

# JIS COLLEGE OF ENGINEERING

## ANNUAL REPORT 2024



DEPARTMENT OF BIOMEDICAL ENGINEERING



## DEPARTMENT OF BIOMEDICAL ENGINEERING

**Vision:**

To foster excellence in Biomedical Engineering Education and Research at both undergraduate and postgraduate levels, by producing globally competitive professionals to serve the mankind and society.

**Mission:**

**DM1:** To provide graduates with the knowledge and abilities needed for their professional development in biomedical engineering.

**DM2:** To create a learning environment that promotes excellence, equipping future professionals with the skills and expertise necessary to thrive in the rapidly evolving landscape of medical technology.

**DM3:** To instill in Biomedical Engineering graduates a sense of professionalism, ethics, values, and a drive for innovation, responsibility, commitment, and leadership.

**Program Specific Outcomes (PSOs)**

**PSO1:** Graduates will be able to design and develop indigenous medical devices that addresses the present societal healthcare problems by applying the concepts of Medical science, Engineering and Technology.

**PSO2:** Graduates shall use software expertise and information and communication technology (ICT) to innovate and resolve problems in the medical field.

**PSO3:** Graduates will be equipped with the skills and knowledge necessary to conduct research, use innovative medical technologies in a multidisciplinary setting with professionalism and ethics.

# Annual Report 2023-24

Department of Biomedical Engineering  
JIS College of Engineering, Kalyani

## 1. Faculty & Technical Staff:

The department has at present twelve nos. of full-time faculty members and one technical staff (TA). The faculty members are encouraged for R&D activity. As per the students' feedback, our faculty maintains an excellent standard of teaching, maintaining a harmonious and cordial relation with the students.

| SL NO. | NAME OF FACULTIES   | DATE OF JOINING | DESIGNATION     | EDUCATIONAL QUALIFICATION |
|--------|---------------------|-----------------|-----------------|---------------------------|
| 1      | Dr. Sandip Bag      | 05/10/2005      | Professor       | Ph.D                      |
| 2      | Dr. Karabi Ganguly  | 21/07/2006      | HOD-BME         | Ph.D                      |
| 3      | Ms. Swati Sikdar    | 27/07/2015      | Asst. Professor | M.Tech                    |
| 4      | Ms. Sayanti Guha    | 11/07/2017      | Asst. Professor | M.Tech                    |
| 5      | Dr. Dibyendu Mandal | 01/08/2020      | Asst. Professor | Ph. D                     |
| 6      | Ms. Sumana Banerjee | 16/01/2020      | Asst. Professor | M.E.                      |

**Technical Assistant:** Mr. Gourango Halder & Mr. Manoj Halder

## 2. Students:

| BATCH     | NO. OF STUDENTS |
|-----------|-----------------|
| 2020-2024 | 26              |
| 2021-2025 | 28              |
| 2022-2026 | 30              |
| 2023-2027 | 30              |

## 3. Laboratories:

The department has at present six laboratories namely

- i) Physiology & Materials Testing Laboratory (Room No. 222).
- ii) Biomedical Instrumentation Laboratory (Room No. 215).
- iii) Biomedical Signal & Image Processing Laboratory (Room No. 214 B).
- iv) Industry sponsored Laboratory (Room No. 214 A).
- v) X-ray & Imaging Laboratory (Room No. 129).
- vi) Project cum Seminar (Room No. 213 A).

## 4. Responsibilities of Faculty Members:

| Delegation of Responsibility (Departmental) |                                                                        |                                                                     |
|---------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------|
| Sl. No.                                     | Nature of Responsibility                                               | Name of the teacher assigned to that job                            |
| 1                                           | Board of Studies in Biomedical Engineering                             | Dr. Karabi Ganguly (Chairperson) & All BME Faculty Members.         |
| 2                                           | In-Charge - Physiology & Materials Testing Laboratory                  | Dr. Karabi Ganguly<br>Dr. Dibyendu Mandal                           |
| 3                                           | In-Charge -Biomedical Instrumentation Laboratory                       | Dr. Sandip Bag<br>Ms. Sumana Bnaerjee                               |
| 4                                           | In-Charge - Biomedical Signal Processing & Image Processing Laboratory | Dr. Dibyendu Mandal<br>Ms. Sumana Bnaerjee<br>Ms. Mitul Chakraborty |
| 5                                           | In Charge - X-ray & Imaging Laboratory                                 | Dr. Dibyendu Mandal &<br>Ms. Sayanti Guha                           |
| 6                                           | Departmental Committee (DC) and related issues                         | Dr. Karabi Ganguly (Chairperson) & All BME Faculty Members.         |
| 7                                           | Time table preparation for lecture and lab classes                     | Dr. Sandip Bag                                                      |
| 8                                           | Research & Development                                                 | Dr. Karabi Ganguly<br>Dr. Sandip Bag<br>Dr. Dibyendu Mandal         |
| 9                                           | Examination matters                                                    | Ms. Sumana Banaerjee<br>(Intuitional Exam Cell member)              |

|    |                                               |                                                                                    |
|----|-----------------------------------------------|------------------------------------------------------------------------------------|
| 10 | In Charge - Departmental Library              | Dr. Sandip Bag                                                                     |
| 11 | Laboratory & Infrastructure Development       | Dr. Karabi Ganguly<br>Dr. Sandip Bag<br>Dr. Dibyendu Mandal                        |
| 12 | Social service and related affairs            | Dr. Karabi Ganguly<br>Ms. Mitul Chakraborty                                        |
| 13 | Preparation of the annual report & Newsletter | Dr. Karabi Ganguly<br>Dr. Sandip Bag<br>Dr. Dibyendu Mandal<br>Ms. Sumana Bnaerjee |
| 14 | Students' mentorship                          | All Faculty Members of the Department                                              |

