UGC Approved	National / International	Impact Factor
1	Comparative analysis between eastern & western urban India under smart city mission: an insight to inequalities, challenges & policy implications.	**Sutradhar, M.** and Nag, A.	International Journal of New Technology and Research	**11(11):** 1-7	ISSN: 2454-4116	–	International	–
2	CCS-normal and B-normal spaces.	**Bag, S., Manna, R.C.** and Raha, A.B.	Asian European Journal of Mathematics	**19(1):** 15	ISSN: 1793-7183	**Yes**	International	**0.5**
3	Robust spontaneous exchange bias effect driven by field-induced magnetic-phase separation in $Co_2Sn_{1-x}Cr_xO_4$.	Xing-Han, C., Hong-Xia, Y., Biao, M., **Chakrabarti, C.**, Cang-Long, L., Yang, Q., Gao-Shang, G., Yong-Qiang, W., Yang, S., Guo-Yu, Q. and Song-Liu, Y.	Rare Metals	**44(8):** 5886–5894	ISSN: 1001-0521	**Yes**	International	–
4	Therapeutic techniques and eastern philosophy: A dual approach to stress management.	**Kirtania, D.**	Bharati International Journal of Multidisciplinary Research	**3(7):** 106-116	ISSN: 2584-1890	–	International	**7.025**
5	Posthumanism: A Belief of Evolution.	**Kirtania, D.**	International Journal Of English and Studies.	**23(1):** 23-28	ISSN: 2581-8333	**Yes**	International	**8.337**
6	Classical and quantum cosmology in a k-essence type scalar field model.	**Mondal, S., Hembrom, S.,** Dutta, S. and Chakraborty, S.	Modern Physics Letters A.	**41:** 1-15 (2026)	0217-7323 / 1793-6632	**Yes**	International	**1.5**

BOOK CHAPTERS (04)

Sl. No.	Name of the faculty	Title of the book/chapter / paper	Title of the proceedings / conference	National / International	Year
1	**Dipali Kirtania**	Weaving Indigenous Knowledge Systems into Narratives and Literary Therapy: A Path to Healing and Empowerment	International Conference on Transforming Lives through Adoption of SDGS: Role of Higher Education Institution	International	2025
2	**Kumaresh Halder**	Breathe-Based Disease Prediction using Gas Sensors and Machine Learning	International Conference on Advances in Communication, Medical Electronics and Smart Grid Automation	International	2026
3	**Mausumi Sutradhar**	A Dichotomous Study on Employment in Sustainable Sectors between Pre-Covid and Post-Covid: Unravelling the Path of Economic Growth and Challenges in India	International Conference on Advanced Materials, Energy, Structural Engineering and Operations Management	International	2026
4	**Mausumi Sutradhar**	Quantitative Analysis of Gender Inequality Index between Developed and Underdeveloped Nations: An explorations of Challenges and Policy Implication	International Conference on Contemporary Issues in Emerging Markets (2.0)	International	2026

PATENT GRANTED (01)

Sl. No.	Patent application number	Status (Publish/Granted)	Date of Grant	Applicant's name	Title
1	LD-49327/2025-CO	**Granted**	30/06/2026	**Jinia Datta,** Soumyendu Bhattacharjee, **Kumaresh Halder**	Quantum-Well-Based Nano-Mixed PIN Photodetector for UV-Visible-IR Detection

