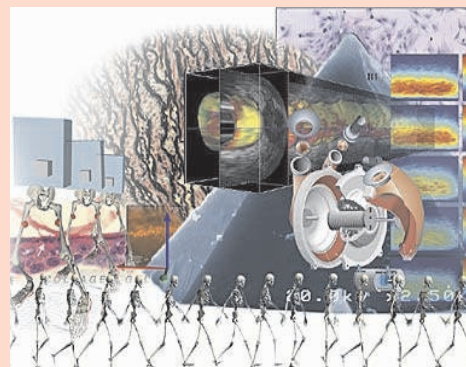




BIOMED NEWS

2022-2023



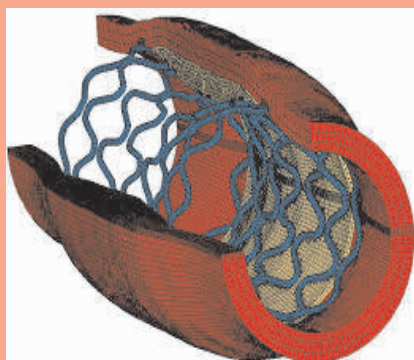
Volume-I

JULY TO DECEMBER -2022



Biomedical Engineering

**JIS COLLEGE OF ENGINEERING, KALYANI
(AN AUTONOMOUS INSTITUTE)**



EDITORS:

DR. KARABI GANGULY

MS. SUMANA BANERJEE

STUDENT COORDINATOR:

UTSAB RAY



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.

Programme Educational Objectives (PEOs):

PEO1: Graduates shall pursue advanced studies and have successful careers in diverse fields in Biomedical Engineering.

PEO2: Graduates will be able to recognize, evaluate, and resolve issues by innovative concept and up-to-date information to satisfy societal expectations.

PEO3: Graduates shall excel themselves in field of teaching, research and development with their in-depth knowledge and innovative minds.

PEO4: Graduates will be able to apply practical knowledge and skill for successful entrepreneurship.

PEO5: Graduates shall work as part of teams on interdisciplinary projects with the multifaceted aspects of using modern tools

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.

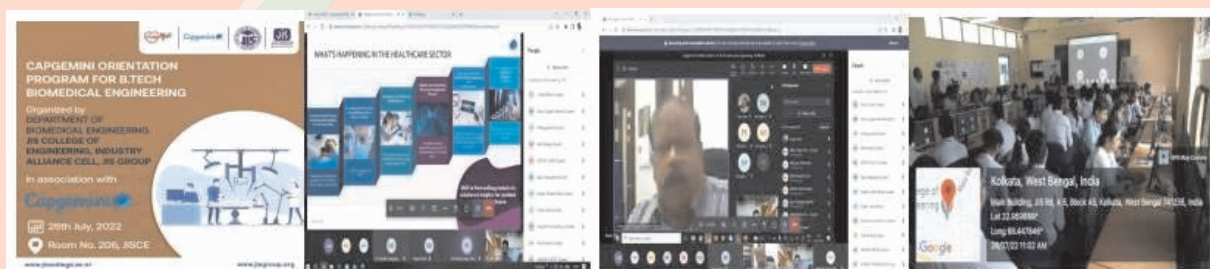
PSO2: Graduates shall use software expertise and information and communication technology (ICT) to innovate and resolve problems in the medical field.

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.

INDUSTRY-INSTITUTE ACTIVITY WITH CAPGEMINI

Capgemini-orientation Program on Requirement Engineering

Name of Visitor/ Guest Speaker	Designation/ Occupation	Seminar/ Workshop/ Conference Topic	Total Participant	Date	Sponsored by
Atul Kurani Dr. Richa Dayal	VP – Capgemini SPOC – Medical & Healthcare Salutation Capgemini	Capgemini Orientation Programme as a part of the MoU execution activity	54	26.07.2022	JIS Group



Wrap-up Session of Requirement Engineering

Name of Visitor/ Guest Speaker	Designation/ Occupation	Seminar/ Workshop/ Conference Topic	Total Participant	Date	Sponsored by
Mr. Narendra Dr. Richa Dayal	Subject Expert SPOC – Medical & Healthcare Salutation Capgemini	Capgemini Wrap- up Session of Requirement Engineering as a part of the MoU execution activity	45	20.09.2022	JIS Group