## 5. Training of Students Details:

| SL NO | NAME OF STUDENT     | NAME OF THE ORGANIZATION           |
|-------|---------------------|------------------------------------|
| 1     | AGNIV DASGUPTA      | INSTITUTE OF CHILD HEALTH          |
| 2     | ANKAN RISHAB MAITY  | WOODLANDS MULTISPECIALITY HOSPITAL |
| 3     | ANKAN SHIT          | WOODLANDS MULTISPECIALITY HOSPITAL |
| 4     | DIBYENDU GHOSH      | WOODLANDS MULTISPECIALITY HOSPITAL |
| 5     | NIKITA SAHA         | FORTIS HEALTHCARE LTD              |
| 6     | PAYEL KAPAT         | INSTITUTE OF CHILD HEALTH          |
| 7     | PRITTHIJIT MAZUMDER | INSTITUTE OF CHILD HEALTH          |
| 8     | RHIDDHI BISWAS      | INSTITUTE OF CHILD HEALTH          |
| 9     | SAHANOWAJ MALITYA   | WOODLANDS MULTISPECIALITY HOSPITAL |
| 10    | SANJIBAN SANTRA     | WOODLANDS MULTISPECIALITY HOSPITAL |
| 11    | SHATABHISA PAUL     | INSTITUTE OF CHILD HEALTH          |
| 12    | SHEIKH RASHEL       | WOODLANDS MULTISPECIALITY HOSPITAL |
| 13    | SHRESHTHA ROY       | INSTITUTE OF CHILD HEALTH          |
| 14    | SNEHA DAS           | INSTITUTE OF CHILD HEALTH          |
| 15    | SOUMIK HORE         | WOODLANDS MULTISPECIALITY HOSPITAL |
| 16    | SOUVAGHYA HORE      | WOODLANDS MULTISPECIALITY HOSPITAL |

|    |                 |                                    |
|----|-----------------|------------------------------------|
| 17 | SUJAY KUMAR ROY | WOODLANDS MULTISPECIALITY HOSPITAL |
| 18 | UMESH MONDAL    | INSTITUTE OF CHILD HEALTH          |
| 19 | SREYA NANDY     | INSTITUTE OF CHILD HEALTH          |
| 20 | SOHANA PARVIN   | INSTITUTE OF CHILD HEALTH          |
| 21 | MANOJ HALDER    | INSTITUTE OF CHILD HEALTH          |

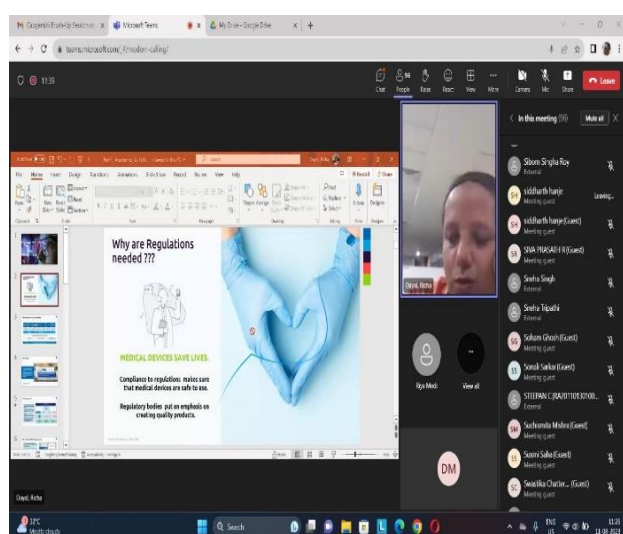
## 6. Industry Institute Interaction Activity:

Department of Biomedical Engineering organizes Industry Institute Interaction which provides betterment of teaching-learning processes, creates awareness among the students about the environment of the industry, provides practical knowledge to students and develops self-confidence of students to become an entrepreneur. Mr. Anirban Basu (Regional Manager-East, Ultrasound Business, Philips) Imparting Exposure on Medical Device Design and Development, Clinical Engineering, Biomedical research, Business Development and Management Discussing the prospect of promising engineering at PHILIPS as well as Introduction to Medical Device Design Testing takes place respectively. Industry Institute Interaction Activity with Students Session Coordinated by Dr. Karabi Ganguly HOD & Associate Professor Dept. of BME, JISCE, Conducting session on Medical Device Design and Development.

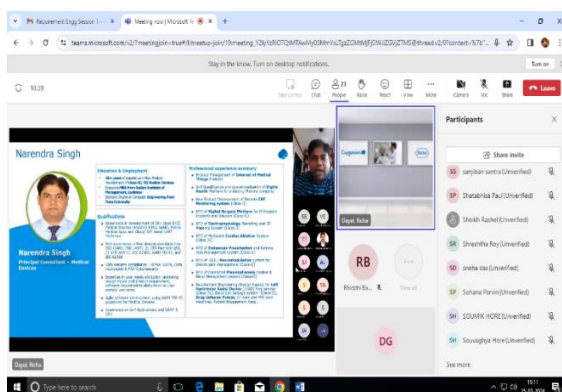


## 7. Seminar/Conference/Workshop Organized:

| Name of Visitor / Guest Speaker | Designation/ Occupation                                           | Seminar/ Workshop/ Conference Topic                                                                        | Total Participant | Date       |
|---------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------|------------|
| Dr. Richa Dayal                 | Subject Expert<br>SPOC-Medical & Healthcare<br>Solution-Capgemini | Capgemini Orientation<br>Program as a part of the<br>MOU execution activity                                | 41                | 11.08.2023 |
| Dr. Richa Dayal                 | Subject Expert<br>SPOC-Medical & Healthcare<br>Solution-Capgemini | Capgemini Wrap-up<br>session on Requirement<br>Engineering (as a part of<br>the MOU execution<br>activity) | 40                | 18.08.2023 |
| Dr. Richa Dayal                 | Subject Expert<br>SPOC-Medical & Healthcare<br>Solution-Capgemini | Webinar on Recent<br>Trends in Medical<br>Imaging                                                          | 41                | 25.08.2023 |



| Name of Visitor / Guest Speaker | Designation/ Occupation                                     | Seminar/ Workshop/ Conference Topic                                                                                             | Total Participant | Date       |
|---------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------|------------|
| Mr. Narendra Singh              | Principal Consultant, Medical Device, Capgemini             | Session on Requirement Engineering: QMS/QSR for pre final year BME students                                                     | 28                | 15.03.2024 |
| Mr. Narendra Singh              | Principal Consultant, Medical Device, Capgemini             | Entrepreneurship in session on Requirement Engineering: Health Insurance Portability and Accountability Act (HIPAA) Compliance. | 28                | 22.03.2024 |
| Mr. Nikhil Hande                | Manager, Capgemini.                                         | Session on Requirement Engineering.                                                                                             | 28                | 29.03.2024 |
| Dr. Richa Dayal                 | Subject Expert SPOC-Medical & Healthcare Solution-Capgemini | Session-1 on Regulation and Standards in Medical Device Orientation Program (as a part of the MOU execution activity)           | 28                | 05.04.2024 |
| Dr. Richa Dayal                 | Subject Expert SPOC-Medical & Healthcare Solution-Capgemini | Session-2 on Regulation and Standards in Medical Device Orientation Program (as a part of the MOU execution activity)           | 28                | 30.04.2024 |
| Dr. Richa Dayal                 | Subject Expert SPOC-Medical & Healthcare Solution-Capgemini | Session-3 on Regulation and Standards in Medical Device Orientation Program (as a part of the MOU execution activity)           | 28                | 03.05.2024 |