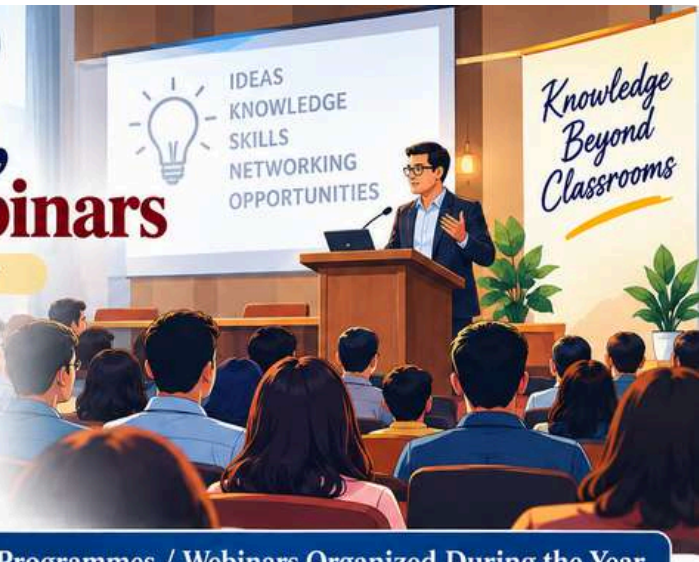
Certificate No.: LD-20260190414

"Research today for a brighter tomorrow"

DEPARTMENT OF BASIC SCIENCE & HUMANITIES (BSH)

Seminar, Conference, Workshops, Training & Webinars

LEARN | ENGAGE | SHARE | GROW | CREATE IMPACT



About the Initiatives

The department regularly organizes seminars, conferences, workshops, training programmes and webinars to provide a platform for knowledge sharing, skill development and interaction with experts from academia, industry and society. These initiatives help students and faculty stay updated with emerging trends, encourage research and innovation, and foster a culture of continuous learning.

Details of Seminars / Conferences / Workshops / Training Programmes / Webinars Organized During the Year

Sl. No.	Name of Convener / Coordinator	Title of seminar / course	Duration with dates	No. of internal and external participants
1	Ms. Paramita Dutta	Health Hygiene and Well Being	10:00 a.m. – 1:00 p.m. 15th October, 2025	141

Knowledge Sharing

Interaction with experts and thought leaders on contemporary topics.

Skill Development

Exposure to new tools, technologies and best practices.

Networking

Platform for collaboration among students, faculty and external experts.

Enriched Learning

Enhances academic growth, research culture and industry readiness.

Interactive
Insightful
Impactful

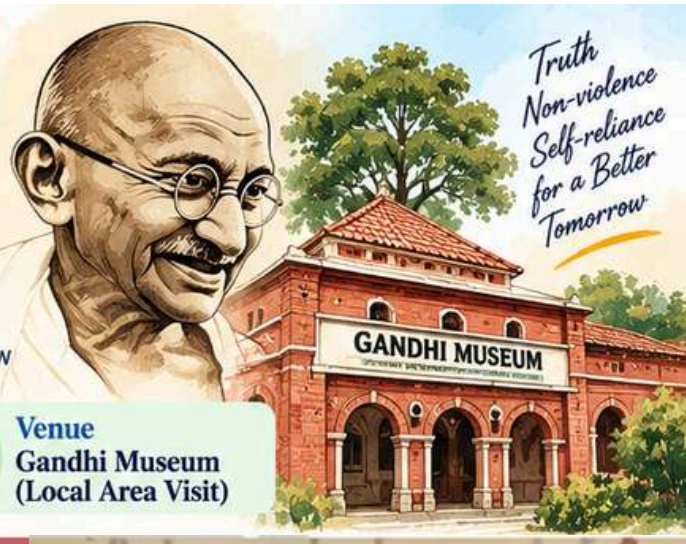
From Discussions to Discoveries

DEPARTMENT OF BASIC SCIENCE & HUMANITIES (BSH)

COMMUNITY OUTREACH ACTIVITY

Local Area Visit to Gandhi Museum

EXPLORING HISTORY | CULTURE | VALUES | A BETTER TOMORROW



Date
17th October, 2025

Time
10:00 a.m.

Venue
Gandhi Museum
(Local Area Visit)

About the Visit

As a part of the 'Local area visit' programme, students of the department visited the Gandhi Museum on 17th October, 2025. The purpose of the visit was to explore the historical and cultural significance of the museum and to understand the legacy of Mahatma Gandhi and the Indian freedom struggle.