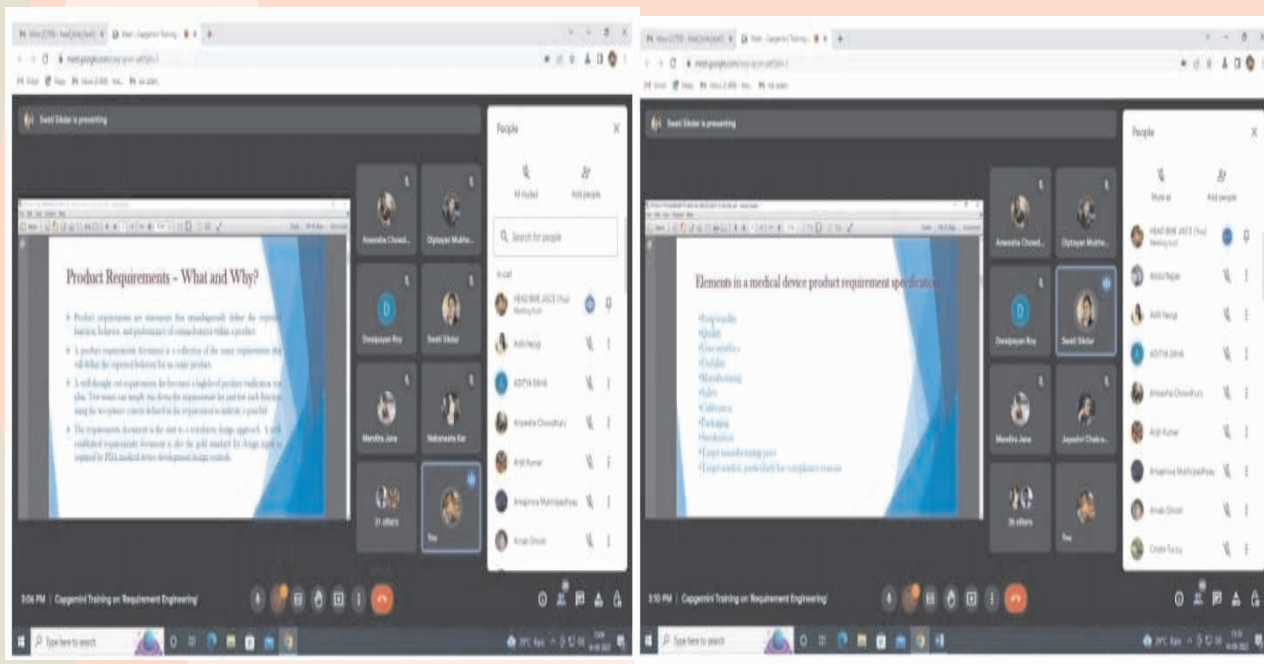


CAREER GUIDANCE SESSION ON ENTREPRENEURSHIP IN BIOMEDICAL ENGINEERING

Date	Name of the Activity	No. of Participants	Organized by	Initiated by	Program Objective
02.12.2022	Career Guidance on entrepreneurship in Biomedical Engineering	38	Dept. of BME	Dr. Karabi Gunguly HOD-BME	To aware B.Tech BME students about career opportunities as entrepreneur and furnishing a road maps to start the entrepreneurial journey.



TRAINING ON REQUIREMENT ENGINEERING AS MoU EXECUTION ACTIVITY with CAPGEMINI



As a part of MoU execution activity for Capgemini, Swati Sikdar (AP-BME) & Dr. Karabi Ganguly (HoD-BME) conducted the in house training on Requirement Engineering for B.Tech BME final and pre-final year students.

BME EXTRA-ACADEMIC ACTIVITIES



Teachers day celebration



INDUSTRY VISIT OF B. TECH BME STUDENTS



REVELATION OF HEALTHCARE INDUSTRY FOR B. TECH BME STUDENTS

BME ACTIVITIES BY ALUMNI



Carrier Guidance as Entrepreneur in B.Tech
Biomedical Engineering

BME PARENTS TEACHERS MEET



BME-PTM-12.11.2022

PARENTS INTERACTING WITH THE HOD & FACULTY MEMBERS

Achievement in JISTECH 2K22



The Department of Biomedical Engineering of JIS College of Engineering exhibited highly innovative health care system related engineering models in JISTECH2K22. Among five groups from department, three superb engineering models from the team, **“HEALERS”**, **“MYO-BEACON”** and **“HRMS”** got recognition.