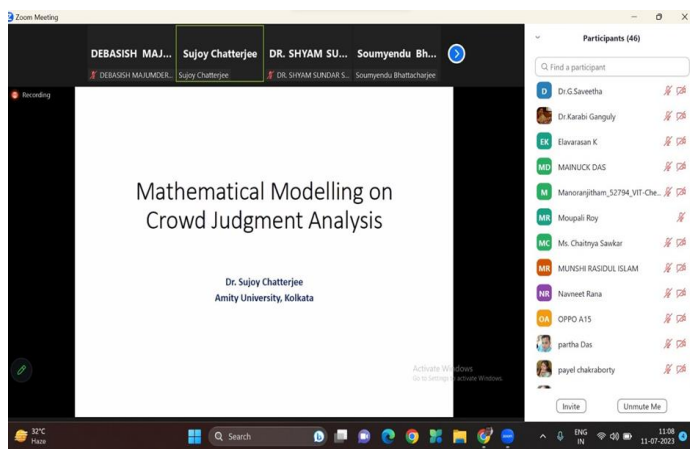
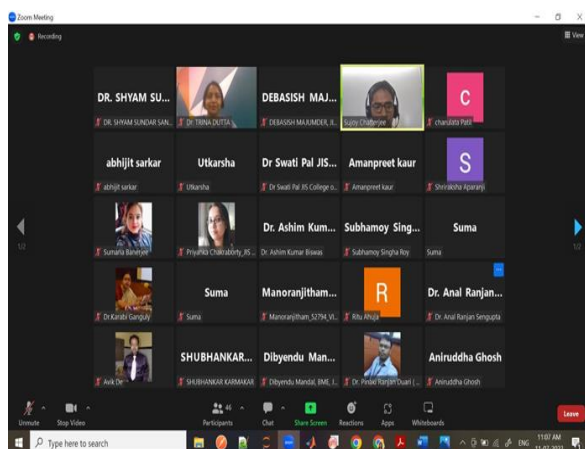


| Name of Visitor/<br>Guest Speaker                                 | Seminar/<br>Workshop/<br>Conference<br>Topic | Total<br>Participant | Date       | Outcome                                                                                                                                                                                   |
|-------------------------------------------------------------------|----------------------------------------------|----------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dr. Karabi Ganguly<br>(HOD-BME) and Faculty<br>Members, BME-JISCE | Vigyan – Jyoti<br>DST-GOI                    | 29                   | 29.01.2024 | Girl Students of JNV Kalyani got exposure of various Physiological Parameter measurement and identification during Physiology & Materials Testing Lab visit in Science Camp at Dept. BME. |

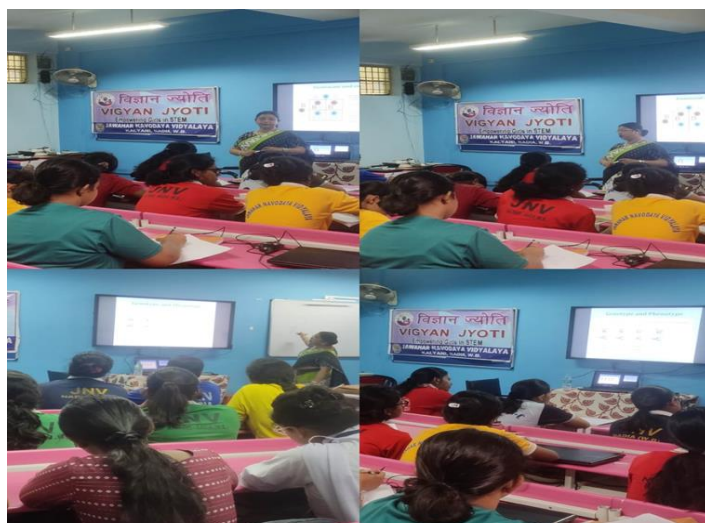


## 8. Achievement of Faculty:

| Name of the Faculty  | Year | Achievement                                                        | Date                  |
|----------------------|------|--------------------------------------------------------------------|-----------------------|
| Dr. Sandip Bag       | 2023 | Completed FDP on Mathematical Modelling in science and Technology. | 10/07/2023-14/07/2023 |
| Dr. Karabi Ganguly   |      |                                                                    |                       |
| Mrs. Swati Sikdar    |      |                                                                    |                       |
| Dr. Dibyendu Mandal  |      |                                                                    |                       |
| Mrs. Sumana Banerjee |      |                                                                    |                       |



| Dept. | Name of the Faculty | Year | Achievement                                                                                                                                          | Certifying Body              | Date       |
|-------|---------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------|
| BME   | Dr. Karabi Ganguly  | 2023 | Invited talk as Resource Person at CN Calcutta News Live Panel Discussion on JISCE Campus: Scope of Biomedical Engineering & Mechanical Engineering. | JIS Group & CN Calcutta News | 14.07.2023 |
|       | Dr. Karabi Ganguly  |      | Invited talk at JNV KALYANI VIGYAN JYOTI PROJECT under DST.GOV. of India on 'Unraveling the Genetic Tapestry: Exploring Human Heredity'              | DST.GOV. of India            | 26.07.2023 |



| Dept. | Name of the Faculty | Year | Achievement                                                                                                              | Certifying Body | Date       |
|-------|---------------------|------|--------------------------------------------------------------------------------------------------------------------------|-----------------|------------|
| BME   | Dr. Karabi Ganguly  | 2023 | Invited as Resource Person and Speaker in Regional Science Congress-2023 organized by Regional Navodaya Vidyalaya Samiti | JISCE           | 20.09.2023 |