Highlights of the Visit

- The main hall displayed a **timeline of Gandhi's life.**
- Rare photographs of the **Dandi March** and Gandhiji's meetings with **Jawaharlal Nehru** and **Subhas Chandra Bose** were exhibited.
- A **spinning wheel replica** demonstrated the Swadeshi movement's emphasis on self-reliance.
- The museum's architecture blends colonial remnants with Indian motifs – **red brick walls and tiled roofs** – creating an authentic historical feel.

Key Takeaways

- Enhanced understanding of India's freedom struggle.
- Exposure to the life and values of Mahatma Gandhi.
- Appreciation of the cultural and historical heritage.
- Awareness about the relevance of Gandhian principles today.
- A meaningful and enriching learning experience beyond the classroom.

Outcome

- Students gained historical and cultural insights.
- Fostered patriotism and ethical awareness.
- Inspired values such as truth, non-violence (Ahimsa) and self-reliance.
- Strengthened the connection between academic learning and real-world heritage.
- A humbling experience that highlighted the enduriny relevance of Gandhian ideals.

"Visiting the Gandhi Museum was a humbling experience, reminding us of the enduring relevance of 'Ahimsa'. It stands as a vital cultural landmark that effectively chronicles Gandhi's contributions and successfully fosters patriotism and ethical awareness among visitors."

DEPARTMENT OF BASIC SCIENCE & HUMANITIES (BSH)

MENTOR–MENTEE SYSTEM

Guidance Today Brighter Tomorrows

SUPPORT | ADVISE | MOTIVATE | GROW | SUCCEED TOGETHER

About the Mentor–Mentee System

The Mentor–Mentee System aims to provide academic, personal and professional guidance to students. It helps create a supportive environment where students can share their concerns, seek advice and receive mentorship for their overall development.

Objectives

- To provide academic support and guidance
- To address personal and behavioural concerns
- To encourage skill development and career planning
- To build a positive and supportive student–faculty relationship
- To enhance overall well-being and confidence

Outcomes / Benefits

- Improved academic performance and regularity
- Better communication and confidence
- Early identification and resolution of issues
- Guidance on higher studies and career opportunities
- Holistic development and well-being of students

List of Mentors and Mentees

Sl. No.	Name of Mentor	Total Number of Mentees
1	Ms. Paramita Dutta	18
2	Ms. Amrita Chakraborty	15
3	Dr. Ram Chandra Manna	16
4	Ms. Ipsita Bose	14
5	Ms. Dipali Kirtania	15
6	Dr. Bithika Sarkar	17
7	Ms. Mausumi Sutradhar	14
8	Dr. Kumaresh Halder	19
9	Dr. Shriton Hembrom	16
10	Ms. Manisha Chowdhury	15

Two remedial classes are conducted per week for each department.

DEPARTMENT OF BASIC SCIENCE & HUMANITIES (BSH)

Future Roadmap

Proposal for Establishment of Open-Source Training Lab

for Skill Development, Computational Learning, and Interdisciplinary Engineering Education

1 Background and Need

The Department of Basic Science & Humanities (BSH) serves as the foundational academic unit for first-year engineering students by imparting knowledge in Physics, Chemistry, Mathematics, English and Humanities. To strengthen experiential learning, computational skills, technical communication, and problem-solving abilities, the department proposes the establishment of an Open-Source Training Lab.

The initiative aims to leverage freely available open-source tools to enhance teaching-learning practices, support interdisciplinary education, and improve industry readiness among students from different engineering branches.

2 Objectives

1. Promote use of open-source software for teaching, learning, and research.
2. Enhance computational and analytical skills among students.
3. Integrate simulations and visualization tools into basic science education.
4. Improve technical communication and documentation capabilities.
5. Encourage interdisciplinary learning across engineering disciplines.
6. Develop problem-solving and programming skills using freely available tools.
7. Align educational practices with AICTE, NBA, NAAC and NEP 2020 guidelines.