Achievement in INNOVATION EXHIBITION



INNOVATION EXHIBITION-1st Prize in the category of "Best innovative project" out of best selected institutional projects.

Industry-Institute Interaction

Date	Name of the Activity	No. of Participants	Organized By	Initiated By	Program Objective
02.12.2022	Revelation of Healthcare Industry, Session by UMRI Hospital	74	Dept. of BME, JISCE	Dr. Karabi Ganguly, HOD-BME	To prepare all BME 2nd, 3rd, 4th Year Students for career opportunities in Healthcare Sector (Hospital) after B.Tech. BME



**Outstanding Achievement in Dancing
(Asmita Chakraborty,
BME Graduate Batch 2023
-won 1st Place)**

Faculty Achievement:-

- 🕒 **Dr. Karabi Ganguly, Dr. Sandip Bag, Swati Sikdar, Dr. Dibyendu Mandal, - Successfully completed FDP on Flipped Learning and its implementation organized by IQAC JISCE during 25.07.2022- 29.07.2022.**
- 🕒 **Dr. Karabi Ganguly - Delivered Invited Talk about Biomedical Engineering & its Career prospects in National Television DD Bangla on 12.08.2022**
- 🕒 **Dr. Karabi Ganguly - Guest Speaker in the Webinar Conducted by Dept. of Hospital Management, GNIT on 17.08.2022**
- 🕒 **Dr. Karabi Ganguly - External Expert in Electrofusion – organized by GNIT on 23.09.2022**
- 🕒 **Dr. Karabi Ganguly – Delivered talk on exposure of Dept. of BME & JISCE in Induction Program for 2022 admission batch on 25.09.2022**

- **Dr. Karabi Ganguly** - Delivered talk on Exposure of Flip Learning & Digital Pedagogy in Induction Program for 2022 admission batch on 27.09.2022
- **Swati Sikdar**– Delivered talk on Art of Living in Induction Program for 2022 admission batch on 28.09.2022
- **Swati Sikdar & Dr. Karabi Ganguly** – Conducted training session on Requirement Engineering as a part of MoU execution activity during August 2022 -September 2022
- **Dr. Karabi Ganguly** - Delivered Talk in Refresher Course in Biology at JNV-Kalyani coordinated by JISCE & Jawahar Navodaya Vidyalaya Kalyani on 06.12.2022
- **Dr. Karabi Ganguly** - Career Counseling Camp on Biomedical Engineering conducted by Rotary Club, Silk City: Malda on 20.12.2022
- **Dr. Karabi Ganguly** - Invited Lecture Session on Biomedical Engineering during at Old Malda K. C. High School & Malda C. C. Girls' School (H. S.) during 20.12.2022-21.12.2022
- **Dr. Karabi Ganguly** – Received BEST PAPER AWARD in International Conference I3SET2K22
- **Dr. Karabi Ganguly** – Received JIS SAMMAN 2022 for FACULTY WITH HIGHEST NUMBER OF PUBLICATION-ONLY INDEXED JOURNAL (from BME Dept)
- **Dr. Sandip Bag** – Received JIS SAMMAN 2022 for FACULTY WITH HIGHEST NUMBER OF STUDENTS PUBLICATION (from BME Dept)
- **Swati Sikdar** - Received JIS SAMMAN 2022 for BEST VIDEO LECTURES (from BME Dept)
- **Dr. Dibyendu Mandal** – Selected as the Reviewer of the Journal - Physical and Engineering Sciences in Medicine during Nov 2022