| Dept. | Name of the Faculty  | Year | Achievement                                                                                                               | Date       |
|-------|----------------------|------|---------------------------------------------------------------------------------------------------------------------------|------------|
| BME   | Dr. Karabi Ganguly   | 2023 | Exposure of Dept. of BME & JISCE in Induction Program for 2023 admission batch                                            | 04.09.2023 |
|       | Dr. Karabi Ganguly   | 2023 | Exposure of Expert Talk on 'Teaching Learning Practice at JISCE' in 1ST YEAR INDUCTION PROGRAM 2023 at JISCE              | 7.09.2023  |
|       | Mrs. Sumana Banerjee | 2023 | Project coordinator for JIS Tech2k23.                                                                                     | 20.11.2023 |
|       | Dr. Karabi Ganguly   | 2023 | PROGRAM HOST and coordinator of AMRIT-KAL VIMARASH VIKASIT BHARAT @2047 AICTE & Ministry of Education                     | 20.09.2023 |
|       | Dr. Karabi Ganguly   | 2023 | Took the initiative to Interactive session on Women's health Myth & Misconceptions by Dr. G.Vishnu Vandana                | 23.12.2023 |
|       | Dr. Karabi Ganguly   | 2023 | Invited as Resource Person at DD Bangla Live Panel Discussion on JISCE Campus: Scope & Carrier of Biomedical Engineering. | 09.02.2024 |
|       | Dr. Karabi Ganguly   | 2022 | Invited as Resource Person at CN Calcutta News Live Panel Discussion on JISCE Campus: Uchcho Sikhkhar Sera Thikana.       | 23.06.2024 |





| Name of the Faculty | Year | Achievement                                                                           | Date       |
|---------------------|------|---------------------------------------------------------------------------------------|------------|
| Dr. Karabi Ganguly  | 2023 | Invited as Judge in 31st Cluster Level NCSC-2023, Govt. of India                      | 17.09.2023 |
|                     |      | Invited as a Judge for Smart India Hackathon at JISCE Intra College Phase             | 26.09.2023 |
|                     |      | Invited as a Judge at JISCE on Engineers Day Celebration: 'Innovation and Creativity' | 15.09.2023 |





| Dept. | Name of the Faculty | Year | Achievement                                                                                                                                          | Date       |
|-------|---------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| BME   | Dr. Karabi Ganguly  | 2023 | Invited talk as Resource Person at CN Calcutta News Live Panel Discussion on JISCE Campus: Scope of Biomedical Engineering & Mechanical Engineering. | 14.07.2023 |



| Dept. | Name of the Faculty | Year | Achievement                                                                                                                    | Date       |
|-------|---------------------|------|--------------------------------------------------------------------------------------------------------------------------------|------------|
| BME   | Dr. Karabi Ganguly  | 2024 | Invited talk as Resource Person at DD Bangla Live Panel Discussion on JISCE Campus: Scope & Carrier of Biomedical Engineering. | 09.02.2024 |





| Name of the Faculty | Year | Achievement                                                                                                              | Date       |
|---------------------|------|--------------------------------------------------------------------------------------------------------------------------|------------|
| Dr. Karabi Ganguly  | 2024 | Invited talk as Resource Person at CN Calcutta News Live Panel Discussion on JISCE Campus: Uchcho Sikhkhar Sera Thikana. | 23.06.2024 |



## 9. Journal Publications of Faculty:

| Sl. No. | Faculty Author(s)            | Title of the Paper                                                     | Journal Name (including Vol., Issue, Page No., Year)                                      | National/ International | ISSN No.  |
|---------|------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------|-----------|
| 1       | Sandip Bag & Dibyendu Mandal | Revolutionizing Healthcare: The Role of Biosensors in Modern Medicine. | Journal of Engineering and Technology Management.<br>Vol- 72; pp 2088-2097:<br>June, 2024 | International (SCOPUS)  | 1879-1719 |

|    |                                   |                                                                                                   |                                                                                                 |                        |           |
|----|-----------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------|-----------|
| 2  | Karabi Ganguly                    | Implementation of AI for Subsequent Gender Detection and Inclusive Approaches for Representation  | Journal of Engineering and Technology Management. Vol- 72; pp 2078-2087: June, 2024             | International (SCOPUS) | 1879-1719 |
| 3  | Sumana Banerjee & Dibyendu Mandal | EMG Signal Acquisition and Processing for Feature Extraction And Detection of Disease             | Journal of Engineering and Technology Management. Vol- 72; pp 1637-1650: June, 2024             | International (SCOPUS) | 1879-1719 |
| 4  | Sandip Bag                        | Integration of Heart Rate and SpO2 Monitoring in Wearable Health Technology                       | Journal of Engineering and Technology Management. Vol- 72; pp 1613-1618: June, 2024             | International (SCOPUS) | 1879-1719 |
| 5  | Sumana Banerjee                   | Detection of Tumour and Its Properties from Thermal Image                                         | Journal of Emerging Technologies and Innovative Research. Vol- 11(5); pp 1219-1227: May, 2024   | International          | 2349-5162 |
| 6  | Karabi Ganguly                    | A Machine Learning Approach for the Analysis of Human Emotions                                    | Journal of Chemical Health Risks. Vol- 14(2); pp 2154-2164: April, 2024                         | International (SCOPUS) | 2251-6727 |
| 7  | Karabi Ganguly                    | Novel Strategies Towards Early Bone Cancer Detection: Matlab Integrated Image Processing Approach | Journal of Chemical Health Risks. Vol- 14(2); pp 12-19: March, 2024                             | International (SCOPUS) | 2251-6727 |
| 8  | Sumana Banerjee                   | Detecting Blood Vessels in Retinal Images using Gaussian Filter Derivatives                       | International Journal of Research and Analytical Reviews. Vol- 11(1); pp 876-879 March, 2024    | International          | 2349-5138 |
| 9  | Sumana Banerjee                   | Classification of Black Tea by QCM based Electronic Nose.                                         | International Journal of Research and Analytical Reviews. Vol- 11(1); pp 866-869 March, 2024    | International          | 2349-5138 |
| 10 | Karabi Ganguly                    | Enhancing Lung Cancer Diagnosis with MATLAB and GLCM: A Robust Image Processing Approach.         | TWIST International Multidisciplinary Journal. Vol- 19(1); pp 454-462: March, 2024              | International (SCOPUS) | 1759-0418 |
| 11 | Sumana Banerjee                   | Detecting blood vessels in a retinal image using the entropic thresholding approach.              | International Journal of Research and Analytical Reviews. Vol- 11(1); pp 873-876 February, 2024 | International          | 2349-5138 |
| 12 | Sumana Banerjee                   | Retinal image analysis is to identify blood vessels.                                              | International Journal of Research and Analytical Reviews. Vol- 11(1); pp 790-795 February, 2024 | International          | 2349-5138 |