3 Target Beneficiaries

Odd Semester (First 6 Months)

Target Departments
- Civil Engineering (CE)
- Mechanical Engineering (ME)
- Computer Science & Engineering (CSE
- Computer Science & Engineering (AI-ML)

Even Semester (Next 6 Months)

Target Departments
- Electrical Engineering (EE)
- Electrical & Electronics Engineering (EEE
- Electronics & Communication Engineering (ECE)

4 Discipline-wise Open-Source Tools

Faculty	Proposed Open-Source Tools	Application
Physics	GNU Octave, Ngspice, PhET Simulations	Scientific computation, simulations, visualization
Chemistry	Avogadro, ChemCollective, Jmol, OpenBabel	Molecular visualization, virtual lab experiments
Mathematics	Python (NumPy, SciPy, Matplotlib), GeoGebra	Numerical analysis, mathematical modeling
English	LibreOffice, LaTeX, Grammarly (open tools), Zotero	Technical writing, documentation, reference management
Humanities	QGIS, Omeka, Audacity, Inkscape	Data visualization, digital content creation, interdisciplinary projects

5 Phase-wise Training Modules

Phase I: Odd Semester (CE, ME, CSE, CSE-AI/ML)

- **Physics** — Computational physics, data analysis & visualization
- **Chemistry** — Molecular visualization & virtual experiments
- **Mathematics** — Numerical analysis & modeling
- **English** — Technical writing & documentation
- **Humanities** — Digital tools for interdisciplinary learning

Phase II: Even Semester (EE, EEE, ECE)

- **Physics** — Circuit simulation, semiconductor physics & data analysis
- **Chemistry** — Computational chemistry & material analysis
- **Mathematics** — Numerical methods & data computation
- **English** — Technical communication & research writing
- **Humanities** — Digital tools & interdisciplinary projects

6 Branch-specific Exposure

Phase I (CE, ME, CSE, CSE-AI/ML)

Branch	Exposure / Activities	Expected Outcome
CE	Computational analysis, visualization, technical communication	Analytical thinking and application in engineering contexts
ME	Simulation-based learning, mathematical modeling, interdisciplinary projects	Computational skills and scientific interpretation for mechanical systems
CSE (Core)	Scientific computing, data interpretation, technical writing	Programming orientation and interdisciplinary application
CSE (AI-ML)	Computational modeling, data analysis, project-based learning	Data-driven problem solving and analytical thinking

Phase II (EE, EEE, ECE)

Branch	Exposure / Activities	Expected Outcome
EE	Circuit simulation, data analysis, interdisciplinary projects	Analytical reasoning and conceptual understanding
EEE	Numerical analysis, concept visualization, project-based activities	Computational ability and problem-solving capability
ECE	Simulation and visualization, data interpretation, mini projects	Conceptual understanding and practical application

7 Annual Action Plan

Activity	Odd Semester (5 Months)	Even Semester (5 Months)
Requirement identification, planning, software installation & faculty orientation	Month 1	Month 1
Training sessions (hands-on workshops)	Month 2–3	Month 2–3
Assignments / practice sessions	Month 3–4	Month 3–4
Mini project development	Month 4–5	Month 4–5
Project submission, evaluation & feedback	Month 5	Month 5
Examination activities (CA, End Semester, Viva)	Month 6	Month 6
Review, outcome assessment & future planning	Post examination / Semester break	Post examination / Semester break

8 Expected Outcomes

For Students
- Use open-source tools effectively
- Apply simulations for scientific understanding
- Improve programming and analytical skills
- Develop technical communication
- Prepare scientific reports
- Enhance interdisciplinary awareness

For Faculty
- Integrate digital pedagogy
- Improve outcome-based educ
- Promote experiential learning

9 Key Performance Indicators (KPI)

- Number of students trained
- Number of faculty participating
- Number of workshops conducted
- Student feedback score
- Mini projects completed
- Software utilization frequency
- Interdisciplinary activities organized

10 Alignment with Institutional Quality Framework

- AICTE Skill Development Initiatives
- NBA Outcome-Based Education (OBE)
- NAAC Quality Enhancement Practices
- NEP 2020 Multidisciplinary Learning
- Digital and Experiential Learning Ecosystem

“उत्तिष्ठत जाग्रत प्राप्य वरान्निबोधत ।”

— Swami Vivekananda

Reach us out at: https://www.regent.ac.in