**DR. KARABI GANGULY,
HOD-BME AS INVITED
SPEAKER AT GNIT**



**DR. KARABI GANGULY, HOD-BME AS
EXTERNAL EXPERT IN ELECTROFUSION –
ORGANIZED BY GNIT**



DR. SANDIP BAG (PROF-BME) & MR. GOURANGO HALDER (TA-BME) GUIDING STUDENTS IN INDUSTRY VISIT AT NARAYAN INDUSTRY, KOLKATA



SWATI SIKDAR (AP-BME) AS INVITED SPEAKER IN STUDENT INDUCTION PROGRAM FOR ALL THE FIRST YEAR STUDENTS ACROSS JISCE



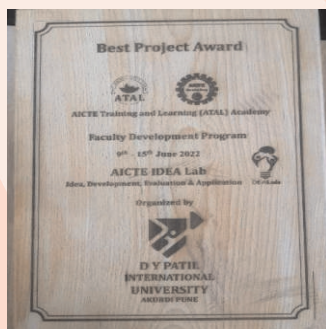
Dr. KARABI GANGULY, HOD-BME AS RESOURCE PERSON FOR CAREER COUNSELING CAMP ON BIOMEDICAL ENGINEERING ORGANIZED BY ROTARY CLUB, SILK CITY: MALDA



DR. KARABI GANGULY (HOD-BME) & DR. POULOMI BASU (SCIENTIST-OSLO RESEARCH PARK & PRESTIGIOUS ALUMNUS-BME, JISCE) AS INVITED SPEAKER IN NATIONAL TELEVISION-DD BANGLA

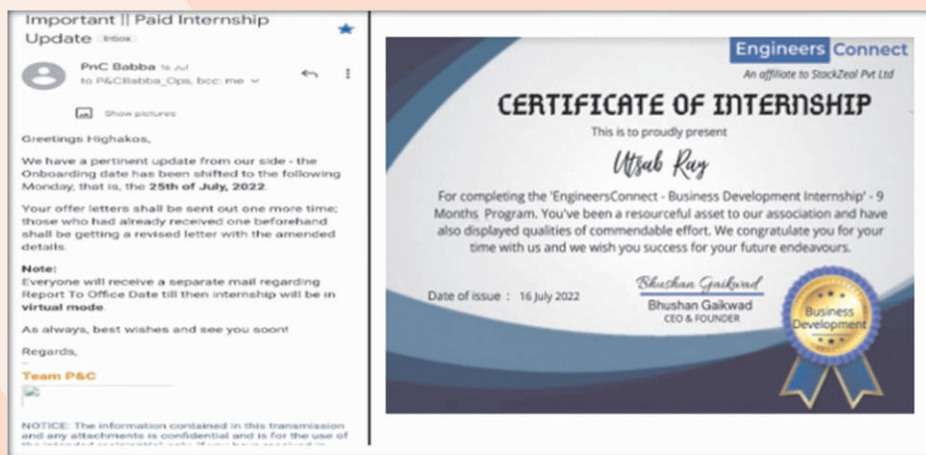


DR. KARABI GANGULY (HOD-BME) & DR. ANWESHA KHASHNOBIS (SCIENTIST-TCS INNOVATION LAB & PRESTIGIOUS ALUMNUS-BME, JISCE) AS INVITED SPEAKER IN NATIONAL TELEVISION-DD BANGLA



Student Achievement:-

Sl.	Student Name	Year	Achievement	Venue/Organizer/ Certifying Body	Date
1.	Tufan Paul	BME 4 th Year	Selected for paid internship by High Radius	High Radius	July 2022
2.	Utsab Ray	BME 4 th Year	Successfully completed Engineers Connect- Business development Internship	Engineers Connect	July 2022
3.	Utsab Ray	BME 4 th Year	Qualified and selected for the Grand Finale of Smart India Hackathon as a part of Team Skyhook Dimension 1	SIH 2022	Aug 2022
4.	Swarnendu Maity, Dipayan Mondal, Sutanu Chakravorty,	BME 2022 Graduate Batch	1st Runner up in Prototype development Competition	JISCE & JIS Group (External Judging in JISTECH2K22)	Sep 2022
5.	Tufan Paul,	BME 3 rd Year			
6.	Sonali Sarkar,	BME 3 rd Year			
7.	Sneha Das	BME 2 nd Year	1 st Runner up in Imagery (Portrait) [JISCE FOCUSTIC]		
8.	Abhigyan Pal, Arnab Ghosh, Pramit Das, Prodyut Karmakar	BME 3 rd Year	1 st position in Robotics –Sand Rover [JISCE ROBOMAN]		
9.	Soumik Hore, Agniv Dasgupta, Sk Rashaal, Prithhijit Majumder, Dibyendu Ghosh	BME 2 nd Year	2nd position in Robotics –Sand Rover [JISCE ROBOMAN]		
10.	Utsab Ray	BME 4 th Year	Special award as JISCE INNOVATOR in project competition,		
11.	Sonali Sarkar, Swatika Chatterjee, Diptayan Mukherjee, Susmi Saha, Avinash Chatterjee, Prodyut Karmakar	BME 3 rd Year	1 st Position in Project Competition		
12.	Utsab Ray, Anwesha Chowdhury, Dipal Singh, Arijit Kumar, Sneha Das,	BME 4 th Year	2 nd Position in Project Competition		
13.		BME 2 nd Year			
14.	Debopriya Roy, Anirban Sarkar, Roshni Dey, Mandira Jana,	BME 3 rd Year	3 rd Position in Project Competition		
15.	Utsab Ray & Team	BME 4 th Year	3 rd Position in JISCE SHORT FILM MAKER		
16.	Utsab Ray	BME 4 th Year	First Milestone achieved for Google cloud ready facilitator team	Google Cloud	16 Oct 2022
17.	Utsab Ray	BME 4 th Year	1st Prize in the category of "Best innovative project " out of best selected institutional projects.	JISCE –Innovation Exhibition (Experts: Dr. SM Ali – Director General, Solar Energy Society of India & Dr. P S Ghosh - MIT, Boston)	17 Nov 2022
18.	Utsab Ray	BME 4 th Year	Best Paper Award in I3SET2K22	JISCE	21 Dec 2022