|    |                                  |                                                                                                                                              |                                                                                                          |                        |           |
|----|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------------------|-----------|
| 13 | Karabi Ganguly                   | Glycemic Stress Analysis and Wellness Monitoring.                                                                                            | International Journal of Innovative Research in Technology.<br>Vol- 10(11), pp 1883-1886:<br>April, 2024 | International          | 2349-6002 |
| 14 | Karabi Ganguly                   | Detection of Cancer Cells by Using Visible and IR Photo-Sensors through Image Processing Technique.                                          | YMER<br>Vol-23(1): pp 200 – 212:<br>January, 2024                                                        | International (SCOPUS) | 0044-0477 |
| 15 | Karabi Ganguly                   | Gastrointestinal Disorders: Identification, Detection, and Categorization Based on Deeply Cognitive Networks and Epiglodean Characteristics. | YMER<br>Vol-22(12): pp 1524 – 1535:<br>January, 2024                                                     | International (SCOPUS) | 0044-0477 |
| 16 | Karabi Ganguly & Dibyendu Mandal | Advancements in robotic surgery: innovations, challenges and future prospects.                                                               | Journal of Robotic Surgery.<br>Vol-18, pp 2 -11,<br>December, 2023                                       | International (SCOPUS) | 1863-2491 |
| 17 | Karabi Ganguly                   | Unveiling the U-Net Architecture for MRI Image Segmentation In Deep Learning                                                                 | Journal of Xidian University Vol- 17(11);<br>pp 83-96:<br>November, 2023                                 | International (SCOPUS) | 1001-2400 |
| 18 | Dibyendu Mandal & Sandip Bag     | Smart Health Monitoring using Wearable Device Sensors: A Brief Review.                                                                       | International Journal of Pharma and Biosciences.<br>Vol-14(4); pp 46-61:<br>October, 2023                | International (WOS)    | 0975-6299 |
| 19 | Karabi Ganguly                   | Image Processing for Automated Leukemia Detection and Stage Prediction                                                                       | Journal of Xidian University Vol- 17(10);<br>pp 1068-1080:<br>October, 2023                              | International (SCOPUS) | 1001-2400 |
| 20 | Karabi Ganguly                   | Precision Measurement of Cancer Cell Diameter by Quantitative Analysis of MRI Data Using GUI                                                 | International Journal of Innovative Research in Technology.<br>Vol- 10(2): pp 517-522:<br>July 2023      | International          | 2349-6002 |
| 21 | Karabi Ganguly                   | A Non-Invasive and Predictive Machine Learning Approach to Detect Breast Cancer                                                              | International Journal of Research and Analytical Reviews.<br>Vol- 10(3); pp 35-42:<br>July 2023          | International          | 2348-1269 |
| 22 | Karabi Ganguly                   | Precision Measurement of Cancer Cell Diameter by Quantitative Analysis of MRI Data using GUI.                                                | International Journal of Innovative Research in Technology.<br>Vol- 10(2); pp 517-522:<br>July 2023      | International          | 2349-6002 |

## 10. Book Chapter

| Sl. No. | Faculty Author(s)            | Title of the Chapter                                   | Name of the Book                                                   | ISBN No.          | Page No. |
|---------|------------------------------|--------------------------------------------------------|--------------------------------------------------------------------|-------------------|----------|
| 1       | Sandip Bag & Dibyendu Mandal | Biodegradable Polymers: The Versatile Forever Material | Futuristic Trends in Chemical, Material Sciences & Nano Technology | 978-93-5747-731-4 | 195-213  |



## **11. Faculty involvement in Conference/Seminar/Workshop:**

- [1] Dr. Karabi Ganguly, Dr. Sandip Bag, Sumana Banerjee, Dr. Dibyendu Mandal- Successfully completed 5 Days FDP on Mathematical Modelling from 10.07.2023-14.07.2023.
- [2] Dr. Karabi Ganguly, Dr. Sandip Bag, Sumana Banerjee, Dr. Dibyendu Mandal- Successfully completed 5 Days FDP on Road MAP to Excellence held on 31.07.2023.
- [3] Dr. Karabi Ganguly, Dr. Sandip Bag, Sumana Banerjee, Dr. Dibyendu Mandal- Successfully completed NDLI club training program on Discover your Research potential with IEEE Explore on 01.08.2023.
- [4] Dr. Karabi Ganguly, Dr. Sandip Bag, Sumana Banerjee, Dr. Dibyendu Mandal- Successfully completed Administrative Training Program on use of Institutional LMS on 04.08.2023.
- [5] Dr. Karabi Ganguly- Delivered Expert Talk on ‘Teaching Learning Practice at JISCE’ in 1<sup>ST</sup> YEAR INDUCTION PROGRAM 2023 at JISCE on 07.09.2023.
- [6] Dr. Karabi Ganguly- PROGRAM HOST and coordinator of Amrit-Kal Vimarash Vikasit Bharat @2047 AICTE & Ministry of Education on 20.09.2023.
- [7] Dr. Karabi Ganguly, Dr. Sandip Bag, Sumana Banerjee, Dr. Dibyendu Mandal- Successfully completed Seminar on ‘Advancing Consultancy Activities at JISCE’ on 27.09.2023.
- [8] Dr. Karabi Ganguly, Dr. Sandip Bag, Sumana Banerjee- Successfully completed Seminar on ‘Developing a active consulting planning at JIS GROUP –a source of knowledge and opportunities for students faculties’ on 13.10.2023.
- [9] Dr. Dibyendu Mandal- Successfully completed AICTE/UGC-Based Credit Framework (LOCF) Examination reforms workshop during 9.10.2023 to 13.10.2023.
- [10] Dr. Karabi Ganguly, Sumana Banerjee- Successfully conducted Seminar on Microwave sensing and Imaging: A new ERA in physiological monitoring on 10.10.2023.