B.TECH BME Students selected for Internship

Faculty involvement in Conference/Seminar/Workshop organized at JISCE, Kalyani

- **Dr. Karabi Ganguly, Dr. Sandip Bag, Swati Sikdar, Dr. Dibyendu Mandal**, - Successfully completed FDP on Flipped Learning and its implementation organized by IQAC JISCE during 25.07.2022-29.07.2022
- **Dr. Karabi Ganguly** – Delivered talk on exposure of Dept. of BME & JISCE in Induction Program for 2022 admission batch on 25.09.2022
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- **Swati Sikdar & Dr. Karabi Ganguly** – Conducted training session on Requirement Engineering as a part of MoU execution activity during August 2022 - September 2022

Publications by Faculty Members:

Book Chapters:

- **S Bag, K Ganguly**: A Guide to Hospital Administration and Planning. Chapter Title: Mitigation of Fire Hazards in Hospital (2022). (Pages 193-229) ISBN: 978-981-19-6692-7
https://link.springer.com/chapter/10.1007/978-981-19-6692-7_12
- **S Bag, D Mandal**: Next Generation Smart Nano-Bio-Devices. Chapter Title: Overview of Biosensors and its application in Healthcare (2022) (Pages 29-60) ISBN: 978-981-19-7107-5
https://link.springer.com/chapter/10.1007/978-981-19-7107-5_3
- **S Bag, S Sikdar**: System Design for Epidemics Using Machine Learning and Deep Learning. Chapter Title: Effective Health Screening and Prompt Vaccination to Prevent the Spread of Covid-19 and Minimize its Adverse Effects (In Press)

Faculty Journal/Conference Papers

Sl. No.	Faculty Author(s)	Title of the Paper	Journal/Conference Name	National/ International	ISSN No.
1	P Biswas, PK Bardhan, A Sarkar, M R Islam, D Mondal, S Bag & S Bose	An Experimental Analysis of Grinding Parameters and Conditions on Surface Roughness of Finished Product.	Journal of Physics: Conference Series. Vol-2286, pp 012027 (1-9), July 2022	International (SCOPUS)	1742-6596
2	Dibyendu Mandal, Swati Sikdar & Sandip Bag	Laser as a Primitive Tool in Photobio modulation Therapy: A Comprehensive Review	International Conference on Industry Interactive Innovation in Science, Engineering and Technology: Laser and its Engineering Applications in the field of Electronic and Electrical Systems (I2SET2K22)	International	978-93-5747-143-5
3	Karabi Ganguly	Exposition of deep learning divulged U-Net architecture to fragmentize the MRI images	International Conference on Industry Interactive Innovation in Science, Engineering and Technology: Laser and its Engineering Applications in the field of Electronic and Electrical Systems (I2SET2K22)	International	978-93-5747-143-5



**BEST PAPER AWARD
IN INTERNATIONAL CONFERENCE I2SET2K22**