## **12. Faculty Award Achievement:**

- [1] Dr. Karabi Ganguly- Invited as Resource Person at DD BANGLA News Live Panel Discussion on JISCE Campus: Scope of Biomedical Engineering & Mechanical Engineering on 09.02.2024.
- [2] Dr. Karabi Ganguly- SPOC & PROGRAMME COORDINATOR at JIS SPIRIT 2024 held on 16.01.2024.
- [3] Dr. Karabi Ganguly, Dr. Sandip Bag, Sumana Banerjee, Dr. Dibyendu Mandal, Ms. Sayanti Guha- Successfully Participated in Nobel Laureate Lecture Science & Spirituality, Speaker: Prof. William D. Phillips held on 10.01.2024
- [4] Dr. Sandip Bag, Sumana Banerjee, Dr. Dibyendu Mandal- Successfully completed 5Days FDP on PRESENT SCENARIO OF LIGHTNING SECTOR: INDUSTRY 4.0” held on 26.01.2024 to 02.02.2024.
- [5] Dr. Karabi Ganguly, Dr. Sandip Bag, Sumana Banerjee, Dr. Dibyendu Mandal- Successfully completed NDLI club training program on Discover your Research potential with IEEE Explore on 01.08.2023.

- [6] Dr. Karabi Ganguly, Dr. Sandip Bag, Sumana Banerjee, Dr. Dibyendu Mandal- Successfully Organised One Day Science Camp. Girl Students of JNV Kalyani got exposure of various Physiological Parameter measurement and identification during Physiology & Materials Testing Lab visit in Science Camp at Dept. BME held on 10.01.2024.
- [7] Dr. Karabi Ganguly -PROGRAM HOST and Coordinator of Seminar on Convergence of wide Spectrum Capabilities Yields Women-Srishti Shakti held on 07.03.2024 & 08.03.2024.
- [8] Sumana Banerjee -Actively Participated in Seminar on Convergence of wide Spectrum Capabilities Yields Women-Srishti Shakti” held on 07.03.2024 & 08.03.2024.
- [9] Dr. Karabi Ganguly- Awarded and got prize money in JIS INNOVATION AWARD 2024 for research activity and publication” held on 22.5.2024.
- [10]Dr. Sandip Bag - Awarded and got prize money in JIS INNOVATION AWARD 2024 for research activity and publication” held on 22.5.2024.
- [11] Dr. Dibyendu Mandal - Awarded and got prize money in JIS INNOVATION AWARD 2024 for research activity and publication” held on 22.5.2024.
- [12]Dr. Karabi Ganguly- Invited talk as Resource Person at CN Calcutta News Live Panel Discussion on JISCE Campus: Uchcho Sikhkhar Sera Thikana held on 23.06.24.



Dr. Dibyendu Mandal: - Awarded and got prize money in JIS INNOVATION AWARD 2024 for research activity and publication



Dr. Karabi Ganguly Awarded and got prize money in JIS INNOVATION AWARD 2024 for research activity and publication



Dr. Sandip Bag: - Awarded and got prize money in JIS INNOVATION AWARD 2024 for research activity and publication





Invited as a Judge for Smart India Hackathon at JISCE Intra College Phase



Invited as Judge in 31st Cluster Level NCSC- 2023, Govt. of India

Conducted Seminar on Microwave sensing and Imaging: A new ERA in physiological monitoring



AICTE/UGC-Based credit Framework (LOCF) Examination reforms workshop



Ref. No. SSMA/75

Date: 07/10/23

To  
Dr. Sandip Bag  
Professor  
Department of Biomedical Engineering  
JIS College Engineering

Respected Sir,

It is our immense pleasure to inform you that Shyampur Siddheswari Mahavidyalaya is going to organize its annual Science Project Exhibition **SSMA 2023** a signature event of the Institute on **10<sup>th</sup> October, 2023** at the College campus.

Major objective of this symposium is to inspire students to convert their ideas into design & development and at the same time provide a larger platform to the young innovators to showcase their projects to a wider peer group. All the projects would be evaluated by external experts from academia and industry and top three prototypes would be funded for patent filing. In this perspective we cordially welcome to be member of honorable panel of judges of the Science Project Exhibition.

Sir/Madam, we would also request you to be part of the inaugural programme at 12 noon on 10.10.2023.

We all look forward for participation of your students in appreciable numbers and present of some of their noteworthy projects so that through exchange of ideas we together can grow scientifically, culturally as well as technically.

With best regards,

  
( DR. SARVASACHI SEN )  
Principal  
Shyampur Siddheswari Mahavidyalaya  
Ayodhya, Mowrah.



Invited as Judge in Shyampur siddheswari Mahabiddyalaya science project exhibition  
anneshawn@ssm 2023



### 13. BME Extra-Academic Activities:



Deeksharambh 2023-Fresher's Welcome



Session with 1st Year Students & 4th Year Placed Students



Smart India Hackathon on Intra JISCE Project Prototype Contest





Annual Cultural Fest-MAJISTIC 2K24-JISCE



Laboratory Visit of Biomedical Engineering Department, Students of Class 12 from JNV-Kalyani,JISCE.

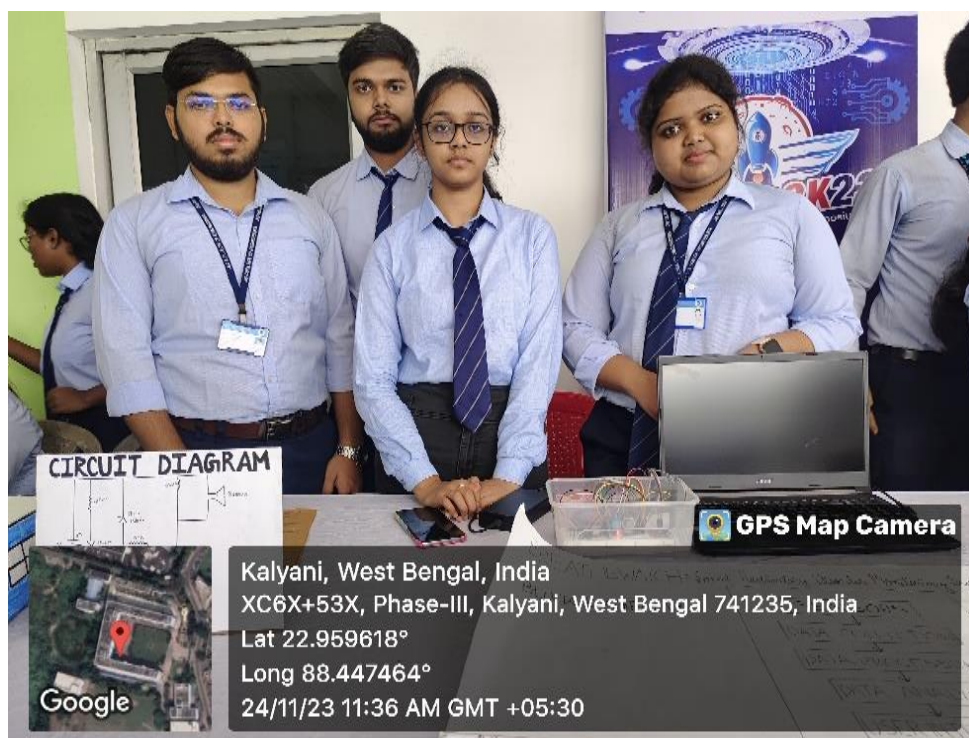


Rabindra Nazrul Jayanti Celebration-Biomedical Engineering Department, JISCE





Farewell celebration Biomedical Engineering Department, JISCE



Actively Participated in JIS Tech2k23 at JISCE.



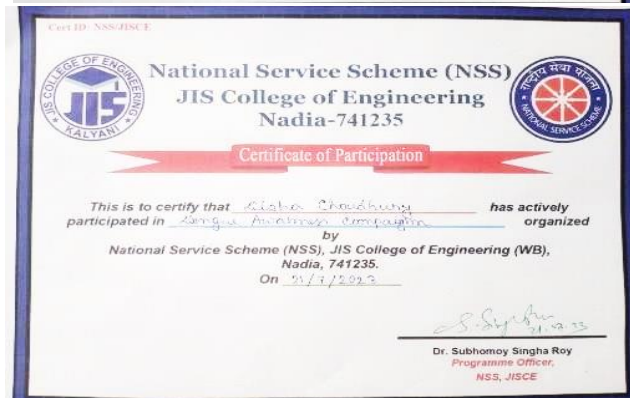
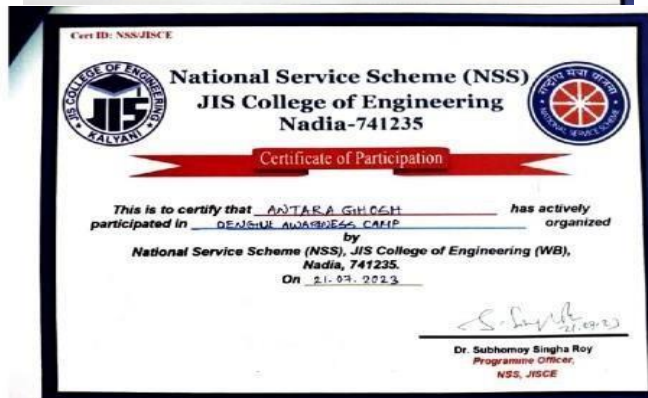
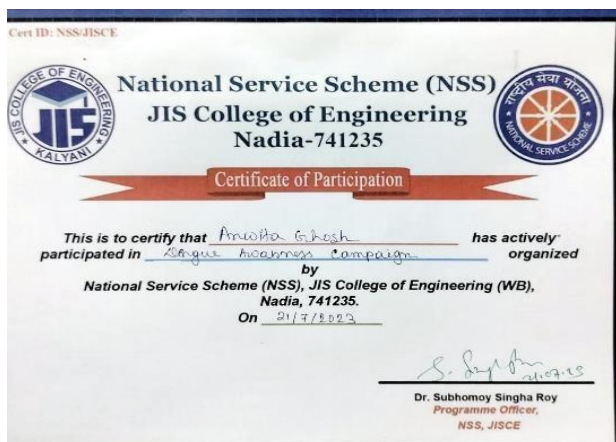
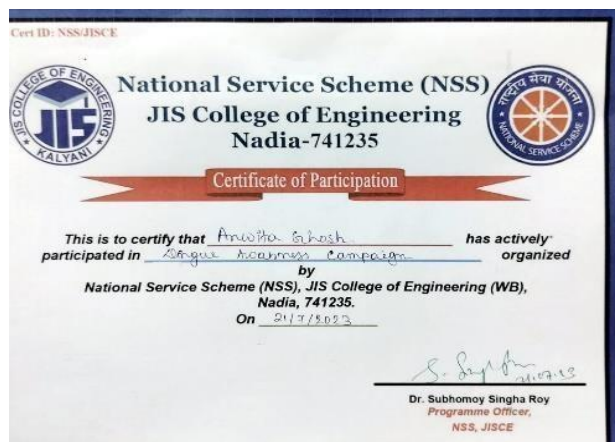
## 14. Student Publications

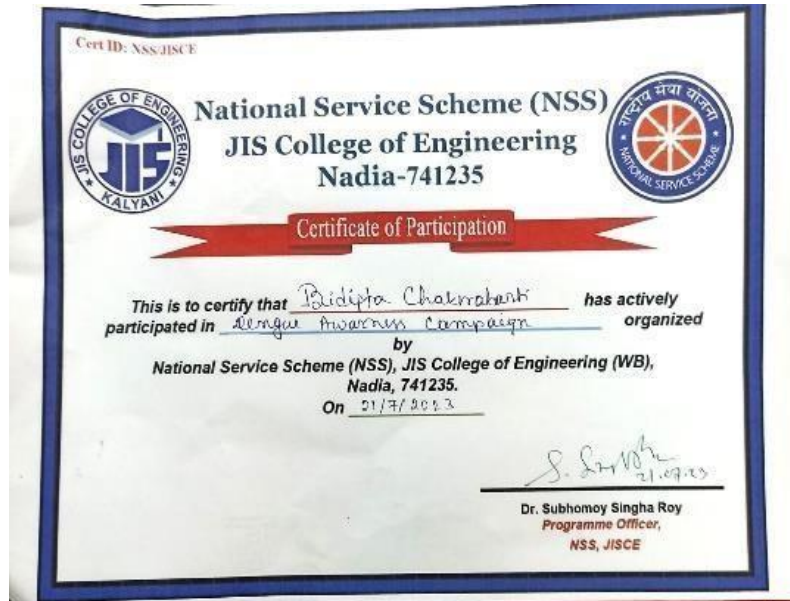
| Name of the Student(s) & Semester | Name of the faculty coordinator (if any) | Type of Publication (Journal/Conference/Abstract/Proceedings/Books/etc)    | National/ International | Date of publication | ISSN/ ISBN No. | Whether peer reviewed, impact factor, if any |
|-----------------------------------|------------------------------------------|----------------------------------------------------------------------------|-------------------------|---------------------|----------------|----------------------------------------------|
| Utsab Ray                         | Karabi Ganguly                           | Journal Paper (International Journal of Innovative Research in Technology) | International           | 02.07.2023          | 349-6002       | Peer Reviewed                                |
| Utsab Ray                         | Karabi Ganguly                           | Journal Paper (International Journal of Innovative Research in Technology) | International           | 05.07.2023          | 349-5138       | Peer Reviewed                                |

## 15. Achievement & Award of Students

| Sl. | Student Name                                                              | Year | Achievement                                                                                                | Date                      |
|-----|---------------------------------------------------------------------------|------|------------------------------------------------------------------------------------------------------------|---------------------------|
| 01  | Diptayan Mukherjee Dwaip<br>An Roy<br>Sonali Sarkar<br>Swastika Mukherjee | 2023 | Awarded for best Departmental Project & get 1 <sup>ST</sup> prize in JISTECK2K23 at JISCE.                 | 24.11.2023-<br>25.11.2023 |
| 02  | Agniv Dasgupta Sk.<br>Rashel Ankan Shit<br>Shreya Nandy<br>Sneha Das      | 2023 | Awarded for best Departmental 2 <sup>ND</sup> project & get 2 <sup>ND</sup> prize in JISTECK2K23 at JISCE. | 24.11.2023-<br>25.11.2023 |
| 03  | Monoj Halder Nikita<br>Saha Sohana Parvin<br>Mehul Podder                 | 2023 | Awarded for best Departmental Project & get 3 <sup>RD</sup> PRIZE in JISTECK2K23 at JISCE.                 | 24.11.2023-<br>25.11.2023 |
| 04  | BME 1 <sup>st</sup> year Students                                         | 2023 | Awarded for best wall magazine & get 2 <sup>nd</sup> prize in JISTECK2K23 at JISCE.                        | 24.11.2023-<br>25.11.2023 |
| 05  | BME 2 <sup>nd</sup> year Students                                         | 2023 | Awarded for best ART Designing & get 1 <sup>ST</sup> prize in JISTECK2K23 at JISCE.                        | 24.11.2023-<br>25.11.2023 |
| 06  | BME 3 <sup>rd</sup> year Students                                         | 2023 | Awarded for best photography & get 2 <sup>nd</sup> prize in JISTECK2K23 at JISCE.                          | 24.11.2023-<br>25.11.2023 |
| 07  | BME 3 <sup>rd</sup> year Students                                         | 2023 | Awarded for best painting Designing & get 1 <sup>ST</sup> prize in JISTECK2K23 at JISCE.                   | 24.11.2023-<br>25.11.2023 |

| Name of the Dept. | Name of the Student(s) & Semester | Achievement                                                              | YEAR                 | CERTIFYING BODY | DATE       |
|-------------------|-----------------------------------|--------------------------------------------------------------------------|----------------------|-----------------|------------|
| BME               | Antara Ghosh                      | Actively Participated In Dengue Awareness Camp And Achieved Certificate. | 2 <sup>nd</sup> Year | JIS Group & NSS | 21.07.2023 |
| BME               | Disha Chowdhury                   | Actively Participated In Dengue Awareness Camp And Achieved Certificate. | 2 <sup>nd</sup> Year | JIS GROUP & NSS | 21.07.2023 |
| BME               | Anwita Ghosh                      | Actively Participated In Dengue Awareness Camp And Achieved Certificate. | 2 <sup>nd</sup> Year | JIS Group & NSS | 21.07.2023 |
| BME               | Disha Bhandari                    | Actively Participated In Dengue Awareness Camp And Achieved Certificate. | 2 <sup>nd</sup> Year | JIS GROUP & NSS | 21.07.2023 |
| BME               | Bidipta Chakraborty               | Actively Participated In Dengue Awareness Camp And Achieved Certificate. | 2 <sup>nd</sup> Year | JIS GROUP & NSS | 21.07.2023 |





| Name of the Dept. | Name of the Student(s) | Achievement                                     | Year                 | Certifying body                                                   | Date       |
|-------------------|------------------------|-------------------------------------------------|----------------------|-------------------------------------------------------------------|------------|
| BME               | Antara Ghosh           | Successfully completed COURSERA COUSE           | 2 <sup>nd</sup> Year | JIS Group & Coursera                                              | 21.07.2023 |
| BME               | Antara Ghosh           | Participation in Environment and lifestyle Quiz | 2 <sup>nd</sup> Year | Ministry of Environment, Forest and climate change Govt.of India. | 20.07.2023 |







| Dept. | Name of the student                    | Year | Achievement                                                                                    | Date       |
|-------|----------------------------------------|------|------------------------------------------------------------------------------------------------|------------|
| BME   | Dhruvajoti Adhikari.<br>Disha Bhandari | 2023 | Actively participated in Training Program on Discover Your Research Potential with IEEE XPLORE | 02.08.2023 |

| Dept. | Students Name              | Year | Achievement                                                                                     | Date       |
|-------|----------------------------|------|-------------------------------------------------------------------------------------------------|------------|
| BME   | Antara Ghosh, Anwita Ghosh | 2023 | Actively participated in Training Program on Discover Your Research Potential with IEEE explore | 02.08.2023 |

| Dept. | Students Name                                                             | Year    | Achievement                                                                                                | Date       |
|-------|---------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------------------|------------|
| BME   | Diptayan Mukherjee                                                        | 2023-24 | BME 4 <sup>TH</sup> students Awarded for best innovative project & get Prize in IDEA Competition at JISCE. | 27.02.2024 |
|       | Swastika Chatterjee                                                       |         | Awarded in JIS INNOVATION AWARD 2024                                                                       | 02.05.2024 |
|       | Diptayan Mukherjee, Swastika Chatterjee, Sonali Sarkar, Pradyut Karmakar. |         | Awarded for best Departmental project & get 1 <sup>ST</sup> PRIZE in JISTECK2K23 at JISCE.                 | 25.11.2023 |
|       | Agniv Dasgupta SK Rashel, Ankan Shit, Shreya Nandy, Sneha Das             |         | Awarded for best Departmental 2 <sup>ND</sup> project & get 2 <sup>ND</sup> PRIZE in JISTECK2K23 at JISCE. | 25.11.2023 |
|       | MonojHaldar, Nikita Saha, SohanaParvin Mehul Podder                       |         | Awarded for best Departmental project & get 3 <sup>RD</sup> PRIZE in JISTECK2K23 at JISCE.                 | 25.11.2023 |

## 16. Student Awards & Achievement in JISTECH2K23:



