

# BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI

## बिरला प्रौद्योगिकी संस्थान, मेसरा, राँची



ANNUAL REPORT  
2022-23

वार्षिक प्रतिवेदन  
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# INSTITUTE PRAYER

## — प्रार्थना —

यं शैवाः समुपासते शिव इति ब्रह्मेति वेदान्तिनो  
बौद्धा बुद्ध इति प्रमाणपटवः कर्तेति नैयायिकाः।  
अर्हन् नित्यथ जैन शासनरताः कर्मेति मीमांसकाः  
सोऽयं नो विदधातु वाञ्छित फलं त्रैलोक्यनाथो हरिः॥

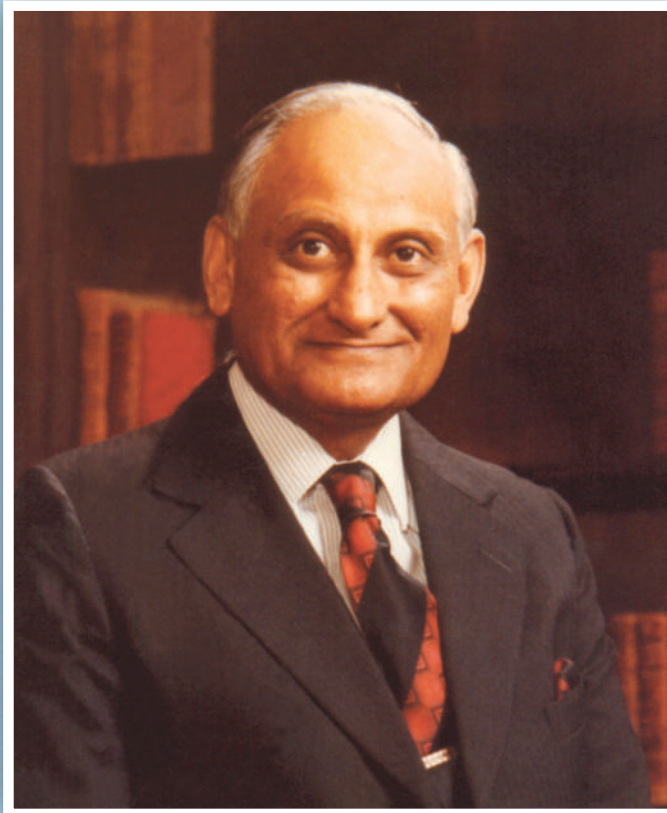
May the Lord of the universe, the remover of evil, whom devotees of Shiva worship as Shiva, the Vedantins as Brahman, the Buddhists as Buddha, the followers of the Nyaya philosophy who are clever in logic as representatives of those devoted to the Jaina doctrines as Arhan, the advocators of the Mimamsa School as Karma-grant us all our hearty desire.

हे जग त्राता, विश्व विधाता, हे सुख शांति निकेतन हे।  
प्रेम के सिन्धु दीन के बन्धु, दुःख दारिद्र विनाशन हे।  
नित्य अखण्ड अनन्त अनादि, पूरण ब्रह्म सनातन हे।  
जगआश्रय जगपति जगवन्दन, अनुपम अलख निरंजन हे।  
प्राण सखा त्रिभुवन प्रतिपालक, जीवन के अवलंबन हे।

You are the saviour, provider of worldly wisdom & the abode of peace and happiness. You are the ocean of love, the friend of the helpless, the reliever of sorrows and misfortune. You are the eternal, the indivisible and the infinite. You are the complete universe and the prime Being. You are the shelter, the Lord and worshiped by world. You are unparalleled, unseen and blissful. You are friend of the living, the preserver of the universe and the support of our life.



**Shri B.M. Birla**  
Founder of the Institute



**Shri G.P. Birla**  
Former Chairman of the Board of Governors





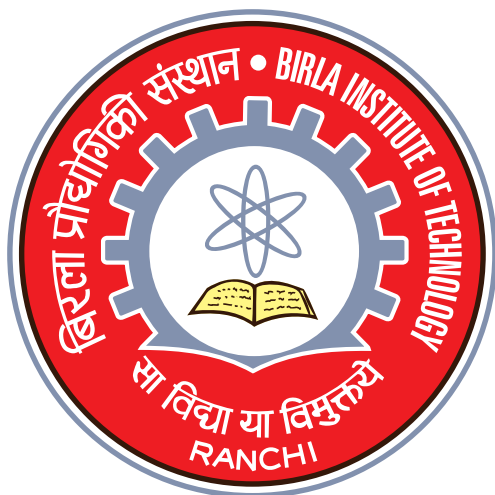
**Shri C. K. Birla**  
Chairman of the Board of Governors



# ANNUAL REPORT

वार्षिक प्रतिवेदन

**2022-23**



**BIRLA INSTITUTE OF TECHNOLOGY**

बिरला प्रौद्योगिकी संस्थान

(Deemed to be University)

Mesra, Ranchi - 835215, Jharkhand



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## Vice Chancellor's Report



Vice Chancellor  
Professor Indranil  
Manna

BIT Mesra is not only one of the oldest Institutes of Technology in the country but also a pioneer in initiating disciplines like Space Engineering and Rocketry, Remote Sensing, and recently Quantitative Economics and Data Sciences. Apart from this main campus, we also have 5 Centers equally fulfilling the engineering and scientific aspirations of students, from different region and diverse ethnicities, maintaining the quality of teaching and research. The Institute has taken many initiatives to enhance the teaching-learning process, promote innovation and entrepreneurship activities among the students, build state-of-the-art engineering education infrastructure, and pursue high-end R & D activities through various schemes. For the academic year 2022-23 several reforms, regulatory compliances and achievements were obtained that are mentioned below:

### 1. New initiatives and reforms

BIT Mesra is a dynamic institution committed to embracing fresh academic programs, embracing innovative teaching methods, exploring novel research opportunities, enhancing both its physical and digital infrastructure, implementing forward-thinking administrative practices, and proactively executing decisions made by the Board and regulatory bodies. In this regard, let me give a brief of some of the initiatives taken by departments and centers.

- ❖ The Department of Physics has taken the initiative for industry collaboration with Surface Modification Technologies Pvt. Ltd., Mumbai.
- ❖ The Department of Physics has also taken the initiative for the MOU with Daegu Catholic University (DCU), Republic of Korea.
- ❖ The Department of Electrical and Electronics Engineering signed an MoU with L&T Technology Services (LTTTS), Grid India Ltd., and CCL to foster research works based on industrial problems. The Department has also renewed the existing MoU with Tata Motors Ltd. for conducting an MTech in EV Technology and upskilling development program for their professionals.
- ❖ The Department of Management developed in-house software for the course (CO) and program objectives (PO) calculation as a part of the program accreditation and academic requirements of the various accreditation bodies.
- ❖ A new and powerful ERP system has been ordered to integrate all administrative, academic, and regulatory functions within BIT Mesra encompassing general administration, purchase, finance, student and faculty life cycle, admission, accreditation, examination, payment gateway, and information dissemination concerning the main and all constituent external campuses. This new ERP is in the process of evaluation, expansion, and implementation to synchronize with the activities of BIT.

### 2. Compliance of statutory regulations – NAAC, NBA, AICTE, UGC

In 1986, the Institute was granted the status of a Deemed-to-be University under Section 3 of the UGC Act 1956. The Institute is firmly



dedicated to adhering to all regulatory standards and guidelines, aiming to secure international recognition for our degree programs, as well as for our students and scholars. The benchmarking of quality across various courses is evident through the NBA, NAAC and AICTE compliance and accreditation system.

- ❖ **NAAC:** After the visit of the NAAC team to the BIT Mesra campus from November 14th to 16th, 2022, and the prior submission of the Data Validation and Verification (DVV) Report, BIT Mesra was awarded an 'A' grade by NAAC.
- ❖ **NBA:** 8 UG and PG Courses of BIT Mesra are NBA accredited.
- ❖ **AICTE:** BIT Mesra, owing to its high standards of educational quality, has received EoA (Extension of Approval) from AICTE to conduct its UG & PG courses.

### 3. Social service rendered by BIT (Vaccination, Rural, and BIT dispensary) and technical help to the State and neighboring villages.

In addition to upholding its esteemed status as a nationally renowned hub for engineering education and research, BIT Mesra has also consistently endeavored to maintain strong ties with the local community. This commitment involves extending humanitarian assistance, such as job opportunities, entrepreneurial education, and medical aid, whenever feasible.

- ❖ The BIT Dispensary plays a vital role in ensuring the well-being of the BIT Mesra community and the surrounding villagers. This 20-bed healthcare center, which includes two isolation wards, operates round the clock, 24x7, including weekends and holidays, providing comprehensive medical services to BIT students, faculties, their families, staff members, and the local community. The health center is well-equipped with four ambulances, each fitted with oxygen cylinders and first-aid kits, ensuring prompt and reliable emergency care. In the past year, the dispensary treated a total of 41,582 patients. BIT also has a rural dispensary to ensure that the neighboring village can get the benefit of medical services. With services ranging from outpatient care and inpatient services for minor ailments to emergency care and specialized clinics, the BIT Dispensary stands as a pillar of healthcare support for the entire BIT Mesra community and beyond.
- ❖ Three Projects have been sanctioned by IIT Delhi in consultation with the Ministry of Education (MoE) for the economic development in adopted villages under the Unnat Bharat Abhiyan initiative. These projects are the Design and Fabrication of a Bellow type of Biogas Plant, the Setting up of a small-scale Pilot Plant for the Production of Biodiesel from an Indigenous Plant, and the Setting up of a small-scale Pilot Plant for the Production of Organic Compost from Kitchen Waste and Dry Leaves.

### 4. Research Grants

The Institute is very keen to promote the culture of research not just for the creation of new knowledge but also for integrating it into our teaching programs, promoting exciting innovation and entrepreneurial activities, and raising the reputation of the Institute to a much higher pedestal.

- ❖ A total of 64 new research grants were sanctioned from 1st April 2022 to 31st March 2023 by external sponsoring agencies (DST-SERB, FIST, PURSE, ISRO, AICTE, ICMR, DRDO, DAE, CCL, etc.) with a total sanctioned budget of Rs.28.78 Crore.
- ❖ A total of 16 consultancy projects were sanctioned with funding of Rs. 1.05 Crores during 22-23.
- ❖ A budget of Rs. 3.74 Crore was allocated for improving the facilities of Central Instrumental Facility (CIF), and 4 new instruments have been added, and CIF utilization is equivalent to the revenue of Rs. 1.01 Crore in 2022-2023.

### 5. MOUs and Collaboration

The Institute constantly endeavors to foster and utilize the practice of collaboration with industries and research organizations for making our teaching and research programs more effective and



modern.

- ❖ In the year 2022-2023 a total of 13 MOUs were signed with various Government, Private Institutions, and Industries.
- ❖ MOU was signed with Jharkhand Police, Ranchi. A 3-week training program on "Cyber Security and Block Chain" was conducted for officer trainees of Jharkhand Police and CRPF at BIT Mesra.

#### List of MoU's

Sr.	Date of MoU	Party
1	09-09-2022	GLA University, Mathura, UP, India
2	21-12-2022	TATA MOTORS Limited, Mumbai, India_(Part-01, 02)
3	16-01-2023	Jharkhand Police, Ranchi, Jharkhand
4	14-02-2023	EDCIL, New Delhi
5	06-02-2023	Central Coalfields Limited, Ranchi- Jharkhand
6	03-02-2023	Central Drug Research Institute (CDRI), Lucknow-UP
7	27-02-2023	IHUB NTIHAC foundation Kanpur-UP
8	29-03-2023	L&T Technology Services
9	06-04-2023	Samford Hospital Pvt Ltd, Ranchi -Jharkhand
10	06-04-2023	PwC Pvt. Ltd., Kolkata
11	05-04-2023	MIT ADT University, Pune-Maharashtra
12	31-05-2023	JUNO Software Private Ltd., Pune-Maharashtra
13	01-06-2023	M/s Twin Engineers

#### 6. Immersive Summer Research Experience Program (ISRE)

- ❖ After the 6th Semester, selected students of Engineering are sent to top US Universities to pursue their summer research experience for around eight weeks. The program is termed as Immersive Summer Research Experience Program.
- ❖ This year a total of 17 students pursued their internships. 11 students conducted their research at Illinois Institute of Technology, Chicago, 3 students conducted their research at Georgia Institute of Technology, Atlanta and one student each in Northeastern University, Boston; Carnegie Mellon University, Pittsburgh and Columbia University, New York.

#### 7. GP BIRLA Scholarship

The Institute demonstrates its commitment to assisting highly talented students from disadvantaged backgrounds by providing a range of financial aid options, including full or partial scholarships and travel grants. The GP Birla Scholarship fund has recently received a significant boost, now amounting to an annual allocation exceeding Rs 4 crore. This substantial increase in funds is primarily aimed at helping students navigate the substantial economic challenges brought about by the global pandemic.

- ❖ GP BIRLA Scholarship worth Rupees 4.38 crore was provided to students of the BIT Mesra including all off-campus and University Polytechnic.
- ❖ More than 700 students and scholars benefited from the GP Birla scholarship Fund both in the Monsoon 2022 (MO22) and Spring 2023 (SP23) semesters.
- ❖ 19 new Institute Research Fellows (IRFs) were awarded in MO 2022 and SP 2023.

#### 8. New equipment and laboratories added.

- ❖ The Department of Architecture has added equipment like Video Conferencing Devices and software like Design Builder, Sketch-Up, Envi-Met, PTV Tutor, and PTV Classroom.



- ❖ The Department of Space Engineering and Rocketry has added equipment like a Transient Flow Diagnostic System, Spectrum Analyzer, Signal Conditioner, Interactive Display, 3D Printers, and Strain Gauge Kit.
- ❖ The Department of ECE has added an Unmanned Vehicle Lab, and has renovated different labs like a Microprocessor lab, Digital Electronics lab, Signal processing lab, Advanced instrumentation lab, Microwave Lab, Fiber Optic research lab, PG lecture room, Fiber Optic Communication Lab etc.
- ❖ The Department of EEE has initiated the Laboratory setup for the Electric Vehicle and Battery Management System in the year 2022-2023.
- ❖ The Department of Chemistry has made the state-of-the-art spectrofluorometer FLS1000 from Edinburgh Instruments, UK for the steady-state and time-dependent fluorescence measurement. Installation of the state-of-the-art Computing Cluster (Make: Tyrone) from Netweb Technologies India Pvt. Ltd. For research in the domain of Theoretical and Computational Chemistry.
- ❖ The Department of Chemical Engineering has procured various equipment like Electrochemical Workstation Battery, Composite Rotating Packed Bed, Steam Chamber for multiple effects Evaporator, Solar Simulator Adsorption Refrigeration system (SSARS), Wastepaper Recycling machine, Sonicator, etc.
- ❖ The Department of Mechanical Engineering developed the Advanced Automobile Engineering Laboratory.
- ❖ The Department of Remote Sensing added a Sun-photometer and Ground Penetrating Radar (GPR) and upgraded DIP/GIS system hosting facilities.
- ❖ The Department of Physics added equipment like a Thickness Profilometer, Hydrothermal Unit, Ansys Electromagnetic Simulator, High Temp. Box Furnace.
- ❖ The Department of Production and Industrial Engineering added a 3 D Printer, Robotic Welding Machine, Diamond Cutting Machine, Tribometer, Fiber Laser Welding Machine, Planetary Ball Milling, etc.

### 9. Clubs and Societies

Birla Institute of Technology, Mesra, boasts an impressive array of over 30 Student Activity Clubs, strategically fostered to provide students with a platform for harnessing their creative and extracurricular potential, essential for their holistic professional development. Among these clubs are dedicated to various disciplines, including Dance, Drama, Aerospace, Fine Arts, Robotics, and Automobile Design, where active student engagement is prominent. Remarkably, our students consistently excel, earning numerous awards and commendations in both national and international competitions arising from their active participation in these club-based activities.

### 10. Achievement of Students

Students take part in various Inter college competitions and bring laurel to the University by winning medals.

- ❖ Team Robolution secured 1st position in the event House of Hackers organized by IIIT Ranchi.
- ❖ A team from the Photographic Society and Drama Society secured 2nd position in a Case Study Challenge, organized at The Solaris 2022 by IIM Udaipur.
- ❖ Dhvani Music Club secured 1st position in Mood Indigo '22 in IIT Bombay.
- ❖ Mr. Ayush Kumar received Indian Youth Icon Award 2022, and National Pratistha Purashkar.
- ❖ Saurav Deka, Bhanu Pratap Singh, Dipanjan & Habiul Rahman were the winners at IIT Bombay FOSSEE-2023 Mapathon Competition.
- ❖ Adiya Vijay Barai secured 1st position out of 400+ teams in Case study competition by IIM Udaipur.
- ❖ Riddhi Sharma, Urvi Priyadarshini, Aditya Aryan, Shivanshi Malik, and Shireen Gajbhiye won First prize in RACHNA Low-cost housing challenge organized by MoHUA & BMTPC.



- ❖ Sohantika Kodiganti, received IIA Medal for best outgoing student 2022 by Indian Institute of Architects.
- ❖ Aastha Sah was a member of Team Compact who were runner up in the business conclave organized by IIM Bangalore.
- ❖ Aryan Kumar was 1st runner up in the Sci-Tech Quiz, organized by MIT, Manipal.
- ❖ Saurya Raj was second runner-up in the literary event of IIT BHU.
- ❖ Team Robolution was 1st runner-up in the Kavach internal hackathon.

## 11. Achievement of Faculty Members

- ❖ Dr. Sumit Mishra, Department of Chemistry, received SERB International Research Experience (SIRE) grant for visit to UK for six months to undertake research work at Scotland Rural College (SRUC), Biorefining and Advanced Materials Research Center, Edinburgh, United Kingdom.
- ❖ Dr Muthu Kumar Sampath, Department of Bio-Engineering and Bio-Technology, received SERB International Research Experience (SIRE) grant for visit to UA for 3 months to undertake research work at Separation Science and Technology Ralph E Martin Department of Chemical Engineering, University of Arkansas, Fayetteville, USA.
- ❖ Dr. S. Pal, Department of ECE received the Sci-Tech Excellence Award from NIT Warangal Alumni Association, Kolkata Chapter, and received recognition from diverse groups and institutions for his newly patented small antenna.
- ❖ Dr. Alok Jain, Department of Bioengineering and Biotechnology received the Vishnu Ji Ram Memorial Award from the Indian Society of Chemists and Biologists (ISCB) during the 27th ISCB International Conference-2022.
- ❖ Dr. Anirban Pradhan, Department of Chemistry received the short gun oral award at the 27th ISCB International Conference (ISCB-22) organized by the Indian Society of Chemists and Biologists (ISCB).
- ❖ The article written by Dr. Suman Ghosh, Department of Physics, has been mentioned in Nature Index-2022.
- ❖ Prof. Sunita Keshri, Department of Physics, became a Member of the International Advisory Committee of the SISM-2023 Conference organized by Moscow State University.
- ❖ Prof. S. Chakraborty, Department of Mathematics, authored IMTA Best Book on Raga Music Titled –“Hindustani Classical Music: A Historical & Computational Study.”
- ❖ Dr. C. Jeganathan, Dr. V.S. Rathore and Mr. Beependra Singh, Department of Remote Sensing, received a letter of appreciation from Director General of Forest Survey of India, Ministry of Environment, Forest and Climate Change, Government of India, for their work on quantifying the leaf fall using satellite data over Central Indian Forested Landscape.
- ❖ Dr. A.P. Krishna from Department of Remote Sensing was invited as an Academic Expert by Indian Universities and Institutions Network for Disaster Risk Reduction.
- ❖ Dr. C. Jeganathan, Professor, Department of Remote Sensing was invited as a Keynote Speaker in the National Seminar on “Climate Change and Adaptation Strategies for Sustainable Livelihood” organised by the Rajiv Gandhi Central University, Arunachal Pradesh (27-28th March, 2023), and delivered a keynote talk on “Diagnostic tools and techniques in the investigation of Climate Change”.
- ❖ Dr. Praveen Srivastava from Department of HMCT, delivered an expert talk in International Hospitality and Tourism Webinar organized by College of Hospitality and Tourism Management, Divine Word College of Vigan, Philippines.
- ❖ Dr. Prabjot Kaur, Department of Mathematics received the Second Best Paper Award in AOTA 2023 organised by REC, Jharkhand & Sultan Moulay Slimane University, Morocco & City University, Malaysia.
- ❖ Ar. Rizwan Kazmi, from the Department of Architecture, received a Summer Faculty Research Fellowship, from IIT Delhi.



- ❖ Dr. Deepak Verma from BIT Jaipur was recognized among Stanford University's World's Top Scientists List (in India 25562) in 2022.
- ❖ Dr. Peeyush Tewari from BIT Jaipur, received "Vrischa Mitra Samman 2023" in G20 Event org by Shree Kalptaru Sansthan.
- ❖ Mrs. Nirupama from University Polytechnic has been selected as a Reviewer for the AICTE's Hindi Translation Project to review a third-semester book (Hindi) for the Diploma Program.
- ❖ Dr. Soumitro Chakravarty and Dr. Umesh Prasad from BIT Lalpur received the Research Excellence Award from The Scientific International Publishing House, registered under the Ministry of MSME, Government of India.

### 12. Faculty and Student Development Related Activities

- ❖ 35 students from different Institutes/Universities have successfully completed their Internship Program during Summer Vacation- 2023 in the Department of Space Engineering and Rocketry.
- ❖ The Department of Space Engineering and Rocketry organized Industrial-cum-Technical Tour to Jharkhand Govt. Mini Tool Room, Tatisilway, Ranchi for all students, research scholars, faculty members and staff members on January 21, 2023.
- ❖ Dr. Nishikant Kumar is inducted in the subject expert committee to create and finalize the syllabus of 'Hospitality and Hotel Management' for the University Grants Commission (UGC), New Delhi to include 'Hospitality and Hotel Management' discipline in UGC-NET from Dec'2023.

### 13. Innovation and Entrepreneurship Related Activities

BIT Mesra has always been committed to advancing entrepreneurial and innovative cultures. The following recent measures have been taken in this direction.

- ❖ The Institute Innovation Council (IIC) team has been expanded to include more young faculty members to increase BIT's commitment to the goals of the MoE's National Innovation Mission.
- ❖ Ministry of Education Innovation Cell & All India Council of Technical Education, New Delhi has organized an Institution's Innovation Council Regional Meet at Guru Nanak Institute of Technology, Kolkata on 2nd August 2022. Around 350 IIC Members from 115 Higher Education Institutions from the Eastern Zone have participated in the Poster Exhibition. In this regional meet BIT Mesra, Ranchi has received the Best Creative Posters award for the IIC-BIT Achievement.
- ❖ IIC organized a total of 47 events during 2022-23, including webinars, Innovation Workshops, Competitions, including IPR awareness lectures. Webinars like Hacks for College Entrepreneurs, The Perfect Recipe for an Entrepreneur, Innovation, and Product Development through Design Thinking, Promoting Research & Innovation in Contemporary Times, etc. were conducted. Innovation Competition Events like "Business Plan Competition," "ENIGMA-A technical Case Study Competition," "Internal Hackathon," "Sirf Excel 2.0- Business Case Study Competition," "Ancient Entrepreneur and Robotics Exhibition," 'E-Summit', 'Fin Street' were also conducted.
- ❖ An Innovation Contest called BIT-NISHAN (Annual Flag Ship Event of IIC) was organized in which proposals from students were evaluated for their innovative ideas to have their startups. A total of 4 teams (Startup ideas) were selected for the award:
  1. Wheel Rover, from Dept. of Management, BIT Mesra
  2. Venture Labs, from Mechanical Dept., BIT Mesra
  3. Housekeeping Hygiene Solution, from University Polytechnic, BIT Mesra
  4. Kards, From ECE Dept., BIT Mesra.



- ❖ IIC-BIT Mesra in collaboration with Space Engineering and Rocketry Department, organized a one-week workshop on “Satellites Manufacturing” under the Design Thinking, Critical thinking, and Innovation Design during 13-17th Feb 2023 in association with AICTE IDEA Lab. This workshop educated the students about satellites, CubeSat/CanSat design, deployment along with hands on Session and Prototype testing.
- ❖ IIC-ECE organised One-Week outreach program on Microelectronics and VLSI Design (MVD2023) from May 15–19, 2023, in support of the national aim to make India self-reliant in the production of semiconductors, displays, and VLSI technology.
- ❖ Product Development fund was given to ECE faculty members for the development of a non-contact type height and distance measurement system using ESP32, Dome shaped solar charging design for drones, and Greet Bolt.

#### 14. Visit of Eminent Professionals and Interaction Sessions with our Student and Faculty members

Several eminent speakers visited BIT and presented, interacted, and shared their ideas and expertise with students and faculty. Some of the prominent visitors/speakers were:

- ❖ Dr. P. A. Ramakrishna, Professor, Dept. of Aerospace Engg., IIT Madras (11th March 2022).
- ❖ Prof. Anand Mohan, Associate Professor, Department of Food Science & Technology, University of Georgia, USA (19th July 2022).
- ❖ Mr. Pankaj Sinha, Managing Director, Coca-Cola, Sri Lanka, and the Maldives) (9th July 2022).
- ❖ Mr. Pritam Pritu, Global IP Leader – IBM JAPAN (10th July 2022).
- ❖ Dr. Ganesh Halade, Associate Professor, Div. of Cardiovascular Sciences, University of South Florida, USA (18th July 2022).
- ❖ Dr. Nripendra Singh, Professor of Marketing, PENNWEST University, USA (06th Sept. 2022).
- ❖ Col. Sunil Kapila, Cyber Security Expert, Athenian Tech, New Delhi (09th Sept 2022).
- ❖ Padmashree Dr. Anil Kakodkar, Former Chairman of the Atomic Energy Commission and Secretary of Department of Atomic Energy, Chancellor of Homi Bhabha National Institute; FNAE, FNASc (03rd Nov. 2022).
- ❖ Shri S. Somnath, Chairman, (ISRO) Indian Space Research Organisation, India (03rd Dec. 2022).
- ❖ Dr. Tapas Kumar Roy, Head, Casting Division, Tata Steel Pvt. Ltd. (December 2022).
- ❖ Dr. Sujit Sinha, Indian Institute of Technology Delhi (December 2022)
- ❖ Dr. G. Satheesh Reddy, Scientific Advisor to Defense Minister, and Chairman, Governing Body, Aeronautical Development Agency (ADA) (2nd March 2023).
- ❖ Dr. Surendra Kumar, President, Indo-US Research Institute for Sustainable Development (IURISD) (14th March 2023)
- ❖ Mr. Mani Shekhar Pandey, Regional Director, TGI Hotels and Hospitality Services, Pvt. Ltd. (21st March 2023)
- ❖ Mr. Pulkit Trivedi, Director Google Pay India (16th April 2023)
- ❖ Mr. Rajesh Kumar Dubey, Technical Lead, Cognizant Technology Solutions (10th May 2023)
- ❖ Dr. Dinesh Mohan, Professor (Thomson Reuters highly cited Researcher), School of Environmental Sciences, Jawaharlal Nehru University, New Delhi 110067, INDIA (26th May 2023)
- ❖ Prof. T. Pradeep, Professor, IIT Madras and Prof Pradip Kalbar, IIT Bombay (25th June 2023)
- ❖ Shri Jayant Sinha, Member of Parliament, Hazaribagh Constituency (24th June 2023).
- ❖ Many IIT Professors, Vice Chancellors from reputed universities participated in the DST-FIST, SERB-MMME meetings, and INAE-NatFoE Conclave conducted in BIT, Mesra during 22-23.



### 15. Achievements of NSS, NCC and Rajbhasha Cell

- ❖ NSS of BIT Mesra has adopted 10 nearby villages and conduct various awareness and educational program in the villages. The NSS celebrated various events like Yoga day, Prabhat Pheri, Van Mahotsav, Plantation Drive, Blood Donation Camp, World Environment Day, Health Checkup camp, Voter Awareness, Har Ghar Tiranga, Swacchta Abhiyaan to name a few. The Program Coordinator Dr. O.P. Pandey was awarded the Jharkhand Seva Ratna Award 2022 for Social Services.
- ❖ NCC of BIT Mesra organized events like Annual Training Camp, Puneet Sagar Abhiyaan, Blood Donation Camp, Republic Day Parade to name a few.
- ❖ Rajbhasha (Hindi) cell has been established in the University. The cell is continuously working to ensure that the Rajbhasha is promoted in the campus. Hindi Pakhwara was organized by the cell where eminent personalities along with students and staff keep their view and discuss the importance of Rajbhasha. The cell also publishes their Annual Magazine Abidha where the articles of staff and students are published.

### 16. Azadi Ka Amrit Mahotsav Celebration

B.I.T. Mesra has proudly celebrated AZADI KA AMRIT MAHOTSAVA by organizing good workshops and events presenting the Indian Knowledge Systems and the legend of Indian History. It celebrated Technology Day and initiated to motivate school students and gave them opportunities to display their talent in Science and Technology. BIT Mesra is also linked to many ATAL Tinkering Labs and mentored them.

### 17. Role of BIT in implementing NEP 2020:

The new education policy NEP 2020 has paved the way to many new ventures and BIT Mesra has quickly adopted it into its curriculum. According to NEP 2020, new courses have been included for enhancing Skill Enhancement, Ability enhancement, Entrepreneurship Development, and Value Education. BIT has been following the Choice Based Credit System which gives flexibility to the students to take the courses of their own interest offered across the university.

### 18. Publications, Patents, Conferences, and Seminars organized.

- ❖ The faculty members were actively involved in research, and published 19 books, 637 articles in reputed Journal, and 280 chapters in Edited books.
- ❖ Several initiatives were taken toward innovation and Intellectual Property (IP) generation. In 22-23, patents filed/published/granted are 21 by various departments and centers.
- ❖ 121 seminars and conferences have also been organized by various departments and centers.

### 19. Foundation Day Celebration and Distinguished Alumni Award

Birla Institute of Technology, Mesra hosted a grand event "Foundation Day" to celebrate the past, present and future on 14th & 15th July '2023.

This year as well the institute felicitated its most illustrious alumnus by way of conferring the Distinguished Alumni Award under 6 different categories, as decided earlier. Apart from this, to pay tribute to our faculty members who have made us proud in the past, the institute under the Chairmanship of our Vice Chancellor decided to felicitate the Distinguished Teacher's Award.

#### Categories of Award:

**Category 1:** Contributions to Engineering, Technology and Entrepreneurship –

**Mr. Ganesh Natarajan**

B.Sc. (Mechanical Engineering) (1973 – 1979)



**Category 2:** Leadership in Corporate World, Industry, Academia, and Research Institutions

**Mr. Sanjay Nayak**

B.E (Electronics & Communication Engineering) (1983 – 1987)

**Category 3:** Excellence in Teaching and Research in Engineering and Technology

**Prof. Ramjee Prasad**

Ph.D. (Electronics & Communication Engineering) (1979)

**Category 4:** Service to Society in India and abroad including support to the alma mater

**Mr. Surinder Chadha**

B.Sc. (Civil Engineering) (1959 – 1963)

**Category 5:** Distinguished service in any of the above categories by an illustrious alumna (Distinguished Alumna Award)

*(Under category: Service to Society in India and abroad, including support to the alma mater)*

**Ms. Anamika Jha**

B.E (Electronics & Communication Engineering) (2006 – 2010)

**Category 6:** Distinguished Alumni Award for Contributions to Engineering, Technology and Entrepreneurship (Distinguished Alumnus Award) –

**Mr. Amit Choudhary**

B.E (Information Technology) (2005 – 2009)

Institute also recognized the services of its teachers who served BIT Mesra and brought laurels to the institute:

The Distinguished Teacher Award for contribution towards academic excellence in teaching and research were given to 5 teachers.

- 1) **Prof. Subrato Sengupta** : Civil Engineering Department
- 2) **Prof. Ashok Misra** : Mechanical Engineering Department
- 3) **Prof. Surinder Kumar** : Production Engineering Department
- 4) **Prof. M Mukherjee** : Chemical Engineering
- 5) **Prof. R Sukesh Kumar** : Electronics & Communication Engineering

## 20. Birla Institute of Technology Mesra Alumni Association (BITMAA)

Our Alumni Association, Birla Institute of Technology Alumni Association (BITMAA) has been registered under Societies Act XXI, 1860 on 10th of January 2022. The PAN card and bank account is also operational. 12A and 80G certificates have been obtained.

## 21. Alumni Interactions

The university has taken several measures to ensure interaction with the alumni.

- ❖ Professor Anirudh Singh, BIT Mesra alumnus from the batch of 1997 – 2001 graduate in Polymer Engineering, interacted with the faculties and students on “The challenges and solutions to regenerating the urinary bladder” on 10th September 2022.
- ❖ An online seminar on Time-synchronized State-Estimation for Transmission and Distribution Grids using Machine Learning was conducted by Dr Anamitra Pal (EEE Department, 2004 – 2008 Batch) on 22nd October 2022.
- ❖ Prof Subbu Subramanian (MCA Graduate of 1988-91 Batch) delivered a talk on ‘Artificial Intelligence, Machine Learning, and its practical applications’ on 4th December 2022.



- ❖ Nikhil Verma (1996-2000 CSE) delivered an online seminar on “Evolving to a Decentralized Autonomous system” on 18th February 2023.
- ❖ Mr. Rajesh Sharma (1985 – 1989 CSE Graduate from BIT Mesra) delivered an online seminar on ‘Demystifying Artificial Intelligence’ on 18th March 2022.

### 22. Digital Infrastructure Augmentation Drive

The Birla Institute of Technology, Mesra made rapid strides in terms of augmenting its digital infrastructure. One of the major initiatives was in the deployment of the campus wide FTTH service. This has allowed most residential quarters on the campus to be connected by the Institute’s internet facilities thus providing faculty members and staff the opportunity of utilizing the Institute’s network resources from their places of residence. Complementary to this the Institute has also established the latest IP-based telephone exchange system. This shall allow the infiltration of the latest technology in this domain for use on the campus. As a part of this project, the Institute has already started providing intercom connections on their desks to all faculty members. This exercise should be completed in about a month’s time.

One of the major digital initiatives undertaken by the Institute was to adopt a new ERP system, in alignment with the vision of “One Institute One System” that we so rigorously follow. The new ERP shall be deployed across all our extension centers thus bringing all the campuses under the same operational umbrella. I am happy to report that within 4 months of the commencement of the work we have succeeded in performing the entire semester registration and admission process on the new ERP. This included all monetary transactions involved in the said processes. The institute shall also create a new chapter in its history as for the first time the new UG students joining the Institute shall be provided with a laptop by the Institute. In this regard, we have negotiated with multiple OEMS and have been able to obtain a very good price-to-configuration ratio for these laptops. I am sure this will be welcomed by our student community.

### 23. Placement Summary

One of the key factors which bring BIT into the limelight, as an institution of high repute, is its campus placement. The Campus Recruitment Program of BIT has further strengthened the value-added relationships with recruiters across a wide spectrum of industries. Every year new milestones are achieved which speak for the strength of the BIT student community as well as the diversity in academic programs.

In the Campus Recruitment Program of 2022-23, around 193 recruiters from different sectors visited for full-time recruitment and internship, achieving an overall target of 729 job offers. The Mesra campus boasts an average package of INR 14.70 lakhs per annum and the highest national salary of INR 51.00 lakhs per annum for BE Program.

### 24. Degree Summary

A total of 2818 degrees are being awarded comprising 56 Ph.D., 699 postgraduate, 1948 undergraduate degrees, and 115 diplomas.

#### Concluding Remarks

I would like to convey my sincere thanks to all the faculty members, staff and students for their constant efforts to achieve a greater milestone in building this great Institution. I also congratulate the faculties and students for their accolades and awards obtained during 2022-2023.

I express my thanks to all my colleagues, students and well-wishers of the Institute for their cooperation, help, and commitment to maintaining the high standards of the Institute. We are dedicated to continuing the rich tradition of our Institute, pursuing bigger aspirations and toiling hard in realizing the ideals set forth by our founding fathers in accordance with the highest international standards for tertiary level of technological education.

## INTRODUCTION



**The Main Building at BIT, Mesra, Ranchi**

Birla Institute of Technology, Mesra was established by the renowned philanthropist and visionary industrialist, Late Sri B. M. Birla in July 1955. Initially it was started as an affiliated college of the erstwhile Bihar University and later in 1960 upon creation of the new university in the state; its affiliation was transferred to Ranchi University. In pursuance of the recommendation of the Education Commission Government of India (1964 -1966) and on the basis of the report of a joint selection committee of the UGC and AUDIT, in March 1972, the Institute was granted the status of an 'Autonomous' college by making special provision in Bihar State University Act. The Chancellor of the University of Bihar made the rules for its governance.

The achievement of the Institute in terms of research and excellent academic program led to its attaining the status of a deemed university under section 3 of the UGC act in August 1986.

The Institute has constantly improved on its technical facilities as well as in academics in order to keep pace with the fast changing technology scenario, thereby acquiring a pride of place amongst the institutions offering technical education in the country. This Institute celebrated the golden jubilee of its establishment in the year 2005 reaffirming its commitment to the cause of higher education.

### Administration

B.I.T. Mesra is a "Deemed to be University" under sec. 3 of the of the U.G.C act 1956. It functions under the overall supervision, direction and control of a high-powered Board of Governors, comprising representatives of all the Ministry of Education, Government of India, the UGC, the state government, the Chancellor, the A.I.C.T.E, the Hindustan Charity Trust and the Institute faculty. The Governor of the state of Jharkhand is the Chancellor of the Institute. Shri C.K. Birla is the chairman of the Board of Governors, the composition of the Board of Governors is given in Annexure - II.

The Academic Council decides the academic policy of the Institute. It controls the approves the curriculum the courses and the examination results. It appoints committee like regulation committee for Undergraduate and Post-Graduate Courses, Semester Program Coordination Committee, Admission Committee, Scholarship Committee, Student Welfare Committee etc. and the Departmental Board of Studies to look into the specific academic matters arising from time to time. The teaching training



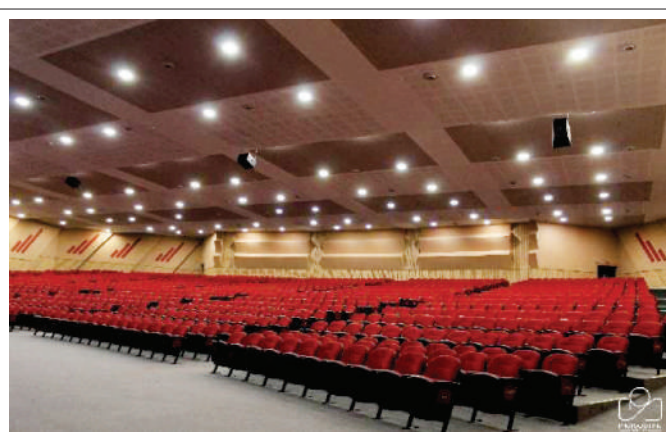
and research activities of various Departments at the Institute are constantly under review for both facilities and Standards. The Vice Chancellor of the Institute is the chairman of the Academic Council. The members of the Academic Council have been enlisted in Annexure - III.

The Finance Committee gives financial advice to the Institute in matters relating to building work as well. The composition of these committees have been given in Annexure-IV and V.

### The Main Campus, Mesra, Ranchi

The main campus of the Institute is fully residential and is spread over 780 acres. The main building of the Institute itself covers an area of 30,000 square meters and accommodates the various research and training laboratory, administrative offices and classrooms

The workshop Annex has built up area of 4,000 square meters. The laboratory and the office of Department of space engineering and rocketry are situated for security reason in a sub campus, about half a kilometer away from the main building the. The campuses is self contained amidst well laid lawn with its own protected water supply, marketing centre, dispensary, Bank and schools the first off campus was established in Ranchi City at Lalpur in 1976 with the experience to support with the spirit is it to support the continuing education program for the working engineers and professionals.



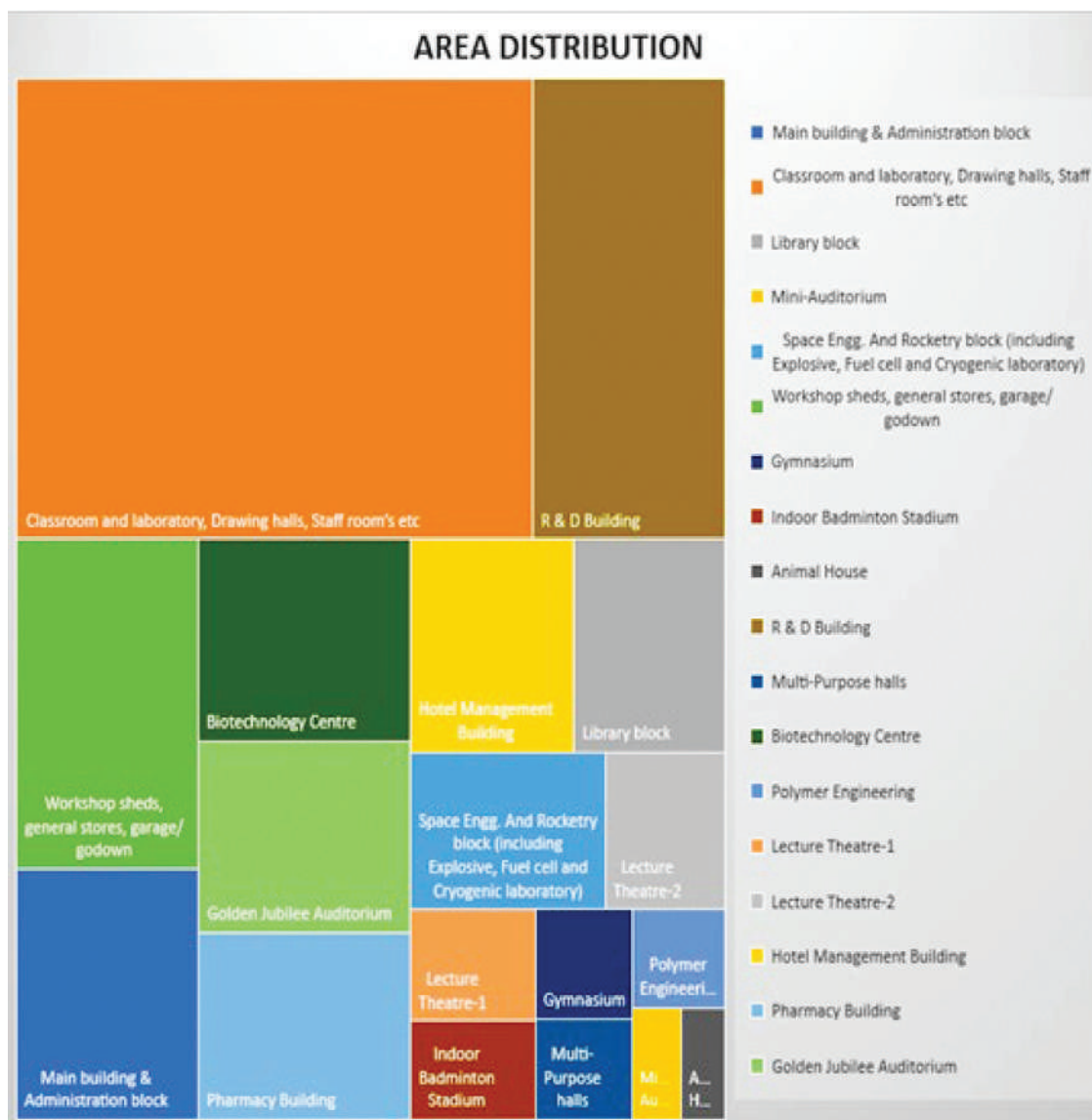
The G.P. Birla Auditorium

Institute Building	(Sq Mtrs.)
➤ Main building & Administration block	3700
➤ Classroom and laboratory, Drawing halls, Staff room's etc	19300
➤ Library block	2600
➤ Mini-Auditorium	450
➤ Space Engg. And Rocketry block (including Explosive, Fuel cell and Cryogenic laboratory)	2490
➤ Workshop sheds, general stores, garage/godown	4880
➤ Gymnasium	850
➤ Indoor Badminton Stadium	1000
➤ Animal House	400
➤ R & D Building	7200
➤ Multi-Purpose halls	785



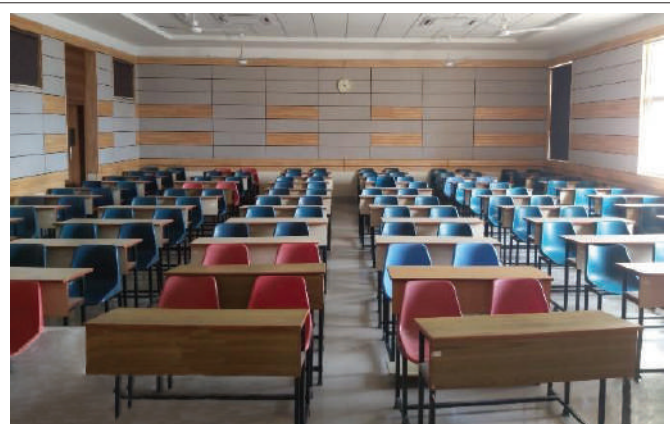
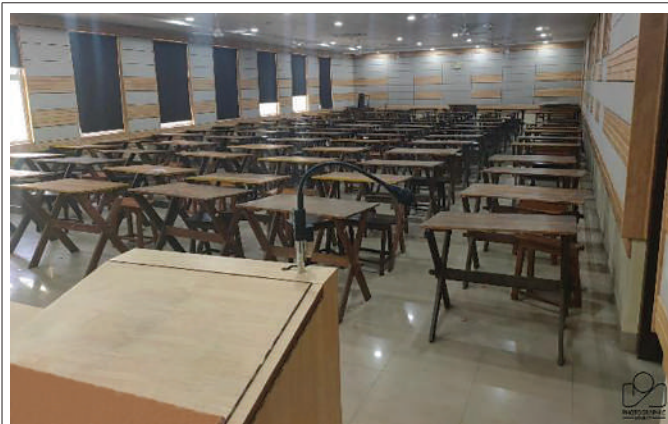
Institute Building	(Sq Mtrs.)
➤ Biotechnology Centre	3477
➤ Polymer Engineering	744
➤ Lecture Theatre-1	1143
➤ Lecture Theatre-2	1535
➤ Hotel Management Building	2835
➤ Pharmacy Building	3220
➤ Golden Jubilee Auditorium	3280
<b>Residential Complex</b>	
➤ Staff quarter in different categories	422
➤ Residential complex for supporting services Guards, Dairy Shopkeepers, Washer man etc.	116

The campus area distribution is shown in the following treemap visualization.





Lecture Halls



Design Studio and Lecture Hall



Staff Quarters and Club House



Student Hostels



SBI and UCO Banking Facilities



Transport Section



NCC Office

## Others

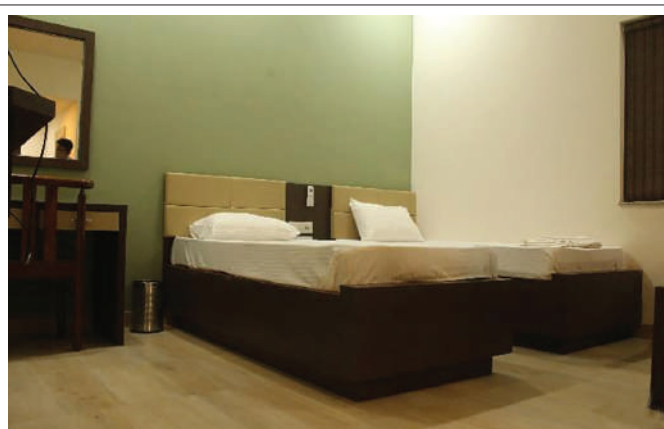
- Consumer's co-operative stores
- NCC Block
- Rifle Firing Range
- NCC Parade ground
- Club House



IC Arena and Cafeteria

### Guest Houses

The Institute maintains two Guest houses with a total numbers of 38 furnished rooms and one VIP Guest-House with 3 deluxe bedrooms to accommodate the Institute's Guests.



### Auditorium

The Institute building houses an auditorium having capacity of 350 persons. Larger scale events organized at Golden Jubilee Auditorium having capacity of about 3000 persons.



Mini Auditorium

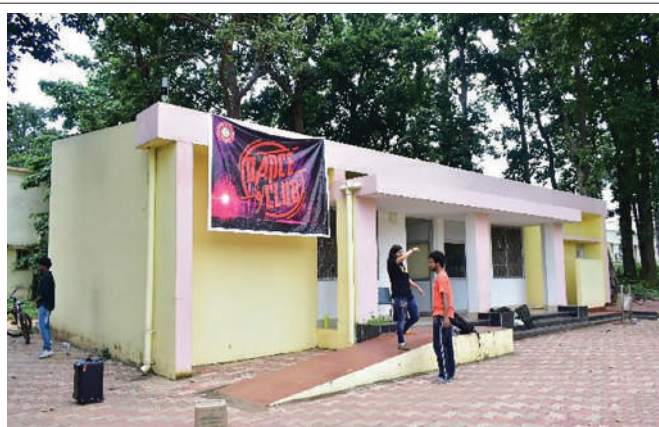
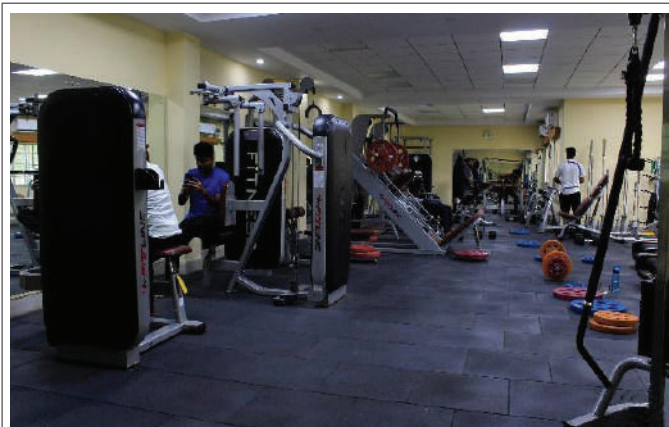


Sports Complex

### Games and Sports Complex

The Institute has Highway structure sports facilities for Indoor as well as outdoor games. These are as follows:

Gymnasium including Multi Gym	1
Stadium for track and field for sports/athletics	1
Cricket ground including net	2
Football ground	2
Hockey ground	2
Basketball courts	4
Volleyball courts	6
Tennis courts	6
Badminton courts	8
Kho - Kho ground	1
Kabaddi Ground	1



Gymnasium and Student Activity Room



The Indoor Stadium



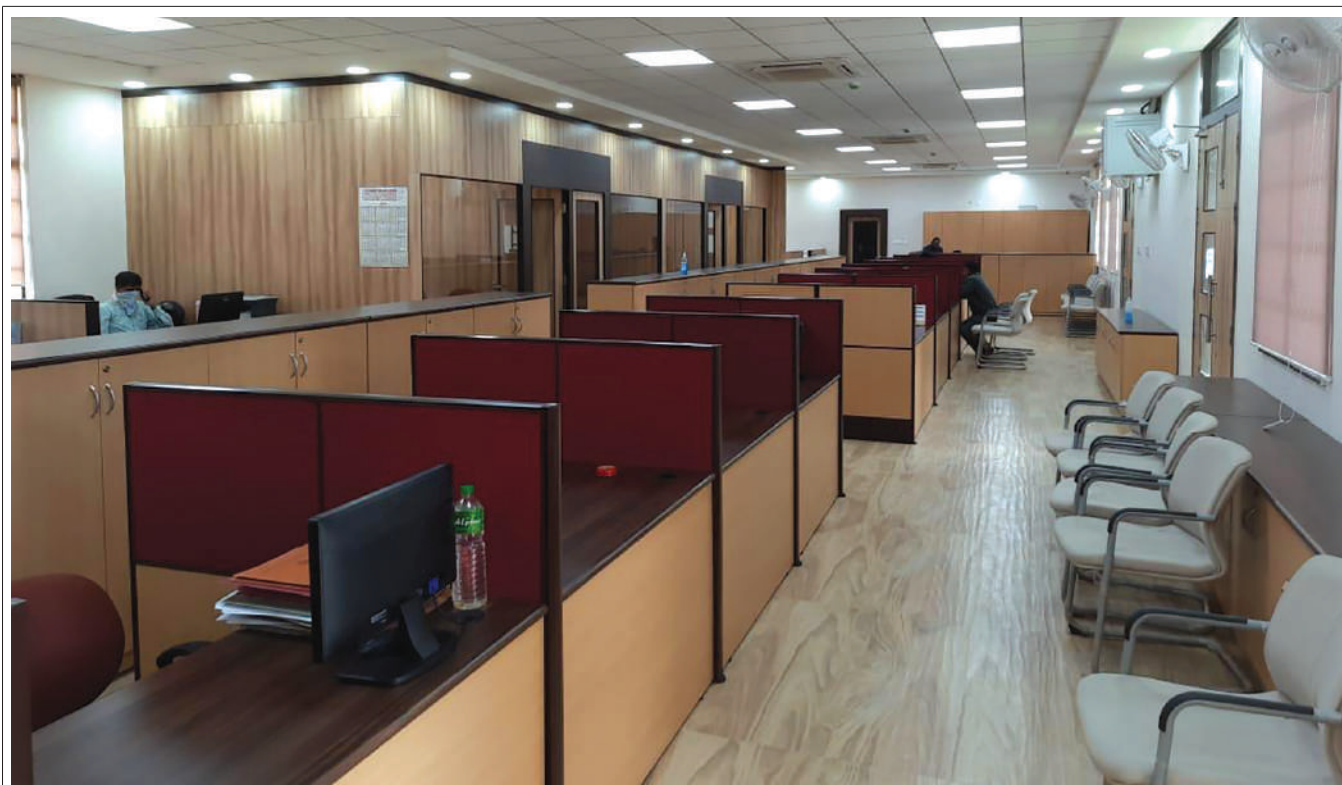
The Volley Ball Court



Seminar Hall



Dispensary



Administrative Offices

### Dispensary Cum Health Centre

#### Facilities available

- |                        |   |
|------------------------|---|
| ➤ OPD services         | 8 A.M to 12.00 Noon, 4.00 P.M to 8.00 P.M |
| ➤ Emergency services   | Round the Clock                           |
| ➤ Total number of Beds | 12 (Male-9, Female-4)                     |

### Shopping Centre

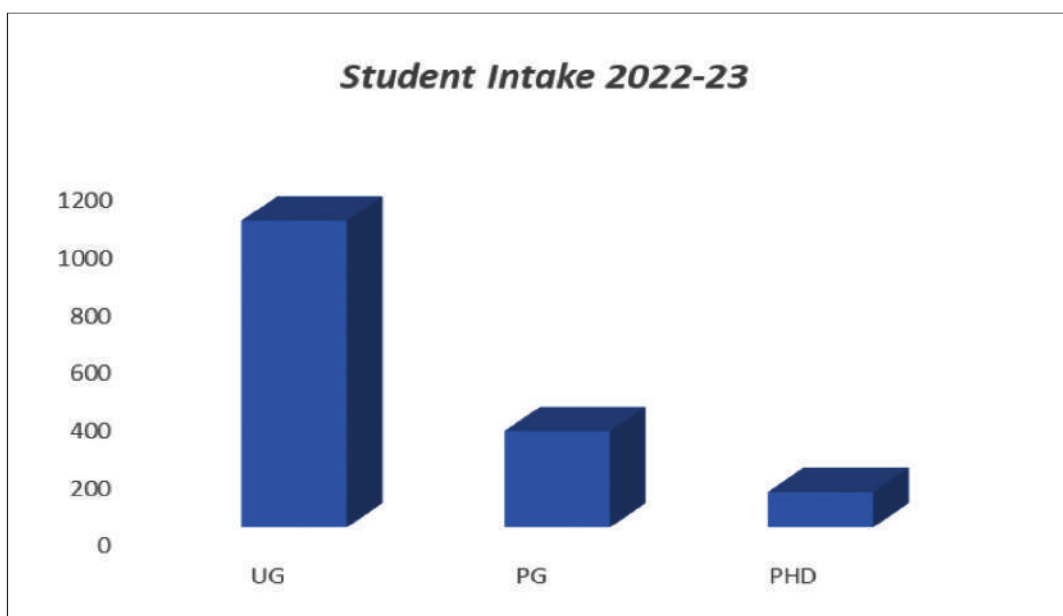
A well - maintained Cooperative Store provides the daily requirements of the campus residents. Over past few years, additional Shopping Complexes have been developed to meet the day today Sundry needs.



### Hostel Facilities for Students

Since the Institute is completely residential, it has 12 boys and 2 girls hostel for their accommodation. All rooms of the hostel are having internet facility. Borders participate in inter - hostel tournaments, indoor and outdoor games, various competitions and adventure trips. Each hostel is having its own well maintained dining hall and a mess committee being managed by the students under the supervision of Hostel Wardens.

### Student Intake and Admissions



### Details of UG Admission at Mesra Campus:

Sl.No.	Branch	Numbers of Admissions
1	B.Tech Biotechnology	37
2	B.Tech Chemical Engineering	132
3	B.Tech Civil Engineering	75
4	B.Tech Computer Science & Engineering	239
5	B.Tech Electrical & Electronics Engineering	70
6	B.Tech Electronics & Communication Engineering	140
7	B.Tech Artificial Intelligence and Machine Learning	69
8	B.Tech Mechanical Engineering	146
9	B.Tech Production Engineering	55
10	Bachelor of Architecture (B. Arch)	32
11	Bachelor of Pharmacy (B. Pharma)	48
12	Bachelor of Hotel Management & Catering Technology (BHMCT)	5
13	Integrated M.Sc. in Chemistry	5
14	Integrated M.Sc. in Mathematics & Computing	65
15	Integrated M.Sc. in Physics	13
16	Integrated M.Sc. in Food Technology	0
17	Integrated M.Sc. QE and DS	29
	<b>Total:</b>	<b>1160</b>



### Admission in PG Programmes 2022-23 (Mesra Campus)

Sl.No.	Branch		Numbers of Admissions
1	MBA		104
2	MCA		63
3	M.Tech Production and Industrial Engineering		0
4	M.Tech Bioengineering and Biotechnology		6
5	M.Tech Civil and Environmental Engineering	Soil Mechanics & Foundation Engineering	1
		Structural Engineering	2
		Environmental Science & Engineering	0
6	M.Tech Computer Science and Engineering		8
7	M.Tech Electrical and Electronics Engineering		6
8	M.Tech Electronics & Communication Engineering		5
9	M.Tech Mechanical Engineering		6
10	M.Tech Space Engineering & Rocketry (Aerospace Engineering)		2
11	M. Tech Remote Sensing		4
12	M.Tech Artificial Intelligence and Machine Learning (Cognizant only)		5
13	M.Tech Electric Vehicle Technology (Tata Motor only)		27
14	Pharmaceutical Sciences and Technology	M.Pharm in Pharmaceutics	11
		M.Pharm in Pharmaceutical Chemistry	10
		M.Pharm in Pharmacology	10
		M.Pharm in Pharmacognosy	3
		M.Pharm in Pharmaceutical Quality Assurance	8
15	Master of Urban Planning (MUP)		9
16	M.Sc. in Biotechnology		16
17	M.Sc. in Chemistry		3
18	M.Sc. in Geoinformatics		18
19	M.Sc. in Physics		6
	<b>Total :</b>		<b>333</b>

### Admission in Ph.D Programme - 2022 (Session MO-2022)

Sl.No.	Departments	Numbers of Admissions
1	Architecture	01
2	Bio - Engineering	13
3	Computer Science.& Engineering	08
4	Chemistry	04
5	Chemical Engineering	01



Sl.No.	Departments	Numbers of Admissions
6	Civil & Environmental Engineering	03
7	Electrical and Electronics Engineering	04
8	Electronics and Communication Engineering	06
9	Mechanical Engineering	00
10	Mathematics	01
11	Management	06
12	Production and Industrial Engineering	01
13	Physics	02
14	Pharmaceutical Science & Technology	08
15	Remote Sensing	02
16	Space Engineering and Rocketry	03
	<b>Total:</b>	<b>63</b>

#### Admission in Ph.D Programme - 2022 (Session SP-2023).

Sl.No.	Departments	Numbers of Admissions
1	Bio Engineering	06
2	Computer Science & Engineering	08
3	Chemistry	05
4	Department of Chemical Engineering	03
5	Civil & Env. Engineering	08
6	Electrical and Electronics Engineering	04
7	Electronics and Communication Engineering	01
8	Mechanical Engineering	03
9	Management	06
10	Production and Industrial Engineering	02
11	Physics	01
12	Pharmaceutical Sc. & Tech.	07
13	Remote Sensing	01
14	Space Engineering and Rocketry	01
15	Quantitative economics & data science	03
	<b>Total:</b>	<b>59</b>



## Award of Degree

Summary of no. of Degree Recipients' Course wise/Center wise							
32nd Convocation (Pass out from September 2021 to September 2022)							
S. No.	Center	Course					Total
		Ph.D	PG	UG	Diploma	Advanced Diploma	
1	Mesra	75	599	858	0	0	1532
2	Patna	11	29	449	0	0	489
3	Deoghar	2	0	123	0	0	125
4	Lalpur	10	184	389	0	0	583
5	Noida	9	51	77	0	0	137
6	Jaipur	7	55	189	0	0	251
7	University Polytechnic	0	0	33	209	0	242
	<b>Total</b>	<b>114</b>	<b>918</b>	<b>2118</b>	<b>209</b>	<b>0</b>	<b>3359</b>

BIRLA INSTITUTE OF TECHNOLOGY, MESRA-835215, RANCHI					
32nd CONVOCATION (MESRA)					
1	<b>Doctor of Philosophy</b>				<b>Total</b>
	Doctor of Philosophy (Architecture)				1
	Doctor of Philosophy (Engineering)				33
	Doctor of Philosophy (Management)				3
	Doctor of Philosophy (Pharmacy)				9
	Doctor of Philosophy (Science)				20
	Doctor of Philosophy (Technology)				9
		<b>Total</b>			<b>75</b>
2	<b>Post-Graduate Degrees</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Integrated Master of Science (Chemistry)	6	4	0	10
	Integrated Master of Science (Food Technology)	3	6	0	9
	Integrated Master of Science (Mathematics and Computing)	42	33	4	79
	Integrated Master of Science (Physics)	6	14	0	20
	Master of Business Administration	0	108	0	108
	Master of Computer Applications (2019 Batch)	0	49	0	49
	Master of Computer Applications (2020 Batch)	0	48	0	48
	Master of Engineering (Mechanical)	1	1	0	2
	Master of Pharmacy	45	0	0	45
	Master of Science (Biotechnology)	0	20	0	20
	Master of Science (Chemistry)	0	5	0	5
	Master of Science (Geo-Informatics)	0	10	0	10
	Master of Science (Mathematics)	0	1	0	1
	Master of Science (Physics)	0	7	0	7
	Master of Technology (Biotechnology)	0	7	0	7
	Master of Technology (Computer Aided Analysis and Design)	0	2	0	2
	Master of Technology (Civil Engineering)	0	20	0	20



	Master of Technology (Computer Science and Engineering)	0	13	0	13
	Master of Technology (Electronics and Communication Engineering)	0	19	0	19
	Master of Technology (Electrical Engineering)	0	36	0	36
	Master of Technology (Energy Technology)	0	3	0	3
	Master of Technology (Environmental Science and Engineering)	0	11	0	11
	Master of Technology (Information Security)	0	8	0	8
	Master of Technology (Information Technology)	0	10	1	11
	Master of Technology (Mechanical Engineering)	0	13	0	13
	Master of Technology (Remote Sensing)	0	6	0	6
	Master of Technology (Space Engineering and Rocketry)	0	22	0	22
	Master of Urban Planning	0	15	0	15
		<b>Total</b>			<b>599</b>
3	<b>Under-Graduate Degrees</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Bachelor of Architecture	23	10	2	35
	Bachelor of Technology (Biotechnology)	8	10	0	18
	Bachelor of Engineering (Biotechnology)	0	1	0	1
	Bachelor of Technology (Chemical Engineering)	31	13	0	44
	Bachelor of Engineering (Chemical)	0	3	2	5
	Bachelor of Engineering (Chemical and Polymer)	0	1	1	2
	Bachelor of Technology (Chemical-Plastics and Polymer)	14	10	0	24
	Bachelor of Engineering (Chemical-Plastics and Polymer)	1	0	1	2
	Bachelor of Technology (Civil Engineering)	31	16	0	47
	Bachelor of Engineering (Civil)	0	0	3	3
	Bachelor of Technology (Computer Science)	94	31	0	125
	Bachelor of Engineering (Computer Science)	0	1	2	3
	Bachelor of Technology (Electronics and Communication Engineering)	81	35	0	116
	Bachelor of Engineering (Electronics and Communication)	2	3	3	8
	Bachelor of Technology (Electrical and Electronics Engineering)	37	18	0	55
	Bachelor of Engineering (Electrical and Electronics)	1	5	0	6
	Bachelor of Technology (Information Technology)	38	21	0	59
	Bachelor of Engineering (Information Technology)	1	2	3	6
	Bachelor of Technology (Mechanical Engineering)	88	30	0	118
	Bachelor of Engineering (Mechanical)	0	2	0	2
	Bachelor of Technology (Production Engineering)	27	12	0	39
	Bachelor of Engineering (Production)	0	4	1	5
	Bachelor of Hotel Management and Catering Technology	13	12	4	29
	Bachelor of Pharmacy	49	3	1	53
	Bachelor of Science (Major in Chemistry)	7	0	0	7
	Bachelor of Science (Major in Food Technology)	2	0	0	2
	Bachelor of Science (Major in Mathematics and Computing)	12	0	0	12
	Bachelor of Science (Major in Physics)	29	3	0	32
		<b>Total</b>			<b>858</b>
		<b>Grand Total</b>			<b>1532</b>



BIRLA INSTITUTE OF TECHNOLOGY, MESRA-835215, RANCHI 32nd CONVOCATION (PATNA)					
1	<b>Doctor of Philosophy</b>				<b>Total</b>
	Doctor of Philosophy (Engineering)				7
	Doctor of Philosophy (Management)				4
		<b>Total</b>			<b>11</b>
2	<b>Post-Graduate Degrees</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Master of Business Administration	0	22	0	22
	Master of Technology (Computer Science and Engineering)	0	3	0	3
	Master of Technology (Electronics and Communication Engineering)	0	3	0	3
	Integrated Master of Science (Physics)	0	1	0	1
		<b>Total</b>			<b>29</b>
3	<b>Under-Graduate Degrees</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Bachelor of Architecture	1	2	4	7
	Bachelor of Business Administration	77	23	1	101
	Bachelor of Computer Applications	19	33	1	53
	Bachelor of Technology (Civil Engineering)	7	23	0	30
	Bachelor of Engineering (Civil)	0	5	0	5
	Bachelor of Technology (Computer Science and Engineering)	21	40	0	61
	Bachelor of Engineering (Computer Science)	0	0	1	1
	Bachelor of Technology (Electronics and Communication Engineering)	21	33	0	54
	Bachelor of Engineering (Electronics and Communication)	1	2	1	4
	Bachelor of Technology (Electrical and Electronics Engineering)	18	38	0	56
	Bachelor of Engineering (Electrical and Electronics)	0	5	1	6
	Bachelor of Technology (Information Technology)	11	17	0	28
	Bachelor of Engineering (Information Technology)	0	2	0	2
	Bachelor of Technology (Mechanical Engineering)	5	24	0	29
	Bachelor of Engineering (Mechanical)	0	6	2	8
	Bachelor of Technology (Production Engineering)	0	3	0	3
	Bachelor of Engineering (Production)	0	1	0	1
		<b>Total</b>			<b>449</b>
		<b>Grand Total</b>			<b>489</b>



BIRLA INSTITUTE OF TECHNOLOGY, MESRA-835215, RANCHI 32 <sup>nd</sup> CONVOCATION (DEOGHAR)					
1	<b>Doctor of Philosophy</b>				<b>Total</b>
	Doctor of Philosophy (Engineering)				2
		<b>Total</b>			<b>2</b>
2	<b>Under-Graduate Degrees</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Bachelor of Technology (Computer Science and Engineering)	21	25	0	46
	Bachelor of Engineering (Computer Science)	1	2	1	4
	Bachelor of Technology (Electronics and Communication Engineering)	14	17	0	31
	Bachelor of Engineering (Electronics and Communication)	1	3	0	4
	Bachelor of Technology (Electrical and Electronics Engineering)	5	9	0	14
	Bachelor of Engineering (Electrical and Electronics)	0	1	3	4
	Bachelor of Technology (Mechanical Engineering)	1	13	0	14
	Bachelor of Engineering (Mechanical)	1	2	1	4
	Bachelor of Technology (Production Engineering)	0	1	0	1
	Bachelor of Engineering (Production)	0	1	0	1
		<b>Total</b>			<b>123</b>
		<b>Grand Total</b>			<b>125</b>

BIRLA INSTITUTE OF TECHNOLOGY, MESRA-835215, RANCHI 32nd CONVOCATION (LALPUR)						
1	Doctor of Philosophy					Total
	Doctor of Philosophy (Management)					8
	Doctor of Philosophy (Technology)					2
			Total			10
2	Post-Graduate Degrees		ID	I	II	Total
	Integrated Master of Computer Applications		0	0	1	1
	Master of Business Administration		0	85	1	86
	Master of Computer Applications	2019 Batch/BL	0	33	1	34
	Master of Computer Applications	2020 Batch	0	63	0	63
			Total			184
3	Under-Graduate Degrees		ID	I	II	Total
	Bachelor of Business Administration		145	53	1	199
	Bachelor of Computer Applications		157	32	1	190
			Total			389
			Grand Total			583



BIRLA INSTITUTE OF TECHNOLOGY, MESRA-835215, RANCHI 32nd CONVOCATION (NOIDA)					
1	<b>Doctor of Philosophy</b>				<b>Total</b>
	Doctor of Philosophy (Engineering)				3
	Doctor of Philosophy (Management)				6
		<b>Total</b>			<b>9</b>
2	<b>Post Graduate Degrees</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Master of Business Administration	0	26	0	26
	Master of Computer Applications (2019 Batch)	0	9	0	9
	Master of Computer Applications (2020 Batch)	0	13	0	13
	Master of Technology (Computer Science and Engineering)	0	3	0	3
			<b>Total</b>		<b>51</b>
3	<b>Under-Graduate Degrees</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Bachelor of Business Administration	22	16	0	38
	Bachelor of Computer Applications	8	11	0	19
	Bachelor of Science (Animation and Multimedia)	14	6	0	20
			<b>Total</b>		<b>77</b>
		<b>Grand Total</b>			<b>137</b>

BIRLA INSTITUTE OF TECHNOLOGY, MESRA-835215, RANCHI 32nd CONVOCATION (JAIPUR)					
1	<b>Doctor of Philosophy</b>				<b>Total</b>
	Doctor of Philosophy (Engineering)				4
	Doctor of Philosophy (Management)				3
		<b>Total</b>			<b>7</b>
2	<b>Post Graduate Degrees</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Integrated Master of Computer Applications	0	0	1	1
	Master of Animation Design	0	4	0	4
	Master of Business Administration	0	8	0	8
	Master of Computer Applications (2019 Batch/BL)	0	13	1	14
	Master of Computer Applications (2020 Batch)	0	28	0	28
			<b>Total</b>		<b>55</b>
3	<b>Under-Graduate Degrees</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>



Bachelor of Business Administration	15	11	0	26
Bachelor of Computer Applications	23	6	1	30
Bachelor of Technology (Computer Science)	32	14	0	46
Bachelor of Engineering (Computer Science)	0	2	0	2
Bachelor of Technology (Electronics and Communication Engineering)	12	24	0	36
Bachelor of Engineering (Electronics and Communication)	0	2	0	2
Bachelor of Technology (Electrical and Electronics Engineering)	9	9	0	18
Bachelor of Engineering (Electrical and Electronics)	1	1	2	4
Bachelor of Science (Animation and Multimedia)	22	3	0	25
	<b>Total</b>			<b>189</b>
	<b>Grand Total</b>			<b>251</b>

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA-835215, RANCHI**  
**32nd CONVOCATION (UNIVERSITY POLYTECHNIC)**

1	<b>Under-Graduate Degrees</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Bachelor of Science (Medical Lab Technology)	29	4	0	33
		<b>Total</b>			<b>33</b>
2	<b>Diploma</b>	<b>ID</b>	<b>I</b>	<b>II</b>	<b>Total</b>
	Diploma in Medical Lab Technology	0	1	0	1
	Diploma in Automobile Engineering	34	10	4	48
	Diploma in Computer Engineering	16	9	4	29
	Diploma in Electrical and Electronics Engineering	25	3	0	28
	Diploma in Electronics Engineering	22	7	1	30
	Diploma in Manufacturing Engineering	6	2	2	10
	Diploma in Mechanical Engineering	48	12	3	63
		<b>Total</b>			<b>209</b>
		<b>Grand Total</b>			<b>242</b>



## LIST OF ELIGIBLE CANDIDATES FOR THE AWARD OF GOLD MEDAL

SL.NO.	ROLL NO.	NAME	CGPA	CENTER
<b>Bachelor of Architecture</b>				
1	BARCH/10011/17	SOHANTIKA KODIGANTI	8.72	MESRA
<b>Bachelor of Technology (Biotechnology)</b>				
2	BTECH/10642/18	HRITHIK BARADIA	8.82	MESRA
<b>Bachelor of Technology (Chemical Engineering)</b>				
3	BTECH/10307/18	AKSHAY SHARMA	9.15	MESRA
<b>Bachelor of Technology (Chemical-Plastics and Polymer)</b>				
4	BTECH/10654/18	AMAN CHOTIA	8.34	MESRA
<b>Bachelor of Technology (Civil Engineering)</b>				
5	BTECH/10503/18	ADITYA SINGH	9.17	MESRA
<b>Bachelor of Technology (Computer Science and Engineering)</b>				
6	BTECH/60130/18	ABHISHEK ANKIT	9.44	DEOGHAR
<b>Bachelor of Technology (Electrical and Electronics Engineering)</b>				
7	BTECH/15009/18	SHIVANI JHA	9.19	PATNA
<b>Bachelor of Technology (Electronics and Communication Engineering)</b>				
8	BTECH/10476/18	SAYANI DAS	8.96	MESRA
<b>Bachelor of Technology (Information Technology)</b>				
9	BTECH/10554/18	SHREYASH LADDHA	8.96	MESRA
<b>Bachelor of Technology (Mechanical Engineering)</b>				
10	BTECH/10030/18	ISHAN KASHYAP	9.39	MESRA
<b>Bachelor of Technology (Production Engineering)</b>				
11	BTECH/10440/18	SHUBHAM KUMAR	9.19	MESRA
<b>Bachelor of Hotel Management and Catering Technology</b>				
12	BHMCT/10020/18	BINA VERMA	8.66	MESRA
<b>Bachelor of Pharmacy</b>				
13	BPH/10059/18	LOVELY RIYA	9.24	MESRA
<b>Bachelor of Business Administration</b>				
14	BBA/15031/19	ANISHK KUMAR SINHA	9.68	PATNA
<b>Bachelor of Computer Applications</b>				
15	BCA/15002/19	SRISHTI KASHYAP	9.26	PATNA
<b>Bachelor of Science (Animation and Multimedia)</b>				
16	BAM/25003/19	SUCHETA VERMA	9.40	JAIPUR
<b>Bachelor of Science (Medical Lab Technology)</b>				
17	BMLT/27/19	SHARDA KUMARI	9.54	UNIV. POLY.

### Faculty Strength:

The faculty percentage in terms of total sanctioned post for last two years is presented in the following chart. A total of 322 faculties are present in Mesra (as on 30.06.2023) and a total of 565 including all off campus.



### Faculty Status

S.No.	Centre Name	Filled in Position (22-23)	Filled in Position (21-22) (as on May 2022)
		<b>Total</b>	<b>Total</b>
1	BIT Mesra	322	318
2	BIT Noida	36	31
3	BIT Patna	69	71
4	BIT Deoghar	50	48
5	BIT Jaipur	50	44
7	BIT Lalpur	38	37
	<b>TOTAL:</b>	<b>565</b>	<b>549</b>





## DEPARTMENTS



## Department of Architecture and Planning

### SECTION 1

### DEPARTMENTAL PROFILE

#### 1. About the Department:



#### Overview

The Department of Architecture & Planning was established at BIT Mesra in the year 1993, in keeping with the multifarious scope of Architecture & Planning as the art and science of designing spaces and adding value to a meaningful, built environment. It is a subject which is a combination of faculties of engineering, science as well as arts. The programme is a balanced combination of all these streams, yet follows a unique pedagogical methodology that is its hallmark.

#### Vision

The underlying vision for the Department of Architecture & Planning is to make the Department an academic knowledge hub that will actively contribute in the contemporary domain, by

- Providing innovative professionals who will contribute wholesomely to nation building.
- Providing individuals who can make significant contribution to the advancement of the society.
- Preparing students for leadership roles in the fields of Architecture & Planning.

#### Mission

The mission of the Department of Architecture & Planning is to foster a student-cantered educational program in architecture. The programme through its pedagogy which is heuristic and responsive to technological, cultural, and social environments,

seeks to offer a diverse, interdisciplinary and rigorous curriculum that will promote personal development and professional excellence.

#### Studying in the Department of Architecture & Planning

Department of Architecture & Planning, BIT Mesra, a leading centre for research and teaching in architecture, urban design, and sustainable design, is one of the top-ranking Architecture and Planning Department in the country. The department is noted for its meticulous teaching leading to fundamental, applied research and collaboration with leading experts from practice and industry. Since its inception in 1993, the Department has made a substantial contribution in the national and international arena by rendering academic and professional services.

The course structure is poised between theoretical knowledge and its practical application with ample application-based lab subjects evenly distributed throughout the syllabus. the practical orientation of working in an actual office is also taken care of in the Practical Training subject in the final year of the course.

Students also get a scope to exercise the applicability of the entire course learning in the Final Year Thesis dissemination.

Architecture students find rewarding employment in planning, design and construction industries.



Many pursue higher studies in India and abroad in City Planning, Urban Design, Landscape Architecture, Conservation, Construction Management - to name a few.

- 2023: Department of Architecture and Planning, BIT Mesra ranks 2nd among the top 30 Private Architecture Colleges In India.
- India Today 2023: Department of Architecture and Planning, BIT Mesra ranks 7th
- NIRF Rankings 2023: Department of Architecture and planning, BIT Mesra has been ranked 20th position in NIRF 2023
- IIRF 2022: Department of Architecture and Planning, BIT Mesra ranks 2nd by the Indian Institutional Ranking Framework
- Education World 2022: Department of Architecture and planning, BIT Mesra ranks 6th as per Education World 2022

### Programmes

1. The Department offers a five year Bachelor of Architecture course, admission to which is in conformation with the Regulations of Council of Architecture, India.

2. The department also offers the degree of Master of Urban Planning, approved by AICTE and the Institute of Town Planners, India (ITPI).
3. The Department of Architecture invites research applications throughout the year and currently, sixteen scholars are enrolled in its Ph.D. programme.

The Department has the rare feat of being the first ever academic institute of Architecture to be awarded research grants under the Department Research Support (DRS) level of the Special Assistance Programme (SAP) of the University Grants Commission (UGC).

The Department Organise STTP/Workshop at regular interval in aspects related to Architecture and Planning.

The department is also closely associated with training institutes like Sri Krishna Institute of Public Administrators (ATI), Ranchi and Government of Jharkhand. Faculty members of the department regularly visit these institutes to deliver lectures in varied subjects related to Architecture, Urban Planning, Transportation Planning, Disaster Management, GIS, Steel Structure and are involved with Consultancy Projects.

## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy)

#### a) Ongoing Projects:

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Interrelationship Between Socio-Economic Development, Social Innovation and Entrepreneurship Development: An Empirical Study on Small Heritage Town	PI – Dr. Satyaki Sarkar	ICSSR	09.03.2023	7,50,000/-	2 years



**b) Projects Completed**

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Formulation of Building Byelaws as Expert heritage Body for 07 ancient monuments and archaeological site	PI- Dr. Manjari Chakraborty Co PI- Dr. Satyaki Sarkar, Mr Ashutosh Kumar	National Monuments Authority	17/8/2022	Rs, 7,28,060	31/3/2023
2.	Upgradation of MUP Lab to 3D City Engine lab under MODROBS	Coordinator – Dr. Satyaki Sarkar	AICTE	13.07.2021	8,00,000/-	12.07.2023

**c) Consultancy Projects carried out/ongoing**

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator / Co-Investigator	Ongoing /Completed*
			from	to			
1.	Rehabilitation site at Dumariya village for shifting of project.	PI- Dr. Manjari Chakraborty Co PI-Dr. Rajan Chandra Sinha, Dr. Prashant Prasad, Ar. Abhinandan Bera	Eastern coalfields Limited, Coal India	24/4/2022	Rs 23,60,000	31/3/2023	

**SECTION 3**

**SEMINAR / CONFERENCE**

**3.1 Seminar / Conferences / Short – Term Courses Conducted**

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1	RACHNA – Resilient, affordable, and comfortable housing through national action training	Dr. Manjari Chakraborty	Ministry of Housing & Urban Affairs(MOHUA)	21st and 22nd July 2022
2	2-Day Online Symposium on “Perpetual Cities: Past, Present and Future.”	Ar. Shama Parween & Ar. Rizwan Kazmi	BIT Mesra (Departmental Annual Budget)	17-03-2023 to 18-03-2023



### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Smriti Mishra as a Resource Person	5-day Online Faculty Development Program on 'Urban Environment, Sustainability and Climate Change'	Council of Architecture Training and Research Center	Council of Architecture Training and Research Center in collaboration with Department of Architecture, NIT Hamirpur	Online mode	15th to 19th May 2023
2	Smriti Mishra	URGENT International Conference on 'Future is Urban' Urban Planning & Resilience, Nature Based Solutions and Capacity Building	Co-funded by the Erasmus+ Programme of the European Union	Institute of Architecture and Planning, Nirma University, Gujarat, Ahmedabad, India	Online mode	16th-18th December, 2022
3	Smriti Mishra	5th World Planning Schools Congress and 16th Asian Planning Schools Association Congress in Bali, Indonesia	Global Planning Education Association Network and Asian Planning Schools Association	Global Planning Education Association Network and Asian Planning Schools Association	Online mode	29 August to 02 September 2022
4	Smriti Mishra	7th International Conference on Engineering, Research and Innovations ISBN: 978-93-92105-03-6	Organized by: Terna Engineering college (TEC), Nerul, Navi Mumbai In association with: Institute For Engineering Research and Publication (IFERP)	Organized by: Terna Engineering college (TEC), Nerul, Navi Mumbai In association with: Institute For Engineering Research and Publication (IFERP)	Online mode	22nd-23rd September 2022
5	Smriti Mishra	The 9th International Conference on Hospitality and Tourism Management 2022 ISBN: 978-624-5746-28-6	The International Institute of Knowledge Management	The International Institute of Knowledge Management	Online mode	27th-28th October 2022



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
6	Dr. Bimal Chandra Roy	3rd International Conference on Advances in Science, Engineering & Management (ICASEM-2022) Title of Paper: "Resilient Sustainable Housing in Madhya Pradesh for Urban Poor: "Challenges and Opportunities"		Lords Institute of Engineering and Technology, Hyderabad. In association with Institute for Engineering Research and Publications (IFERP)	Lords Institute of Engineering and Technology, Hyderabad	18th -19th November 2022
7	Dr. Bimal Chandra Roy	3rd International Conference on Advances in Science, Engineering & Management (ICASEM-2022) Title of Paper: "Transformative Changes of Urban Core Resilience towards Urban Health and Environmental Sustainability" Received the best paper award		Lords Institute of Engineering and Technology, Hyderabad. In association with Institute for Engineering Research and Publications (IFERP)	Lords Institute of Engineering and Technology, Hyderabad	18th -19th November 2022
8	Dr. Bimal Chandra Roy	Urgent International Conference on 'Future is Urban' Title of Paper: A case study of Odisha's Institutional Framework for a Capacity- Building Strategy towards Tourists Destination Resilience		Institute of Architecture and Planning, Nirma University, Gujrat, Ahmedabad	Institute of Architecture and Planning, Nirma University, Gujrat, Ahmedabad	16th to 18th December 2022
9	Dr. Bimal Chandra Roy	Urgent International Conference on 'Future is Urban' Title of Paper: Climate Change Impact on Coastal Belt Resilience: A Case of a Coastal Belt of an Indian City		Institute of Architecture and Planning, Nirma University, Gujrat, Ahmedabad	Institute of Architecture and Planning, Nirma University, Gujrat, Ahmedabad	16th to 18th December 2022



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
10	Dr. Bimal Chandra Roy	1st International Conference on Sci/ Tech and Engineering (ICSTE-2023)		National Institute of Technology, Manipur	National Institute of Technology, Manipur	17th to 18th February 2023
11	Dr. Bimal Chandra Roy	National Conference on Innovations in Civil Engineering through Sustainable Technologies (NICEST-2023)		Department of Civil Engineering, Mahatma Gandhi Institute of Technology (MGIT), Gandipet, Hyderabad	Department of Civil Engineering, Mahatma Gandhi Institute of Technology (MGIT), Gandipet, Hyderabad	09th to 10th June 2023
12	Dr. Bimal Chandra Roy	One Day Symposium, "Perpetual Cities: Past Present and Future" Title of Presentation: Cultural and Heritage Tourism- A tool for sustainable development		Department of Architecture and Planning, B.I.T Mesra, Ranchi, Jharkhand	Department of Architecture and Planning, B.I.T Mesra, Ranchi, Jharkhand	17th to 18th March 2023
13	Dr. Rajan Chandra Sinha	Planning strategies for open recreational areas-A case study Nagpur	-----	School of Architecture, Planning and Design, DIT University, Dehradun	Dehradun	15-17 September 2022
14	Dr. Rajan Chandra Sinha	Neighbourhood Livability index development and residential land value incorporation	-----	ICERI-2022 Terna Engineering College	Navi Mumbai	22-23 September 2022
15	Ritu Agrawal	Online Course on "Applications of Machine Learning In Urban Studies"	Free	ISRO and IIRS, Dehradun	Online	5 -9 June- 2023



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
16	Ritu Agrawal	FDP on "CROSSING THE FIRST MILESTONE IN RESEARCH - Tips and Techniques for a Thorough Literature Review and Formulating Research Topic in the areas of Architecture, Urban Planning, and Urban Design"	Self	Council of Architecture Training and Research Center, Pune in Collaboration with ICFAI School of Architecture, Hyderabad	Online	17 – 21 April 2023
17	Ritu Agrawal	2-Day Online Symposium on "Perpetual Cities- Past, Present and Future"	Free for the faculty of the department	Department of Architecture and Planning, Birla Institute of Technology, Mesra, Ranchi	Online	17 -18, March 2023.
18	Ritu Agrawal	'Application of Remote Sensing and GIS in Urban Planning'	Self	Department of Architecture and Planning, National Institute of Technology, Patna and ITPI Bihar Regional Chapter	Hybrid, But I attended online	15 -19 March 2023.
19	Ritu Agrawal	'Pan Asia Africa Training on Safe Drinking Water, Greywater and Faecal Sludge Management in Rural Areas',	Self	School of Water and Waste, Centre of Science and Environment, India	Online Course	7 - 21, October 2022.
20	Ritu Agrawal	6th International Conference On Mathematical Modelling, Applied Analysis And Computation (ICMMAAC-23), organised by	Institute	Department of Mathematics, JECRC University, Jaipur,	Hybrid, But I attended online	3-5 August 2023.



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
21	Ritu Agrawal	International Conference on "Future is Urban (ICFU '22), Urban Planning & Resilience, Nature Based Solutions and Capacity Building"	Self	NIRMA University, Ahmedabad,	Hybrid, But I attended online	16- 18 Dec 2022
22	Ritu Agrawal	International Conference on Global Mental Health and Public Health Challenges and Innovation (GMHPHCI'22), organised by, on	Self	Indian Institute of Information Technology, Ranchi, Jharkhand	Offline	25 - 27 Nov, 2022.
23	Ritu Agrawal	International Conference on Environment, Forestry & Sustainable Agriculture	Self	Department of Botany, St. Xavier's College, Ranchi in association with International Academy of Science & Research (IASR), Kolkata, West Bengal ,In collaboration with Confederation of Indian Universities (CIU), New Delhi	Offline	14- 16 Nov, 2022
24	Ritu Agrawal	2nd International Conference on Changing Dimensions of the Built Environment	Self	School of Architecture, Planning and Design, DIT University, Dehradun	Online	15 -17 September, 2022.
25	Tiwari Pavan Kumar	One Week Workshop cum Training on Advanced Instruments for Geospatial Analysis.	BIT Mesra.	Department of Remote Sensing, BIT Mesra.	BIT Mesra	20/03/23 to 24/03/23.
26	Tiwari Pavan Kumar	One Day Workshop on Enriching the Teaching-Learning Process.	BIT Mesra	Value Education Cell, BIT Mesra.	BIT Mesra	10/05/23



## वार्षिक प्रतिवेदन 2022-2023

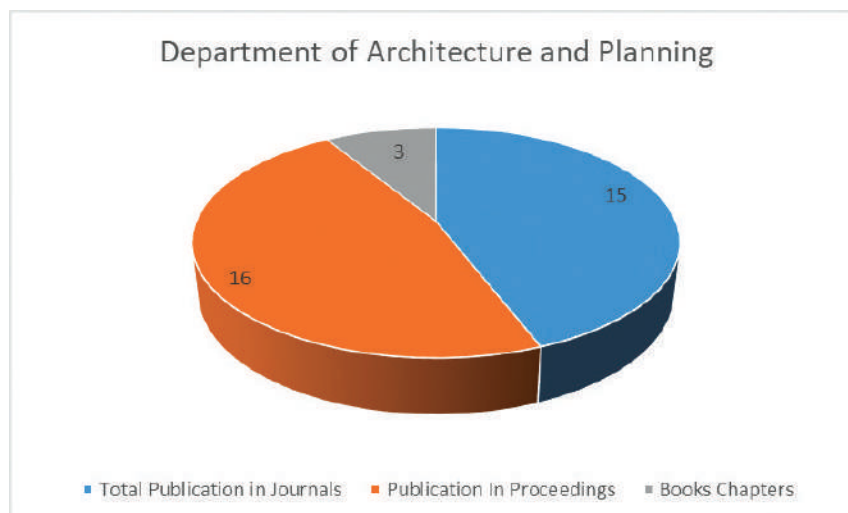
Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
27	Anjali pathak	International Conference on 'Future is Urban'		Institute of Architecture & Planning, NIRMA University, Gujarat	NIRMA University, Gujarat	16-18 December 2022
28	Anjali pathak	Crossing the First Milestone in Research		COA-TRC & ICFAI School of Architecture, Hyderabad	Online	17-21 April 2023
29	Anjali Pathak	FDP – Advanced research Capabilities in Architecture & Planning		Dr APJ Abdul Kalam Technical University, Lucknow	Online	20-24 February 2023
30	Anjali Pathak	Perpetual Cities – Past, Present, and Future		BIT Mesra, Ranchi	Online	17-18 March 2023
31	Ar. Rizwan Kazmi	Advanced Research Capabilities in Architecture & Planning	Dr. APJ Abdul Kalam Technical University, Lucknow	Faculty of Architecture & Planning, Dr. APJ Abdul Kalam Technical University, Lucknow	Online	20-02-2023 to 24-02-2023
32	Ar. Rizwan Kazmi	Module 4: Instructional Planning and Delivery	AICTE	National Initiative for Technical Teachers Training	Online Course (05 months: September 2022 to Jan 2023)	February 2023 (Result)
33	Ar. Rizwan Kazmi	Module 5: Technology Enabled Learning and Life-Long Self Learning	AICTE	National Initiative for Technical Teachers Training	Online Course (05 months: September 2022 to Jan 2023)	February 2023 (Result)
34	Ar. Rizwan Kazmi	National Conference on Energy Efficiency in Planning for Enhanced Urban Resilience	NIDM, Ministry of Home Affairs, GoI	SPA Vijaywada & NIDM, GoI	SPA Vijaywada	26-04-2023 to 27-04-2023
35	Shama Parween	Advanced Research Capabilities in Architecture & Planning	Dr. APJ Abdul Kalam Technical University, Lucknow	Faculty of Architecture & Planning, Dr. APJ Abdul Kalam Technical University, Lucknow	Online	20-02-2023 to 24-02-2023



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
36	Shama Parween	9th International Conference on Environmental Science and Technology (ICOEST)		National University of life and environmental sciences of Ukraine, International University of Sarajevo, Institute of Environmental Science & Technology, California State University, Northridge, Economic Cooperation Organization,	Sarajevo, Bosnia & Herzegovina (Hybrid)	17/05/2023 to 21/05/2023
37	Prashant Prasad	Training of Trainers (ToT) Workshop on Architecture Design Studio	NDMA	IIT Bombay & GGSIPU New Delhi	GGSIPU New Delhi	17-19 Jan 2023
38	Ar. Ashutosh Kumar	KSHITIJ ERC 2022	IIA	IIA Odisha	Mayfair Hotel, Bhubaneswar	17/12/22 to 19/12/22
39	Ar. Ashutosh Kumar	Workshop on Energy Simulation	BEE, ministry of Power GOI	JREDA	Conference Hall, New Project Bhawan Ranchi	28/02/23 to 01/03/23
40	Ar. Ashutosh Kumar	Recent Research Techniques in Architecture and Planning	NIT Patna	Department of Architecture and Planning NIT Patna	ONLINE MODE	15/05/23 to 19/05/23

## SECTION 4

## RESEARCH PUBLICATIONS





## SECTION 5

## AWARD / PATENT / COLLABORATIONS

### 5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
01	Dr. Bimal C. Roy	Best Paper	3 <sup>rd</sup> International Conference on Advances in Science, Engineering & Management (ICASEM-2022), Lords Institute of Engineering and Technology, Hyderabad in association with Institute for Engineering Research and Publication	International	18-11-2022 to 19-11-2022
02	Dr. Tiwari Pavan Kumar.	Best Paper and Special Mention Awards.	2nd International Conference i-Converge 2022. DIT University, Dehradun.	International	15-17 September 2022.
03	Ar. Ritu Agrawal	Best Paper and Special Mention Awards.	2nd International Conference i-Converge 2022. DIT University, Dehradun.	International	15-17 September 2022.
03	Ar. Rizwan Kazmi	Summer Faculty Research Fellow	IIT Delhi	International	16-05-2023 to 06-07-2023

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS / DAS

### 6.1 Departmental Students' Activities (Please arrange in reverse chronological order: Latest first)

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1.	Model Making Workshop for UG Students	Student's Society of Architecture	NA	07.02.2023
2.	Lecture on Thesis Writing & Compilation, Dr. Fuzail Javed , Assist. Prof. of Architecture, IKG Punjab Technical University	NA	Ar. Rizwan Kazmi	20.02.2023
3.	Lecture on Road Safety by Dr. Roshan Jose (Industry Expert) Associate Director, Save Life Foundation , New Delhi	NA	Dr. Prashant Prasad	02.03.2023
4.	2D CNC Cutting and Engraving Workshop	NA	Ar. Ritu Agrawal, Dr. Priyank Kumar and Mr. Mrinal Kumar Pathak	02.03.2023



Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
5.	Two-day Online Symposium titled "Perpetual Cities: Past, Present and Future"	NA	Ar. Shama Parween & Ar. Rizwan Kazmi	17.03.2023 – 18.03.2023
6.	ECBC and Energy Simulation of Commercial Buildings	NA	Ar. Apurv Asish	16.03.2023 – 17.03.2023
7.	ECBC and Energy Simulation of Commercial Buildings	NA	Ar. Apurv Asish	16.03.2023 – 17.03.2023
8.	Architectural Photography Workshop	NA	Ar. Apurv Asish	07.04.2023 – 08.04.2023
9.	AVANT-GARDE COLLOQUIUM (2023) Ar. Rajeev Kathpalia of Vastu Shilpa Consultants and Ar. Suditya Sinha	NA	Ar. Apurv Asish	09.04.2023
10.	Colloquium on Parametricism and Computational Design	NA	Ar. Apurv Asish	14.04.2023

## 6.2. List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Dr. Smriti Mishra	Associate Prof. & Head
2.	Dr. Manjari Chakraborty	Professor & DoIP
3.	Dr. Satyaki Sarkar	Professor
4.	Dr. Bimal Chandra Roy	Associate Prof.
5.	Dr. Rajan Chandra Sinha	Associate Prof.
6.	Ar. Ritu Agrawal	Assist. Prof.
7.	Ar. Anuj Kumar Toppo	Assist. Prof.
8.	Mr. Mrinal Pathak	Assist. Prof.
9.	Ar. Apurv Ashish	Assist. Prof.
10.	Ar. Anila S. Surin	Assist. Prof.
11.	Dr. Tiwari Pavan Kumar	Assist. Prof.
12.	Ar. Anjali Pathak	Assist. Prof.
13.	Ar. Rizwan Kazmi	Assist. Prof.
14.	Ar. Shama Parween	Assist. Prof.
15.	Dr. Prashant Prasad	Assist. Prof.
16.	Ar. Abhinandan Bera	Assist. Prof.
17.	Ar. Ashutosh Kumar	Assist. Prof.



### 6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Ar. Sudipa Chakraborty	Adjunct Professor	Department of Architecture & Planning BIT, Mesra Ex-Chief Architect, CMPDIL, Ranchi.
2.	Prof. Chetan V. Vaidya	Adjunct Professor	Department of Architecture & Planning BIT, Mesra Ex Director School of Planning and Architecture (SPA), New Delhi

### 6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
<b>Internal Member</b>			
1	Dr. Smriti Mishra	Associate Prof. and Head, Architecture & Planning	Ex-officio Chairman
2	Prof. Manjari Chakraborty	Professor and Dean, Architecture & Planning	Member
3	Dr. Satyaki Sarkar	Professor, Architecture & Planning	Member
4	Dr. Bimal Chandra Roy	Associate Prof., Architecture & Planning	Member
5	Dr. Rajan Chandra Sinha	Associate Prof., Architecture & Planning	Member
6	Prof. Akhoury Pramod Krishna	Prof., Dept. of Remote Sensing	Member(Allied Dept.)
7	Prof. Sudeshna Chakravarty	Prof. Dept. of Civil & Environment Engg.	Member(Allied Dept.)
8	In-charge	Dept. of Architecture, BIT Patna	Member
9	Final Yr. MUP (PG) student	Dept. of Architecture & Planning	Student Member
10	Final Yr. B. Arch (UG) student	Dept. of Architecture & Planning	Student Member

#### External Member

Sl. No.	Name of Member,	Designation, Institute/Company, Full Address	Role
1	Prof. Chetan Vaidya	Ex-Director, School of Planning and Architecture, New Delhi	External Member
2	Prof. Gaurav Raheja	Professor, Department of Architecture & Planning, Indian Institute of Technology, Roorkee	External Member
3	Ar. Sudipta Chakraborty	Ex-Chief Architect, CMPDIL, Ranchi	External Member
4	Dr. Mini Malhotra	Research & Development Wing, Oak Ridge National Laboratory, Tennessee, USA	External Member



## SECTION 7

## OTHER INFORMATION

## 7.1 Publication by students, if any

**Publications in Journals :(International/ National)**

1. Aditi Nag, Satyaki Sarkar, (2022). Developing an Integrated Model for Assessment of Tourism, Transportation and Economy in Small Heritage Sites, Int. J. of Technological Learning, Innovation and Development (IJTLID), 14 (3), 272 – 296 (Inderscience) (SCOPUS) [ISSN: 1753-1950] DOI: 10.1504/IJTLID.2022.125694
2. Basu, D. and Mishra, S. (2023). A Comprehensive Literature Review Approach for Assessing the Probable Impact of Post-Reclamation Strategies Applied to Abandoned Mines. Journal of Mining and Environment. Vol. 14, no. 3, 2023, 871-896, doi:10.22044/jme.2023.13007.2356
3. Basu, D. and Mishra, S. (2023). Review of Mining Tourism and Destination Image Positioning – Case Study: India. Journal of Mining and Environment <https://doi.org/10.22044/jme.2023.13008.2357>
4. Nag, A., Choudhary, N., Sinha, D., Sinha, A. P., & Mishra, S. (2023). Predictive Analytics- New Business Intelligence in SCM. International Journal of Value Chain Management. DOI: 10.1504/IJVCM.2023.10055736
5. Nag, A., Mishra, S. (2023). Stakeholders' perception and competitiveness of heritage towns: A systematic literature review. Tourism Management Perspectives. Volume 48, September 2023, 101-156. <https://doi.org/10.1016/j.tmp.2023.101156>
6. Vivek Garg, Ar. Mitali Madhusmita, Dr. Bimal Chandra Roy (2022). Identification of Indicators for Affordable Housing in Indian Scenario. CSVTU Research Journal. Vol 11(1). 1-11.
7. Parween. S., Sinha, Rajan C., Identification of Indicators for Developing an Integrated Study on Urban Water Supply System, Planning, and Management, Journal of Environmental Engineering, Vol.149, No. (3), January 2023. (ASCE) (ISSN-0733-9372, 1943-7870) (SCIE) DOI: 10.1061/joeedu.eeeng-7062
8. Antriksh Khadgata, Tiwari Pavan Kumar, Apurv Ashish (2023). The relevance of Manasara planning model in walled cities of India: An assessment review of Rajasthan. International Journal for Multidisciplinary Research (IJFMR).

Volume 5, Issue 3, May-June 2023.

9. Chatterjee S.&Kazmi R., Vernacular Style of Architecture and Architectural Elements in Bengal, India, International Journal of Creative Research Thoughts, Volume 10, Issue 9, ISSN: 2320 – 2882

**Publications in Proceedings: ( International/ National)**

1. Kazmi R. and Chakraborty M., Circular Economy in the built environment: a systematic review, National Conference on Energy Efficiency in Planning for enhanced urban resilience, National Institute of Disaster Management, MoHA, GoI, in collaboration with School of Planning and Architecture Vijaywada, held from 26-04-2023 to 27-04-2023, Edition 2: E-Proceedings
2. Nag, A., Mishra, S. (2022). Planning and Implementation of Tourism Evaluation Tool to Town Planning and Infrastructure for Competitive Place-Making. 7th International Conference On Engineering Research and Innovations. ISBN: 978-93-92105-03-6
3. Nag, A., Mishra, S. (2022). Designing an Integrated Tourism Evaluation Model to Assess the Competitiveness of Tourism Destinations. The 9th International Conference on Hospitality and Tourism Management 2022. ISBN: 978-624-5746-28-6
4. Basu, D. and Mishra, S. (2022). Impacts of Intensive and Non-intensive Recreation/ tourism-based Reclamation Strategy in Abandoned Mines. 7th International Conference on Engineering Research and Innovations. ISBN: 978-93-92105-03-6
5. Basu, D. and Mishra, S. (2022). Impact of Reclamation Strategies based on Tourism and Recreational Activities in Abandoned Mines. The 9th International Conference on Hospitality and Tourism Management 2022. ISBN: 978-624-5746-28-6
6. Ahmad R. &Kazmi R., Placemaking Approach for Sustainable Urban Regeneration - a Case of the Yamuna Riverfront, Annual Research on Cities Summit: 7.0, International Conference: Sustainable Urbanism in the Global South, School of Human Settlements, XIM University, Bhubaneswar, 10-11 February 2023, ISBN: 978-81-954005-2-2, DOI: 10.5281/zenodo.7648092



7. Das D., Venkatraman M., and Kazmi R., Visual and performing arts as a design research tool for interpretation and accomplishment of Transgender Inclusivity Goals, 3rd International and Interdisciplinary Conference on Spatial Methods for Urban Sustainability (SMUS Conference), Indian Institute of Technology Roorkee (IIT Roorkee, India) held from 20 to 26 February 2023, E-Proceedings
8. Parween S. & Sinha R.C. (2023), Water Security in Urban India and Way forward-a case of Delhi and Ranchi"Book of abstracts of 9th International Conference on Environmental Science and Technology (ICOEST) ISBN 978-605-81426-5-7
9. Parween S. & Sinha R.C. (2023), Identification of key performance indicators using Delphi Method for integration of urban water supply system, Planning and Management, Book of abstracts of 9th International Conference on Environmental Science and Technology (ICOEST) ISBN 978-605-81426-5-7
10. Chandrayan V, Prasad. P., & Sarkar S. (2023) Approaching Mobility for Indian Smart City - Study of Bhubaneswar. ARCS 7.0, Sustainable Urbanism in the Global South, ISBN: 978-81-954005-2-2, DOI: 10.5281/zenodo.7648092
11. Boricha J., Sarkar S., & Prasad P. (2023) Place-Making in an Urban Core: Case of Surat. ARCS 7.0, Sustainable Urbanism in the Global South, ISBN: 978-81-954005-2-2, DOI: 10.5281/zenodo.7648092
12. Jasoriya K., & Prasad P. (2023). Optimizing crowd flow in grandstand arrangements. ARCS 7.0, Sustainable Urbanism in the Global South, ISBN: 978-81-954005-2-2, DOI: 10.5281/zenodo.7648092
13. Choudhary N., & Prasad P. (2023). Geometry augmentation for spatial development to optimize pedestrian flow and circulation. ARCS 7.0, Sustainable Urbanism in the Global South, ISBN: 978-81-954005-2-2, DOI: 10.5281/zenodo.7648092
14. Chandrayan V, Prasad. P., & Sarkar S. (2023) Infusing Intelligence in Mobility Planning of Existing city Structure - Case of Bhubaneswar. IBSR, IIT Kharagpur.
15. Boricha J., Sarkar S., & Prasad P. (2023) An Approach Towards Reclaiming Streets in Inner Urban Core of Surat. IBSR, IIT Kharagpur.

### 7.2 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
01	Sohantika Kodiganti	IIA Medal for best outgoing student 2022	Indian Institute of Architects	07-04-2023, BIT Mesra
02	Razi Ahmad (B. Arch. 9th Semester)	Best Paper Presentation (Third position in Annual Urban Research Award: AURA)	Annual Research on Cities Summit: 7.0, International Conference: Sustainable Urbanism in the Global South, School of Human Settlements, XIM University, Bhubaneswar	10-02-2023 to 11-02-2023, XIM University, Bhubaneswar
03	Ar. Varsha Vinod (MUP)	Best Paper and Special mention Award	2nd International Conference, i-Converge 2022, DIT University, Dehradun	15-09-2022 to 17-09-2022, DIT University, Dehradun
04	Ar. Mitali Madhusmita (PhD)	Best Paper	3rd International Conference on Advances in Science, Engineering & Management (ICASEM-2022)	18-11-2022 to 19-11-2022, Lords Institute of Engineering and Technology, Hyderabad
05	Sri Sahiti Vemavarapu	CHARPAK SCHOLARSHIP LAB	French Government	23-03-2023



Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
06	Swarnav Nayan and Rohan Premkumar (B. Arch. 6th Semester)	Jury Commendation (Third at East-Zonal level)	Saint Gobain (Transparence)	02-02-2023, KIIT Bhubaneswar
07	Swarnav Nayan, Dristi Lahkar and Swarnim Kiran (B. Arch. 4th Semester)	Honourable Mentions (International Design Competition: Future Material Pavilion)	Archdais.com	15-08-2022, Mumbai
08	Harsh Kumar Singh and Devesh Kedia (B. Arch. 4th Semester)	Honourable Mentions (International Design Competition: Future Material Pavilion)	Archdais.com	15-08-2022, Mumbai
09	Riddhi Sharma	Top 50: Competition The Great Render and Visualization	Archdais.com	26-01-2023
10	Riddhi Sharma	Lixil mentorship program 2023 under architect Qutub Mandviwala	NASA and LIXIL	01-07-2023
11	Dipansh Sah	Top 20, Portfolio competition by Archmello	Archmello	21-01-2023
12	Riddhi Sharma, Urvi Priyadarshini, Aditya Aryan, Shivanshi Malik, Shireen Gajbhiye	First prize in RACHNA Low-cost housing challenge	MoHUA& BMTPC	21-07-2022 & 22-07-2022
13	Tanvi Ritika Tigga and Rupam Sharma	First Prize in Academic Tower Design	BIT Mesra	19-08-2023
14	Riddhi Sharma and Nayanthara R.	Second Prize in Academic Tower Design	BIT Mesra	19-08-2023
15	Ananya Chaudhary and Ritika Chandra	Third Prize in Academic Tower Design	BIT Mesra	19-08-2023


### 7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1	Ar. Monish Siripurapu. Principal Architect and founder of ANT Studio,	14 /05/ 2023	



## वार्षिक प्रतिवेदन 2022-2023

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
2.	Ar. Rajeev Kathpalia of Vastu Shilpa Consultants and Ar. Suditya Sinha o	09/04/2023	
3.	1. Dr. Satyaki Sarkar, BIT, Mesra 2. Dr. Bimal C. Roy, BIT, Mesra 3. Dr. Joy Sen, IIT Kharagpur 4. Dr. Mohammed Firoz, NIT Calicut 5. Dr. Nisar Khan, JMI New Delhi 6. Dr. Harshit Sonam Lakra, IIT, Roorkee 7. Ar. Somi Chatterjee, Creative Footprints, New Delhi 8. Ar. Adarsha Kapoor, Creative Footprints, New Delhi 9. Ar. Nidhi Batra, SDP, New Delhi 10. Dr. Rohit Jigyasu, ICCROM, Rome, Italy	17.03.2023 – 18.03.2023	

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
4.	Dr. Roshan Jose (Industry Expert) Associate Director, Save Life Foundation, New Delhi	02.03.2023	 
5.	Dr. Fuzail Javaid, Assist. Prof. of Architecture, IKG Punjab Technical University	20.02.2023	
6.	Rana Pratap Poddar, BEE Certified ECBC Master Trainer & Jitendra Vyas, Structural Consultant and GRIHA Evaluator	16.03.2023 & 17.03.2023	
7.	Ar. Pranjal Kumar, Renowned architect, and photographer	07-04-2023 to 08-04-2023	 

#### 7.4 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Avneet Kaur [B. Arch: 1994-1999] Head of Characters and Technical Animation at Walt Disney Animation Studios La Canada Flintridge, California, United States	Avneet Kaur is a veteran in the animation and vfx industry with 18+ years of experience. After her Bachelor's degree in Architecture she pursued M.S., in Computer Graphics/Visualization Sciences [2000 – 2003] from the Texas A&M University. She has been working with Walt Disney Animation Studios for past 19 years and is currently in a leadership role as the Head of Characters at the organisation. She is deeply engaged in outreach for WDAS and has been a Speaker, Paper Contributor, and Talk Presenter at several international conferences in an effort to share the artistic and technical innovations in CG



Sr. No	Name, Batch and Affiliation	Short Description
		Animation. She is actively involved as a mentor with various associations such as Women in Animation, Women in Technology, Girls Who Code, Rise Up Animation, ABAI(India), and both her Alma Maters (BIT-Mesra and TAMU) in an effort to encourage and support diversity and inclusion in the animation community and its ecosystem, worldwide. Her work as a distinguished leader and humanitarian in her field, was recently recognized and she was awarded the Texas A & M Outstanding Alumni Award for 2021.
2.	Tanay Kumar [B. Arch: 1995-2000] CEO, Co-founder and Chief Creative Officer at Fractal ink - A Merkle Company	Tanay Kumar is currently the CEO and Creative Director for Fractal Ink. He currently spearheads Visual Design and Design Strategy at the Studio. After Graduating from BIT Mesra in 2000, he went onto finish his Post Graduation from IDC, IIT Bombay as a Visual Communication Designer. After graduating as a gold medallist from IIT Bombay and teamed up with Priyanka to launch Ambiaance Designs in 2002. He Moved to London in 2006, to join LBI (One of largest Digital Agency of Europe) as a creative head for their Indian Arm. He helped stabilise relationship and bring design practices from London to their India office. After shifting back to India in 2010 he was appointed as the Creative Director for LBI India. Shortly after
		which FIDS Pvt. Ltd. was formed with a vision to take Digital design in India to the next level. Some of the brands which he was involved in shaping up during his professional journey are Microsoft, F1, Disney, British Telecom, Indian Railways, Nokia, Barclays, Axis Bank, ICICI, Samsung, Godrej.
3.	Anijo Mathew [B. Arch: 1995-2000] Dean, IIT Institute of Design Chicago, Illinois, United States	Anijo Mathew is the Dean of the IIT Institute of Design in Chicago, IL. He is an internationally recognized design educator, entrepreneur, and strategic designer. He has taught at the Institute of Design for over 15 years. Previously, he was the Head of the Department of Art and Design at the American University of Sharjah in the UAE. His research interests are in design-led corporate innovation and technology-led urban experiences. He has been an advisor to senior leadership at several large Asian conglomerates on design-led innovation strategy, including companies such as Godrej, Finabl, and Far Eastern Group. He is the founder of Vamonde, a Chicago-based startup, named as one of six Chicago startups shaping the future of virtual reality. Widely published, Mathew regularly consults on innovation projects with organizations worldwide. He worked with the city of Chicago on the 2012 Chicago Cultural Plan.
4.	Satyajeet Roy Gupta [MUP: 2007-2009] Vice President (Planning &Co ordination), Meinhardt Singapore Pte Limited June 2022 - Present Gurugram, Haryana, India	Satyajeet Roy Gupta is currently working as Vice President (Planning &Co ordination) Meinhardt Singapore Pte Limited since June 2022 till date. He worked at India Feedback Infra Pvt Ltd, Gurgaon, Haryana as Senior Manager for 10 years and prepared various City Development Plans for 10 Cities of Madhya Pradesh, and also worked on GIS/RS based master plan for Bhadrak and Balasore towns.



Sr. No	Name, Batch and Affiliation	Short Description
5.	Sandeep Jha [MUP: 2012 - 2015] Design Principal at Axis, Architects and Urban Planners	Ar. Sandeep Jha, has been engaged in architectural practice since 1995. Currently he is the Principal Architect at Axis, Architects and Urban Planners, Ranchi that was established by him in October 2002 and is today a well acclaimed architect in the eastern zone of India.

### 7.5 Infrastructure Development.

1. Software
  - i) Design Builder
  - ii) Sket-Up
  - iii) Envi-Met
  - iv) PTV Tutor
  - v) PTV Class Room
  - vi) Rhino 7
2. Desktop Computer
  - Desktop Computer 2nos.  
(BY MODROBS Project)
3. Video Conferencing Device -1nos

4. AC -18 nos.
5. HP LaserJet Tank Printer – 01nos.
6. Revolving Chair – 20 nos.

### 7.6 Best Thesis Project (UG/PG)

#### PG: Manish Nair (MUP/10002/21)

"Managing pluvial floods through nature-based planning strategies: A Case of Delhi."

#### UG: Deeptam Das (BARCH/10006/18)

"Visual and Performing Arts Complex for the transgender community in Mehrauli, Delhi"



## Department of Bioengineering and Biotechnology

### SECTION 1

### DEPARTMENTAL PROFILE



#### About the Department:

The Department of Biotechnology was established in 2002 with financial support from the Department of Agriculture, Government of Jharkhand, with objectives like providing education and training facilities, carrying out application oriented research, developing in-house technologies and promoting consultancy services in various areas of Biotechnology. The Department name was changed to Bio-Engineering in May, 2013 and further as Department of Bioengineering and Biotechnology in the year 2022.

#### Vision

The Department of Bioengineering and Biotechnology has a vision to impart international standard quality education in the field of Bioscience, Biotechnology and

Bioengineering.

#### Mission

- To create state-of-the-art infrastructure for Research and Training in Biotechnology and Bioengineering.
- To provide globally acceptable technical education in Bioscience, Biotechnology and Bioengineering.
- To nurture graduates for innovation and creativity in the field of Bioscience, Biotechnology and Bioengineering having ethical and social concern.
- To promote collaboration with Academia, Industries and Research Organizations at National and International level.
- To contribute to socio-economic development through education and bioentrepreneurship.

### SECTION 2

### RESEARCH PROJECTS

#### 2.1 Sponsored Projects (Research and Consultancy)

##### a) Ongoing Projects:

Sr. No.	Project Title	PI/ Co PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. in lakhs)	Duration of the Project
1.	Analysis and identification of features from neural dynamics and their correlations with autonomic nervous system for Development of Hybrid Brain-Computer Interface	Dr. Rakesh Kumar Sinha	AICTE	RPS File No. 8-34/FDC/RPS (Policy-1)/2019-20	17.64	14/08/2020-13/08/2023



Sr. No.	Project Title	PI/ Co PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. in lakhs)	Duration of the Project
2.	Brain Signal Controlled Wheelchair	Dr. P. K. Upadhyay (PI), Dr. Yogender Aggarwal (Co-PI)	ICMR	BMI/12(01)/2022 & 19/03/2023	31.01	2023 to 2026
3.	Development of a rational technology for production of ceramic materials from coal mining, washeries and processing wastes	D. M. Pandey (Co-PI)	CIL GOI	CIL/R &D/04/17/2022 & 08-07-2022	136.36	11/07/2022 to 10/11/2024
4.	Bioleaching process for the recovery of precious metals (Cu, Ag) from electronic waste: Towards circular economy	Dr Muthu (PI), Dr V. K. Nigam (Co-PI)	SERB	CRG/2022/006243 & 07/02/2023	29.51	2023 to 2026
5.	Indigenous development of novel biomaterial for laser tissue soldering process and real-time monitoring with optical coherence tomography/ angiography system	Dr. Raju Poddar (PI) and Dr. Ashok Pattnaik (Co-PI)	DST-SERB	CRG/2022/001404 dated 23.02.2023	41.00	2023 -2026
6.	Indigenous development of low-cost, portable, high-speed confocal Scanning Laser Ophthalmoscopy (cSLO) system for fluorescence angiographic and photoreceptors imaging of human eye	Dr. Raju Poddar (PI)	ICMR	2020-0540-ITR dated 19.02.2021	43.00	2021-2024
7.	Indigenous development of low-cost optical imaging system for early detection of Retinoblastoma in child	Dr, Raju Poddar (PI) and Dr. R. K. Sinha (Co-PI)	DHR, GOI	2022-1566 dated 02.02.2023	38.00	2023 -2026



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Sr. No.	Project Title	PI/ Co PI/ Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. in lakhs)	Duration of the Project
8.	Indigenous development of low-cost AI enabled portable multispectral camera system for rapid early detection of plant diseases and other stress based morphological changes	Dr, Raju Poddar (PI) and Dr. K. Mukhopadhyay (Co-PI)	IDEAS, Technology Innovation Hub @ Indian Statistical Institute		5.26	2022-2025
9.	Self-fitting 4D-Printed Smart Scaffolds with Efficient Bone Regenerative Potential	Dr. Sneha Singh (PI), Dr. Dilip K. Singh (Co-PI), and Prof. Ashok Kumar (Co-PI, IIT Kanpur)	DST-SERB	CRG/2021/002179 dated 24.12.2021	70.56	2021-2024
10.	Development of Novel Antileukemics through Structural and Functional Studies of Engineered and Chimeric Plant type Asparaginase	Dr V. K. Nigam (Co-PI), Dr. H. R. Singh (Co-PI), Dr. K. K. Pradhan (PI)	DST-SERB	File No. CRG/2021/006543, December 23, 2021	33.66	2022-2025
11.	A Multi-scale Simulation-based Approach to Design, Characterize and Optimize the Peptide Based Scaffold for Tissue Engineering Applications	Dr. Alok Jain (PI)	SERB-SRG	SRG/2022/000575, 07 Nov 2022	29.81	2022-2024
12.	In-silico design and validation of boronic acid-based molecules for the treatment of colorectal cancer: Computer aided hit to lead discovery	Dr. Alok Jain (PI)	DBT- Rama-lingaswami Fellowship	BT/HRD/35/02/2006, 17 May 2019	113.60	2019-2024
13.	Nanorobotic drug delivery system & LAB-ON-CHIP platform development	Dr. Koel Mukherjee (PI)	IHFC-IIT Delhi	GP/2023/NR/035, 31st March 2023	45.88	2023-2026



## b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Rs. in lakhs)	Date of completion of the Project
1.	Development of multi-functional nano-HAP bone substitute for effective bone regeneration in critical defects	Dr. Sneha Singh (PI), Prof. Ashok Kumar (PI, IIT Kanpur), Dr. Abhimanyu Dev (Co-PI), Dr. Saravanan Mathesharan (Co-PI, IIT Kanpur)	DST Nanomission	15.07.2019	51.15	31.03.2023

## SECTION 3

## SEMINAR / CONFERENCE

## 3.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Two-Day Faculty Training Workshop on "Functional Nano-Bio Materials (FNBM-2023)"	Dr. Sneha Singh	SERB	27th - 28th March 2023

## 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Alok Jain (Invited Lecture)	2nd International Conference on Recent Trends in Natural Sciences		University of Education Jauharabad Campus, Punjab Pakistan	Punjab Pakistan (Virtual Mode)	May 3-4, 2023
2.	Alok Jain (Invited Lecture)	National workshop on "Perspectives of Big Data Analysis in Biological Sciences"		Central University of Rajasthan	Central University of Rajasthan	March 27-29, 2023
3.	Alok Jain (Invited Lecture)	National Bioengineering Conference (NBC-2022)		NIT Rourkela	NIT Rourkela	December 22-23, 2022
4.	Alok Jain (Invited Lecture)	Workshop on Advanced Analytical and Simulation Techniques in Chemical Engineering Applications		Birla Institute of Technology Mesra, Ranchi	Birla Institute of Technology Mesra, Ranchi	November 21-27, 2022

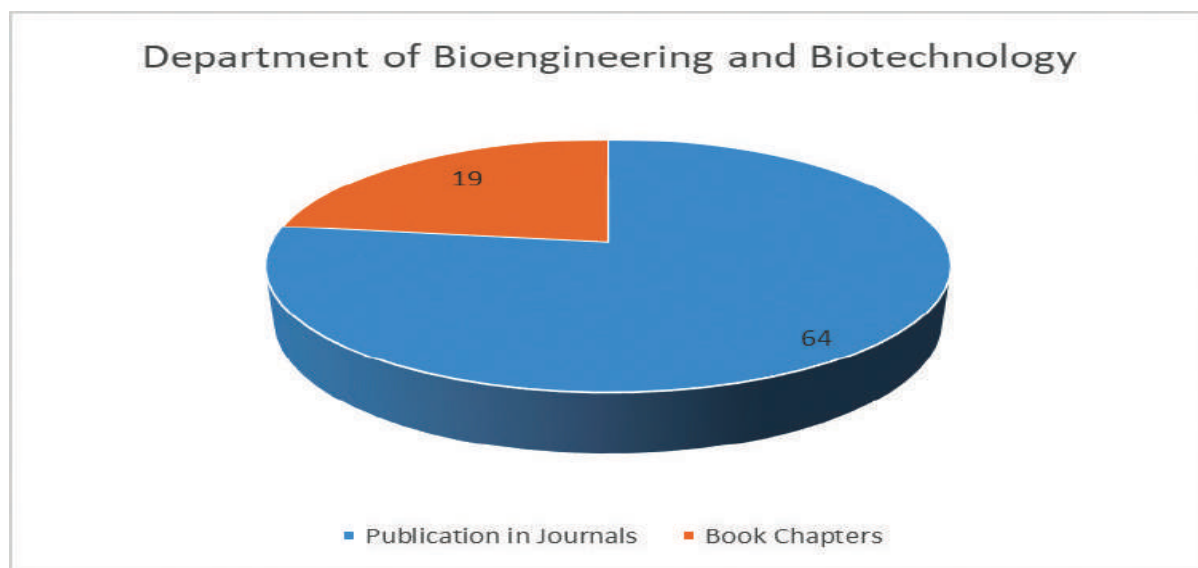


## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
5.	Alok Jain (Invited Lecture)	27th ISCB International Conference (ISCBC-2022)		Birla Institute of Technology Mesra, Ranchi	Birla Institute of Technology Mesra, Ranchi	November 16-19, 2022
6.	Dr. Anjana Dwivedi	GMHPHCI 2022		IIIT Ranchi	IIIT Ranchi	Nov. 25 - 27, 2022
7.	Dr. Anjana Dwivedi	Inbix'22		Vignan University, Guntur, Andhra Pradesh	Online	Oct. 31. 2022 - Nov. 02.2022
8.	Muthu Sampath Kumar	ICSWHK 2023	D S T - SERB	Hongkong Baptist university	Hong Kong	31.05.2023 to 03.06.2023

### SECTION 4

### Research Publication



### SECTION 5

### AWARD / PATENT / COLLABORATIONS

#### 5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1	Alok Jain	Vishnu Ji Ram Memorial Award	Indian Society of Chemists and Biologists (ISCB)	National	2022



## 5.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1.	Garima Kumari, Vinod Kumar Nigam, Dev Mani Pandey	Method for enrichment of phytoconstituents in plants	Patent Application No. 202331044085/PAT199/011/23 Dated June 30, 2023	2023	Under Review
2.	Koena Mukherjee and Koel Mukherjee	A system for development of a bullet shaped nanofiber coated bio-robot for targeted drug delivery.	South Africa Patent. Application No. 2023/02064. (Granted)	2023	-

## 5.3 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1.	MoU with CSIR – Central Drug Research Institute, Lucknow	i. Faculty Exchange Programs ii. Sharing of Instrumentation Facility iii. Collaborative Research Programs in specific fields of interest and submission of Joint projects iv. Trainee Programs	2023-2028
2.	MOU with IHFC-IIT Delhi	i. Sharing of Instrumentation Facility ii. Collaborative Research Programs in specific fields of interest and submission of Joint projects	2023

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS / DAS

### 6.1 List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Dr. Rakesh Kumar Sinha	Professor and Head
2.	Dr. Kunal Mukhopadhyay	Professor & Dean
3.	Dr. Ramesh Chandra	Professor
4.	Dr. Padmini Padmanabhan	Professor
5.	Dr. Vinod Kumar Nigam	Professor
6.	Dr. Manish Kumar	Associate Professor
7.	Dr. Dev Mani Pandey	Associate Professor
8.	Dr. Raju Poddar	Associate Professor
9.	Dr. Shashwati Ghosh Sachan	Associate Professor
10.	Dr. Yogender Aggarwal	Assistant Professor
11.	Dr. Sheela Chandra	Assistant Professor



Sr. No.	Name	Designation
12.	Dr. Soham Chattopadhyay	Assistant Professor
13.	Dr. Anjana Dwivedi	Assistant Professor
14.	Dr. Alok Jain	Assistant Professor
15.	Dr. S. Muthu Kumar	Assistant Professor
16.	Dr. Koel Mukherjee	Assistant Professor
17.	Dr. Dinesh Prasad	Assistant Professor
18.	Dr. Shubha Rani Sharma	Assistant Professor
19.	Dr. Hare Ram Singh	Assistant Professor
20.	Dr. Sneha Singh	Assistant Professor

## 6.2 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Rakesh Kumar Sinha	Professor, Bioengg. & Biotech.	Chairman (Ex officio)
2.	Dr. Gautam Sarkhel	Professor, Chem. Engg.	Internal Member
3.	Dr. Ashoke Sharon	Professor, Chemistry	Internal Member
4.	Dr. Padmini Padmanabhan	Professor, Bioengg. & Biotech.	Internal Member
5.	Dr. Kunal Mukhopadhyay	Professor, Bioengg. & Biotech.	Internal Member
6.	Dr. Ramesh Chandra	Professor, Bioengg. & Biotech.	Internal Member
7.	Dr. Manish Kumar	Asso. Professor, Bioengg. & Biotech.	Internal Member
8.	Dr. Soham Chattopadhyay	Asst. Professor, Bioengg. & Biotech.	Internal Member
9.	Dr. Arun Goyal	Professor, Department of Biosciences and Bioengineering Indian Institute of Technology, Guwahati Guwahati- 781039 Assam	External Member
10.	Dr. Sudip Chattopadhyay	Professor, Department of Biotechnology National Institute of Technology, Durgapur Mahatma Gandhi Avenue, Durgapur- 713209 West Bengal	External Member
11.	Mr. Anup Kumar	Regional Head, Mumbai and Business Development Manager, Africa Himedia Laboratories Pvt. Ltd., Vadhani Industrial Estate, L.B.S. Marg Mumbai - 400 086 Maharashtra	External Member
12.	Dr. Sivaramaiah Nallapeta	Head, Business Operations NanoTemper Technologies India World Trade Center, 22nd Floor, Brigade Gateway Campus, Malleswaram (W), Bangalore- 560055 Karnataka	External Member



## SECTION 7

## OTHER INFORMATION

## 7.1 Publication by students, if any

**Publications in Journals : (International/National)**

1. Baradia H., Kumar S.M., Chattopadhyay S. (2023) Techno-economic analysis of production and purification of lipase from *Bacillus subtilis* (NCIM 2193). *Preparative Biochemistry & Biotechnology*, 1: 1–6.
2. Chandra, S., Sinha, R. K., Upadhyay, P. K. and Aggarwal, Y. (2023) Detection of EEG spikes using machine learning classifier, *International Research Journal of Engineering and Technology*, 10: 480-500.
3. Eshika Jaiswal, Christoph Globisch, and Alok Jain (2022) Knowledge-driven design and optimization of potent symmetric anticancer molecules: A case study on PKM2 activators, *Comput. Biol. Med.*, 151, 106313.
4. Hrithik Bhadaria, Koel Mukherjee and Biplab Sarkar (2022) An illustrative in silico study of Copper oxide nanoparticles (CuNPs) and its interaction with fish liver proteins. *Int. J. of Bioinformatics Research and Applications (IJBRA-105043)*.
5. Iyer M., Shreshtha I., Baradia H., Chattopadhyay S. (2022) Challenges and opportunities of using immobilized lipase as biosensor. *Biotechnology and Genetic Engineering Reviews*, 38: 87–110.
6. Koel Mukherjee, Namrata Bhagat, Madhubala Kumari, Arnab Roy Choudhury, Biplab Sarkar and Barnali Dasgupta Ghosh (2023) Insight study on synthesis and antibacterial mechanism of silver nanoparticles prepared from indigenous plant source of Jharkhand.. *Journal of Genetic Engineering and Biotechnology*. 21: 30.
7. Misra M., Chattopadhyay S., Sachan A., Sachan S.G. (2022) Microbially synthesized nanoparticles and their applications in environmental clean-up. *Environmental Technology Reviews*, 11: 18–32.
8. Muthu Kumar S., Asani P.C., Baradia H., Chattopadhyay S. (2023), Process optimization and techno-economic analysis for the production of lipase from *Bacillus* sp. *Journal of Taibah University for Science*, 17: 1–8.
9. Muthu Kumar, S., Pooja C. Asani, Hrithik Baradia, and Soham Chattopadhyay (2023) Process optimization and techno-economic analysis for the production of lipase from *Bacillus* sp. *JOURNAL OF TAIBAH UNIVERSITY FOR SCIENCE* 17, no. 1 (2023): 2198925.
10. Richa Kiran, Namrata Kushwaha, Eshika Jaiswal, Ajay Kumar, Jaspreet Kaur, Shalini Sharma, Alok Jain, Jayant Sindhu, Surinder K. Mehta, Vikram Saini and Ramesh Kataria (2023) Mixed ligand approach for novel hydrazide copper (II) complexes: Structural aspects, theoretical investigation and their biological evaluation, *Appl. Organomet. Chem.*, e7118.
11. Samal S., Misra M., Rangarajan V., Chattopadhyay S. (2023) Antimicrobial nanoparticles mediated prevention and control of membrane biofouling in water and wastewater treatment: Current trends and future perspectives. *Applied Biochemistry and Biotechnology*, <https://doi.org/10.1007/s12010-023-04497-8>.

**Publications in Proceedings: (International/National)**

1. Joanna Rai, Sunanda, Shashwati Ghosh Sachan; Screening of triclosan degrading microbes at National Conference on "Environment and Sustainable Development and Celebration of National Science Day (NCESD-NSD-2023)" In Pandit Ravishankar Shukla University, Raipur, Chhattisgarh, 28-29 March, 2023.
2. Mona Priya Tirkey, Ahmed Hussian, Shashwati Ghosh Sachan; Microbial removal of crystal violet dye at International Conference on Exploring New Horizons in Biotechnology (ENB-2023) and Mini-symposium on Recent Advances in Biotechnological Innovations (RABI-2023) at School of Biotechnology, Institute of Science, Banaras Hindu University, Varanasi, UP, India, 10th to 12th February 2023.



## 7.2 Achievements of Students:

Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
1.	Anushka Ash	Poster Presentation 2nd position	National Bioengineering Conference (NBC 2022), National Institute of Technology, Rourkela.	23rd Dec 2022 National Institute of Technology, Rourkela.
2.	Eshika Jaiswal	Oral Presentation, 1st position	3rd Research Colloquium Birla Institute of Technology, Mesra	28th July 2022 Birla Institute of Technology, Mesra
3.	Eshika Jaiswal	Poster Presentation, Metabolic Research Award (1st position)	27th Indian Society of Chemists and Biologists International Conference 2022, BIT Mesra	19th Nov 2022 Birla Institute of Technology, Mesra
4.	Eshika Jaiswal	Poster Presentation 3rd position	Department of Pharmaceutical Sciences and Technology, Golden Jubilee Event, BIT Mesra	18th Dec 2022 Birla Institute of Technology, Mesra
5.	Dipti Kumari	Poster Presentation in Research Showdown Event of Coalescence'23 1st position	Indian Institute of Chemical Engineers (IICE), BIT Mesra	18th March 2023 Birla Institute of Technology, Mesra
6.	Mani Prabha Panda	Poster Presentation in Research Showdown Event of Coalescence'23 1st position	Indian Institute of Chemical Engineers (IICE), BIT Mesra	18th March 2023 Birla Institute of Technology, Mesra
7.	Anushka Ash	Poster Presentation in Research Showdown Event of Coalescence'23 2nd position	Indian Institute of Chemical Engineers (IICE), BIT Mesra	18th March 2023 Birla Institute of Technology, Mesra
8.	Chandrima Modak	Poster Presentation in Research Showdown Event of Coalescence'23 2nd position	Indian Institute of Chemical Engineers (IICE), BIT Mesra	18th March 2023 Birla Institute of Technology, Mesra



### 7.3 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Dr. Sreepriya Pramod	Sreepriya joined the BE Biotechnology program at Birla Institute of Technology in Fall 2003. With encouragement and guidance from faculty of the Biotechnology program, she applied for Ph.D. programs in Plant genetics within United States in 2007. She has served as a panelist for the National Science Foundation GRFP area of genetics, genomics and proteomics (2020), and on the AgroPhyto Information Collection task force for CORESTA. She is a Review Editor for Frontiers in Genetics (Plant Genomics), Frontiers in Agronomy (Disease Management), and is on the reviewer board for the journal, Agronomy.
2.	Dr. Prasoon Kumar	Prasoon did his Bachelor of Engineering (BE) from Birla Institute of Technology, MESRA, Ranchi in the department of Biotechnology from 2004-2008. Thereafter, he pursued Master of Technology from Indian Institute of Technology, Kanpur in an area of Bioengineering with specialization in tissue engineering and biomechanics from 2008-2010. In June, 2020, he has joined as Assistant Professor in the department of Biotechnology and Medical Engineering, National Institute of Technology, Rourkela. Apart from academics. He has been actively pursuing entrepreneurship for the last few years and co-founded Spin Nanofibers Technologies LLP, Indore (2015- present), cofounded Nuovatek Biosolutions Pvt. Ltd., Bhopal (2019- present) and Iota Design and Innovation Labs Pvt. Ltd., Ahmedabad (2020- present).
3.	Dr. Amulya Nidhi Shrivastava	After finishing his BE Biotechnology from BIT Mesra, Amulya moved to Austria for his PhD (2007-2010). He obtained his PhD from Medical University of Vienna where he studied the trafficking of inhibitory GABAA receptors. Following which he worked at Ecole Normale Supérieure, Paris as a post-doctoral researcher in Neurodegeneration (Alzheimer's and Parkinson's disease). Throughout his academic career, he has published several high-impact papers and review articles. In 2019, Amulya joined UCB Pharma, Belgium as a Scientist contributing to various drug-development projects in the field of Neurodegeneration. He is currently based in the Brussels region.
4.	Dr. Amit Rai	Amit Rai is currently working as an Assistant Professor at the Graduate School of Pharmaceutical Sciences, Chiba University. He received his undergraduate training at B.I.T Mesra, India (Biotechnology; Gold Medalist), and achieved an outstanding All India Rank of 31 (99.91 percentile) in GATE 2007 in the life sciences section. He has been awarded graduate studies scholarship (2008-2012) and Young Scientist award at the National University of Singapore (Nov. 2014), best research poster at The 4th International Conference on Plant Metabolism held in Dalian, China (2017), and best original research by The Japanese Society of Pharmacognosy (2018).
5.	Mr. Pulkit Kanodia	He graduated from BIT in 2014 and the same year joined Iowa State University in the US to pursue his PhD with a major in Interdepartmental Genetics and Genomics. He spent one year in 4 different labs as a rotation student and worked with C. elegans to study the effect of hypoxia on gene expression, with mouse models to study Parkinson's disease, with Zebrafish to study the onset of and progression of brain tumor and finally with plants to study how plant viruses affect the host gene expression. He received Print and Grace Powers Hudson Scholarship in Agriculture for \$1000 from College of Agriculture and Life Sciences (CALS) and in 2019, he received Brown Graduate Fellowship for \$10,000 from the office of the Vice President for Research at Iowa State University.



## 7.4 Infrastructure Development:

One floor construction is under progress in the existing building for faculty cubicles and shifting of laboratories from basement.

## 7.5 Best Thesis Project (UG/PG)

Course	Student's Name	Roll No.	Title of Thesis	Guide/Co-guide
<b>B.Tech (Biotechnology)</b>	Vinay Joshi	BTECH/10524/19	A Comparative Analysis of Various Machine Learning Algorithms: A descriptor based prediction of PKM2 Modulator's Bioactivity	Dr. Alok Jain
	Hrithik Shankar	BTECH/10530/19	Classification and Prediction of nanoparticles using Machine Learning approach	Dr. Koel Mukherjee
	Ujjwal Kant	BTECH/10588/19	Fabrication and characterization of nanocarrier for drug delivery	Dr. Sneha Singh
<b>M.Sc. (Biotechnology)</b>	Anushka Ash	MBT/10012/21	Cross talk of Orexin ad amyloid beta in early stage of Alzheimer's disease; insight from MD simulations	Dr. Alok Jain
	Sneha Kumari Binha	MBT/10006/21	Effects of microplastics on wheat seeds: Ultrastructure, OCT-based and molecular biology characterization during germination and growth	Dr. Kunal Mukhopadhyay & Dr. Raju Poddar
	Anjali Pandey	MBT/10016/21	Identification and characterization of leaf rust responsive resistant genes of Puccinia triticina regulated by micro RNA-like RNAs	Dr. Manish Kumar & Dr. Kunal Mukhopadhyay
<b>M.Tech (Biotechnology)</b>	Abhimanyu Kumar	MT/BT/10005/21	Role of microbial consortium in biological waste utilization	Dr. V. K. Nigam
	Pooja Asani	MT/BT/10009/21	Development of a Multi-spectral system and biospeckle imaging of microplastic in a biological system	Dr. R. Poddar
	Joanna Rai	MT/BT/10003/21	Triclosan treatment through enhanced microbial degradation	Dr. S. Ghosh Sachan
	Shatabdi Basu	MT/BT/10016/21	Design and development of metallic nanoparticles (nps) based drug delivery model against cancer	Dr. K. Mukherjee

## 8. Any other relevant information:

Departmental faculty coordinator for training and placement is taken initiative to identify recruiters for Biotechnology students. For this process he is coordinating with the T&P cell of the Institute.

## 9. Special Initiatives if any:

Faculty members of the department are reaching out the nearby institutions to highlight the courses offered by the Department of Bioengineering and Biotechnology to improve the intake.

## Department of Chemical Engineering

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the Department:

The Department was established in 1994 as Polymer Engineering and is renamed as Chemical Engineering in 2011. The Department currently offers two undergraduate programs one is B.TECH. (Chemical Engineering) NBA Accredited with 120 seat capacity & another is B.TECH. (Food Engineering and Technology) with 30 seat capacity. The Department has well qualified faculties provides high standard of education and research in the diversified fields of Chemical Engineering. The academic curriculum of both the existing and proposed courses is up-to-dated to CBCS in line with the recent scenario in the field while retaining the core concepts from the discipline. Faculties have introduced new electives related to their research and recent industrial developments. The Department also provides facilities for doctoral research in the fields of Chemical Engineering, Polymer Science and Technology, Food Science and Technology and allied areas.

The Department has state of the art laboratory

facilities comprising the high end equipment's, processing line and cutting edge computational facility with modern simulations software to cater the modern industrial requirements. The Department has 7 undergraduate laboratories covering the length and breadth of the core concepts of the disciplines that includes Heat and Mass transfer lab, Fluid and Mechanical operations, Reaction Engineering, Process Control, Chemical synthesis, material processing and computational lab with new edge software like COMSOL, ASPEN, ANSYS, MAT LAB and others. In addition, the Department has 4 advanced research lab covering the area of recent advancement of energy, material, process engineering, and computational fluid dynamics. The Department received national recognition by winning the Gold Trophy for Plasticon Award 2012 in the category of Best Educational Institution Contributing to Plastics at the 8th International Plastics Exhibition and Conference, supported by the Ministry of Chemicals and Fertilizers and the Department of Chemicals



and Petrochemicals, Government of India. The Department is recognized by the Department of Science and Technology, Government of India as a FIST Department. Over last few years, an increase in sponsored research from DRDL, DRDO, DBT, DST, ICMR, Ministry of New and Renewable Energy, Coir Board, CCL, etc.

The Department has strong interaction with many Industries to insist our students to take part in the industrial projects, and to accept pre placement offers as final year project in the Industry. Students are placed in esteemed core and software companies across the word. To name some of our recruiters ADITY BIRLA, TATA STEEL, ZINDAL, RELIANCE, PWC, STARLITE, GOOGLE, WIPRO, AMAZON, ACCENTURE and many more.

Students are also pursuing their higher studies in the institute of national and international repute including different IITs, NITs and foreign Universities. Some of our Alumni cracked Civil Service examinations also.

## Vision

To be a centre of excellence for the provision of effective teaching/learning, skill development and research in the areas of chemical engineering and allied areas through the application of chemical engineering principles.

## Mission

1. To educate and prepare graduate engineers with critical thinking skills in the areas of chemical engineering & polymer science and engineering, who will be the leaders in industry, academia and administrative services, both at national and international levels.
2. To inculcate a fundamental knowledge base in undergraduate students which enable them to carry out post-graduate study, do innovative interdisciplinary doctoral research and to be engaged in long-life learning.
3. To train students in addressing the challenges in chemical, petrochemical, polymer and allied industries by developing sustainable and eco-friendly technologies.

## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy)

#### a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Degradation of polystyrene microplastics (PMPs) from wastewater using novel continuous rotating electrochemical reactor (CRECR)	Dr. Abhijit Mondal	ICMR	22.03.2023	Rs. 44.5 Lakhs	Three Years
2	Development of a rational technology for production of ceramic materials from coal mining, washeries & processing wastes.	Dr. Amar Nath Mishra (PI)	CMPDI	21.06.2022	Rs. 136.36 Lakhs	Two year
3	Study the Effect of Stretching on the Physico-Mechanical Properties of Acrylates	Dr. Gautam Sarkhel (PI) Dr. Arup Choudhury (Co-PI)	DMSRDE-DRDO	02.08.2022	Rs.81.368 Lakhs	Three Years



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
4	Development of Radiation, Chemical and Flame-Resistant High-Performance Polymer Composite for Defence Application	PI – Dr. Pulak Datta Co-PI – Dr. Arup Choudhury	DRDO, New Delhi	08/02/2023	Rs. 36.722	Three Years
5	Development 3D flexible hybrid mat based on waste sugarcane bagasse derived carbon nanofiber and metal organic framework (MOFs) for fabrication of next generation flexible / wearable supercapacitors	Dr. Arup Choudhury (PI)	DST-SERB	24.02.23	25.33	Three Years
6.	Development of nondestructive process technology for simultaneous micronutrient fortification and bioavailability enhancement in Dal through selective binding of phytic acid	PI: Dr. Anupam Roy	DBT	04.02.2021	Rs. 57.9 Lakhs	3 years
7.	Role of hybrid nanofillers on the physiochemical and tribological behaviour of polymer nanocomposite for load bearing advanced mechanical components applications	Co-PI: Dr. J Sudeepan	DST-SERB	03.03.2022	Rs.45.84 Lakhs	3 years
8.	Design and development of low cost technology for micronutrient protein-fortified whole grain puffed rice	PI: Dr. Anupam Roy	ICMR	01.05.2022	Rs.51.02 Lakhs	2 years
9.	Modification of expanded porous starch matrix (EPSM) for promoting survival of probiotic bacteria in both high temperature and gastrointestinal condition: Lab scale to food product matrix validation	PI: Dr. Anupam Roy	ICMR	01.06.2022	Rs. 11.67 Lakhs	3 years
10.	Design and Development of Energy Efficient modified refrigeration system using Phase Change Material and its CFD analysis	PI: Dr. Debasree Ghosh	DST-SERB	08.06.2022	Rs 29.81264 Lakhs	3 years



**b) Projects Completed**

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Biopolymer based nano-layer fortification of self-assembled micronutrients over preconditioned rice: Retention of fortified nutrients and scale up studies	PI: Dr. Anupam Roy	ICMR	26.11.2019	Rs. 39.57 Lakhs	
2	Development of process technology for enhanced resistant starch content in rice and rice based snack (Puffed rice)	PI: Dr. Anupam Roy	DST-SERB	06.06.2019	Rs. 53.06 Lakhs	

**SECTION 3**

**SEMINAR / CONFERENCE**

**3.1 Seminar / Conferences / Short-Term Courses Conducted**

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event (dd.mm.year)
1.	Design and development of energy efficient modified refrigeration system using phase change materials and its CFD analysis (seminar)	Dr. Debasree Ghosh	SERB-DST	04-03-2023

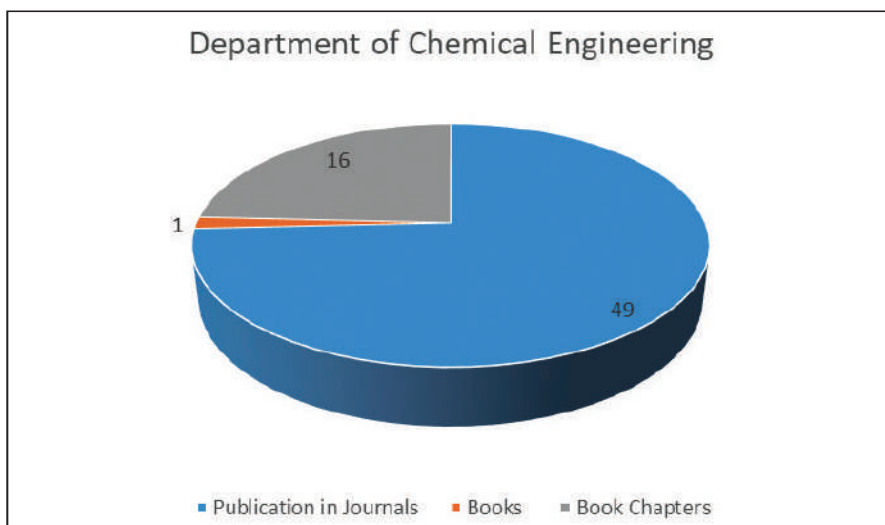
**3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:**

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date (dd.mm.year)
1.	Bidhan Chandra Ruidas	5-day Online FDP on the theme "Inculcating Universal Human Values in Technical Education		ALL INDIA COUNCIL FOR TECHNICAL EDUCATION	online	19-23 Dec'2022



## SECTION 4

## RESEARCH PUBLICATION



## SECTION 5

## AWARD / PATENT / COLLABORATIONS

## 5.1 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1	Anupam Roy, & Sreyajit Saha	Premix composition and method for preparing micronutrient fortified whole grain puffed rice	Application no. 202331036336	2023	The present invention relates to a fortification premix composition and its use in the fortified puffed rice production process. The composition is such a designed that are compatible to the rice preconditioning step prior to salt treatment and didn't alter puffed rice characteristic (physicochemical and sensory). The composition of the premix makes the high retention of the fortificants in the puffed rice matrix and thus increases the micronutrient content sufficiently. The fortified micronutrients in the premix are bioavailable and poses nil toxicity.



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
2	Anupam Roy, Ankanksha Kumari & Sreyajit Saha	Microwave-assisted screw conveyor for rice fortification	Application no. 202231057966.	2022	An apparatus has a housing, a conveyor assembly, and a spray assembly. The housing is adapted to receive grains for fortification. The conveyor assembly is installed inside the housing and adapted to carry the grains within the housing. The spray assembly is positioned along a length of the conveyor assembly. The spray assembly comprising a plurality of nozzles aimed at the grains on the conveyor assembly for spraying nutrients on the grains to form fortified grains.
3	Anupam Roy & Ankanksha Kumari	A method for fortification of grains	Application no. 202311010189.	2023	A method for fortification of grains comprising six steps preconditioning of grains to obtain preconditioned grains with a degree of gelatinization; depositing a primary encapsulant mixture over the surface of the preconditioned grains following intermittent vacuum treatment to obtain encapsulated grains; depositing secondary encapsulant mixture over the surface of encapsulated grains with intermittent vacuum treatment to obtain dual-layered encapsulated grains; treating the dual-layered encapsulated grains with heat moisture treatment along with continuous mixing to obtain a dual-layered encapsulated-gelatinized grains followed by vacuum treatment; drying the dual-layered encapsulated-gelatinized grains, followed by cooling; and obtaining a recrystallized dual-layered encapsulated fortified grains.



Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
4	Amar Nath Mishra and Manik Ghosh	HYPOTHERMIA THERMAL COVERING FOR NEONATALS	Application no 202331016578	13.3.2023	The present invention relates to a hypothermia thermal covering (100) for neonatal have alert unit. The hypothermia thermal covering (100) for neonatal have alert unit comprises a temperature sensor, an adaptive heating unit, an adaptive heating unit, an alarm generating unit, a central processing unit. The temperature sensor is configured to measure the neonate's body temperature. The adaptive heating unit is configured to adjust the temperature based on the neonate's body temperature, age, weight, and other factors to maintain a stable temperature within the covering (100). The plurality of sensor is configured to monitor the neonate's heart rate, respiratory rate, and oxygen saturation levels. The alarm generating unit is configured to generate alert signal on detection of abnormal condition of neonatal. The display unit is configured to provide user interface unit and information on the neonate's body temperature, vital signs, and other relevant data to the user.

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS / DAS

Sr. No.	Name of Organisation/ University	Purpose/ Area Short Description	Year / Duration
1.	M/s John Deere India Pvt Ltd, John Deere Technology Centre, Tower 14, Magarpatta City, Hadapsar Pune 411013	Industrial Research Project	Date of MOU signing 20.07.2022
2.	Dhofar University, Salala, Oman	Research collaboration between Dr. Arup Choudhury from BIT, Mesra and Dr.Wasi Ahmad, from Dhofar University. Dr. Choudhury associated as Foregion Collaborator with an ongoing research project on Waste Date Sheed-derived Carbon for Supercapacitor Applications	Nov 2022- Oct 2024
3.	The University of Texas at Dallas, USA	Dr. Arup Choudhury from BIT, Mesra and Dr. Duck-Joo Yang from UTD, USA working jointly on the development of polymer/co-polymer-derived porous carbon for supercapacitor applications	2022-2023





One-day visit of B. Tech Chemical Engineering students and Faculties BIT, Mesra, Ranchi to Hindalco Muri Jharkhand on dated 14/03/2023

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1.	Net-zero Emission Technologies for Sustainable Development: Challenges and Opportunities (NOET-2022) (conference)	Arya Kishore, Akash Raj	Dr. Debasree Ghosh	12-12-22 to 13-12-22 (at IIT-ISM)
2.	CHEMCON-2022 (conference)	Gaurav Kumar	Dr. Anand Bharti	27-12-22 to 30-12-22
3.	I-STEM (conference)	Anirban Mukerjee	Dr. Bidhan Chandra Ruidas	19-01-23 to 20-01-23
4.	COALESCENCE		Dr. Abhijit Mondal	17-03-22 to 19-03-22

## 6.2. List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Dr. Akhil Kumar Sen	Professor & HOD
2.	Dr. Gautam Sarkhel	Professor
3.	Dr. Sudipta Goswami	Professor
4.	Dr. Arup Choudhury	Associate Professor
5.	Dr. G.T. Mohanraj	Associate Professor
6.	Dr. Pulak Datta	Assistant Professor
7.	Dr. Debasree Ghosh	Assistant Professor
8.	Dr. Sumit Kumar Jana	Assistant Professor
9.	Dr. Sudeepan Jayapalan	Assistant Professor



Sr. No.	Name	Designation
10	Dr. Arnab Karmakar	Assistant Professor
11	Dr. Amarnath Mishra	Assistant Professor
12	Dr. Abhijit Mondal	Assistant Professor
13	Dr. Anupam Roy	Assistant Professor
14	Dr. Bidhan Chandra Ruidas	Assistant Professor
15	Dr. Amit Kumar Tiwari	Assistant Professor
16	Dr. Anand Bharti	Assistant Professor
17	Dr. Yogendra Nath Prajapati	Assistant Professor
18	Dr. Rajeswari Chatterjee	Assistant Professor
19	Dr. Saikat Bhattacharaya	Assistant Professor
20	Dr. Sangram Roy	Assistant Professor
21	Dr Y Jerjurkar (Joint Faculty with Department of Space Engineering and Rocketry)	Assistant Professor

### 6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr Pradip Munshi	Visiting Faculty	Chief Technology Officer (R &D) Tatva Chintan Pharma Chem Ltd, Gujrat

### 6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HoD/In-charge	Ex-Officio	Chairman
2.	Dr. Gautam Sarkhel	Professor	Internal Member
3.	Dr. (Mrs.) S. Goswami	Professor	Internal Member
4.	Dr. G.T. Mohanraj	Associate Professor	Internal Member
5.	Dr. Anand Bharti	Assistant Professor	Internal Member
6.	Dr. Sumit Kumar Jana	Assistant Professor	Internal Member
7.	Dr (Mrs.) Padmini Padmanavan	Professor	Internal Member
8.	Dr. Sudip das	Professor	Internal Member
9.	One student representative of UG programme		Internal Member
10.	One student representative of PG programme		Internal Member
11.	Dr. Pallab Ghosh	Professor, Dept. of chemical engineering, IIT G	External Member



Sr. No.	Name of the Member	Designation	Role
12.	Dr. Sudip Pattanayek	Professor, Chemical Engineering Department, IIT D	External Member
13.	Dr. H.N. Mishra	Ex-Professor, Department of Food and Agricultural Engineering, IIT KGP	External Member
14.	Prof. Priyabrata Sarkar	Ex-Professor, Department of Polymer Science & technology, University of Calcutta	External Member
15.	Dr. Lalaso Vishnu Mohite	Senior Scientist, Aditya Birla Science and Technology Comp Ltd.	External Member
16.	Dr. Chandan Guria	Professor, Department of Petroleum Engineering, ISM Dhanbad	External Member
17.	Dr. Kartik Chandra Ghanta	Professor, Department of Chemical Engineering, NIT Durgapur	External Member
18.	Mr. Basudev Chakraborty	GM Coal Cabonization, RDCIS, SAIL	External Member

## SECTION 7

## OTHER INFORMATION

## 7.1 Achievements of Students :


Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
1.	Anirban Mukherjee	Catalytic grant from I-STEM	Indian Science, Technology, and Engineering facilities Map	13th July 2022-30th June 2023

## 7.2 Distinguished Visitors from Industry/Academia/Research organizations


Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Prof. Anand Mohan, Associate Professor, Department of Food Science & Technology, University of Georgia, USA	19.07.22	
2.	Dr D S Bag Managing Director DMSRDE Kanpur	21/11/22	






## वार्षिक प्रतिवेदन 2022-2023

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
3.	Prof R K Dey Department of Chemistry, Central University of Jharkhand, Ranchi	26/11/22	
4.	Mr Basudev Chakraborty General Manager and Head Coal Carbonisation Group RDCIS, SAIL Ranchi	17.03.23	
5.	Mr Sankar Gunasekaran General Manager Indian Oil Corporation Limited, Chennai	18.03.23	
6.	Prof Chandan Guria Department of Petrochemical Engineering IIT ISM Dhanbad India	10.05.23	

### 7.3 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Prof. D. Anirudha Singh (97-2001 batch) Johns Hopkins School of Medicine	

Sr.No	Name, Batch and Affiliation	Short Description
2.	Mr. Saurabh Toshniwal (2002-06) Director, Royal Composites Pvt. Ltd., Kolkata	
3.	Dr Praphulla Tiwary (2004-08) Co-founder & COO - plantee bioplastics inc. Canada	
4.	Mr. Mukesh Chandra Anchuri (2006-10) C.E.O and Co-Founder Paymarix	

#### 7.4 Infrastructure Development.

The following machines/ instruments are installed in the Department of Chemical Engineering

- Electrochemical Workstation Battery
- Composite Rotating Packed Bed
- Steam Chamber for multiple effect Evaporator
- Solar Simulator Adsorption Refrigeration system (SSARS)
- Waste Paper Recycling machine
- Sonicator



HPLC Machine (M/s Agilent Technologies India Pvt Ltd)



## Department of Chemistry

### SECTION 1

### DEPARTMENTAL PROFILE

#### 1. About the Department :



**Award Ceremony:** Inaugural Session of 27th ISCB International Conference (Nov 16 – 18, 2022)

Dr. P. M. S. Chauhan, General Secretary, ISCB; Dr. Anamik Shah, Ex-Vice Chancellor, Gujarat Vidyapeeth, Ahmedabad; Dr. Uday Bandyopadhyay, Director, Bose Institute; Dr. Indranil Manna, Vice Chancellor BIT Mesra; Dr. D. S. Rawat, Vice Chancellor, Kumaon University, Nainital; Dr. A. Sharon, Convenor ISCB 2022

**Vision:** To become a recognized center of excellence for teaching and research in Chemical

Sciences by producing excellent academicians, professionals, entrepreneurs, and innovators.

**Mission:** Inculcate fundamental concepts of Chemical Sciences through state-of-the-art laboratory, teaching, and research facilities. Building a scientific environment and motivation towards innovation with quality research in chemical sciences and allied areas

#### State of Art Research Facility Addition in 2022-23



i) High Performance Computing Facility; ii) Steady State, Fluorescence Lifetime Spectrometer with Quantum Yield Measurement Facility

### SECTION 2

### RESEARCH PROJECTS

#### 2.1 Sponsored Projects (Research and Consultancy) (1ST JULY 2022-30TH JUNE 2023)

##### a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Combination of small light emitting molecules with carbon materials for next generation optoelectronics (SB/SRS/2020-21/52/CS)	Dr. Anirban Pradhan (PI)	SERB-DST Government of India	June 2022	16.0 Lacs	3 years
2.	Bottom-up solution phase synthesis of curved polycyclic aromatics, nanographene, carbon nanoribbons and nanobelts for next-generation optoelectronics (Sanction Order No.: SRG/2022/000628),	Dr. Anirban Pradhan (PI)	SERB-DST Government of India	Sep, 22	31.18 Lacs	2 years



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
3	Photo-responsive tetra-aryl pyrazole based emissive organic nano-cage as an artificial-light harvester for heterogeneous photocatalysis (Sanction Order No.: SERB SRG/2022/001484)	Dr. A. Kumar (PI)	DST	Sep, 26	31.76 Lacs	2 years
4	Direct Dynamics Simulation Study on the Catalytic Hydrogenation of CO <sub>2</sub> by Some Transition Metal Hydride Clusters.	Dr. D. Chakravorty (PI)	DST	Sep, 22	23.64	2 years
5	Electrospun PVDF based piezoelectric nanocomposite energy harvesters for self-powered smart wearable and implantable electronics	Dr. B. Dasgupta Ghosh	SERB	Jan, 23	48	3 years
6	Natural Product Inspired Synthesis and Biological Evaluation of Novel Pyranone/Pyridinone Analogs as Enhancer of Muscle Energy Expenditure to Treat Type 2 Diabetes	Dr. C. Bal (PI)	DST	Sep, 22	16.17	3 years
7.	Metal organic frameworks and sequential electrocoagulation for remediation of mining effluents	Dr Sumit Mishra (PI)	SERB	Mar'22	25,01,400	3 years

#### b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Synthesis of biobased and multifunctional adhesive hydrogels for environmental and biomedical applications	Dr Sumit Mishra	SERB SIRE Award	Oct 22	17.77	6 months

### SECTION 3

#### SEMINAR / CONFERENCE

#### 3.1 Seminar / Conferences / Short – Term Courses Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Convenor/ Coordinator	Funding / Sponsoring Agency	Date of Event
1	DST & ACS Workshop	Dr. A. Pradhan	ACS	July 19, 2022
2	27th ISCB International Conference (ISCBC 2022)	Dr. A. Sharon	ISCB	November 16-19, 2022
3.	NatFOE'2023: Theme: Smart Water Harvesting and Cleaning: Engineering Water	Dr. Sumit Mishra	INAE, SERB, BIT Mesra	24-25 June'2023



### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members

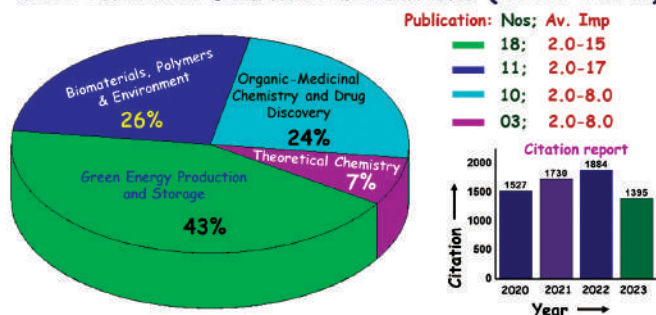
S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Anirban Pradhan	Activated porous carbon materials/graphene/nanoribbons synthesis for energy production and storage applications" "Invited speaker" for 27th ISCB International Conference (ISCBC-22), at BIT, Mesra Ranchi	ISCB	BIT, Mesra Ranchi	BIT, Mesra Ranchi	16th-19th November 2022
2.	Dr. Joydeep Dhar	Delivered talk as invited speaker on "Investigating the Effect of Systematic Caesium Substitution in Organo Lead Halide Perovskite" in the "International Hybrid Conference on Nano Structured Materials and Polymers (ICNP-2023)"	Seed Money Grant, BIT Mesra	Mahatma Gandhi University, Kottayam	Mahatma Gandhi University, Kottayam	12-14th May 2023
3.	Dr Sumit Mishra	Delivered talk on "Exploring the potential of polysaccharide based graft copolymers and their applications", Kingston University, London, UK, Jan 25, 2023	Kingston University, London UK	Kingston University London UK	Kingston University London UK	25 Jan 2023
4.	Dr Sumit Mishra	Training on Electrospinning and its applications	SRUC, Edinburgh UK	SRUC, Edinburgh UK	SRUC, Edinburgh UK	Feb' 2023
5.	Dr Sumit Mishra	Health safety and risk management training, Cardinus	SRUC, Edinburgh UK	Cardinus, UK	SRUC, Edinburgh UK	Dec 2022
6.	Dr. S. Naskar	Invited Speaker of Inorg. Chem. Section of ACC-2022 & RTCS-2022 Title: Single site Ruthenium Complexes with anionic ligands as Molecular Water Oxidation Catalysts	Indian Chemical Society	Indian Chemical Society	IIT (ISM), Dhanbad	16-18 December, 2022.
7.	Dr. A. Sharon	Invited Speaker of Org. Chem. Section of ACC-2022 & RTCS-2022 Title: Structure, Computation, and Chemistry of HSP90 in Drug Discovery	Indian Chemical Society	Indian Chemical Society	IIT (ISM), Dhanbad	16-18 December 2022.



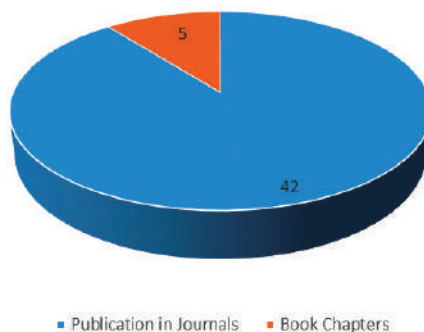
## SECTION 4

## RESEARCH PUBLICATIONS

## SCI-Indexed Journal Publications (2022-2023)



## Department of Chemistry



## SECTION 5

## AWARD / PATENT / COLLABORATIONS

## 5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Dr. Anirban Pradhan	Short gun oral award at 27th ISCB International Conference (ISCBC-22)	Indian Society of Chemists and Biologists (ISCB)	27th ISCB International Conference (ISCBC-22)	11/2022
2.	Dr Sumit Mishra	SERB SIRE Fellow for visit to UK for six months	SERB	National	Feb 2022 (Oct 22-Mar 23)

## 5.2 Patents (Applied / Granted)

Sr. No	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1.	J. K. Maity, R. Hore, A. Pradhan, T. Halder, S. Mukherjee	Sauropunol Compounds and Method of Preparing the Same	Application no. 202331049046, Ref no: PAT199/012/23, Date 20.07.23	2023	The present invention, in general, relates to sauropunol compounds and its method of preparation. More particularly, the present invention relates to natural novel sauropunol compounds and their O-glycoside analogues and process of synthesis thereof.



### 5.3 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1.	Dr. Joykrishna Maity, Department of Chemistry, Ramakrishna Mission Residential College (Autonomous) (Vivekananda Centre for Research), Narendrapur, Kolkata - 700103, W.B, India Mobile: +919433353553, Email: jkmaityc@gmail.com	Porous carbon material based biological activity studies and new molecule development.	2019 to till now
2	Dr. Matthew Addicoat Nottingham Trent University (School of Science and Technology), Nottingham, NG11 8NS, UK, e-mail- matthew.addicoat@ntu.ac.uk.	Theoretical calculation of large porous carbon materials for HER and OER studies	2017 to till now
3	Dr. Paul R. McGonigal - Durham University, Department of Organic Chemistry Lower, Mountjoy, Stockton Road Durham, DH1 3LE, UK, e-mail- paul.mcgonigal@durham.ac.uk.	OLED development based TADF materials	2017 to till now
4	Prof. Sagar Mitra- Indian Institute of Technology (IIT), Bombay, India, Department of Energy Science and Engineering, 400076, e-mail-sagar.mitra@iitb.ac.in	Battery preparation and testing base on porous carbon materials	2017 to till now
5	Dr. Bishnu P. Biswal-School of Chemical Sciences, NISER Bhubaneswar, IndiaE-mail bp.biswal@niser.ac.in	High end structural analysis of porous carbon materials	2022 to till now
6	Dr. Dirtha Sanyal, Ion-Beam Research Facility Lab, Variable Energy Cyclotron Centre, Kolkata 700064, India, Email: dirtha@vecc.gov.in	Positron annihilation study for lattice defect analysis	2017 to till now

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

### 6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students	Faculty Coordinator (if any)	Date / Duration
1.	IMP2023 (award for innovation in PG category)	Nistha Mukhopadhyay	Mentor: Dr Sumit Mishra	June'2023
2.	IMP 2023	Asmita De (selected in round 1 screening, certificate awarded)	Mentor: Dr Sumit Mishra	June'2023
3.	Environment day event (poster presentation)	Gargi Mandal: 2nd Prize	Mentor: Dr Sumit Mishra	June'2023

### 6.2. List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Dr. A. Sharon	Professor & Head
2	Dr. P. K. Srivastava	Professor
3	Dr. U. Jha	Professor
4	Dr. J. P. Pandey	Professor



5	Dr. B. Verma	Associate Professor
6	Dr S. Mishra	Associate Professor
7	Dr. S. Naskar	Associate Professor
8	Dr. P Kar	Associate Professor
9	Dr. C. Bal	Associate Professor
10	Dr. Deepshikha	Assistant Professor
11	Dr. B. D. Ghosh	Assistant Professor
12	Dr. S. S. Mahapatra	Assistant Professor
13	Dr. G. Sen	Assistant Professor
14	Dr. Joydeep Dhar	Assistant Professor
15	Dr. Anirban Pradhan	Assistant Professor
16	Dr. Debdutta Chakraborty	Assistant Professor
17	Dr. Atul Kumar	Assistant Professor

### 6.3 List of Adjunct/Visiting Faculties

Sr. No.	Name	Designation	Affiliation
2.	Dr. Amit Basak	Senior Adjunct Professor	

### 6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HOD	Head of the Department (Ex-Officio)	Chairperson
2.	Dr. P.K. Srivastava	Professor Dept. of Chemistry	Member
3.	Dr. Usha Jha	Professor Dept. of Chemistry	Member
4.	Dr. J.P. Pandey	Professor, Dept. of Chemistry	Member
5.	Dr. Sumit Mishra	Associate Professor, Dept. of Chemistry	Member
6.	Dr. Subhendu Naskar	Associate Professor, Dept. of Chemistry	Member
7.	Dr. P. Kar	Associate Professor, Dept. of Chemistry	Member
8.	Dr. C. Bal	Associate Professor, Dept. of Chemistry	Member
9.	Dr. G. Sen	Assistant Professor, Dept. of Chemistry	Member



Sr. No.	Name of the Member	Designation	Role
10.	Dr. T. Ghose	Professor, Dept. of Electrical and Electronics Eng.	Member
11	Dr. Sudip Das	Professor, Dept. of Space Eng. & Rocketry	Member
12	Dr. Pradyut Ghosh	Professor, Indian Association for the Cultivation of Science (IACS), Kolkata	External Member
13	Dr. Manas K. Ghorai	Professor, Indian Institute of Technology, Kanpur	External Member
14	Dr. Rakeshwar Bandichhor	Vice- President & Head of Chemistry, Dr. Reddy's Laboratories Ltd. Hyderabad	External Member
15	Dr. Satish Patil	Professor, Solid State and Structural Chemistry Unit, IISc, Bangalore	External Member

## SECTION 7


## OTHER INFORMATION

### 7.1 Publication by students, if any

#### Publications in Journals : (International/National)

- Gargi Mandal, Sumit Mishra, A review on emerging micro and nanoplastic pollutants, heavy metals and their remediation techniques, Nanofabrication, pp 1-18, 2023, <https://doi.org/10.37819/nanofab.008.302>

#### Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Prof. T. Pradeep Professor, IIT Madras, Prof Pradip Kalbar, IIT Bombay	25th June 2023	
2.	Dr. Vishal Mishra, IIT BHU	26 June 2023	Talk Title: "Clean Water, Green Energy and Solid Waste Management: Rural Development, Entrepreneurship and Science Demonstration Experiments"

### 7.2 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1	Harsh Aryan Jalan, IMSc 2K19	AIR:32 in IIT JAM 2022, Joined IIT Bombay for MSc.



Sr.No	Name, Batch and Affiliation	Short Description
2	Prachi Priya, IMSc 2K19	AIR:140 in IIT JAM 2022,Joined IISc Bangalore for Integrated PhD.
3	Sunidhi Raj, IMSc 2K19	AIR:510 in IIT JAM 2022.Joined IIT Patna for MSc.
4	Bhavi Rathod, IMSc 2K19	AIR: 662 in IIT JAM 2022,Joined NIT Rourkela for MSc.
5	Shaini Banerjee, MSc 2K19	Joined M.Sc.in Biotherapeutics in University College Dublin, Ireland
6	Utkarsh Singh, IMSc 2K18	AIR:310 in IIT JAM 2021 Joined JNCASR, Bengaluru for Integrated PhD(Material Science).
7	Shubhadeep Saha, IMSc 2K18	Joined IISER TVM for MSc
8	Sruthi Swaminathan, IMSc. 2K18	Joined School of Polymer Science and Polymer Engineering, University of Akron, Ohio, USA for PhD
9	Devleena Sahoo, IMSc. 2K18	Joined Dalhousie University, Canada for PhD
10	Koustav Kundu, IMSc 2K17	Higher Studies from IIT Mandi
11	Siddharth Mukherjee IMSc. 2K17	IMBA Finance, SDA Bocconi, Milan, Italy
12	K. Nikhila IMSc. 2K17	Joined MSc-PhD dual degree in Environmental Sciences and Engineering, IIT Bombay
13	Rishij Roychowdhury IMSc. 2K17	Joined PhD at IISER Pune with CSIR (NET)
14	Sayan Ghosh, IMSc 2K16	Joined Research Associate at Syngene International, Bangalore
15	Asparshika Shruti, IMSc 2K16	Joined Bowling Green State University, USA for PhD
16	Sumant Verma, IMSc 2K16	Working in ESL Vedanta, Bokaro
17	Keshav Kishor, IMSc 2K15	Joined Department of Chemistry and Biochemistry,University of Delaware, Newark, DE, for PhD.
18	Sneha Nayak, IMSc 2K15	Joined School of Molecular Sciences(Organic Chemistry), Arizona State University, Tempe, AZ, for PhD.
19	Suryansh Kashyap, IMSc 2K14	Joined as Assistant Scientist,DSRI CCRUM MINISTRY OF AYUSH GOVT OF INDIA, NEW DELHI
20	Shubhangi Nath, MSc 2K20	Joined PhD at the Department of Chemistry, University at Buffalo (Sunny Buffalo), USA
21	Nilsha Ghosh, MSc 2K20	Assistant lecturer at Aakash institute, Bangalore
22	Prachi Thakur, MSc 2K20	Associate Scientist (QA), Schrodinger, Hyderabad
23	Arpan, MSc 2K19	Working in ESL Vedanta, Bokaro
24	Dr. Shalini Divya, M.Sc. 2K10	CEO of the Tasmanian, an NZ-based battery manufacturing company
25	Dr. Arijit Hazari, M.Sc. 2K13	Postdoctoral Research Associate (Marie Skłodowska-Curie fellow) Institute of Inorganic Chemistry (University of Stuttgart), Germany
26	Monika Yadav,IMSc. 2K11	Graduate Research Assistant, Department of Chemistry, Purdue University, USA



Sr.No	Name, Batch and Affiliation	Short Description
27	Shambhu Deo Chnadra, IMSc. 2K13	Graduate Research Assistant, Department of Chemistry, The University of British Columbia, Canada
29	Shrikant Singh, IM.Sc. 2K13	Graduate Research Assistant, Department of Chemistry University of Saskatchewan, Canada
30	Simran, IMSc. 2K13	Graduate Research Assistant, Department of Chemistry, Simon Fraser University, British Columbia, Canada
31	Ela Rani, IMSc. 2K13	Teaching in Vedantu Ltd.
32	Rishika Kothari, IMSc. 2K14	Junior Engineer, National Fertilizer Limited, Hyderabad
33	Prem Kumar Kushwaha, IMSc. 2K15	Process R&D Scientist, Dr. Reddy Laboratories, Hyderabad
34	Omanjana Goswami, IMSc. 2K12	Joined PhD at Rutgers University, New Jersey, USA
35	Tanmoya Akash Pradhan, B.Sc. Chemistry (2012-15)	Researcher at Asian Paints R & T Facility, Mumbai
36	Rahul Jha B.Sc. Chemistry (2013-16)	Graduate Research Assistant University of Kentucky, USA
37	Dr. Konreddy Anand Ph.D. Chemistry (2010-15)	Postdoctoral Research Associate University of Georgia Athens, Georgia, USA
38	Dr. Mohan Kasula Ph.D. Chemistry (2010-15)	Assistant Professor
39	Dr. Tuniki Balaraju Ph.D. Chemistry (2010-14)	Scientist, Aragen Biosciences, Hyderabad
40	Dr. Nandkishore Thombare Ph.D. Chemistry (2014-17)	Scientist, ICAR- Indian Institute of Natural Resins and Gums, Namkum, Ranchi- 834010
41	Dr. Ch. Jamkhokai Mate Ph.D. Chemistry (2017-20)	Scientist, ICAR- Indian Institute of Natural Resins and Gums, Namkum, Ranchi- 834010
42	Dr. Sweta Sinha PhD. Chemistry (2012-16)	Assistant Professor, Amity University – Ranchi Campus
43	Dr. Usha Rani Grandhe PhD Chemistry (2011-15)	Postdoctoral Researcher University of Georgia Athens, Georgia, USA
44	Dr Md. Shahid PhD Chemistry (2012-17)	Assistant professor (On Contract), Department of Chemistry, Central University of Jharkhand, Brambe, Ranchi.

## 7.4 Infrastructure Development.

Installation of the state-of-the-art spectro fluorometer FLS1000 from Edinburgh Instruments, UK for the steady-state and time-dependent fluorescence measurement.

Installation of the state-of-the-art Computing Cluster (Make: Tyrone) from Netweb Technologies India Pvt. Ltd. For the research in the domain of Theoretical and Computational Chemistry.

## Department of Civil and Environmental Engineering

### SECTION 1

### DEPARTMENTAL PROFILE

#### 1. About the Department :



#### Department

##### Vision

To develop quality intellectuals through education, research and motivation so that they can bring a positive contribution to the society in area of Civil and Environmental Engineering

##### Mission

- ❖ To develop professional skills through quality education and research
- ❖ To outreach various sectors of society through interdisciplinary programmes and practical oriented approach.
- ❖ To create dynamic, logical and effective leaders with inspiring mindsets.



## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy)

#### a) Ongoing Projects:

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Prediction of Particulate Matter and Gaseous Pollutant Concentration Through ANN, PNN And CART Models and Comparison with CALPUFF and AERMOD In Singrauli Coal Mines	PI-Tanushree Bhattacharya Co-PI- Bindhu Lal	Coal India	7.6.2021	85.25 lakhs	3 years
2.	Impact Response Of Bio-inspired Fibre-based Helicoidal Composites	PI - Subhajit Sen	SERB	03/11/22	32.67 lakhs	2 years
3.	National Carbonaceous Aerosols Programme (NCAP): Working Group III – Emissions, sources apportionment and climate effects	PI - R. Naresh Kumar, Co-PI - Jawed Iqbal	MoEFCC	01/4/2016	159.50 Lakhs	7 Years
4	Effect of blasting on opencast mine dump and development of relationship between blast induced vibration and dump design	PI - Ashish Kumar Patnik CO-PI- Indrajit Roy, Siddhart Sengupta, Subhajit Sen, Puja Rajhans, Mani Mohan	CIL R & D grant	10/02/2021	33 Lakhs	2 years
5.	Source Apportionment, Hydrodynamic Study and Environmental Fate Assessment of Micro-Plastics in Drinking Water Supplying Reservoirs of Ranchi, Jharkhand"	PI: Sukalyan Chakraborty CoPI: Mili Ghosh And MadhuPriya	SERB	21/05/2022	38.01 lakhs	3 years

#### b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Performance Evaluation of Cement Concrete Pavements in Rural Roads	PI – Prof. Bindhu Lal, Co-PIs – Prof. Anand Kr. Sinha and Mr. Mani Mohan	National Rural Roads Development Agency, Ministry of Rural Development, Government of India	1.4.2022	22.76 lakhs	31.3.2023



## c) Consultancy Projects carried out/ongoing

Sl. No.	Title of Project	Funding Agency	Duration from	to	Grant mobilized (Rs. lakhs)	Principal Investigator/ Co- Investigator	Ongoing/ Completed*
1.	Carbon Footprint Study and carbon sink due to proposed opencast mining of Kotre Basantpur OCP	KBP Consultants	May 2023	Till date	10.62lacs	Kirti Avishek	Ongoing
2.	Augmentation report on Natural resources including carrying capacity of rivers and streams passing by the Catchment area and Its mitigation measures for Chandragupt Coal Mines,	Sushree Consultant	June 2023	Till date	11.5lacs	Kirti Avishek	Ongoing
3.	Scrutiny of DPR under PMGSY	National Rural Roads Development Agency, Ministry of Rural Development, Government of India	2001	Ongoing	Rs. 19.22 lakhs in FY 2022-2023	STA Coordinator - Prof. Anand Kr. Sinha, Members - Prof. Bindhu Lal and Mr. Mani Mohan	Ongoing

## SECTION 3

## SEMINAR / CONFERENCE

## 3.1 Seminar / Conferences / Short – Term Courses Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1	Workshop on Practices, Challenges & Innovations in the field of Road Safety in India	Ashish Kumar Patnaik, Prasant Prasad	BIT Mesra	02.03.2023

## 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Puja Rajhans	Prospects of Infrastructure Development in the Construction Sector	Self-Sponsored One Week Online Short-Term Course on	NIT Jalandhar	NIT Jalandhar (Online)	22-26 May, 2023

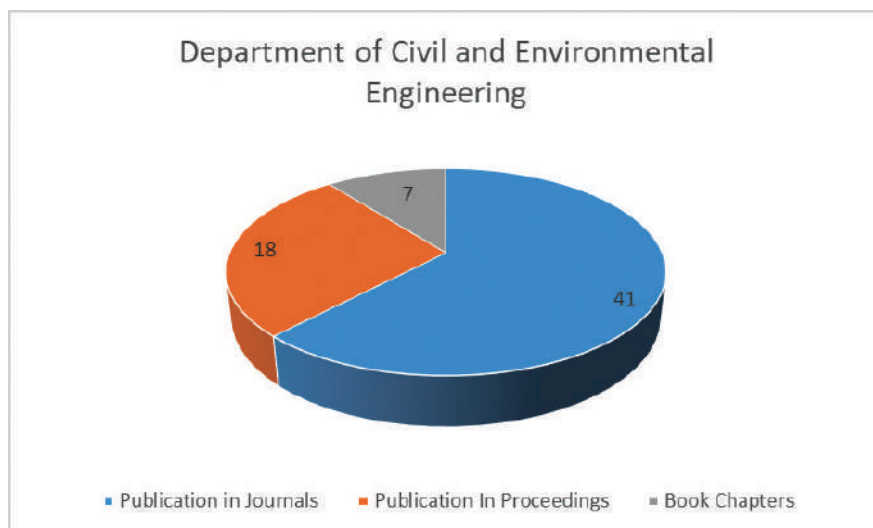


## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
2.	Puja Rajhans	SEISMIC DESIGN OF REINFORCED CONCRETE STRUCTURES	National Disaster Management Authority and IIT Bombay	IIT Bombay	IIT Madras	16 Feb, 2023
3	Prof. Anand Kr. Sinha, Prof. Bindhu Lal, and Mr. Mani Mohan	Workshop on 'Full Depth Reclamation Technology'	National Rural Roads Development Agency, Ministry of Rural Development, Government of India	Jharkhand State Rural Road Development Agency, Ministry of Rural Works, Government of Jharkhand	Ranchi	April 18, 2023
4	Tanushree Bhattacharya	Regional Workshop on Air Quality Management in Cities	European Union	European Union and TERI	Lucknow	31st May, 2023
5	Tanushree Bhattacharya	Converging Best practices to Achieve Clean Air under NCAP	Jharkhand Pollution Control Board	Jharkhand Pollution Control Board	Ranchi	28th March, 2023
6	Tanushree Bhattacharya	National Seminar on Solid waste management	RTC College	RTC College	Ranchi	15th September 2022
7	Neeta Kumari	6 day FDP on Application of AI & ML in Civil Engineering (ONLINE)	Dept of Civil engg, ACE engg college	Dept of Civil engg, ACE engg college	Hyderabad	30th Jan to 4th Feb, 2023
8	Subhajit Sen	Workshop on Geotechnical Earthquake Engineering	National Disaster Management Authority and IIT Bombay	IIT Bombay	IIT Bombay	6-7 February, 2023
9	Sukalyan Chakraborty	Nation Seminar on "GREEN MINING - The Global Need"	ICFAI University, Ranchi	ICFAI University, Ranchi	ICFAI University, Ranchi	31st Jan 2023

### SECTION 4

### RESEARCH PUBLICATIONS





## SECTION 5

## AWARD / PATENT / COLLABORATIONS

## 5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1	Sukalyan Chakraborty	Best Paper Award	ICFAI University, Ranchi	National	2023

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

## 6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (If any)	Date / Duration
1	Dalmia Cement Plant visit	Dhruv Choudhury Subrat Singh	Dr. Pulak Munshi Dr. Kirti Avishek Dr. Ashish Kumar Patnaik Dr. Puja Rajhans Dr. Subhajit Sen Mr. Mani Mohan	11.03.2023- 15.03.2023
3	CMPDI Laboratory	R&D Dhruv Choudhury Subrat Singh	Dr. Indrajit Roy Mr. Mani Mohan	07.02. 2023

## 6.2. List of Faculties

Sr. No.	Name	Designation
1.	Prof. Anand Kumar Sinha	Professor
2	Prof. Rajiv Ranjan Sahay	Professor
3	Prof. Sudeshna Chakravarty	Professor
4	Prof. Bindhu Lal	Professor
5	Prof. Birendra Kumar Singh	Professor
6	Dr. Siddhartha Sengupta	Associate Professor
7	Dr. Kirti Avishek	Associate Professor
8	Dr. R. Naresh Kumar	Associate Professor
9	Dr. Sukalyan Chakraborty	Associate Professor
10	Dr. Tanusree Bhattacharya	Associate Professor
11	Mr. Mani Mohan	Assistant Professor
12	Dr. Jawed Iqbal	Assistant Professor
13	Dr. Neeta Kumari	Assistant Professor
14	Dr. Ashish Kumar Patnaik	Assistant Professor
15	Dr. Puja Rajhans	Assistant Professor
16	Dr. Subhajit Sen	Assistant Professor



## 6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Pulak Munshi	Adjunct Professor	BIT Mesra
2.	Dr. Indrajit Roy	Adjunct Faculty	BIT Mesra
3	Dr. Arnab Ranjan Majumdar	Professor of Practice	BIT Mesra

## 6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Prof. Bindhu Lal	HOD (Ex-Officio)	Chairman
2.	Prof. Anand Kr. Sinha	Professor	Internal Member
3.	Prof. Rajeev Ranjan Sahay	Professor	Internal Member
4.	Prof. Sudeshna Chakravarty	Professor	Internal Member
5.	Prof. Birendra Kr. Singh	Professor	Internal Member
6.	Dr. Sukalyan Chakraborty	Associate Professor	Internal Member
7.	Dr. Ashish Kr. Patnaik	Assistant Professor	Internal Member
8.	Prof. Manjari Chakraborty	Professor(Architecture and Planning)	Internal Member
9.	Prof. Rabindra Prasad Sharma	Professor (Mechanical Engineering)	Internal Member
10.	Prof. S. K. Maity	Professor (ESE), IIT (ISM), Dhanbad	External Member
11.	Prof. Rajesh Kumar	Professor (CE), IIT(BHU), Varanasi	External Member
12.	Dr. Rakesh Pratap Singh	Associate Professor (CE), NIT Jamshedpur	External Member
13.	Mr. Sujib Chatterjee	Former Chief Manager (Civil), CMPDIL	External Member
14.	Mr. Rammohon Chatterjee	Former Head (Structural Div), CET, SAIL	External Member
15.	Mr. Suwendu Basu	Head, Redimix, Health and Safety, Lafarge	External Member

## SECTION 7

## OTHER INFORMATION

### 7.1 Publication by students, if any

#### Publications in Journals :(International/National)

1. R. Naresh Kumar, S. Sadaf, Mohini Verma, Shubhrasekhar Chakraborty, Shweta Kumari, Veerababu Poliseti, Parashuram Kallem, Jawed Iqbal, Fawji Banat (2023). Old landfill leachate and municipal wastewater co-treatment by sequencing batch reactor combined with coagulation-flocculation using novel flocculant. Sustainability, Vol. 15, 8205.
2. Abisheg Dhandapani, Jawed Iqbal, R. Naresh Kumar, Ankur Bhardwaj, Deeksha Shukla, Ramya Sunder Raman, SVL Prasad, BMS Murthy (2023)

3. Characterization of fine particulate matter water-soluble inorganic ions and estimation of aerosol acidity at three COALESCE network sites – Mysuru, Bhopal and Mesra in India. Environmental Science and Pollution Research.
3. Verma Mohini, Shubhrasekhar Chakraborty, Shweta Kumari, Aalok Gupta, Dewanshu Kumar, Jawed Iqbal, J. Rajesh Banu, Arulazhagan Pugazhendi, R. Naresh Kumar (2023). Co-treatment of stabilized landfill leachate and municipal wastewater in a granular activated carbon-sequencing batch reactor (GAC-SBR). Process Safety and Environmental Protection, 174, 424-432.



4. Haswani D, RS Raman, K Yadav, A Dhandapani, J Iqbal, R. Naresh Kumar, SVL Prasad, A Yogesh, BMS Murthy, KS Lokesh (2023). Pollution Characteristics and Ecological Risks of Trace Elements in PM<sub>2.5</sub> over three COALESCE network sites - Bhopal, Mesra, and Mysuru, India. *Chemosphere*, 324, 138203.
5. Sadaf S, AK Singh, J Iqbal, R. Naresh Kumar, J Sulejmanovi, MA Habila, PJH Américo-Pinheiro, F Sher, (2022), Advancements of sequencing batch biofilm reactor for slaughterhouse wastewater assisted with response surface methodology, *Chemosphere*, 307, 135952.
6. Mala Kumari, Abhishek Kumar, Tanushree Bhattacharya. Assessment of heavy metal contamination in street dust: concentrations, bioaccessibility, and human health risks in coal mine and thermal power plant complex, *Env. Geochem and Health*. DOI :10.1007/s10653-023-01695-5. published online.
7. N. Prasad, T. Bhattacharya, Just transition and future of Coal: A comprehensive review, *Mine Tech*. 44 (2023) 12–16. ISSN: 09707204
8. A. Kumar, T. Bhattacharya, M. Vithanage, Valorization of waste biomass for biochar production and arsenic removal: A comparative assessment, *Groundw. Sustain. Dev.* 22 (2023) 100972. <https://doi.org/https://doi.org/10.1016/j.gsd.2023.100972>.
9. M. Kumari, T. Bhattacharya, A review on bioaccessibility and the associated health risks due to heavy metal pollution in coal mines: Content and trend analysis, *Environ. Dev.* 46 (2023) 100859. <https://doi.org/10.1016/j.envdev.2023.100859>.
10. A. Roy, A. Kumar, T. Bhattacharya, J.K. Biswas, M. Watts, Review: Bioaccessibility of Potentially Harmful Metals in Dust and Soil Matrices, *Expo. Heal.* (2023) 1–30. <https://doi.org/10.1007/s12403-023-00546-z>.
11. A. Kumar, T. Bhattacharya, W.A. Shaikh, A. Roy, S. Chakraborty, M. Vithanage, J.K. Biswas, Multifaceted applications of biochar in environmental management: a bibliometric profile, *Biochar*. 5 (2023) 11. <https://doi.org/10.1007/s42773-023-00207-z>.
12. A. Kumar, T. Bhattacharya, W.A. Shaikh, S. Chakraborty, D. Sarkar, J.K. Biswas, Biochar Modification Methods for Augmenting Sorption of Contaminants, *Curr. Pollut. Reports*. 8 (2022) 519–555. <https://doi.org/10.1007/s40726-022-00238-3>.
13. W.A. Shaikh, A. Kumar, S. Chakraborty, M. Naushad, R.U. Islam, T. Bhattacharya, S. Datta, Removal of toxic dye from dye-laden wastewater using a new nanocomposite material: Isotherm, kinetics and adsorption mechanism, *Chemosphere*. 308 (2022) 136413. <https://doi.org/10.1016/j.chemosphere.2022.136413>.
14. A. Kumar, T. Bhattacharya, W.A. Shaikh, S. Chakraborty, G. Owens, M. Naushad, Valorization of fruit waste-based biochar for arsenic removal in soils, *Environ. Res.* 213 (2022) 113710. <https://doi.org/10.1016/j.envres.2022.113710>.
15. A. Kumar, T. Bhattacharya, S. Mukherjee, B. Sarkar, A perspective on biochar for repairing damages in the soil–plant system caused by climate change-driven extreme weather events, *Biochar*. 4 (2022) 1–23. <https://doi.org/10.1007/s42773-022-00148-z>.
16. A. Roy, T. Bhattacharya, Ecological and human health risks from pseudo-total and bio-accessible metals in street dusts, *Environ. Monit. Assess.* 194 (2022). <https://doi.org/10.1007/s10661-021-09658-y>.
17. W.A. Shaikh, A. Kumar, S. Chakraborty, R.U. Islam, T. Bhattacharya, J.K. Biswas, Biochar-based nanocomposite from waste tea leaf for toxic dye removal: From facile fabrication to functional fitness, *Chemosphere*. 291 (2022) 132788. <https://doi.org/10.1016/j.chemosphere.2021.132788>.
18. Pandey, S. and Kumari, N., 2023. Prediction and monitoring of LULC shift using cellular automata-artificial neural network in Jumar watershed of Ranchi District, Jharkhand. *Environmental Monitoring and Assessment*, 195(1), p.130.
19. Pandey, S., Kumari, N. and Al Nawajish, S., 2023. Land use land cover (LULC) and surface water quality assessment in and around selected dams of Jharkhand using water quality index (WQI) and geographic information system (GIS). *Journal of the Geological Society of India*, 99(2), pp.205-218.
20. Kadave, K., Patil, V. and Kumari, N., 2023. Noise Mapping of Nashik City using Q-GIS. *Grenze International Journal of Engineering & Technology (GIJET)*, 9(1).
21. Munshi, A.K., Patnaik, A.K. (2023). Development of PCU Model for Unsignalised Intersection: A Case Study of Ranchi City. *Lecture Notes in Civil Engineering*, vol 347. Springer, Singapore. [https://doi.org/10.1007/978-981-99-2556-8\\_16](https://doi.org/10.1007/978-981-99-2556-8_16)


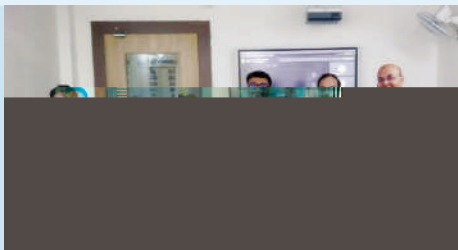


22. Singh, B.K., Sengupta, S. (2022). "An overview of fly ash utilization in production of geopolymer bricks and various factors influencing its strength." Innovative Infrastructure Solutions <https://doi.org/10.1007/s41062-022-00891-z>.
23. Kirti Avishek, Abhrankash Kanungo, Aditi Majumdar & Rabindranath Nanda (2023). Integrating USLE in Geospatial Platform for Preparing Catchment Area Treatment Plan for Chandil Dam, Jharkhand, India. Journal of the Indian Society of Remote Sensing. <https://doi.org/10.1007/s12524-023-01753-6>. Sep 2023.
24. Majumdar, A., Avishek, K (2023). Riparian Zone Assessment and Management: an Integrated Review Using Geospatial Technology. Water Air Soil Pollut 234, 319 (2023). <https://doi.org/10.1007/s11270-023-06329-1>. May 2023. 234:319.
25. Kanchan Lakra, Kirti Avishek (2022). A review of factors influencing fog formation, classification, forecasting, detection and Impacts. Rendi Conti Lenci. Springer. 1720-0776. <https://link.springer.com/article/10.1007/s12210-022-01060-1>

## 7.2 Achievements of Students:

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1	Abhishek Kumar	Best poster award in International Symposium on Sustainable Urban Environment (ISSUE-2022), (Topic - Influence Of Feedstock on The Production and Properties Of Biochar And Assessment Of Their Efficacy For Removal Of Arsenic	UPES, Dehradun	11-14 October 2022); UPES Dehradun
2	Soumya Pandey	Best paper award in third international conference on nanoelectronics, machine learning, internet of things and computing systems (NMIC-2023) Title of the paper: Application of AI in addressing land degradation: A case study of Jumar watershed, Ranchi, Jharkhand	ISVE (Indian society for VLSI education), Ranchi	29-30th April, 2023

## 7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Dr. Dinesh Mohan Professor (Thomson Reuters highly cited Researcher), School of Environmental Sciences Jawaharlal Nehru University, New Delhi 110067, INDIA	26.5.2023	 



#### 7.4 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Mr. Sharad Jaipuriar, 1980	Retired General Manager I/C Civil and Architecture, MECON Limited
2	Prof. Gopal Pathak, 1977	Vice Chancellor, Sarala Birla University, Ranchi
3	Mr. Madan Mohan Mohanka, 1959	Chairman/Executive Director, Tega Industries Ltd.
4	Dr. Sunil Sinha, 1986	Professor & Director, SWIM Center, Virginia Tech
5	Dr. B.K. Rath, 1966	Retired Director, NIT Rourkela
6	Mr. Surinder Chadha, 1963	Senior Consultant, Metlife

#### 7.5 Infrastructure Development.

Advance Instrumentation Lab is being developed.



## Department of Computer Science and Engineering

### SECTION 1

### DEPARTMENTAL PROFILE

#### 1. About the Department :

The Department of Computer Science & Engineering was established in the year 1983 and is now recognized as one of the leading departments with infrastructure and facilities to match the very best in the country. The department remains committed towards its mission, which is twofold. One is to provide students with the fundamental knowledge and problem solving skills in Computer Science required for a fulfilling career. The other goal is to create and disseminate knowledge to improve Computer Science research, education and practice.



The department has had academic collaborations with University of New Brunswick, Canada, University of Melbourne, Australia and University of Manitoba, Canada.

The Department offers following Undergraduate and Graduate programmes in session 2023 – 24.

UG/PG	Programmes Offered (2023-24)	Duration	Intake
Undergraduate Programmes	B.Tech in Computer Science and engineering	4 Years (8 Semesters)	180
	B.Tech in Artificial Intelligence and Machine Learning	4 Years (8 Semesters)	60
Postgraduate Programmes	M.Tech in Computer Science and Engineering	2 Years (4 Semesters)	30
	M.Tech in Artificial Intelligence and Machine Learning	2 Years (4 Semesters)	18
	Master of Computer Application	2 Years (4 Semesters)	60
Doctoral Programme	Ph.D in Engineering		

#### Department :

##### Vision

The department strives to be recognized for outstanding education and research, leading to excellent professionals and innovators in the field of Computer Science and Engineering, who can positively contribute to the society.

##### Mission

To impart quality education and equip the students with strong foundation that could make them capable of handling challenges of the new century.

To maintain state of the art research facilities and facilitate interaction with world's leading universities, industries and research organization for constant improvement in the quality of education and research.



## SECTION 2

## RESEARCH PROJECTS

## 2.1 Sponsored Projects (Research and Consultancy)

## a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Machine Learning-based characterization and grading of minerals and establishment of image-based mineral repository for the state of Jharkhand	Subrajeet Mohapatra (PI) Shamama Anwar (CO-PI)	SERB	21st February 2022	Rs. 20.39 Lakhs	3 years
2.	Improving health services of rural areas in Indian healthcare system through Machine Learning approaches	Dr. B.K. Sarkar PI Dr. S.K. Sahana (Co-PI)	IDEA: Technology Innovation Hub@ Indian Statistical Institute, Kolkata	23.09.2022	5.79 lakhs	3 years
3	Multi-Source Optimization using Deep Learning framework for Downscaling Satellite-Derived Thermal Data	Co PI	SERB	10 Jan 2023	Rs. 1908240/-	3 years
4	Centre for Advance Research on Machine Learning for Geospatial Analytics and Solutions for Jharkhand State	Dr. Abhijit Mustafi (PI), Dr. Debjani Mustafi (Co-PI), Dr. Sudip Kumar Sahana (Co-PI), Dr. Shamama Anwar (Co-PI)	PURSE: DST	27-02-2023	8.45 Crores	4 Years
5	360 0 Health Monitoring of Miners and Mining Community of CCL	Dr. Sudip Kumar Sahana (PI), Dr. Debjani Mustafi (Co-PI), Dr. Abhijit Mustafi (Co-PI), Dr. Subrajit Mohapatra (Co-PI)	CSR: CCL, Govt. of India	14-11-2022	30.11 Lakhs	3 Years
6	Mitigation of Electromagnetic Interference and Electromagnetic Compatibility issues in Wearable IoT devices.	Dr.Itu Snigdh, Co PI	SERB POWER	Aug, 2021	29,95,300	3Years



b) Consultancy Projects carried out/ongoing

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator / Co-Investigator	Ongoing / Completed*
			from	to			
1.	Summarize Research Problem-Solution & Cluster Similar Problems	Samsung R&D, Bangalore	Dec 2022	July 2023	-	Shruti Garg	Completed

SECTION 3

SEMINAR / CONFERENCE

3.1 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members

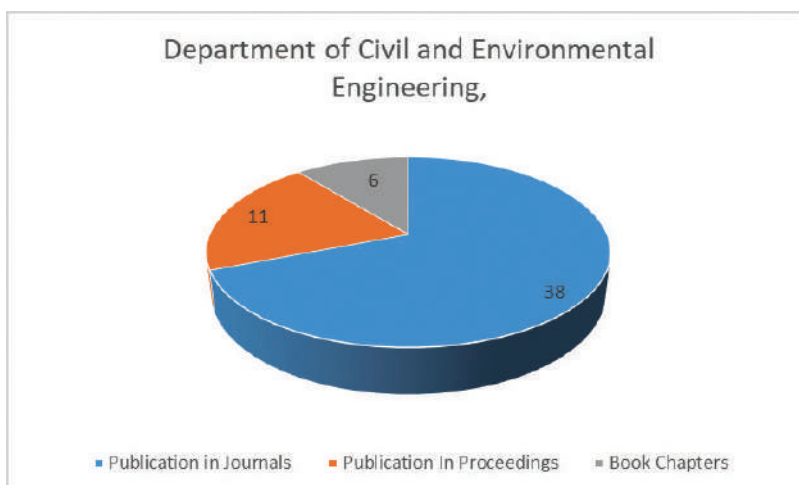
Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. B.K Sarkar	Summer Programme on Cyber Security	SERB	BIT Mesra	BIT Mesra	10.06.2023 to 15.06.2023
2.	Amritanjali	NPTEL-AICTE FDP on Real Time Systems.	Self	IIT Kharagpur	Online	Jul-Oct, 2022 (12 week)
3.	Amritanjali	Open Source tools for Research	Self	NITTTR Chandigarh	Online	15-19 May 2023
4.	Dr. Jamimamul Bakas	International Conference on Distributed Computing and Intelligent Technology (2023)		KIIT, Bhubaneswar	KIIT, Bhubaneswar	18.01.2023 to 20.01.2023
5.	Dr. Satya Prakash Singh	Two-day workshop on design Thinking for Start-up & Entrepreneurship	Institutions Innovation Council	BIT Mesra	BIT Mesra	27.02.2023 to 28.02.2023
6.	Dr. Satya Prakash Singh	One-day workshop on Enriching the Quality of Teaching-learning Process in the Present Scenario	Value Education Cell BIT	BIT Mesra	BIT Mesra	04.05.2023 to 11.05.2023
7.	Dr Shruti Garg	Data Analytics with Python	NIL	Prof A. Ramesh, IIT, Roorkee	NPTEL	Jan-Apr 2023



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
8.	Dr. Pankaj Gupta	National intellectual property awareness mission	Ministry of Commerce and industry, Govt. of India	Controller general of patent and design	Online	28-04-2022
8.	Shashank Pushkar	3rd International Conference on Nanoelectronics, Machine Learning, Internet of Things & Computing Systems (NMIC-2023)	ISVE	ISVE Ranchi Jharkhand	Advanced Regional Telecom Training Center, BSNL, Hazaribag Road, Ranchi - 835217, Jharkhand, India	29.04.2023-30.04.2023
10	Dr.Ritesh Jha	Summer Programme on Cyber Security	SERB	BIT Mesra	BIT Mesra	10.06.2023 to 15.06.2023
11.	Suvendu Kanungo	Workshop on Cyber Crime and Investigation	SERB	BIT Mesra	BIT Mesra	12-06-2023 to 17-06-2023
12.	Suvendu Kanungo	Workshop on Enriching the Quality of Teaching-Learning Process in the Present Scenario	BIT Mesra	BIT Mesra	BIT Mesra	04-05-2023 to 11-05-2023
13.	Dr. Debjani Mustafi	Workshop on Cyber crime and Investigation	DST-SERB	BIT Mesra	BIT Mesra	12.06.2023 to 17.06.2023

## SECTION 4

## RESEARCH PUBLICATIONS





SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration

5.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1	Dr Satya Prakash Singh Dr Siva Surya Narayana Chintapalli Mrs. Vijaya Lakshmi Chintapalli Ms. Pammi Kumari	IoT Health Monitoring Device	369242-001	15.08.2022	IoT Health Monitoring Device
2	Dr Satya Prakash Singh Ms. Pammi Kumari Dr Pankaj Gupta Dr Prerna Agarwal Mr. Pranav Shrivastava	A Machine Learning Based Approach For Products	202231053644A	20.09.2022	A Machine Learning Based Approach For Products
3	Dr Satya Prakash Singh Dr Siva Surya Narayana Chintapalli Mrs. Vijaya Lakshmi Chintapalli	IoT Based Camera for Health Care Management	378611-001	03-02-2023	IoT Based Camera for Health Care Management
4	Dr Satya Prakash Singh Dr Prerna Agarwal Mr. Pranav Shrivastava Mrs Garima Anand Mr. Anish Shandilya	Digital Stethoscope	378614-001	03-02-2023	Digital Stethoscope
5	Mrs. Vijaya Lakshmi Chintapalli Dr Siva Surya Narayana Chintapalli Dr Satya Prakash Singh	AI and Image Processing Based Medicine Stock Maintenance System for Hospitals	202331035281A	26-05-23	AI and Image Processing Based Medicine Stock Maintenance System for Hospitals



Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
6	Shruti Garg, Pushkar Anand, Kaushik Gupta, Parnab Kumar Chanda, Srinivasa Rao Payyavula	Method of Scholar Data Search Engine	Application Number- 202331050192, Application Ref Number- 202331050192, Filing Date- 25/07/2023 -Indian Patent Office	2023	
7	Dr. Pankaj Gupta	Innovation Patent "A Machine Learning Based Approach for Products with Embedded Sensor of E-Commerce Sites"	The Patent Office Journal No. 38/2022 Dated 23/09/2022	2022	To conduct an academic literature review of key Fusion-based solutions that can help address everyday challenges in the e-commerce environment as well as their needs for more accurate and better business decision-making. To classify solutions, a novel 4-fold classification approach has been introduced, including product related, economy-related, business-related and consumer-related solutions, followed by the relevant sub-categorization, facing e-commerce.
8	Shashank Pushkar	Hospital Environment Monitoring Robotic Devise	Patent No. 377265-001	Published on 24/03/2023	A design patent of a device which monitors the Working activities of a Hospital environment and alerts for any panic situation.
9	Shashank Pushkar	DUAL ACCESS CLOUD CONTROL DEVISE	Patent No. 381084-001	Published 2023-06-09	A design patent of a device for secure and efficient cloud-based data storage and sharing mechanism

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

## 6.1 List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Dr. Supratim Biswas	Professor & Head,
2	Dr. Sandip Dutta	Professor



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name	Designation
3	Dr. (Mrs). Vandana Bhattacharjee	Professor
4	Dr. Dheeresh Kumar Mallick	Associate Professor
5	Dr. Bhaskar Karn	Associate Professor
6	Dr. Vijay Kumar Jha	Associate Professor
7	Dr. K. Sridhar Patnaik	Associate Professor
8	Dr. Kumar Rajnish	Associate Professor
9	Dr. Abhijit Mustafi	Associate Professor
10	Dr. Bikas Kanti Sarkar	Associate Professor
11	Dr. Sudip Kumar Sahana	Associate Professor
12	Dr. (Mrs.) Sanchita Paul	Associate Professor
13	Dr. Indrajit Mukherjee	Assistant Professor
14	Dr. (Mrs.) Itu Snigdh	Assistant Professor
15	Dr. Ritesh Jha	Assistant Professor
16	Prof. Indradeo Ram	Assistant Professor
17	Dr. Anup Kumar Keshri	Assistant Professor
18	Dr. Kishore Kumar Senapati	Assistant Professor
19	Dr. (Mrs.) Amritanjali	Assistant Professor
20	Dr. (Mrs.) Shruti Garg	Assistant Professor
21	Prof. Bidyut K. Chanda	Assistant Professor
22	Dr. Shashank Pushkar	Assistant Professor
23	Dr. Sabina Priyadarshini	Assistant Professor
24	Dr. (Mrs.) Shamama Anwar	Assistant Professor
25	Prof. Kalyan Samanta	Assistant Professor
26	Dr. Subrajeet Mohapatra	Assistant Professor
27	Dr. (Mrs) Akriti Nigam	Assistant Professor
28	Dr. Sumit Srivasatava	Assistant Professor
29	Dr. Niraj Kumar Singh	Assistant Professor
30	Dr. (Mrs.) Debjani Mustafi	Assistant Professor
31	Dr. Satya Prakash Singh	Assistant Professor
32	Dr. Satish Chander	Assistant Professor
33	Dr. Pankaj Gupta	Assistant Professor
34	Dr. Jit Mukherjee	Assistant Professor
35	Dr. Prashant Pranav	Assistant Professor
36	Dr. Suvendu Kanungo	Assistant Professor
37	Dr Supreeti Kamilya	Assistant Professor



Sr. No.	Name	Designation
38	Dr. Jamimamul Bakas	Assistant Professor
39	Dr. Richa	Assistant Professor
40	Dr. Md Shah Fahad	Assistant Professor

## 6.2 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Supratim Biswas	Adjunct Faculty	Ex-Professor, IIT Bombay
2.	Dr. R.K. Ghosh	Adjunct Faculty	Ex-Professor, IIT Kanpur

## 6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Supratim Biswas	Professor & Head (Ex-Officio)	Chairman
2.	Dr. V. Bhattacharjee	Professor, CSE	Internal Member
3.	Dr. S. Dutta	Professor, CSE	Internal Member
4.	Dr. V. K. Jha	Associate Professor, CSE	Internal Member
5.	Dr. K. Rajnish	Associate Professor, CSE	Internal Member
6.	Dr. (Mrs.) ItuSnigdha	Assistant Professor, CSE	Internal Member
7.	Dr. (Mrs) Akriti Nigam	Assistant Professor, CSE	Internal Member
8.	Faculty Member CSE,	Nominee of Director BIT Jaipur	Internal Member
9.	Faculty Member CSE,	Nominee of Director BIT Patna	Internal Member
10.	Faculty Member CSE,	Nominee of Director BIT Deoghar	Internal Member
11.	Faculty Member CSE,	Nominee of Director BIT Noida	Internal Member
12.	Faculty Member CSE,	Nominee of Director BIT Lalpur	Internal Member
13.	Dr. Sandeep Singh Solanki	Professor, ECE, Member	External Member
14.	Dr. Akhouri Pramod Krishna	Professor, DRS, Member	External Member
15.	Dr. Pabitra Mitra	Professor, IIT Kharagpur	External Member
16.	Dr. Vasudeva Varma	Professor, IIIT Hyderabad	External Member
17.	Prof. Prem Kumar Kalra	Director, IIT Kanpur, UP	External Member
18.	Dr. Pramod Kumar Mishra	Professor, BHU, Varanasi	External Member
19.	Dr. Sriparna Saha	Asso. Professor, IIT Patna	External Member
20.	Dr. Jyotsna Kumar Mandal	Professor, Kalyani Univ. West Bengal	External Member
21.	Dr. Lobiyal	Professor, JNU New Delhi	External Member
22.	Mrs. Mini Rani Sharma	Ex-Chief Technical Officer, Ranchi	External Member
23.	Mr. Amit Chaudhary	Co-Founder at Lenskart, South Delhi	External Member
24.	Mr. Vaibhav Kumar Singh	Steel Authority of India Limited	External Member



SECTION 7

OTHER INFORMATION

Student Entrepreneurship activities/Start-ups if any:

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
1.				

7.1 Publication by students, if any

Publications in Journals : (International/National)

Publications in Proceedings: (International/National)

- Shendge, O, Naaz, K., and Singh, N.K., 2023. Classification of all-purpose sand: A deep learning approach. International Conference on Recent Advances in Computer Science and Information Technology (ICRACSIT), Pune, India. 16th May 2023.

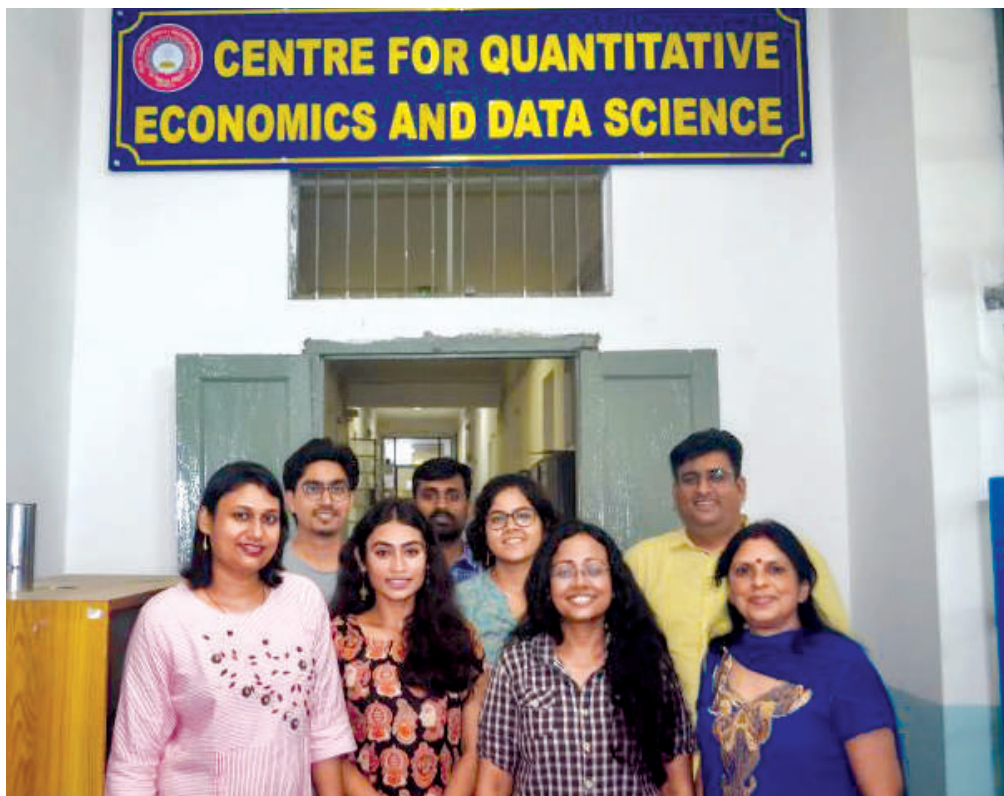
7.2 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
	PRANAV KUMAR (BTECH/10086/19) VANSHIKA KUMARI (BTECH/10423/19) VIVEK JHA (BTECH/10046/19) SHREYA SHUKLA (BTECH/10447/19) ABHISHEK (BTECH/10675/19)	3rd Prize in SIH 2022 Grand Finale Team-Hexagon XI	MoE,GoI	26 Aug,2022 GTU, Ahmedabad

## Centre for Quantitative Economics and Data Science

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the Department:

The Centre for Quantitative Economics and Data Science was established in the year 2021 with the aim to provide fundamental knowledge and problem-solving skills in the area of Quantitative Economics and Data Sciences. This will help in disseminating the acquired knowledge towards improving analytical skills, research and practical application.

The Centre is recognized at par with existing leading Centres in terms of available computational facilities and academic & research infrastructure. The Centre remains committed to its two-fold mission.

#### Department:

##### Vision

To become a globally recognized centre of excellence in teaching and research by producing academicians, professionals, and innovators

to create a better world where a profound understanding of the field of Quantitative Economics and Data Sciences drives positive change in business and society.

#### Mission

- To set-up a world-class Quantitative Economics and Data Science centre by producing original & robust research insights, delivering high-quality & evidence-based education and engaging with people & organisations worldwide, across the private & public sectors, who are motivated to transform the world by tackling real world challenges.
- To intellectually transform students for productive and stimulating careers by providing them a strong grasp of fundamentals through a diverse living environment, exposure to new ideas and interaction with people who come from different walks of life and have evolving identities.



## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy):

#### a) Ongoing Projects:

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Development and Validation of Graph Optimization Based Multi-Sensor Fusion Algorithm to Establish Real-Time Connections between Climatic Variables in Himalayan Ecohydrological Process Networks for Future Climate Projections.	Dr Manish Kumar Pandey (PI)	BIT Mesra	27th Sept. 2022	₹ 5,00,000.00	2 Years
2.	Microwave satellite data assimilation in Weather Research & Forecasting model through deep learning for improved forecasting of surface and sub-surface soil moisture conditions	Dr Manish Kumar Pandey (Co-PI)	Science and Engineering Research Board (SERB) Sponsored CRG	March 2023	₹ 25,41,240.00	3 Years

#### b) Projects Completed:

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Techniques and Applications of Hyperspectral Data Analytics	Event Organizer	Science and Engineering Research Board (SERB)	04 <sup>th</sup> July 2022	₹ 5,00,000.00	7 <sup>th</sup> August 2022

#### c) Consultancy Projects carried out/ongoing:

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized. (Rs. lakhs)	Principal Investigator / Co-Investigator	Ongoing / Completed*
			from	to			
1.	Execution of Digital Innovation Lab	Adrosonic IT Consultancy Pvt Ltd	1st March 2023	28th February 2024	₹ 10,62,000.00	Dr Manish Kumar Pandey	Ongoing



## SECTION 3

## SEMINAR / CONFERENCE

## 3.1 Seminar / Conferences / Short – Term Courses Conducted:

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1	Techniques and Applications of Hyperspectral Data Analytics	Dr Manish Kumar Pandey	Science and Engineering Research Board (SERB) Sponsored High-End workshop (KARYASHALA)	25th July 2022 to 7th August 2022.

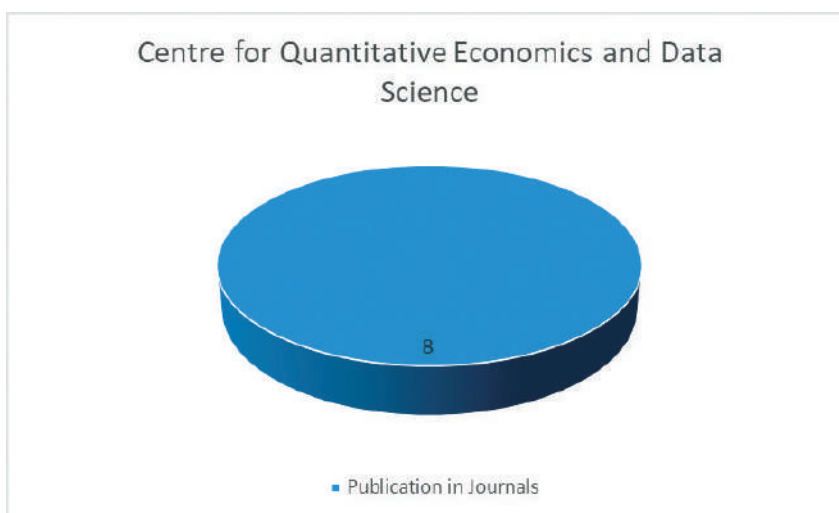
## 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by

## Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date (dd.mm.year)
1	Dr Manish Kumar Pandey	International Conference on Machine Learning and Data Engineering (ICMLDE 2022)	UPES in association with University of Dayton, United States.	UPES, Dehradun, India	UPES, Dehradun, India	07th to 08th September 2022

## SECTION 4

## RESEARCH PUBLICATIONS



## SECTION 5

## AWARD / PATENT / COLLABORATIONS

## 5.1 MoUs / Collaborations :

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1.	Jharkhand Police	Technology and knowledge partner	5 Years
2.	Floxus Education Pvt Ltd	Development of Course "Mastering Data Science"	1 Year



SECTION 6

ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

6.1. List of Faculties

Sr. No.	Name	Designation
1.	Dr. Manish Kumar Pandey	Assistant Professor
2.	Dr. Abhishek Naresh	Assistant Professor
3.	Dr. Tamalika Koley	Assistant Professor
4.	Dr. Mrinal Jana	Assistant Professor
5.	Dr. Surya Nath Maiti	Assistant Professor

6.2 List of Adjunct Faculties:

Sr. No.	Name	Designation	Affiliation
1.	Dr Deepali Aparajita Dungdung	Adjunct Faculty	Ranchi University

6.1 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1	Prof. Kunal Mukhopadhyay	Professor, HOC, CQEDS, BIT Mesra	Chairman
2	Dr. Manish Kumar Pandey	Assistant Professor of Data Science CQEDS, BIT Mesra	Internal member
3	Dr. Abhishek Naresh	Assistant Professor of Economics CQEDS, BIT Mesra	Internal member
4	Dr. Tamalika Koley	Assistant Professor of Statistics CQEDS, BIT Mesra	Internal member
5	Dr. K. Sridhar Patnaik	Associate Professor, Department of Computer Science & Engineering, BIT Mesra	Internal member
6	Prof. S. Padhi	Professor, Department of Mathematics, BIT Mesra	Internal member
External Members (Any Two Members of the Following List)8			
7	Mr Mayank	CEO & Managing Director, Adrosonic	Member from Industry
8	Prof. Saikat Sinha Roy	Professor of Economics, Jadavpur University, Kolkata	Member from Academics
9	Prof. Mousumi Dutta	Professor of Economics, Presidency University, Kolkata	Member from Academics
10	Prof. Rahul Mukerjee	Professor of Statistics, Indian Institute of Management, Calcutta	Member from Academics
11	Prof. Pabitra Mitra	Professor of Computer Science IIT Kharagpur	Member from Academics

## SECTION 7

## OTHER INFORMATION


## 7.1 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Dr Lokesh Kumar Sinha, Ex Director Defence Geological Research Establishment	27th July 2023	
2.	Dr. Shubhajit Chakrabarty, Louisiana State University	3rd January 2023	
3.	Dr Prashant K. Srivastava, Professor, IESD BHU and Collaborator, NASA Jet Propulsion Laboratory	3rd August 2022	
4.	Dr Manika Gupta, Professor, Delhi University and Collaborator, NASA Jet Propulsion Laboratory	5th August 2022	



## वार्षिक प्रतिवेदन 2022-2023

5.	Dr P G Diwakar, ISRO Chair Professor, IAS (Online)	25th July 2023	
6.	Prof. R. N Sahoo, Principal Scientist, IARI, New Delhi	28th July 2022	
7.	Dr Himanshu Govil, Department of Applied Geology, NIT Raipur	6th August 2022	
8.	Dr Randall Perrey, Chief Software Engineering Officer at ADROSONIC	19th April 2023	

9.	Dr Parthsarathi Mukhopadhyay Senior Scientist IITM Pune	1st August 2022	
10.	Dr Amit Kumar, Central University of Jharkhand.	26th July 2023	

## 7.2 Infrastructure Development.

Development of Digital Innovation Lab in collaboration with ADROSONIC. The interiors of the lab and furnishing of the same is anticipated to be around ₹ 27.50 Lakh to be borne by Adrosonic. The total investment by ADROSONIC over next five years

would ₹ 3,01,26,563 including the lab development cost. The total investment would be distributed into Development cost, IT Infrastructure cost including hardware, software, consultancy charge, running cost, cost to students' activities, engagement cost and maintenance cost.



## Department of Electronics & Communication Engineering

### SECTION 1

### DEPARTMENTAL PROFILE



### 1. About the Department :

#### Department:

#### Vision:

To become a centre of excellence in teaching and research for creating technical manpower to meet the technological need of the country in the field of Electronics and Communications Engineering. Department exposes the undergraduate students to all fundamental and advanced technology in the field of Electronics and Communication.

#### Mission:

1. To offer state of the art education of global standards through innovative methods

of teaching and learning with practical orientation aiming to prepare the students for successful career and to provide required technological services.

2. To prepare the students to think independently, take initiative, lead a team in an organization, take responsibility and solve the problems related to industry, society, environmental, health, safety, legal and cultural issues maintaining the professional ethics.
3. To pursue high quality contemporary research through continued interaction with research organizations and industries.



## SECTION 2

## RESEARCH PROJECTS

## 2.1 Sponsored Projects (Research and Consultancy)

## a) Ongoing Projects:

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	High Speed Two Photon Polymerization based fabrication of hollow microneedles	Dr. Richa Mishra	BIT Mesra	3rd January 2022	5 Lacs	2 years
2.	Data Science NMICPS	Dr. S.K.Ghorai (PI), & Spoke- TIH Members	IDEAS, TIH_ ISI Kolkata	26th July 2022	1.0 Crore out of 100.00 Crore	3 years (2022-2025) (Ongoing)
3.	Modernization of CMOS and Compound Semiconductor Devices & Circuit Laboratory	HoD ECE (Program Coordinator) Dr. V. Nath (Dept. Coordinator)	AICTE New Delhi	31st Dec 2019	6.80 /19.60 Lakhs	2 years Ongoing (2020-2022) Final Submission FY2022-23
4.	Mitigation of Electromagnetic Interference and Electromagnetic Compatibility issues in Wearable IoT devices	Dr. Nisha Gupta	DST SERB under DST Power scheme New Delhi	26th Sept. 2022	23.2166 Lakhs	2022-25
5.	AI Enabled MEMS BASED Sensors Fabrication and Characterization Facility (AMSFCF)	PI: Prof. Sandeep Singh Solanki, Co-PI: Dr. Neela Chatteraj, Dr. Sitanshu S. Sahu, Dr. S.S.Tripathy, Dr. Kartik Mahto, Dr. Priyank Saxena, Dr. Richa Mishra	DST FIST	19th Dec 2022	178 Lacs	2023-2028
6.	Scalable Assembly of Painless Hollow Microneedle Array	Dr. Richa Mishra	SERB POWER	28 October 2022	29.1 Lacs	2022-25

## b) Projects Completed :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Design of Ultra Low Power CMOS Temperature Sensors for Aerospace Applications	Dr. Vijay Nath	RESPOND ISRO Bangalore	19th Nov 2015	25.0 lakhs	31st Dec2022



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Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
2.	Study of HEMT and its performance in amplifier circuit	Dr. Aminul Islam	DRDO	04/07/2017	23.742 Lakh	3+(1 year extension due to COVID)

### c) Consultancy Projects carried out/ongoing

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator / Co-Investigator	Ongoing / Completed*
			from	to			
1.	Development of a fire announcement system for mining applications	MIMEC Electronics Pvt. Ltd., Ranchi	June 2023	Dec 2023	200000/-	Dr. Priyank Saxena	Ongoing
2.	Development of Range Extender (Repeater) for Walkie-Talkie Communication System	MIMEC Electronics Pvt Ltd., Ranchi	June 2023	Dec 2023	200000/-	Dr. G. K. Mishra.	Ongoing
3.	Radar based proximity sensing system.	Rizitek India Pvt Ltd., Ranchi	Jan 2023	Dec 2023	200000/-	Dr. S. S. Tripathy	Ongoing

## SECTION 3

## SEMINAR/ CONFERENCE

### 3.1 Seminar / Conferences / Short – Term Courses Conducted:

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1	Enriching the Quality of Teaching-Learning Process in the present scenario	Dr. Sanjay Kumar	BIT Mesra	4 -16. May.2023
2	Brain-machine interface	Dr. M. K. Mukul	SERB, DST New Delhi	22-28. Aug. 2022.
3	Intellectual Property Rights for young Innovators	Dr. Sanjaya Shankar Tripathy	Institution's Innovation Council, BIT Mesra	26.April. 2023
4	One-week outreach program on Microelectronics & VLSI design (MVD-2023)	Dr. Vijay Nath and Dr. Aminul Islam	ECE & Institution's Innovation Council, BIT Mesra	15-19.May. 2023
5	Designing Embedded AI Systems using STMICROELECTRONICS AI Ecosystem	Dr. Sitanshu Sekhar Sahu.	ECE, BIT Mesra	20-24. Feb.2023
6	An Exhibition on Indian Knowledge system	Dr. Sanjay Kumar	BIT Mesra, Ranchi	13-15. Apr.2023



### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by

#### Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Richa Mishra	INUP-i2i 2023 2nd Hands-on Training on Fabrication & Characterization of Nanoelectronics Devices	SERB	Centre for Nanotechnology	Indian Institute of Technology Guwahati	2-11. June. 2023
2.	Dr. Richa Mishra	One day Online Workshop	BIT Mesra	Indian Institute of Technology, Hyderabad.	Indian Institute of Technology, Hyderabad.	2. December .2022
3.	Dr. Aminul Islam	1st International Conference on Cyber Physical Systems and Assistive Technologies 2022 (CCPSAT2022),	Self-finance	KG Reddy College of Engineering & Technology, Hyderabad, Telangana, India,	KG Reddy College of Engineering & Technology, Hyderabad, Telangana, India,	23- 24. Sep. 2022
4	Dr. Richa Mishra	3 days online Familiarization Workshop	MeitY	Centre for Nanotechnology Indian Institute of Technology, Guwahati	Online	21-23.Feb.2023.
5.	Dr. Richa Mishra	3 days online workshop	MeitY	IIT Madras, Chennai	Online	8-10. Feb.2023
6.	Dr. Richa Mishra	7th user Awareness Workshop	MeitY	NRF, Indian Institute of Technology Delhi	Online	11-12.March, 2023
7.	Dr. Kalyan Koley	9th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON 2022)	Self-finance	IIIT Allahabad	IIIT Allahabad	2-4.Dec.2022
8.	Dr. Kalyan Koley	19th IEEE India Council International Conference (INDICON 2022)	Self-finance	CUST Kochi	CUST Kochi	24-26.Nov. 2022
9.	Dr. Kalyan Koley	14th International Conference on Information Technology and Electrical Engineering (ICITEE 2022),	Self-finance	UGM Yogyakarta, Indonesia	UGM Yogyakarta, Indonesia (Online)	18-19. Oct. 2022



## वार्षिक प्रतिवेदन 2022-2023

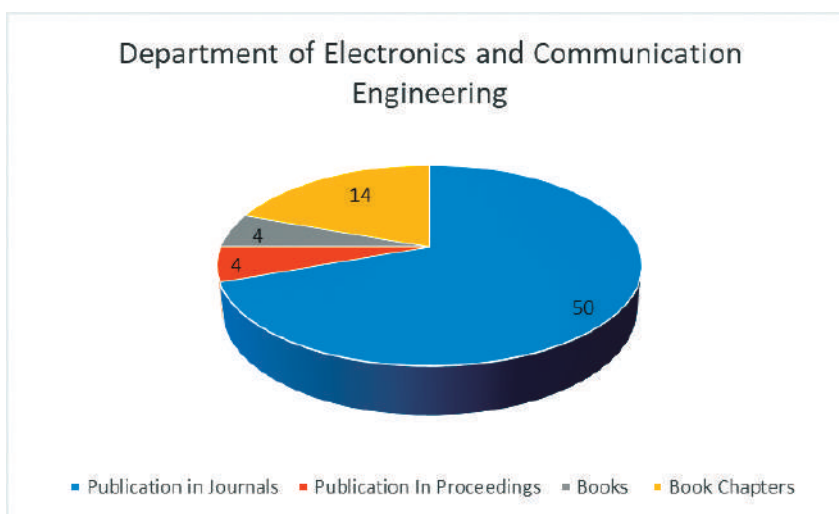
Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
10.	Dr. Nisha Gupta	IEEE Microwaves, Antennas, and Propagation Conference	BIT Mesra	IEEE MTT/ AP Society Bangalore	IEEE MTT/ AP Society Bangalore	12-15. Dec.2022.
11.	Dr. Aminul Islam	2023 IEEE Devices for Integrated Circuit (DevIC) conference	Self-finance	IEEE EDS Kolkata Chapter	Vedic Village, Kolkata	07-08. April. 2023
12.	Dr. Sitanshu Sekhar Sahu and Dr. Rupesh Kumar Sinha	International Conference on Data Science and Intelligent Applications ICDSIA-2023,	Self-finance	Gandhi Nagar Institute of Technology Gandhinagar	Gandhi Nagar Institute of Technology Gandhinagar	28-29. April. 2023
13.	Dr. Rupesh Kumar Sinha	31st SAPI Annual Conference & National Symposium	Self-finance	Sher-E-Kashmir, University of Agriculture Science	Sher-E-Kashmir, University of Agriculture Science	3-5.May.2023
14.	Dr. Vijay Nath	8th International Conference on Nano-electronics, Computational Intelligence & Communication Systems (NCCS-2022) "Performance Analysis of Low Power & Low Phase Noise CMOS VCO"	Self-finance	Organized by Indian Society for VLSI Education Ranchi	ARTTC BSNL Ranchi	17-18.Dec2022
15.	Dr. Vijay Nath	8th International Conference on Nano-electronics, Computational Intelligence & Communication Systems (NCCS-2022) "Performance Analysis of Low Power Current Starved VCO using 45 nm Technology"	BIT Mesra	Organized by Indian Society for VLSI Education Ranchi	ARTTC BSNL Ranchi	17-18th Dec2022
16.	Dr. Vijay Nath	8th International Conference on Nano-electronics, Computational Intelligence & Communication Systems (NCCS-2022) "Design of Folded Cascode Operational Amplifier in 180nm Technology"	BIT Mesra	Organized by Indian Society for VLSI Education Ranchi	ARTTC BSNL Ranchi (Online)	17-18th Dec2022



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
17.	Dr. Sanjeet Kumar	2023 Fifth International Conference on Electrical, Computer and Communication Technologies (ICECCT)	BIT Mesra	Vellore College of Engineering and Technology, Erode, Tamil Nadu, India	Vellore College of Engineering and Technology, Erode, Tamil Nadu India (online)	22-24.Feb.2023
18.	Dr. G. K. Mishra	3rd International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies, ICAECT 2023	Self Finance	Shri Shankaracharya Technical Campus (SSTC), Bhilai, India	Shri Shankaracharya Technical Campus (SSTC), Bhilai, India (Online)	5-6.Jan.2023

## SECTION 4

## RESEARCH PUBLICATIONS



## SECTION 5

## AWARD / PATENT / COLLABORATIONS

## 5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State/ National/ International Level	Year/ Duration
1.	Dr. S. Pal	"Innovative Antenna Developer Gets Lifetime Membership" - Celebrated Antenna Scientist	Radio Newline, USA	International Level	6.Jan.2023



Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State/ National/ International Level	Year/ Duration
2.	Dr. S. Pal	"Felicitation" for invention of World's smallest planar ultra-wideband antenna	BIT-M (2004 CSE ) alumni - Neha Vatsala (Founder & MD, Vats creations) & @ Sharad Raj (Asst. VP @ Deutsche Bank, Pune	National Level	13.Dec. 2022
3.	Dr. S. Pal	University Research Board (URB) Member (under the Senior Academician from Premier Academic Institution Category)	Mohan Babu University, Tirupati, Andhra Pradesh,	National Level	19.Nov. 2022
4.	Dr. S. Pal	"Sci-Tech Excellence Award" - 2022	NIT Warangal-Alumni Association, Kolkata Chapter,	National Level	13.Jan. 2023
5.	Dr. S. Pal	"Honorary Life Membership, HAM Radio"	West Bengal Radio Club, Kolkata (Radio News published from USA,)	National Level	27.Dec. 2022
6.	Dr. S. Pal	"Lifetime Achievement Award"	International conference for Award Winners in Engineering, Science and Medicine - INS(O), Pondicherry	National Level	15-16.Apr. 2023

## 5.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1.	Richa Mishra, T.K. Bhattacharyya, T.K. Maiti	Indian Patent "Microneedle and Micropump based Fluid Delivery System"	application no. E-2/150/2019/KOL dated 03.05.2019	2022	Published

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

### 6.1 List of Faculties

Sr. No.	Name	Designation
1	Dr. Nisha Gupta	Professor
2	Dr. S.K. Ghorai	Professor
3	Dr. S. Pal	Professor
4	Dr. V.R. Gupta	Professor
5	Dr. S.S. Solanki	Professor and Head
6	Dr. N. Chattoraj	Associate Prof.



Sr. No.	Name	Designation
7	Dr. Vijay Nath	Associate Prof.
8	Dr. Sanjay Kumar	Associate Prof.
9	Dr. Aminul Islam	Associate Prof.
10	Dr. S.S. Sahu	Associate Prof.
11	Dr. A.K. Tiwary	Assistant Prof.
12	Dr. D.K. Upadhyay	Assistant Prof.
13	Dr. G.K. Mishra	Assistant Prof.
14	Dr. Kartik Mahto	Assistant Prof.
15	Dr. M.K. Mukul	Assistant Prof.
16	Dr. P.P. Dash	Assistant Prof.
17	Dr. Priyank Saxena	Assistant Prof.
18	Dr. S.S. Tripathy	Assistant Prof.
19	Dr. Sanjeet Kumar	Assistant Prof.
20	Dr. S. Sengupta	Assistant Prof.
21	Mr. S.K. dash	Assistant Prof.
22	Mr. Vishal H. Shah	Assistant Prof.
23	Dr. S.A. Prasad	Assistant Prof.
24	Dr. S. Sidhishwari	Assistant Prof.
25	Dr. R.K. Sinha	Assistant Prof.
26	Dr. Richa Mishra	Assistant Prof.
27	Dr. Deepti Gola	Assistant Prof.
28	Dr. Kalyan Koley	Assistant Prof.
29	Dr. Chandreyee Sarkar	Assistant Prof.
30	Dr S. S. Pathak	Visiting Professor, IIT Kharagpur

## 6.2 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. S. S. Solanki	Professor	HOD, ECE, Chairman (Ex-Officio)
2.	Dr. Nisha Gupta	Professor	Internal Member
3.	Dr. S.K. Ghorai	Professor	Internal Member
4	Dr. V.R. Gupta	Professor	Internal Member
4.	Dr. S. Pal	Professor	Internal Member
5.	Dr. Vijay Nath	Associate Professor	Internal Member
6.	Dr. Kartik Mahto	Assistant Professor	Internal Member



Sr. No.	Name of the Member	Designation	Role
7.	Dr. S.K. Rout	Professor	Dept. of Physics, Internal member
8.	Dr. T. Ghosh	Professor	Dept. of EEE, Internal member
9.	Dr. Umesh Chandra Pati	Professor	NIT, Rourkela (External member)
10.	Dr. Bratin Ghosh	Professor	IIT, Kharagpur (External member)
11.	Dr. Goutam	Professor	Saha IIT, Kharagpur (External member)
12.	Dr. Brajesh Kumar Kaushik	Professor	IIT, Roorkee (External member)
13.	Dr. Nandita Dasgupta	Professor	IIT, Madras (External member)
14.	Dr. Suvra Sekhar Das	Associate Professor	G.S Sanyal School of Telecommunication, IIT, Kharagpur (External member)
15.	Mr. Sanjaya Nayak .	CEO & MD	Tejas Network (External member)
16.	Mr. Subhas Basu CEO	CEO	Silicon Interfaces Pvt. Ltd. (External member)
17.	Parikhit Dutta Sr.	RF Engineer	Knowles Corporation, Bengaluru
18.	Dr. Shahiruddin	Assistant Professor	In charge Dept. of ECE, Patna
19.	Ankur Agarwal	Assistant Professor	In charge, Dept. of ECE, Jaipur
20.	Atharv Kapre	M.Tech 1st Yr. student	Student, Roll no: MT/EC/10002/20
21.	Shashank Kumar	B.Tech.1st Yr. student	Student, Roll no: BTECH/10056/2
22.	Dr. P.P. Dash	Member Secretary	

## SECTION 7

## OTHER INFORMATION

### 7.1 Publication by students, if any

#### Publications in Journals: (International/National)

- Prakash, D. and Gupta, N. (2022). High-Sensitivity Grooved CSRR Based Sensor for Liquid Chemical Characterization. IEEE Sensors Journal. 22(19). 18463-70.
- Dash, S.S., Solanki, S. S. and Chakraborty, S. (2023). A Comprehensive Review on Audio Based Musical Instrument Recognition: Human-Machine Interaction Towards Industry 4.0. Journal of Scientific & Industrial Research 82, 26-37.
- Kumari, P. and Saxena, P. (2023). Automated Diabetic Retinopathy Grading Based on the Modified Capsule Network Architecture. IETE Journal of Research. 1-12.
- Ujjaval Kerketta, Daniel, T.T. Yadav, V.K.S. and Roy, P. Paily (2023). Room Temperature Hydrogen Gas Sensing using ZN2TIO4 Thin Film. IEEE Sensors Letters. 7(2). 1 – 4.
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2. Priyadarshi, R., Rana, H., Srivastava, A., Nath, V. (2023). A Novel Approach for Sink Route in Wireless Sensor Network. In: Nath, V., Mandal, J.K. (eds) Microelectronics, Communication Systems, Machine Learning and Internet of Things. Lecture Notes in Electrical Engineering, vol 887. Print ISBN978-981-19-1905-3, Online ISBN978-981-19-1906-0, Springer, Singapore. [https://doi.org/10.1007/978-981-19-1906-0\\_58](https://doi.org/10.1007/978-981-19-1906-0_58)
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### 7.3 Achievements of Students:

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Sukanta Kumar Dash	First prize in the "Instrumentation" track in Research and Innovation Conclave	ECE Department	28-02-2023, BIT Mesra.
2.	Himadri Nirjhar Mandal	First prize in the "Wireless Communication" track in Research and Innovation Conclave	ECE Department	28-02-2023, BIT Mesra.
3	Divya Prakash	First prize in the "Microwave Engineering" track in Research and Innovation Conclave	ECE Department	28-02-2023, BIT Mesra.
4	Divya Sharma	First position in "VLSI" track in Research and Innovation Conclave	ECE Department	28-02-2023, BIT Mesra.
5.	Nikhat Anjum	ISVE Best Paper Awards in NCCS-2022 "Performance Analysis of Low Power Current Starved VCO using 45 nm Technology"	Indian Society for VLSI Education Ranchi	17-18th Dec 2022 ARTTC BSNL Ranchi

### 7.4 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Dr. Vishal Kesari, Scientist at Microwave tube research and development center, Defence Research and Development Organisation, Bangalore.	21/02/2023	



## 7.5 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Akshay Jalan, 2010-2014. Co-Founder at AllThingsBaby.com Brainsmith	Akshay graduated in the year 2014 and started his venture 'AllThingsBaby', an exclusive collection of brands from the house of All Things Baby, where they curate the finest baby healthcare, personal & lifestyle brands from all over the world.
2.	Sanjay Nayak CEO & MD at Tejas Networks B.E, ECE, BIT Mesra (1981-85)	Sanjay Nayak is Co-founder of Tejas Networks Ltd. (Bangalore, India) and served as the founding CEO & MD from 2000-2023 till his retirement. Tejas Networks is India's largest R&D-driven telecom and networking products company, which designs and manufactures an entire range of wireless and wireline equipment. Tejas is the first Indian deep-technology product company that successfully grew from being a startup to a publicly listed company and is now a part of the Tata Group.
3.	Abhishek Sinha Co-Founder at Eko.in Gurugram, Haryana, India B.E (ECE), BIT Mesra (1995-1999)	Abhishek Sinha is Co-founder & CEO of Eko India Financial Services Private Limited. Abhishek believes in the creation of wealth and degrees of freedom. In February 2007, Abhishek exited his first venture to pursue his vision to promote mobile phones as a financial identity for people at the bottom of the pyramid. These ideas were validated when he won the TIE-Canaan Entrepreneurial Challenge, 2006. After a brief stint with Mahindra-Satyam, he co-founded Six DEE Telecom Solutions, a telecom value added services company in 2002. He holds a bachelor's degree in Electronics and Communication Engineering from Birla Institute of Technology, Mesra.
4.	Rohit Prasad Vice President and Head Scientist, Alexa Artificial Intelligence (AI), Lexington, Massachusetts, United States B.E, ECE BIT Mesra (1993-1997)	Growing up in a family of engineers in India, Rohit Prasad's first research problem involved finding a television on which to watch his favorite show: Star Trek. "This was back when TVs were still a rarity in India," he said. "But whenever Star Trek was on, I managed to find one and plant myself in front of it." Unlike many other Trekkies, Prasad was not a space geek keen on exploring new worlds and meeting distant civilizations. He was fascinated by the show's talking computer. "That awesome, all-knowing, voice-activated computer, which you could make requests to just by saying, 'Computer,'" he said. "It was deeply inspiring to me and made me want to build something just like it—something that would change people's lives." He did. Prasad spent the last decade helping build Alexa, Amazon's conversational AI, into a technology that now supports people in millions of homes around the world. Amazon recently announced that in addition to his role as head scientist, Prasad is also the new leader of the Alexa business. "We have built a solid foundation for achieving our vision of Alexa being an indispensable personal assistant, adviser, and companion for anyone, anywhere," he said. "Alexa is one of the most loved and advanced AI applications in the world."
5.	Nancy Sahay Presently the Deputy Commissioner at Hazaribagh ECE BIT Mesra 2007 – 2011 UPSC: 2014	Nancy Sahay is currently serving as the Deputy Commissioner at Hazaribagh. She is truly blessed with an amalgam of refined grace and intellect. She was born and brought up in Ranchi and grew up to pursue a B.Tech in Electronics and Communication from BIT Mesra. With her academic dexterity and miraculous knowledge, she cracked the UPSC examination 2014 with an All-India Rank 36.



		She became a zestfully committed IAS officer and went on to handle posts such as the Probationer at Chaibasa, the Deputy Development Commissioner of Sahibganj, the Sub-divisional Officer Palamu, etc.
6.	Naman Priyesh Lakra Presently the Deputy Commissioner at Giridih ECE BIT Mesra 2006 – 2010 UPSC: 2015	Naman is an ECE graduate (2006 – 2010), and is currently working as Deputy Commissioner of Giridih
7.	Varun Ranjan Presently the Deputy Commissioner and District Magistrate at Pakur ECE BIT Mesra 2004 - 2008 UPSC: 2014	Varun is an ECE graduate (2004 – 2008) and is presently the deputy Commissioner and District Magistrate at Pakur.

#### 7.6 Infrastructure Development.

- New lab:** Unmanned Vehicle Lab
- Renovated lab:** Microprocessor lab, Digital Electronics lab, Signal processing lab, Advanced instrumentation lab, Microwave Lab, Fibre Optic research lab, PG lecture room, Fiber Optic Communication Lab.

#### 7.7 Best Thesis Project (UG/PG)

- UG Best Thesis Project:** Rishab Pandey, BTECH/10073/19
- PG Best Thesis Project:** Jyotsana, MT/EC/10009/21

#### 8.0 Any other relevant information

**60 Seats** added in B.Tech Program

#### 9. Special Initiatives if any:

Department has initiated following programs:

- Expedition (Newsletter)
- Minor Projects in B. Tech Program



## Department of Electrical and Electronics Engineering

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the Department:

The Department of Electrical and Electronics Engineering (EEE) offers B.Tech. in Electrical and Electronics Engineering, M. Tech. in Electrical Engineering and Ph.D. in Engineering. CBCS Course Structure has been implemented from MO/2018 offering B.Tech. and M.Tech. in EEE department. All the UG and PG programmes are accredited by NBA. Thirty-two research scholars are currently pursuing their doctoral degree on different concepts related to Micro grid, Reliability, Hybrid Electric Vehicles, Multi-level Inverters, Robotics, Fault Tolerant Multi Phase Drives, Image Processing, Power System Voltage Stability, System Identifications, Brain signal analysis, Applications of Soft Computing Techniques etc. The Department of EEE is presently utilizing the grants received from ICMR, SERB, CCL, DST (FIST), UGC (SAP), MODROB, TEQIP and Institute grant to strengthen the research and postgraduate lab facilities. The department is continuously working in the direction of elevating the standard of 11 laboratories for research and teaching purpose. Many major equipment, such as 3 and 5 kW Solar photovoltaic with Grid-tied inverters, Solar and wind emulators, Micro Lab Box, DSpace Platform, IoT Based Devices, Twin Rotor MIMO System, Magnetic Levitation System, DC Servo fundamental trainer kit, Temperature, Pressure, Level and flow controller (both manual and PLC based), ACB, SVC, Relay Testing System, Generator Protection System, several numbers of DSO, Programmable Function Generator, Harmonic Analyser, NI Power Measurement System, Variable DC Power Supply, LCQ Meter, different ratings of DC and AC Motors, M-G Set, BLDC Motor, Single Phase And Three Phase Transformers, NI Data Acquisition

Card CRIO, LabVIEW, Smart Energy Meter and NAO Humanoid Robot, Machine Fault Simulator, Typhoon Hill, Micro Lab box, DSO 1000 MHZ, Data Acquisition system Integrated with Sensor, 3 Phase Multilevel Inverter based Induction Motor Drive, NI ELVIS Rotary Inverted Pendulum, PSCAD, ETAP Software are available in the key laboratories like Control System, Power System, Power Electronics, Measurement and Process Control and Machines, Power Electronic, Smart Grid, Measurement, and Drive labs.

#### Department:

##### Vision

- To become an internationally recognized centre of excellence in academics, research and technological services in the area of Electrical and Electronics Engineering and related inter-disciplinary fields.

##### Mission

- Imparting strong fundamental concepts to students and motivate them to find innovative solutions to engineering problems independently.
- Developing engineers with managerial attributes capable of applying appropriate technology with responsibility.
- Creation of congenial atmosphere and ample research facilities for undertaking quality research to achieve national and international recognition by faculty and students.
- To strive for internationally recognized publication of research papers, books and to obtain patent and copyrights.
- To provide excellent technological services to industry for the benefit of society.



## SECTION 2

## RESEARCH PROJECTS

## 2.1 Sponsored Projects (Research and Consultancy)

## a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (in Lacs)	Duration of the Project (in Years)
1.	Brain Signal Controlled Wheel Chair	Dr. P.K. Upadhyay	Indian Council of Medical Research (ICMR)	19, March 2023	31.01	3
2	Secured Data Analytics for Microgrid Energy Management System through Blockchain Technology	Dr. Deepak Kumar(PI), Dr. T.Ghose(Co-PI)	SERB	24, January 2022	25.21	3
3	Adaptive Irrigation Management System using Sustainable Energy	Dr. Debomita Ghosh (PI)	Coal India Limited	6 Feb, 2023	20.06	1
4	Analysis, Design And Verification of Coordinated Control for Prototype Hybrid AC-DC Microgrid With IoT Based Cloud Computation Platform	Dr. T.Ghose	AICTE	22 Nov, 2019	10.5	3.5
5	Design of IoT enabled system for Precision Agriculture using AI based Supervisory Algorithm on Cloud Computing Platform	Dr. A. Alam	IDEAS-TIH- ISI Kolkata, NM-CPS	23 September 2022	5.14	1
6	Data Driven Smart Energy Management of Microgrid based cyber physical system for precision agriculture	Dr. S. K. Mishra	IDEAS-TIH- ISI Kolkata, NM-CPS	23 September 2022	4.64	1
7	Development of Low Cost and Portable Impedimetric Sensors for on -site heavy metal detection	Dr. Debosmita Mondal	SMS-BIT Mesra	1 July 2022	5	2
8	Performance validation of sensor measurements considering various communication protocols in an active distribution system	Dr. Debomita Ghosh (PI)	Typhoon HIL	27 Sep, 2023	0.5	1



## वार्षिक प्रतिवेदन 2022-2023

### b) Projects Completed :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (in Lacs)	Date of completion of the Project
1.	Design of IoT Based Energy Management System Using Cloud Computing Platform	Dr. Aftab Alam	SERB	1 May 2019	38.7	Nov, 2022

### c) Consultancy Projects carried out/ongoing :

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (in lakhs)	Principal Investigator / Co-Investigator	Ongoing / Completed
			from	to			
1.	Technical training on electrical system installation for skilled workers	Infimind educare foundation, Bangalore	7 Dec, 2022	7 Dec, 2023	0.15	Dr. Pankaj Mishra	Completed
2.	TATA Motors Certification Program on Basic of Auto Electricals	TATA Motors	11 Feb, 2023	27 May, 2023	4.5	Dr. Pankaj Mishra Co-ordinator	Completed

## SECTION 3

## SEMINAR / CONFERENCE

### 3.1 Seminar / Conferences / Short – Term Courses Conducted:

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	SERB sponsored one-week High-End Workshop (KARYASHALA) on Operational Requirements and Control Issues of Smart Technology Driven Active Distribution Network	Dr. Pankaj Mishra	SERB	15.05.2023 - 21.05.2023
2.	Introduction to Typhoon HIL	Dr. Debomita Ghosh, Dr. T. Ghose	Department of EEE	30.01.2023- 03.02.2023
3.	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	Dr. Debomita Ghosh, Dr. T. Ghose	In collaboration with ERLD, Grid Controller of India Limited, GoI	10.4.2023- 14.04.2023
4.	SERB sponsored one-week High-End Workshop (KARYASHALA) on Operational Requirements and Control Issues of Smart Technology Driven Active Distribution Network	Dr. Pankaj Mishra	SERB	15.05.2023 - 21.05.2023



### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by

#### Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Organizers	Venue	Date
1.	Dr. P.K. Upadhyay	2022 2nd Asian Conference on Innovation in Technology (ASIANCON)	Pimpri Chinchwad College of Engineering & Research	Ravet, India	26-28 August, 2022
2	Dr. P.K. Upadhyay	Introduction to Typhoon HIL	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23
3	Dr. P.K. Upadhyay	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
4	Dr. Debasmita Mondal	Introduction to Typhoon HIL	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23
5	Dr. Debasmita Mondal	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
6	Dr. Debasmita Mondal	One day workshop on "Enriching the Quality of Teaching-Learning Process in the Present Scenario"	BIT Mesra	R&D Building, BIT Mesra	10.05.23
7	Dr. Deep Shekhar Acharya	Introduction to Typhoon HIL	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23
8	Dr. Deep Shekhar Acharya	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
9	Dr. Aftab Alam	Introduction to Typhoon HIL	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23
10	Dr. Mohammad Junaid Akhtar	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
11	Dr. Mohammad Junaid Akhtar	Introduction to Typhoon HIL	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Organizers	Venue	Date
12	Dr. Pankaj Mishra	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	Department of EEE BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
13	Dr. Surendra Kumar	Introduction to Typhoon HIL	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23
14	Dr. Surendra Kumar	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
15	Dr. Debomita Ghosh	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
16	Dr. Debomita Ghosh	Introduction to Typhoon HIL	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23
17	Dr. R.C. Jha	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
18	Dr. R.C. Jha	Introduction to Typhoon HIL	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23
19	Mr. B. M. Prasad	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
20	Dr. S. K. Mishra	Introduction to Typhoon HIL(Workshop)	BIT, Mesra, Ranchi	EEE Dept.	30.01.23- 03.02.23
21	Dr. S. K. Mishra	Bi2I-Business Ideation to Implementation (Workshop)	Institution's Innovation Council in association with Entrepreneurship Development Cell(EDC) and Finance Club(FC)	BIT, Mesra, Ranchi	25.03.23
22	Dr. S. K. Mishra	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration(workshop)	BIT, Mesra, Ranchi	EEE Dept.	10.04.23 - 14.04.23

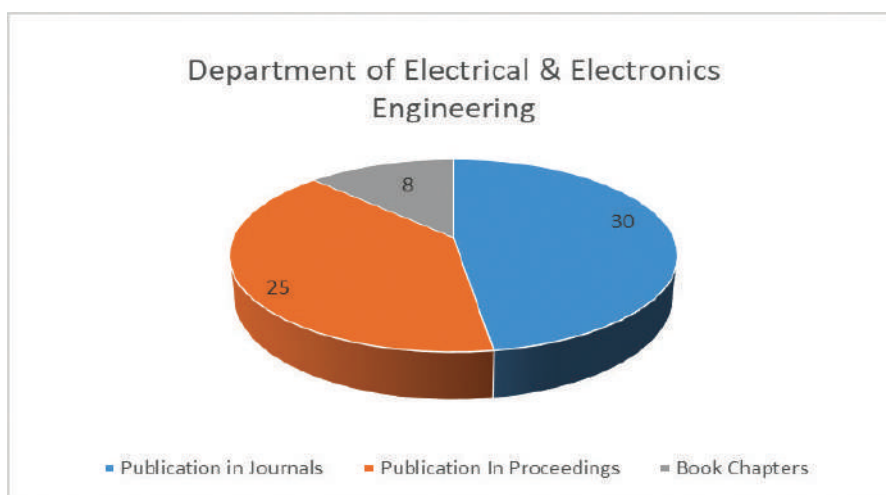


Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Organizers	Venue	Date
23	Dr. S. K. Mishra	Designing Embedded AI Systems using STMicroelectronics AI Ecosystem (Hands on Training)	BIT, Mesra, Ranchi	ECE Dept	20.02.23-24.02.23
24	Dr. S. K. Mishra	Enriching the Quality of Teaching-Learning Process in the Present Scenario (Workshop)	BIT, Mesra, Ranchi	BIT, Mesra, Ranchi	04.05.23-11.05.23
25	Dr. T.Ghose	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT, Mesra, Ranchi	EEE Dept.	10.04.23 - 14.04.23
26	Dr. T.Ghose	Introduction to Typhoon HIL(Workshop)	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
27	Dr S Shiva Kumar	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23
28	Dr S Shiva Kumar	Introduction to Typhoon HIL(Workshop)	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
29	Dr. G. S. Gupta	Introduction to Typhoon HIL	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23
30	Dr. G. S. Gupta	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23
31	Dr. Deepak Kumar	Introduction to Typhoon HIL	BIT Mesra	EEE Dept.	30.01.23 - 03.02.23
32	Dr. Deepak kumar	Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra in collaboration with ERLDC, Grid Controller of India Limited	EEE Dept.	10.04.23 - 14.04.23



## SECTION 4

## RESEARCH PUBLICATIONS



## SECTION 5

## AWARD / PATENT / COLLABORATIONS

### 5.1 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1.	Debomita Ghosh, Sourav Kumar Sahu, Sonal	A system for promoting and managing renewable energy	202022103951.8	2022	Present invention is to provide dynamic variations of solar irradiation, voltage, and load for development process of the Dynamic Customary Operational Hosting Capacity control strategy that can be readily retuned by the utility on-line with additional injection of Distributed Energy Resources, without cost of upgradation which is immune to data loss with centralized data monitoring facility
2.	Sourav Kumar Sahu, Sonal, Debomita Ghosh, Dusmanta Kumar Mohanta	Method for Assessment of Hosting Capacity and Voltage Stability for Renewable Energy Integrated EV Charging Station	202231065637	2023	The present invention relates to a method for Assessment of Hosting Capacity (HC) and Voltage Stability for Renewable Energy Integrated Electric Vehicle (EV) Charging Station. More particularly, it recites a combination of different configurations and HC approach adopted for stable operation of distribution network for EV charging and proper estimation of HC ensures minimum loss in the network, simultaneously enhancing the voltage profile.
3.	Deepak Kumar, K. Kumar, Mukesh Sharma, Abdullah Umar	A Machine Learning Based Intelligent Dust Suppression System	202022105381	2022	In a coal mining industry, it is important for mines to make sound decisions when it comes to investing in pollution treatment projects. This process involves analyzing the various factors related to the projects complexity and determining the best way to maximize profits. The decision-making process in coal mining can be solved using the discrete Dynamic Programming optimization method as well as Artificial Intelligence based techniques.



## 5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1.	L&T Technology Services (LTTS)	Research collaboration	29.03.2023
2.	ERLDC	Research collaboration and Workshop	March 2022 and Renewed for the year 2023-2024.
3.	CIL	Research collaboration	?
4.	Tata Motors Ltd	To conduct M.Tech in EV Technology and upskilling programs	Dec. 2022

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

### 6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Coordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1.	BITMUN	Ohm Gupta	Dr. S.K. Mishra, Mr. Vishal H. Shah	25th & 26th March, 2023 - 2 days (9 AM to 5 PM both days)
2.	EEESOC - Bitotsav Bot Soccer	Ayushman Dutta	Dr S Shiva Kumar	March 2023
3.	EEESOC - Bitotsav BOT Soccer NSS - Blood Donation Camp	Pushkal Kishore	Dr. Shiva Kumar Dr. O.P. Pandey	Mar, 2023 - Apr 2023
4.	EEESOC - Bitotsav BOT Soccer	Aditya Raj	Dr S Shiva Kumar	Mar 2022
5.	EEESOC- Bitotsav BOT Soccer	Souhardya Chatterjee	Dr S Shiva Kumar	Mar 2022
6.	Student Mentorship Programme	Souhardya Chatterjee	Dr S Shiva Kumar	Apr 2023 - Jun 2023
7.	Student Mentorship Programme	Aditya Raj	Dr S Shiva Kumar	Apr 2023 - Jun 2023
8.	Summer Project Programme	Aditya Raj	Dr S Shiva Kumar	Sep 2022- Nov 2022
9.	Summer Project Programme	Souhardya Chatterjee	Dr S Shiva Kumar	Sep 2022- Nov 2022

### 6.2. List of Faculties

Sr. No.	Name	Designation
1	Dr. T. Ghose	Professor
2	Dr. R.C. Jha	Professor
3	Dr. (Mrs.) Vijaya Laxmi	Professor
4	Dr. S. Chakraborty	Professor
5	Dr. Prem Prakash	Assistant Professor



Sr. No.	Name	Designation
6	Dr. P. K. Upadhayay	Assistant Professor
7	Dr. Surendra Kumar	Assistant Professor
8	Dr. Gauri Shankar Gupta	Assistant Professor
9	Dr. (Mrs.) Debomita Ghosh	Assistant Professor
10	Dr. Sudhansu Kr. Mishra	Assistant Professor
11	Dr. Sushma S. Kamlu	Assistant Professor
12	Mr. Subrat Kuamr Swain	Assistant Professor
13	Dr. Deepak Kuamr	Assistant Professor
14	Dr. Aftab Alam	Assistant Professor
15	Dr. S. Shiva Kumar	Assistant Professor
16	Mr. B. M. Prasad	Assistant Professor
17	Dr. Pankaj Mishra	Assistant Professor
18	Dr. Debasmita Mondal	Assistant Professor
19	Dr. Deep Shekhar Acharya	Assistant Professor
20	Dr. Md. Junaid Akhtar	Assistant Professor

### 6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HOD, EEE	Ex-Officio	Chairman
2.	Dr. T. Ghose	Professor	Internal Member
3.	Dr. R.C.Jha	Professor	Internal Member
4.	Dr. (Mrs.) Vijaya Laxmi	Professor	Internal Member
5.	Dr. (Mrs.) Sarbani Chakraborty	Professor	Internal Member
6.	Dr. Sudhansu Kumar Mishra	Assistant Professor	Internal Member
7.	Dr. Deepak Kumar	Assistant Professor	Internal Member
8.	Dr. S.S. Solanki	Professor	Internal Member
9.	Dr. V.K. Jha,	Associate Professor	Internal Member
10.	Dr. Piyush Kumar Ojha	Assistant Professor	Internal Member
11.	Dr. Mayank Singh	Assistant Professor	Internal Member
12.	Dr. P.S. Rathore	Assistant Professor	Internal Member
13.	Dr. (Mrs.) Aparajita Pandey	Assistant Professor	Internal Member
14.	Dr. Amitava Chatterjee	Professor, Department of Electrical Engineering, Jadavpur University	External Member
15.	Dr. Anup Kumar Panda,	Professor, Department of Electrical Engineering, NIT Rourkela	External Member
16.	Dr. Nilanjan Senroy	Professor, Department of Electrical Engineering, IIT, Delhi	External Member
17.	Dr. S.A. Soman	Professor, Department of Electrical Engineering, IIT Bombay	External Member



Sr. No.	Name of the Member	Designation	Role
18	Dr. Sumit Kumar Sen	Professor, Department of Applied Physics, University of Calcutta	External Member
19	Mr. Partha Pratim Sen	Chief General Manager (CGM), Electrical, MECON Ltd., Ranchi	Member
20	Mr. Tapan Dasgupta	Managing Director, Powertronix Engineering Pvt. Ltd, Kolkata, www.powertronix.co.in	Member
21	Mr. Deepak Kumar	GM, Electrical, MECON Ltd, Ranchi	Member

#### 6.4 Student Entrepreneurship activities/Start-ups if any:

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
1.	Aryan Kumar	-	Venture Labs	Venture Labs is a college student startup where a group of skilled individuals has come together to provide you with a wide range of facilities and services for your growth and smooth going. Our goal is to observe and simplify all the problems to provide optimum amount of satisfaction that our client seeks.

## SECTION 7

## OTHER INFORMATION

### 7.1 Publication by students, if any

#### Publications in Journals: (International/National)

Sr. No	Authors	Date	Title	Journal	Vol	Page	DOI
1	Prity Soni, Debasmita Mondal and Pankaj Mishra	May 2023	Comparative Evaluation of Deep Learning CNN Techniques for Power Quality Disturbance Classification	Journal of Mines, Metals and Fuels	71 (5)	627 - 631	10.18311/jmmf/2023/34161
2	Sourav Kumar Sahu, Soham Dutta, Millend Roy, Debomita Ghosh, Dusmanta Kumar Mohanta	Dec 2022	Machine learning based adaptive fault diagnosis considering hosting capacity amendment in active distribution network	Electric Power Systems Research, Elsevier	216	109025	<a href="https://doi.org/10.1016/j.epsr.2022.109025">https://doi.org/10.1016/j.epsr.2022.109025</a>



## वार्षिक प्रतिवेदन 2022-2023

Sr. No	Authors	Date	Title	Journal	Vol	Page	DOI
3	Sonal, Debomita Ghosh	Aug 2022	Impact of Situational Awareness Attributes for Resilience Assessment of Active Distribution Networks Using Hybrid Dynamic Bayesian Multi Criteria Decision-making Approach	Reliability Engineering & System Safety, Elsevier	228	108772	<a href="https://doi.org/10.1016/j.res.2022.108772">https://doi.org/10.1016/j.res.2022.108772</a>
4	Sonal, Debomita Ghosh	June 2022	Hybrid Data-driven Resilience Assessment and Enhancement of Distribution System for Cyclone Susceptible Zones	Scientific Reports, Springer	12	9492	<a href="https://doi.org/10.1038/s41598-022-13311-0">https://doi.org/10.1038/s41598-022-13311-0</a>
5	Subhranil Mishra, Sudhansu Kumar Mishra.	Jan. 2023	Collision Avoidance and Path Planning for Mobile Robots Based on State Estimation Approach'	Journal of Intelligent and Fuzzy Systems:		pp.1 – 12.	DOI: 10.3233/JIFS-221426, Indexing: SCIE, Impact Factor:1.737.
6	Subhranil Das, Sudhansu Kumar Mishra,	Oct. 2022	A Machine Learning Approach for Collision Avoidance and Path Planning of Mobile Robot under Dense and Cluttered Environments",	?			
7	Saujanya Nath Tiwari, Naman Deep, Shreya, Sudhansu Kumar Mishra	25-27, Nov, 2022	Deep Learning based Malignant Melanoma Detection in Dermoscopy Images	IEEE International Conference on Futuristic Technologies, (INCOFT 2022),			
8	Thakur, A., Mishra, S.K.	Feb.2023	Review on Vision-Based Control Using Artificial Intelligence in Autonomous Ground Vehicle.	Algorithms for Intelligent Systems. Springer, Singapore.			<a href="https://doi.org/10.1007/978-981-19-8742-7_49">https://doi.org/10.1007/978-981-19-8742-7_49</a> , eBook ISBN9 789811987427, Springer, Feb-2023.



Sr. No	Authors	Date	Title	Journal	Vol	Page	DOI
9	Rudra Narayan Pandey, Shreyas Shubhankar, Bibhudendra Acharya, Sudhansu Kumar Mishra,	Jan, 2023	Generative Adversarial Network-Based Satellite Image Enhancement	Microelectronics, Communication Systems, Machine Learning and Internet of Things.			<a href="https://doi.org/10.1007/978-981-19-1906-0_38">https://doi.org/10.1007/978-981-19-1906-0_38</a>
10	Manjari Singh, Shikha Lakra, Subhranil Das, Sudhansu Kumar Mishra, Ajit Kumar Sahoo, Bibhudendra Acharya,	Jan, 2023	Extended Kalman Filter-Based Position Estimation in Autonomous Vehicle Applications,	Lecture Notes in Electrical Engineering, Springer, Singapore.	7	887	<a href="https://doi.org/10.1007/978-981-19-1906-0_38">https://doi.org/10.1007/978-981-19-1906-0_38</a>

#### Publications in Proceedings: (International/National)

S. No.	Authors	Title	Proceedings	DOI
1	Swarali Pujari, Sonal, Sourav Kumar Sahu, Debomita Ghosh, Debasmita Mondal	Enabling Network Protection Using Switching based Availability Analysis of IEC 61850	2nd International Symposium on Sustainable Energy and Technological Advancements (ISSETA 2023)	
2	Prity Soni, Debasmita Mondal, Soumya Chatterjee, Pankaj Mishra	Deep Learning Technique for Recurrence Plot-based Classification of Power Quality Disturbances	2022 IEEE International Power and Renewable Energy Conference (IPRECON 2022)	
3	Sonal, Debomita Ghosh,	Resilience Analysis of Mesh-Grid Integrated Distribution Network using Bayes' Theorem	5th International Conference on Power, Control & Embedded Systems (ICPCES), Prayagraj, India, January 06 – 08, 2023, Allahabad, India, IEEE	10.1109/ICPCES57104.2023.10076022
4	Divyangini Gyani, Sonal, Sourav Kumar Sahu, Debomita Ghosh, Pankaj Mishra and Deep Shekhar Acharya	Data-Driven Apprehension of Cyber and Physical Anomalies in Distribution System	2nd International Symposium on Sustainable Energy, Signal Processing and Cyber Security (ISSSC), December 15-17, 2022, Odisha, India, IEEE	10.1109/iSSSC56467.2022.10051628



S. No.	Authors	Title	Proceedings	DOI
5	Divyangini Gyani, Sonal, Sourav Kumar Sahu, Debomita Ghosh, Pankaj Mishra and Deep Shekhar Acharya	Data-Driven Apprehension of Cyber and Physical Anomalies in Distribution System	2nd International Symposium on Sustainable Energy, Signal Processing and Cyber Security (ISSSC), December 15-17, 2022, Odisha, India, IEEE	10.1109/iSSSC56467.2022.10051628
6	Anamika Kumari, Nada Ali and Deepak Kumar	Voltage Unbalance Factor (VUF) Mitigation Considering Demand Side Management on Islanded Microgrid	2022 IEEE India Council International Subsections Conference (INDISCON)	10.1109/INDISCON54605.2022.9862865.

## 7.2 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Sonal	1st Prize in Oral Presentation 3rd Research Scholar Colloquium, "Hybrid data-driven resilience assessment and enhancement of distribution system for cyclone susceptible zones"	BIT Mesra	BIT Mesra, 2022
2.	Ashish Ranjan	1st Prize in Cost & Manufacturing and 2nd prize in Design Event	Formula Green	Aug 2022, Bangalore
3	Shubham Patra	Winners of Inter Hostel Football Tournament	BIT Mesra	Sep 2022, BIT Mesra
4.	Vinay Kumar	Got 11th position in marathon hold by BIT Mesra	BIT MESRA	Feb 2021, BIT Mesra
5.	Souhardya Chatterjee	Quarter Finals in EYantra Competition	IIT Bombay	Sep 2022 to Feb 2023
6.	Suraj Gorai	Third Prize Winner at Hack Star Bengaluru 22.	MBRDI	Feb 2022 to March 2022
7.	Aditya Raj	Quarter Finals in EYantra Competition	IIT Bombay	Sep 2022 to Feb 2023
8.	Sushanto Kumar Das	Baja Sae India Competition 2022- Sales Presentation -1st; Acceleration Event -2nd ; Raftaar(Lightest Vehicle) Event-3rd	BAJA SAE INDIA	Apr,2022
9.	Aryan Kumar	National runner up in Sci Tech Quiz	MIT, Manipal	Aug 2022
10.	Aryan Kumar	Overall Champion in Pantheon	BIT Mesra	Sep 2022
11.	Shashwat Sinha	Overall champion in Pantheon	BIT Mesra	Sep 2022
12.	Akriti Smriti Khalkho	2nd in Dance saga(BITOTSAB)	BIT Mesra	Feb 2023

### 7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr. Sougata Basu, Founder, CashRich	24-08-2022	 basu@cashrich.com
2	Dr. Arpan Malkhandi	03-09-2022	amal@energy.aau.dk
3	Dr. Pradeep Chatterjee	15-10-2022	pchats2000@yahoo.com

### 7.5 List of Alumni

Alumni passed out in 2023 (UG) and placed through campus placement

S.NO	Roll No.	Name of the student placed	Name of the Employer
1.	BTECH/10018/19	Ajaz Hussain	Orient Electric
2.	BTECH/10030/19	Dipan Mukhopadhyay	TATA MOTORS
3.	BTECH/10090/19	Ankit Kumar	AMDOCS
4.	BTECH/10098/19	Siddhartha Deo	Societe Generale
5.	BTECH/10129/19	Dibya Ranjan Barwa	AMDOCS
6.	BTECH/10133/19	Shubham Anand	TATA POWER
7.	BTECH/10233/19	Bompaly Manoj Reddy	PWC
8.	BTECH/10249/19	Doman Mandi	TATA STEEL
9.	BTECH/10253/19	Alakshendra Singh	TATA Autocomp
10.	BTECH/10265/19	Harsh Tomar	Tolaram
11.	BTECH/10268/19	Anand Raj	BOX8
12.	BTECH/10274/19	Harshit Kerketta	AMDOCS
13.	BTECH/10279/19	Swaraj Anand	Societe Generale
14.	BTECH/10293/19	Saurav Kumar	AMDOCS
15.	BTECH/10300/19	Kumari Shikha	PWC
16.	BTECH/10322/19	Charchit Gupta	AMADEUS
17.	BTECH/10328/19	Varun Kumar	Aditya Birla Group
18.	BTECH/10333/19	Ankit Kumar Rajak	KPMG
19.	BTECH/10359/19	Sanjay Kumar Mandal	AMDOCS
20.	BTECH/10360/19	Aditya Raj	ADROSONIC



S.NO	Roll No.	Name of the student placed	Name of the Employer
21.	BTECH/10374/19	Md Zeeshan Equbal Ansari	INCREFF
22.	BTECH/10451/19	Abheet Pandey	Microsoft
23.	BTECH/10500/19	Pranav Prakhar	OPTUM
24.	BTECH/10533/19	Kurra Bala Adithya	Dalmia Bharat
25.	BTECH/10547/19	Bharat Ranjan Kujur	Tata Motors
26.	BTECH/10556/19	Kumar Sandeep	FASTENAL
27.	BTECH/10560/19	Ankit Kumar	FASTENAL
28.	BTECH/10564/19	Akshat Jain	AXIS BANK
29.	BTECH/10591/19	Abhishek Raj	TATA Motors
30.	BTECH/10595/19	Shivam Shandilya	Microsoft Research
31.	BTECH/10619/19	Shivam Kumar	AXIS Bank
32.	BTECH/10629/19	Priyanshu Azad	PWC India
33.	BTECH/10640/19	Vaibhav Mishra	Societe Generale
34.	BTECH/10668/19	Sparsh Khare	Tresvista
35.	BTECH/10712/19	Rajnish Ranjan Tiwary	PWC
36.	BTECH/10733/19	Ankit Kumar	NXP Semiconductor

## 7.6 Alumni passed out in 2023 (PG):

S. NO	Roll No.	Name of the student placed	Name of the Employer
1.	MT/EE/10001/21	Binit Kumar Deepak	TATA Motors
2.	MT/EE/10005/21	Sambit Mukherjee	TOLARAM
3.	MT/EE/10017/21	Dipayan Kundu	TATA Steel
4.	MT/EE/10019/21	Debanjan Bhaskar	TATA Motors
5.	MT/EE/10011/21	Yoshita	Hyundai Motors India
6.	MT/EE/10012/21	Sristi Sejal	BOSCH Global Software Technology
7.	MT/EE/10015/21	Aditya Raj	TATA Motors
8.	MT/EE/10018/21	Karnal Digvijay Singh Dinkar	HCL Tech.

## 7.7 Infrastructure Development

The Department has initiated the Laboratory set-up for Electric Vehicle and Battery Management System in the year of 2022-2023.

## 8. Any other Achievement:

- Dr. Vijaylaxmi participated as a speaker in the short term course "Recent Trends of Control Systems and Automation" organised by RTC Institute of Technology during 19.09.22-23.09.23.

- Dr. Vijaylaxmi participated as a speaker in the short term course "Next-generation Applications in Electrical and Electronics Engineering" organised by NIT, Patna during 15.09.22-20.09.23.
- Dr. Mohammad Junaid Akhtar participated as a resource person in "Training of Trainers (ToT) Program on Electric Vehicle : Fundamentals & Components" organised by IIT Patna during 22.07.22 - 26-07-22.



- Dr. S.K. Mishra participated as a resource person in the short term course "Recent Trends of Control Systems and Automation" organised by RTC Institute of Technology during 19.09.22-23.09.23.
- Dr. S.K. Mishra participated as a Program Committee Member and Reviewer in "International Conference on Paradigms of Communication, Computing and Data Sciences (PCCDS 2022)" held during 05.07.2022 - 07.07.2022.
- Dr. T. Ghose participated as a speaker in the short term course "Next-generation

Applications in Electrical and Electronics Engineering" organised by NIT, Patna during 15.09.22-20.09.23.

9

#### Special Initiatives if any:

The department has signed an MoU with L&T Technology Services (LTTS), Grid India Ltd. and CCL to foster the research works based on industrial problems.

Department has also renewed the existing MoU with Tata Motors Ltd. for conducting M.Tech in EV Technology and upskilling development programs for their professionals.



## Department of Hotel Management and Catering Technology

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the Department

Department of Hotel Management & Catering Technology of BIT MESRA was established in January-2003. Department offers 4 years (8 Semester) bachelor's degree in Hotel Management & Catering Technology (BHMCT). The program lays emphasis on practical application of theoretical lessons through training, laboratory work, hands on workshops, theme parties, project and study tour. The department has a well-qualified team of faculty members with a blend of sound industry experience in India and overseas, and academic excellence, who are consistently involved in various training, consultancy and research activities. The faculty members put in immense effort for both academic and practical training of the students.

Department is well equipped with training kitchen and bakery, training restaurant, housekeeping laboratory, laundry laboratory, front office laboratory etc. which ensure practical training in a professional environment to students.

Department has biannual double blind refereed, research journal JOHAR- Journal of Hospitality Application and Research published in association with Publishing India Group which is indexed in ProQuest, i-scholar and Sci-Archives.

Department has its own departmental club 'Hospitality Club' solely managed by students which hones their managerial and entrepreneurial skills required in the hospitality industry. As a regular feature department organizes various workshops, theme parties, food festivals and

outdoor caterings to cultivate skill among the students.

Among the branded and luxurious hotels in India our department has gained a very good image and students go on "Industrial Exposure Training" in India and abroad for 18 weeks in various star Hotels such as Taj group of hotels, Oberoi group of hotels, ITC group of hotels, The Park hotels, Marriott group of hotels, etc.

#### Department:

#### Vision

To become a globally recognized hospitality institution for creating skilled human resource to meet the professional Hospitality Industry needs across the globe.

#### Mission

- To create a salubrious environment to provide excellent state of the art facilities meeting the hospitality industry requirement.
- To provide excellent technological support to bridge the gap between academics and industry to fulfil the overall academic need of the society.
- To ensure all round development of the students and to create a platform for turning out hospitality professional who can assume leadership position in society.
- To provide high quality course structure to enable qualified professionals to meet the hospitality needs globally.
- To develop effective teaching skill and research potentials of the faculty members



## SECTION 2

## SEMINAR/CONFERENCE

## 2.1 Seminar / Conferences / Short – Term Courses Conducted:

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Enriching the Quality of Teaching -Learning Process in the Present Scenario	Gautam Shandilya - Moderator	Birla Institute of Technology, Mesra, Ranchi	04.05.2023 to 11.05.2023
2.	Udbodhan – Exhibition on Indian Knowledge System	Gautam Shandilya – Convenor (Health Wellness and Psychology)	Birla Institute of Technology, Mesra, Ranchi	13.04.2023 to 15.04.2023

## 2.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by

## Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Abhinav Kumar Shandilya	Third International Conference on Innovation in Science and Technology for Sustainable Development (ICISTSD-2022)	Self	College of Engineering, Perumon, Kerala (TEQIP-II and Co-sponsored by IEEE Kerala section)	College of Engineering, Perumon, Kerala	25.08.2022 - 26.08.2022
2.	Abhinav Kumar Shandilya	8th International Conference on Paradigm Shift Transformation Industry: Issues & Challenges 4.0	Self	KC Group of Institutions, Nawanshahar (PB) & Pandoga (HP)	KC Group of Institutions, Nawanshahar (PB) & Pandoga (HP)	04.01.2023 - 05.01.2023
3.	Abhinav Kumar Shandilya	International Conference on Emerging Trends in Operations and Analytics (ICETOA)	Self	TAPMI, a unit of Manipal Academy of Higher Education (MAHE)	TAPMI, a unit of Manipal Academy of Higher Education (MAHE)	17.03.2023 - 19.03.2023
4.	Praveen Srivastava	Faculty Development Program on Emergent Pedagogy and Contemporary Research Methods in Travel and Tourism	Self	Amity Institute of Travel and Tourism, Amity University, Kolkata	Online	25.07.2022 -29.07.2022
5.	Praveen Srivastava	Faculty Development Program on Arduino	BIT, Mesra	BIT, Mesra	IDEA Lab, BIT Mesra	11.07.2022 -15.07.2022
6.	Praveen Srivastava	Innovation Ambassador (IA) training Foundation Level.	BIT, Mesra	Ministry of Education, Innovation Cell and AICTE	Online	15 sessions of 30 contact hours (22.07.2022)

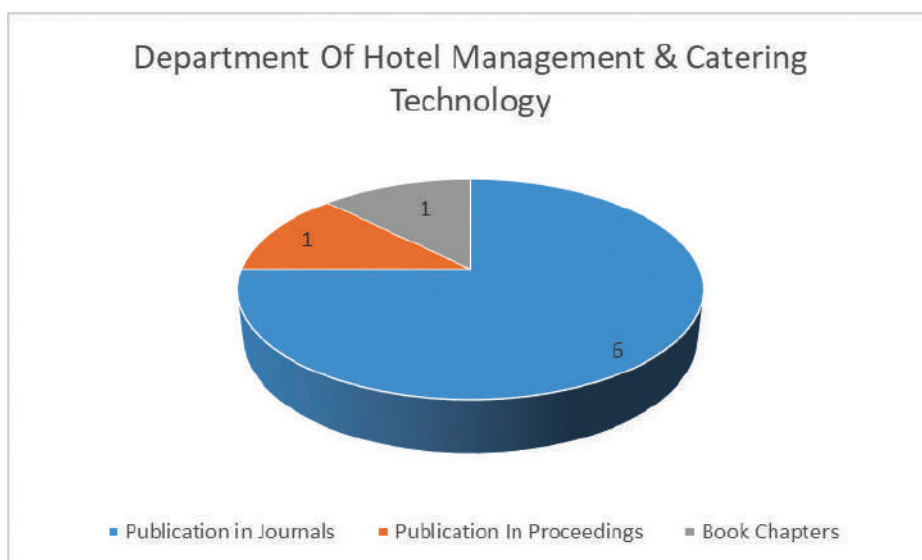


## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
7.	Nishikant Kumar	International Financial Management Conference	Chandragupta Institute of Management, Patna	Chandragupta Institute of Management, Patna	Chandragupta Institute of Management, Patna	11.02.2023
8.	Nishikant Kumar	Seminar - Rural Transformation: Prospects and Challenges	University Department of Management, Vinoba Bhave University, Hazaribagh	University Department of Management, Vinoba Bhave University, Hazaribagh	University Department of Management, Vinoba Bhave University, Hazaribagh	30.01.2023
9.	Nishikant Kumar	Int. Conference on Digital All the Way: Hospitality and Tourism	Amity University, Gurugram	Amity University, Gurugram	Amity University, Gurugram	21.11.2022 -25.11.2022
10.	Sanjiv Kumar Srivastava	Workshop - Enriching the Quality of Teaching Learning Process in the Present Scenario	BIT ,Mesra	Value Education Cell, BIT Mesra, Ranchi	Birla Institute of Technology, Mesra	10.05. 2023
11.	Amit Saran	Workshop - Full agenda of the DST & ACS	DST	BIT, Mesra	BIT, Mesra	19.07.2022
12.	Amit Saran	Workshop - Design Thinking for Startups & Entrepreneurship	Institution's Innovation Council BIT	BIT, Mesra	BIT, Mesra	27.02.2023 -28.02.2023
13.	Amit Saran	Workshop-Enriching the Quality of Teaching-Learning Process in the Present Scenario	Value Education Cell, BIT, Mesra	BIT, Mesra	BIT, Mesra	04.05.2023 -11.05.2023
14.	Gautam Shandilya	International Conference on "Emerging Research Paradigm for Sustainable Development"	Self	Jharkhand Rai University, Ranchi	Jharkhand Rai University, Ranchi	27.05.2023 -28.05.2023
15	Gautam Shandilya	FDP- Inculcating Universal Human Values in Technical Education	AICTE	AICTE	Birla Institute of Technology, Mesra, Ranchi	26.09.2022 - 30.09.2022
16	Gautam Shandilya	Workshop -Enriching the Quality of Teaching -Learning Process in the Present Scenario	BIT ,Mesra	Value Education Cell, BIT Mesra, Ranchi	Birla Institute of Technology, Mesra, Ranchi	10.05.2023

## SECTION 3

## RESEARCH PUBLICATIONS



## SECTION 4

## AWARD / PATENT / COLLABORATIONS

## 4.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State/ National/ International Level	Year / Duration
1	Praveen Srivastava	Resource person in AICTE Training & Learning (ATAL) Academy Basic ATAL FDP on "Design Thinking as tool for Innovative Teaching Pedagogy"	BIT, Noida	National	20.02.23 - 03.03.23
2	Praveen Srivastava	Best Paper Award for the research paper presented in 3rd Business, Law and Management (BLM3) International Conference	Conference was organised by CIRI in association with Taylor's University, Malaysia.	International	12.11.2022.
3	Praveen Srivastava	Resource Person in a one day International Hospitality and Tourism Webinar with the theme "Burning Passion: Heading the Hospitality and Tourism Industry to a Brighter Future"	College of Hospitality and Tourism Management, Divine Word College of Vigan.	International	04.07.2022



## 4.2 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1.	Front Page Feast	Amrita Bandhyopadhyay	Mr. Gautam Shandilya & Mr. Sanjiv Kr. Srivastava	20.03.2023
2.	Industrial Visit	Amrita Bandhyopadhyay	Dr. Pranjal Kumar	09.03.2023
3.	Launch of YUVA tourism Club	Amrita Bandhyopadhyay	Dr. Pratima Ekka Mr. Gautam Shandilya	02.03.2023

## 4.3. List of Faculties

Sr. No.	Name	Designation
1.	Dr. Abhinav Kr. Shandilya	Associate Professor
2.	Dr. Praveen Srivastava	Assistant Professor
3.	Dr. Nishikant Kumar	Assistant Professor
4.	Dr. Abhisek Jana	Assistant Professor
5.	Mr. Sanjiv Kr. Srivastava	Assistant Professor
6.	Dr. Amit Saran	Assistant Professor
7.	Mr. Gautam Shandilya	Assistant Professor
8.	Ms. Pratima Ekka	Assistant Professor
9.	Dr. Pranjal Kumar	Assistant Professor

## 4.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Abhinav Kr. Shandilya	HOD - (Ex-Officio)	Chairman
2.	Dr. Praveen Srivastava	Asst. Professor, Dept. of HMCT	Internal Member
3.	Dr. Nishikant Kumar	Asst. Professor, Dept. of HMCT	Internal Member
4.	Dr. Abhisek Jana	Asst. Professor, Dept. of HMCT	Internal Member
5.	Mr. Sanjiv Kr. Srivastava	Asst. Professor, Dept. of HMCT	Internal Member
6.	Dr. Amit Saran	Asst. Professor, Dept. of HMCT	Internal Member
7.	Mr. Gautam Shandilya	Asst. Professor, Dept. of HMCT	Internal Member
8.	Dr. B. N. Sinha	Professor, Dept. of Pharmaceutical Sciences and Technology	Internal Member
9.	Prof. Shradha Shivani	Professor, Dept. of Management	Internal Member
10.	Dr. Saswati Ghosh Sachen	Asst. Professor, Dept. of Bioengineering	Internal Member
11.	General Manager, Hotel Radisson Blu, Ranchi	(Ex-Officio)	External Member (Any Two)
12.	General Manager, JTDC, Ranchi	(Ex-Officio)	External Member (Any Two)

Sr. No.	Name of the Member	Designation	Role
13.	General Manager, Chanakya BNR Hotel, Ranchi	(Ex-Officio)	External Member (Any Two)
14.	Principal, IHM Hazipur, Bihar	(Ex-Officio)	External Member (Any Two)
15.	General Manager, Capitol Residency, Ranchi	(Ex-Officio)	External Member (Any Two)
16.	Convenor, INTACH, Jharkhand	(Ex-Officio)	External Member (Any Two)
17.	Director, Airport, Ranchi	(Ex-Officio)	External Member (Any Two)

## SECTION 5

## OTHER INFORMATION

## 5.1 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Chef Danveer Kr Veer (Alumni)	24th January 23	
2.	Mr. John Rounio (Food Blogger) from Sweden participated as a guest in Food Fest.	20th March 23	
3.	Mr. Mani Shekhar Pandey, Regional Director, TGI Hotels and Hospitality Services, Pvt. Ltd. Online Guest Lecture	21st March 23.	



## 5.2 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Bhasakar Mandal, 2005 batch, BHMCT	General Manager, Peninsula Suites by Lemon Tree, Bangalore.
2.	Rahul Raj Singh, 2008 batch, BHMCT	Associate Director of Events at Marriott International.
3.	Pradeep Kr Singh, 2005 batch, BHMCT	District Manager in Jubilant Food works Ltd Looking after Rourkela, Sambalpur, Jharshugudda, Ramgargh and Hazaribagh.
4.	Kumar Raghaw, 2005 batch, BHMCT	HR Manager at WABCO India Ltd, Jamshedpur.

## 5.3 Best Thesis Project (UG/PG)

Sadaf Tanvi, Roll No. BHMCT/10023/19, "Behavioural traits of young diners during restaurant selection", under the supervision of Dr. Abhinav Kumar Shandilya.

## 6. Any other relevant information

Dr. Nishikant Kumar: Subject expert Committee member to create and finalize the syllabus of 'Hospitality and Hotel Management' for University Grants Commission (UGC), New Delhi to include 'Hospitality and Hotel Management' discipline in UGC-NET from Dec'2023. (Subject discussion, Syllabus finalization time period was from Feb – June'2023).

## Department of Management

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the Department:

The Department of Management was established in the year 1979 with the aim of serving the growing need for qualified professionals who could harness the resources of the country to achieve its development goals. The department has continuously strived to achieve this aim by maintaining the highest standards in the Postgraduate (MBA) and Doctoral Programmes offered by it since its inception. The vision of the department today is to be recognized as a frontrunner in Management education in the country in consonance with the social, economic and ecological environment while striving to contribute to nation building through excellence in research and development activities. The department follows the philosophy of Outcome Based Education. Therefore, the teaching-learning process is student centric. The pedagogy is practical, hands on and real time. Case studies, Problem Solving Exercises, Role-Plays, Management Games and Presentations

are extensively used. The curriculum is planned to facilitate learning in theory and practice of all aspects of the discipline of management ensuring the achievement of predefined learning outcomes. The MBA program offered by the department is NBA accredited.

#### Department :

##### Vision

To be recognized as a frontrunner in Management education in the country in consonance with the social, economic and ecological environment while striving to contribute to nation building through excellence in research and development activities.

##### Mission

- To educate students at Postgraduate and Doctoral level to perform better in challenging environment.
- To nurture first generation entrepreneurs with innovative mindset.



## वार्षिक प्रतिवेदन 2022-2023

- To provide excellent Consulting, and Research & Development facilities for faculty and students.
- To uphold the values of Personal Integrity and Social Responsibility in all our decisions.

### SECTION 2

### RESEARCH PROJECTS

#### 2.1 Sponsored Projects (Research and Consultancy)

##### a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Entrepreneurship Development and its Impact on 'Quality of Life': An Empirical Study on small heritage town	Dr. Supriyo Roy (CP PI)	ICSSR		7.5 LAKHS	

##### b) Consultancy Projects carried out/ongoing

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator / Co-Investigator	Ongoing/ Completed*
			from	to			
1.	Nav Disha-Management Training of Indane Distributors	Indian Oil Corporation	22.12.2022	23.12.2022	2.12	Dr. Niraj Mishra / Dr. Shelly Srivastav	Completed
2.	Nav Disha-Management Training of Indane Distributors	Indian Oil Corporation	21.11.2022	22.12.2022	2.12	Dr. Niraj Mishra / Dr. Shelly Srivastav	Completed
3.	Nav Disha-Management Training of Indane Distributors	Indian Oil Corporation	17.10.2022	28.10.2022	2.12	Dr. Niraj Mishra / Dr. Shelly Srivastav	Completed
4.	MSME IDEA Hackathon 2.0	MSME, GOI	17.04.2021	21.04.2021	--	Dr. Satyajit Mahato / Dr. Niraj Mishra	Completed



## SECTION 3

## SEMINAR / CONFERENCE

## 3.1 Seminar / Conferences / Short – Term Courses Conducted:

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1	National workshop on Digital Marketing	Co-Convenor	Self-financed through participation fee	04-07-2022 to 08-07-2022

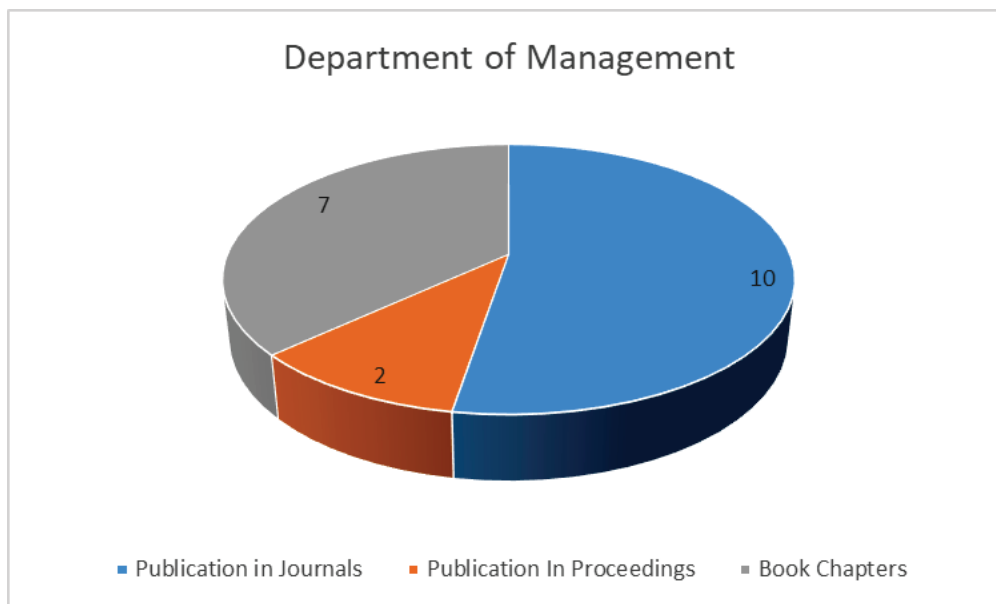
## 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Niraj Mishra	EUMMAS A2S Conference, Dubai2023	BIT, Mesra	Skyline University College, Sharjah, UAE	Dubai	22-02-2023
2	Dr. Anand Pd. Sinha	"Regional Meet"	Institution's Innovation Council MoE's Innovation Cell, New Delhi.	Guru Nanak Institute of Technology, Kolkata	Kolkata	2/08/2022
3	Dr. Anand Pd. Sinha	"IP & Entrepreneurship" under Mentor -Mentee Scheme Ministry of Education Innovation Cell Govt. of India.	Dhanbad in association with ACICIIT (ISM) Foundation.	Indian Institute of Technology (Indian Schools of Mines).	Dhanbad	18/07/2022 to 19/07/2022
4	Dr. Shelly Srivastava	International Conference on Innovation in Engineering and Management	BIT Mesra	BIT, Mesra (Ranchi) Off Campus Noida.	Online	2/06/2023
5	Dr. Sujata Priyambada Dash	Workshop titled 'Enriching the Quality of Teaching-Learning Process in the Present Scenario'	BIT, Mesra	Value Education Cell, BIT, Mesra,	R & D Building, Seminar Hall-2	04/05/2023 to 11/05/2023
6	Dr. Shailendra Kumar Singh	Improving the learning behaviour of students and the behaviour in general in present scenarios	BIT	IKS, BIT	R& D Building	11/05/2023
7	Dr. Satyajit Mahato	Improving the learning behaviour of students and the behaviour in general in present scenarios	BIT	IKS, BIT	R& D Building	11/05/2023



#### SECTION 4

#### RESEARCH PUBLICATIONS



#### SECTION 5

#### AWARD / PATENT / COLLABORATIONS

##### 5.1 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1	Dr Anand Pd Sinha, Adiya Nair, Amit Kumar	Wheel Rover	381672-001 (Applied)	17/03/2023	The novelty resides in the shape, configuration, and surface pattern of the "WHEEL ROVER"

#### SECTION 6

#### ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

##### 6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1	Kartavya- Intra-College Competition	Abhishek Kr Mishra	Dr. Shailendra Kumar Singh	11-12-2022
2	BTriX23	Debjani Ghosh, Neha Vats, Akansha Singh, Subham Raj, Kashis Jain	Dr Sujata Dash, Dr. Satyajit Mahato	14-03-2023
3	International Women's Day Celebration	Abhishek Kr Mishra	Dr. Shailendra Kumar Singh	10-03-2023
4	National Education Day	Abhishek Kr Mishra	Dr. Shailendra Kumar Singh	11-11-2022
5	Abhyuday 2022	Abhishek Kr Mishra, Aditi Kiran	Dr. Satyajit Mahato	18-09-2022



Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
6	International Youth Day	Abhishek Kr Mishra	Dr. Shailendra Kumar Singh	12-08-2022
7	Orientation Program -UDGAM 2022	Kashish, Subham, Rifat, Vartika, Saugandh	Dr Shelly Shrivastava	03-07-2022

### 6.2. List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1	Dr. Shradha Shivani	Professor & Head
2	Dr. Manju Bhagat	Professor
3	Dr. Ravindra Nath Bhagat	Professor
4	Dr. A.N.Jha	Professor
5	Dr. Supriyo Roy	Associate Professor
6	Dr. Anupam Ghosh	Assistant Professor
7	Dr. Dharmendra Kumar Chand	Assistant Professor
8	Dr. Praveen Chandra Jha	Assistant Professor
9	Dr. Rohit Kumar Pandey	Assistant Professor
10	Dr. Anand Kumar	Assistant Professor
11	Dr. Shailendra Kumar Singh	Assistant Professor
12	Dr. Mrs Rohini Jha	Assistant Professor
13	Dr. Shelly Srivastava	Assistant Professor
14	Dr. Anand Prasad Sinha	Assistant Professor
15	Dr. Sujata Priyambada Dash	Assistant Professor
16	Dr. Niraj Mishra	Assistant Professor
17	Dr. Satyajit Mahato	Assistant Professor

### 6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Kripa Shanker	Professor (Retd.)	Industrial and Management Engineering Department, Indian Institute of Technology Kanpur, 208016(UP), India
2.	Dr Purusottam Sen	Professor (Retd)	IIM Calcutta
3.	Ms Bishwajit Choudhary	General Manager (Finance)	RDCIS SAIL, Ranchi
4.	Dr. Utpal Baul	Professor (Retd.)	BIT Mesra.



#### 6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HOD/In charge-	Chairman (Ex-Officio)	
2.	Dr. Shradha Shivani	Professor	Internal Member
3.	Dr. Utpal Baul	Professor	Internal Member
4.	Dr. Manju Bhagat	Professor	Internal Member
5.	Dr. R.N. Bhagat	Professor	Internal Member
6.	Dr. Supriyo Roy	Associate Professor	Internal Member
7.	Dr. Rohini Jha	Assistant Professor	Internal Member
8.	Dr. Satyajit Mahato	Assistant Professor	Internal Member
9.	Dr. Vandana Bhattacharjee	HOD & Professor, Dept. of Computer Science and Engineering, BIT, Mesra	Internal Member
10.	Dr. Ritesh Kumar Singh	Associate Professor, Associate. Professor, Production & Industrial Engg., BIT, Mesra	Internal Member
11.	Dr. Tannushri Dutta	Associate Professor, IIM, Ranchi	External Member
12.	Dr. Rakesh Kumar Singh	Professor, IMT Ghaziabad	External Member
13.	Prof. Partha Pratim Sengupta	Sr. Professor, INIT· Durgapur, West Bengal	External Member
14.	Dr. Shivesh Singh	Head Business HR, Bandhan Bank	External Member, Industry
15.	Mr. Priyobrata Bhattacharjee	DGM, Knowledge Management, Birla Corporation Ltd. Birla Cement Works	External Member, Industry
16.	Mr. Shiva Botchu	Executive from Industry	External Member, Industry

#### SECTION 7

#### OTHER INFORMATION

#### 7.1 Achievements of Students :

Name of Student	Sr. No	Achievement/Position/Award etc	Organised by	Date and Venue
Aditya Nair, Amit Kumar, Akash & Abhishek Mishra, Aditya Krishna	1	1st Prize -BIT NISHAN	Institution's Innovation Council BIT Mesra	5/11/2022 BIT Mesra

## 7.2 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr. Pratyay Das (Analytics Associate - Accenture) and Mr. Pramit Basu (Product Manager – Orient Electric	3rd July, 2022	 <p>Department of Management, Birla Institute of Technology, Mesra PRESENTS <b>Alumni Webinar Series : DAY -1</b> <b>UDGAM'22</b> Pratyay Das MBA BATCH 2019-2021 Analytics Associate - Accenture Pramit Basu MBA BATCH 2019-2021 Product Manager - Orient Electric July 2022   3   11 AM Onwards PLATFORM : MS-TEAMS</p>
2.	Mr. Pankaj Sinha (Managing Director, Coca-Cola, Sri Lanka, and the Maldives)	9th July, 2022	 <p>DEPARTMENT OF MANAGEMENT, BIRLA INSTITUTE OF TECHNOLOGY, MESRA PRESENTS <b>UDGAM'22</b> <b>Alumni Webinar Series : DAY-2</b> 11 AM onwards 9, July PLATFORM : MS-TEAMS Mr. Pankaj Sinha MBA Batch 1996-1998 Managing Director Coca-Cola, Sri Lanka and Maldives.</p>
3.	Mr. Pritam Pritu (Global IP Leader – IBM JAPAN.)	10th July, 2022	 <p>DEPARTMENT OF MANAGEMENT, BIRLA INSTITUTE OF TECHNOLOGY, MESRA PRESENTS <b>UDGAM'22</b> <b>Alumni Webinar Series</b> 11 AM onwards 10, July PLATFORM : MS-TEAMS Mr. Pritam Pritu MBA Batch 1997-1999 Global IP CoC Leader - IBM Japan</p>
4.	Mr. Raj Vardhan (Independent Director of McLeod Russel India Limited.)	17th July, 2022	 <p>DEPARTMENT OF MANAGEMENT, BIRLA INSTITUTE OF TECHNOLOGY, MESRA PRESENTS <b>UDGAM'22</b> <b>Alumni Webinar Series</b> 11 am onwards 17 th July, 2022 PLATFORM : MS-TEAMS Raj Vardhan MBA BATCH 1989-1991 Independent Director - McLeod Russel India Limited, Ex-Senior V.P Olam</p>



## वार्षिक प्रतिवेदन 2022-2023

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
5.	Mr. Kamlesh Kumar Sharma (Chief Public affairs and communication officer at Hindustan Coca-Cola Beverages)	30th July, 2022	
6.	Dr. S. Shadab Hassan (Founder and Ex-Director of H. H. High School, Brambe.)	8th Aug, 2022	
7.	Ms. Adya Singh (Senior Analyst, Deloitte)	11th December 2022	
8.	Mr. Ripudaman Magon	28th December, 2022	
9.	Pramit Basu (MBA BATCH 2019-2021) Product Manager – Orient Electric	4th March, 2023	

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
10.	Ms. Divya Sonali Minz (Alumnus, batch 1996-98), Director Human Resource, Avnet India Pvt Ltd.	6th April, 2023	 <p>DEPARTMENT OF MANAGEMENT BIRLA INSTITUTE OF TECHNOLOGY MESRA PRESENTS <b>ALUMNI LECTURE</b> Navigating Your Career: Insights from Alumna and Corporate Leader Divya Sonali Minz VENUE: CAT HALL, BIT MESRA <b>06 APRIL 2023 10 AM ONWARDS</b> <b>DIVYA SONALI MINZ</b> MBA BATCH 1996-1998 DIRECTOR HUMAN RESOURCES AVNET INDIA PVT LTD.</p>
11.	Mr. Pulkit Trivedi, Alumnus, (batch 1996-98), Director Google Pay India.	16th April, 2023	 <p>DEPARTMENT OF MANAGEMENT, BIRLA INSTITUTE OF TECHNOLOGY, MESRA RANCHI <b>ALUMNI SESSION</b> 16th Apr 2023 10:00 AM ONWARDS CAT HALL <b>PULKIT TRIVEDI</b> Director: Google Pay Batch - 1996-1998</p>
12.	Mr. Mayank Shekar (Assistant Manager, IDBI Bank)	16th April, 2023	
13.	Mr. Ripudaman Magon (alumnus of 1989-91 batch) (Director of Natural Group and Conserve Infotech (P) Ltd.)	2nd July, 2023	 <p>DEPARTMENT OF MANAGEMENT BIRLA INSTITUTE OF TECHNOLOGY, MESRA PRESENTS <b>UDGAM'23</b> <b>ALUMNI WEBINAR SERIES</b> 2ND JULY 11AM ONWARDS MS-TEAMS <b>Mr. Ripudaman Magon</b> Batch: 1989-91 Director: Natural Group and Conserve Infotech</p>



## 7.3 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Mr. Sanjay Singh MBA Batch 1987-89	Founder, Strategic Concepts (I) Pvt. Ltd · Freelance
2.	Mr. Ripudaman Magon MBA Batch 1989-1991	Director at Natural Group and ConServe Infotech (P) Ltd. Former Associate Vice President, HCL Infosystems Ltd.(2008-2013)
3.	Mr. Pranay Mittal MBA Batch 1991-1993	Chief Operating Officer, Global Midmarket & SME Business at SAP Global Vice President, SAP SE (2015-2020)
4	Mr. Aloke Singh MBA Batch 1985-1987	CEO Air India Express
5	Mr. Nirmal Dayani MBA Batch 1989-1991	CO-Founder Expereal India Former senior director Marketing, ESPN Star sports

## 8 Any other relevant information

Ph.D. Scholars (Awarded) - Sadiya Fatima- 8/2/2023.

Ph.D. Scholars (Awarded) - Savita Sodhi- 16/12/2022.

Ph.D. Scholars (Awarded) - Rashi Malpani- 13/12/2022.

As a Speaker at "Glasgow Convention : Sustainable Pathways for Future Ready Jharkhand" organized by Department of Forest, Environment and Climate Change, GoJ on 9th May, 22 at Hotel Chanakya BNR, Ranchi

## 9 Special Initiatives if any:

Developed an inhouse software for the CO and PO calculation as part of the program accreditation and academic requirements of the various accreditation bodies.

## Department of Mathematics

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the Department

The Department of Mathematics started in the year 1956. It conducts all the mathematics courses offered by all branches of engineering, management, pharmaceutical sciences, architecture, and the University Polytechnic. At present, the department offers a five year Integrated M. Sc in mathematics and Computing program, and Ph.D program. It has two computer Labs. Consisting of 90 and 20 computers, respectively. The faculties of the department are working on three major areas of research: Pure Mathematics, Applied Mathematics and Statistics. The research areas are Differential Equations, Algebra, Difference Equations, Number Theory, Group Theory, Functional Analysis, Topology, Complex Dynamics, Mathematical Modelling, Fluid Dynamics, Fuzzy Logic, Operations Research, Theoretical Seismology, Numerical Analysis, Computational Solid Mechanics, Optimization Techniques, Applied Statistics, Statistical

Computing and Statistical Musicology.

#### Vision:

To become a globally recognized centre of excellence in teaching and research, producing excellent academicians, professionals and innovators who can positively contribute towards the society.

#### Mission :

1. Imparting strong fundamental concepts to students in the field of Mathematical Sciences and motivate them towards innovative and emerging areas of research.
2. Creation of compatible environment and provide sufficient research facilities for undertaking quality research to achieve global recognition.

### SECTION 2

### RESEARCH PROJECTS

#### 2.1 Sponsored Projects (Research and Consultancy)

##### a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Hindustani Raga Analysis Using Statistical Musicology with Therapeutic Applications for Stress Management	PI: Prof. S. Chakraborty Co-PI 1: Dr. S. B. Singh (RIMS) Co-PI 2: Prof. Omar Farooq (AMU)	IDEA: Technology Innovation Hub @ Indian Statistical institute, Kolkata	Letter no. DRIE/RDC/NM-ICPS/ISI Kolkata/2022-2-23 dated 23 <sup>rd</sup> Sept, 2022	Rs. 4,64,000/= (rupees 4 lakhs 64 thousand only)	3 years



**b) Consultancy Projects carried ongoing : Department Library Grant**

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator / Co-investigator	Ongoing/ Completed*
			from	to			
1.	NBHM Library Grant	NBHM(DAE)	2023	2024	2,00,000	HOD Maths	Ongoing

**SECTION 3**

**Seminar**

**3.1 Seminar / Conferences / Short – Term Courses Conducted:**

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	88-th Annual Conference of the Indian Mathematical Society: An International Meet	S. Padhi	NBHM (DAE) SERB CSIR	December 27-30, 2022

**3.1 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by**

**Faculty Members:**

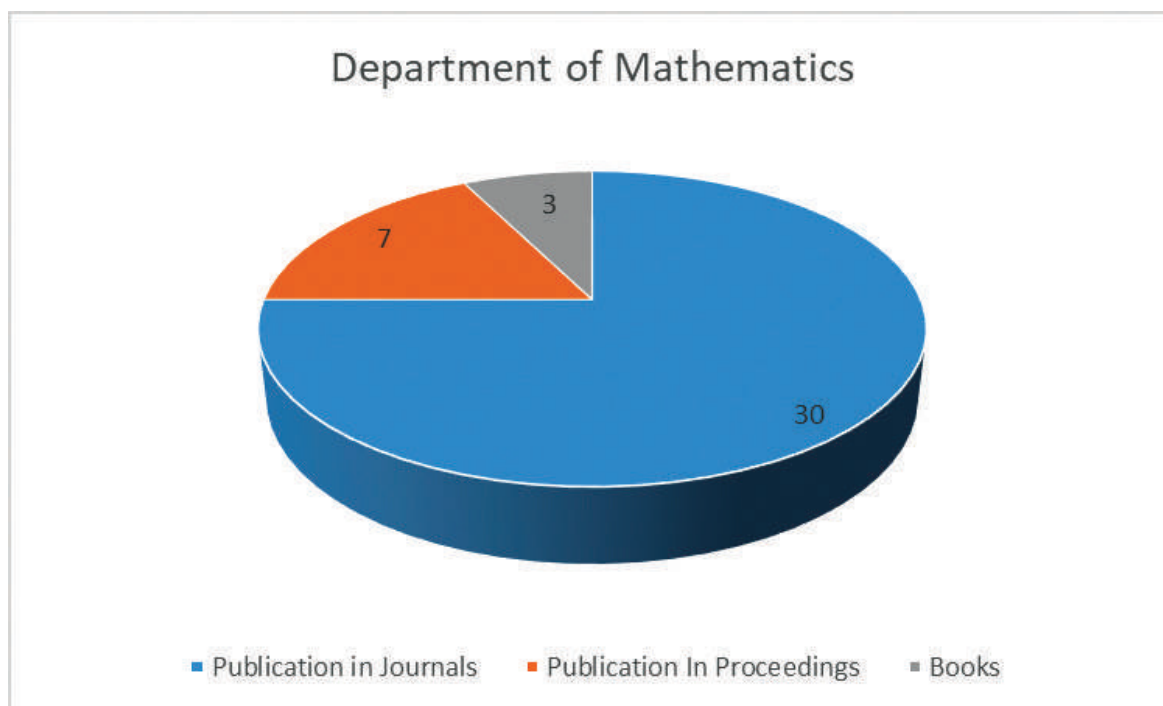
Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Dr. Abhinav Tandon	International Conference on Advances In Biomathematics (ICABM-2022)	-----	Indian Society of Mathematical Modelling and Computer Simulation (ISMMACS), IIT Kanpur	Amity School of Applied Sciences, Lucknow	21.7.2023 - 23.7.2023
2.	Dr. Prabjot Kaur	5th International conference on Mathematical Modelling, Applied Analysis and Computation-2022 JERCE, JAIPUR	BIT, MESRA	Department of Mathematics, Faculty of Science JECRC University, Jaipur(Raj.)	JECRC University	4-6 August, 2022
3	Dr. Prabjot Kaur	1st International Conference on Advanced Optimization Techniques and Applications (AOTA-2023)	BIT, MESRA	Ramgarh Engineering College in collaboration with Sultan Moulay Slimane University, Morocco City University, Malaysia	Ramgarh Engineering College	21-22 January, 2023
4.	Dr. Prabjot Kaur	Speaker in One week International FDP ON "Innovation in Recent Trends in Computing"	As resource person & sponsored by JIS university	JIS University Department of Computer Science & Engineering, Kolkata	JIS UNIVERSITY	28.11.2022 to 02.12.2022



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
5.	Dr.Prabjot Kaur	Seaker in One day national webinar on Fuzzy Mathematics	Gonza College	Gonzaga college of arts and science for women, Salem,Tamil Nadu	Department of Mathematics Gonzaga college	26.10.2022
6	Dr. Upasana Samanta	Participated in Workshop on "Enriching the quality of teaching-learning process in present scenario"		Value-education cell, BIT Mesra, Ranchi	BIT Mesra	4th May, 23–11th May, 23.
7	Dr. P. Tewari	ATAL FDP TALK - Faculty Development Program on Pedagogical Design Thinking For Digital Employability"		Alagappa University, Alagappa University, Karaikudi – 630004. Tamilnadu. India	Alagappa University, Alagappa University, Karaikudi – 630004. Tamilnadu. India	5th to 16th December 2022
8	Dr. P. Tewari	ATAL FDP TALK: Digital Supply Chain and Logistics 4.0 on Research Methodology,		MNIT Jaipur, AICTE Training And Learning (ATAL) Academy, New Delhi,	MNIT Jaipur, AICTE Training And Learning (ATAL) Academy, New Delhi,	16-17 Jan 2023

## SECTION 4

## RESEARCH PUBLICATIONS





## SECTION 5

## AWARD / PATENT / COLLABORATIONS

### 5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	Level	Year / Duration
1.	Prof. S. Chakraborty	Lead Author of IMTA Best Book on Raga Music Titled as - Hindustani Classical Music: A Historical & Computational Study for the Year 2022 (published by Sanctum Books)	Indian Music Therapy Association (IMTA)	National Level	2022
2	Dr.Prabjot Kaur & Kumari Divya	Second Best paper award in AOTA 2023.	REC, Jharkhand & Sultan Moulay Slimane University, Morocco & City University, Malaysia	International	21-22 January, 2023
3.	Naresh Chandra Pati	Academic Editor of the Journal "Computational and Mathematical Methods"	Wiley and Hindawi (Joint partnership)	International	2023

### 6. List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Prof. S. K. Jain	Prof. and Head
2	Prof. S. Chakraborty	Professor
3	Prof. S. Padhi	Professor
4	Dr. P. Tewari	Associate Professor
5	Dr. A. P. Ghorai	Associate Professor
6	Dr. Prabal Datta	Asst. Professor
7	Dr. A. Tandon	Asst. Professor
8	Dr. P. Kaur	Asst. Professor
9	Dr. R. Singh	Asst. Professor
10	Dr. S. D. Jabeen	Asst. Professor
11	Dr. Vandana	Asst. Professor
12	Dr. Dinesh Kumar	Asst. Professor
13	Dr. U. Samanta	Asst. Professor
14	Dr. N. C. Pati	Asst. Professor
15	Dr. P. Das	Asst. Professor
16	Dr. P. Majji	Asst. Professor



## 7. Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. S. K. Jain	Professor & HOD	Chairman
2.	Dr. S. Chakraborty	Professor	Member
3.	Dr. S. Padhi	Professor	Member
4.	Prof. S. Konar	Professor	External Member
5.	Prof. G. K. Panda	Professor	External Member
6.	Dr. A. P. Ghorai	Associate Professor	Member
7.	Dr. A. Tandon	Asst. Professor	Member
8.	Dr. P. Kaur	Asst. Professor	Member
9.	Dr. A. Mustaffi	Associate Professor	Member
10.	Dr. S. B. Singh	Associate Professor	External Member



## Department of Mechanical Engineering

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the Department

Since its inception in 1955, the Department of Mechanical Engineering has a wide reputation for the quality of teaching and research it offers. It has been awarded top grades for both teaching and research activities from independent and government bodies. The excellent laboratory facilities, modern computer clusters, systematically designed curriculum, and dedicated faculty members make this Department a dynamic place to study.

#### Programmes Offered

##### Under Graduate Programme (4 years):

- B. Tech. in Mechanical Engineering
- Post Graduate Programmes: (2 Years)
- M.Tech. in Mechanical Engineering

##### PhD. Programme

##### Laboratory Facilities:

- Drawing Office
- Mechanics of Solids Lab



- Fluid Mechanics and Hydraulic Machines Lab
- Renewable Energy Lab
- Central CAD Lab
- Theory of Machines Lab
- Autonomous Systems Lab
- Computational Lab (For Research)
- Heat Transfer and RAC Lab
- I.C Engines Lab

#### Department:

##### Vision:

The Mechanical Engineering Department of Birla Institute of Technology, Mesra, Ranchi strives to be globally recognised for quality engineering education and research leading to well qualified engineers, academicians and researchers who are innovative, entrepreneurial and successful in

achieving excellence in their field of study.

##### Mission:

1. To impart quality education to the students and enhancing their knowledge and skills to be globally competitive Mechanical Engineers.
2. To maintain state of the art research facilities to provide its students and faculty to create, interpret, apply and disseminate knowledge with an understanding of the limitations.
3. To develop linkages and interaction with industry, R & D organization and educational institution for excellence in consultancy practices, research and teaching.
4. To provide a conducive environment for learning, creativity and problem solving skills.

## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy)

#### a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Development of multi-layered lead free electroless Ni-B coating with high wear resistance, thermal stability and corrosion resistance for tribological applications	Dr. Arkadeb Mukhopadhyay (PI) & Dr. Arun Kumar Kadian (Co-PI) & Dr. Mukesh Sharma (Co-PI) & Dr. Anil Chandra Mahato (Co-PI)	SERB-DST	Feb 2023	Rs 37 lakhs	3 years
2.	Advanced Research in Energy Technology and Materials Testing	Dr. D.P. Mishra (PI)	DST-FIST	Dec 2022	Rs 88 lakhs	5 years
3.	Investigation of Stones as Sensible Thermal Heat Storage Materials for Concentrated Solar Power Applications	Dr. Omprakash (PI) & Dr. L.S. Brar (Co-PI) & Dr. D.P. Mishra (Co-PI)	SERB-DST	03.03.2021	25 Lacs	3Years
4.	Role of Hybrid Nanofillers on The Physio-Mechanical and Tribological Behaviour of Polymer Nanocomposites for Load Bearing Advanced Mechanical Component Applications	Dr. K. Kumar (PI)	SERB-DST	03.03.2021	45.84	3 Years



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
5.	Development, testing, calibration and validation of Sterling Engine for Decentralise power generation using Bio gas produced from stubble waste and Agricultural waste	Dr. Rajeev Kumar (PI)	DST	29.09.2021	93 Lacs	3Year

### Projects Completed :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Design and fabrication of bellow type Biogas plant	Dr. Richa Pandey (PI)	Unnat Bharat Abhiyan (Ministry of Education)	01.06.2022	1 Lac	1 year

### SECTION 3

### SEMINAR / CONFERENCE

#### 3.1 Seminar / Conferences / Short – Term Courses Conducted:

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Joining Techniques for Modern Transportation Sector	Dr. Arun Kumar Kadian	SERB	5-11 December 2022

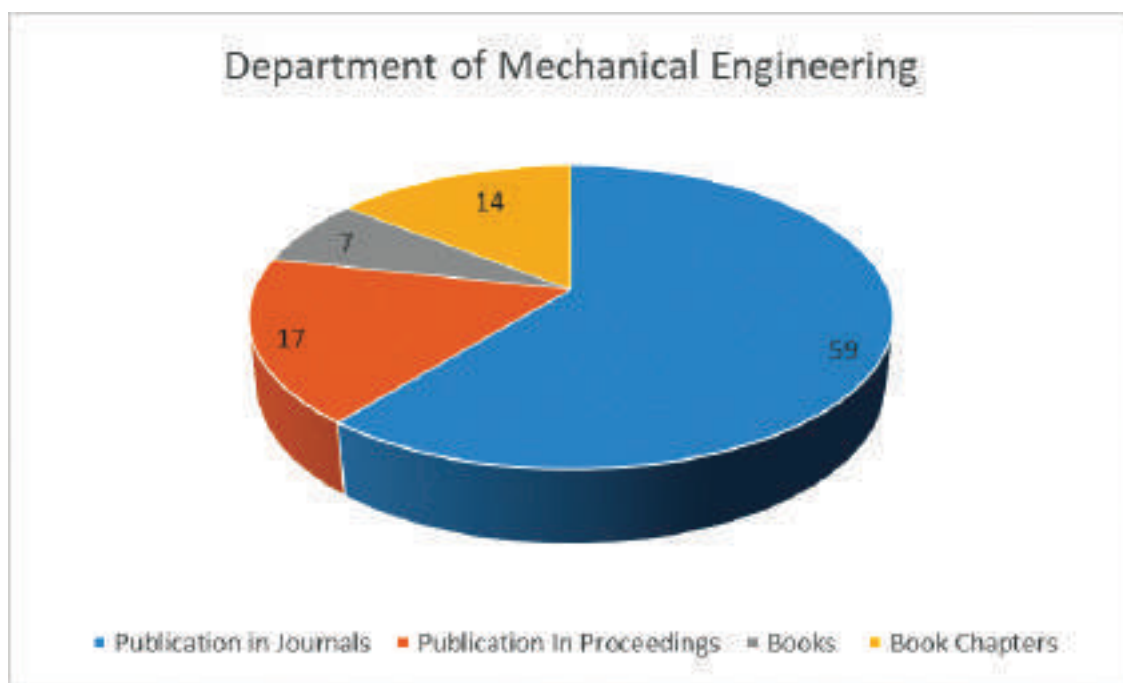
#### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by

##### Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Dr. Saurav Chakraborty, Dr. Ritwik Maiti, Dr. Praveen Mishra, Dr. O.P. Pandey, Dr. S.K. Dhiman, Dr. A.K. Roy, Dr. Nirmal Kumar, Dr. P.J Sanga	Enriching the Quality of Teaching-Learning Process in the Present Scenario	NA	Value Education Cell, BIT Mesra	BIT Mesra	08/05/2023-12/05/2023

## SECTION 4

## RESEARCH PUBLICATIONS



## SECTION 5

## MOUS / COLLABORATIONS

## 5.1 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1.	Ms. Sabita Engineering Works	UG and PG Projects and Internships	ongoing
2	Delhi Technological University	SERB-DST Project	ongoing

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS / DAS

## 6.2. List of Faculties

Sr. No.	Name	Designation
1.	Prof. R. P. Sharma	Professor
2.	Prof. Dipti Prasad Mishra	Professor
3.	Dr. Kaushik Kumar	Associate Professor
4.	Dr. Apurba Kumar Roy	Associate Professor
5.	Dr. Rajeev Kumar	Associate Professor
6.	Mr. Praveen James Sanga	Assistant Professor
7.	Dr. Lakhbir Singh Brar	Assistant Professor
8.	Dr. Sushil Kumar Dhiman	Assistant Professor



Sr. No.	Name	Designation
9.	Dr. Sujeet Kumar Mishra	Assistant Professor
10.	Dr. Praveen Mishra	Assistant Professor
11.	Dr. Abhijit Nag	Assistant Professor
12.	Dr. Om Prakash Pandey	Assistant Professor
13.	Dr. Om Prakash	Assistant Professor
14.	Dr. Paritosh Mahata	Assistant Professor
15.	Dr. Nirmal Kumar	Assistant Professor
16.	Dr. Anil Chandra Mahato	Assistant Professor
17.	Dr. Arun Kumar Kadian	Assistant Professor
18.	Dr. Arkadeb Mukhopadhyay	Assistant Professor
19.	Dr. Mukesh Sharma	Assistant Professor
20.	Dr. Saurav Chakraborty	Assistant Professor
21.	Dr. Ritik Maiti	Assistant Professor
22.	Dr. Faisal Rahmani	Assistant Professor
23.	Dr. Richa Pandey	Assistant Professor
24.	Dr. Shushanta Gukhu	Assistant Professor

## 6.2 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. D.P. Mishra	Professor	Chairman
2.	Dr. R.P. Sharma	Professor	Internal Member
3.	Dr. Kaushik Kumar	Assoc. Professor	Internal Member
4.	Dr. A.K. Roy	Assoc. Professor	Internal Member
5.	Dr. Rajeev Kumar	Assoc. Professor	Internal Member
6.	Dr. Praveen Mishra	Asst. Professor	Internal Member
7.	Dr. Arun Kumar Kadian	Asst. Professor	Internal Member
8.	Dr. Gautam Sarkhel	Professor	Internal Member (Allied Department)
9.	Dr. Joyjeet Ghose	Assoc. Professor	Internal Member (Allied Department)
10.	Dr. S.K. Dash	Professor, IIT Kharagpur	External Member
11.	Dr. Swarup Kumar Mahapatra	Professor, IIT Bhubaneswar	External Member
12.	Dr. Dayal Ramakrishna Parhi	Professor, NIT Rourkela	External Member
13.	Dr. M.K. Sinha	Professor, NIT Jamshedpur	External Member



Sr. No.	Name of the Member	Designation	Role
14.	Mr. Deepak Mishra	Head – Project Procurement Tata Steel Limited, Jamshedpur	External Member
15.	Mr. Amit Kumar Pandey	G.M., Usha Martin Tatisilwai, Ranchi	External Member
16.	Dr. Bharat Bhushan	Chief Digital Officer, GM- Project IT, Tata Metaliks Ltd.	External Member
17.	Mr. Prabhas Kumar	DGM (HOD, Energy Conservation), RDCIS, SAIL, Ranchi	External Member

## SECTION 7

## OTHER INFORMATION

## 7.1 Publication by students, if any

**Publications in Journals: (International/ National)**

- Khan, Md Modassir, Kadian, A.K. and Sharma, R.P. (2023). Investigation of high fuel injection pressure variation on compression ignition engines powered by jatropha oil methyl ester-heptanol-diesel blends. Alexandria Engineering Journal, 65,675-688.
- Khan, Md Modassir, Arun Kumar Kadian, and Rabindra Prasad Sharma (2022). Attempt to mitigate marine engine emissions with improved performance by the investigation of alcohol inclusion in sunflower biodiesel-sunflower oil-diesel blend. Environmental Science and Pollution Research, 1-18.
- Sharma, R., Mishra, D.P., Wasilewski, M. and Brar, L.S.(2023).Application of Response Surface Methodology and Artificial Neural Network to Optimize the Curved Trapezoidal Winglet Geometry for Enhancing the Performance of a Fin-and-Tube Heat Exchanger, Energies, 16(10), 4209.
- Pandey S. and Bra, L.S., Performance analysis of cyclone separators with bulged conical segment using large-eddy simulation, Powder Technology, 425 (2023): 118584.
- Sharma, R., Mishra, D.P., Sarangi, S.K. and Brar, L.S. (2023). Performance evaluation of a fin and tube heat exchanger based on different shapes of the winglets, J. of Th. Sc. & Eng. Appl., 15(5), 050905.
- Mittal, A., Mahato, A.C., Sharma, M., Mukhopadhyay, A. and Kadian, A.K. (2023). Explicit Dynamic Frontal Crash Analysis of an All-Terrain Vehicle Roll Cage, Applications of Modeling and Simulation (AMS), 7,85-92.
- Kashyap, I., Kumar,S. Singh, S.K. and Sharma, M. (2022). Numerical Investigation on Heat Flux variation in fuel bundle over fully voided concentric channel of IPHWR under severe accidental scenario," Journal of Thermal Science and Engineering applications, ASME, 1-17.
- Dharmendra, Kumar and Mahato, A.C.(2023). A feasibility and dynamic performance analysis of hydromechanical hybrid power transmission technology for wind turbines, Mechanical Sciences,14(1), 33-45.
- Kashyap, I., Kumar, S. Mahato, A.C. Mukhopadhyay, A. and Sharma, M.(2022). Numerical Investigations on boiling of moderator during PT/CT contact in 220 MWe IPHWR under postulated accidental scenario, Nuclear Engineering and Design,397,111920.
- Dharmendra, Kumar and Mahato, A.C, Prakash, O and. Kumar,K.(2022). Priority flow divider valve and its dynamic analysis using various hydraulic drive systems: a bond graph approach, Mechanical Sciences,13(1),459-472.
- Ahmad, A., Prakash,O., Kumar,S., Chauhan, P.S., Chatterjee, R., Sharma,S., Kumar, R., Sayed M Tag,Kumar, A., Salah, B., Syed Sajid Ullah(2023). Thermal and CFD Analyses of Sustainable Heat Storage-based Passive Greenhouse Dryer operating in No-load Condition. sustainability-2295982., 15, 12067.
- Kumar, L. and Prakash, O.(2023). Development of FE modeling for Hybrid Greenhouse Dryer for potato chips drying. Journal of Food Science, 1-16.DOI: 10.1111/1750-3841.16525.
- Ahmad, A., Prakash, O., Kumar, A., Chatterjee, R., Sharma, S. Prabhkar, V., Kulshreshtha, K., Li, C. and Eldin, E.M.T. (2023). A Comprehensive



- State-of-the-Art Review on the Recent Developments in Greenhouse Drying. *Energies*. 2022, 15(24), 9493; <https://doi.org/10.3390/en15249493> (registering DOI).
14. Kumar, S. and Prakash, O. (2022). Energy, Exergy, and Cost Analysis of Latent Heat Storage Based Single Slope Solar Still Assisted with Solar Air Heater. *Energies*. 15, 8013. <https://doi.org/10.3390/en15218013>.
  15. Agrawal, R. and Mukhopadhyay, A.(2023). Inclusion of W in electroless Ni-B coating developed from a stabilizer free bath and investigation of its tribological behaviour, *Journal of the Indian Chemical Society*, 100(4), 100966.
  16. Agrawal, R. and Mukhopadhyay, A. (2022). Development of Ni-B electroless coating from stabilizer free bath and characterization of high temperature tribological behaviour, scratch and corrosion resistance, *Surface Topography: Metrology and Properties*, 10(4), 045028.
  17. Ranjan, C., Sarkhel, G. and Kumar, K. Investigation of Mechanical, Tribological and Electrical Properties of Silk Reinforced Polymeric Composite, *Advances in Materials Science and Engineering*; (Accepted); ISSN: 1687-8442 .
  18. Shiv, J. Kumar, K. and Jayapalan, S. Recent Advances in Polymer Using Metal Oxides Nanocomposite and Its Hybrid Fillers for Tribological Application, *Advances in Materials and Processing Technologies*; (Online), <https://doi.org/10.1080/2374068X.2023.2171673>; ISSN: 2374-0698 .
  19. Shastri, R., Brar, L.S., Elsayed, K.(2022). Multi-objective optimization of cyclone separators using mathematical modelling and large-eddy simulation for a fixed total height condition, *Separation and Purification Technology*, 291, 1–21 (<https://doi.org/10.1016/j.seppur.2022.120968>)
  20. Khan, Md. Modassir, Sharma, R.P., Kadian, A.K. and Hasnain, S.M..M (2022). An assessment of alcohol inclusion in various combinations of biodiesel-diesel on the performance and exhaust emission of modern-day compression ignition engines–A review, *Materials Science for Energy Technologies* ,5 ,81-98.
  21. Kadian, A.K., Modassir, K. and Sharma, R.P. (2022). Performance enhancement and emissions mitigation of DI-CI engine fuelled with ternary blends of jatropha biodiesel-diesel-heptanol, *Materials Science for Energy Technologies*.
  22. Kumar, D., Mahato, A.C., Prakash, O. and Kumar, K. Priority flow divider valve and its dynamic analysis using various hydraulic drive systems: a bond graph approach, *Mechanical Sciences*, Vol. 13, No.1, 2022, 459–472. <https://doi.org/10.5194/ms-13-459-2022>
  23. Kumar, R., Dharmendra Kumar, D., Mahato, A.C. and Tripathi, J.P.(2022). Dynamic modeling and analysis of a hydro-mechanical power transmission system, *Materials Today: Proceedings*, 61(1),50-54.
  24. Agrawal, R. and Mukhopadhyay, A. (2022). The use of machine learning and metaheuristic algorithm for wear performance optimization of AISI 1040 steel and investigation of corrosion resistance, *Proceedings of the Institution of Mechanical Engineers Part J: Journal of Engineering Tribology*, In Press, <https://doi.org/10.1177/13506501221094416> .
  25. Agrawal, R. and Mukhopadhyay, A. (2022). Optimization of wear performance and COF of AISI 1040 steel using grey relational analysis, *Materials Today: Proceedings*, 61, 110-114. <https://doi.org/10.1016/j.matpr.2022.03.665>.
  26. Mukhopadhyay, A. Sahoo, S. (2022). A Grey-Fuzzy Based Approach for the Optimization of Corrosion Resistance of Rebars Coated with Ternary Electroless Nickel Coatings, *Journal of Soft Computing in Civil Engineering*, 6(2), 107-127. <https://doi.org/10.22115/SCCE.2022.326903.1401> .
  27. Pandey, S., Saha, I., Prakash, O., Mukherjee, T., Iqbal, J.Roy, A.K., Wasilewski, M. and Bra, L.K. (2022). CFD investigations of cyclone separators with different cone heights and shapes, *Applied Sciences*,12,4906.
- Publications in Proceedings: (International/ National)**
1. Sarangi, S.K., Anand, N., Srivastava, K., Chamoli, P., Mishra, D.P. Performance Evaluation of Fin and Tube Heat Exchanger based on Different Shapes of Winglets, *AIP Proceedings* (2023).
  2. Kumar, D., Mahato, A.C., Prakash, O. and Kumar, K. Priority flow divider valve and its dynamic analysis using various hydraulic drive systems: a bond graph approach, *Mechanical Sciences*, 13(1), 459–472. <https://doi.org/10.5194/ms-13-459-2022>.
  3. Kumar, R., Dharmendra Kumar, Anil C Mahato, and Jay Prakash Tripathi, Dynamic modeling and analysis of a hydro-mechanical power



- transmission system, *Materials Today: Proceedings*, 61( 1), 2022, 50-54. <https://doi.org/10.1016/j.matpr.2022.03.311>.
4. Singh, A.P. Asim Ahmad, and Prakash, O. (2022). Comprehensive Review on the Usage of Phase Change Material in Solar Energy, International Conference on Thermo Fluids and System Design, (ICTFSD 2022), 22-23 March 2022, Organized by Department of Mechanical Engineering Birla Institute of Technology Mesra, Ranchi-835215, Jharkhand
  5. Prakash, O., Upadhyay, A., Kant, P. and Gupta, G.(2022). Modelling of Hybrid Energy storage-based Greenhouse dryer, International Conference on Thermo Fluids and System Design, (ICTFSD 2022), 22-23 March 2022, Organized by Department of Mechanical Engineering Birla Institute of Technology Mesra, Ranchi-835215, Jharkhand
  6. Kumar, L. and Prakash, P.(2022). Numerical modelling of mixed mode solar dryer with latent heat storage for red chilli drying, International Conference on Thermo Fluids and System Design, (ICTFSD 2022), 22-23 March 2022, Organized by Department of Mechanical Engineering Birla Institute of Technology Mesra, Ranchi-835215, Jharkhand
  7. Prakash, O., Ahmad, A., Dutta, S. and Sharma, R.P. (2022). CFD Analysis and Mathematical Modelling for Drying of Potato Chips under Heat Storage based Passive Greenhouse Dryer, International Conference on Thermo Fluids and System Design, (ICTFSD 2022), 22-23 March 2022, Organized by Department of Mechanical Engineering Birla Institute of Technology Mesra, Ranchi-835215, Jharkhand.
  8. Ahmad, A., Prakash, O., Kumar, A. and Hussain, S, Md. (2022). Drying Kinetics and Techno-Environmental Analysis of Heat Storage Based Hybrid Greenhouse Dryer for Uniform Drying of Tomato Flakes, International Conference on Thermo Fluids and System Design, (ICTFSD 2022), 22-23 March 2022, Organized by Department of Mechanical Engineering Birla Institute of Technology Mesra, Ranchi-835215, Jharkhand.
  9. Prakash, O., Nayan, P., Kumar, A., Ahmad, A., Bhushan, B. and Chatterjee, R. (2022). Thermal dispersion study of roof and wall materials in residential building for energy reduction, International Conference on Thermo Fluids and System Design, (ICTFSD 2022), 22-23 March 2022, Organized by Department of Mechanical Engineering Birla Institute of Technology Mesra, Ranchi-835215, Jharkhand.
  10. Chatterjee, R., Prakash, O., Kumar, N. and Sharma, A. (2022). Simulation of Mechanical Heart Valves, International Conference on Thermo Fluids and System Design, (ICTFSD 2022), 22-23 March 2022, Organized by Department of Mechanical Engineering Birla Institute of Technology Mesra, Ranchi-835215, Jharkhand.
  11. Raj, A., Kumar, A., Tirkey, J., Ahmad, A. and Prakash, O.(2022). Recent Advancement in the Applications of Software in Solar Drying Technology - A Review, International Conference on Thermo Fluids and System Design, (ICTFSD 2022), 22-23 March 2022, Organized by Department of Mechanical Engineering Birla Institute of Technology Mesra, Ranchi-835215, Jharkhand.
  12. Pandey, V.K. and Prakash, O. Lingamagari Harshavardhan Reddy, and Gandu Grohith Raja, 2022, Design of Therminol VP-1 oil based parabolic trough collector, International Conference on Thermo Fluids and System Design, (ICTFSD 2022), 22-23 March 2022, Organized by Department of Mechanical Engineering Birla Institute of Technology Mesra, Ranchi-835215, Jharkhand.
  13. Kashyap, I., Kumar, S., Singh, S.K. and Sharma, M. Numerical Investigation on Heat Flux variation in fuel bundle over fully voided concentric channel of IPHWR, International Conference on Thermo-Fluids and System Design (ICTFSD 2022), 22-23 March.
  14. Momin, M. and Sharma, M. Flow Regimes and Flow Patterns for Kerosene - Water Flow Through 15o Inclined Return Bend, International Conference on Thermo-Fluids and System Design (ICTFSD 2022), 22-23 March.
- Kumar,A. and Sharma,M. Numerical Simulation on kerosene- water flow through Sudden Contraction pipe, International Conference on Thermo-Fluids and System Design (ICTFSD 2022), 22-23 March.



## 7.2 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit
1.	Dr. Tapas Kumar Roy (Head, Casting Division, Tata Steel Pvt. Ltd.)	December 2022
2.	Dr. Sujit Sinha, Indian Institute of Technology Delhi	December 2022

## 7.3 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Mr. Derek Michael Shah	Executive Vice President & Head – Power Plant Business
2.	Dr. Ramesh Singh	Professor, Mechanical Engineering Department, IIT, Bombay
3.	Mr. T. Venkatesh	An Indian administrative Service Officer, Members of Board of Directors of NTPC Ltd.
4.	Mr. Pawan Bhageria	Gold Medalist, Currently part of GM International Operations as Director, Ex Head of IT for Tata Motors Ltd.
5.	Mr. Amitava Bakshi	Chief Procurement Officer, Tata Steel Ltd.
6.	Mr. Avinash P. Gandhi	Former Special Advisor to Asia Automotive Acquisition Corp.

## 7.4 Infrastructure Development

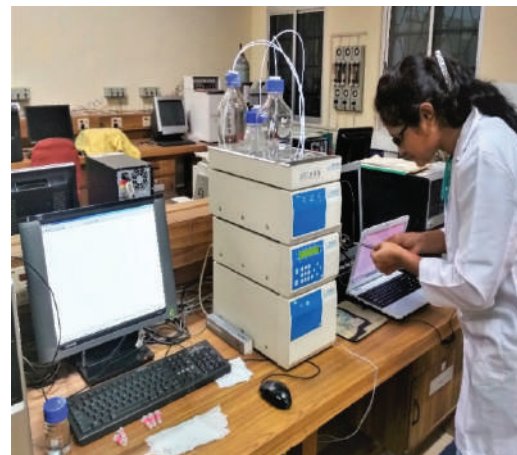
Facilities created for research and teaching

- Advanced Automobile Lab: Newly developed Advanced Automobile Engineering Laboratory.

## Department of Pharmaceutical Sciences & Technology

### SECTION 1

### DEPARTMENTAL PROFILE



### 1. About the Department :

The Department of Pharmaceutical Sciences and Technology was established in 1972. It boasts of a robust scientific community comprising of qualified and competent faculties, technical staffs, undergraduate & postgraduate students and research fellows.

#### Vision:

To become a Centre of Excellence in teaching and research for creating technical manpower to meet the technological needs in the area of healthcare system contributing towards socio-economic development of the country

#### Mission

1. To develop state of the art education and research at undergraduate, post graduate

and doctoral levels in different areas of pharmaceutical sciences and technology.

2. To provide excellent infrastructural facilities to strengthen research and development activities.
3. To extend proper academic guidance and career counseling to students in order to bridge the gap between academia and industry as per needs of the society.
4. To develop effective pedagogical and research potential among the faculties.
5. To create pharmaceutical knowledge pool with innovative, ethical and leadership qualities to serve the cause of the society
6. To promote collaboration with academia, industries and research organizations at national and international levels in the areas of mutual interests.



## Highlights of the Department:

- B. Pharm. and M. Pharm. courses are recognized by both Pharmacy Council of India and AICTE.
- Ranked 28th in Overall by National Institutional Ranking Framework (NIRF) 2021, Ministry of HRD, GOI in category of Pharmacy.
- B. Pharm. Programme is accredited by NBA for Six Years ((2017-18 to 2022-23)).
- Recognized amongst the 10 centres in the country for AICTE- Quality Improvement Program (QIP) in Pharmacy, since 2007.
- One of the Nodal Centre for the award of prestigious AICTE- National Doctoral Fellowship.
- Average Teaching Experience of the faculty is 20 Years

## Facilities:

Total Built up area	: 36000 Sq. ft.
Total number of Labs	: 17
Central Instrumentation Laboratory	: 02
Library/ Reading room	: 01
Animal House	: 01
Medicinal Plant Garden	: 01

## Academics:

- The department offers following UG, PG courses:
- B. Pharm (Seats: 60; Duration: 4-year; 8-semester)
  - M. Pharm (Seats: 15/ Specialization; Duration: 2-year, 4-semester)

- Pharmaceutical Chemistry
  - Pharmaceutics
  - Pharmacology
  - Pharmaceutical Quality Assurance
  - Pharmacognosy
- M. Pharm. Programme under AICTE Q.I.P (offered to academia sponsored candidates only).
  - Ph. D. (in Pharmaceutical Sciences and allied research applications).

## Research:

- An array of research strategies is being encouraged in the field of:
  - Novel Drug Delivery Systems
  - Natural Products Chemistry
  - Development of Synthetic Medicinal Agents
  - Biochemical Pharmacology & Toxicology
  - Computer Aided Drug Design
- Total Research Grants of 3.97 Crores during 2019-2023, from National and International funding agencies like DST-SERB, DBT, UGC, AICTE, DRDO, CSIR, ICAR, ICMR, BMBF (Germany), UGC-UKIERI etc.
- Contemporary state of the art laboratories for Instrumental Analysis, Molecular Biology and Molecular Modelling supporting high end research.

**Major recruiters:** Dr. Reddy's Lab, Strides Pharma Ltd., Biocon Biologics, Sun Pharma, Torrent Pharma Ltd., Mylan Labs, MacLeods Pharma Ltd., Leutis Pharma Ltd., Associated Capsules Group Ltd., Cipla etc.

## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy)

#### Ongoing Projects

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration of the Project
1.	Mitigation of poor physical and chemical properties of SGLT2 inhibitor by drug-drug cocrystallization with DPP4 inhibitor and comparative pharmacokinetic study with their respective co-administered drug products	Dr. Animesh Ghosh (PI)	SERB-CRG	14.12.22	28.43	3 Years



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration of the Project
2.	Electrospun pvdF based piezoelectric nanocomposite energy harvesters for self-powered smart wearable and implantable electronics	Dr. Trishna Bal (Co-PI) Dr. Barnali Dasgupta Ghosh (PI), Dept. Of Chemistry	SERB-CRG	14.02.23	48.19	3 Years
3.	Protein nanoparticles integrated biodegradable microneedle patch: Preclinical investigation on extended therapeutic effect of apremilast through localized intradermal delivery for Psoriasis	Dr. Monika Dwivedi (PI)	ICMR	09.12.22	28.3	3 Years
4.	Mechanistic insight of healing diabetic wound by different varieties of honey via regulating the expression of adenosine monophosphate-activated protein kinase (AMPK), hypoxia inducible factor-1 $\alpha$ (HIF-1 $\alpha$ ) and inflammatory cytokines with special emphasis on identification of active component in honey (2022-25)	Dr. Bapi Gorain (PI)	SERB-SRG	22.11.22	29.40	2 Years
5.	QbD based approaches and mechanistic studies towards development of verbascoside loaded topical formulations to treat diabetic wound	Dr. Biswatrish Sarkar (PI)	SERB-EMEQ	10.03.2022	40.537	3 Years
6.	Development of Novel Antileukemics Through the Structural and Functional Studies of Engineered and Chimeric Plant -Type Asparaginases	Dr. K. K. Pradhan (PI)	SERB-CRG	10.02.2022	33.66	3 Years
7.	Development of non-destructive process technology for simultaneous micronutrient fortification and bioavailability enhancement in Dal through selective binding of phytic acid	Dr. Biswatrish Sarkar (Co-PI) Dr. Anupam Roy, Food Tech (PI)	Department of Biotechnology, GOI	04.03.2021	57.90	3 Years
8.	Aptamer-based Rapid Diagnostic Kit for Detection of Corona Virus Infection (CoVapt)	Dr. Abhimanyu Dev (PI) Dr. Venkatesan J. (Co-PI)	SERB	17.07.2020	15.75	1 Year



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lacs)	Duration of the Project
9.	Development of multi-functional nano-HAP bone substitute for effective bone regeneration in critical defects	Dr. Abhimanyu Dev (Co-PI)	DST-Nanomission	10.7.2019	51.15	3 Years
10.	To modulate the aqueous solubility of poorly water soluble pharmaceuticals by crystal engineering technique and understand that mechanistic approach of solubilisation	Dr. Animesh Ghosh (PI)	AICTE-RPS	4.1.2019	24.12	3 Years
11.	Biopolymer based nano-layer fortification of self-assembled micronutrients over pre-conditioned rice – Retention of fortified nutrients and scale-up studies	Dr. Animesh Ghosh (Co-PI) & Dr. Anupam Roy, Chemical Engineering (PI)	ICMR	26.11.2019	39.57	3 Years

### SECTION 3

### SEMINAR / CONFERENCE

#### 3.1 Seminar / Conferences / Short – Term Courses Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	One Day Research Facility Training Program	Dr. Biswatrish Sarkar	SERB-EMEQ Project (File Number: EEQ/2021/000850)	12.04.2023

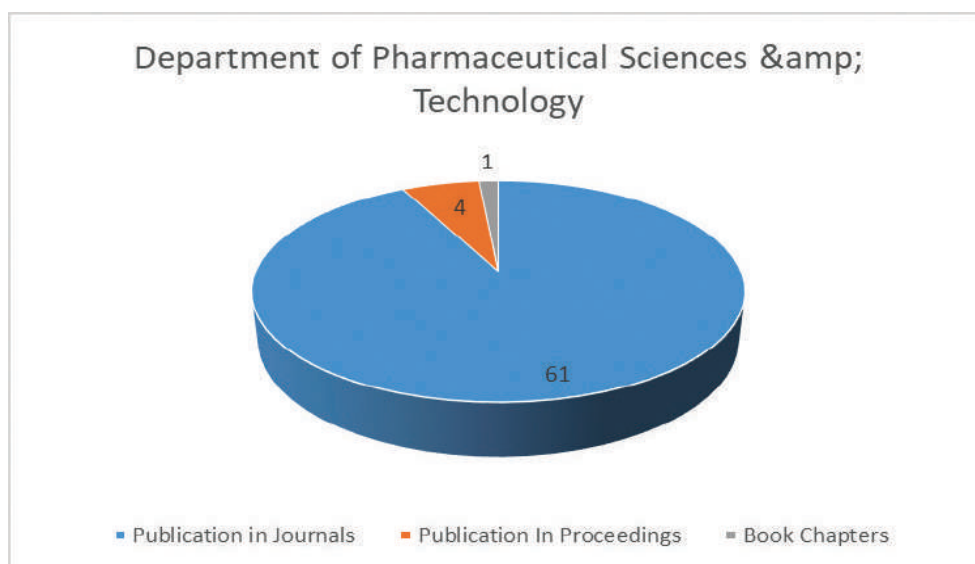
#### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Anima Pandey	Recent trends and Challenges in Drug Discovery	NA	Birla Institute of Technology & Science, Pilani	Online	03-03-2023 to 04-03-2023



## SECTION 4

## RESEARCH PUBLICATIONS



## SECTION 5

## AWARD / PATENT / COLLABORATIONS

## 5.1 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1.	Dr. Swastika Ganguly Dr. Radheshyam Bahare	Thiazolidine-2, 4-dione derivatives, their Synthesis and uses	Patent No:434035 Patent Granted: 07/06/2023	2023	Method of synthesis of Thiazolidine-2, 4-dione derivatives for antimicrobial activity

## 5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area	Year / Duration
1.	National Institute of Pharmaceutical Education Research, Kolkata	Academic and Research	2021-2026

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

## 6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Co-ordinator (if any)	Date / Duration
1.	IPA Phama- cup (Cricket Tournament)	Mr. Fahaduddin	Dr. M. P. Chopra	January- April 2023
2.	Entrepreneurship, Community connect and reducing unnecessary medications	Mr. Fahaduddin	Dr. M. P. Chopra	May 18, 2023



## 6.2. List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Dr. (Ms.) Swastika Ganguly	Professor & Head
2.	Dr. Barij Nayan Sinha	Professor
3.	Dr. Sivesh Jha	Professor
4.	Dr. (Mrs.) Papiya Mitra Mazumder	Professor
5.	Dr. K. Jayaram Kumar	Professor
6.	Dr. Venkatesan J.	Professor
7.	Dr. Ashok Kumar Pattnaik	Associate Professor
8.	Dr. Manik Ghosh	Associate Professor
9.	Dr. Sandeep Kumar Singh	Associate Professor
10.	Dr. Animesh Ghosh	Associate Professor
11.	Dr. Anima Pandey	Assistant Professor
12.	Dr. Neelima Sharma	Assistant Professor
13.	Dr. Abhimanyu Dev	Assistant Professor
14.	Dr. Biswatrish Sarkar	Assistant Professor
15.	Dr. Trishna Bal	Assistant Professor
16.	Dr. Kishanta Kumar Pradhan	Assistant Professor
17.	Dr. Mahendra Pratap Chopra	Assistant Professor
18.	Dr. Bapi Gorain	Assistant Professor
19.	Dr. Monika Dwivedi	Assistant Professor
20.	Dr. Santanu Ghosh	Assistant Professor
21.	Dr. Pran Kishore Deb	Assistant Professor

## 6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Mr. Raweesh Chaudhary	Director - Strategy	Medical Excellence. Biogen. USA.

## 6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Swastika Ganguly (HOD)	Ex-Officio	Chairman
2.	Dr. P. R. P. Verma	Professor	Internal Member
3.	Dr. B. N. Sinha	Professor	Internal Member
4.	Dr. S. Jha	Professor	Internal Member
5.	Dr. (Mrs.) Papiya Mitra Mazumder	Professor	Internal Member



Sr. No.	Name of the Member	Designation	Role
6.	Dr. K. Jayaram Kumar	Professor	Internal Member
7.	Dr. (Mrs.) S. M. Verma	Professor	Internal Member
8.	Dr. Animesh Ghosh	Associate Professor	Internal Member
9.	Dr. M. P. Chopra	Assistant Professor	Internal Member
10.	Dr. Manik Ghosh	Assistant Professor	Internal Member
11.	Dr. Rakesh Kumar Sinha	Professor & Head (Dept. of Bioengg. & Biotech)	External Member
12.	Dr. Sumit Mishra	Associate Professor (Dept. of Chemistry)	External Member
13.	Dr. S. Murugesan	Associate Professor, Dept. of Pharmacy, BITS Pilani	External Member
14.	Dr. Tarun Jha	Professor, Dept. Pharm. Technology, Jadavpur University	External Member
15.	Dr. Ajay Kumar Handa	Executive Vice President Dr. Reddy's Lab. Ltd., Hyderabad	External Member

## SECTION 7

## OTHER INFORMATION

## 7.1 Publication by students, if any

Majie, A., Saha, R. & Sarkar, B. (2023). The outbreak of the monkeypox virus in the shadow of the pandemic. Environmental Science and Pollution Research, 30, 48686-48702 <https://doi.org/10.1007/s11356-023-26098-y>.



## 7.2 Achievements of Students

Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
1.	Ankan Naskar, M.Pharm Student (MPH/10031/21)	Received 2nd Prize in Poster presentation in the National Seminar on "Emerging Trends and Innovations in Biological and Pharmaceutical Sciences".	Department of Pharmaceutical Sciences, Jharkhand Rai University, Ranchi, India	25th March 2023, P. L. Chopra Auditorium, Chamber Bhawan, FJCCI, Ranchi, India on
2.	Snigdha Chakraborty (BPH/10036/20) and Apurva (BPH/10039/20)	Received 2nd Prize in Paper and Presentation in the National Pharma Challenge on "Reducing toxicology of nanomaterials and improving their ADME profile"	Biogen Shaastra, Indian Institute of Technology (IIT) Madras, India.	26th January, 2023. Indian Institute of Technology, Madras, India



Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
3.	Amrita Chatterjee, Ph.D. Scholar (PHD/ PH/10001/19)	2nd Prize in Poster presentation in the International Seminar on "Emerging Fields of Research in Biotechnology and Biomedicine"	Dr. V. Ravi Chandran Centre for Advanced Research in Pharmaceutical Sciences, Jadavpur University, Kolkata, India & Indian Association of Pharmaceutical Scientists and Technologists (IAPST), Kolkata,	16th November 2022 Jadavpur University, Kolkata, India
4.	Rajdeep Saha, Ph.D. Scholar (PHD/ PH/10003/19)	2nd Prize in Oral presentation in the International Seminar on "Emerging Fields of Research in Biotechnology and Biomedicine"	Dr. V. Ravi Chandran Centre for Advanced Research in Pharmaceutical Sciences, Jadavpur University, Kolkata, India & Indian Association of Pharmaceutical Scientists and Technologists (IAPST), Kolkata,	16th November 2022 Jadavpur University, Kolkata, India

### 7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Dr. Maya Prakash Singh Senior Research Scientist (Retd.) Lederle Laboratories/Wyeth/ Pfizer/ Novozyme etc. New York, USA	Golden Jubilee Lecture Series (July 18, 2022) Delivered a lecture entitled "Study designs to assess bacterial resistance to biocides and cross- resistance to antibiotics"	
2.	Dr. Ganesh Halade Associate Professor Div. of Cardiovascular Sciences University of South Florida, USA	Golden Jubilee Lecture Series (July 18, 2022) Delivered a lecture entitled "Interaction of Fat and Leukocyte after Heart Attack"	

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
3.	4. Dr. R. N. Gupta Visiting Professor NIPER, Kolkata Professor (Retd.), BIT, Mesra	Golden Jubilee Lecture Series (August 30, 2022) Delivered a lecture entitled "Intellectual Property Rights and its Importance in Pharmacy"	
4.	Dr. P. H. Rao CEO, Centre for Symbiosis of Technology, Bangalore	Golden Jubilee Lecture Series (September 15, 2022) Delivered a lecture entitled "Know Your Managerial Style & Effectiveness"	
5.	Mr. Narendra Vivek Ahooja Drugs Controller of Haryana (Retd.)	Golden Jubilee Lecture Series (October 15, 2022) Delivered a lecture entitled "Drugs Regulatory System in India"	
6.	Mr. Jayant Kumar Mahto Cofounder of Glaucus Supply Chain Solutions Pvt Ltd	Golden Jubilee Lecture Series (28th September) "Entrepreneurship in Pharmacy"	



## 7.4 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Dr. Sanmoy Karmakar (1992 Batch, B. Pharm)	Professor & Head, Dept. of Pharmaceutical Technology. Jadavpur University, Kolkata
2.	Ms. Ritu Sahay Drug Controller Jharkhand State (1984 batch B. Pharm)	She is serving as Director, Drugs Control Administration, Ministry of Health, Govt. of Jharkhand since February 2015
3.	Mr. Raweesh Chaudhary, Director - Strategy, Medical Excellence. Biogen. USA (1992 batch B. Pharm)	He has 23 years of wide-ranging experience and stellar track record in Medical Affairs, Product management and commercial roles spread across countries like India, Canada and USA
4.	Dr. Dharmendra Singhal Vice President / Global Head Small Molecules CMC Dev at Roche-Genentech Pharma Group (1992 batch B. Pharm)	He is leading a global organization responsible for CMC (API/Chemistry, drug product and analytics) development to advance NCEs from preclinical stage through clinical development to commercial manufacturing and ensuring marketed support/technical life-cycle management of Roche SM commercial products.
5.	Mr. Naveen Sharma President, Cliantha Research Ltd., Ahmedabad (1989 batch B. Pharm, 1993 batch M. Pharm.)	Expert in Bioavailability and bioequivalence, he has more than 25 years experience in the industry. With his strong business acumen and strategic planning he heads the Cliantha Research Ltd an leading CRO in the country.

## 8. Any other relevant information:

The Department celebrated its Golden Jubilee during December 16-18, 2022. Former HoDs, Professors and Staffs were felicitated during this occasion in the presence of more than 200 alumni contingent across the world. The program provided a generous platform to exchange views and improvement of the department along with networking session for present and past students.

## Department of Physics

### SECTION 1

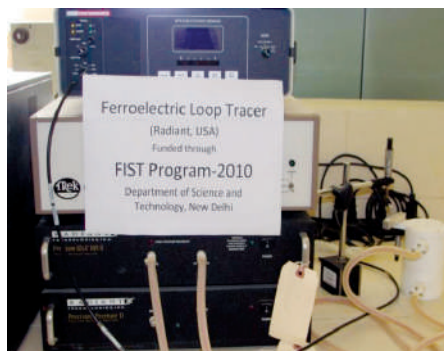
### DEPARTMENTAL PROFILE

#### 1. About the Department/Off Campus :

##### Departmental Experimental Facilities



Ferroelectric Loop tracer



RF-PECVD system



Microwave PECVD



Thermal CVD



Plasma Diagnostic system



Hot Filament CVD RF/DC



Magnetron system



3- target RF Magnetron system



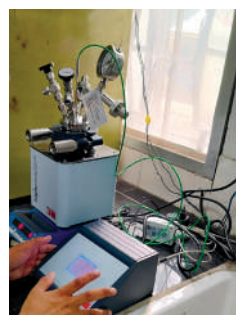
Plasma Nitriding system



Cryogenic set-up



Atmospheric Pressure Plasma Jet



Hydrothermal unit



Thickness Profilometer



Solar Simulator



BIRLA INSTITUTE OF TECHNOLOGY  
MESRA, RANCHI



Ph.D & INTEGRATED MASTER OF SCIENCE (2023)  
DEPARTMENT OF PHYSICS

The Department of Physics was established in 1955. The Department offers Ph.D. in various areas of Physics, M.Sc. in Physics, Integrated M.Sc. in Physics and B.E. Physics course. The Department has a strong pool of highly qualified and motivated faculty members, and excellent laboratory facilities. It is well supported financially through the "Fund for Improvement in Science & Technology Infrastructure" (FIST) Programme of the Department of Science and Technology, New Delhi and "Special Assistance Programme" (SAP) of the UGC. The Department has also received significant funds under TEQIP Phases – I, II & III. At present, the Department has many ongoing research projects sponsored by UGC, DST, BRNS, ARDB, ISRO, DRDO and

CSIR. Some faculty members have also participated in several international (Indo-German, Indo-Russian, Indo-Israel) collaborative projects.

Other than BTech Courses, the important thrust of the Department of Physics is the 5-year Integrated M. Sc. Programme which has been offering since 2011. The course aims to train the young students with the following objectives:

- To impart high quality Science education in a vibrant academic ambience.
- To prepare students to take up challenges as a researcher in diverse areas of theoretical and experimental physics.



- Excellent lab, library, and internet facilities.
- Opportunity of pursuing high end research as project work.
- During 9th and 10th semester, students may opt special papers for the following areas:

Theoretical and Computational Physics, Condensed Matter Physics, Electronics, Photonics, and Plasma Sciences.

#### Department:

#### Vision

To become an internationally recognized centre of excellence in academics and research in the area of Physics and related interdisciplinary fields.

#### Mission

- To impart high quality science education in a multidisciplinary vibrant academic ambience, nurture young talents and prepare them to take up challenges in diverse areas of science and technology.
- To inculcate professional ethics, integrity, and appreciation for diversity in students and incumbents.
- To provide an environment for collaborative cutting-edge research leading to innovations, while maintaining focus on social responsibilities.
- To create proactive performers to take up initiatives, leading to creation of new knowledge.
- Strive towards achieving satisfaction of all stakeholders.

## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy)

#### a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Development of lead free piezoceramics for under water applications.	Dr. S. K. Rout (PI)	CARS NPOL	31 May 2020	29.21 Lac	2 Years
2.	Modifications in Atmospheric Energetics over Indian domain during Monsoon in response to ENSO Phases	Dr. Nishi Srivastava (PI)	SERB	05 Jan 2023	6.60 Lac	2023-2026
3	Source Apportionment, Hydrodynamic Study and Environmental Fate Assessment of Micro-Plastics in Drinking Water Supplying Reservoirs of Ranchi, Jharkhand	Dr. Madhu Priya Co-PI	DST-SERB, CRG	11 May 2022	38.1 Lac	May 2022- May 2025
4.	Atmospheric plasma surface treatment and development of graphene-reinforced zinc-rich nanocomposite coatings on aircraft structure materials for superior corrosion and wear resistance	Dr. S. K. Mukherjee (PI) Dr. Rishi Sharma (Co-PI)	DST-SERB, CRG	13 Feb 2023	34.21 Lac	Feb 2023 – Feb2026



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
5.	Development of novel p-type TCOs using HiPIMS and fabrication of transparent p-n heterojunction diodes	Dr. S. K. Mukherjee (PI)	UGC-DAE CSR	May 2023	0.45 Lac	May 2023 – May 2024
6.	Development of solid lubricant coatings for bearing components using custom made magnetron sputtering system	Dr. Rishi Sharma (PI) Dr. S. K. Mukherjee (Co-PI)	DST-SERB, CRG	07.02.2023	46.904 Lac	Feb 2023 – Feb2026
7.	Deposition of Ti-Al doped MoS <sub>2</sub> coating on ball bearings	Dr. Rishi Sharma (PI) Dr. S. K. Mukherjee (Co-PI)	National Engineering Industries (NEI) Ltd. (NBC Bearing)	01.04.2023	2.124 Lac	06 months
8.	Biocompatibility and mechanical studies of nanostructured HAP, metal doped nanostructured HAP on alumina by RF Magnetron Sputtering	S. K. Sinha, Co-PI	SERB	23.02.22	27.71 Lakh	3 Years
9.	Exploring Resistive Random Access Memory Devices based on Two-Dimensional Materials for Nonvolatile Memory Applications	Dr. Anupam Roy (PI)	SERB	27 December 2022	33 Lacs	2 Years
10.	Optimization of Chemical Vapor Deposition (CVD) growth conditions for defect free large crystallite 2D-Semiconductors and their hetro-structures for Opto-electronic applications.	Dr. Dilip K. Singh (PI)	UGC-DAE-CSR Indore	24 June, 2022	2.26 Lakhs	June,2022-June, 2025
11.	Self-fitting 4-D printed smart scaffolds with efficient bone regenerative potential.	Dr. Dilip K. Singh (Co-PI)	CRG, DST Govt. of India	24 Dec, 2021	Rs. 40.26 Lakhs	2021-2024
12.	Investigation of Stones as Sensible Thermal Heat Storage Materials for Concentrated Solar Power Applications	Dr. Dilip K. Singh (Co-PI)	CRG, DST Govt. of India	03 Mar, 2022	Rs. 24.85 Lakhs	2022-2025



## b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Setting up of a small – scale pilot plant for production of Biodiesel from indigenous plants	Dr. S. K. Mukherjee (PI)	UBA 2.0	June 2022	1.00 Lac	Dec 2022
2.	Development of super-lubricated nanocrystalline diamond film on bearing materials for aerospace applications	Dr. Rishi Sharma (PI) Dr. S. K. Mukherjee (Co-PI)	AR&DB	Dec 2019	26.115 Lac	Mar 2023
3	Karyashala on “Nanostructured Devices”	Dr. Dilip K. Singh (PI)	SERB, DST Govt. of India	07 October, 2022	Rs. 5.00 Lakhs	31st March, 2023
4.	DST-Stuti Training Programme on “Nanostructured Materials and Devices: Fabrication, Characterization and Applications”	Dr. Dilip K. Singh (PI)	DST Stuti, IIT (ISM) Dhanbad	30 June, 2022	Rs. 8.84 Lakhs	31st March, 2023

## c) Consultancy Projects carried out/ongoing

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator / Co-Investigator	Ongoing / Completed*
			from	to			
1	Smart onboard big-data monitoring and processing tools for safer road transportation	NM-ICPS, ISI Kolkata, DST Govt. of India	23rd Sept., 2022	22nd Sept., 2023	5.02 Lakhs	Dr. Dilip K. Singh (PI)	Ongoing

## SECTION 3

## SEMINAR / CONFERENCE

## 3.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1	12th “Field Theoretic Aspects of Gravity” (FTAG2023)	Dr. Suman Ghosh	SERB, IISc Chennai, NISER, BIT Mesra	March 17-19, 2023
2	Organized DAE-SSP Symposium	Dr. S. K. Rout	BRNS, BARC	Dec 18-22, 2022



Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
3	One Week High End Workshop on "Nanostructured Devices"	Dr. Dilip K. Singh	SERB Govt. of India	9th-15th December, 2022.
4	DST Stuti Training Program on "Nanostructured Materials and Devices: Fabrication, Characterization and Applications"	Dr. Dilip K. Singh	DST-Stuti IIT (ISM) Dhanbad during	22nd-28th July, 2022.

### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by

#### Faculty Members:

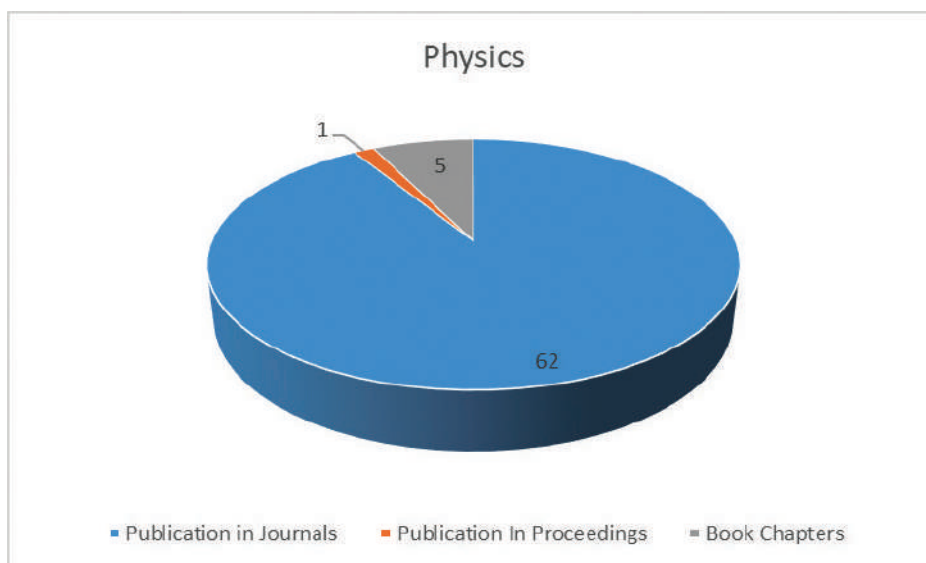
Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Sourabh Lahiri	8th Indian Statistical Physics Community Meeting	ICTS-TIFR	RRI (India), ICTS-TIFR (India), JNCASR (India), IISc (India)	ICTS-TIFR, Bengaluru	01.02.2023 - 03.02.2023
2.	Nishi Srivastava	National Conference on Land-Atmosphere Interactions Controlling Weather & Climate: Applications of Numerical Models and Observations,		NIT-Rourkela	NIT-Rourkela	January 09-12, 2023
3.	Nishi Srivastava	National Symposium on Tropical Meteorology, TROPMET 2022,		Indian Meteorological Society , Bhopal -Chapter, IISER-Bhopal	IISER-Bhopal	29Nov - 2Dec, 2022
4.	Nishi Srivastava	10th Scientific Committee on Antarctic Research (SCAR) Open Science Conference, (Online)		The National Centre for Polar and Ocean Research (NCPOR)	The National Centre for Polar and Ocean Research (NCPOR)	1-10 August, 2022
5.	Nishi Srivastava	International Conference on Sustainability: Integrated and Scientific Approach (ICS-2022), (Online)		University of Mumbai	University of Mumbai	4th to 6th August 2022,



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
6.	Anupam Roy	Molecular Beam Epitaxy of Thin Films and Nanostructures		One Week High End Workshop on "Nanostructured Devices (ND-2022)"	BIT Mesra	December 09-15, 2022.
7.	R Ray	Invited Talk on "Structure-magnetism relationship in proximate quantum spin liquid Kitaev-Heisenberg magnets"	BIT Mesra & Tata Institute of Fundamental Research (TIFR), Mumbai	Dr. B. Singh, Tata Institute of Fundamental Research (TIFR), Mumbai.	Tata Institute of Fundamental Research (TIFR), Mumbai.	May 12 - 15, 2023

## SECTION 4

## RESEARCH PUBLICATIONS



## SECTION 5

## AWARD / PATENT / COLLABORATIONS

## 5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Prof. Sunita Keshri	Became a Member of International Advisory Committee of SISM-2023 Conference	Moscow State University	International	2023, July 2-6.
2.	Dr. Suman Ghosh	Our article, Eur. Phys. J. C (2022) 82:702, 13 August 2022 has been indexed by Nature Index in 2022	Nature	International	01.12.2021 to 30.11.2022



## 5.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1.	Dr. S. K. Rout	A new liquid cell for MEV-Electron irradiation at low temperature	Appl. No.: 935/KOL/2013 Patent No.: 436472	30.06.2023	The liquid cell is suitable for high energy radiation

## 5.3 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1.	Anupam Roy Visiting Professor, Microelectronics Research Center, The University of Texas at Austin, Austin, TX, USA	Research	May 2022 to July 2022
2.	Institute for Theoretical Solid-State Physics (ITF), Leibniz Institute of Solid State and Materials Research (IFW) Dresden, Dresden 01062, Germany	Research collaboration visit by Dr. Rajyavardhan Ray	May 17, 2023 - July 24, 2023.

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS / DAS

### 6.1 List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Prof. S. K. Sinha	Professor and Head
2.	Prof. S. Keshri	Professor
3.	Prof. S. K. Rout	Professor
4.	Dr. R. K. Paul	Associate Professor
5.	Dr. Rajeev Kumar Sinha	Associate Professor
6.	Dr. Rajeev Kumar	Asstt. Professor
7.	Dr. Ela Rout	Asstt. Professor
8.	Dr. Nishi Srivastava	Asstt. Professor
9.	Dr. K. Bose	Asstt. Professor
10.	Dr. Rishi Sharma	Asstt. Professor
11.	Dr. S. K. Mukherjee	Asstt. Professor
12.	Dr. D. K. Singh	Asstt. Professor
13.	Dr. Madhu Priya	Asstt. Professor
14.	Dr. Sourabh Lahiri	Asstt. Professor
15.	Dr. Anupam Roy	Asstt. Professor
16.	Dr. Suman Ghosh	Asstt. Professor
17.	Dr. P. K. Tiwari	Asstt. Professor
18.	Dr. Rajyavardhan Ray	Asstt. Professor
19.	Dr. R. K. Dewanjee	Asstt. Professor



## 6.2 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Prof. S. K.Sinha	H.O.D, Deptt. of Physics, BIT Mesra	Chairman
2.	Prof. S. Keshri	Deptt. of Physics, BIT Mesra	Member
3.	Prof. S. K. Rout	Deptt. of Physics, BIT Mesra	Member
4.	Dr. R. K. Paul	Deptt. of Physics, BIT Mesra	Member
5.	Dr. Rajeev Kumar	Deptt. of Physics, BIT Mesra	Member
6.	Dr. Sourabh Lahiri	Deptt. of Physics, BIT Mesra	Member
7.	Dr. Tirthadip Ghose	Deptt. of EEE, BIT Mesra	Member
8.	Dr. Sandeep Singh Solanki	Deptt. of ECE, BIT Mesra	Member
9.	Dr. Dilip Kr. Ghosh	Senior Professor, School of Physical Science, Indian Association of Cultivation of Science, Kolkata	External Member
10.	Prof. Dr. Dalip Singh Mehta	Department of Physics Indian Institute of Technology Delhi, Hauz-Khas, New Delhi-110016	External Member
11.	Prof. Yashowanta Narayan Mohapatra	Professor of Physics and Materials Science, S.L 105 I.I.T Kanpur, U.P, India 20801	External Member
12.	Prof. Alok Shukla	Department of Physics Indian Institute of Technology, Bombay Powai, Mumbai 400076, India	External Member
13.	Prof. Sreerup Raichoudhury	Department of Theoretical Physics, Tata Institute of Fundamental Research, 1 Homi Bhabha Road, Mumbai-400005, India	External Member
14.	Dr. Umesh R. Mhatre	Managing Director, Surface Modification Technologies Pvt. Ltd. (SMTPL) Unit No. 9, 10 & 11, Emerald Premises Waliv Phata, Sativali Road, Behind Modi Hyundai, Vasai (East) Maharashtra-401208	External Member

## SECTION 7

## OTHER INFORMATION



### 7.1 Achievements of Students:

Sr. No	Name of Student	Achievement/ Position/ Award etc	Organised by	Date and Venue
1.	Mr. Dhanranjan Kumar	Best Paper - Oral	International Conference on Materials Processing and Applications-2023	01/03/23 to 03/03/23 Patliputra University, Patna
2.	Mr. Dhanranjan Kumar	First Position in Poster Presentation	3rd Research Colloquium, B.I.T. Mesra, Ranchi	27-28 July 2022 B.I.T. Mesra, Ranchi



Sr. No	Name of Student	Achievement/ Position/ Award etc	Organised by	Date and Venue
3.	Mr. Dhanranjan Kumar	1st Best Oral Presentation	Center for Materials for Electronics Technology, Thrissur	14-15 July 2022 C-MET Thrissur

## 7.2 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Prof Pradip Kumar Bhattacharya Professor & HOD Critical Care Medicine In charge New Trauma & Emergency Centre Dean Research at RIMS Ranchi		
2.	Dr. Umesh R. Mhatre Managing Director Surface Modification Technologies Pvt. Ltd. Mumbai		

## 7.3 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Dr. Gajendra Prasad Singh, Professor & Head, Nanoscience & Nanotechnology, CUJ	M.Tech. from Dept. of Physics BIT, Mesra
2.	Dr. Pankaj Singh, Director, Dehli Skill and Entrepreneurship University, Govt. of NCT.	M.Tech. from Dept. of Physics BIT, Mesra

## 7.4 Infrastructure Development.

- Lab Renovation.
- Research Scholars sitting arrangement.
- Renovation of Faculty Cabin.
- Renovation of HOD Cabin.
- Purchase of research equipments: Thickness Profilometer, Hydrothermal Unit, Ansys Electromagnetic Simulator, High Temp. Box Furnace.

## 7.5 Best Thesis Project (UG/PG)

Mr. Rajan Kumar Singh received best oral presentation in the 2nd virtual international conference on Functional Material and Applied Physics (FMAP 2022), SBNIT Surat, 14-15 Oct. 2022.



**8. Any other relevant information**

Dr. S. K. Mukherjee was awarded for Research Publication Record.

**9. Special Initiatives if any:**

- Initiative taken for industry collaboration with Surface Modification Technologies Pvt. Ltd., Mumbai.
- Restructuring IMSc. Course best on NEP 2020.
- Initiative is taken for the MOU with Daegu Catholic University (DCU), Republic of Korea.



## Department of Production and Industrial Engineering

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the Department/Off Campus :

Department of Production & Industrial Engineering since its inception in 1964 (Previously Production Engineering) has been trying to impart quality education to undergraduates and train them to meet the demands of the manufacturing industry. The department has established links with the industry, R&D organizations, consultancy organizations and academic institutes in the region in furtherance of the cause of manufacturing engineering. The department sees itself as a pathfinder of emerging technologies and techniques in the area of production engineering and develops students to be technologically and managerially sound to meet the challenges of the open market in the present era of globalization.

The main objective of production and Industrial engineering is the integration of technology with management in planning and controlling the design, development and operation of manufacturing systems. Rapid advances in manufacturing technology, e.g., computer-controlled processes and management information systems, ERP and new manufacturing concepts like TPS, agile manufacturing, pull system etc., are reinforcing the recognition of technological, organizational, economic and

human factors. Furthermore, specialized training in manufacturing technology is necessary for industries in India and abroad.

#### Vision

To become a centre of repute striving continuously towards providing quality education, research and innovation in the Field of production and Industrial Engineering

#### Mission

- To provide quality education at both undergraduate and post graduate levels.
- To provide opportunities and facilities for research and innovation in Production and Industrial Engineering.
- To produce industry-ready graduates to meet the demands of manufacturing industries, knowledge-based software firms, supply chain and logistic firms, and R&D organizations
- To integrate skills on state-of-the-art manufacturing technology with industrial engineering and operations management
- To impart latest knowledge in the domain area to students by continuous up-gradation of curricula and faculty



## SECTION 2

## RESEARCH PROJECTS

## 2.1 Sponsored Projects (Research and Consultancy)

## Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Assessment of Tribological Properties of Graphene based Nanolubricants Developed by Ball Milling for Automotive Applications	Dr. Gayatri Paul	DST-SERB (SRG)	07-Sep-2022	32, 92,340/-	2 years
2.	Synthesis, Characterization and Application of Nano lubricants for Minimum Quantity Lubrication	Dr.Gayatri Paul	BIT Mesra	Jan 2022	5 L	2 years
3	Laser-based manufacturing of multi-layer polymer-metal sandwich composite and performance assessment for lightweight material applications.	Dr. Bappa Acherjee	DST-SERB (CRG)	17-Feb-2023	54,39,544	3 Years
4.	Manufacturing and characterization of aluminium alloy hybrid nanocomposite produced by stir-ultrasonic-squeeze casting method for automotive application	PI: Dr.JoyjeetGhose Co-PI: Dr.BappaAcherjee	DST SERB	Jan 2022	40L	3 years
5	Investigation of the forming behaviour of high strength thermal resistant (HSTR) Metals/ alloys through incremental sheet metal forming	Manish Oraon	DST-SERB (EEQ)	14-March 2022	52,54,194	3 Years



### SECTION 3

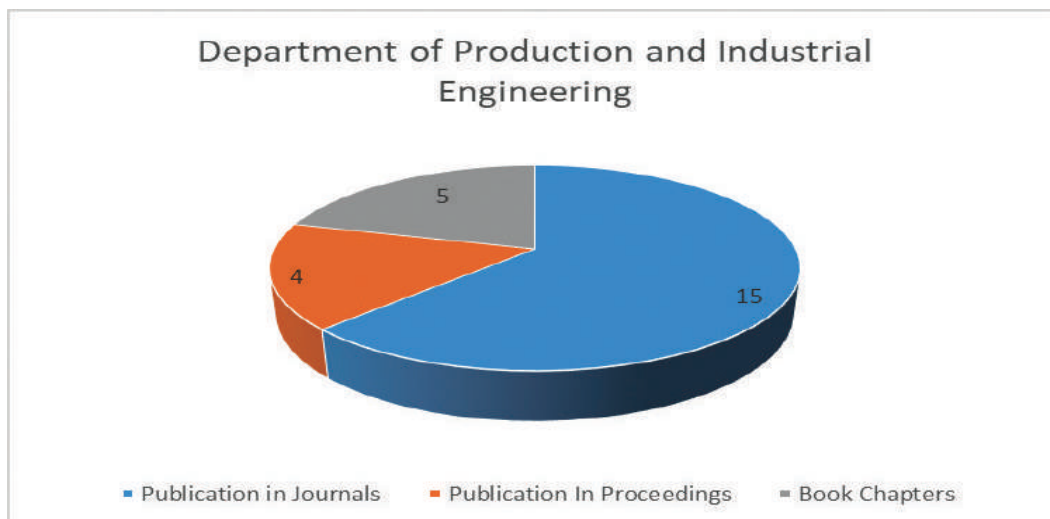
### SEMINAR / CONFERENCE

#### 3.1 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Gayatri Paul	International Conference on Processing and Characterization of Materials (ICPCM) 2022	BITM -SMS	NIT Rourkela	NIT Rourkela	08-10 December 2022
2.	Sanjiv Kumar Tiwari	Key Enabling Technologies for Sustainable Agri-Food Chain (KETSAC-2022)	National Institute of Technology, Rourkela	Department of Food Process Engineering National Institute of Technology, Rourkela	National Institute of Technology, Rourkela	December 9-11, 2022
3.	Sanjiv Kumar Tiwari	7th International Conference on Production & Industrial Engineering (CPIE 2023)	Dr B R Ambedkar National Institute of Technology, Jalandhar	Department of Industrial and Production Engineering, Dr B R Ambedkar National Institute of Technology, Jalandhar	Dr B R Ambedkar National Institute of Technology, Jalandhar	10-12 March 2023
4	Manish Oraon	7th International Conference on Production & Industrial Engineering (CPIE 2023)	Dr. B R Ambedkar National Institute of Technology, Jalandhar	Department of Industrial and Production Engineering, Dr B R Ambedkar National Institute of Technology, Jalandhar	Dr B R Ambedkar National Institute of Technology, Jalandhar	10-12 March 2023

### SECTION 4

### RESEARCH PUBLICATIONS





## SECTION 5

## ACTIVITIES/ FACULTY MEMBERS / DOS / DAS

## 5.1 List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1	Prof. (Dr.) Indranil Manna	Professor
2	Dr. Vinay Sharma	Professor
3	Dr. Joyjeet Ghose	Associate Professor & Head
4	Dr. Sanjay Kumar Jha	Associate Professor
5	Dr. Ritesh Kumar Singh	Associate Professor
6	Dr. L.N. Pattanaik	Associate Professor
7	Dr. Binay Kumar	Assistant Professor
8	Dr. Somak Datta	Assistant Professor
9	Dr. Bappa Acharjee	Assistant Professor
10	Dr. Abhishek Kumar Singh	Assistant Professor
11	Dr. Randhir Kumar	Assistant Professor
12	Dr. Sanjiv Kumar Tiwari	Assistant Professor
13	Dr. Manish Oraon	Assistant Professor
14	Dr. Prashant Prakash	Assistant Professor
15	Mr. Thakur Abhinav Amar	Assistant Professor
16	Dr. Gayatri Paul	Assistant Professor
17	Dr. Suman Samanta	Assistant Professor

## 5.2 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Kripa Shankar	Professor	Indian Institute of Technology Kanpur

## 5.3 Board of Studies

Sl. No.	Name	Designation	Role
1.	Dr. Joyjeet Ghose	Head- Production Engineering (Ex-officio)	Chairman
2.	Dr. L.N. Pattanaik	Associate Professor, Department of Production Engineering	Internal Member
3.	Dr. R.K. Singh	Associate Professor, Department of Production Engineering	Internal Member
4.	Dr. Somak Datta	Assistant Professor, Department of Production Engineering	Internal Member
5.	Dr. Utpal Baul	Dean (A&IR) and Professor, Department of Management	Internal Member



Sl. No.	Name	Designation	Role
6	Dr. D.P. Mishra	Professor, Mechanical Engineering Internal Member	Internal Member
7.	Mr. Kapil Deo Prasad	Assistant Professor, Production Engineering, BIT Mesra(Patna centre)	Internal Member
8.	Dr. Vinay Sharma	Professor, Production Engineering, Deoghar centre	Internal Member
9.	Dr. Govind Sharan Dangayach	Professor & Head, Department of Mechanical Engineering, Malaviya National Institute of Technology, J I Nehru Marg, Jaipur – 302017	External member
10.	Dr. Saroj Kumar Patel	Professor , Department of Mechanical Engineering, National Institute of Technology Rourkela	External member
11.	Mr. Vishwajit Kumar	Senior Manager, Iron Making Division, MECON Ltd, Doranda, Ranchi	External member
12.	Mr. P. Pathak	DGM, Rolling Technology, R&D SAIL, Ranchi Email: ppathak@sail-rdcis.com	External member

## SECTION 6

## OTHER INFORMATION

### 6.1 Publication by students if any

1. ChandrahaasVellanki, Soumyarup Choudhury, Shubham Kumar, George Vimson and Gayatri Paul Influence of Lubrication on the Friction and Wear Characteristics of Low Carbon Steel under Sliding Reciprocation Conditions IOP Conference Series: Materials Science and Engineering, 1248, 12033, 2022
2. Gayatri Paul, Puja Jha, Ankita Jha, Aditya Roy, Effect of Molybdenum Disulfide Dispersed Nanolubricants on the Tribological Properties of Mating Stainless Steel Pair, Journal of Materials Engineering and Performance, 1-1, 2023

### 6.2 Achievements of Students:

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by
1	Ms. Aastha Sah (Roll No. BTECH/10404/20) V semester (Production)	Member of Team Compact stood second in the business conclave	IIM Bangalore

### 6.3 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Mr. Binod Kumar Sharma (1979-84 Batch)	AGM, NTPC
2.	Mr. Akhilesh Agarwal (1983-87 Batch)	Chief Operating Officer, IGT Solutions
3.	Mr. Arun Chalgeri (1977-81 Batch)	Director, Daichi Sankyo Inc.
4.	Raghwendra Purwar (2008-12 Batch)	Factory Manager, Britannia Industries Ltd.
5.	Aditya Kumar Lal (2016-20 Batch)	Cyber Security Analyst, Deloitte (USI)

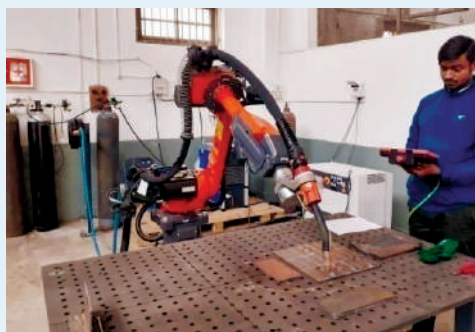
#### 6.4 Infrastructure Development.

The following equipment had been procured during AY 2022-23 for different laboratory/research purposes:

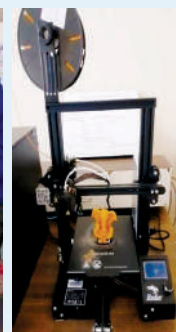
Sl. No.	Equipment	Make	Laboratory involved
1	3D Printer (Snapmaker)	Snapmaker, China	Simulation Lab
2	Robotic (MIG) Welding Machine	CLOOS Pvt Ltd, Germany	Welding & Fitting Shop
3	Diamond Cutting Machine	Metatech Industries, Pune	Metallurgy Lab
4	3D Printer (Ender)	Creality, China	Simulation Lab
5	Tribometer	Ducom Pvt Ltd, Bangalore	Metallurgy Lab
6	Data Acquisition System	Keysight Technologies	Metallurgy Lab
7	Fibre Laser Welding Machine	Kirti Lasers, Pune	Modern Manufacturing lab
8	Planetary Ball Milling	Verder Scientific Private Limited	Metallurgy Lab



1



2



4



7

#### 6.5 Best Thesis Project (UG)

Design of Ergonomic Office Chair with Exercise Bike Feature for Indian Railways by final year B.Tech. (Production Engineering) students (2022) – Utkarsh (BTECH/10667/18), Sameer Singh (BTECH/10668/18), Ayush Amrendra Singh (BTECH/10429/18) and Abhishek Anand (BTECH/10560/18)

Investigation of Thermo-physical and Tribological Properties of Nano-lubricants by final year B.Tech. (Production Engineering) students (2023) – Puja Jha (BTECH/15282/19) and Aditya Roy (BTECH/15292/19)



## Department of Remote Sensing



### SECTION 1

### DEPARTMENTAL PROFILE

#### 1. About the Department:

This Department has been imparting specialised education of geo-spatial technology in various application areas using advanced tools like satellite remote sensing, geographical information system and global positioning system etc. at the Postgraduate and Doctoral research levels. This has become more significant in light of the recently implemented Indian Geo-spatial Policy with lot of emphasis on use of this technology in various government departments. As a department, state-of-the-art equipment facilities have been developed with latest hardware and software. As also, the department has well-accomplished faculty members with high academic/research credentials. Timely updating of needed infrastructure and research capacities through UGC-SAP, DST-

FIST and collaboration with other national and international level apex organisations has kept us motivated to do challenging research and outreach. We have been part of many national mission projects of ISRO and other agencies of Govt. of India and through those programs, the department is striving to serve the nation and contribute to building national capabilities in this advancing field of geoinformatics. Apart from being a leading department in the country in the field of remote sensing, our department also has International recognition which can be seen through our sponsored research activities from the International Centre for Integrated Mountain Development (ICIMOD, Kathmandu, Nepal), Goddard Space flight Centre (GSFC), NASA, USA, International Water Management Institute (IWMI), Sri Lanka, and collaborative research with University of Southampton (UK), University



of Lancaster (UK), University of California Santa Barbara (UCSB, USA), Shastri Indo-Canadian Institute/University of Calgary, Canada etc. Strength of our educational quality and outreach can be seen through our students serving in reputed national/international organisations. In addition, they are also opting for higher education by getting selected for Doctoral Research in reputed national and international level institutions viz. IITs/NITs as well as Universities abroad such as Durham University, UK, James Cook University, Australia, University of Manitoba, Canada, Western University, Canada, Delft University of Technology, Netherlands, University of Chinese Academy of Sciences etc. Hence, our departmental activities are coherently in phase with our Institutional vision and mission.

Vision and Mission are being communicated regularly to the stakeholders by prominently

displaying in the Department, as well as through Institute website, admission brochure, through social-media and e-mails to various universities/colleges/institutions.

**Department Vision:** - Be a centre of excellence in the field of Geospatial Technology education and research in the areas of Earth Resources, Environment & Climate to meet the needs of ever-increasing requirement of human resources in these fields and to cater to the larger interest of the Society and Nation.

**Department Mission:** - Impart quality education and equip the students with strong foundation that could make them capable of handling challenges of the ever-advancing geospatial technologies. Maintain state-of-the-art in research and outreach facilities in phase with the premier institutions for sustained improvement in the quality of education and research.

## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy)

#### a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lakhs)	Duration of the Project
1.	Machine Learning and Deep Learning based Automatic Lunar Crater Detecting using Terrain Mapping Camera-2 DEM Images	Co-PI: Dr. Mili Ghosh Nee Lala and Dr. C. Jeganathan PI: Dr. Sanchita Paul of Dept. of Comp. Sc., BIT Mesra	ISRO, DoS, GoI	24.06.2022	Rs.21.98	3 Years
2.	Source Apportionment, Hydrodynamic Study and Environmental Fate Assessment of Micro-Plastics in Drinking Water Supplying Reservoirs of Ranchi, Jharkhand	Co-PI: Dr. Mili Ghosh Nee Lala and Dr. Madhu Priya of Dept. of Physics PI: Dr. Sukalyan Chakraborty, Dept. CEE	Science & Engineering Research Board (SERB), New Delhi	11-05-22	Rs. 38.10	3 Years
3.	Mapping and morphological characterization of craters in the south polar region of the lunar surface using Chandrayaan-2 Dual Frequency SAR (DFSAR), High resolution OHRC and TMC-2 data	PI: Dr. V.S. Rathore Co-PI: Dr. A.P. Krishna	ISRO, DoS, GoI	10-03-22	Rs. 19.98	3 Years



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lakhs)	Duration of the Project
4.	Modelling Forest Phenological Parameters from Time Series Remote Sensing Data	PI: Dr. C. Jeganathan Co-PIs: Dr. A.P. Krishna, Dr. Mili Ghosh Nee Lala, Mr. Nitish K. Sinha	SAC, ISRO, Ahmedabad	February 2021	Rs. 30.23	3 Years
5.	Remote Sensing based Hydrologic budget of the Subarnarekha River Basin	PI: Dr. A.P. Krishna Co-PIs: Dr. C. Jeganathan, Dr. V.S. Rathore	DST-Science & Engineering Research Board (SERB), New Delhi	January 2020	Rs. 27.39	3 years
6.	Lightning impact on ozone precursor over Indian region and its implications on tropospheric ozone	PI: Dr. Swagata Payra Co-PI: Dr. Sunita Verma, BHU Varanasi	Ministry of Earth Sciences (MoES), Govt of India	October, 2017	Rs. 34.64	31.03.23
7.	AERONET Observations at Jaipur	Dr. Swagata Payra (Collaborator)	MoU with GSFC, NASA, USA	October, 2009	Rs. 10.00	October, 2029
8.	"Center for Advanced Research on Machine Learning for Geospatial Analytics and Solutions for the State of Jharkhand (ARMLEGS)".	Team CSE – Dr. Abhijit Mustafi, Dr. Sandip Dutta, Dr. Sudip K Sahana, Dr. Shamama Anwar, Dr. Debjani Mustafi Team RS – Dr. A.P. Krishna, Dr. C. Jeganathan, Dr. Mili Ghosh Nee Lala	DST-PURSE	13.01. 2023	Rs. 844	4 years
9.	"Multi- Source Optimization using Deep Learning framework for Downscaling Satellite-Derived Thermal Data".	CO-PI (Dr. C. Jeganathan)	DST SERB Sponsored Research Project	24.02.23	Rs. 19.08	3 years
10.	Prediction of ground-level particulate matter concentrations from Multi-Satellite AOD over the Indian Subcontinent	Co-PI Dr. Swagata Payra	Space Application Centre (SAC), ISRO	2019	Rs. 22.08	
11.	National Wetland Inventory and Assessment (Phase II).	PI: Dr. C. Jeganathan Co-PIs: Dr. A.P. Krishna, Dr. V.S. Rathore, Mr. Nitish K. Sinha	Space Application Center (SAC), ISRO, Ahmedabad	July, 2019	Rs. 20.50	4 Years



Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount (Lakhs)	Duration of the Project
12.	Aerosol Characterization and its Radiative Effects on Changing Climate	PI: Dr. S. Payra Co-PIs: Dr. A. P. Krishna, Dr. C. Jeganathan, Dr. V. S. Rathore, Dr. Mili Ghosh Nee Lala	Fund for Improvement of Science & Technology (FIST)	2023	Rs. 215	5 Years

#### b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Use of Geoinformatics in Rural Road Projects under PMGSY	PI: Dr. A.P. Krishna Co-PIs: Dr. C. Jeganathan, Dr. V.S. Rathore, Mr. Nitish Kr. Sinha	NRSC (ISRO), GoI	July 2019	Rs. 54.33	June 2023

### SECTION 3

### SEMINAR / CONFERENCE

#### 3.1 Seminar / Conferences / Short – Term Courses Conducted:

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1	GIS training workshop for CRPF Officers	HOD	CRPF	December 01-04, 2022
2	"One Week Workshop-cum-Training on Advanced Instruments for Geospatial Data Analysis	Dr. V. S. Rathore, Dr. Mili Ghosh Nee Lala Dr. Richa Sharma	-	March 20-24, 2023

#### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by

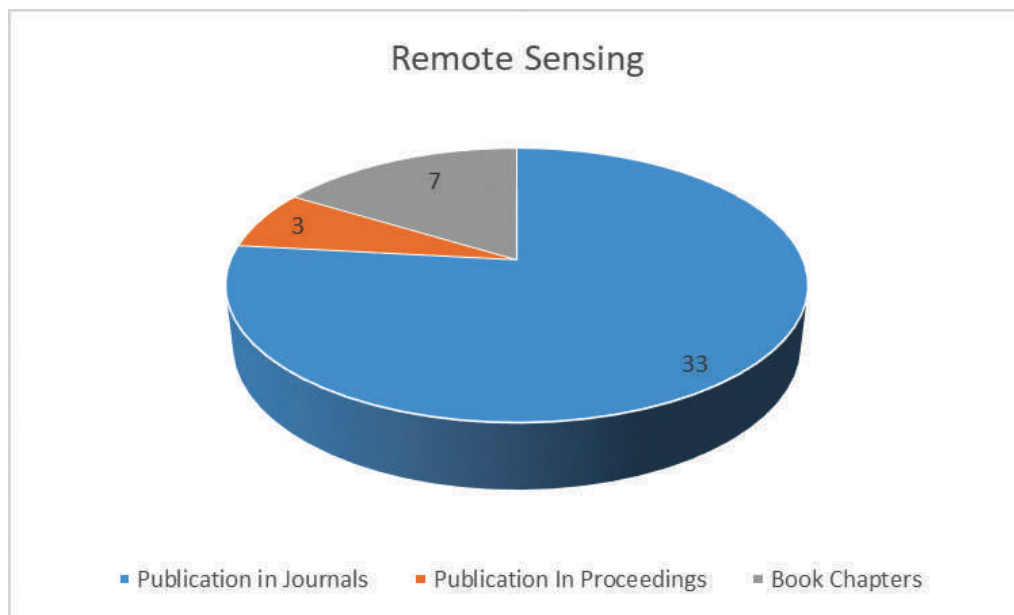
##### Faculty Members :

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Dr. Mili Ghosh Nee Lala	Chandrayan- 3 science data analysis workshop	ISRO	ISRO	ISTRAC, ISRO, Bangalore	28-03-2023 to 29-03-2023
2	Dr. A. P. Krishna	Chandrayan- 3 science data analysis workshop	ISRO	ISRO	ISTRAC, ISRO, Bangalore	28-03-2023 to 29-03-2023
3	Dr. Swagata Payra	Chandrayan- 3 science data analysis workshop	ISRO	ISRO	ISTRAC, ISRO, Bangalore	28-03-2023 to 29-03-2023



## SECTION 4

## RESEARCH PUBLICATIONS



## SECTION 5

## AWARD / PATENT / COLLABORATIONS

### 5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award/ Honour	Organisation	State/ National/ International Level	Year / Duration
1.	Dr. A.P. Krishna	Invited as Ph.D. thesis examiner	RCG School of Infrastructure Design and Management, Indian Institute of Technology (IIT) -Kharagpur	National Level	2022
2.	Dr. A.P. Krishna	Contribution as an Academic Expert - Indian Universities and Institutions Network for Disaster Risk Reduction (IUINDRR-NIDM) in the Post Graduate level Model Course Curriculum for 'Disaster Risk Reduction and Management'	National Institute of Disaster Management (NIDM), Ministry of Home Affairs, GoI	National Level	2022



Sr. No.	Name of the Faculty Member	Title of the Award/ Honour	Organisation	State/ National/ International Level	Year / Duration
3.	Dr. A.P. Krishna	Contribution as an Academic Expert – Indian Universities and Institutions Network for Disaster Risk Reduction (IUINDRR) in the Graduate level Model Course Curriculum for 'Disaster Risk Reduction and Management'	National Institute of Disaster Management (NIDM), Ministry of Home Affairs, GoI	National Level	2022
4.	Dr. A.P. Krishna	Invited Participation in the Brainstorming Session on Landslides and Human Environment: A New Approach to the Study of Fault related Hazards in Himalayan Towns (February 11, 2023) in online mode	National Networked Project initiative by the MOES, GoI PAMC, Geosciences, coordinated by Indian Institute of Technology (IIT)-Bombay	National Level	2023
5.	Dr. A.P. Krishna	Invited as a Manuscript Reviewer for the Journals	i. Agriculture, MDPI ii. Applied Sciences, MDPI iii. Landslides, Springer-Verlag GmbH iv. Remote Sensing, MDPI v. Water, MDPI	International	2022-23
6.	Dr. A.P. Krishna	Invited as a Manuscript Reviewer for the Journals	Current Science, Current Science Association, India	National	2022-23
7.	Dr. Nilanchal Patel	Associate Editor	Journal of Forestry Research, Springer, SCIE, Scopus <a href="https://www.springer.com/journal/11676/editors">https://www.springer.com/journal/11676/editors</a>		
8.	Dr. Nilanchal Patel	Associate Editor	Arabian Journal of Geosciences, Springer, SCIE, Scopus <a href="https://www.springer.com/journal/12517/editors">https://www.springer.com/journal/12517/editors</a>		



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Faculty Member	Title of the Award/ Honour	Organisation	State/ National/ International Level	Year / Duration
9.	Dr. Nilanchal Patel	Editor	Journal of Mountain Science, Springer, SCIE, Scopus <a href="https://www.springer.com/journal/11629/editors">https://www.springer.com/journal/11629/editors</a>		
10	Dr. Nilanchal Patel	Editor	International Journal of Sustainable Development and World Ecology, Taylor and Francis, Scopus <a href="https://www.tandfonline.com/action/journalInformation?show=editorialBoard&amp;journalCode=tsdw20">https://www.tandfonline.com/action/journalInformation?show=editorialBoard&amp;journalCode=tsdw20</a>		
11	Dr. Nilanchal Patel		Journal of Ecology and Sustainable Development, Sweden <a href="http://www.isaacpub.org/EditorialBoard.aspx?ids=44">http://www.isaacpub.org/EditorialBoard.aspx?ids=44</a>		
12	Dr. Nilanchal Patel	Member	Journal of Environmental Geology, Pulsus Journals <a href="https://www.pulsus.com/journal-environmental-geology/editorial-board.html">https://www.pulsus.com/journal-environmental-geology/editorial-board.html</a>		
13	Dr. Nilanchal Patel	Guest Editor:	MDPI LAND Special Issue: "Innovative Research Approaches & Practices towards Sustainable Land Management, Preservation & Restoration"		
14	Dr. Nilanchal Patel	Associate Editor,	Journal of Forestry Research, Springer, SCIE, Scopus <a href="https://www.springer.com/journal/11676/editors">https://www.springer.com/journal/11676/editors</a>		
15	Dr. V. S. Rathore	Invited as a Manuscript Reviewer for the Journals	MDPI, Water, MDPI	International	2022-23
16.	Dr. V. S. Rathore	Invited as expert member	BPSC, Patna, Bihar	National	2022-23

## 5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1.	Indian Institute of Tropical Meteorology	Lightning and Rainfall Data Acquisition	2023
2	CSRE, IIT Bombay	Microwave Remote Sensing for Vegetation	2022-23

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

### 6.1 Departmental Students' Activities

#### Field visit/ educational trip of M.Sc. Geoinformatics (2022-24 batch)

Department of Remote Sensing conducted the student's field trip to Shillong and nearby area under the mentorship of Dr. Richa Sharma. The student visited NESAC, ISRO situated in Shillong and were exposed to various live projects being carried out by the NESAC. This field trip was organized during January 25-Feb 3, 2023. As a part of this field trip, the student visited several locations nearby in Shillong and carried out measurements and ground truthing utilising various instruments i.e., Juno-SB, Handheld Mobile GPS device (By Trimble), Infrared Thermometer, Clinometer etc.



Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1.	Shuvra Pal has done internship at NATMO, Kolkata		Dr Mili Ghosh	May to July, 2023
2.	Satyam Kumar has done internship at RRSC-North ISRO		Dr Mili Ghosh	May to July, 2023
3.	Akhil Joshi has done internship at RRSC-North ISRO		Dr Mili Ghosh	May to July, 2023
4.	Bhanupratap Singh has done internship at RRSC-North ISRO		Dr Mili Ghosh	May to July, 2023



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
5.	Ritwick Sen has done internship at Bose Institute, Kolkata		Dr Mili Ghosh	May to July, 2023
6	Deepanjan Bhattacharjee has done internship at Bose Institute, Kolkata		Dr Mili Ghosh	May to July, 2023
7	Ankit Mandal has done internship at office of D.F.O. Godda Division		Dr Mili Ghosh	May to July, 2023
8	Arkabi Roy has done internship at office of D.F.O. Godda Division		Dr Mili Ghosh	May to July, 2023
9	Sabnam Banu has done internship at office of D.F.O. Godda Division		Dr Mili Ghosh	May to July, 2023
10	Wahida Rahaman has done internship at ICAR DELHI		Dr Swagata Payra	May to July, 2023
11	Biswadeep Banerjee has done internship at NATMO, Kolkata		Dr Swagata Payra	May to July, 2023
12	Anjali Jha has done internship at NATMO, Kolkata		Dr Mili Ghosh	May to July, 2023
13	Bhaskar Sarkar has done internship at NATMO, Kolkata		Dr Mili Ghosh	May to July, 2023
14	SK. Habibula has done internship at CQEDS, BIT Mesra		Dr Swagata Payra	
15	Protyusha Mukhopadhyay has done internship at IITM-Pune		Dr Mili Ghosh	May to July, 2023
16	Rani Kumari has done internship at IIT Roorkee		Dr Mili Ghosh	May to July, 2023
17	Praveen Kumar has done internship at IIT Roorkee		Dr Mili Ghosh	May to July, 2023
18	Baby Sonal has done internship at IIT Delhi		Dr Mili Ghosh	May to July, 2023
19	Suparna Ghosh has done internship at IIT Delhi		Dr Mili Ghosh	May to July, 2023
20.	Field visit/ educational trip M.Sc. Geoinformatics (2022-24 batch) students visited NESAC (ISRO) Shillong and nearby area	Ankit Mandal	Dr. Richa Sharma	January 25- Feb 4, 2023

### 6.2. List of Faculty members as on 30.6.2023

Sr. No.	Name	Designation
1.	Dr. A.P. Krishna	Professor
2.	Dr. C. Jeganathan	Professor
3.	Dr. N. Patel	Professor
4.	Dr. V.S. Rathore	Associate Professor
5.	Dr. Mili Ghosh nee Lala	Associate Professor
6.	Dr. Swagata Payra	Associate Professor
7.	Dr. Richa Sharma	Assistant Professor



### 6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HoD, DRS	Ex-Officio	Chairman
2.	Dr A P Krishna	Professor	Internal Member
3.	Dr C Jeganathan	Professor	Internal Member
4.	Dr N Patel	Professor	Internal Member
5.	Dr V S Rathore	Associate Professor	Internal Member
6.	Dr Mili Ghosh Nee Lala	Associate Professor	Internal Member
7.	Dr. Swagata Payra	Associate Professor	Internal Member (Invitee)
8.	Dr Richa Sharma	Assistant Professor	Internal Member
11.	Dr Bindhu Lal	Professor	Internal Member
12.	Dr Satyaki Sarkar	Associate Professor	Internal Member
13.	Dr Dheeraj Kumar	Professor (IIT,ISM)	External Member
14.	Dr Y S Rao	Professor (IIT,Bombay)	External Member
15.	Dr Rajneesh Kumar	Head, (Geomatics Division) CMPDI, Ranchi	External Member
16.	Dr Milap Punia	Professor, JNU, N. Delhi	External Member
17.	Dr Mukund D. Behera	Associate Professor (IIT-Kharagpur)	External Member

## SECTION 7

## OTHER INFORMATION

### 7.1 Student Entrepreneurship activities/Start-ups if any:

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
1.	Alok Mukherjee Bharath Settippally	-	Leads NexTech India Pvt. Ltd	Harnessing Research for developing Sustainable, Scalable, & Impactful Solutions

### 7.2 Publication by students, if any

#### Publications in Journals : (International/National)

1. Beependra Singh, Jeganathan, C., Rathore, V.S., Atkinson, P.M., Behera, M.D., Singh, C.P., Dash, J. and Roy, P.S. (2023). The relationship between central Indian terrestrial vegetation and monsoon rainfall distributions in different hydroclimatic extreme years using time-series satellite data. Journal of Theoretical and Applied Climatology, <https://doi.org/10.1007/s00704-023-04582-2>. (Aug, 2023)
2. Alex Praveen, Jeganathan, C. and Mondal, S. (2023). Mapping Annual Cropping Pattern from Time-Series MODIS EVI Using Parameter-Tuned Random Forest Classifier. Journal of Indian Society of Remote Sensing, <https://doi.org/10.1007/s12524-023-01676-2>.
3. Mallika Bhuyan, Beependra Singh, Swayam Vid and Jeganathan, C. (2023). Analysing the spatio-temporal patterns of vegetation dynamics and their responses to climatic parameters in Meghalaya from 2001 to 2020. Environmental Monitoring and Assessment, <https://doi.org/10.1007/s10661-022-10685-6>.



## वार्षिक प्रतिवेदन 2022-2023

- Swadhina Koley and Jeganathan, C. (2022). Evaluating the climatic and socio-economic influences on the agricultural drought vulnerability in Jharkhand. Environmental Monitoring and Assessment, <https://doi.org/10.1007/s10661-022-10557-z>.
- Farzana Shaheen, Nayama Scariah, Mili Ghosh, A.P. Krishna, Jeganathan, C. and Nick M. Hoekzema (2022). Shadow method retrievals of the atmospheric optical depth above Gale crater on Mars using HRSC images. Icarus, 388(3-4):115229. DOI: 10.1016/j.icarus.2022.115229.
- Saptarshi Mondal and Jeganathan, C. (2022). Effect of scale, landscape heterogeneity and terrain complexity on agriculture mapping accuracy from time-series NDVI in the Western-Himalaya region. Landscape Ecology, <https://doi.org/10.1007/s10980-022-01533-6>.

### 7.3 Publications in Proceedings: (International/ National)

- Mariya Sunil, Beependra Singh, C. Jeganathan and A.P. Krishna (2023). Evaluation of Topographic Wetness Index estimated from four different Digital Elevation Models using Various Techniques. International Conference on Geo-Eco Novel Inventories for Objective Based Unique Studies (InGenious 2023), Organised

by Active Spatial Sciences Research Group and Hindustan School of Architecture, Pollachi, Tamil Nadu, 7-8th March, 2023. (1st Prize - Best Paper Award).

- Sumedha S. Singh, and Jeganathan, C. (2023). Quantifying Forest Resilience Post Forest fire in Bandhavgarh National Park, India Based on Time-Series Satellite Data. National Conference on Biodiversity and Climate Change (BDCC-2023), 16-19th February, Organized by CORAL, IIT Kharagpur. (1<sup>st</sup> Prize – Best Research Paper).
- Mallika Bhuyan, Jeganathan, C. and Pujar G.S. (2023). Characterising Vegetation Phenology Metrics over North-East India from 2001 to 2020 using MODIS Time-Series Data. National Conference on Biodiversity and Climate Change (BDCC-2023), 16-19th February, Organized by CORAL, IIT Kharagpur. (3<sup>rd</sup> Prize – Best Research Paper).
- Preeti Sardar, Beependra Singh, Mallika Bhuyan, Jeganathan, C., Haobam, S., Sarma, K.K. and Aggarwal, S.P. (2023). Understanding the vegetation growth anomalies in the North Eastern states of India based on time Series satellite data (2001-2020). National Conference on Biodiversity and Climate Change (BDCC-2023), 16-19th February, Organized by CORAL, IIT Kharagpur.

### 7.4 Achievements of Students:

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1.	Saurav Deka & Sibalika Kundu	Winner at IIT Bombay FOSSEE Mapathon 2023	IIT Bombay	22ndFeb-6th May 2023
2.	Rani Kumari, Suparna Ghosh, Praveen Kumar & Satyam Kumar	Notable Participants at IIT Bombay FOSSEE Mapathon 2023	IIT Bombay	22ndFeb-6th May 2023
3.	Kshitij Divyansh	Mentor of Team at IIT Bombay FOSSEE Mapathon 2023	IIT Bombay	22ndFeb-6th May 2023
4.	Nabeeha Jamil	Got offer for M.S. in Geographic Information Science & Technology in Georgia Tech	Georgia Tech	May, 2023
5.	Shreyas R C	Got offer for Ph.D. in IIT Hyderabad with GREENKO Fellowship	IIT Hyderabad & Greenko Group	May, 2023
6.	Sumedha Surbhi Singh	1st Prize – Best Research Paper	National Conference on Biodiversity and Climate Change (BDCC-2023),	16-19th February, I.I.T. Kharagpur
7.	Damini Sharma	A.I.R.- 28 in GATE-2023 in Geomatics Engineering	GATE – IIT Kanpur	11 February, 2023

### 7.5 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Dr. Atul Kumar Srivastava	From 21-06-22023 to 22-06-2023	
2.	Mr. Jatinder Pal Singh	23-06-2023	
3.	Dr. S. Somnath	04.12.22	

### 7.6 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Dr. N. Rama Rao	Professor & Head, Department of Earth & Space Science, IIST, ISRO, Thiruvananthapuram
2.	Dr. M. V. Ravibabu	Professor, National Institute of Rural Development and Panchayati Raj Hyderabad
3.	Dr. Gulab Singh	Professor, IITB
4.	Dr. Amitabh	Scientist/ Engineer- SG, Space Applications Center, ISRO
5.	Dr. C.P. Singh	Scientist/ Engineer- SF, Space Applications Center, ISRO
6.	Mr. Ashutosh k Jha	Scientist/Engineer- SE, Geoinformatics Department IIRS, Dehradun- ISRO
7.	Mr. Abhishek Verma	RSGIS Head, Reliance India Limited, Ranchi



### 7.7 Infrastructure Development.

- Advanced instrument facilities were added for teaching and research this year
- These include Sun-photometer and Ground Penetrating Radar (GPR)
- Sun-photometer is perceived to greatly add to the academic and research works involving to study of aerosols, radiative forcing etc in atmosphere
- GPR is a very advanced level equipment which shall aid academic and research activities centred around sub-surface information derivation of geo parameters of considerable depth
- As also, DIP/GIS system hosting facilities were upgraded with addition of high-end configuration desktop systems to match with latest processing software

## Department of Space Engineering and Rocketry

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the Department:

The Department of Space Engineering and Rocketry was envisioned by the renowned industrialist and philanthropist, Shri Brij Mohan Birla in the year 1962. With the support from Dr. Vikram A. Sarabhai, Chairman, Indian National Committee for Space Research (INCOSPAR), and NASA, a full-fledged Department was established in the year 1964 with an objective to train the scientists and engineers in the field of Aerospace Technologies and Rocketry. Since its inception, the Department had all the necessary facilities to develop rockets of different calibres, stages (single and two – staged), and carry out its static and dynamic testing. The Department initially offered a one year Post Graduate Diploma course and then started offering full time Post Graduate Degree (Master of Engineering) in Space Engineering and Rocketry from 1968. The first rocket symposium was organised by the Department in 1967. Since then, several National Conventions and seminars have been organised by the Department till date. The Department has state of the art facilities to train the post graduate students majorly in the field of Rocket Propulsion and Aerodynamics. The Department has been striving for excellence by pursuing R&D work in the emerging areas of Aerospace and Rocket Technologies. The Department has undertaken sponsored R&D projects from premier agencies such as DST, AR&DB, CSIR, ISRO, AICTE and UGC. The Department also got support from DST FIST

(Fund for Improvement of S&T Infrastructure) and UGC SAP (Special Assistance Program). The Department received Rs 5.65 lakh in the year 1976 from the Department of Science and Technology, Govt. of India to develop rockets for weather modifications. Thirty-three rockets name 'SWATI' were fabricated and tested at different sites of Hazaribagh (Jharkhand), Horap (Jharkhand) and Balasore (Orissa) under this project. The Department has currently five ongoing projects with sanction value of more than Rs 250.00 lakhs.

#### VISION

- To effectively integrate teaching, research and innovation for significant contribution towards National Aerospace Programmes and related activities.

#### MISSION

- To impart quality education and advanced research training leading to postgraduate and doctoral degree.
- To generate modern infrastructure and conducive research atmosphere for carrying out innovative sponsored research projects
- To nurture spirit of excellence and professional leadership in students and faculty members through exposure to leading academic/research organisations and external experts.
- To create attractive opportunities for sustained interaction and collaboration with academia and industry.



## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy)

#### a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Supersonic Flow Studies over spike blunt body with different nose bluntness ratio	Dr. Sudip Das (PI) Dr. Priyank Kumar (CoPI)	AR&DB	17.06.2020	22.3 Lakhs	2 Years
2.	Aerodynamic Characterization of Reusable Launch Vehicles at Low Speeds	Priyank Kumar (PI) Sudip Das (CoPI)	RESPOND ISRO	03.12.2019	22.39 Lakhs	3 Years
3.	Development of catalyst system for stable combustion of HAN green propellants	Dr. Shelly Biswas (PI) Dr. Rajiv Kumar (Co-PI)	ARDB	27.05.2021	30.207 Lakhs	3 Years
4.	AICTE-IDEA LAB	Dr. Priyank Kumar Coordinator Dr. Sudip Das Co- Coordinator	AICTE and Industry	17.06.2021	106.79 Lakhs	2 Years
5.	Use of multi-location swirl injection as a performance enhancer for the hybrid rocket system	Dr. Rajiv Kumar (PI) Dr. Shelly Biswas (Co-PI)	Core Research Grant SERB, DST	21.12.2021	39.78 Lakhs	3 Years
6.	Catalyst Development for Hydrogen Peroxide Monopropellant Thrusters	Dr. Shelly Biswas (PI) Dr. Rajiv Kumar (Co-PI)	SERB-POWER	08.06.2022	29.86 Lakhs	3 Years
7.	Scheme for Promoting Interests, Creativity and Ethics among Students (SPICES)	Dr. Priyank Kumar (PI) Dr. Sudip Das (Co-PI)	AICTE	April 2021	2.00 Lakhs	2 Years

#### b) Consultancy Projects carried out/ongoing

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator/ Co-Investigator	Ongoing/ Completed*
			from	to			
1.	CFD Analysis for Metal Casting Process	Intocast-Hitech, Jamshedpur	Jan 2022	Dec 2022		Dr. Priyank Kumar	Completed



## SECTION 3

## SEMINAR / CONFERENCE

## 3.1 Seminar / Conferences / Short – Term Courses Conducted :

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Topics in Fluid Dynamics	Dr. P. Mondal	BIT Mesra	31.01.2023 and 24.02.2023
2.	Faculty Development Program on Advancement in Aerospace Technology	Dr. Rajiv Kumar Dr. Shelly Biswas	BIT Mesra	11.03.2023 to 15.03.2023
3.	INSPIRE Award MANAK Mentorship Workshop	Dr. Rajiv Kumar	National Innovation Foundation (NIF)	05.05.2023
4.	Two days seminar on "Advances in Aerospace Propulsion Technology"	Dr. Rajiv Kumar	NMIT, BANGALORE	27.12.2022 to 28.12.2022
5.	Basic FDP on Arduino Kits	Dr. Priyank Kumar	AICTE IDEA Lab	11.07.2022
6.	Geo-Informatics using Drone Technology	Dr. Priyank Kumar	AICTE IDEA Lab	17.07.2022
7.	Advanced FDP on Arduino Kits	Dr. Priyank Kumar	AICTE IDEA Lab	18.07.2022
8.	Skilling Workshop For Students in AICTE IDEA Lab	Dr. Priyank Kumar	AICTE IDEA Lab	10.09.2022
9.	Hatch From Scratch	Dr. Priyank Kumar	AICTE IDEA Lab	14.10.2022
10.	Visit of K. C. Roy Memorial School (80 students + 4 teachers)	Dr. Priyank Kumar	AICTE IDEA Lab	15.10.2022
11.	Skilling workshop for 30 participants of DST sponsored One week High End Workshop (Karyashala) - on 3D printing	Dr. Priyank Kumar	AICTE IDEA Lab	12.12.2022
12.	Skilling Workshop on Additive Manufacturing	Dr. Priyank Kumar	AICTE IDEA Lab	27.01.2023
13.	Design and Manufacturing of Drone	Dr. Priyank Kumar	AICTE IDEA Lab	31.01.2023
14.	Air Crash Investigation	Dr. Priyank Kumar	AICTE IDEA Lab	11.02.2023
15.	Workshop on Satellite Manufacturing	Dr. Priyank Kumar	AICTE IDEA Lab	13.02.2023
16.	Skilling Workshop on 3D Printing and CNC Wood Carving	Dr. Priyank Kumar	AICTE IDEA Lab	23.02.2023
17.	Awareness Program for Tata Motors	Dr. Priyank Kumar	AICTE IDEA Lab	04.03.2023
18.	Introduction with RC aircraft electronics, sensors and its flying control	Dr. Priyank Kumar	AICTE IDEA Lab	11.03.2023
19.	FDP on advancement in Aerospace Technology (hands on session done on 3D printers for rocket nozzle design)	Dr. Priyank Kumar	AICTE IDEA Lab	11.03.2023
20.	CNC Router Workshop (Batch-1)	Dr. Priyank Kumar	AICTE IDEA Lab	13.03.2023
21.	CNC Router Workshop (Batch - 2)	Dr. Priyank Kumar	AICTE IDEA Lab	20.03.2023
22.	CNC Router Workshop (Batch - 3)	Dr. Priyank Kumar	AICTE IDEA Lab	27.03.2023
23.	CNC Workshop (Batch - 4)	Dr. Priyank Kumar	AICTE IDEA Lab	03.04.2023
24.	Skilling Workshop on 3D printing	Dr. Priyank Kumar	AICTE IDEA Lab	24.04.2023
25.	Ideation Workshop	Dr. Priyank Kumar	AICTE IDEA Lab	26.04.2023
26.	Arduino Workshop	Dr. Priyank Kumar	AICTE IDEA Lab	06.05.2023
27.	CNC Workshop	Dr. Priyank Kumar	AICTE IDEA Lab	01.05.2023
28.	Open Day School	Dr. Priyank Kumar	AICTE IDEA Lab	11.05.2023
29.	Summer Camp for school student	Dr. Priyank Kumar	AICTE IDEA Lab	22.05.2023
30.	NCC Cadet Visit	Dr. Priyank Kumar	AICTE IDEA Lab	06.05.2023
31.	Skilling Workshop on 3D printers	Dr. Priyank Kumar	AICTE IDEA Lab	02.06.2023

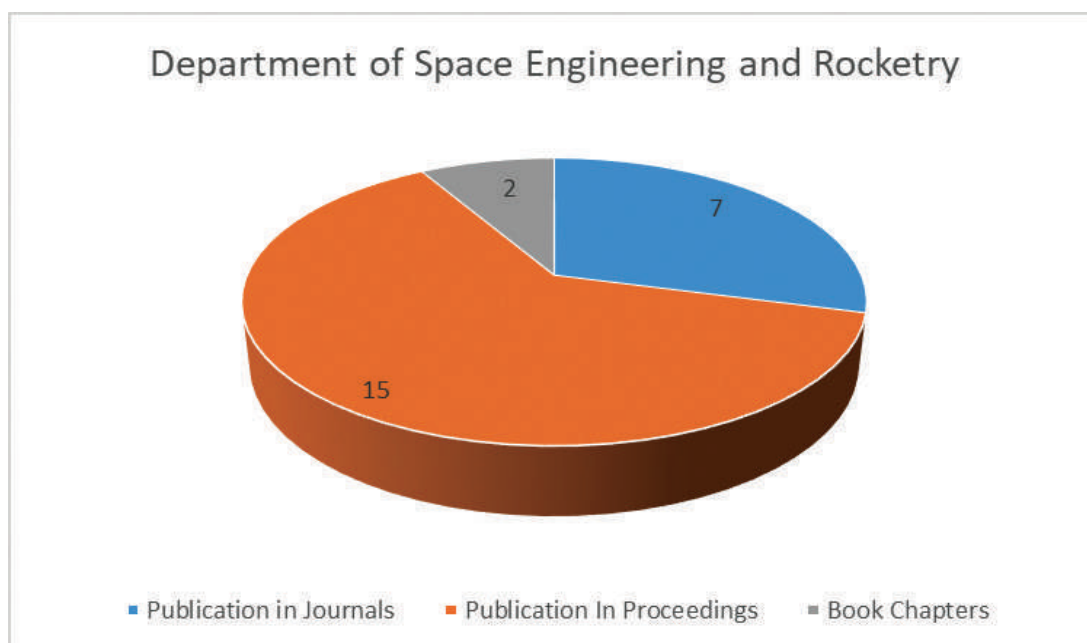


### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date (dd. mm.year)
1.	Dr. P. Mondal	Enriching the Quality of Teaching-Learning Process in the Present Scenario	BIT Mesra	BIT Mesra	BIT Mesra	04.05.2023 to 11.05.2023
2	Dr. Rajiv Kumar	Brainstorming sessions to enrich the quality of T-L process	BIT Mesra, Ranchi	BIT Mesra, Ranchi	Seminar Hall-I, R&D Building	10.05.2023
3	Dr. Rajiv Kumar	National Aerospace Propulsion Conference (NAPC-2022)	SERB, DST	Aerospace Department, IIT Bombay	IIT Bombay	19.12.2022 to 20.12.2022
4	Dr. Rajiv Kumar	Workshop on "Bi2I - Business Ideation to Implementation"	BIT Mesra, Ranchi	BIT Mesra, Ranchi	Seminar Hall-I, R&D Building	25.03.2023
5	Dr. Rajiv Kumar	Seminar cum workshop on "Struggles to accomplishments - a journey of empowerment"	BIT Mesra, Ranchi	BIT Mesra, Ranchi	Seminar Hall-I/ Online	22.03.2023
6	Dr. Rajiv Kumar	Two-day Workshop on "Design Thinking for Startups and Entrepreneurship"	BIT Mesra, Ranchi	BIT Mesra, Ranchi	Seminar Hall-I, R&D Building	27.02.2023 to 28.02.2023
7	Dr. Rajiv Kumar	Current and Future Trends in Aerospace Propulsion	SERB, DST	Aerospace Department, IIT Bombay	IIT Bombay	21.12.2022

## SECTION 4

## RESEARCH PUBLICATIONS





## SECTION 5

## AWARD / PATENT / COLLABORATIONS

## 5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State/ National/ International Level	Year/ Duration
1.	Dr. Rajiv Kumar	Reviewers under the INSPIRE Awards-MANAK for the year 2022-2023	National Innovation Foundation (NIF)	National	2022-2023
2.	Dr. Rajiv Kumar	Juri Member for ANVESHAN Technical Fest	BIT Polytechnic	National	2022-2023
3.	Dr. Rajiv Kumar	Juri Member for State Level INSPIRE Award MANAK Project	National Innovation Foundation (NIF)	National	2022-2023

## 5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year/ Duration
1.	MoU between BIT Mesra and MIT-ADT University, Pune	Collaborative Research, Students Internship, STTP/FDP, Invited Lectures etc.	2023
2.	International collaboration on microalgal research with Prof. Vinoth Kumar Ponnusamy, Department of Medicinal and Applied Chemistry, Kaohsiung Medical University, Kaohsiung, Taiwan	A review paper was submitted to Fuel which is under review after the first revisions are submitted, the second revision were obtained. (Fist submitted on 07/06/2023)	2023

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

## 6.1 List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Dr. Sudip Das	Professor & Dean (AAC)
2.	Dr. Priyank Kumar	Assistant Professor & Prof. In-charge
3.	Dr. Partha Mondal	Assistant Professor
4.	Dr. Rajiv Kumar	Assistant Professor
5.	Dr. Shelly Biswas	Assistant Professor
6.	Dr. Swarupkumar Y. Jejurkar	Assistant Professor



## 6.2 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	HOD/In-Charge	Chairman (Ex-Officio)	Chairman
2.	Dr. Sudip Das	Professor	Internal Member
3.	Dr. Priyank Kumar	Asst. Professor	Internal Member
4.	Dr. Rajiv Kumar	Asst. Professor	Internal Member
5.	Dr. Gautam Sarkhel	Professor	Internal Member
6.	Dr. Praveen Mishra	Asst. Professor	Internal Member
7.	Dr. Debopam Das,	Professor, Dept. of Aerospace Engineering, IIT Kanpur	External Member
8.	Dr. A. M. Pradeep	Professor, Dept. of Aerospace Engg. IIT Bombay	External Member
9.	Dr. Arnab Roy	Professor, Dept. of Aerospace Engg. IIT Kharagpur	External Member
10.	Shri Prateek Kishore	Outstanding Scientist & Director, TBRL, Chandigarh	External Member
11.	Shri Rajeev Kumar Singh	RDCSI, SAIL, Ranchi	External Member

## SECTION 7

## OTHER INFORMATION

### 7.1 Publication by students, if any

#### Publications in Journals : (International/National)

- P. K. Karn, S. Das, P. Kumar, (2023), "Effect of Ring on the Flow Unsteadiness of Slender Body at  $\alpha = 50^\circ$ ", Journal of the Brazilian Society of Mechanical Sciences and Engineering, 45, 173 . <https://doi.org/10.1007/s40430-023-04101-4>.
- Shuvendra Mohan & Priyank Kumar, (2023), "Computational Investigation of a Blended Wing Body at Low Speeds", Journal of Aerospace Science & Technologies, (Accepted)
- Avik, Arora, Sudip Das, Priyank Kumar, (2023), "Flow Field Investigation of Blended Wing Body in Low Speeds", Journal of Applied Fluid Mechanics, Vol. 16, No. 4, pp. 794 – 804. [doi.org/10.47176/jafm.16.04.1475](https://doi.org/10.47176/jafm.16.04.1475).
- G. Sarwar, P. Kumar, Das S. (2022), "Supersonic flow investigation of a drag reducing conical spike on a hemispherically blunted nose body", Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering. [doi:10.1177/09544100221140942](https://doi.org/10.1177/09544100221140942)
- Guelilia, A, Kumar, P., (2022), "CFD analysis of film cooling applied on longitudinally curved walls", Thermophysics and Aeromechanics, Vol. 29, pp. 385-393.
- Midhun M.V., Mondal, P., Pawan Kumar Karn and Priyank Kumar, (2023), "Aerodynamic Investigation of Blended Wing Body Configuration", Defence Science Journal, Vol. 73, No. 3, pp. 283-292, DOI : 10.14429/dsj.73.17735.
- V. Vani Pooja and Rajiv Kumar, (2023) "Studies of Jet A1 Fuel Atomization Through Non-Circular Orifices", Defence Science Journal, Vol. 73, No. 3, pp. 270-278, DOI: 10.14429/dsj.73.17893.

#### Publications in Proceedings: (International/National)






- Shuvendra Mohan and P. Kumar, (2022), "Computational Investigation of a Blended Wing Body at Low Speeds" 23rd Annual CFD Symposium, AeSI, Bangalore.
- L. S. Rao, P. Mondal, and S. Das, (2022), "Numerical and Experimental Studies on Supersonic Free jet with various cross-sectional



- tab configuration", FMFP2022-2703, Proceedings of the 9th International and 49th National Conference on Fluid Mechanics and Fluid Power (FMFP), December 14-16, IIT Roorkee, India.
3. Md. Azhar Ali, and P. Mondal, (2022), "Numerical Analysis of Shock Wave Boundary Layer Interactions on Finned Missile Body", SAROD 2022, December 15 -17, Hyderabad.
  4. L. S. Rao, P. Mondal and S. Das, (2022) "Experimental Investigation on Shock Cell Characteristics of Sonic/Supersonic Jets", Proceedings of the 9th International and 49th National Conference on Fluid Mechanics and Fluid Power (FMFP) December 14-16, 2022, IIT Roorkee, Roorkee-247667, Uttarakhand, India.
  5. G. Sarwar, P. Kumar,, and S. Das, (2022) "Flow field characteristics of a different nose cone fairing with fixed tip location sharp spike at supersonic speed", 49th National Conference on Fluid Mechanics and Fluid Power (FMFP) December 14-16, 2022, IIT Roorkee, 2022.
  6. Samanyu. R, Lavala, S. R., and S. Das, (2023) "Flow field Studies of Overexpanded Supersonic Jets", Symposium on Applied Aerodynamics and Design of Aerospace Vehicle (SAROD 2023) February 9 - 11, 2023, Hyderabad, India
  7. Dylewicz, K., S. K. Karthick, S. Das, Auteri, F., Theofilis, V. and Cohen, J., (2023) "On the change in flow dynamics of a transonic open cavity with trailing edge modification", Israel Annual Conference on Aerospace Sciences (IACAS), Tel-Aviv, Israel, March 15, 2023.
  8. Umang Jain and Rajiv Kumar, (2022), "Experimental Study of an Annular Aerospike Nozzle with Hybrid Rocket Motor Using a Liquefying Fuel", AIAA 2022-3861, Session: Inlet/Exhaust System Integration Design, Performance, and/or Operability II. <https://doi.org/10.2514/6.2022-3861>.
  9. Arpit Dubey, Rajiv Kumar and Shelly Biswas, (2022), "Effect of Varying the Swirl Injection Location on the Performance of a Hybrid Rocket Motor" Paper No. NAPC2022-71, 4th National Aerospace Propulsion Conference, organized by Aerospace Department, IIT Bombay, 19-20 December, 2022.
  10. Joshi, Shelly Biswas and Rajiv Kumar, (2022), "Effect of Biomass Based Catalyst on Ignition of HAN Monopropellant" NAPC2022-80, 4th National Aerospace Propulsion Conference, organized by Aerospace Department, IIT Bombay, 19-20 December, 2022.
  11. Ritesh Dubey, Dr. Rajiv Kumar and Lakshmi Pasupathi, (2022), "Synthesis Of Ammonium Dinitramide Using A Commercially Available Nitric Acid For Solid Rocket Application" NAPC2022-75, 4th National Aerospace Propulsion Conference, organized by Aerospace Department, IIT Bombay, 19-20 December, 2022.
  12. Sankalp Jain and Rajiv Kumar, (2022), "Effects of Gallant Concentration on Ethanol Gel Propellant Characteristics", NAPC2022-78, 4th National Aerospace Propulsion Conference, organized by Aerospace Department, IIT Bombay, 19-20 December, 2022.
  13. Gyandeep and Rajiv Kumar, (2022), "Performance Estimation by Varying the Grain Port Alignment Position in A Hybrid Rocket Motor", NAPC2022-79, 4th National Aerospace Propulsion Conference, organized by Aerospace Department, IIT Bombay, 19-20 December, 2022.
  14. Tathagat Sarangi and Rajiv Kumar, (2022), "Emission and Performance Studies of a Hybrid Rocket by Varying The L\*", NAPC2022-72, 4th National Aerospace Propulsion Conference, organized by Aerospace Department, IIT Bombay, 19-20 December, 2022.
  15. Prakhar Jain, Vineet Kumar Rathi and Shelly Biswas, Study of ageing characteristics for metallized HTPB and PVC/DBP based composite solid propellant stored in ambient conditions, NAPC-2022 (National Aerospace Propulsion Conference), IIT Bombay, 19-20 December 2022.



## 7.2 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Shri S. Somnath Chairman, (ISRO) Indian Space Research Organisation, India	03.12.2022	
2.	Padmashree Anil Kakodkar Former Chairman of the Atomic Energy Commission and Secretary of the Department of Atomic Energy, Chancellor of Homi Bhabha National Institute; FNAE, FNASc	03.11.2022	
3.	NAAC PEER TEAM	15.11.2022	
4.	Mj. General M. Indrabalan ADG NCC (Bihar & Jharkhand)	06.09.2022	
5.	Dr. KPJ Reddy Former Professor IISc, Bangalore	15.03.2022	

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
6.	Dr. Sanjay Mittal Professor Dept. of Aerospace Engg. IIT Kanpur	12.03.2022	
7.	Dr. P. A. Ramakrishna Professor Dept. of Aerospace Engg. IIT Madras	11.03.2022	

### 7.3 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Padma Shri M. C. Dathan Batch : 1984-1986	Scientific Advisor to Chief Minister of Kerala Former Director, Vikram Sarabhai Space Centre (2014) Former Director, Satish Dhawan Space Centre (2008)
2.	Dr. D. Narayan Batch : 1989-1991	Scientist 'G' Group Director, Aeronautical Development Agency (ADA)
3.	Prof. Ujjwal K. Saha Batch : 1989-1991	Professor, Department of Mechanical Engineering, Indian Institute of Technology, Guwahati
4.	Shri S. L. N. Desikan Batch : 2000-2002	Scientist 'G', EAD, Aero Vikram Sarabhai Space Centre (VSSC)

### 7.4 Infrastructure Development..

Transient Flow Diagnostic System, Spectrum Analyzer, Signal Conditioner, Interactive Display, 3D Printers, Strain Gauge Kit are added in our existing equipment.

### 7.5 Best Thesis Project (UG/PG): PG

- Rajesh R. (MT/SER/10001/21) - Aerodynamics  
Thesis Title: Development of Axisymmetric finite volume solver using compressible navier- stokes equations with turbulence modeling.
- Kommajosyula Nikhil (MT/SER/10015/21) - Rocket Propulsion  
Thesis Title : Synthesis of gap (glycidyl azide polymer) and studies of gap as inder/plasticizer for greener propulsion

### 8. Any other relevant information:

35 Nos. of external students from different Institute/University have successfully completed their Internship Program during Summer Vacation- 2023.

Industrial-cum-Technical Tour to Jharkhand Govt. Mini Tool Room, Tatisilway, Ranchi was arranged for all students, research scholars, faculty members and staff members on January 21, 2023.



## BIT MESRA OFF CAMPUS : DEOGHAR

### SECTION 1

### CAMPUS PROFILE



#### 1.1 About the Off Campus:

BIT Mesra, Off-Campus Deoghar was established in 2007 with the financial and infrastructural supports from the Govt. of Jharkhand and has entered into the 15th year of its successful operation. Over the years, the institute has established itself as an important, fully residential, AICTE approved educational hub in Santhan Parganas, Jharkhand. The campus is well equipped with modern instruments and software facilities for the undergraduate engineering courses in CSE, ECE, EEE and Mechanical Engineering with a total intake capacity of 300. From the year 2020, the lateral entry to the engineering branches has also been initiated as per the AICTE norms. Also from the year 2020, BBA and BCA courses have been started with 40 seats in each of them.

Programmes Offered	Intake
B.Tech. in Computer Science & Engineering	90
B.Tech. in Electronics & Communication Engineering	60
B.Tech. in Electrical & Electronics Engineering	60
B.Tech. in Mechanical Engineering	60

B.Tech. in Production Engineering (till 2020)	30
BBA	40
BCA	40

The campus is spread over an area of 25 acres, has its staff quarters, library (having more than 28,900 volumes), language lab, gymnasium, health centre, ambulance facility, ATM, canteen, playground, two basketball courts, entrepreneur development cell, training and placement cell and is under CC TV surveillance. Most of the faculty members of this campus are engaged in R&D activities; organize conferences, workshops & seminars and regularly publish quality research articles in journals of international repute. The NSS members of the campus regularly arrange for blood donation camps and literacy drives in nearby villages as a part of the institute's social responsibilities. Over the years, the institute has encouraged its students to take part in various inter-college affairs including athletic and sports events and literary activities. The institute has witnessed its students well placed not only in Govt. sectors, like defence, ONGC, IOCL, power plants, renewable energy, electricity distribution, etc. the alumni of this campus are efficiently working in multi-national companies, like Sigmoid

Analytics, CGI, TCS, CTZ, Wipro, Amdocs, NPCI, Docquity, Adani Group, Vodafone, Eshopbox, BYJU's, Pursuit Software, Peoplestrong, Docquity & Elucidata. For Batch 2019-2023, the highest package obtained has been Rs. 51 LPA. In the placement session 2022-2023, the institute has witnessed student placements over 80% with an average annual CTC ranges between Rs. 7 lacs to 8 lacs. The institute has also produced many entrepreneurs, who are successfully running their own companies and business ventures. Apart from giving quality education and healthy lifestyles, the institute is also very keen on developing the moral characters of its students and thus regularly arranges for spiritual events in association with Art of Living, Ram Krishna Math and Mission, International Society for Krishna Consciousness, etc.

## 1.2 About the Campus:

### 1.2.1 Vision:

To become a recognized academic institution striving continuously for excellence in education, research and technological service to the Nation.

### 1.2.2 Mission:

1. To equip students with the requisite skills to perform challenging engineering and managerial jobs in industry.
2. To augment the teaching-learning skills and research potential of the faculty.
3. To provide excellent technological services satisfying industrial requirements and academic needs of the society in general, and especially the deprived society of Santhal Pargana, Jharkhand.



## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy)

Ongoing Projects : NIL

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project



**b) Projects Completed**

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1	Reconstruction and digitization of PATAH Art, a perishing cultural heritage of Eastern India with special reference to Santhal Parganas.	Dr. Manoj Kumar Dutta	Indian National Science Academy (INSA)	16.10.20	7,15,440/-	Dec 2020 to Mar 2023

**c) Consultancy Projects carried out/ongoing : NIL**

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator/ Co-Investigator	Ongoing/ Completed*
			from	to			
1.							

**SECTION 3**

**SEMINAR / CONFERENCE**

**3.1 Seminar / Conferences / Short – Term Courses Conducted:**

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.				

**3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members**

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Mrs. Payal Bhardwaj	Design and Development of Wearable Antennas for Biomedical Applications	Nil	Thapar Institute of Engineering and Technology, Patiala	Online	16.02.2023-17.02.2023
2	Dr. Sounak Paul	5-Day Face-to-Face UHV-II	AICTE	Heritage Institute of Technology	Kolkata	22.08.22-26.08.22
3	Mr. Rayees Ahamad	International Conference on Computational Intelligence and Knowledge Economy - ICCIKE 2023	BIT Mesra	Amity University	Dubai, UAE	08.09.23



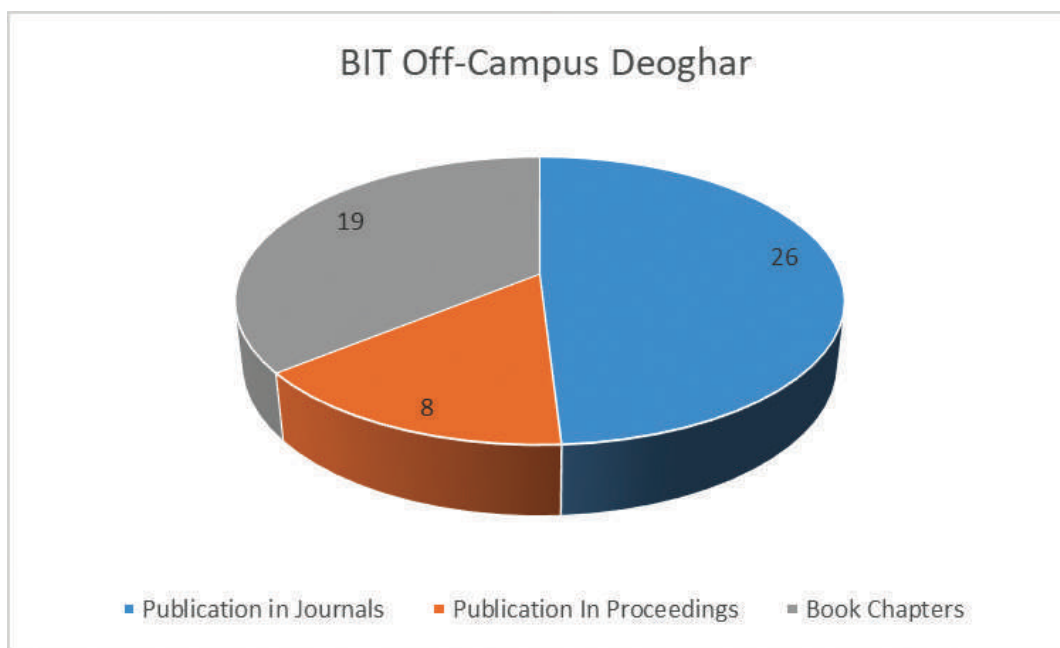
Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
4	Dr. Soumya Ray	5-Day Face-to-Face UHV-II	AICTE	Heritage Institute of Technology	Kolkata	22.08.22-26.08.22
5	Mr. Nilesh Kumar Rajalwal	Artificial Intelligence and ICT application to Power System Protection	Ministry of Electronics & IT	NIT warangal	online	18.07.22-27.07.22
6	Mr. Nilesh Kumar Rajalwal	IEEE CATCON-2022,	IEEE	NIT Durgapur	online	17.12.22-19.12.22
7	Ms. Rashmi Kumari	International Conference on Innovation in Engineering and Management 2023 (ICIEM'23)	Nil	Birla Institute of Technology, Mesra, Noida Campus	Hybrid	01.06.23-02.06.23
8	Ms. Rashmi Kumari	International Conference on Contemporary Trends in Multidisciplinary Research and Innovation (ICCTMRI – 2023)	Nil	Birla Institute of Technology, Mesra, Jaipur Campus	Hybrid	27-07-23-28-07-23
9	Mr. Sunit Prasad, Dr. Rohini Jha and Dr. Amar Nath Jha	International Conference on Shaping the Future of Management Education for Sustainable Emerging Economies, Department of Management Studies, IIT Roorkee in collaboration with Arizona State University, USA.	Nil	Department of Management Studies, IIT Roorkee in collaboration with Arizona State University	Hybrid	20-11-22-22-11-22
10	Mr. Sunit Prasad, Dr. Rohini Jha and Dr. Amar NathJha	International Conference on Financial Markets and Corporate Finance, Organised by PAN IIT.	Nil	PAN IIT Conference	Hybrid	06.07.23-08.07.23
11	Mr. Sunit Prasad, Dr. RohiniJha and Dr. Amar Nath Jha	International Conference on Sustainability: Research, Education and Practice	Nil	Department of Management, Birla Institute of Technology, Mesra	Hybrid	30.05.22-31.05.22



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
12	Dr. Anil Kumar Sharma	NPTEL/ FDP Course on "Cognition and its computation"	Self-funded	IIT, Kharagpur	Online/ Proctored Examination	01.07.22-30.10.22
13	Dr. Anil Kumar Sharma	NPTEL/ FDP Course on "Advanced Neural Science for Engineers"	Self-funded	IISc, Bangalore	Online/ Proctored Examination	01.01.23-30.04.23
14	Dr. Anil Kumar Sharma	NPTEL Workshop on "Mapping Neuroscience to Indian Knowledge Systems"	Self-funded	IIT, Kanpur	Online	15.06.23-16.06.23

#### SECTION 4

#### RESEARCH PUBLICATIONS



#### SECTION 5

#### AWARD / PATENT / COLLABORATIONS

##### 5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award/ Honour	Organisation	State/ National/ International Level	Year / Duration



## 5.2 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1	Aiquantum Smart Solutions Private Limited Address: NITK-STEP, Surathkal, Srinivasnagar P.O., Mangalore-575025, Karnataka, India.	For Internship as well as Campus Placement purposes.	2022-23 & continuing till date
2	YBI Foundation, Address: C-176B Lane, Street No. 36, Mahavir Enclave Part 3, New Delhi, Delhi 110059, India.	For Internship as well as Campus Placement purposes.	2022-23 & continuing till date

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

### 6.1 Departmental Students' Activities (Please arrange in reverse chronological order: Latest first)

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1	Talking Tech with Tejas	Anmol Amrit	Dr. Sounak Paul	09.07.22
2	Dev - Hunt	Anmol Amrit	Dr. Sounak Paul	10.10. 22
3	Auto Run Season 1	Anmol Amrit	Dr. Sounak Paul	18.12. 22
4	AMA WITH #PLACED 06	Anmol Amrit	Dr. Sounak Paul	28.12.22
5	AMA WITH #PLACED 07	Anmol Amrit	Dr. Sounak Paul	22.01.23

### 6.2. List of Faculties as on 30.6.2023:

Sr No.	Name	Designation
1.	Dr. Aruna Jain	Director
DEPARTMENT OF PHYSICS		
2.	Dr. Ram Krishna Sarkar	Asst. Prof. & In Charge
3.	Dr. Soumen Karmakar	Asst. Prof.
4.	Dr. Manoj Kumar Dutta	Asst. Prof.
DEPARTMENT OF CHEMISTRY		
5.	Dr. S.S. Majhi	Asst. Prof. & In Charge
6.	Dr. A.C. Singh	Asst. Prof.
DEPARTMENT OF MATHEMATICS		
7.	Dr. Ranjan Chattaraj	Asst. Prof. & In Charge
8.	Dr. Amit Kumar	Asst. Prof.
9.	Dr. Bishnu Kumar	Asst. Prof.
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING		
10.	Dr. Sounak Paul	Asst. Prof. & Incharge
11.	Dr. Kamta Nath Mishra	Asst. Prof.



## वार्षिक प्रतिवेदन 2022-2023

Sr No.	Name	Designation
12.	Mrs. Anita Kushwaha	Asst. Prof.
13.	Mr. Rayees Ahamad	Asst. Prof.
14.	Mr. Arbind Kr. Choudhary	Asst. Prof.
15.	Mr. Balaram Mandal	Asst. Prof.
16.	Mr. Raja Ram Dutta	Asst. Prof.
17.	Mr. Soumya Ray	Asst. Prof.
18.	Dr. Pravas Ranjan Bal	Asst. Prof.
19.	Mr. Swapan Kr. Borat	Associate Lecturer
20.	Mr. Saswata Mukherjee	Associate Lecturer
21.	Dr. Nishi Kant Kumar	Associate Lecturer
22.	Mrs. Neena Jha	Associate Lecturer
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING		
23.	Dr. Rajesh Kumar Lal	Assoc. Prof.& In Charge
24.	Dr. Mainak Mukhopadhyay	Assoc. Prof.
25.	Dr Chinmay Chakraborty	Asst. Prof.
26.	Mr. Sridhar Chintala	Asst. Prof.
27.	Mr. Akash Gupta	Asst. Prof.
28.	Mr. Vikash Sharma	Asst. Prof.
29.	Mr. Akhilesh Kr. Roy	Asst. Prof.
30.	Mrs. Payal Bharadwaj	Asst. Prof.
31.	Mrs. Sutapa Mandal	Asst. Prof.
32.	Mr. Mahendra Kumar Das	Associate Lecturer
DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING		
33.	Dr. Deep Shekhar Acharya (on deputation to EEE Dept. BIT Mesra)	Asst. Prof.& In Charge
34.	Dr. Md. Junaid Akhtar (on deputation to EEE Dept. BIT Mesra)	Asst. Prof.
35.	Mr. Piyush Kumar Ojha	Asst. Prof.
36.	Mr. Prabhat Kumar Ranjan	Asst. Prof.
37.	Mr. Nilesh Kumar Rajalwal	Asst. Prof.
DEPARTMENT OF MECHANICAL ENGINEERING		
38.	Prof. Arbind Kumar	Professor & In Charge
39.	Dr. Ashish Kumar Chakraborty	Assoc. Professor
40.	Dr. Ritesh Kumar Upadhyay	Asst. Prof.
41.	Mr. Gopiseti Srinivasarao	Asst. Prof.
42.	Mr. Ashutosh Kumar	Asst. Prof.
43.	Dr. Anil Sharma	Asst. Prof.& In Charge

Sr No.	Name	Designation
44.	Mr. P. K. Manoharan	Asst. Prof.
DEPARTMENT OF HUMANITIES & MANAGEMENT		
45.	Dr. Sandip Ghosh Hazra	Asst. Prof. & In Charge
46.	Mr. Sunit Prasad	Visiting Asst. Prof
47.	Ms. Rashmi Kumari	Visiting Asst. Prof

**SECTION 7****OTHER INFORMATION****7.1 Student Entrepreneurship activities/Start-ups if any: NIL**

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
1.				



**7.2 Publication by students, if any: NIL**

1. Harsh (2022). Digital Governance in India. Jankriti Patrika, ISSN: 2454-2725.

**7.3 Achievements of Students :**

Sr. No	Name of Student	Achievement/Position/Award etc.	Organised by	Date and Venue
01.	Anshul Raj (Batch/60025/22)	Silver Medal (Chess)	Prakrida-23	9th -13th Feb,23

**7.4 Distinguished Visitors from Industry/Academia/Research organizations:**

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture (Insert Picture here. Further send the JPEG file along with the email.)
1.	Prof. E. Balaguruswamy, Ex-Vice Chancellor, Anna University, Tamil Nadu, India.	14.06.23	
2.	Mr. Rajendra Singh, Waterman of India. Indian water conservationist and environmentalist from Alwar district, Rajasthan in India	26.06.23	



## 7.5 List of Distinguished Alumni:

The alumni of BIT Deoghar are working all over the world in leading organizations and holding top positions such as Co-Founder, AVP, CTO, Head of Strategy, etc. BIT Deoghar also produced alumni that are working as reputed government officers in Indian Judicial Service, Indian Revenue Service, Indian Audit and Account Services, Indian Army, Central Board of Excise and Customs, ISRO, leading public sectors etc.

The name of top MNCs where our alumni are

working such as Amazon, Oracle, Google, CTDI, Qualcomm, Walmart, Alvarez and Marshal, IBM, Youtube, Barclays, Tata Digital, Nordstrom, ZS Associates, Docquity, Sigmoid Analytics, CGI, Broadridge, Tata Steel, Jindal Steel, Yamaha Motors, Amdocs, Peoplestrong etc. Our alumni also completed or pursuing higher education from world's leading universities/ institutes such as John Hopkin's University, University of Houston, University of Minnesota, Clemson University, Delft University, Toulouse Business School, IISc, IIMs, IITs, IIIT etc. The details of few alumni are provided here:

Sr.No	Name, Batch and Affiliation	Short Description
1	Ms. Tanya Ambastha , 2016, B.TECH (CSE)	Ms. Tanya Ambastha completed her B.E. from Department of Computer Science and Engineering in 2016. She qualified in UPSC 2019 examination with AIR 237. She is selected as IA&AS Officer Trainee in Indian Audit and Accounts Department by Govt. of India.
2	Mr. Nitin Kamal, 2015, B.TECH (CSE)	Mr. Nitin Kamal completed his B.E. from Department of Computer Science and Engineering in 2015. He is Co-Founder of Data Monk, A company dedicated for providing very best of Analytics and Data Science, with an emphasis on Data Analyst, Data Science, Business Analysis and Data Engineering. He is also working as Business Intelligence in Ola. Previously, he worked at various positions in the field of data science in OYO and Mu Sigma.
3	Mr. Amit Srivastava, 2011, B.TECH (CSE)	Mr. Amit Srivastava completed his B.E. from Department of Computer Science and Engineering in 2011. He is presently working as Principal Software Engineer at Amazon. Previously, he worked as System Software Engineer in HP R&D and subsequently joined Amazon in 2013, as Software Development Engineer.
4	Mr. Vijay Prakash , 2012, B.TECH (CSE)	Mr. Vijay Prakash completed his B.E. from Department of Computer Science and Engineering in 2012. He is presently working as Chief Architect at Pocket Aces Pictures. He also worked in Phone Warrior, NuvoEx, AudioCompass at various positions.
5	Ms. Rameshwari Kumari, 2011, B.TECH (CSE)	Ms. Rameshwari Kumari completed her B.E. from Department of Computer Science and Engineering in 2011. He is presently working as SDE at Amazon Web Services. She also worked as Sr. Associate in JP Morgan Chase & Co. and Senior Technical Associate at Sears Holdings Corporation. Before that she was at various positions in Deutsche Bank and ATOS India Pvt. Ltd.
6	Mr. Rahul Dey, 2012, B.TECH (CSE)	Mr. Rahul Dey completed his Bachelor's degree in Electronics and Communication Engineering in 2012. He currently holds the position of Vice President Tech Lead at Sygnum Bank. Prior to his role at Sygnum Bank, Mr. Dey served as a Team Lead at HCL, where he demonstrated his leadership skills and contributed to the success of various projects.
7	Ms. Tanmay Sharma, 2018, B.TECH (ECE)	Current Designation: Solution Integrator, Ericsson, New Town Kolkata.



Sr.No	Name, Batch and Affiliation	Short Description
8	Ms. Aruna Singh, 2012, B.TECH (ECE)	Current Designation: Business Intelligence Engineer, Amazon, Washington, USA.
9	Mr. Shubham Tiwary, 2012, B.TECH (ECE)	Current Designation: Assistant General Manager, Vodafone Idea Ltd, Address: Panchsil Tech Park, Vodafone Idea Ltd, Groud Floor, Office 2- Seat No. 13, Hinjawadi phase 1, Pune 411057 MH.
10	Ms. Tanusha Majumdar, 2016, B.TECH (ECE)	She has joined the prestigious ESSEC Business School, Paris, France for Masters' Degree
11	Mr. Ankita Kumari, 2018, B. Tech (ECE).	Current Designation: Solution Integrator in Ericsson India Global Services Private Limited, Bangalore.
12	Name: Sushil Kumar Sah, 2010. B.TECH (ECE)	Current Designation: Postal Assistant (PA), Post Office, Ramgarh Cantt HO.
13	Mr. Alok Kumar, 2012. B.TECH (ECE)	Current Designation: Consultant, Deloitte USI, 6th & 7th, Techno Polis, BP Block, Sector V, Bidhannagar, Kolkata, West Bengal 700091.
14	Mr. Abhishek Kumar, 2008.B.TECH (Mechanical Engineering)	Current Designation: AVP - Information Management, HSBC Electronic Data Processing India Ltd., Bangalore.
15	Mr. Romit Maulik, 2008. B.TECH (Mechanical Engineering)	Current Designation: Director, Interdisciplinary Scientific Computing Laboratory; Assistant Professor, IST/ICDS, Pennsylvania State University & Joint Appointment, MCS Division, Argonne National Laboratory.
16	Ms. Sashi, 2012. B.TECH (Mechanical Engineering)	Current Designation: Research Engineer, CNRS, Marseille, France.
17	Mr. Ravi Kumar Jeela, 2009.B.TECH (Mechanical Engineering)	Current Designation: Researcher, Institute of Digitale Material forschung (IDM), Willy-Andreas-Allee 19, 76131 Karlsruhe, Germany.
18	Mr. Amit Kumar, 2010. B.TECH (Mechanical Engineering)	Current Designation: Data Science Director, Morgan Stanley, Mumbai.

## 7.6 Infrastructure Development:

Installation and Commissioning of Fire Hydrant System in the Institute Main Academic Building has been completed in December 2022. This comprises MS Pipes (400 meters inlet & outlets), four motor pumps, construction of Pump House, construction of two water tanks of 50000 litres capacity each and other fire hydrant related accessories & fixtures as per the advisory of Fire Department. This system covers the fire protection of the entire academic building of the Institute.

## 7.7 Best Thesis Project (UG/PG):

1. BTECH (ECE): Devashish Mishra (BTech/60054/19), Title: Realizing Multiplexer through Quantum Computing, Project Guide: Dr. Mainak Mukhopadhyay.
2. BBA: Harsh (BBA/60006/20). Title: A Study on Consumer Behaviour and intention over online shopping with reference to Flipkart, Project Guide: Dr. Sandip Ghosh Hazra.

## 8. Any other relevant Information:

- 8.1:** Prof. Vikash Sharma has received a certificate of appreciation from IEEE regarding Volunteered as proctor to guide and oversee competing teams for the IEEE Xtreme 16.0 programming competition that hosted +14,600 participants.



## 8.2: IEEE Student Branch:

Date	Events
05.07.22	Team Cause hosted workshop in association with IEEE BIT DEOGHAR on "Remote Work Opportunities in Digital Marketing"
09.07.22	*Polkadot India* with ecosystem partner *Hack2skill* presented an exciting opportunity of *Substrate Saturday: Season 2*
06.07.22-26.07.22	<p>P4P – Mock Placement Drive.</p> <p>IEEE BITD hosted its mock placement program #P4P Preparation For Placement, which was undoubtedly a spectacular event for engineering undergrads.</p> <p>While all participants have shown a great deal of effort in the aptitude, coding, and interview rounds, we have a handful of participants who showcased their exceptional skills and emerged as winners (in alphabetical order):-</p> <ul style="list-style-type: none"> <li>● Arundhati Mukherjee (BIT Deoghar)</li> <li>● Divyanshu (ABV IIITM Gwalior)</li> <li>● Ivan Ganatra (SGSITS Indore)</li> <li>● Keshav Agarwal (IIIT Vadodara)</li> <li>● Nitish Sinha (NIT Raipur)</li> <li>● Rishika Raj (BIT Mesra)</li> <li>● Sachin (BIT Deoghar)</li> <li>● Sanskar Maliwad (SGSITS Indore)</li> </ul>
14.08.22	"Tarang" Beta Code Coding Competition
27.11.22 -28.11.22	Fresh Q
10.12.22- 16.12.22	7DevDays – Boot Camp on Coding
13.02.23	Expert talk on Process of Innovation Development, Technology Readiness Level (TRL,); Commercialisation of Lab Technologies & Tech Transfer Speaker – Mr. Paras Nath Barwal, Senior Director – CDAC – Noida
15.04.23-16.04.23	Trial by Trivia 2.0
18.06.23	Last Minute Preparation Tips – by Alumni – Sachin

## 8.3 Activities by IIC 4.0:

Date	Events	Operation management/organised/participation
14.11.22	Visit to ATL facility of Ramakrishna Mission Vidyapeeth, Deoghar to celebrate 10,000th ATL facility under Atal Innovation Mission.	Mr. Vikash Sharma, Mr. Ashutosh Kumar and Mr. Hari Shankar Pathak
05.11.22	Yuvodaya – Premier Entrepreneurship Challenge	Students from various schools participated in activities - idea pitching, start-up quiz, problem-solving and Can you sell it?



10.09.22	Panel Discussion "Startup in tangible products manufacturing and its importance"	PANELISTS – 1. Dr. Arun Dayal Udai, Faculty, IIT ISM Dhanbad & Founder of Aduza Robotics & Automation Pvt Ltd Company. 2. Ms Khushbu Kumari Soni, Founder, RekRock Cystart Pvt Ltd. 3. Prof. Ashutosh Kumar, Startup Ecosystem Enabler 4. Dr. R K Lal, IIC 4.0 Vice President. MODERATOR: Dr. Soumen Karmakar, IIC 4.0, BIT- Deoghar, Member.
10.09.22	Recent innovation and advancement in robotics and skill set needed to become a robotics engineer	Dr. ARUN DAYAL UDAI, Associate Prefessor, Dept. of MECHANICAL ENGINEERING, IIT - ISM Dhanbad FOUNDER, ADUZA ROBOTICS & AUTOMATION PVT LTD.
23.08.22	How to Plan for StartUps?	Vikash Sharma, Faculty In-Charge, T&P Cell.
03.08.22	Online workshop on Intellectual Property Rights (IPR) & Patents and Design Filing	In association with Rajiv Gandhi National Institute of Intellectual Property Management (RGNIIPM), Govt. of India, Nagpur by Mr. Pankaj Prabhakar Borkar.
02.08.22	7th Regional Meet, Guru Nanak Institute of Technology, Kolkota	Dr. Rajesh Kumar Lal, Dr. Mainak Mukhopadhyay, Dr. Soumen Karmakar and Prof. Ashutosh Kumar
26.07.22	Visit to Ramakrishna Mission Vidyapith, Deoghar as a part of Atal Tinkering Lab Program	Dr. Rajesh Kumar Lal, Prof. Vikash Sharma, Prof. Ashutosh Kumar

#### 8.4 Central Library:

The BIT Deoghar Central Library serves as a central facility of the Institute to support the study, teaching, research and development programmes of the Institute since 2007. The library has a collection of more than 31535 volumes which includes Text Books, Reference Books, various types of competition books and story books etc. The Library subscribes to about 30 current print Journals. The Library also subscribes numbers of e-journals as per AICTE norms. Library operations have been automated with the help of an integrated library software package, LIBSYS. The book database is accessible through OPAC (Online Public Access Catalogue). Circulation Services are executed through Barcode System.

Library has a well-equipped Xerox facility & computerized printout (black & white as well as colour). The users can avail of this facility on payment of a nominal charge.

#### Mission:

The mission of our central Library is to provide comprehensive information to fulfill the needs of the BIT community and to support the Institute's mission to contribute to society through the pursuit of education, teaching, learning and research at premier levels of excellence.

#### Vision:

In this preferred future, Library makes certain that its collections remain forward-looking, diverse in girth and form. Through promotion, the Library makes its users aware of the resources available to them, and through innovation, it makes access to these resources easier. To serve potential users, the Library conserves information across all formats and ensures effectual storage and deliverance scheme. The Library's cooperation with expanding circles of associates yields unified access, broadening knowledge, and enhanced services.



## वार्षिक प्रतिवेदन 2022-2023

### New achievement during last one year (2022-23):

- Added more than 421 new books.
- Renewal of subscription of on-line journals like IEEE, Science Direct etc.
- Generated Licenses of Ithenticate & Grammarly software to every faculty

members of Institute.

- Renewal of 30 print journals.
- New arrival services started for books
- Fully air-conditioned Reading Room
- More events done through NDLI.
- Membership renewal of NDLI up to 2nd April 2024.

### 8.5 List of significant activities conducted by NSS, BIT Deoghar:

S. No.	Activities conducted	Duration	No. of participants
1.	Debate Competition and flag distribution under HAR GHAR TIRAGA CAMPAIGN	14.08.22	80
2.	Prabhat Pheri on the occasion of Independence Day	15.08.22	90
3.	Fit India Run	20.10.22	75
4.	Run for Unity	27.10.22	75
5.	"Prabhat Pheri" on the occasion of "Republic Day"	26.01.23	76
6.	Distribution of Sanitary Napkins to Women in Village	16.04.23	36
7.	Community Cleanliness Drive and Plantation Drive on "World Environment Day"	05.06.23	105
8.	Participation in Yoga Activity on "International Yoga Day"	21.06.23	102

### 8.6 Techno-Cultural Activities:

The following cultural activities were conducted in the institute:

1. Annual Techno-Cultural event of the institute "UTTHAAN" during 14/2/23 -16/2/23.
2. Cultural Program "UMANG", Saraswati Puja and Republic Day were organized and celebrated on 26.1.23.
3. Techno-Cultural event "AGHAAZ" was organized on 12.11.22
4. Photographic Society of BIT-D organized an event "Get Set AGHAAZ" on 12.11.22
5. "Dandiya Night" was organized by the Dance Society "Nritya" on 24.09.22
6. Vishwakarma Puja was celebrated on 17.09.22
7. Photographic Society of BIT-D organized an event "KLICK" at Nandan Pahar on 17.9.22
8. Cultural Program "TARANG" was organized on 26.8.22.

### 8.7: Training & Placement Cell:

Since 2007, Birla Institute of Technology, Deoghar, growing by leaps and bounds. The institute has not only established itself as a forerunner in technical education but has also left deep imprints of its presence in the country and society. The pool of talent and aspirations that the students carry along makes BIT Deoghar one of the most sought-after institutes in India.

In session 2022-2023, more than 100 companies provided job opportunities for the students of BIT Deoghar. Major recruiters includes IT Product to IT Services, Analytics & Consulting, heavy engineering and core companies etc. Several meritorious students have received multiple offers.

Considering the percentage placement of eligible students, 84% B.Tech. students have got placed with maximum package of 51 LPA and average package between 7 LPA & 8 LPA as of now. BBA students achieved 85 % placements in the session 2022-23.

## BIT Mesra Off Campus : Jaipur

### SECTION 1

### CAMPUS PROFILE



#### 1. About the Off Campus:

##### Department:

**Vision:** To become a Globally Recognised Academic Institution in consonance with the social, economic and ecological environment, striving continuously for excellence in education, research and technological service to the National needs.

##### Mission:

- To educate students at Under Graduate, Post-Graduate, Doctoral, and Post-Doctoral

levels to perform challenging engineering and managerial jobs in industry.

- To provide excellent research and development facilities to up Ph.D. programmes and research projects.
- To develop effective teaching learning skills and state-of-the-art research potential of the faculty.
- To build national capabilities in technology, education, and research in emerging areas.
- To provide excellent technological services to satisfy the requirements of the industry and overall academic needs of society.

### SECTION 2

### RESEARCH PROJECTS

#### 2.1 Sponsored Projects (Research and Consultancy)

##### a) Projects Completed

Sr. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator / Co-Investigator	Ongoing/ Completed*
			from	to			
1.	The Animated Short on Contract Management	Linpico SARL, France	16th Aug. 22	22nd Aug. 22	Rs. 80,000/-	Dr. Vibhuti Pandya & Mr. Gautam Goswami	Completed



b) Consultancy Projects carried out/ongoing

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Development of Distributed Deep Learning based Dynamic Causality Analysis Model for Predicting Epilepsy and Simulation of Epileptic Brain	PI: Dr. V. Pathak Co PI: Dr. Vivek Gaur	DST under CSRI Scheme	12/03/2020	INR 16,88,040	22/02/2023

SECTION 3

SEMINAR / CONFERENCE

3.1 Seminar / Conferences / Short – Term Courses Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	Summer Training program on "Web Development"	Dr. Archana Bhatnagar Mr. Santosh Sharma	BIT, Mesra, Off Campus, Jaipur	04th July -12th August 2022
2.	Summer Training Program on 'Python Programming'	Mr. Subhash C Gupta Dr. Shripal Vijayvargiya	BIT, Mesra, Off Campus, Jaipur.	04th July -12th August 2022
3.	Seminar on "National Education Policy 2020" by Dr. Ghanshyam Singh, Professor, Dept of ECE, MNIT Jaipur	Dr. Madhavi Sinha Mr. Santosh Sharma	BIT, Mesra, Off Campus, Jaipur.	07th Sept 2022
4.	Workshop on "Data Analytics using R"	Dr. Seema Gaur Dr. Vishwambhar Pathak	BIT, Mesra, Off Campus, Jaipur.	24th -26th August, 2022
5.	Seminar on " Role of Graduate Engineers in Indian Society "	Dr. M.M. Agarwal Dr. Seema Gaur	BIT, Mesra, Off Campus, Jaipur.	15th Sept 2022
6.	Webinar on "Cyber Security and Ethical Hacking"	Mr. Santosh Sharma Dr. Piyush Gupta	BIT, Mesra, Off Campus, Jaipur.	07th January 2023
7.	Workshop on "Fundamentals of Scilab and its Utilization"	Dr. Bhawna Agarwal, Dr. Gurminder Singh Malhotra , Dr. Seema Gaur, Dr. Indar Kumar Dadheech	BIT, Mesra, Off Campus, Jaipur.	07th - 08th, October 2022.
8.	IPR Outreach Program on Plasma Its Applications and Nuclear Fusion	Dr. Anand Kumar Srivastava and Dr. Ravindra Kumar	Institute for Plasma Research, Gandhinagar and BIT Mesra	22-26 August, 2022
9.	National Science Day (Seminar and Science Exhibition)	Dr. Anand Kumar Srivastava and other faculty members of Department of Sciences	BIT Mesra	28 February, 2023



Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
10.	Webinar on topic "Surface Plasmons: Fundamentals and Applications in Fibre Optic Sensing"	Dr. Ravindra Kumar	NA	12th August 2022
11.	Seventh Online International Conference on Ancient Mathematics and Science for Computing (AMSCO 2K22)	Dr. Gurminder Singh and Dr. Indra Kumar Dadheech	NA	23-24 December, 2022
12.	Two days' workshop on "To understand the fundamentals of SCILAB and its utilization".	Dr. Gurminder Singh, Dr. Indra Kumar Dadheech, Dr. Bhawna Agarwal and Mrs. Seema Gaur	NA	7-8 October, 2022
13.	5-days workshop for BIT Jaipur students on "Design Antennas using simulation tools for Research and Industrial Requirements (Hybrid Mode)	Dr. Dheeraj Bhardwaj	NA	10-14 October, 2022
14.	International Conference on "Pathways to Sustainability Initiatives in the Floriculture Sector, in International Conference on Sustainability: Research, Education and Practice - SREP-2022" collectively organized by the Department of Management Birla Institute of Technology Mesra, and Off Campuses Jaipur, Lalpur, Noida, Patna.	Dr. Roopali Sharma (Coordinator from BIT Off Campus Jaipur)	BIT Mesra	30-31/05/2022
15.	Five Days National Workshop on Animation (Hybrid)	Dr. Vibhuti Pandya	BIT, Mesra, Off Campus, Jaipur.	19th - 23rd June 2023

### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by

#### Faculty Members

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Anju Sharma	International Conference on Recent Trends in Engineering and Science	-	SVNIT Surat, Centre for Continuing Education (CCE), SVNIT Surat and Shiksha Sanskriti Utthan Nyas, India.	SVNIT, Surat (Online mode)	2.05.2023 – 3.05.2023
2.	Dr. Archana Bhatnagar	3rd International Conference on Data Science & Big Data Analytics (IDBA – ACMWIR 2023)	-	Sri Aurobindo Institute of Technology	Indore (online)	16.06.2023 – 17.06.2023



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Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
3.	Dr. Archana Bhatnagar	International Conference on Recent Trends in Engineering and Sciences, (RTES-2023)	-	S.V. National Institute of Technology (SVNIT), Surat(India) and Shiksha Sanskriti Utthan Nyas, India	Surat (online)	2.05.2023 – 3.05.2023
4.	Dr. Archana Bhatnagar	Symposium on "Innovations in Artificial Intelligence in Biotechnology and Health Care"	-	School of Life and Basic Sciences & Institute of Medical Sciences and Research Centre, Jaipur	Jaipur	24.03.2023 – 26.03.2023
5.	Bimalendu Pathak	Innovations in Artificial Intelligence in Biotechnology & Healthcare	Department of Science and Technology, Rajasthan	Jaipur National University, Jaipur	Jaipur National University, Jaipur	24.03.2023 – 26.03.2023
6.	Madan Mohan Agarwal	UHV II	AICTE	SAGE University Indore	SAGE University Indore	01.08.2022-05.08.2022
7.	Dr. Piyush Gupta	Designing and Modelling of IoT, AI & ML Systems	AICTE	AICTE	Online	01.08.2022-05.08.2022
8.	Dr. Piyush Gupta	International Conference on Recent Trends in Engineering and Sciences(RTES – 2023)	-	Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat, Gujarat	Online	02.05.2023 – 03.05.2023
9.	Dr. Piyush Gupta	International Conference on Innovation in Engineering & Management: Sustainability Through Creativity & Innovation(ICIEM'23)	-	BIT Noida Off Campus, NOIDA	Online	01.06.2023-02.06.2023
10.	Dr. Piyush Gupta	3rd International Conference Data Science & Big Data Analytics (IDBA-ACMWIR 2023)	-	Sri Aurobindo Institute of Technology, Indore, India	Hybrid	16.06.2023-17.06.2023
11.	V. Pathak	International Conference on Recent Trends in Engineering and Sciences (RTES-2023)	-	NIT, Surat	Online	2.05.2023 – 3.05.2023



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
12.	V. Pathak	15th International Conference on Computer Modeling and Simulation (ICCMS 2023) (ICCMS 2023), Dalian, China	-	Dalian University of Technology, China, co-organized by Chongqing University of Posts and Telecommunications, China	Online	16.06.2023 – 18.06.2023
13.	Vivek Gaur	International Conference on Recent Trends in Engineering and Sciences (RTES-2023)	-	SVNIT, Surat	Online	02.05.2023 – 03.05.2023
14.	Vivek Gaur	The 15th International Conference on Computer Modeling and Simulation, ACM Publishing (Scopus)	-	Dalian University of Technology, China	Online	16.06.2023 – 18.06.2023
15.	Dr. Deepak Verma	The 5-day Face-to-Face UHV-II FDP organized by All India Council for Technical Education (AICTE)	AICTE	All India Council for Technical Education (AICTE) at Sagar Institute of Research and Technology, Indore	Sagar Institute of Research and Technology, Indore	02.08.2022 - 06.08.2022
16.	Dr. Deepak Verma & Dr. P S Rathore	International Conference on Recent Trends in Engineering and Sciences (RTES – 2023)	BIT	Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat	Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat	02.05.2023- 03.05.2023
17.	Dr. Deepak Verma	IEEE Renewable Energy and Sustainable E-Mobility Conference (RESEM)	-	MANIT Bhopal	MANIT Bhopal	17.05.2023- 18.05.2023
18.	Jyoti Sharma	Two Week Online Faculty Development Program/Short term Training Program on Advanced Optimization Techniques and hands-on with MATLAB/SCILAB (AOT 2022)	Ministry of Electronics and Information Technology (MeitY), Electronics & ICT Academies	MNIT Jaipur, NIT Patna & IIITDM Jabalpur	Online	08.08.2022 – 19.08.2022



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
19.	Jyoti Sharma	One week outreach programme on Microelectronics and VLSI Design (MVD-2023)	-	Department of Electronics and Communication Engineering, BIT Mesra, Ranchi	BIT Mesra, Ranchi	15.05.2023-19.05.2023
20.	Puneet Sharma	One week outreach programme on Microelectronics and VLSI Design (MVD-2023)	-	Department of Electronics and Communication Engineering, BIT Mesra, Ranchi	BIT Mesra, Ranchi	15.05.2023-19.05.2023
21.	Dr. Anand Kumar Srivastava	International Conference of Recent Trends in Engineering and Sciences (RTES-2023)	-	SVNIT, Surat	Online	02.05.2023-03.05.2023
22.	Dr. Ravindra Kumar	International Conference of Recent Trends in Engineering and Sciences (RTES-2023)	-	SVNIT, Surat	Online	02.05.2023-03.05.2023
23.	Dr. Ranjana Agarwal, Dr. Bhawna Agarwal, Mrs. Nidhi Singh	International Conference of Recent Trends in Engineering and Sciences (RTES-2023)	-	SVNIT, Surat	Online	02.05.2023-03.05.2023
24.	Dr. Gurminder Singh	International Conference of Recent Trends in Engineering and Sciences (RTES-2023)	-	SVNIT, Surat	Online	02.05.2023-03.05.2023
25.	Mrs Nidhi Singh	Environmental Toxicology :Impact on Human Health	DST, Rajasthan	Deptt. Of Life Sciences,VGU, Jaipur Rajasthan	VGU, Jaipur	25.11.2022-26.11.2022
26.	Mrs Nidhi Singh	International Conference of Recent Trends in Engineering and Sciences (RTES-2023)		SVNIT, Surat	Online	02.05.2023-03.05.2023
27.	Dr. Roopali Sharma	Global Perspective Series: Food as Medicine	Drexel University College of Nursing & Health Professions, United States	Drexel University College of Nursing & Health Professions, United States	Online	14.04.2022



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
28.	Dr. Ritu Pareek	Remittances, Economy, and Indian Diaspora	-	Central University of Gujrat	Online	23.02.2023-25.02.2023
29.	Purvi Mathur	International Conference on 'New Horizons in Commerce, Finance and Economics'	Chinmay Vishwa Vidayapeeth with Shri Ram College of Commerce, University of Delhi	Chinmay Vishwa Vidayapeeth with Shri Ram College of Commerce, University of Delhi	Online	16.02.2023-17.02.2023
30.	Purvi Mathur	Re-Imagineering Business and Management: The Emerging Landscape	ICFAI Business School, Jaipur	ICFAI Business School, Jaipur	Online	23.03.2023-24.03.2023
31.	Dr. Vibhuti Pandya	Jaipur International Film Festival-23	JIFF	JIFF India	Inox GT Central & Maharana Pratap Auditorium Malviya Nagar, Jaipur	06.01.2023-10.01.2023
32.	Dr. Vibhuti Pandya	23rd Kala Mela	BIT Jaipur	Rajasthan Lalit Kala Academy	Jawahar Kala Kendra. Jaipur	03.02.2023-08.02.2023
33.	Dr. Vibhuti Pandya	MEDLEY An Exhibition of Indian Masters & Upcoming Masters	Sneha Arts, Hyderabad	Sneha Arts	Museum of Goa, 79, Industrial Estate Pilerne, Goa	29.10.2022-06.11.2022
34.	Dr. Rishika Sharma	5 day's FDP Theme- Inculcating Universal Human Values in Technical education	BIT	AICTE	Online	06.06.2022-10.06.2022
35.	Dr. Rishika Sharma	International conference on EMERGING TREANDS IN DESIGN AND ARTS	Self	Poornima University, Jaipur	Poornima University, Jaipur	07.04.2023-08.04.2023
36.	Mr. Gautam Kumar Goswami	International conference on EMERGING TREANDS IN DESIGN AND ARTS	Self	Poornima University, Jaipur	Poornima University, Jaipur	07.04.2023-08.04.2023



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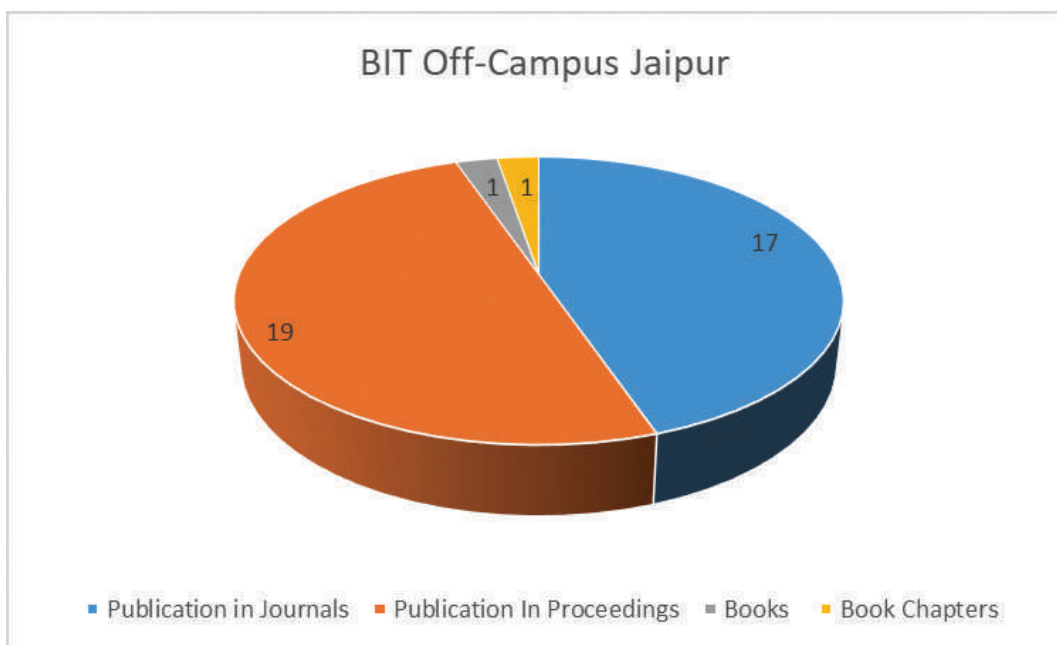
Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
37.	Mr. Gautam Kumar Goswami	Visual Art Exhibition ,2022	Ministry of Cultural Affairs, Assam	Remember 91	State Art Gallery, Guwahati, Assam	10.10.2022-13.10.2022
38.	Mr. Gautam Kumar Goswami	The Bridge: Indo Bangla Art Exhibition -2023	Nrityanjali Academy, Guwahati	Nrityanjali Academy, Guwahati	Lalit Kala Art Gallery, Srimanta Sankardeva Kalakshetra Guwahati, Assam	02.05.2023 - 06.05.2023
39.	Mr. Manish Kumar	International conference on EMERGING TREANDS IN DESIGN AND ARTS	Self	Poornima University, Jaipur	Poornima University, Jaipur	07.04.2023-08.04.2023
40.	Mr. Gaurav Choudhary	07 days online FDP on "Qualitative Research" by Dr. D. N. Sansanwal & Dr. Meenakshi	Self	The Indian Teacher Education Community, Indore (M.P.)	Online	17.10.2022-23.10.2022
41.	Mr. Gaurav Choudhary	The CII Summit FX 3 rd Global AVGC & Immersive Media Summit	BIT	Global AVGC & Immersive Media Summit	Hotel Lalit, New Delhi	20.08.2022
42.	Mr. Gaurav Choudhary	International Conference- "Kalaon me Vasant"	-	Department of Music, Faculty of Fine Arts, University of Rajasthan, Jaipur	Fine Arts, University of Rajasthan, Jaipur	23.01.2023-25.01.2023
43.	Dr.Gurminder Singh Malhotra and Dr. Peeyush Tewari	"Modelling the Total Income of a Hindi Movie Using Modified Exponential Model"	International Conference on Recent Trends in Engineering and Science (RTES - 2023)	NIT Surat	NIT Surat	02.05.2023-03.05.2023
44.	Mr.Sanjeet Kumar Agrawal, Mr.Jitendra Kumar Singh, Dr. Peeyush Tewari	"An application of Integral method on thinning of lithosphere"	International conference, on Contemporary Trends In Multidisciplinary Research And Innovation	BIT Jaipur	BIT Jaipur	27.07.2023-28.07.2023



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
45	Mr.Sanjeet Kumar Agrawal and Dr. Peeyush Tewari	"Moving Boundary Problem the current state"	88th Annual Conference of Indian Mathematical Society, An International Meet	Department of Mathematics, BIT Mesra, Ranchi	Department of Mathematics, BIT Mesra, Ranchi	27.12.2022-30.12.2022
46	Dr. Raj Kumar Gothwal, Dr. Sampat Nehra, Dr.AK Varshneya, Dr. P. Tewari, Dr. Pooran Singh Solankia, and Dr. P Ghosh,	"Textile azo dyes degradation by a novel Bacillus spp. BISR-TD206 isolated from dyeing industrial effluent"	International Conference on Recent Trends in Engineering and Science (RTES – 2023)	NIT Surat	NIT Surat	02.05.2023-03.05.2023
47	Mr. Annu Mishra, Mr. Pankaj Gupta, Dr. Peeyush Tewari	"Biomedical Image Segmentation Using Integrated FCM Clustering Modified with Regularized Level Set Method"	International Conference on Disruptive Technologies (ICDT) PP 344-348, 2023			

## SECTION 4

## RESEARCH PUBLICATIONS





SECTION 5

AWARD / PATENT / COLLABORATIONS

5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1.	Purvi Mathur	Best Paper Award Title of the manuscript "Psychology towards the sustainability in context to Online Food Applications- Pandemic Impact on India School Teenagers".	ICFAI University, Jaipur	International Conference on "Re-Imagineering Business and Management: The Emerging Landscape "	2023
2.	Dr. Deepak Verma	Recognized among Stanford University's World's Top Scientists List (in India 25562) in 2022	Stanford University	International	2022
3.	Dr. Peeyush Tewari	"Vrischa Mitra Samman 2023"	G20 Event org by Shree Kalptaru Sansthan	National	2023

5.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1.	Santosh Kumar Sharma	Artificial Intelligence And Machine Learning In Healthcare Application	India Patent Office/ 202311026115	Application date: 6/4/2023	This study suggesting that AI can perform as well as or better than humans at key healthcare tasks, such as diagnosing disease. Today, algorithms are already outperforming radiologists at spotting malignant tumours, and guiding researchers in how to construct cohorts for costly clinical trials.
2.	1) Dr. N. Kumaratharan 2) Dr. Parimala Prabhakar 3) Dr. Shubhi Jain 4) Dr. Dheeraj Bhardwaj 5) Dr. Komal Sharma 6) Dr. Monika Mathur	Novel 5G communication microstrip patch antenna for broadcasting and navigation application	202241051840 A Publication Date: - 16/09/2022	2022	The goal of this development is to create a circular microstrip patch antenna with a microstrip feed line and a resonance frequency of 28.5 GHz. The antenna has been optimized for use in high-speed 5G applications via the use of modelling software called CST Microwave Studio.



Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
	7) Jay Kumar Pandey 8) Dr. M. Poonguzhali 9) Dr. Prabha Shreeraj Nair 10) Ms. Prathibha Sudhakaran				This antenna design is fit for usage in advanced high-speed networks like those used for 5G applications because of its 10 dB gain, -32.86 dB return loss, and increased bandwidth of 1.636 GHz.

### 5.3 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1.	City Palace, Jaipur And The Palace School, Jaipur	It is proposed to work jointly to promote animation art in Indian schools by conducting seminars and workshops. This year a National Animation Workshop was organized in association with the Palace School from 19th to 23rd June 2023. Over 1000 participants registered for the workshop, and 350 enthusiastic students actively participated in the event.  Also, it is planned to work on the series of graphic Novels by the faculty members and students from the Animation & Multimedia Dept.	2022-23

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

### 6.1 Departmental Students' Activities

(Please arrange in reverse chronological order: Latest first)

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1.	Enigma: A Brain Power Challenge	Nandani Pareek (B.Tech(CSE)-VI) Rubaani Manrai (B.Tech(CSE)-VI) Nirmal Saravgi (B.Tech(ECE)-VI)	Dr. Shripal Vijayvargiya and Mr. Subhash Gupta	10/02/2023
2.	Technophilia: A Technical Poster Presentation Event	Rubanni Manrai (B.Tech(CSE)-VI) Aman Choudhary (B.Tech.(ECE)-VI) Ananya Shukla	Mr. Subhash Gupta and Dr. Shripal Vijayvargiya	19/04/2023
3.	Poster making competition in Mathematics	-	Dr. Gurminder Singh and Dr. Bhawna Agarwal	22/12/2022
4.	Scientific Model Display, Oral Presentation, Poster Presentation and Science Quiz during National Science Day Celebration	-	All Faculty members of Department of Sciences	28/02/2023



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Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
5.	Quiz on Environmental Studies	-	Dr. Ranjana Agarwal and Mrs. Nidhi Singh	11/10/2022
6.	Workshop on Communication Skills for school students	-	Dr. Roopali Sharma and Dr. Ritu Pareek	24/04/ 2023
7.	Pictionary	Kashish Singhal (B. Tech 6th Sem) and Sarthak Sharma (BBA 4).	Dr. Ritu Pareek	21/03/ 2023
8.	Table Talk-	Astha Agarwal & Saurabh Shekhawat	Dr. Ritu Pareek and Dr. Roopali Sharma	10 /02/2023
9.	Shark Tank	Ms. Anmol Agarwal and Ms. Saumya Taneja of BBA semester V.	Mrs. Purvi Mathur	24-25/01/2023
10.	AD Mad	Surmai Sharma ( MBA II)	Mrs. Purvi Mathur and Dr. J K Chandel	24-25/01/2023
11.	Invest X	Sanya Jain , Vinayak Chaturvedi (BBA V)	Dr. Roopali Sharma	24-25/01/2023
12.	Mock Parliament	Purviya Gupta( BBA V) Surmai Sharma (MBA II)	Dr. Ritu Pareek	24-25/01/2023
13.	Fin-Pro Graphics, an event for designing digital posters on "E-rupee"	Ms. Surmai Sharma -MBA Semester II, Ms. Niharika Agarwal-BBA III& Ms. Anmol Agarwal -BBA V	Dr. Roopali Sharma, Mrs, Pankaj Sharma and Dr. Priyanshu Sharma	18 /01/ 2023
14.	TRIVIA FIGHT 2023	Ashish Varghese, Khushagra Jhunhunwala, Raktim M Hazarika (BBA V)	Dr. G.P. Mishra and Dr. Kusum Nishra	16/01/2023
15.	Human Resource Quest -2022	Ashish Varghese, Khushagra Jhunhunwala, Raktim M Hazarika (BBA V)	Dr. G.P. Mishra and Dr. Kusum Nishra	15 /11/2022
16.	SPICE 2022 (Sustainable Product Pitch-Innovative/ Challenging/ Exciting)	Vinayak Chaturvedi of BBA Semester V	Mrs. Purvi Mathur and Dr. J K Chandel	20/09/ 2022
17.	An industrial visit to JAIPUR DAIRY	-	Dr. J. K Chandel, Mrs. Purvi Mathur, Dr. Priyanshu Sharma and Dr.Kusum Lata Mishra	16/09/ 2022
18.	An Invited Talk on "What Brought You Here, Will not Take You There" was conducted by Mr. Harshit Malviya, Deputy Vice-President & Head HR-Commercial Banking & Government Banking, AU Small Finance Bank	Ms. Anmol Agarwal and Ms. Saumya Taneja of BBA semester V.	Dr. Roopali Sharma	06 /09/ 2022



Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
19.	Business Buzz 2022	Ms. Anmol Agarwal and Ms. Saumya Taneja of BBA semester V	Mrs. Purvi Mathur, Dr. Priyanshu Sharma and Dr. Kusum Mishra	30/08/2022
20.	Participation in Marathon organized by CK Birla Hospitals	Nainav Pancholi	Vikas Sangwan and Dr. Piyush Gupta	16/04/2023
21.	Sports activity in student induction program	Prerna Gupta	Vikas Sangwan and Dr. Piyush Gupta	04/12/2022
22.	Participation by students in sports activity at IIT Kanpur in UDGHOSH 2022	-	Nidhi Singh	14-16/10/2022
23.	Participation by students in sports activity at BITS Pilani in BOSM 2022	-	Puneet Sharma	14-18/10/2022
24.	Students' Exhibition of Animation Design during Alumni Meet "sampark-23"	Siddharth Saini BAM/25027/20	Dr. Vibhuti Pandya	25/03/2023
25.	Art Exhibition Visit at Samanvaya Art Gallery, MI Road, Jaipur	Rachnaa Raghupati MAD/25001/22	Dr. Rishika Sharma	15/03/2023
26.	Art Exhibition Visit at Jawahar Kala Kendra, JLN Marg, Jaipur	Mona Rani MAD/25002/22	Dr. Vibhuti Pandya	02/03/2023
27.	Participation in State Level Art Exhibition in 23rd Kala Mela at Jawahar Kala Kendra, Jaipur organized by Rajasthan Lalit Kala Academy	Ishveen Kaur Baluja MAD/25001/21 Mohit Patwa MAD/25003/21	Dr. Vibhuti Pandya	3-8/02/2023
28.	Workshop on Digital Sculpting	Bhushan Kandelkar MAD/25002/21	Mr. Gautam Kumar Goswami	5-9/09/2022
29.	Students' Exhibition of Animation Design during the visit of three International Guests Ms. Monika Kowaleczko, Animation Film Maker (Poland) Ms. Innava, Film Writer (Hungary)	Ayush Sharma BAM/25008/20	Mr. Gaurav Choudhary	27/08/2022



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
	And Mr. Chandra Shekhar, Documentary Film Maker & Writer (New Delhi)			
30.	Students' Exhibition of Animation Design during National Plasma Gyan Program	Kartik Singh Bhandari BAM/25001/20	Dr. Vibhuti Pandya	22-26/08/2022

### 6.2. List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
<b>Department of Computer Science &amp; Engineering</b>		
1	Dr. Madhavi Sinha	Associate Professor
2	Dr. Shripal Vijayvargiya	Associate Professor
3	Mr. P. K. Sharma	Assistant Professor
4	Dr. Piyush Gupta	Assistant Professor
5	Mr. B. Pathak	Assistant Professor
6	Dr. M.M. Agarwal	Assistant Professor
7	Dr. Vishwambhar Pathak	Assistant Professor
8	Dr. Vivek Gaur	Assistant Professor
9	Dr. Alok Pandey	Assistant Professor
10	Dr. Seema Gaur	Assistant Professor
11	Dr. Archana Bhatnagar	Assistant Professor
12	Dr. Anju Sharma	Assistant Professor
13	Mr. Subhash Gupta	Assistant Professor
14	Mr. Santosh K. Sharma	Assistant Professor
15.	Mr. Santosh Agarwal	Associate Lecturer
<b>Department of Electrical &amp; Electronics Engineering</b>		
1.	Dr. P. S. Rathore	Assistant Professor & In-Charge
2.	Dr. Aparijta Panadey	Assistant Professor
3.	Dr. Deepak Verma	Assistant Professor
<b>Department of Electronics &amp; Communication Engineering</b>		
1.	Mr. Ankur Agarwal	Assistant Professor
2.	Mr. Deepak Chaturvedi	Assistant Professor



Sr. No.	Name	Designation
3.	Mrs. Jyoti Sharma	Assistant Professor
4.	Mr. Gaurav Jain	Assistant Professor
5.	Mr. Snehanishu Shekhar	Assistant Professor
6.	Mr. Puneet Sharma	Assistant Professor
<b>Department of Sciences</b>		
1.	Dr. Anand Kumar Srivastava	Assistant Professor & In-Charge
2.	Dr. Gurminder Singh	Associate Professor
3.	Dr. Ranjana Agarwal	Assistant Professor
4.	Dr. Dheeraj Bhardwaj	Assistant Professor
5.	Dr. Indra Kumar Dadheech	Assistant Professor
6.	Dr. Bhawna Agarwal	Assistant Professor
7.	Dr. Ravindra Kumar	Associate Lecturer
8.	Mrs. Nidhi Singh	Associate Lecturer
9.	Dr. Rajni Agarwal	Technical Superintendent
<b>Department of Management</b>		
1.	Dr. Roopali Sharma	Professor
2.	Mr. S.C. Mishra	Associate Professor
3.	Dr. Jyoti Kumar Chandel	Assistant Professor
4.	Dr. Ritu Pareek	Assistant Professor
5.	Dr. Priyanshu Sharma	Associate Lecturer
6.	Mrs. Purvi Mathur	Associate Lecturer
<b>Department of Animation &amp; Multimedia</b>		
1.	Dr. Vibhuti Pandya	Asst. Professor
2.	Mr. Gautam Kumar Goswami	Asst. Professor
3.	Mr. Gaurav Choudhary	Asst. Professor
4.	Mr. Manish Kumar	Asst. Professor
5.	Dr. Rishika Sharma	Asst. Professor
6.	Mr Obed H. Longvah	Cameraman

### 6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	-	-	-
2.	-	-	-



#### 6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Dr. Madhavi Sinha	Associate Prof. & In Charge	Nominee of BIT Jaipur Campus for BCA and B.Tech. (AI) BOS
2.	Dr. Madhavi Sinha	Associate Prof. & In Charge	External Member of BOS in VGU University, Jaipur External Member of BOS in Apex University, Jaipur
3.	Dr. Shripal Vijayvergiya	Associate Professor	Nominee of BIT Jaipur Campus for B.Tech. (AI) BOS
4.	Dr. P. S. Rathore	Incharge EEE	Internal Member
5.	Dr. Roopali Sharma	Professor	Representing BIT, Off Jaipur Campus in BOS of Management Department, BIT Mesra.

#### 6.5 Student Entrepreneurship activities/Start-ups if any:

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
1.	Abhishekk Handa	Self	Startup circle (Started in 2023)	Startup Circle takes the guesswork out of entrepreneurship with Personalised AI Bot, Task Management, and AI-built User Surveys.

### SECTION 7

### OTHER INFORMATION

#### 7.1 Publication by students, if any

##### Publications in Journals: (International/National)

1. Deepak Verma, Khushi Jain, Deepak Agrawal (2023) "The amalgamation of various LED driver topologies" Journal of Nanoelectronics and Optoelectronics (2023). Accepted for publication [SCI and SCOPUS indexed]

##### Publications in Proceedings: (International/National)

2. Radheyshree Agrawal, Archana Bhatnagar, Piyush Gupta (2023), "Study of Environmental Impact of Computation and Rise of Green Computing", International Conference on Recent Trends in Engineering and Sciences (RTES-2023), May 02-03, 2023 organized by SVNIT Surat, India.
3. Yamini Kumawat, Shrinivas Shukla, Deepak Verma, Prashant Singh Rathore (2023). Wireless Energy Harvesting and Transfer: A Comprehensive Review of Recent Developments. IEEE Renewable Energy and Sustainable

- E-Mobility Conference (RESEM) 2023. 17 to 18 May 2023 MANIT Bhopal.
4. Palak Gupta, Rohan Verma, Deepak Verma, Prashant Singh Rathore (2023). Building a Stronger Grid: How Blockchain Can Improve Smart Grid Resilience. IEEE Renewable Energy and Sustainable E-Mobility Conference (RESEM) 2023. 17 to 18 May 2023 MANIT Bhopal.
5. Rahul Jangid, Deepak Verma and Prashant Singh Rathore, "Implementation and Analysis of Inductor-less MPPT controlled Reflex Wave Charging of Lead-Acid Battery" 2022 IEEE 6th International Conference on Condition Assessment Techniques in Electrical Systems (IEEE CATCON 2022) December 17-19, 2022. NIT Durgapur India
6. Khushi Jain, Deepak Verma and Prashant Singh Rathore, "Assessment of Blockchain based Energy Trading methods for Electric Vehicles" 2022 IEEE 6th International Conference on Condition Assessment Techniques in Electrical Systems (IEEE CATCON 2022) December 17-19, 2022. NIT Durgapur India

## 7.2 Achievements of Students:

Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
1.	Keshav Sharma (MCA/25019/22)	Notable participant in FOSSEE Mapathon 2023.	IIT Bombay	February 22 to May 06, 2023.
2.	Akanksha Dadheech (BTECH/25004/17)	AIR 460 in GATE 2023	-	-
3.	Kartik Sharma, Tanishq Sharma and Shubham Kumar Sain	B.Tech.-CSE-II Second Prize "Think and Bring Idea Competition" Project Title: Pollution Control of Metro City by DBD Plasma Filter.	Institute of Advanced Research, Gandhinagar.	2022, Online

## 7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr. Vinod Purohit, RAS, Secretary, Rajasthan State Text Book Board, Jaipur.	08/08/2022	
2.	Mr. Harshit Malviya, Deputy Vice-President & Head HR- Commercial Banking & Government Banking, AU Small Finance Bank, Jaipur	06/09/2022	

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
3.	<p>Ms. Monika Kowaleczko, Animation Film Maker (Poland)</p> <p>Ms. Innava, Film Writer (Hungary)</p> <p>&amp;</p> <p>Mr. Chandra Shekhar, Documentary Film Maker &amp; Writer (New Delhi)</p> <p>Animation and Multimedia Dept. had interaction with international guests on Animation and Documentary film making with three eminent international guests- Ms. Monika (from Poland), Ms. Innava (Hungary) and Mr. Chandra Shekhar (from New Delhi).</p>	27/08/ 2022	
4.	<p>Mr. Hanuroj</p> <p>Director, Jaipur International Film Festival (JIFF)</p> <p>Director of Jaipur International Film Festival visited BIT Jaipur Campus and they interacted with students and showcase their work, and also discussed about their upcoming event – JIFF 2023 (from 6th to 10th Jan. 2023). Students and Faculty members attended this session.</p>	17/12/2022	
5.	<p>Ms. Mugdha Sinha, IAS</p> <p>Secretary, DST, Government of Rajasthan</p> <p>Ms. Mugdha Sinha, IAS, Secretary, DST, Government of Rajasthan, inaugurated Animation Design Exhibition at Animation &amp; Multimedia department of Birla Institute of Technology, Mesra, Off-Campus Jaipur on 22 August 2022.</p>	22/08/2022	



#### 7.4 List of Distinguished Alumni

Sr. No	Name, Batch and Affiliation	Short Description
1.	Aashish Singh, MBA (2006-08)	Program Director - Digital Transformation and Services Transition, at HCL America Inc.
2.	Kriti Bajaj, MBA (2006-08)	Business Research, Financial Analyst, Market Intelligence Sengkang, Singapore
3.	Pranay Mathur, BBA (2004-07)	Founder, Wedigtech, Real Time Accelerator Fund, Jaipur
4.	Shreyansh Jain, (BBA 2016-19)	Founder, IBV Technologies Private Limited, Jaipur
5.	Shruti Gupta, (BBA 2016-19)	Co- Founder, IBV Technologies Private Limited, Jaipur
6.	Hansjeet Duggal, M.Sc. Animation Design, BIT Jaipur Campus Batch: 2011	Hansjeet Duggal is an eminent Visual Effects Director in Hollywood. Recently, he has collaborated with Well-Known Hollywood director Ben Affleck on multiple projects. Duggal was part of two Student Oscar winning projects — Gardeners of the Forest and It's Just A Gun. His animation short films were screened in many international film festivals including a reputed film festival- ANNECY, France. Also, he is a Jury Member of many international film festivals including Jaipur International Film Festival.

#### 7.5 Infrastructure Development.

Audio Visual Lab is established in the Department of Animation & Multimedia, BIT Jaipur.

#### 8. Special Initiatives if any:

- M.Sc. Bioinformatics & Computational Biology course is introduced with Post Graduate Diploma in Bioinformatics and Computational Biology after Ist year and Degree after IInd year. This is as per NEP 2020.
- B.Tech. in Artificial Intelligence (AI) course has been introduced in the year 2023.
- Lateral Entry is introduced in B.Tech. courses from the current year.
- BCA course is redesigned with Certification in Computer Application after Ist year, Diploma in Computer Applications after IInd year, Degree after IIIrd year and BCA Honours after completion of the IVth year. This is as per NEP 2020. Dr. Madhavi Sinha is the coordinator for the course structure and syllabus design for the BCA course.
- BBA course is with Certification in Business Administration after Ist year, Diploma in Business Administration after IInd year, Degree after IIIrd year and Bachelor's Degree with Honours or Bachelor's Degree Honours with Research after completion of IVth year. This is as per NEP 2020. Dr. Roopali Sharma is the coordinator for the course structure and syllabus design for BBA course.
- BAM course is also providing with Certification in Animation & Multimedia after Ist year, Diploma in Animation & Multimedia after IInd year, Degree after IIIrd year and B.Sc. Animation with Multimedia with Honours after completion of IVth year. This is as per NEP 2020. Dr. Vibhuti Pandya is the coordinator for the course structure and syllabus design for BAM course.
- Dr. Peeyush Tewari: (a) ATAL FDP TALK - Faculty Development Program on PEDAGOGICAL DESIGN THINKING FOR DIGITAL EMPLOYABILITY", from 5th to 16th December 2022, Alagappa University, Karaikudi - 630004. Tamilnadu. India. (b) ATAL FDP TALK: Digital Supply Chain and Logistics 4.0 on Research Methodology, MNIT Jaipur, AICTE TRAINING AND LEARNING (ATAL) ACADEMY, NEW DELHI, 16-17th Jan 2023.
- Dr. Peeyush Tewari, Conference Chairman: International Conference on Contemporary Trends in Multidisciplinary Research and Innovation, 27-28th July 2023, (ICCTMRI-2023)
- Dr. Peeyush Tewari, Conference Co-organizing Secretary: 88th Annual Conference of Indian Mathematical Society, An International Meet, BIT Mesra, Ranchi, 27-30, Dec 2022.



## BIT Off Campus : LALPUR

### SECTION 1

### PROFILE



#### 1.1 About the Off Campus:

With a vision to inspire young minds and professionals, BIT Lalpur Campus Ranchi, was started initially with part-time courses in 1998. Currently, Master of Business Administration (MBA), Master of Computer Application (MCA), Bachelor of Business Administration (BBA), Bachelor of Computer Application (BCA) programs, and Ph.D. are being offered by the institute.

#### 1.2 About the Department of Computer Science:

##### Vision

The department of Computer Science, BITOC, Lalpur strives relentlessly to develop and maintain its recognition as an institute of repute well known in the industry & academia for developing and nurturing professionals and innovators who can play a significant role in positively contributing to the society.

##### Mission

1. To impart quality education in tune with the present times and also empower the students with a solid foundation to ensure that they develop as complete professionals who can handle challenges of the modern era with full confidence.
2. To develop and maintain state of art

research infrastructure and facilities for our students and staff with mutually beneficial collaborations with leading universities, industries and research bodies across the globe to continually improve the quality of education and research.

#### 1.3: About the Department of Management:

##### Vision

The department of Management, BITOC, Lalpur strives relentlessly to develop and maintain its recognition as a frontrunner in contemporary management education in the country and contribute positively towards nation-building through excellence in education, research and development activities.

##### Mission

1. To educate students across under graduate, post graduate and doctoral levels with a view to equip them with the requisite skills for emerging as successful managers, leaders, entrepreneurs and researchers in the modern era.
2. To provide excellent research and development facilities for faculty and students to undertake contemporarily relevant theoretical and applied research.



## SECTION 2

## SEMINAR / CONFERENCE

## 2.1 Seminar / Conferences / Short – Term Courses Conducted:

S. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1	Five-day National Workshop on "Digital Marketing"	Dr. Abhaya Ranjan Srivastava	BIT Mesra	04-08 Jul, 2022
2	Five day Workshop on Introduction to data analytics using open source software (R and Python) [IDOSS 2022]	Dr. P S Bishnu Dr. Umesh Prasad Dr. Soumitro Chakravarty	BIT Mesra	13-17 Dec, 2022

## 2.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Shruti G V, Mili Dutta & Pranab Kumar	Reshaping Talent Management strategies using Technology in the workplace to provide better Employee Experience	International Conference on Advances in Management and Technology	Jaypee Business School, IIIT, Noida Virtual.	Jaypee Business School, IIIT, Noida Virtual.	2023
2	Shruti G V, Mili Dutta & Pranab Kumar	The Technology used for Talent Management and Retention to provide a better Employee Experience in the workplace	XVIIIth International Conference on Jagannath Institute of Management School Kalkaji, New Delhi (JIMS Kalkaji)	Jagannath Institute of Management School Kalkaji, New Delhi	Jagannath Institute of Management School Kalkaji, New Delhi	2023
3	Ashutosh Mishra	Circular Economy Approach for Sustainable Rural Development	National Seminar on Rural Transformation: Prospects and Challenges, University Department of Management	Vinoba Bhave University, Hazaribag	Vinoba Bhave University, Hazaribag	2023
4	Pooja Yadav and Abhaya Ranjan Srivastava	An analysis on the effect of employee engagement on job satisfaction: A study on Public Sector Banks	5th International Conference on Banking and Finance	IMI, Bhubaneswar	IMI, Bhubaneswar	2023



## वार्षिक प्रतिवेदन 2022-2023

S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
5	Anuradha Sharma, Anjali Sharma and Vandana Bhattacharjee	Breast Cancer Prediction: Impact of Stratified Sampling Approach on Classifier Accuracy	International Conference on Artificial Intelligence and Smart Communication (AISC),	Greater Noida, India	Greater Noida, India	2023
6	Partha Sarathi Bishnu, Anirban Pal	RNN-DNN Based Stress Detection using Sensors Data	International conference on global mental health and public health challenges & innovation, GMHPHCI '22	IIIT, Ranchi	IIIT, Ranchi	25-27 Dec, 2022
7	Onima Tigga, Jaya Pal and Debjani Mustafi	A Comparative Study of Rule Based Classifier and Decision Tree in Machine Learning	4th International Conference on Soft Computing and its Engineering Applications (icSoftComp2022), CHARUSAT	Changa, India		09-10 Dec, 2022
8	Onima Tigga, Jaya Pal and Debjani Mustafi	A Comparative Study of Multiple Linear Regression and K Nearest Neighbours using Machine Learning	Fifth IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT 2023),	Velalar College of Engineering & Technologies	Erode, Tamil Nadu, India	22-24 Feb, 2023
9	Arunima Asthana, Tanmoy Kr. Banerjee and Shubhamoy Dey	Effects of Digitisation on Banknote Durability	4th International Conference on Evidence-Based Management.	Dept. of Management, BITS Pilani - Pilani Campus	BITS Pilani	24-25 Feb, 2023
10	Vibhuti, Harshit Kumar, Mahua Banerjee	Process Mining: An Emerging Tool for Data Science and Process Management	National Conference on Advances in Engineering and Technology (NCAET - 23),	Kolkata, India	Kolkata, India	19 Mar, 2023
11	Swati Minz, Pradeep Munda, Milli Dutta, Gaurav Abhishek Tigga and Mahua Banerjee	Proximal and distal determinants of police personal 's work life balance and their leadership skill	XVIII International Conference on "Business Leadership in VUCA world: Driving Growth through effective integration of people technology and the environment	Jagannath Institute of Management School, Kalkaji, New Delhi (Online)	Kalkaji, New Delhi	17-18 Feb, 2023

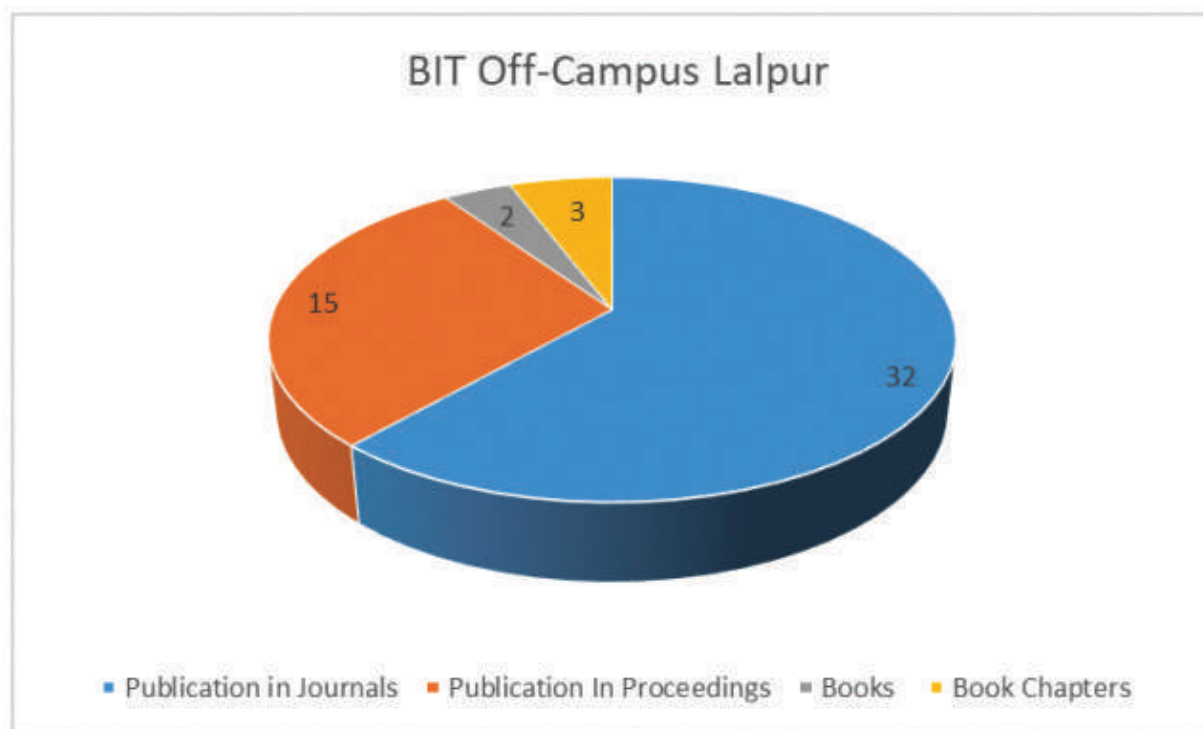


S. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
12	Ashok Ramavat, Vandana Bhattacharjee, Sanjay Kumar	A Machine Learning approach to predict the rating of a team using Regression Algorithms	3rd International Conference on Machine Learning and Information Processing, (ICMLIP-2023)	Usha Martin University, Ranchi, India	Usha Martin University, Ranchi, India	25-26 Feb, 2023
13	Swati Minz	Education: still a distant dream for girls?	National conference on "emerging trends in innovative and sustainable business practices	Faculty of Commerce & Management SBU	SBU, Ranchi, Jharkhand	13-14 Oct, 2022
14	Dr Jaya Pal, Vijayalakshmi Sarraju & Supreeti Kamilya	Performance Analysis of Supervised Learning Algorithms on Different Applications	9th International Conference on Foundations of Computer Science & Technology (CST 2022).		Chennai, India	12-13Nov, 2022
15	Dr. Umesh Prasad, Dr. Soumitro Chakravarty	Agricultural Water Saving through IoT Based Smart Irrigation System	International Conference on Innovating Technologies & Intelligent Systems (ICITIS-2023	Department of Computer Application & Information Technology, Center for Vocational Studies, YSN College, Ranchi		24-25 Feb, 2023
16	Mamata Pandey, Anup Kumar Keshri	QRS Detection in digital ECG signal using Deterministic Finite Automata	Fifth IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT 2023)	Velalar College of Engineering & Technology	Erode, Tamil Nadu	22-24, Feb, 2023
17	Choudhary N., Sinha, A.P., Mukherjee, S	Imperatives of Service Innovation on Customer Satisfaction And Loyalty: Perspective Of Indian Retail Banking Sector	International Marketing Conference-II, IIM Shillong, Meghalaya	IIM Shillong	Meghalaya	24-25 Aug, 2022
18	Choudhary N., Sinha, A.P., Mukherjee, S	Exploring Employee Involvement in Service Innovation: Study of Indian Retail Banking Sector	International Conference on Contemporary Issues in Emerging Markets (CIEMC 2022), IIM Bodh Gaya, Bihar, India	IIM Bodh Gaya	Bodh Gaya Bihar, India	28-29 Oct, 2022



### SECTION 3

### RESEARCH PUBLICATIONS



### SECTION 4

### AWARD / PATENT / COLLABORATIONS

#### 4.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State/ National/ International Level	Year / Duration
1	Dr. Soumitro Chakravarty	Research Excellence Award	The Scientific International Publishing House, registered under the ministry of SME, Government Of India	National	March 2023
2	Dr. Umesh Prasad	Research Excellence Award	The Scientific International Publishing House, registered under the ministry of SME, Government Of India	National	March 2023

#### 4.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1	Dr. G P Mishra & others	A system and method for managing and accessing Digital content	Patent Application No.] TEMP/E-1/ 41401/2023- MUM	2023	The patent refers to the technical field of controlling devices and in specific, relates to a system that manages and gains access to digital content through multiple interfaces.



Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
2	S P Singh, Siva Surya Narayana Chintapalli, Vijaya Lakshmi Chintapalli, Ms. Pammi Kumari	IoT HEALTH MONITORING DEVICE	369242-001	2023	The Novelty resides in the shape and configuration of the 'IOT HEALTH MONITORING DEVICE'. Novelty in the rear, front, top, bottom, right side, and left side view of the device design. This registration made it in respect of any mechanical or other action of the mechanism or any mode or principle of construction of the article. The design is neither restricted to any colour nor a combination of colours. It is more useful in hospitals.
3	S P Singh, Siva Surya Narayana Chintapalli, Vijaya Lakshmi Chintapalli	IoT Based Camera for Healthcare Management	378611-001	2023	The novelty resides in the shape and configuration of the "IOT BASED CAMERA FOR HEALTHCARE MANAGEMENT". Novelty in the rear, front, top, bottom, right side, and left side view of the device. The device is helpful in Healthcare Management Systems.
4	Mrs. Vijaya Lakshmi Chintapalli, Dr. Siva Surya Narayana Chintapalli, Dr. Satya Prakash Singh	AI and Image Processing Based Medicine Stock Maintenance System for Hospitals	202331035281 A	2023	Artificial intelligence (AI) is a powerful and disruptive area of computer science, with the potential to fundamentally transform the practice of medicine and the delivery of healthcare. In this review article, we outline recent breakthroughs in the application of AI in healthcare, describe a roadmap to building effective, reliable, and safe AI systems, and discuss the possible future direction of AI augmented healthcare systems. Medical facilities and big healthcare organizations are tasked with the responsibility of managing a sizable inventory. A Hospital Management Inventory is basically a stock or data of all the medical resources such as equipment, medicines, and patient's health data that are generally found in any small or large healthcare facility.



#### 4.3 MoUs / Collaborations:

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1	Shriram Life Insurance Company Limited	To facilitate students' training & placement opportunities	2022-25
2	An MOU between Birla Institute of Technology, Off Campus Lalpur and The Jharkhand State Cooperative Milk Producer's Federation Ltd.		
3	Perennation Computer Solutions Global Private Limited, Kolkata		

#### SECTION 5

#### ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

##### 5.1. List of Faculties as on 30.6.2022

##### Department: Computer Science & Engineering

Sl. No.	Name of Faculty	Designation
1	Dr.Vandana Bhattacharjee	(Professor) Director In-Charge
2	Dr. (Mrs.)Srabani Mukhopadhyaya	Associate Professor
3	Dr. (Mrs.) Amrita Priyam	Associate Professor
4	Mrs. Onima Tigga	Assistant Professor
5	Dr. Sanjay Kumar	Assistant Professor
6	Mr. Amar Kumar	Assistant Professor
7	Dr. Nagendra Prasad Tiwary	Assistant Professor
8	Dr. N.K. Singh	Assistant Professor
9	Dr. Partha Sarthi Bishnu	Assistant Professor
10	Dr. Binod Kumar Sharma	Assistant Professor
11	Dr. Kuntal Mukherjee	Assistant Professor
12	Dr. (Ms.) Jaya Pal	Assistant Professor
13	Dr. Umesh Prasad	Assistant Professor
14	Dr. (Mrs.) Siba Mitra	Assistant Professor
15	Dr. Siva Surya Narayana Chintapalli	Assistant Professor
16	Dr. Amrita Sarkar	Assistant Professor
17	Mr. Deepak Kumar Mishra	Associate Lecturer
18	Dr. (Mrs.) Aparna Shukla	Associate Lecturer
19	Mr. Hareshwar Prasad	Associate Lecturer
20	Mr. Khalid Ashraf	Associate Lecturer
21	Mrs. Vijaya Lakshmi Chintapalli	Sr. Scientific Officer
22	Mr. Shubhojeet Paul	Visiting Assistant Professor
23	Ms. Mamata Pandey	Visiting Assistant Professor
24	Mr. Dhananjay Kumar	Visiting Assistant Professor
25	Ms. Kimmi Kumari	Visiting Assistant Professor

**Department: Management**

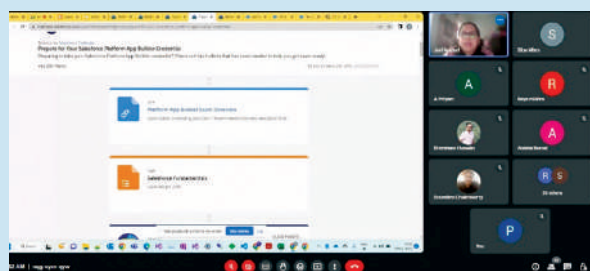
Sl. No.	Name of Faculty	Designation
1	Dr. Pranab Kumar	Associate Professor
2	Dr. Arun Kumar Singh	Assistant Professor
3	Dr. Abhay Ranjan Srivastava	Assistant Professor
4	Ms. Anupma Sahai	Assistant Professor
5	Dr. Somnath Mukherjee	Assistant Professor
6	Dr. Sandeep Nath Sahdeo	Assistant Professor
7	Dr. Syed Anis Haider	Assistant Professor
8	Dr. Ashutosh Mishra	Assistant Professor
9	Mr. Amitabh Chandan	Assistant Professor
10	Dr. (Mrs.) Mili Dutta	Assistant Professor
11	Dr. Pradeep Munda	Assistant Professor
12	Dr. Soumitro Chakravarty	Assistant Professor
13	Dr. Avinash Kumar Sinha	Assistant Professor
14	Dr. Jaleshwar Bhagat	Assistant Professor
15	Dr. Satrajeet Choudhury	Assistant Professor
16	Dr. Tanmoy Kumar Banerjee	Assistant Professor
17	Dr. B.N.Sanyal	Assistant Professor
18	Mr. Prashant Kumar Singh	Assistant Professor
19	Dr. Mahua Banerjee	Visiting Assistant Professor
20	Dr. Swati Minz	Visiting Assistant Professor
21	Dr. Gaurav Abhishek Tigga	Visiting Assistant Professor

**SECTION 6****ANY OTHER RELEVANT INFORMATION****6.1 PhD Supervision:**

S. No.	Name of Supervisor	Name of the research scholar	Date of registration	Date of award (Ph.D Viva Voce)
1	Dr. Sandeep Nath Sahdeo	Mrs. Maya Singh	16-04-2014	23-07-2022
2	Dr. S. Anis Haider	Sumona Das	04-02-2014	24-08-2022
3	Dr. Arun Kumar Singh	Yasmin Yaqub	21-12-2016	13-09-2022
4	Dr. S Mukherjee	Evelina Sahay	17-12-2014	05-04-2023
5	Dr. Sandeep Nath Sahdeo	Farhan Alam	10-03-2014	10-08-2022



A Guest Lecture Series on "Introduction to Salesforce and its ecosystem" on 4/2/23. The resource person was Mrs. Juni Kumari (Senior manager, Pepsi Co. Inc.; BCA (gold medalist) & MCA from BIT Lalpur). The session was attended by a large number of students and faculty members of the campus.



Interclass and Inter-Society Volleyball tournament held at BIT Lalpur from 6/2/23 to 8/2/23. BCA VI emerged as the winners with IT society being the runners up. Multiple number of teams across departments and societies participated with great enthusiasm in the event.



Eureka - A Bizwit Society Event (Bet or Debt & Roads to Attainment) was organized on 13/2/23



BIT Lalpur observed Black Day on 14/2/23 to remember the martyrs of Pulwama Attack.



As an effort towards promoting a green and clean environment, a 'Plantation Drive' was carried out by NSS Wing, BIT Mesra, Lalpur Campus.





E-Waste Awareness Program was organized by the Circular Economy Study Group, BIT Off Campus Lalpur, in collaboration with Ranchi Municipal Corporation & Hulladek Recycling, Kolkata. Awareness session on e-Waste for faculty members and students was conducted, along with a poster making and model designing competition for students. The prizes were sponsored by Ranchi Municipal Corporation.



### Students' Annual Fest

A two day students' fest AURORA 2023 was organized at BIT Lalpur Campus on 22nd – 23rd March, 2023. Dean of Admission, Accreditation and Coordination (DAAC), Prof. Sudip Das was present as the Chief Guest and inaugurated the event. Dean of Students' affairs (DOSA), Dr. Bhaskar Karn was present as the Chief Guest for the CODEFEST organized by the IT society as part of AURORA '23.

Various technical, socio-cultural and sports events were conducted namely,  
CODEFEST,  
FOOD-PRENEUR,  
KHEL KABADDI,  
AD GURU,  
MODEL UNITED NATIONS, SERIES BUZZER,  
BRANDING REBRANDING,  
ACES,  
ART-SI CRAFTS,  
ATTIRE SPECTRA,  
WORDSWORTH,  
SPEEDSTER,  
TUG OF WAR,  
TRIVIA – THE MASTER MIND, GET SET KHO,  
FEATURETTE,  
FASHION ILLUSTRATION and FACE PAINTING.



Smart India Hackathon (26-27 August 2022) : BITOC Lalpur students emerged as the 1st prize winners in Smart India Hackathon 2022. The Team of MCA students composed of Mr. Rahul Kant (Team Leader), Ms. Anshu Kumari, Ms. Ruchika Vijay, Mr. Soumyak Biswas and Ms. Swati Rani were declared 1st prize winners. The Team of BCA students composed of Mr. Aakash Arya (Team Leader), Mr. Aman Kumar, Mr. Harsh Raj, Mr. Shubham Kumar Singh, Ms. Puja Kumari and Ms. Kriti Shekhar were declared joint winners.



#### Blood Donation Camp 16 September 2022

As part of social responsibility in these troubled times, a blood donation camp was organized by DRISHTI NGO in collaboration with SEVA SADAN blood bank at BITOC Lalpur on 16th September 2022. High level of enthusiasm and cooperation was shown by the students of our campus, and under the guidance of center director and other faculty members, diligently supported by other staff members, total of 56 Units of blood were donated by the students and staff members.



#### VIIth Degree Distribution ceremony

The VIIth Degree Distribution ceremony was conducted at BITOC, Lalpur on Dec. 18, 2022. A total of 583 students across various disciplines collected their respective degrees and diplomas in the presence of Honourable Speaker, Jharkhand Legislative Assembly, Shri Rabindra Nath Mahto who graced the occasion as a chief guest.



#### Workshop on Introduction to data analytics using open source software (R and Python) [IDOSS 2022] 13 - 17 December 2022

A five day workshop on Introduction to data analytics using open source software was organized by the department of Computer Science in the period December 13, 2022 to December 17, 2022 at BIT Mesra, Lalpur Off Campus, Ranchi. The workshop served as a potent platform for providing a solid foundation to participants who aspire to develop a career in the fast-growing field of Data Sciences. It was attended by students, academicians and practicing researchers who benefited from the theory as well as practical sessions conducted during the workshop by eminent speakers across the country.



#### One-day Workshop on "Enriching the Quality of Teaching-Learning Process in the Present Scenario" was conducted on 16th May 2023 Organized by Value Education Cell Birla Institute of Technology, Mesra, Ranchi



#### National Workshop on "Digital Marketing" 04 – 08 July 2022

A One Weeklong Online National Workshop on 'Digital Marketing' was organized by the department of management BITOC, Lalpur. The workshop served as a platform for exchange of knowledge among practicing academicians and professionals across the globe.



## BIT Mesra Off Campus : Noida

### SECTION 1

### DEPARTMENTAL PROFILE



### 1. About the Off Campus:

Birla Institute of Technology, Noida Campus is one of the leading Technical Institutions in the National Capital Region in the State of Uttar Pradesh. Established in the year 1997, the Institution has set bench marks every year, and grown into an Institution of Excellence in Technical Education. Located at the entrance of NOIDA, BIT Noida Campus has become a household name for its excellence in Discipline,

Teaching, Training and Placement. Its rich academic tradition has always attracted the most talented students who later on went on to make important contributions to the society.

### Facilities Provided

- In order to nurture effective learning among students, all class rooms are well equipped with AC and LCD Projectors.
- The Institute has a well-stocked library with



more than 5000 volumes on various subjects along with latest editions of prescribed books, several periodicals, journals and high value books to give the students a winning edge.

- The centre believes in holistic personality development of students providing ample space for their recreational activities like – Canteen, Auditorium, Table Tennis space, and badminton, a centralised college computer centre and fully equipped labs.
- The centre is well equipped with e-journals (Emerald, ProQuest ABI Complete, Pro Quest Dissertations & Thesis, Science Direct), and research software like MATLAB and dedicated internet facility for the research scholars.

### Academic Programmes Offered:

#### Under Graduate Courses:

Bachelor in Business Administration (BBA) –	3 years
Bachelor in Computer Applications (BCA) –	3 years

#### Post Graduate Courses:

Masters in Business Administration –	2 years
Masters in Computer Applications –	2 years

Ph.D. in Management, Computer Science & Mathematics (Full Time & Part Time)

### Department: Computer Science & Engineering

#### Overview

Computer Science Department at BIT Mesra off Campus Noida campus endeavours to be an important regional, national, and international resource center for the development of computing, IT systems and applications. The Department is recognized as one of the leading departments with infrastructure and facilities to match the very best in the country. The department remains committed towards its mission, which is twofold. One is to provide students with the fundamental knowledge and problem solving skills in Computer Science required for a fulfilling career. The other goal is to create and disseminate knowledge to improve Computer Science research, education and practice.

#### Vision

The department strives to be recognized for outstanding education and research, leading to excellent professionals and innovators in the field of Computer Science and Engineering, who can positively contribute to the society.

#### Mission

The mission of the department is to impart quality education and research, to produce innovative and globally competent technocrats as well as young researchers having sound knowledge in the fields of Computer Science & Engineering.

1. To impart quality education and equip the students with strong foundation that could make them capable of handling challenges of the new century.
2. To maintain state of the art research facilities and facilitate interaction with world's leading universities, industries and research organization for constant improvement in the quality of education and research.

### Department: Management

#### Overview

The Department of Management was established in the year 1998 with an aim to serve growing need for qualified management professionals and to meet the requirements of the industry in the competitive and dynamic business environment. The department has continuously strived to achieve this aim by maintaining the highest standards in the Undergraduate (BBA), Postgraduate (MBA) and Doctoral Programmes offered by it.

The strategic location of BIT Noida Campus provides an added advantage to its management students. Due to its prime location in commercial hub of Noida and proximity to Delhi, the students have easy and quick access to the industry, which fulfills their need for continuous industry-interaction.

#### Vision

To be recognized as a frontrunner in Management education in the country in consonance with the social, economic and ecological environment while striving to contribute to nation building through excellence in research and development activities.



## Mission

- To educate students at Undergraduate, Postgraduate and Doctoral level to perform challenging managerial jobs in industry as a leader and achieve excellence as Entrepreneurs and Researchers.
- To provide excellent research and development facilities for faculty and students to undertake path breaking theoretical and applied research.
- To build national capabilities in management education and research in emerging areas.
- To uphold the values of Personal Integrity and Social Responsibility in all our decisions.

## Department: Animation & Multimedia

BIT Off Campus Noida was the first major institute to start Animation and Multimedia

as an Under-graduate course. The B.Sc. Animation and Multimedia program was started under University Grants Commission of India's Innovative Program Scheme in the year 2004.

After 16 years of existence, the Department of Animation and Multimedia, Noida campus is the proud home of many achievements and firsts.

The department has a high-end computer lab with the latest versions of graphics, 3D Modeling and Animation, Video Editing and Game Design software. A 2D lab for drawing with 40 light boxes, line-testing facility, dummies and mannequins is there. The department also has a Studio with professional lighting facilities, DSLR camera, for still and video recording and blue-green screen sets for compositing.

## SECTION 2

## RESEARCH PROJECTS

### 2.1 Sponsored Projects (Research and Consultancy)

#### a) Ongoing Projects:

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	The Rural youth from Enrollment to Employment: Role of New National Education Policy-2020 in Re-Imagining Vocational Education with Experiential Learning through Higher Education Institutions	Prof. (Dr.) S.L. Gupta and Dr. Arun Mittal	Mahatma Gandhi National Council for Rural Education	21.09.2021	Rs. 5.5 lakhs	1 year
2.	Role of Women Entrepreneurship in Holistic Empowerment of Women: An Empirical study of Semi-urban and Urban women Entrepreneurs	Dr. Arun Mittal	Indian Council of Social Science Research	12.03.2022	Rs. 7.5 lakhs	1 year

#### b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1.	Impact of Green Brand Image on Green Brand Equity and Green Purchase Intention in Indian Banking Sector	Dr. Meenakshi Sharma	ICSSR	January 1, 2021	Rs. 16,00,000	17.07.2023



## c) Consultancy Projects carried out/ongoing

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator / Co- Investigator	Ongoing / Completed*
			from	to			
1.	Digital Marketing Consultancy	Noida Lok Manch	May 2023	April 2024	1.44 Lakh	Dr. Arun Mittal	Ongoing

## SECTION 3

## SEMINAR / CONFERENCE

## 3.1 Seminar / Conferences / Short – Term Courses Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	National Workshop on Qualitative Data Analysis through NVIVO	Dr. Arun Mittal		03.06.2023
2.	International Conference on Innovations in Engineering and Management – Sustainability through Creativity and Innovation (ICIEM'23)	Prof. (Dr.) S.L. Gupta, Dr. Niket Mehta, Dr. Monika Bisht, Dr. Arun Mittal, Dr. B.B. Sagar, Ms. Priti Sharma and Mr. Rahul Dora	Indian Oil	01.06.2023 – 02.06.2023
3.	ATAL FDP on Design Thinking	Prof. (Dr.) S L Gupta, Dr. Monika Bisht	AICTE	27.02.2023 – 3.03.2023
4.	MDP on Multivariate Data Analysis	Dr. Arun Mittal		07.02.2023 – 11.02.2023
5.	Workshop on NBA	IQAC Cell		22.12.2022, 20.12.2022
6.	MDP on Internal Marketing, Leadership and Communication	Dr. Arun Mittal	Pest Shields India Pvt. Ltd.	11.12.2022 – 12.12.2022
7.	OBE Training using Inpods	Dr. Charu Wahi	--	02.11.2022
8.	MDP on Multivariate Analysis	Dr. Arun Mittal		30.07.2022 – 01.08.2022
9.	Workshop on CO-PO Attainment – Evaluation Tools	Dr. Swati Prasad	--	20.07.2022
10.	Lecture on How to write a Research Proposal	Dr. Charu Wahi	--	18.07.2022

## 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by

## Faculty Members

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Charu Wahi	1 week FDP on "Outcome Based Education through Student Centric Teaching Learning Process"	Self	BSIOTR Pune	Online	22.05.2023 – 26.05.2023

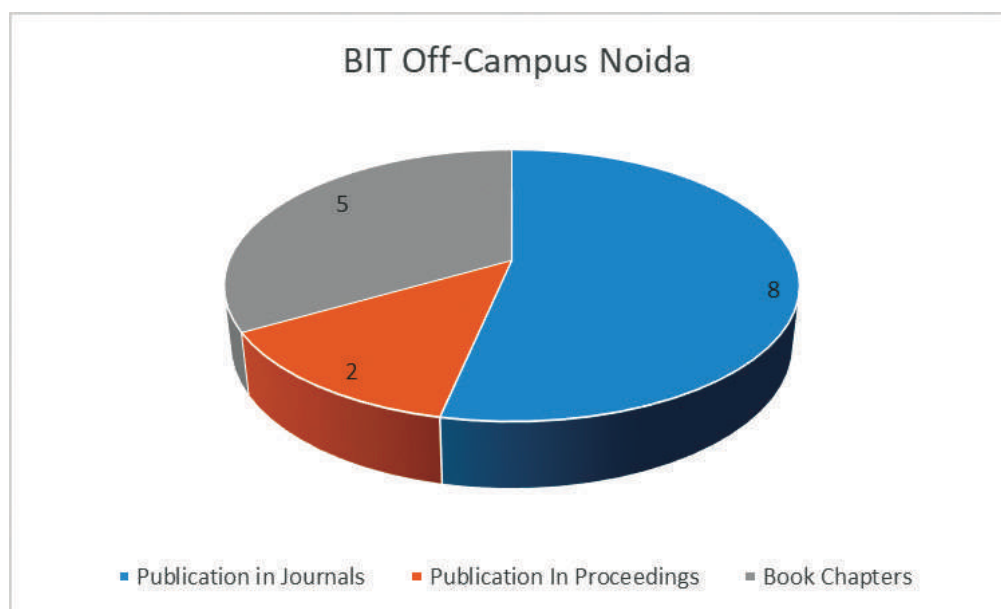


## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
2.	Seema Sharma, Priti Sharma	1 week FDP on "Cloud Practitioner (AWS)"	--	ICT Academy	Inderprastha Engg. College, Ghaziabad	22.05.2023 – 26.05.2023
3.	Rakesh Singh, Anurag Joshi, Dr. Abhishek Singh, Seema Sharma, Pramila Joshi, Rachana Pratik, Priti Sharma and Dr. Charu Wahi	Tech4Ed Expo & Conference 2023	--	ICT Academy	India Expo Centre & Mart, U.P.	28.04.2023
4.	Rahul Dora, Partha Acharya	Visit to East Point School	--	--	East Point School	13.03.2023
5.	Dr. Charu Wahi, Dr. Niket Mehta, Preety Bajaj, Dr. Meenakshi Sharma and Dr. Arun Mittal	ATAL FDP on Design Thinking	AICTE	BIT Noida	BIT Noida	20.02.2023 – 03.03.2023
6.	Mrinalini Mehta	1 week FDP on Ethical Hacking & Cyber Security	--		Online	03.04.2023 – 07.04.2023
7.	Dr. Charu Wahi	1 week FDP on Societal Applications of Machine Learning	--	Shri Vishnu Engineering College for Women, Bhimavaram	Online	26.12.2022 – 30.12.2022
8.	Mr. Lalit M. Bhatt	11th CII Big Picture Summit	--	CII	Le Meridien, Delhi	16.11.2022
9	Dr. Swati Prasad	International Conference on Digitalization of New Technologies Jointly with 39th GISFI STANDARDIZATION SERIES MEETING		The Institute of Technology & Science (ITS), Mohan Nagar, Ghaziabad, India	The Institute of Technology & Science (ITS), Mohan Nagar, Ghaziabad, India	29.08.2022 -30.08.2022

## SECTION 4

## RESEARCH PUBLICATIONS



## SECTION 5

## AWARD / PATENT / COLLABORATIONS

## 5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award/ Honour	Organisation	State / National/ International Level	Year / Duration
1.	Dr. Asha Prasad	Best Paper Presentation	BIT Mesra	National	19.05.2023

## 5.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1.	Dr. Smita Jha	Solar powered UV Water tank filtration system	202211063325	2022	Implementation of solar technologies in portable and remote power generation via non-battery system configurations



## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS /DAS

### 6.1 Departmental Students' Activities

(Please arrange in reverse chronological order: Latest first)

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1.	Research Scholar's Day	Sanjay Sonkar, Prashant Jha, Devanshi	Dr. B. B. Sagar	19.5.2023
2.	Student's Farewell	Prashant, Mangalam, Aditya, Ujjwal, Rupen, Shashwat, Aaradhya, Harshal, Avneesh, Ritika & Shreya	Pramila Joshi, Dr. Charu Wahi, Dr. Niket Mehta	12.5.2023
3.	Excursion Toor to Kanhatal		Dr. Abhishek Singh, Anurag Joshi	12.04.2023 – 13.04.2023
4.	Photowalk session		Mr. Lalit M. Bhatt	01.04.2023
5.	Hackathon'23		Seema Sharma, Anurag Joshi, Sheetal Dhir, Priti Sharma, Muntaha Ahmad, Dr. Charu Wahi	29.03.2023 – 04.04.2023
6.	High Impact Guest Lecture – Art of Mind Control		Preety Bajaj, Priti Sharma	22.03.2023
7.	Research Paper Writing and Publishing		Anurag Joshi	21.03.2023
8.	Pre-Placement Activity – Group Discussion		Dr. Charu Wahi, Seema Sharma, Muntaha Ahmad, Sheetal Sehgal	20.03.2023, 13.02.2023
9.	Annual Prize Distribution Ceremony 2023	Devanshi, Shashwat, Ujjwal, Rupen	Dr. Charu Wahi, Pramila Joshi, Dr. Niket Mehta, Umair Ujala, Sheetal Sehgal	17.03.2023
10.	National Level Inter-collegiate Business Plan competition	Raghav, Riya	Dr. Vibha Kaw Raina	15.03.2023
11.	High Impact Guest Lecture – Big Data Analytics using R		Preety Bajaj, Priti Sharma	15.03.2023
12.	Full Stack Development Career Opportunities with PrepBytes		Dr. Charu Wahi, Seema Sharma, Muntaha Ahmad, Sheetal Sehgal	13.03.2023
13.	Research Masterclass on How to Catch Fake/ Cloned / Predatory Journals in Academics		Dr. Arun Mittal	10.03.2023
14.	Mock Test on Data Structures		Sheetal Sehgal, Muntaha Ahmad, Dr. Charu Wahi, Seema Sharma	20.02.2023



Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
15.	Cultural Fest	Prashant, Annie, Koyana, Manas, Piyush, Pankaj	Pramila Joshi, Dr. Niket Mehta, Dr. Charu Wahi	09.02.2023 – 10.02.2023
16.	Industrial Visit to Mother Dairy		Rachana Pratik, Dr. Abhishek Singh	07.02.2023
17.	Awareness Session on Career Opportunities Abroad		Dr. Charu Wahi, Seema Sharma, Muntaha Ahmad, Sheetal Sehgal	07.02.2023
18.	Annual Sports		Umair Ujala, Sheetal Sehgal	03.02.2023 – 04.02.2023
19.	International Research Talk		Dr. Charu Wahi	03.02.2023
20.	High Impact Guest Lecture - Mental Health & Positive Psychiatry		Preety Bajaj, Priti Sharma	01.02.2023
21.	Research Paper Writing		Dr. Monika Bisht	31.01.2023
22.	Students Visit to National Commission for Medium Range Weather Forecasting, Noida		Seema Sharma, Priti Sharma	27.01.2023
23.	High Impact Guest Lecture - GST and its Implications		Priti Sharma, Preety Bajaj	25.01.2023
24.	Session on Effective Communication		Dr. Charu Wahi, Seema Sharma, Muntaha Ahmad, Sheetal Sehgal	23.01.2023
25.	Visit to Jaipur Literary Fest, Jaipur		Dr. Suparna Dutta	20.01.2023 – 22.01.2023
26.	Academia Industry Interaction Meet 2023		Dr. Monika Bisht, Ms. Rachna Pratik, Mr. Anurag Joshi & Mr. Partha Acharya	16.01.2023 – 21.01.2023
27.	Police ki Pathshala		CSR & NSS Club	13.01.2023
28.	High Impact Guest Lecture - Employability Skills for Future		Priti Sharma, Preety Bajaj	11.01.2023
29.	Session on Career Options in AI and ML		Dr. Charu Wahi, Seema Sharma, Muntaha Ahmad, Sheetal Sehgal	09.01.2023
30.	High Impact Guest Lecture - Employability Skills for Future		Priti Sharma, Preety Bajaj	04.01.2023
31.	Janjatiya Gaurav Diwas		Cultural Club & Photography Club	15.11.2022
32.	Diwali Bash		Pramila Joshi, Dr. Niket Mehta, Dr. Charu Wahi	20.10.2022



## वार्षिक प्रतिवेदन 2022-2023

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
33.	Elocution Competition		Rachana Pratik and CSR/NSS Club	20.10.2022
34.	BIT Techwiz 2.0		Seema Sharma, Priti Sharma	19.10.2022
35.	High Impact Guest Lecture – Expectations of Industry from Young Managers		Preety Bajaj, Priti Sharma	19.10.2022
36.	High Impact Guest Lecture – Personal Interview Skills		Preety Bajaj, Priti Sharma	12.10.2022
37.	Educational tour to Kanatal		Dr. Monika Bisht, Lalit M. Bhatt	23.09.2022 – 26.09.2022
38.	Industrial visit to Britannia Industries Ltd.		Dr. Abhishek Singh, Dr. Monika Bisht	22.09.2022
39.	Health checkup camp with Metro Hospital		NSS	14.09.2022
40.	Webinar on AI and ML		IT Club	12.09.2022
41.	Wellness and Body Evaluation camp		Umair Ujala, Dr. Swati Prasad	08.09.2022
42.	High Impact Guest Lecture – Data Science		Priti Sharma, Preety Bajaj	07.09.2022
43.	PG Orientation Programme		Dr. Monika Bisht, Anurag Joshi	05.09.2022 – 09.09.2022
44.	Toastmaster Demo meet		Dr. Suparna Dutta	03.09.2022 – 04.09.2022
45.	Guidance for International Studies for UG & PG students		Dr. Monika Bisht	02.09.2022
46.	Mock Interviews – 2nd Round		Dr. Charu Wahi	01.09.2022
47.	High Impact Guest Lecture – Personality Development		Preety Bajaj, Priti Sharma	31.08.2022
48.	Research Talk Series 9		Dr. Smita Jha	30.08.2022
49.	High Impact Guest Lecture – Digital Marketing		Preety Bajaj, Priti Sharma	24.08.2022
50.	Azadi ka Amrit Mahotsav		Pramila Joshi, Dr. Niket Mehta	18.08.2022
51.	High Impact Guest Lecture – Magic with Numbers		Preety Bajaj, Priti Sharma	17.08.2022
52.	Har Ghar Tiranga Nukkad Natak		NSS	12.08.2022
53.	High Impact Guest Lecture – Getting Career Ready		Priti Sharma, Preety Bajaj	10.08.2022
54.	UG Orientation Programme		Academic Coordinators	08.08.2022



Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
55.	Mock Sessions for Placement preparations of MCA students		Seema Sharma, Muntaha Ahmad, Sheetal Sehgal, Dr. Charu Wahi	25.07.2022 – 05.08.2022
56.	Research Talk Series 8		Dr. Smita Jha	22.07.2022

## 6.2. List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Dr. S. L. Gupta	Professor & Director
2.	Dr. (Mrs.) Asha Prasad	Professor
3.	Dr. (Mrs.) Meenakshi Sharma	Associate Professor
4.	Mrs. Rachana Pratik	Assistant Professor
5.	Mrs. Preety Bajaj	Assistant Professor
6.	Dr. Arun Mittal	Assistant Professor
7.	Dr. (Ms.) Monika Bisht	Assistant Professor
8.	Dr. Abhishek Singh	Assistant Professor
9.	Dr. (Mrs.) Suparna Dutta	Associate Professor
10.	Mrs. Sadhu Mallika	Assistant Professor
11.	Dr. (Mrs.) Ila Sahay Dayal	Associate Professor
12.	Mrs. Mrinalini Mehta	Assistant Professor
13.	Dr. (Mrs.) Vibha Kaw Raina	Assistant Professor
14.	Mrs. Soma Sircar Dasgupta	Assistant Professor
15.	Mr. Aruna Malik	Assistant Professor
16.	Mrs. Sheetal Sehgal	Assistant Professor
17.	Mrs. Pramila Joshi	Assistant Professor
18.	Mrs. Muntaha Ahmad	Assistant Professor
19.	Dr. (Mrs.) Smitha Jha	Assistant Professor
20.	Mr. Anurag Joshi	Assistant Professor
21.	Mrs. Priti Sharma	Assistant Professor
22.	Dr. (Ms.) Charu Wahi	Assistant Professor
23.	Mrs. Seema Sharma	Assistant Professor
24.	Dr. Bharat Bhushan Sagar	Assistant Professor
25.	Mr. Umair Ujala	Assistant Professor
26.	Mr. Sanjay Kumar	Assistant Professor
27.	Dr. (Mrs.) Swati Prasad	Assistant Professor
28.	Mr. Rakesh Singh	Associate Lecturer
29.	Dr. Niket Mehta	Assistant Professor
30.	Mr. Partha Acharya	Assistant Professor
31.	Mr. Kiran Ashok Shetti	Sr. Animation Trainer
32.	Mr. Lalit Mohan Bhatt	Editor
33.	Mr. Rahul Dora	Tech. Superintendent
34.	Mr. Manoj Kumar	Animator



### 6.3 List of Adjunct Faculties

Sr. No.	Name	Designation	Affiliation
1.	Dr. Nripendra Singh	Professor of Marketing, Director – Research and Clarion Consulting Center	Department of Management and Marketing, PennWest University, Clarion Campus, USA

### 6.4 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Director, BIT Noida Campus	Director	Internal
2.	Ms. Soma Sircar Dasgupta	Assistant Professor & Coordinator, A&M Dept. BIT Noida	Internal
3.	Mr. Lalit Mohan Bhatt	Editor & Coordinator, A&M Dept. BIT Noida	Internal
4.	Dr. Niket Mehta	Assistant Professor- Animation & Multimedia Dept. BIT Mesra, Noida Campus	Internal
5.	Dr. Meenakshi Sharma	Associate Professor, Dept. of Management	Nominee of BIT Noida for MBA and BBA
6.	Dr. Charu Wahi	Assistant Professor, Dept. of CSE	Nominee of BIT Noida for BCA

## SECTION 7

## OTHER INFORMATION

### 7.1 Publication by students, if any

#### Publications in Journals: (International/ National)

#### Publications in Proceedings: (International/ National)

- Shashank Kumar Gupta & Swati Prasad, Developing an Ecommerce Website Mirror 2 Mirror, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
- Gaurav Jangid & Aruna Malik, Stock price analysis and prediction, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
- Sheetal Sehgal & Sanskriti Tiwari, Advances in supervised learning a review, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
- Pankaj Kannavedia & Mrs Seema Sharma, Plants Planet Ecommerce Web Based Application Using MERN Stack Development, International

Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.

- Anjali Sahu & Mrs Priti Sharma, Internet-based Blood Bank Management System, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
- Jaspinder Kaur Bahara & Mrs Pramila Joshi, User experience designs using flutter framework and dart, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
- Shubham Tiwari & Sadhu Mailka, Performance optimization techniques in spring boot applications: a comparative study, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
- Aditya Khurana & Dr. B. B. Sagar, Sentiment analysis of product reviews using natural language processing and neural networks in Data Analytics, International Conference on Innovation in Engineering & Management held at



- BIT Mesra, Noida Campus, 1st – 2nd June 2023.
9. Priti Sharma & Disa Gaur & Rishi Vasistha, Designing an AI based eye wear with audio capability VIEW AI (Visual Interface Eye Wear Artificial intelligence): A state of art, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  10. Sanjay Kumar & Ayush Jaiswal, Creating customizable scalable voice assistant using python, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  11. Sameer Jadhav, Book recommendation system using machine learning, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  12. Bharti Chourasiya & Mrs Seema Sharma, A review paper on devops is all about change in culture, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  13. Vikram Vishwakarma, Investigating and Implementing security mechanisms in spring boot web applications, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  14. Rahul Kirar & Sheetal Sehgal, Shopping mall management system and services, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  15. Piyush Nalviya & Mrs Sheetal Sehgal, A review of fake news detection techniques, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  16. Girish Sharma, Online Pharmacy Store, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  17. Shiv Raj & Pramila Joshi, The role of artificial intelligence in online job portal, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  18. Quatib Ul Mujtaba & Sanjay Kumar, improving the accuracy of opencv panorama stitching through the use of advanced optimization techniques such as bundle adjustment and ransac, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  19. Sandeep Jiyalal Yadav, Online Examination portal, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  20. Somya Tiwari & Dr. Vibha Kaw Raina, An ubiquitous platform of user-friendly digital examination system: current and future perspective, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  21. Arpan Shrimali & Seema Sharma, Emotion Based Music Recommendation system, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  22. Vishal Chauhan & Dr Smitha Jha, gst bill system, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  23. Osman Rabbani & Anurag Joshi, Analysis of the Challenges and Opportunities of Adopting Cloud-Based Hotel Management Systems, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  24. Arpit Gupta & Dr Smitha Jha, Analysis of IPL match results using machine learning algorithms, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  25. Priyadarsani Kumari & Rakesh Singh, Airline Reservation system, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  26. Rohit Katarita & Dr. Charu Wahi, impact of online food ordering system on Restaurant industry: A case study analysis, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  27. Ananya Kumari & Soma Sircar Dasgupta, Airline Reservation system, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
  28. Gladwin Tirkey & Soma Sircar Dasgupta, Salary prediction application using linear regression, International Conference on Innovation in Engineering & Management held at BIT Mesra,



Noida Campus, 1st – 2nd June 2023.

29. Sandeep Gorai & Dr. Vibha Kaw, Use of AL and ML techniques in digital, mobile, and E-Commerce scenario, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
30. Vishesh Shukla & Mrinalini Mehta, School Cab booking website, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
31. Karthik Jyothi Sivan & Dr. Shankar Lal Gupta, A study on comparative analysis between domestic and international product usage in Noida region, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
32. Akanksha Dubey & Mrs. Rachana Pratik, Study of customer satisfaction towards online and offline shopping, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
33. Manshi Kumari & Dr. Arun Mittal, An Empirical Study on Consumer Attitudes Towards Fintech Adoption, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
34. Kajal Singh & Dr. Monika Bisht, Measuring Design Thinking Mindset, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
35. Antra Anand & Dr. Meenakshi Sharma, A study on Emotional ambivalence and Hesitation checkout on online shopping cart abandonment, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
36. Avantika Singh, Mental health in adolescence, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
37. Gaurav Kumar & Mrs. Pramila Joshi, Analysis of employee attrition and strategies for employee retention in the IT sector, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
38. Prashant Singh & Prof. (Dr.) S.L Gupta, A study on comparative analysis of non-performing assets of public sector banks, and private sector banks, International Conference on Innovation in Engineering & Management held at BIT Mesra,



Noida Campus, 1st – 2nd June 2023.

39. Aditi Bajpai & Mrs. Preety Bajaj, A Comparative Study on Attrition Rate and Retention Strategies of Employees in Deloitte and Infosys, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
40. Nikhil Choudhury & Mrs. Rachana Pratik, Electric Vehicles: A Sustainable Alternative to Fossil Fuel Vehicles, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
41. Subham Kumar Soni & Mrs. Rachana Pratik, A Study to Understand the factor behind of Distributor Satisfaction of US POLO Its Relationship with the Company, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
42. Samhita Paul & Dr. Monika Bisht, A study on culture and brand performance in Indian Food Industry, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
43. Aman & Dr. Meenakshi Sharma, Robotics in Banking, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
44. Vartika Sinha & Prof. (Dr.) S.L. Gupta, Exploring user perceptions of downloading personal finance applications in the banking sector, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
45. Khyati Gupta & Dr. Meenakshi Sharma, Impact of social media on Consumer Behaviour in Cosmetic Industry, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
46. Annu Ranjan & Prof. (Dr.) S.L. Gupta, Study on comparison of employee retention in BPCL and OIL, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.
47. Saurabh Kumar & Dr. Abhishek Singh, A Comparative Study on Financial Performance of SBI and HDFC Bank, International Conference on Innovation in Engineering & Management held at BIT Mesra, Noida Campus, 1st – 2nd June 2023.

## 7.2 Achievements of Students:

Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
1.	Avneesh Dubey, Harshal Bansal, Fardeen Saifi, Japjot Singh	Stop Motion Animation-Short Film "RAAKH" secured 2nd position in the competition "Nazariya"	Kamla Nehru College, Delhi University	Kamla Nehru College, DU
2.	Shruti Singh	Best Paper Award in the 10th International Conference on Advances in Business and Management	Shaheed Bhagat Singh College, University of Delhi	11.11.2022

## 7.3 Distinguished Visitors from Industry/Academia/Research organizations

S. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Mr. Aditya Arora Application Security Engineer Amdocs	18.01.2023	
2.	Mr. Anurag Gupta	06.04.2023	
3.	Mr. Kamal Bansal Software Development Manager, Coats Digital	08.05.2023	



## वार्षिक प्रतिवेदन 2022-2023

S. No	Name of Visitor with Affiliation	Date of Visit	Picture
4.	Mr Rajesh Kumar Dubey Technical Lead, Cognizant Technology Solutions	10.05.2023	
5.	Dr. Abhishek Singh Head – National Operations (Inbound), Britannia Industries Ltd.	05.09.2022	
6.	Ms. Akshara Seth Founder & CEO YOUR NEXT MOVE	05.09.2022	
7.	Dr. Nripendra Singh Professor of Marketing PENNWEST University, USA	06.09.2022	
8.	Dr. Yogesh Mishra VP Thomas Assessments Pvt. Ltd.	07.09.2022	

S. No	Name of Visitor with Affiliation	Date of Visit	Picture
9.	Mr. Anay Pathak Advisory Consultant DELL TECHNOLOGIES	08.09.2022	
10.	Dr. Shivani Bali Professor Jaipuria Institute of Management Noida	08.09.2022	
11.	Col. Sunil Kapila Cyber Security Expert Athenian Tech, New Delhi	09.09.2022	
12.	Ms. Parul Chaturvedi Corporate HR, Genpact	16.01.2023	



#### 7.4 List of Distinguished Alumni

S. No	Name, Batch and Affiliation	Short Description
1.	SAURABH SHUKLA MCA 2010-2013 Program Manager, AI Practice Team TCS	Saurabh Shukla is a highly accomplished individual who has achieved remarkable success throughout his career journey. He graduated with a Master's degree in Computer Applications in 2013 and started his professional life as a Business Analyst- Analytics at EXL Services. He then joined Centurylink Technologies as a Data Scientist, where he skilfully handled statistical data modelling in the Telecom and Utility Infrastructure Maintenance domains. Saurabh later joined GlobalLogic as a Senior Consultant and made significant contributions to the delivery side, managing the Data Science team.
2.	AJAY YADAV MBA 2008-2010 Associate Vice-President Persistent Systems New Jersey USA	Responsible for overall business growth and development for Google Cloud offerings within US and Canada - Help businesses in their Cloud Modernization and Digital Transformation journey. - Responsible for the overall P&L of the Sales Team in the region. - Work closely with Executive Leaders to define business and GTM strategies. - Work with Client Leadership to identify the potential areas of business growth improvements either through enhanced customer experience or platform/product modernization.
3.	AKHIL KUMAR MBA 2010-2012 Senior Manager- Business Operations, JMDR - JMD Railtech Group, United Kingdom	Responsible for International JV / Consortium preparations, all Vendors / subcontractors Registrations, offer submission and negotiations, floating RFQs / RFIs, RFPs and prepare complete documents and handle meetings and Subcontractors.
4.	BHUMIKA DUA BAM 2008-2011 Associate Manager Xtrea	She started her career with an internship for which she got leads from BIT faculty and got her first job from the college campus. Along with her job, she did her M.Sc. in Multimedia (distance learning). She is currently working as Associate Manager in Xtrea (MNC - Data Science Company in Pharma Sector).
5.	SASWATA DUTTA BAM 2019-2022 Motion Designer, Ola	He started his career as an intern with Apolo 24X7 which is provided by the college during the final semester of his course. After completing his degree, he joined Ola as a motion graphics Artist. And was soon promoted as a 3D Motion Designer, Product Design.

#### 8. Any other relevant information

- Placement details:

Discipline	Branch	Total No. of Students	Placed	Minimum Salary	Maximum Salary
Management	MBA	21	19	350000	900000
Computer Science	MCA	33	19	360000	1000000



- Ph.D. Degree awarded to
  - a. Ms. Harsh, (PhD/MB/10010/2014) on the topic "Impact of Employment Relations on Firm Performance: A Study on Manufacturing in NCR" on 23.09.2022.
  - b. Ms. Sunaina Kothari (PhD/MB/10061/13) on the topic "Impact of Sensory Marketing on Brand Loyalty and Consumers Purchase Intention – In Case of Quick Service Restaurant Industry" on 31.01.2023.
  - c. Ms. Chetna Kudeshia (PhD/MB/10058/12) on the topic "Effect of eWOM on Brand Attitude and Purchase Intention of Consumers in Case of Consumer Electronics", on 24.03.2023.
  - d. Ms. Richa Dhir (PhD/MB/10057/2016) on the topic "Psychological Capital and Its Relationship with Organizational Commitment in IT Organizations" on 12.04.2023.
- An editorial team comprising of Dr. Charu Wahi (Editor), Mrs. Preety Bajaj and Dr. Niket Mehta with student representative Prashant Kumar Jha designed and published two editions of college Newsletter "BIT Fusion" for the academic year 2022-23.



## BIT Mesra Off Campus : Patna

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the Department/Off Campus :

Birla Institute of Technology Patna Campus came into existence in the year 2006 with the initiative of Government of Bihar with a vision to provide quality education for the students of Bihar who wishes to pursue their career in technical education. By far, BIT Patna is one of the best equipped, technically sound professional colleges in the state of Bihar. The campus is well networked. The infrastructure includes 25 Acres of academic space. BIT Patna is committed to provide state-of-the-art facilities to its students. BIT Patna Campus seeks to attract the best students from diverse background and offer them an excellent educational experience. It offers more flexibility and choice to the students in the academic programmes, option of extra- and co-curricular activities, personality development, life-skills and career planning as the part of holistic development.

The Campus strives to achieve excellence in Teaching, Research and Consultancy by creating an environment in which the faculty and students share a passion for creating, sharing and applying knowledge to continuously improve the quality of education. To keep abreast with latest pedagogy the Institute organizes various International and National Seminar/conferences/ workshops/ FDP/ Short term courses/ Guest lecture etc from time to time.

#### Programmes Offered at BIT Patna Campus:

BIT Patna provides Four Years Bachelor of Technology (B.Tech.) in 05 disciplines, namely EEE, ECE, CSE, MECHANICAL & CIVIL Engineering. Admission in the B.Tech. programme is done through JOSAA/CSAB counselling process.

BIT Patna also provides Three Years Bachelor of Business Administration (BBA), Bachelor of Computer Applications (BCA).

It also provides Two Years Masters of Business Applications (MBA), Masters of Technology (M.Tech.) in CSE & ECE (Wireless Communications) and Ph.D. Programme in Science, Engineering and Management.

**Vision:** Empowering Innovators and Leaders for a Sustainable Tomorrow

**Mission:** To cultivate a dynamic learning environment that seamlessly integrates engineering and management disciplines. We are committed to nurturing the next generation of innovative engineers and visionary leaders who possess the technical prowess and ethical grounding needed to address complex global challenges. Through experiential learning, cutting-edge research, and collaborative partnerships, we aim to foster creativity, critical thinking, and holistic development. Our graduates will be equipped to pioneer technological advancements, drive organizational excellence, and contribute positively to society while upholding the values of integrity, inclusivity, and sustainability.



## SECTION 2

## RESEARCH PROJECTS

## 2.1 Sponsored Projects (Research and Consultancy)

## a) On going Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1	Role of Microstructure and interface Strain engineering in Magneto-Electric Properties of PFN/ CZFMO Composite	PI- Dr P.Kour	UGC-DAE CSR	15 May 2023	0.45 Lakh	01
2	Crystal and Magnetic Structure study on co-doped SrFe <sub>12</sub> O <sub>19</sub> and its Magneto-Electric Properties'	Co PI- Dr P.Kour	UGC-DAE CSR	15 May 2023	0.45 Lakh	01
3	An Intense Field Dielectric based anti-smog outdoor design to regulate Air Quality Index	Dr. Md Asif Hasan	Department of Biotechnology, GOI	1 April 2023	4.0 Lakh	1 year
4	Microwave Shielding of Quaternary composite for Aerospace Industry	PI- Dr P.Kour	Aeronautic R &D Board, DRDO	26 July 2022	29.39996	03 Years

## b) Projects Completed

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Date of completion of the Project
1	Role of Microstructure and interface Strain engineering in Magneto-Electric Properties of PFN/CZFMO Composite	PI- Dr P. Kour	UGC-DAE CSR	30 March 2022	0.45 Lakh	30 March 2023
2	Crystal and Magnetic Structure study on co-doped SrFe <sub>12</sub> O <sub>19</sub> and its Magneto-Electric Properties	Co PI- Dr P. Kour	UGC-DAE CSR	30 March 2022	0.45 Lakh	30 March 2023

## c) Consultancy Projects carried out/ongoing

Sl. No.	Title of Project	Funding Agency	Duration		Grant mobilized (Rs. lakhs)	Principal Investigator/ Co-Investigator	Ongoing/ Completed*
			from	to			
1	Mix Design of M-35 Grade	Mundeshwari Multicon Pvt. Ltd.	23.09.2022	26.04.2023	0.78	Dr. Anish Ms. B. Mahto Dr. A. Mandal	Completed



### SECTION 3

### SEMINAR / CONFERENCE

#### 3.1 Seminar / Conferences / Short – Term Courses Conducted:

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1.	One Day Seminar cum Workshop on "Woman Empowerment: Think Equal, Build Smart and Innovate for Change"	Dr. Sheel Shalini, Ms. Trisha Kumar	NA	29 March 2023
2.	Expert Talk on "Spin to Spintronics" By Dr. Tanmay Datta of EEE Dept., IIT Guwahati.	Dr. Nilay Pandey	NA	03 March 2023
3.	2nd National Seminar on Pragmatic Role of Technological Innovation in Start-Up (NPTIS-2023)' held at B.I.T Patna.	Dr K.P. Tiwary	Department of Industries, Government of Bihar	21-22 Jan. 2023
4.	Soft Skills, Mock GD & PI	Dr. Arthur Fernandes	Kirloskar Institute of Management	19-20 Jan. 2023
5.	National Conference-NCIPP 2022 from 13th to 14th December 2023	Dr S.K. Sinha, Dr. Md Asif Hasan, Dr. Nidhi Mishra	BPCB, Govt of Bihar	13-14 Dec. 2022
6.	Next level Gaming Talent Hunt Event	Mr. Kushagra Sharma	Facebook Gaming India and Trinity Gaming	18 Nov. 2022
7.	Network Mgmt. & Anroid	Mr. Santu Purkait	Netcamp	05-07 Nov. 2022
8.	Mock GD & PI Sessions	Mr. Ranjan Jha	TIME	19-20 Oct. 2022
9.	New age Careers and need of Upskilling	Mr. Vinay Poddar	Emarticus, Patna	16 Sep. 2022
10.	Enhancing Employability Skills	Elios, Patna	Elios, Patna	25 Aug. 2022

#### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1.	Dr. Paramjit Kour	IIMATM 2022	BIT Mesra+ARDB	IIM&ARDB		13-16 Nov. 2022
2.	Dr. Kumar Nikhil	Second International Conference on Design and Materials (ICDM) - 2023		Delhi Technological University, Delhi	Delhi	28-29 July 2023
3.	Dr. Shradha Kishore	46th (Inter) National Systems Conference (NSC) 2023	System Society of India	Dayalbagh Educational Institute	Agra	27-29 June 2023



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
4.	Dr. Sweta	"International Conference on Innovation in Engineering & Management: Sustainability Through Creativity & Innovation" (ICIEM'23	Indian Oil Corporation	Birla Institute of Technology, Mesra (Ranchi), Noida Campus, India	Online Mode.	01-02 June 2023
5.	Dr. Megha Dadel	Recent Trends in Design and Measurement of RF and Microwave Devices	-	Jaypee Institute of Information Technology, Noida, U.P.		22-27 May 2023
6.	Dr. Adhishree	2023 IEEE IAS Global Conference on Emerging Technologies (GlobConET)		IEEE	Loughborough University, London, United Kingdom	19-21 May 2023
7.	Dr. Anish	Workshop on Intellectual Property Rights	-	BIT Patna	BIT Patna	30 May 2023
8.	Ms. Bandana Mahto	Workshop on Intellectual Property Rights	-	BIT Patna	BIT Patna	30 May 2023
9.	Dr. Angshuman Mandal	Workshop on Intellectual Property Rights	-	BIT Patna	BIT Patna	30 May 2023
10.	Dr. Paramjit Kour	ICOMPA 2023	Self	COC	Patna	01-03 March 2023
11.	Dr. Md. Asif Hasan	2nd International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET)	IEEE	NIT Patna	NIT Patna	24 July 2022
12.	Dr. Shambhu Sharan Kumar	"Intellectual Property Rights and IP Management"	I.I.C.,	B.I.T. Mesra- Patna Campus.	B.I.T. Mesra- Patna Campus	30 May 2023
13.	Dr. Akmal raza	Mathematical Modelling with Simulation in Applied Science	SERB	Department of Mathematics Central University of Haryana	Online Mode	22-26 May 2023



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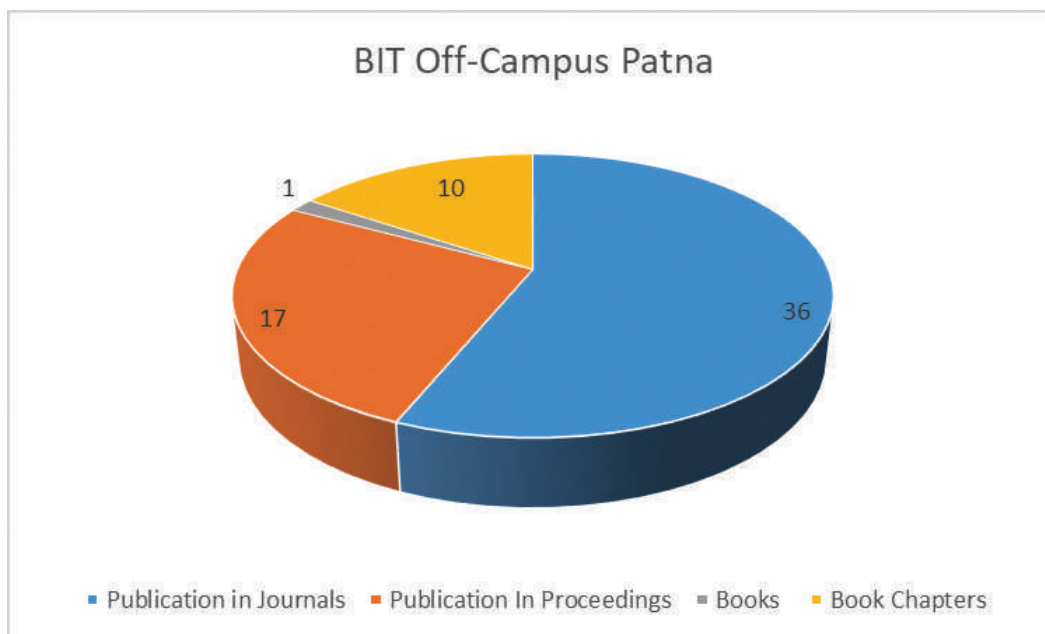
Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
14.	Dr. Anish	Professional development workshop on digital creativity skill	-	Adobe Express	Online	17 May 2023
15.	Dr. Angshuman Mandal	Professional development workshop on digital creativity skill	-	Adobe Express	Online	17 May 2023
16.	Ms. Bandana Mahto	Professional development workshop on digital creativity skill	-	Adobe Express	Online	17 May 2023
17.	Dr. Sweta Kumari	Universal Human Value (UHV-II)	AICTE	AICTE	Online	24-28 April 2023
18.	Dr. Shradha Kishore	7th International Conference on Advances in Computing and Data Sciences (ICACDS 2023)	Springer Nature	Brainware University	Kolkata,	27-28 April, 2023
19.	Mr. Rajeev Ranjan	FDP-Inculcating Universal Human Values in Technical Education	AICTE	AICTE	Online	17-21 April 2023
20.	Dr. Nidhi Mishra	One Week Workshop on Power System Resilience Re-assessment: Situational Awareness based Operational Augmentation and Renewable Integration	BIT Mesra and Grid India	BIT Mesra	BIT Mesra, Ranchi	10-14 April 2023
21.	Ms. Bandana Mahto	One-day regional workshop NAQIM	-	CGWB, Patna	Patna	17 March 2023
22.	Dr. Angshuman Mandal	One-day regional workshop NAQIM	-	CGWB, Patna	Patna	17 March 2023
23.	Dr. S.K. Pradhan	ICOMPA	self	COC	Patna	01-03 March 2023
24.	Dr. S. K. Chatterjee	2nd.Seminar on Pragmatic Role of Technological Innovation in Start-ups.	Bihar Govt. (For Start-ups)	Convenor- Dr. Upendra Kumar Singh	Dept. of CSE, BIT Patna	20-21 Jan. 2023
25.	Dr. Sunil Kumar Pandey	National Seminar on Pragmatic Role of Technological Innovation in Start-Up (NPTIS-2023)	Birla Institute of Technology, Mesra, Patna Campus	Birla Institute of Technology, Mesra, Patna Campus	Birla Institute of Technology, Mesra, Patna Campus	21 January 2023
26.	Dr. P.C.Srivastava	88th Annual Conference IMS	SERB&DST	BIT MESRA	BIT MESRA	27-30 Dec. 2022



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
27.	Dr. Shambhu Sharan Kumar	One week High End Workshop on "Nano-structured Devices"	SERB, Govt. Of India	B.I.T. Mesra, Ranchi.	B.I.T. Mesra	09-15 Dec. 2022
28.	Dr. S.K.Pradhan	IIMATM-2022	Self	DRDO	Hyderabad	13-16 Nov. 2022
29.	Dr. Sweta	"International Conference on Opportunities and Challenges in Techno-Management for Socio-Economic Development" "ICOTMSED 2022"	Department of Humanities And social sciences MNNIT Allahabad, Prayagraj-211004	Department of Humanities And social sciences MNNIT Allahabad, Prayagraj-211004	Online Mode.	11-13 Nov. 2022
30.	Dr. Shambhu Sharan Kumar	One week FDP on "Inculcating Universal Human Values in Technical Education"	A.I.C.T.E., Govt. Of India	A.I.C.T.E., Govt. Of India.	Online / B.I.T. Mesra, Ranchi	22-26 Aug. 2022

## SECTION 4

## RESEARCH PUBLICATIONS





## SECTION 5

## AWARD / PATENT / COLLABORATIONS

### 5.1 Award / Recognition Bestowed on Faculties (State / National / International)

Sr. No.	Name of the Faculty Member	Title of the Award/ Honour	Organisation	State/ National/ International Level	Year/ Duration
1	Dr Shradha Kishore	Best Paper Award for Engineering Systems	National Systems Conference (NSC 23) by Dayalbagh Educational Institute, Agra	National	27 – 29 June 2023
2	Dr. Nidhi Mishra	Global distinguished young scientist award	IEEE	International	March, 2023

### 5.2 Patents (Applied / Granted)

Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
1	B.Singh and N. Mishra	An Improved Arrangement of a Cascaded U-Cell Based Multilevel Converter Device by Using A Modified Fundamental Switching Technique	402114	July 27, 2022	
2	1. Ayan Kumar Das 2. Sanjib Roy 3. Swami Ranjan 4. Ditipriya Sinha	An IoT -Enabled Brain Tumor Detection System Using Capsule Network and Attention Mechanism	202023103114.5	2023	The paramount significant, sensitive and critical part of the human body is brain which plays the vital role in the nervous system. Unlike other diseases, uncontrolled cells development inside the cerebrum which is well known as brain tumor, is extremely dangerous and executioner to human beings. Therefore, early detection is required to save the patient's life. Unlike the clinical approaches, many researchers have used computer aided technologies which suffer from either insufficient accuracy or longer execution time. In this paper, an enhanced technique is developed for observing visual substance (unnatural growth) in a Magnetic Resonance Imaging (MRI) image.



Sr. No.	Name of the Inventor	Title of the Invention	Application / Patent No. (As applicable)	Year	Short Description about the patent
					The suggested method has given emphasis on feature extraction through convolutional attention mechanism and finally classifies the image by using Capsule network. The experimental results prove that the suggested method has accomplished better accuracy and has produced the result with reduced execution time.

### 5.3 MoUs / Collaborations

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1.	Building Construction Department - Government of Bihar	Third-Party Quality Assurance	Effective from 28.02.2023

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS / DAS

### 6.1 Departmental Students' Activities

(Please arrange in reverse chronological order: Latest first)

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1	International Yoga Day		Dr.S S Yadav	21 June 2023
2	'SVADHYAYA' 4th Issue of Departmental Magazine	Mahi Sharan Shubhanshu Raj Himanshu Raj	Ms. Bandana Mahto	06 May 2023
3	Inter Institutional sports Fest (PRAKRIDA' 23) Events : Football, Volleyball (Men/Women), Basketball (Men/Women), Cricket, Badminton (Men/Women), Table Tennis (Men/Women), Carom (Men/Women) Chess (Men/Women)	Mr. Kapil Kashyap	Dr. S S Yadav	10-12 Feb. 2023
4	Annual Athletic Meet	Mr. Kapil Kashyap	Dr. S S Yadav	27-29 Jan. 2023
5	Inter-Branch Tournament Football, Volleyball (Men/Women), Basketball (Men/Women), Cricket	Branch Captains	Dr. S S Yadav	September and October 2022



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Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
6	Department organized "Prabhat Feri" for Students, Faculty & Staff on 15-08-2022, as per the directives from AICTE with regard to "Azadi ka Amrit Mahotsav"; An initiative of Ministry of Education, Department of Higher Education, Technical Coordination Section, Government of India.		Dr. S S Yadav	15 August 2022

### 6.2. List of Faculties as on 30.6.2023

Sr. No.	Name	Designation
1.	Prof. (Dr. ) Arbind Kumar	Professor & Director
2.	Prof. (Dr.) Shree Prakash Lal	Professor
3.	Mr. Subho Chaudhuri	Associate Professor
4.	Dr. Sanjay Kumar Sinha	Associate Professor
5.	Dr. Vijay Agarwal	Associate Professor
6.	Dr. Kaushlendra Sharma	Assistant Professor
7.	Dr. Shambhu Sharan Kumar	Assistant Professor
8.	Dr. Gyan Kumar Agrawal	Assistant Professor
9.	Dr. Anish	Assistant Professor
10.	Ms. Bandana Mahto	Assistant Professor
11.	Dr. Angshuman Mandal	Assistant Professor
12.	Dr. Anamika Nandan	Assistant Professor
13.	Mr. Sujit Kumar Chatterjee	Assistant Professor
14.	Dr. Sheel Shalini	Assistant Professor
15.	Dr. Ravi Shanker Pandey	Assistant Professor
16.	Dr. Subhash Chandra Pandey	Assistant Professor
17.	Dr. Ajit Kumar Keshri	Assistant Professor
18.	Dr. Ratnesh Mishra	Assistant Professor
19.	Mr. Shridhar Kumar	Assistant Professor
20.	Dr. Upendra Kumar	Assistant Professor
21.	Dr. Ayan Kumar Das	Assistant Professor
22.	Dr. Amit Prakash	Assistant Professor
23.	Dr. Kumar Nikhil	Assistant Professor
24.	Dr. Mayank Singh	Assistant Professor
25.	Mr. Sanjay Kumar	Assistant Professor
26.	Mr. Raj Kumar Mishra	Assistant Professor
27.	Dr. Shradha Kishore	Assistant Professor
28.	Dr. Asif Hasan	Assistant Professor



Sr. No.	Name	Designation
29.	Dr. Adhishree	Assistant Professor
30.	Dr. Nidhi Mishra	Assistant Professor
31.	Dr. Ritesh Kumar Badhai	Assistant Professor
32.	Dr. Megha Dadel	Assistant Professor
33.	Dr. Shipra	Assistant Professor
34.	Dr. Atul Kumar Pandey	Assistant Professor
35.	Dr. Sweta Kumari	Assistant Professor
36.	Dr. Priyadarshi Suraj	Assistant Professor
37.	Mr. Rajeev Ranjan	Assistant Professor
38.	Dr. Nilay Ranjan	Assistant Professor
39.	Dr. Sunil Kumar Pandey	Assistant Professor
40.	Dr. Adhip Kumar Mahanty	Assistant Professor
41.	Dr. Iftekhar Ahmad	Assistant Professor
42.	Dr. Sweta	Assistant Professor
43.	Dr. Ashish Mohan Dubey	Assistant Professor
44.	Dr. Sohini Ghosh	Assistant Professor
45.	Dr. Amit Raghuvanshi	Assistant Professor
46.	Dr. Sushil Kumar	Assistant Professor
47.	Mr. Sultan Khan	Assistant Professor
48.	Dr. Prakash Chandra Srivastava	Assistant Professor
49.	Dr. Premalata Singh	Assistant Professor
50.	Dr. Akmal Raza	Assistant Professor
51.	Dr. Anand Kumar	Assistant Professor
52.	Dr. Sudipta Kishore Pradhan	Assistant Professor
53.	Dr. Soumen Mandal	Assistant Professor
54.	Dr. Chandan Kumar	Assistant Professor
55.	Dr. Ravi Shankar Anand	Assistant Professor
56.	Dr. Amit Kumar	Assistant Professor
57.	Mr. Kapil Deo Prasad	Assistant Professor
58.	Dr. Binay Bhushan	Assistant Professor
59.	Dr. Kamala Pati Tiwary	Assistant Professor
60.	Dr. Paramjit Kour	Assistant Professor
61.	Mr. Madhup Kumar	Associate Lecturer
62.	Dr. Suresh Singh Yadav	Associate Lecturer
63.	Mr. Adnan Mahmood	Associate Lecturer
64.	Mr. Vijay Kumar Mandal	Associate Lecturer



## SECTION 7

## OTHER INFORMATION

### 7.1 Student Entrepreneurship activities/Start-ups if any:

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
1.	Aditya Avi, Anushka Sharma	Department of Biotechnology	E-YUVA Fellow	Sanctioned a project to develop an air filter by Department of Biotechnology with a funding amount of Rs 4.0 Lakhs.

### 7.2 Publication by students, if any

#### Publications in Journals : (International/National)

- Namrata Singh, Ayan Kumar Das, "TFAS: Three Factor Authentication Scheme for Blockchain enabled IoMT using PUF and Fuzzy Extractor", accepted in Journal of Supercomputing, Impact Factor: 2.557, SCI Indexed, 2023.
- Sanjib Roy, Ayan Kumar Das, "Deep-CoV: An integrated deep learning model to detect COVID-19 using chest X-ray and CT images", in Computational Intelligence, Wiley, Vol. 39, Issue 2, pp. 369-400, <https://doi.org/10.1111/coin.12568>, Impact Factor: 2.142, SCI-E Indexed, 2023.
- Namrata Singh, Ayan Kumar Das, "Energy-efficient fuzzy data offloading for IoMT", in Computer Networks, Elsevier, Vol. 213, Issue 4, Article No. 109127, <https://doi.org/10.1016/j.comnet.2022.109127>, Impact Factor: 5.493, SCI-E Indexed, 2022.

- Ayan Kumar Das, Sabana Afroz, Shivangi Chandra, Ditipriya Sinha, "MACP: Multifactor Authentication using Physical Unclonable Function and Fuzzy Extractor based Chebyshev Polynomial for Industrial Internet of Things devices", in Transactions on Emerging Telecommunications Technologies, John Wiley & Sons, Ltd., pp. e4581, <https://doi.org/10.1002/ett.4581>, Impact Factor: 3.310, SCI-E Indexed, 2022.

#### Publications in Proceedings: (International/National)

- Sonam Kumari Bharti, Priyadarshi Anand & Shradha Kishore, "Machine Learning-Based Temperature Monitoring and Prediction," Advances in Computing and Data Sciences. ICACDS 2023. Communications in Computer and Information Science, vol 1848 pp 402-13. Springer Nature. eBook ISBN 978-3-031-37940-6 Published: 22 July 2023 [https://doi.org/10.1007/978-3-031-37940-6\\_33](https://doi.org/10.1007/978-3-031-37940-6_33)

### 7.3 Achievements of Students :

Sr. No	Name of Student	Achievement/Position/ Award etc	Organised by	Date and Venue
1	Aniket Kumar	Man of The Match, Cricket (St. Xavier Premier League)	St. Xaviers College Patna	12-20 July 2023, Patna
2	Aditya	Paid internship in eighth semester	NHAI	Feb-May 2023, Ranchi
3	Wajiha Muswi (BTECH/15130/20)	Prakrida 2023, winner in women double and Runner up in Women's Singles Table Tennis	BIT Patna	10-12 Feb. 2023
4	Sumit Kumar	1st Position in Discus Throw	IIT Patna	13 Nov. 2022, IIT Patna
5	Sumit Kumar	1st Position in Javelin Throw	IIT Patna	13 Nov. 2022, IIT Patna
6	Sumit Kumar	1st Position in Short-Put Throw	IIT Patna	13 Nov. 2022, IIT Patna
7	Pratik Kumar (BTECH/15134/20)	1st rank in Egg Hunt conducted by LITERARY CLUB for the session 2022-2023	BIT Patna	08 Nov. 2022



#### 7.4 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1	Ms. Shiveta Sinha Certified Financial Planner, NISM, SEBI	31 Jan. 2023 to 03 Feb. 2023	
2	Dr. Sayantika Bose Chakraborty, Associate Professor, Dept. of Basic Science & Humanities, Techno International, New Town, Kolkata	11 Nov. 2022	

#### 7.5 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Gaurav Kumar	AIR No-1, GATE 2022
2.	Varoope Varoope	Bagged 23 Lacs PA Package
3.	Shivani Jha	Gold Medalist, 2022
4.	Vivek Bose	Gold Medalist, 2015
5.	Saurav Murarka	Gold Medalist, 2012
6.	Ankur Dhanuka	Gold Medalist, 2010
7.	Er. Avi Ranjan Batch 2007	Executive Engineer, Govt. of Bihar
8.	Er. Nasseer Shamim Batch 2008	Assistant Engineer, Govt. of Bihar
9.	Er. Abhishek Kumar Shaurya Batch: 2010	Deputy manager, SAIL
10.	Er. Sidharth Kumar Batch 2010	BSRDC
11.	Er. Vimal Kumar Batch 2012	RITES Construction, Mumbai
12.	Er. Uday Kumar Batch 2012	Assistant Engineer, Govt. of Bihar
13.	Er. Anjneya Srivastava Batch 2012	Pursuing PhD from IIT Kharagpur
14.	Er. Sourav Swaraj Batch 2013	Group 1 services in Indian Railways
15.	Er. Sparsh Bhardwaj Batch 2014	Group 1 services in Indian Railways
16.	Er. Kashfi Khan Batch: 2014	MHRD
17.	Er. Saurav Batch: 2014	Medishala Startup
18.	Er. Rituraj Batch: 2014	Medishala Startup
19.	Er. Arpan Singh Batch: 2015	Completed MS from IIIT-Hyderabad
20.	Er. Shamsheer Alam Batch: 2016	Working in Physics Wallah
21.	Er. Nihar Ranjan Batch 2017	Junior Engineer, Govt. of Jharkhand

#### 7.5 Infrastructure Development.

##### Dept. of CSE

- A new 100-seater Computer Lab. is being developed for the department.
- Advanced Research Lab. is being developed for MTech/Ph.D. & research work.



## Dept. of Civil Engg.

- Procurement of Rapid Chloride Penetration Test Apparatus in Concrete Lab Worth 3.0 Lakhs

## Dept. of PT & Games

- Contraction of Basket ball court
- Lightening of sports Ground

## 7.7 Best Thesis Project (UG/PG)

### Dept. of Management

#### UG

Student Name: Nirbhay Nath (BBA/15044/20), Archit Mani (BBA/15046/20), Nandini Singh (BBA/15056/20)

Title of the Project: Influence of BTL Marketing on Consumer Behaviour in Patna – Special Focus on Apparel & Personal Care.

#### PG

Student Name: Abhishek Kumar (MBA/15017/21)

Title of the Project: A Study on the Acquisition of Retail Division of Biyani Group (BigBazar) by Reliance Retail with reference to the HR Practices in Patna.

## 8. Any other relevant information

### Civil Engg.

- A group of 15 students of 2020 Batch, B.Tech. (Civil) under the guidance of Ms. Bandana Mahto (as Institute Nodal Officer) has participated in the internship (offered by the Ministry of Housing & Urban Affairs, GoI, and implemented by AICTE from 1st July 2022 to 5th August 2022 in formulating a rejuvenation and reimagination strategy for Malti Pokhar, Tetarpur- Ward-5, Bihar as a part of Mission Amrit Sarovar - Jal Dharohar

### Sanrakshan Internship.

- Dr. Anish was selected as one of the reviewers of the submitted Technical papers in the 13th Structural Engineering Convention (SEC-2023) to be held at VNIT, Nagpur
- Dr. Angshuman Mandal, reviewed two journal articles from the International Journal of Civil Engineering (Published by Springer, SCIE Indexed Journal), one article from Advances in Computational Design, An International Journal (Published by Technopress, Scopus Indexed)

### Library

The library houses a large collection of reading materials such as more than 46000 books in print form and more than 1.5 lakhs e-books. More than 400 project reports of UG and PG Students good collection of magazines and newspapers. Good collection of Thesis is also available in the library. The central library has automated all its routine activities through library software called LIBSYS 10 on cloud.

The Library's collection comprises hybrid resources (Print & Electronic) in the field of science and technology, engineering and management. The Library also has a separate Internet section consisting of a number of networked terminals for providing recent and most comprehensive access to online journals, online databases and other online reference resources to the faculty, students and staff under Intranet and Internet environment. The Central library has automated all its routine activities through library software called "LIBSYS 10" and also extended the scope of various services like database search and OPAC (online public access catalogue). The books have bar coded accession numbers for which laser scanners are used.

## University Polytechnic

### SECTION 1

### DEPARTMENTAL PROFILE



#### 1. About the University Polytechnic:

The inception of the University Polytechnic at BIT Mesra dates back to 2001, arising from a collaborative effort between Birla Institute of Technology, Mesra, Ranchi, and the Department of Welfare under the Government of Jharkhand. This institution was founded with a core objective to meet the nation's demand for skilled technological personnel, aligning with global standards, to contribute to developmental initiatives effectively. The University Polytechnic offers:

- Diploma in Computer Engineering
- Diploma in Electronics and Communications Engineering
- Diploma in Mechanical Engineering
- Diploma in Electrical and Electronics Engineering
- Diploma in Automobile Engineering
- B.Sc. in Medical Lab Technology

The University Polytechnic boasts exceptional amenities encompassing a seminar room, a comprehensively stocked library, state-of-the-art modern laboratories, and an expansive campus-wide network. The institution features a fully residential facility and excellent sports amenities.

The institute has implemented Choice Based Credit System curriculum - CBCS, which presents a wider range of elective subjects. This initiative aims to enhance the system's

flexibility and ensure alignment with global assessment techniques. Furthermore, students are actively urged to participate in diverse activities aimed at fostering social development through the National Service Scheme (NSS). The Polytechnic's mission and vision revolve around providing students with contemporary tools and skills necessary for 21<sup>st</sup> century technical education, focusing on outcomes. The institution is dedicated to cultivating diploma engineers who are not only globally competitive but also possess a growth-oriented mentality, professional ethics, and unwavering integrity.

The aspiration of the Polytechnic is to guide inventive minds, foster teaching and learning rooted in design thinking, and harness the power of global best practices. Moreover, the Polytechnic is actively enhancing collaboration between academia and industry, aiming to establish impactful partnerships that drive technical excellence forward.

#### INSTITUTE VISION

To emerge as a leading technical training institution in the country and serve the nation and engineering profession with distinction by developing the most skilled human resources with comprehensive and modern training and skill sets in selected engineering disciplines and trades.

#### INSTITUTE MISSION

1. To administer a technical training institute of the highest standard of education and



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training commensurate with modern engineering practices.

- To offer technical diploma and certificate courses to cater to contemporary demand and relevance to the engineering industry.
- To adopt and implement modern curriculum of technical education and training.
- To continuously upgrade the infrastructure necessary for practical training with new and contemporary machines and methods.
- To arrange on job training and internships for the students and staff members with

proper supervision.

- To liaise with industry for internship and collaboration, and also, for arranging periodic review of infrastructure and training methods and modernizing teaching and training curriculum.
- To create special program for the youth of the State of Jharkhand to help them acquire entrepreneurial and managerial skills, manufacturing capability, career advancement training and professional confidence.

### SECTION 2

### RESEARCH PROJECTS

#### 2.1 Sponsored Projects (Research and Consultancy) (1ST JULY 2022-30TH JUNE 2023)

##### a) Ongoing Projects :

Sr. No.	Project Title	PI / Co PI / Collaborator, if any	Funding Agency	Date of Sanction	Sanctioned Amount	Duration of the Project
1.	Modernization of Computer Hardware & Networking Lab	PI-Mr.Niraj Kumar Co-PI-Mr..Ramnish Sinha	AICTE (MODROB)	20.01.2022	16,84,750	2 Years

### SECTION 3

### Seminar and conference

#### 3.1 Seminar / Conferences / Short – Term Courses Conducted

Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
1	Workshop on Legal and Ethical steps for Startup by Professor Swati Dhir, Associate Professor OB/HRM IIM, New Delhi	Dr. Sandhya Rani & Mr. Manoj Kumar	Institute	03.05.2023
2	Workshop on Business Model Canvas by Dr. Ranjana Patel Former General Manager AIC-PIF Indore Faculty Prestige Institute of Management and Research, Indore	Dr. Sandhya Rani& Mr. Manoj Kumar	Institute	02.05.2023
3	Intellectual property Rights for Young Innovative Mind by Mr. Chandrachur Lahiri Advocate Kolkata	Dr. Sandhya Rani& Mr. Manoj Kumar	Institute	28.04.23
4	Workshop with 10 hours session on "Financial Literacy for Youth"	Mrs. Nirupam	National Institute of Securities Markets (NISM) under the aegis of CSR program of Axis bank Ltd.	15.04.2023 – 16.04.2023



Sr. No.	Title of Seminar/ Conference/ Short Term Courses/ Workshop	Coordinator	Funding / Sponsoring Agency	Date of Event
5	Opportunity in IT Sector by Mr. Mayank pahan, Senior tech Lead Nathcorp, Ranchi	Mr. Abhay Kumar	Institute	15.09.22
6	Expert talk on Growing Industry and need of the professionalism by Mr. Dhanesh Mahto, CEO, Bright code Software Services Pvt. Ltd. With the team of Bright code	Mr. Abhay Kumar	Institute	14.09.22
7	Invited talk of Dr. Sanjay Kumar, Associate Professor, BIT, Mesra on the topic "Universal Human Values" during AICTE Teacher's Day Week 2022.	Dr. Neeru Singh and Mrs. Rekha Kumari	Institute	08.09.22
8	Online invited talk of Deputy Commandant-BSF Sanjay Kumar on the topic "Shortcut to Success" during AICTE Teacher's Day Week 2022.	Dr. Neeru Singh and Mrs. Rekha Kumari	Institute	07.09.22
9	Workshop on Artificial Intelligence (AI)/Machine Learning (ML), Internet of Things (IoT)/ Analytics/ Web 3.0 organized in Association with Centre of Deep Tech Excellence (CODE) Under Institution Development Program (IDP) Singapore/ Australia Industry Ready Talent (IRT)	Dr. Satish Kumar	Institute	27.08.22
10	Impact Lecture on Role of Engineers in Society	Dr. Satish Kumar & Mr. Manoj Kumar	IIC, Institute	05.08.22
11	Impact Lecture on Role of Innovation in the Development of Our Nation	Dr. Satish Kumar & Mr. Manoj Kumar	IIC, Institute	04.08.22
12	A Short term course on Geo-Informatics using Drone Technology	Mr. Abhay Kumar	Institute	24.07.22 to 14.08.22

### 3.2 Conferences/ Seminars/ Workshops/ Staff Development Programmes attended by Faculty Members:

Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
1	Dr. Sumana Kumari, Mr. Ramnish Sinha, Mr. Niraj Kumar, Mrs. Rekha Kumari, Mrs. Nirupam, & Dr. Md Maqubool Hosain	National Frontiers of Engineering (NatFoE-2023) conclave	Indian National Academy of Engineering (INAE) and Science and Engineering Research Board (SERB) Government of India	BIT Mesra	BIT	24.06.23- 25 06.23



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Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
2	Dr. Md Maqubool Hosain	ANTENNA FOR UWB/SUWB APPLICATIONS	Baku Euroasian University, IKSAD Institute & Goreme Municipality	Baku Euroasian University, IKSAD Institute & Goreme Municipality	Baku Euroasian University, IKSAD Institute & Goreme Municipality	22.06.23-23.06.23
3	Dr. Sumana Kumari	NAAC Accreditation: Focused Preparation & Improved Performance	Edhitch	Edhitch	Online	03.06.23
4	Dr Sandhya Rani, Dr. Anubha Singh, Dr. T.K. Parashar & Mrs. Nirupam	One Day workshop on Enriching the Quality of Teaching – Learning Process in the Present Scenario	Value Education Cell, B.I.T. Mesra, Ranchi	Value Education Cell, B.I.T. Mesra, Ranchi	B.I.T. Mesra, Ranchi	During 4.05.23-11.05.23
5	Mrs. Nirupam	Industrial Training Program on “Applied AI and Deep Learning in Health Care Data Analysis”	Self-funded	EduxLabs (Esoir Business Solution LLP) in Association with Mechanica IIT Madras	Online	27.03.2023-12.04.2023
6	Mrs. Nirupam	Course of study “IoT101: Build Your First IoT Application with Arm”	Self-funded	ArmEducationX, an online learning initiative of Arm Education.	Online	09.03.2023
7	Dr Sandhya Rani	Workshop on Design Thinking for Startups Entrepreneurship.	AICTE	IIC, BIT Mesra, Ranchi	R&D Building	27.02.23 to 28.02.23
8	Dr. Anubha Singh	Inculcating Universal Human Values in Technical Education	AICTE	AICTE	Online	06.02.23 to 10.02.23
9	Dr. Md Maqubool Hosain	Latest Research in Application of AI in Smart Manufacturing, Image Processing IC, Business Intelligence & Text Mining	Self-funded	Educare Taiwan with Yuan Ze University (YZU), Taiwan.	Online	29.01.23



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
10	Mrs. Nirupam	Industrial Training Program on "AI and Machine Learning and Its Applications with Python"	Self-funded	EduxLabs (Esoir Business Solution LLP) in Association with Mechanica IIT Madras	Online	09.01.2023-23.01.2023
11	Mrs. Nirupam	Management Development Programme on "Industry Academia Collaboration"	Self-funded	Jharkhand Government Tool Room, Ranchi	Online	28.11.2022-03.12.2022
12	Dr. Md Maqubool Hosain	"Latest Research in Smart Manufacturing & AI Approach for Materials & Molecular Design"	Self-funded	Educare Taiwan with National Taiwan Normal University (NTNU), Taiwan.	Online	06.11.22
13	Dr. Md Maqubool Hosain	"Latest Research in Nano-Composites, Computational Physics, Cyber security, Network Communication & Data Privacy"	Self-funded	Educare Taiwan with NSYSU, Taiwan	Online	16.10.22
14	Mrs. Nirupam	UGC-Approved Short-Term Professional Development Programme on "Implementation of NEP2020 for University and College Teachers" obtained "A+" Grade	Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching	INDIRA GANDHI NATIONAL OPEN UNIVERSITY Staff Training and Research Institute of Distance Education New Delhi 110068	Online	07.10-22-15.10.22
15	Mrs. Nirupam	Training and Certification Program on "Engineering 5G - Next Gen Communication System" using ANSYS Technology	Self-funded	Indian Institute of Technology Madras Pravartak in association with CADFEM India	Online	01.09.22 – 31.05.23



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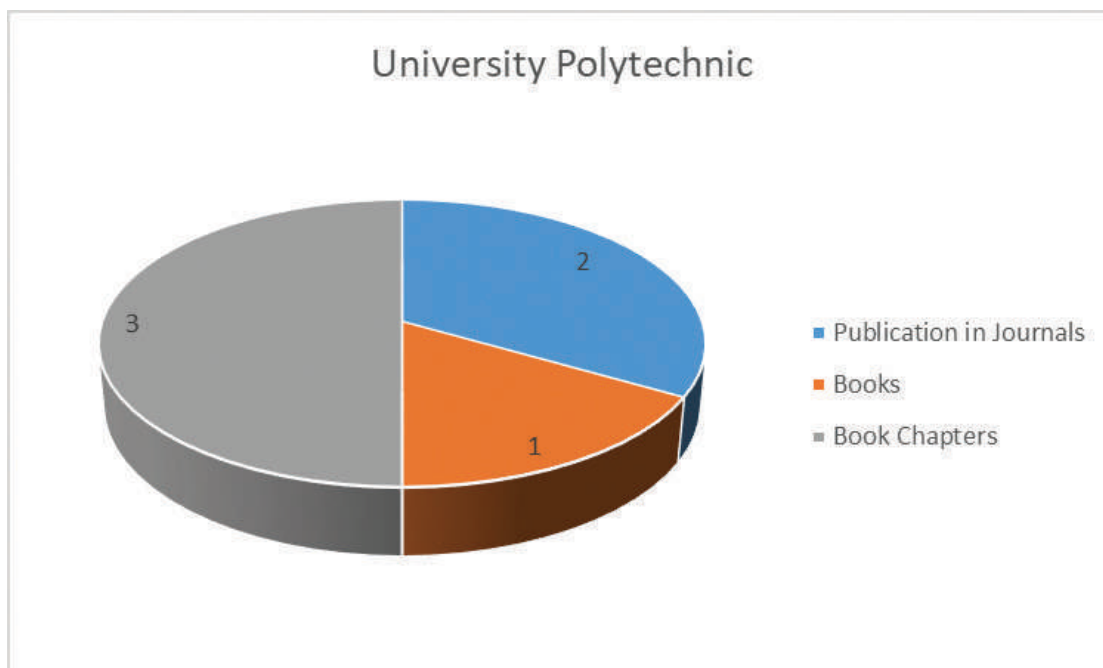
Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
16	Dr. Md Maqubool Hosain	"Latest Research in IC Design, Applications of AI in Micro Systems and smart Manufacturing"	Self-funded	Educare Taiwan with Top 3 Universities- NSYSU, CGU, YZU Taiwan.	Online	28.08.22
17	Dr. Md Maqubool Hosain	"New Research of AI & ML in Applications of Computer Image, Intelligent Driving System"	Self-funded	Educare Taiwan with National Yang Ming Chiao Tung University, Taiwan.	Online	14.08.22
18	Dr. Md Maqubool Hosain	Making a website clone using React JS	Self-funded	AccioJob	Online	07.08.22
19	Dr. Satish Kumar	Workshop on "Enable student success with blended learning solution in higher education" organized	AICTE	Microsoft	Online	06.08.22
20	Mr. Niraj Kumar & Mrs. Nirupam	Workshop on "Designing and Modelling of IoT, AI & ML Systems"	AICTE	AICTE, ATAL Academy, Arm Education, and STMicroelectronics	Online	01.08.22 – 05.08.22
21	Dr. Neeru Singh, Mrs. Rekha Kumari, Mrs. Nirupam & Dr. Md Maqubool Hosain	AICTE Hybrid Learning Training Program "Best Strategies from Remote, Blended and Hybrid Learning"	All India Council for Technical Education (AICTE)	Tech Avant-Garde	Online	29.07.22- 30.07.2022
22	Dr. Sandhya Rani, Dr. T. K. Parashar, Mrs. Rekha Kumari & Mrs. Nirupam	FDP on "Inculcating Universal Human Values in Technical Education"	AICTE	All India Council for Technical Education (AICTE)	Online	04.07.22- 08.07.22
23	Mrs. Nirupam	Two Credit Course "Academic And Research Report Writing" with the consolidated score of 90%	Self-funded (Proctored Examination Fee)	SWAYAM Online Course Certification	Proctored examination center: Ranchi	July to November 2022 (Proctored examination held on 26.02.2023)



Sr. No.	Name of the Faculty	Title of the Conference/ Seminar	Funding Agency	Organizers	Venue	Date
24	Mrs. Nirupam	Three credit course "Accreditation For Diploma Engineering Programme" with the consolidated score of 97%	Self-funded (Proctored Examination Fee)	SWAYAM Online Course Certification	Proctored examination center: Ranchi	July to November 2022 (proctored examination held on 25.02.2023)
25	Mrs Rekha Kumari	Workshop on Production Technology Theory and practice	Self-funded	NPTEL-AICTE	Online	July-Oct 2022
26	Mrs Rekha Kumari	course Introduction to Composites, Faculty Development Programme	Self-funded	NPTEL-AICTE	Online	July-Oct 2022

## SECTION 4

## RESEARCH PUBLICATIONS





## SECTION 5

## AWARD / PATENT / COLLABORATIONS

### 5.1 Award / Recognition Bestowed on Faculties

Sr. No.	Name of the Faculty Member	Title of the Award / Honour	Organisation	State / National / International Level	Year / Duration
1	Mrs. Nirupam	Selected as a Reviewer for the AICTE's Hindi Translation Project to review a third-semester book (Hindi) for the Diploma Programme.	AICTE	National	January, 2023
2	Mrs. Nirupam	Selected for the Summer Faculty Research Fellow (SFRF-2023) Programme.	Indian Institute of Technology, Delhi	National	16.05.2023-14.07.2023

### 5.2 Patents (Applied / Granted)

NIL

### 5.3 MoUs / Collaborations :

Sr. No.	Name of Organisation / University	Purpose / Area/Short Description	Year / Duration
1.	MoU between University Polytechnic BIT Mesra and ETS Services Ranchi	Skill development, outcome-based Training, Placement, R & D services and related services	12/5/22 for 3 Years

## SECTION 6

## ACTIVITIES/ FACULTY MEMBERS / DOS / DAS

### 6.1 Departmental Students' Activities

Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
1	International Yoga Day	-	Mr. N. K. Singh	21.06.23
2	World Environmental Day Celebration	Rohan Soni, Ritu Kumari, Ankit Kumar	Dr Sandhya Rani, Mr. Manoj Kumar, Dr Anubha Singh	05.06.23
3	National Technology Day Celebration	Rohan Soni, Ritu Kumari, Ankit Kumar	Dr Sandhya Rani, Mr. Manoj Kumar, Dr Anubha Singh	11.05.23
4	Training of Waste Paper Recycling.	Sangam Pandey, Rohit Yadav	Dr Sandhya Rani, Mr. Manoj Kumar	02.05.23
5	Visit to main building to attend Indian Knowledge system program named as Udbodhan.	Rohan Soni, Ritu Kumari, Ankit Kumar	Dr Sandhya Rani, Mr. Manoj Kumar	14.04.23
6	ANVESHAN (Technical Fest)	Shravan Kumar, Babban Choudhary, Rajkishor	Dr. Satish Kumar, Mr. Niraj Kumar, Dr. Sumana Kumari	21.03.23



Sr. No.	Name of the Activity	Students' Co-Ordinator (If any)	Faculty Coordinator (if any)	Date / Duration
7	Science Day Celebration. (Participated in Science Exhibition at R&D Building,	Rohan Soni, Ritu Kumari, Ankit Kumar	Dr Sandhya Rani, Dr Satish Kumar, Mr. Manoj kumar	28.02.23
8	Unifesto 2023 (Cultural Fest)	Srijan, Payal Bhogta, Vikas ,Aayan,Bittu	Dr Sandhya Rani, Mr.Shankar Singh	15.02.23
9	Annual Athletic Meet	Overall Championship: EEE Runner's up Trophy: BMLT INDIVIDUAL Champion: Mr. Nipun Tirkey (Boy) Ms. Arpana Koya (Girl)	Mr. N. K. Singh	09.02.2023- 10.02.23
10	Industrial visit to TATA MOTORS, Jamshedpur	-	Dr. Satish Kumar, Dr. Anubha Singh	30.01.23
11	Saraswati Puja	Paayal Bhogta and Vikash Kumar	Dr Sandhya Rani & Dr. Anubha Singh	26.01.23
12	Cross Country Race	-	Mr. N.K. Singh	08.01.2023
13	Aagaaz (Fresher Party)	Senior Batch	Dr. Neeru Singh, Mr. Shanker Singh, Md. Maqubool Hosain	28.11.22
14	Inter Semester Cricket Tournament	Winner: 2K20 Batch Runner Up: A team of 2K21 batch	Mr. N.K. Singh	Month of November 2022
15	Inter semester Volleyball Tournament	Winner: 2K21 batch	Mr. N.K. Singh	24.09.22-25.09.22
16	Inter semester Football Tournament	Winner: 2K21 batch	Mr. N.K. Singh	16.08.22-21.08.22

## 6.2. List of Faculties as on 30.6.2023

S.No.	Name	Designation
1	Dr. Vinay Sharma	Professor and Director
2	Mr. Abhay Kumar	Assistant Professor
3	Dr. (Mrs.) Anubha Singh	Assistant Professor
4	Dr. Chanchal Kumar Mishra	Assistant Professor
5	Mr. Manoj Kumar	Assistant Professor
6	Mr. Maqubool Hosain	Associate Lecturer
7	Dr. (Mrs.) Meena Singh	Assistant Professor
8	Dr. Mohd. Neyaz Ahsan	Assistant Professor
9	Mr. N. K. Mukherjee	Associate Lecturer
10	Mr. Narendra Kumar Singh	Physical Training Instructor
11	Dr.(Mrs.) Neeru Singh	Assistant Professor
12	Mr. Niraj Kumar	Assistant Professor
13	Mrs. Nirupam	Assistant Professor



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14	Mr. P.R. Mahto	Teaching Assistant
15	Mr. Pradeep Toppo	Assistant Professor
16	Mr. Rajendra Mahto	Assistant Professor
17	Mr. Rakesh	Associate Lecturer
18	Mr. Ramkishore Prasad	Senior Superintendent
19	Mr. Ramkesh	Assistant Professor
20	Mr. Ramnish Sinha	Assistant Professor
21	Mrs. Rekha Kumari	Assistant Professor
22	Dr. Rohit Kamal Chatterjee	Assistant Professor
23	Dr.(Mrs.) Sandhya Rani	Assistant Professor
24	Mr. Sanjay Jha	Teaching Assistant
25	Dr. Satish Kumar	Assistant Professor
26	Mr. Shankar Kumar	Teaching Assistant
27	Dr.(Mrs.) Sumana Kumari	Assistant Professor
28	Mr. Surendar Kumar Mahto	Associate Lecturer
29	Dr. T. K. Parashar	Assistant Professor

### 6.3 Board of Studies

Sr. No.	Name of the Member	Designation	Role
1.	Prof. (Dr.) Vinay Sharma	Director (Ex-Officio)	Chairman
2.	Dr. D. P. Mishra	HOD., Mechanical Engineering, B.I.T. Mesra	External
3.	Dr. Joyjeet Ghose	HOD, Mechanical and Industrial Engineering	External
4.	Mr. Pradeep Kr. Gupta	DGM, Tata Motors Ltd., Jamshedpur	External
5.	Mr. Pranay Kant Prasad	DGM, Tata Motors Ltd., Jamshedpur	External
6.	Mr. Dhiman Das	Mind Tree, Tatisilwai, Ranchi	External
7.	Mr. Manoj Kumar	Course Coordinator, Automobile Engineering	Internal
8.	Mr. Ramkesh	Course Coordinator, Mechanical (Production) Engineering	Internal
9.	Mr. Rakesh	Course Coordinator, Mechanical Engineering	Internal
10.	Dr. Sarbani Chhakraborty	HOD, EEE, B.I.T. Mesra	External
11.	Dr. Sandeep Dutta	HOD, CSE, B.I.T. Mesra	External



Sr. No.	Name of the Member	Designation	Role
12.	Prof. (Dr.) S.S. Solanki	H.O.D., Electronics & Communication Engineering, B.I.T. Mesra	External
13.	Dr. Swastika Ganguly	HOD, PST, B.I.T. Mesra	External
14.	Mr. Randhir Prasad	DGM, Tata Motors Ltd., JSR (EEE)	External
15.	Mr. N.C. Aggarwal	CEO, Meditron, Ranchi (ECE)	External
16.	Mr. Praveen Kumar	SDE, Admin and T M, BSNL, Ranchi (CSE)	External
17.	Dr. K. K. Das	CCL, Head of Path., Gandhinagar Hospital (BMLT)	External
18.	Mr. N. K. Mukherjee	Course Coordinator, Electrical and Electronics Engineering	Internal
19.	Mrs. Nirupam	Course Coordinator, Electronics and Communication Engineering	Internal
20.	Mr. Abhay Kumar	Course Coordinator, Computer Science Engineering	Internal
21.	Dr. Chanchal Mishra	Course Coordinator, BMLT	Internal

## SECTION 7

## OTHER INFORMATION

## 7.1 Student Entrepreneurship activities/Start-ups if any:

Sr. No	Name of Student	Source of Funding	Title of Start up	Short Description
1	Aditya Sharma, Srijan, Payal Bhogta,	BIT Mesra	House Keeping Hygiene Solutions.	Cloth wash liquid, Dish wash Liquid, Hand wash Liquid, formula and products were developed. One lakh and ten thousand rupees announced as a cash prize.

## 7.2 Achievements of Students:

Sr. No	Name of Student	Achievement/Position/Award etc	Organised by	Date and Venue
1	Aditya Sharma, Srijan, Payal Bhogta,	Won 1st prize in BIT NISHAN 2022 Cloth wash liquid, Dish wash Liquid, Hand wash Liquid, formula and products were developed. One lakh and ten thousand rupees announced as a cash prize.	BIT Mesra	27.08.22, BIT MESRA



## 7.3 Distinguished Visitors from Industry/Academia/Research organizations

Sr. No	Name of Visitor with Affiliation	Date of Visit	Picture
1.	Dr Surendra Kumar, President Indo-US Research Institute for Sustainable Development (IURISD) Former Professor & Head, Production Engineering Department, BIT Mesra	14th MARCH, 2023	
2.	Mr. Shishir Suman, Founder, www.einsehen.com	12th December, 2022	
3.	Mr. Nitish Prakash Surya. Youth Coach, Motivator & Author	27th January, 2023	
4.	Mrs. Sutapa Nandi Entrepreneur, Life Coach, Personality Development Coach, Aviation Trainer, NLP Practitioner, TV Anchor	22th March, 2023	

## 7.5 List of Distinguished Alumni

Sr.No	Name, Batch and Affiliation	Short Description
1.	Mr. Sandeep Kumar Branch: Mechanical (2018-21)	Asst. Project Manager, Tata Technologies Ltd.
2.	Mr. Ravishanker Lohra Branch: Automobile (2012-15)	Assistant Manager, GMMCO LTD.
3.	Mr. Ashit Kumar Mahto Branch: Mechanical (2015-18)	Trainer, Tata Steel Adventure Foundation
4.	Mr. Vikash Kumar Branch: BMLT (2015-18)	Assistant Professor, Usha Martin University



## 7.6 Infrastructure Development.

1. Construction of 5000 Sq. Feet area of New Electrical Trade Building/Academic Building.
2. A Basketball Court has been constructed in this year for the students.
3. Renovation of Toilets (Both Boys and Girls Hostel) has been done.
4. A budget of Rs.5 lakh was sanctioned in the financial year 2022-2023 for campus wide Wi-Fi and LAN Connectivity. Campus wide network connectivity is established via Optical Fiber Cable. Internet can be accessed from hostels, library, all computer labs including CAD lab. The Wi-Fi connectivity is available in all the academic blocks.
5. A recurring budget of Rs 3 lakh is approved for Internet leased line with 50 Mbps bandwidth. The ILL is installed and operational in the campus.

### Laboratory Development:

The University Polytechnic is committed to a continuous enhancement of our laboratory facilities, introducing new equipment to provide students with enriched exposure and practical learning opportunities.

A total budget of Rs 90 lakh was allocated for modernization and setting-up of various laboratories, listed below:

S.No.	Laboratory Name	Department
1.	Computer Hardware & Networking Lab	Computer
2.	IOT Lab	Computer
3.	Computer Lab	Computer
4.	Heat Transfer Lab	Mechanical
5.	Refrigeration and Air Conditioning Lab	Mechanical
6.	Engineering Measurement	Mechanical
7.	Strength of Material Lab	Mechanical
8.	Theory of Machine Lab	Mechanical
9.	Workshop	Mechanical
10.	Automobile Lab.	Automobile
11.	PLC Lab.	EEE
12.	Control System Lab.	ECE
13.	Microbiology Lab.	MLT
14.	Haematology Lab	MLT

## 8. Any other relevant information

1. Mrs. Mridula Pathak Jr. Superintendent Library has attended 5 days online National workshop on Library Management using open-source software held during 12 June 2023- 16 June 2023 organised by central library IIT (ISM) Dhanbad.
2. Dr. Sandhya rani has chaired a conference on "Role of mother power in development of nation" in Seva Bharti Matri Vahini meeting on 12 June 2023.
3. Dr. Satish Kumar delivered lectures as a Resource Person on the World Environment Day Celebration organized by Indian Water Work Association, Jharkhand (Ranchi) on 5th June 2023 and on the National Technology Day Celebration organized by Lady K. C. Roy Memorial School on 11th May, 2023
4. Dr. Satish Kumar served as MENTOR for state level INSPIRE AWARDEE of Jharkhand organized by National Innovation Foundation-India, Deptt. of Science & Technology, Govt. of India and Education dept.. at Jharkhand Academic Council (JAC), Ranchi on 5th May 2023.
5. Dr. Satish Kumar served as JURY MEMBER in State Level program INSPIRE AWARD MANAK SCHEME (Science exhibition) organized by Deptt. of Science & Technology, Govt. of India and Education deptt. at Ranchi on 4th May 2023.
6. Dr. Satish Kumar, delivered an Invited Lecture in as a Resource Person in One week Short Term Course on Teseach Methodology & Ethics, organized by UGC-HRD Centre, Guru Nanak Dev University (NAAC A++ Graded), Amritsar during 14-03-2023 to 20-03-2023 and on the Engineer's Day Celebration organized by Indian Water Work Association, Jharkhand (Ranchi) on 15th September 2022
7. Dr. Satish Kumar, served as an Expert cum Jury Member in National Science Seminar organized Birla Industrial & Technological Museum, Ministry of Culture, Government of India in association of Education Department, Government of Jharkhand on 28 October 2022 at Ranchi.
8. Dr. Satish Kumar serves as National level Reviewer to review the ideas/innovations under the INSPIRE Awards-MANAK organized by National Innovation Foundation-



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India, Autonomous Body of Department of Science and Technology, Govt. of India.

- Dr. Satish Kumar appointed as REVIEWER of International "Journal of Colloid and Interface Science" published under ELSEVIER (Impact Factor-7.489) and "ENVIRONMENTAL MONITORING AND ASSESSMENT" published under SPRINGER (Impact factor-1.959).

### CAMPUS PLACEMENT 2023 (DIPLOMA)

Our placement records are consistently outstanding, with each passing year witnessing an elevation in the standard of placements. Nevertheless, we remain dedicated to continuously exceeding the lofty expectations of our Diploma graduates.

S.No.	COMPANY	Job Offered
1.	Wheel India Limited, Chennai	77
2.	Spicer (Dana), Pune	13
3.	Spicer (Dana), Jodalli	14
4.	Heldex, Nasik	08
5.	Gebriel India Ltd., Hosur	13
6.	Hindalco (Aditya Birla Group)	07

S.No.	COMPANY	Job Offered
7.	Larsen & Toubro Limited	03
8.	Wipro	05
9.	BAJAJ Auto Limited	11
10.	TATA Technologies Ltd	01
11.	TATA Consulting Engineers Ltd	12
12.	Anand Mando mobility, Bhiwadi, Rajasthan	03
13.	Subros Ltd, Gurgaon (2020, 21, 22 & 23 pass out)	35
	TOTAL	202

HIGHEST PACKAGE: 3.7 LPA, AVERAGE PACKAGE: 2.5 LPA, # BMLT PLACED STUDENTS-17

### 9. Special Initiatives if any:

Project (House Keeping Hygiene Solutions) won in NISHAN-22 under the mentorship of Dr. Sandhya Rani.

Release of first e-Magazine "SPANDAN", Editor: Dr. Satish Kumar, Co-editor: Mr. Niraj Kumar, Students Editorial Committee 1. Shivam Kumar, 2. Rohan Soni, 3. Piyush Kumar

## BIT DISPENSARY



The present BIT Dispensary is 20 bedded including 8 bedded two isolation wards fully functional Health Care Centre providing facilities to BIT Students, Faculties, their families and staff members & their families plus Villagers around the Campus. The Dispensary is functioning in all the 3 shifts (Round the clock 24x7) including Sunday & Holidays attending all OPD and IPD & Emergency Cases. Presently it is manned by 4 Allopathic & 1 Homeopathic Doctor put in shift/General shift and about 20 paramedical staff.

We have Dentist, Physiotherapist & psychiatrist as visiting specialist every week for health care service. The workforce, as per the need and work-load is quite insufficient and we are in the process of appointing and adding up few more Doctors & Paramedics to give our services in a better way. The dispensary is functioning essentially as a primary health centre and patients who need specialized treatment or hospitalization are referred to multi specialty hospitals.

All students and staff members & their two dependent children are covered under Mediclaim policy by ICICI Lombard insurance. The Health Centre is equipped with 4 Ambulances, available in all the 3 shifts fitted with Oxygen Cylinders & first aid kits.

### Details of Dispensary Staffs

S.N	Medical officers	Contact No
1.	Dr. Mona Deepa	7763855564
2.	Dr. Anju Kumari	7319905831
3.	Dr. Madhu Pramanik	9546745091
4.	Dr. Dharmendra Kumar	9576174033

	Visiting Specialist	Specialization
1.	Dr. Rishi Raj	Dentist
2.	Dr. Promod Kumar	Physiotherapist
3.	Dr. Subhodh Kumar	Psychiatrist
Homeopathy Physician		
1.	Dr. P. Mohanty	9430118376
	Pharmacist	Store Keeper
1.	Mr. A.K. Tarun	Mr. Mahesh Kumar Sinha
2.	Mr. B.P. Yadav	Mr. Rajeev Ranjan
3.	Mr. Umesh Prasad	
	Nursing Staff	X-Ray Technician
1.	Mrs. Renu Kumari	Mr. Kaleshwar Mahto
2.	Ms. Suman Lovely Tigga	
3.	Mr. Ram Egbal Singh	Lab Technician
4.	Mrs. Sanju Devi	Mr. Surendra Kumar Singh
5.	Mrs. Pinki Kachhap	
	Dressing Staffs	Office Attendant
1.	Mrs. Janki Devi	Mr. Bhuneshwar Munda (Peon)
ATTENDANT		
1.	Mr. Radhe Shyam Mahto	Medical Lab Attendant- (IV)
2.	Mr. Saurav Kumar	Attendant-(IV)



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3.	Mr. Jitendra Kumar	Ward Attendant- (A-IV)
4.	Mr. Akash Kumar	Ward Attendant-(IV)
5.	Mr. Bijay Kumar Lakra	Office Attendant-(IV)
6.	Mrs. Sunita Pallai	Ward Attendant-(IV)
7.	Mrs. Nupur Tigga	Attendant-(IV) Nursing
8.	Mrs. Parmila Devi	Attendant-(IV)
8.	Mrs. Aruna Goswami	Ward Attendant-(V)
9.	Mrs. Pramila Devi	Attendant-(IV)
10.	Mr. Anil Kumar	Attendant-(IV)
<b>SAFAI KARMCHARI</b>		
1.	Mrs. Gita Devi	Safai Karamchari (A-V)
2.	Mr. Rajendra Munda	Safai Karamchari (A-V)
3.	Mr. Mukesh Ram	Safai Karamchari (A-V)

### Facilities and Services:-

- OPD Services including part time specialist OPD viz. Skin Obs/Gynecologist & Dental Surgeon & Physiotherapist.
- In patient Service for minor ailments.
- Emergency Service
- Homeopathy Clinic

- Dental Clinic
- Physiotherapy Unit
- X-Ray Unit
- ECG Unit
- Isolation Ward 02 (One each for male & Female Patients)
- Dressing unit
- 02 Ventilators are available
- 03 Oxygen concentrators & portable oxygen cylinders are available.

### Service Details

SI.No		
1	Total Number of patient	41582
2	Number of outdoor patients treated & Supplied medicines	33259
3	Male	16808
4	Female	6554
5	Students	10254
6	Staff members & their dependants	28532
7	Non- entitled Cases	840
8	Number of patients admitted & treated	159
9	Number of patients referred	273
10	Number of ECGs	65
11	Number of X-Rays	115

## NATIONAL CADET CORPS

### 1. About NCC at BIT Mesra:

The 3 Jhar CTC, NCC BIT Mesra provides the enrolled cadets with training equivalent to army training for the theoretical, physical, emotional and social development of the cadets. The cadets are taught and trained to inculcate qualities of leadership along with the feelings of patriotism.

### 2. No. of units in NCC (If Applicable):

#### JHARKHAND COMPOSITE TECHNICAL COMPANY, NCC BIT MESRA

No of students enrolled:	Boys:	Girls:
K21—64	K21—50	K21—14
K22—72	K22--62	K22—10
Total Students--136		

### 3. Achievement of NCC:

- 49 number of students cleared the B certificate Exam.
- 17 number of students cleared the C certificate Exam.

### 4. EVENTS CONDUCTED

- HAR GHAR TIRANGA Campaign 12th August 2022 Number of participants: 100  
Batches: 2021 and 2019  
In-Charge: SUO Md. Farooq (2019 batch)

To foster the spirit of patriotism throughout the campus, cadets of 3 JHAR CTC distributed the national flag in the residential colonies.





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### 5. Independence Day 15th August 2022

Number of Participants: 135 Batches: 2021 and 2019

Parade Commander: SUO Md. Farooq (2019 batch)



### 6. Blood Donation Camp 28th August 2022

Number of Participants: 120

Batches: 2021 and 2019

In-Charge: SUO Md. Farooq (2019 batch)



### 7. Annual Training Camp XVII 11th to 18th December 2022

Every year 3 JHAR CTC NCC organizes the Annual Training Camp within the premises of NCC Ground. Cadets are trained in Military Studies, Weapon Training, Obstacle Course, Cycling Marathon and various activities are organized.

No. of Participants: 175 Batches: 2019, 2021 and 2022

Camp In-Charge: SUO Md. Farooq (2019 batch)



## 8. Republic Day 26th January 2023

Number of Participants: 115 Batches: 2021 and 2022  
Parade Commander: SUO Aayushi Prasad (2021 batch)



## 9. Puneet Sagar Abhiyaan 10th February 2023

Number of Participants: 90  
Batches: 2021 and 2022  
In-Charge: SUO Aayushi Prasad (2021 batch)



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Cadets of 3 JHAR CTC pledged to take responsibility for their nearby water resources and participated in cleaning the river bank.



### 10. International Yoga Day (21st June 2023)

In-Charge: SUO Aayushi Prasad (2021 batch) & SGT. Akash Deep Singh (2022 batch)

International yoga day is celebrated worldwide on June 21st each year, bringing people together to honor the ancient practice of yoga. This day serves as a reminder of the immense benefits that yoga offers for physical, mental, and spiritual well-being. The international yoga day celebration by 3 Jhar CTC NCC BIT Mesra was done with great energy and enthusiasm from the cadets.



### 11. Group Commander Brigadier VS Yadav Visit 23rd June 2023

Number of Participants: 72

Batch- 2022

In-Charge: SUO Aayushi Prasad (2021 batch)



## National Service Scheme

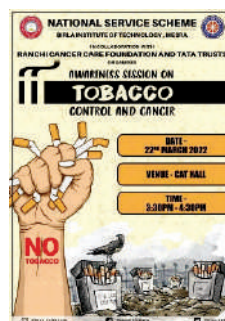
### Blood Donation Camp (13th March, 2022)

NSS BIT, MESRA had organized a Blood Donation Camp at Bit Dispensary on 13th March, 2022. The Camp was successfully conducted by the chief guest VC Indranil Manna and AGM Bikram Mishra of the Bank of India. Four hospitals Maa Rampyari, Raj, Medanta, Sevasadan in collaboration with the Blood Bank of India visited for the collection of blood. A total of 250 plus units of blood was donated. All the NSS volunteers and executives joined the Camp and made it a successful one.



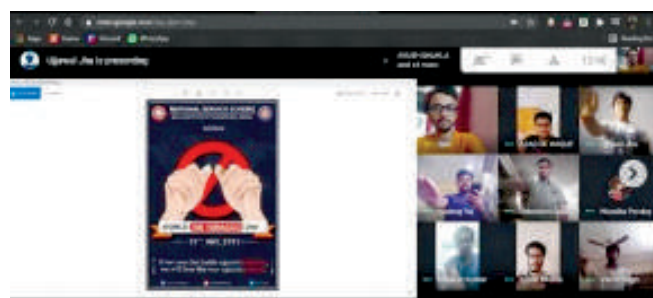
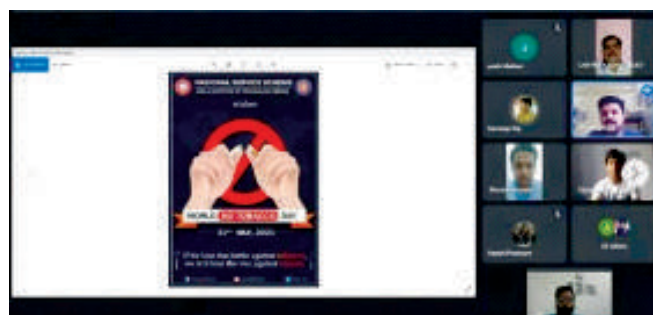
### Seminar on ill-effects of Tobacco and Cancer (22nd March, 2022)

The Nation is celebrating 2021 as its 75th year of Independence, the Amrit Mahotsav. On this extraordinary occasion, NSS BIT Mesra organized 'Abhivyakti: An extempore competition.' Where one can speak by delivering one's opinion in the best possible way.



### No Tobacco Day (31st May, 2022)

The world No Tobacco Day, observed every year on May 31, is a day of thought and reflection for smokers and non-smokers around the world. The day aims at informing the public about the dangers of using tobacco and the business practices of tobacco companies. This No Tobacco Day, we, the members of NSS, BIT MESRA, gathered to take the pledge to refrain from the use of tobacco via any means and stop people from doing it.



### Yoga Day (21st June, 2022)

NSS, BIT MESRA organized a yoga session on the occasion of International Yoga Day on 21st of June, 2022. It took place at Sports Complex and was attended by 155 volunteers. It began with the yoga session followed by an encouraging speech. This was followed by various pranayama and asana performed by all the participants. Thus, the event was conducted successfully witnessing an enthusiastic participation of



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the volunteers and executives and the revered presence of our faculty members and dignitaries.



### Environment Day Event (5th June, 2022)

World Environment Day has been celebrated as an annual event on June 5 every year to raise the importance of the healthy and green environment in human lives and solve the issues of the environment by implementing positive environmental actions. To recognize the importance of this special day, NSS BIT Mesra, in association with Institute Innovation Council (IIC) and Environment Protection and Awareness Club (EPAC) organized a series of events for World Environment Day on 5th June, 2022.



### Blood Donation Camp (15th October, 2022)

NSS BIT, Mesra had organised a Blood Donation Camp at Bit Dispensary on 15th October, 2022. The Camp was successfully conducted by the chief guest VC Indranil Manna and AGM Bikram Mishra of the Bank of India. Four hospitals Maa Rampyari, Raj, Medanta, Sevasadan in collaboration with the Blood Bank of India visited for the collection of blood. A total of 250 plus units of blood was donated. All the NSS volunteers and executives joined the Camp and made it a successful one.



### National Unity Day pledge and poster making (31st October, 2022)

NSS, BIT MESRA celebrated the 'National Unity Day', also called 'Rashtriya Ekta Diwas' under the aegis of Azadi Ka Amrit Mahotsav on 31st October, 2022 to regard the birth anniversary of Sardar Vallabhai Patel. The day was observed by reciting the unity pledge, followed by poster making activity which showed the importance of unity in our country. Around 70 volunteers participated in recitation of pledge and poster making activity.

### National Youth Day (12th January, 2023)

On the occasion of nation youth day, NSS, BIT MESRA organized poster making and debate competitions to enlighten the youth about their responsibilities as the citizen of our country.



### National Road Safety Week (11th to 17th January, 2023)

From 11th to 17th, NSS BIT Mesra celebrated National Road Safety Week where 200 volunteers took an oath to conduct themselves with caution on roads. They also had a spirit awakening poster making competition where enthusiastic participants showcased their artistic talents.



### Parakram Diwas (23rd January, 2023)



On the occasion of Parakram Diwas, NSS BIT Mesra organized a poster making activity and over 100 volunteers participated to make the youth aware of the importance of Parakram Diwas. This way the students paid respect to Netaji Subhash Chandra Bose who fought against Britishers and played an important role in our freedom.

### Prabhat Pheri (26th January, 2023)

On the occasion of republic day, NSS, BIT MESRA organized Prabhat Pheri to enliven the spirit of patriotism and national pride. The students walked around the campus and cheered slogans.



### Blood Donation Camp Awareness Drive (31st March, 4th & 7th April, 2023)

The volunteers made people aware of the importance of donating blood and how it can save lives. The volunteers answered the queries of villagers and aimed to convince people to donate blood and contribute to the well-being of society.





### Blood Donation Camp (8th April, 2023)

NSS BIT, MESRA organized a Blood Donation Camp at Bit Dispensary from 9 am to 4 pm on 8th April'23. The Camp was successfully conducted by the chief guest VC Indranil Manna, Ranveer Singh (Deputy General Manager), Bank of India, and NBB Jharkhand. Six hospitals Maa Ramprasad, Raj, Medanta, Sevasadan, Sadar and Paras in collaboration with the Blood Bank of India visited for the collection of blood. Over 300 donors with the NSS volunteers and executives took part in this noble initiative and made it a successful one.



## ENVIRONMENT PROTECTION AND AWARENESS CLUB

The EPAC, short for Environment Protection and Awareness Club, is an important student organization at BIT Mesra. Our core purpose is to encourage students on our campus to actively consider the harmful consequences our environment is facing today.

As students united by a common cause, we're dedicated to enhancing the systems that support nature. Across our vibrant, green campus, we've initiated a variety of projects aimed at improving the environment. Our focus is on creating positive change and raising awareness about the consequences of an unhealthy environment.

### PHOTOGRAPHS/MEDIA(FB/Twitter/LinkedIn/Press)



On the occasion of Van Mahotsav EPAC Representatives conducting a plantation drive.



Participants writing their answers down in the first written round with the EPAC members supervising them.

We collaborate seamlessly with the latest technological advancements to introduce minor yet impactful changes that possess the potential to bring about substantial transformations. One event that stands out

is our flagship initiative – JSEF (Jharkhand Science And Environment Festival). This event is a platform where we extend invitations to students from various schools in Jharkhand. Through JSEF, we organize a diverse range of competitions and activities. This serves the purpose of not only spreading environmental awareness but also inspiring proactive measures among the participants.

JSEF acts as a bridge between educational institutions and environmental awareness. It offers students an opportunity to step out of their classrooms and engage in hands-on learning experiences related to environmental issues.

JSEF is characterized by a diverse range of competitions and activities, all centered around environmental themes. These can include quiz contests, eco-art exhibitions, eco-debates, tree-planting campaigns, and even technology-driven challenges that align with sustainability.

In addition to the JSEF event, the Environment Protection and Awareness Club (EPAC) at BIT Mesra hosts a range of other impactful initiatives that contribute to our mission of promoting environmental consciousness and positive change.

**Escape Into Nature** was an umbrella event under which Environment Protection and Awareness Club (EPAC) at BIT Mesra organized various events. Two events took place under the name of this umbrella event are :-

1. Earth Matters
2. Natframes

Earth Matters was a presentation based event, aimed at finding solutions to environmental problems within the campus. The event had two rounds, with teams consisting of 1 to 3 members only. In round 1, participants were required to submit their proposals for a solution to an environmental problem identified by them using a PowerPoint presentation, poster, or video through the registration link provided. The shortlisted candidates were then required to present a short pitch of about 10 minutes in round 2, discussing the presentation they had made in round 1. The winning presentation stood out for its innovative solution.



### Entrepreneurship Development Cell

**The Entrepreneurship Development Cell** was founded in the year 2007 by students Amit Chaudhary and Ankit Jain with Dr. B.M Karan as Mentor to foster the spirit of entrepreneurship among students. EDC's prime objective is to be a stepping stone for students who want to take the unconventional path and start their own enterprise. To gather the required expertise for them and help them to approach Venture Capitalists (VCs), investors and banks are the major areas of focus. EDC also plays a vital role in encouraging entrepreneurship among students of the Jharkhand region through workshops, activities, and guest lectures by eminent personalities. The Institute is governmentally recognized as the Nodal Centre for Entrepreneurship in the state of Jharkhand.

The major events held for the duration July'22 – June'23 had The Annual Entrepreneurship Summit which accounted for a footfall of more than 1000 young and budding entrepreneurs looking to take part in a series of challenging events & be a part of guest talks from renowned industry moguls. IPL Auction and Storage Wars were the major highlights of informal events. Participants had the opportunity to demonstrate their skill and expertise in one of the best financial showdowns thanks to Storage Wars. Online contests like FIFA and Valorant drew participants from various colleges and involved them in an exciting activity. Participants gained knowledge about market speculation through B-Quiz, B-Plan, provided the right opportunity to the folks to put up their skills in the real business world. Participants got a taste of what it's like to handle the heat of unpredictability through experiences from the Boardroom. For those who wanted to start in this domain-pitch, Pitchers presented a perfect opportunity to come and pitch their ideas to judges and take home exciting prizes. Ancient Entrepreneur made students deep dive into ancient history of entrepreneurship, helping them not to make the grave mistakes again. The total prize pool for the entire summit was a whopping 2.5 crore thanks to a strong sponsorship from a variety of brands.



E-Summit'23 featured a stellar lineup of speakers that included Mr. Anshul Rustaggi, a creative and motivating leader focused on producing positive outcomes in the combative gaming industry; Mr. Pratik Gauri, the CEO and Founder of one of India's fastest growing unicorns "Sire"; Mr. Rishab Jain, a poet, an author, a financial guru and the CEO and Co-Founder of "Labour Law Expert"; Mr. Aditya Arora, an Angel Investor and a part time Stand-Up Comedian; Mr. Anmol Sharmal, founder and CEO at "Finlight"; Mr. Rahul Anand, a passionate and knowledgeable edupreneur and the Co-Founder and Mentor of "B-Factory"; and last but not least a BIT Alumni and president awardee IAS, Mr. Aditya Ranjan, enlightening us on various aspects of the UPSC exam.

-E-Summit had strong backing from renowned sponsors & corporate partners like Titanium Mahindra, BMW, Nissan, Zinoverse, Unstop, Psyber Duck, Floxus & the list goes on. Overall E-Summit was an overwhelming plethora of events, speakers & an entrepreneurial vibe.

#### SPEAKER SESSIONS



1. NFT( New Financial Trajectory ) -EDC BIT MESRA had an interactive session with Anshul

Rustaggi, the Founder of Totality Corp. and a graduate of the London School of Economics, IIM Bangalore, and IIT Delhi. He has a legal degree from the Campus Law Center as well. His most recent initiative, Totality Corp, a Web3 Gaming firm, is a game metaverse powered by playable NFT based on Indian mythology. He often regards video games as “fun, serious, mind-boggling, achievement-oriented, and social experiences.” Anshul had been a mobile gaming pioneer before entering the Web3 gaming market with his Mobile Gaming Premier League (MGPL), which amassed 2.2 million members and is also an interactive video gaming platform.

2. **INNOVATING EDUCATION with Web 3.0** - EDC BIT Mesra had another breathtaking session with the CEO and Founder of India's one of the fastest growing unicorns “5ire”- Mr. Pratik Gauri . 5ire is a block chain ecosystem that brings sustainability, technology and innovation to build the 5th Industrial revolution(5IR)
3. **FIRESIDE CHAT**-Aiming to nurture innovative startups and making India Jagruk, The Entrepreneurship Development Cell, BIT Mesra is extremely delighted to have Rishabh Jain, CEO & Co-Founder of Labour Law Advisor as our guest speaker for E-Summit'23. Having passed out from IIT Bombay, he is currently a content creator on @labourlawadvisor boasting of a whopping subscriber base, as he calls “Jagruk Janta”. A poet, an author, an innovative entrepreneur, and a finance guru, Mr. Rishabh Jain is a polymath and an educator at heart with a simple vision to simplify labour laws for the common man.
4. **STARTUPS IN AGE OF RECESSION** -Entrepreneurship Development Cell is honored to invite such a prominent figure like Aditya Arora .He is currently the CEO of Faad Network Pvt Ltd. He is also an angel investor in over 20 start-ups, is recognized as a successful young entrepreneur on national and international platforms.
5. **THE PERFECT RECIPE FOR AN ENTREPRENEUR** -Mr. Anmol Sharma is the founder and CEO at Finlight, simplifying finance, business, and investment to the masses in a very easy-to-understand manner. He also got featured on reputed channels like Mint, TOI, CNBC, and ET Now and has amassed a community of more than 500K on various social media platforms. He launched his first startup Karegivers in his

second year of college.

6. **MASTERCLASS: GET YOUR DREAM BSCHOOL**- Mr Rahul Anand is the co-founder and mentor of B-factory. A passionate and knowledgeable edupreneur, he and his team have trained more than 10,000 students for MBA entrance examinations, engineering placements, and MBA campus placements.
7. **ASPIRANT TO ADMINISTRATOR JOURNEY OF AN IAS**- EDC BIT mesra invited Aditya Ranjan to enlighten the zealous students on various aspects of UPSE exam , this session was held to learn how to be motivated during preparation from pre to interview .

## EVENTS



Brief details about different major events and activities conducted by EDC BIT mesra :-

1. **IPL AUCTION** - In this exciting and captivating event, there will be a test of talent, planning, critical thinking, and quick decision-making. You may put up your ideal IPL squad and outwit your rivals. Sports experience is not necessary.
2. **B-QUIZ** - This quiz is designed to test your understanding of business concepts and principles. If you are interested in business, we think you will enjoy taking this quiz to see how well you know the basics.
3. **STORAGE WARS** - It is a activity where students learn about the dynamics between the auction, the auctioneer, and the competing bidders, remodel your insights into a bidding strategy and apply it in a real-world scenario to see whether it thrives or fails.
4. **BIT NISHAN** - Apart from the E-Summit, The Institute of Innovation council in association with Entrepreneurship Development Cell and Finance Club presented 'BIT-NISHAN' - an initiative to provide seed funding to home startups



## वार्षिक प्रतिवेदन 2022-2023

run by students and faculty of BIT Mesra and off campuses. This new initiative served as a landing platform for providing hands-on support to entrepreneurs. BIT NISHAN is focused on scouting early-stage ventures to help them upscale and provide guidance for necessary outreach and growth.

5. B- PLAN- It's a detailed document outlining the goals, strategies, financial projections,

and operational details of a new business venture. A well-developed business plan helps entrepreneurs clarify their vision, attract investors, and guide the growth of their startup

6. BOARDROOM - A "boardroom" is an activity where people are assigned specific roles and given certain marketing challenges to solve according to their assigned roles.



ENTREPRENEURSHIP DEVELOPMENT CELL  
BIT MESRA, RANCHI  
www.ecdbitmesta.in

FORMED IN 2007, EDC HAS A CORE MISSION: TO BE A LAUNCHING PAD FOR STUDENTS VENTURING INTO THE UNCONVENTIONAL REALM OF ENTREPRENEURSHIP. IT'S ALL ABOUT EMPOWERING THEM TO TAKE THE LEAP INTO THEIR OWN BUSINESSES. FROM EQUIPPING THEM WITH THE RIGHT EXPERTISE TO HELPING THEM CONNECT WITH VENTURE CAPITALISTS AND ANGEL INVESTORS, EDC IS ALL HANDS ON DECK.

BUT THAT'S NOT ALL - EDC SHINES AS A KEY PLAYER IN CULTIVATING ENTREPRENEURIAL SPIRIT. WITH WORKSHOPS, COMPETITIONS, SEMINARS, AND A MIX OF ENGAGING EVENTS, IT'S A HUB WHERE INNOVATION MEETS OPPORTUNITY!!

BIT Mesra's  
**E-SUMMIT'23**  
DARE TO BEGIN



### MAJOR EVENTS

- 7K+ registrations in E-SUMMIT'23
- 70+ startups participated in BIT NISHAN
- 15+ SPEAKER SESSIONS
- 600+ Participation in VIRTUAL STOCK SIMULATION
- 100+ participation in IPL AUCTION
- 50+ teams participated in MARKETING MAESTRO
- 80+ participation in INVESTOR'S HAT
- 60+ participation in STARTUP QUIZ

1<sup>st</sup> JULY 2022 - 30<sup>th</sup> JUNE 2023

## CREATIVE ARTS

Creative arts, as the name suggests is related to the art of creativity with the knowledge of skill that is taught in this subject. Here, this subject is divided into two categories comprising of music and fine arts. This subject is included in the curriculum of BIT MESRA for various branches like Architecture, IMH, IPH, BTech, BPharma, etc. to make the students more effective in their performance and also provide a good method of stress busting.

### FINE ARTS & MUSIC

The music section of Creative Arts performed 2 patriotic songs on 15th August '22 (Independence Day).

The Students of Creative Arts also performed in the flute band on the 15th of August '23 (Independence Day)



The Music section of Creative Arts performed the Institute Prayer on several occasions including the

Foundation Day of BIT Mesra and convocations.

The Students of creative arts were part of different cultural programmes in BIT including "Azadi ka amritmahotsav".

### CREATIVE ARTS

BIT MESRA

The music section of creative arts performed 2 patriotic songs on 26th January '23, Republic Day .

In the music section of Creative arts Indian Ragas, Bhajans , Ghazals, Prabhat sangeet and different Indian folk and various western instruments are taught as per the syllabus .

The Students of creative arts performed in the Flute Band on 26th January '23, Republic Day.





### IIC-Activities

#### Special Features of Innovation @ BIT MESRA

Under the Chief Mentorship of the Vice Chancellor Prof. Indranil Manna, the Research and Development Cell under the Dean of Research, Innovation, and Entrepreneurship (DRIE) has been promoting and funding diverse innovation related activities for faculty members and students in BIT Mesra. The following list of Schemes, Grants, Policies, Competitions and Funding Support have actively been carried out in BIT Mesra.

#### Seed Money Scheme

##### > Research Promotion Grant

1. Implementation of National Innovation and Start-up Policy
2. Funding Support for Startups under I & E promotion
3. Funding for Innovative Product Development
4. Business Plan Competition
5. BIT Nishan -Innovation Contest
6. Funding Support for Patents through IPR Cell
7. AICTE IDEA Lab
8. Numerous Innovation Activities under IIC

##### > Seed Money Scheme

Seed Money Scheme (SMS), sponsored by Birla Institute of Technology, Mesra, Ranchi, aim to promote research and innovation amongst young faculty. Seed funding scheme is to be used to initiate/continue the research work of the new faculty. The objective of the scheme is to develop cutting edge new innovative idea and to accelerate the possibility to receive the financial support from external agencies in future which may also help in publishing high quality papers in the least of the purpose. The funding support under this scheme will be up to Rs. 5,00,000/- (for 2 years). Additional small grant may be sought with proper justifications at time of the project evaluation meeting.

##### > Research Promotion Grant (RPG)

It is a fundamental duty of every Faculty of the university to carry out research work through sponsored project grants from various funding agency, in addition to regular academic activities. In order to encourage the faculty to get projects and to appreciate their efforts, 30% of the

overhead money from the sponsored project is allotted to the PI for his/her own spending as a Research Promotion Grant (RPG). PI can use this RPG to attend conference, workshop, buy any minor equipments, Laptop, or send their own research scholars or students to any training for promoting innovation. The fund under PI's RPG is credited as soon as the overhead money is deducted from the project, on regular basis, till the project is completed. If there are more than one investigator is involved in the project then 60% will go to the Principal Investigator, and remaining 40% will go to co-investigator. If there are more than 2 investigators are involved, then they can mutually decide their share as per their level of contribution, and inform the R&D cell for RPG fund distribution.

##### > Implementation of National Innovation and Start-up Policy (NISIP)

As per Ministry of Education's (MoE) mandatory requirement, every HEI is required to have NISP for promoting students' driven innovations & start-ups and to engage the students and faculty in innovation and start up activities in campus. In order to implement this requirement, BIT has created two policies: (a) Innovation, Incubation and Entrepreneurship policy, (b) Startup policy. These policies aims to build, streamline and strengthen the innovation and entrepreneurial ecosystem in campus and will be instrumental in leveraging the potential of student's creative problem solving and entrepreneurial mind-set, and promoting a strong intra and inter institutional partnerships with ecosystem enablers and different stakeholders at regional, national and international level. These policies provides a framework and facilitates students and faculty to take-up innovation and entrepreneurship activities along with their academic activities.

##### > Funding Support for Startups under I & E promotion

There is a dedicated funding support for creating a sustainable environment to promote student and faculty members to creat a new startup. This policy will lead the academic ecosystem at Institute with excellence through new innovative idea, new product development, Institute-Industry relation, employability, along with social



responsibility. In this policy the funding support providing Rs. 50,000 per startup (up to 10 startups) under Innovation & Entrepreneurship (I&E) promotion.

#### ➤ **Funding Support for Innovative Product Development**

There is a separate funding ear marked for converting any innovative idea of a faculty into a product. Under this funding scheme, faculty can apply for funding with their proposal which will be evaluated by an expert committee through many iterations of discussions and presentations. Finally, if the faculty's proposal is found suitable and recommended by the committee then they will be funded to create their innovative product. This funding support is open throughout the year.

#### ➤ **Business Plan Competition**

The Institution's Innovation Council (IIC-BIT Mesra as per MoE) organizes a "Business Plan Competition" every year in the months of August and September. This business plan competition aims to identify the innovative entrepreneurial bent of mind of BIT students in different domains of business and allied disciplines where they present their business idea plans. In this event students will showcase their innovative business plan idea and present their idea in front of Jury members. The Business plan event is a Pre-Qualifier event of BIT -NISHAN -an innovation contest. In this business plan competition students will get financial support of Rs 10,000 for up to 6 to 8 teams for initial market survey expenses and to make a prototype product and demonstrate their innovation product in the final round of BIT NISHAN.

#### ➤ **BIT NISHAN -Innovation Contest**

BIT NISHAN is an Innovation Contest where NISHAN stands for Neoteric-Indigenous-Scientific-Harmonious-Ambitious-Novel. BIT-NISHAN aims to identify potential startup-idea and to ensure that no idea from BIT with the potential to excel shall go unnoticed and untested due to lack of opportunity, resources and capital. BIT NISHAN event will help to

promote the culture of entrepreneurship & innovation amongst students and faculty in BIT. This event's major goal is to draw angel investors while also encouraging innovation and entrepreneurship among students from other underfunded colleges in Jharkhand. Students who participate in this innovation competition will get Rs. 1 lakh (One Lakhs) funding to help them create their innovative product and register their new startup company for implementation and commercialization for their product.

#### ➤ **Funding Support for Patents through IPR cell**

BIT has established a dedicated Intellectual Property Rights Cell to promote patenting activities amidst students and faculty. This cell organizes training, workshops, brain storming discussions, interaction with Patent Attorneys on regular basis in the campus. A dedicated funding support is also provided for registration and processing of patent applications from faculty and students, throughout the year.

#### ➤ **AICTE IDEA Lab**

BIT has established a dedicated Lab called AICTE – Idea Development, Evaluation and Application (IDEA) Lab funding by both AICTE and BIT. This lab is available for students around 24x7. This IDEA lab encourages students to practically apply Science, Technologies, Engineering and Mathematics (STEM) fundamentals towards enhanced hands-on experience i.e., learning by doing. A dedicated Faculty Coordinator is managing this lab and its fund along with a dedicated student's team. Under this facility, many advanced instruments and software are procured, and is available freely to all students. This lab also provides training, hands on practical knowledge, and expert interaction to both students from BIT and from outside BIT as well as from schools.

#### ➤ **Numerous Activities under IIC**

BIT organizes numerous Innovation related activities funded under Institution's Innovation Council, BIT Mesra regularly at each quarter as per the mandatory requirement of Ministry of Education, which are mentioned below.



## वार्षिक प्रतिवेदन 2022-2023

July 2022 to June 2023

SI No.	Description	Total
1	IIC Webinar, Workshop & Event Conducted	40

SI No.	Name of The Event	Date	Evidence
<b>Webinar</b>			
1	Seminar on Research Commercialization and Kick-Starting Your Startup Resource Person: Dr. Abhay D. Deshmukh, Director INCUBEIN Foundation Department of physics, Energy Materials and Device Lab RTM Nagpur University, Nagpur, India	26 .07.22 (Offline)	
2	Seminar on Chunauti 4.0 Resource Person: Mr. Siddharth Rai Additional Director at STPI- Ranchi	30.07.2022 (Online)	
3	Seminar on "Data Analytics and impact of financial process & Control" Resource Person: Ms. Manya Gaurav Sales Operation Analyst Qualcomm Inc-USA.	20.08.22 (Online)	

Sl No.	Name of The Event	Date	Evidence
4	Seminar on "5 Hacks for college entrepreneurs" Resource Person: Mr. Atul Singhal Co-Founder & CEO of CUVETTE	05.11.22 (Seminar Hall-1 R&D Building, BIT Mesra Ranchi)	
5	Seminar on "YOU CAN INVENT" Resource Person: Mr. Praveen Vettiyattil CEO, YCI Technologies Pvt. Ltd Thrissur, Kerala (MS from University of Southern California, USA)	29.12.22 (online)	
6	Seminar on "Achieving Problem Solution & Product Market Fit Through Intellectual Property" Resource Person: Mr. Vedant Pujari, Accures Legal (Founding Partner) New Delhi.	27.01.23 Seminar Hall-1 R&D Building, BIT Mesra Ranchi	



## वार्षिक प्रतिवेदन 2022-2023

SI No.	Name of The Event	Date	Evidence
7	Seminar on "College life at and after university" Resource Person: Mr. Rishabh Jain CEO & Co-Founder of Labour Law Advisor	28.01.23 CAT Hall BIT Mesra	
8	Seminar on The perfect Recipe for an Entrepreneur Resource Person: Mr. Anmol Sharma Founder and CEO at Finlight, simplifying finance, business, and investment	29.01.2023 6:00pm-7:00pm CAT Hall BIT Mesra	
9	Seminar on Aspirant to Administrator: Journey of an IAS Resource Person: Mr. Aditya Ranjan, IAS Alumnus of CSE, BIT Mesra	29.01.2023 12:30 pm to 1:30 pm Seminar Hall-1 R&D Building, BIT Mesra Ranchi	
10	Seminar on "Innovation and Product Development through Design Thinking" Resource Person: Mr. Srinivas Chamorthy Chief Innovation Executive & MD at CYME Automation System private Ltd.	03.04.2023 in Seminar Hall -1 R&D Building BIT Mesra	

Sl No.	Name of The Event	Date	Evidence
11	Seminar on "Promoting Research & Innovation in the Contemporary Times" Resource Person: Prof. Sivaji Chakravorti, Vice-President, Indian National Academy of Engineering, New Delhi & Professor, Electrical Engineering Department, Jadavpur University, Kolkata	27.06.23 CAT Hall BIT Mesra	
12	Poster Exhibition Institution's Innovation Council Regional Meet At Kolkata	2nd August 2022	
13	IIC-Essay Writing Competition on "Innovations and Entrepreneurship in Higher Education Institutes"	16.08.22	



## वार्षिक प्रतिवेदन 2022-2023

SI No.	Name of The Event	Date	Evidence
14	Azadi ka Amrit Mahotsav Poster Competition Achievement @75 Research Innovation and Entrepreneurial excellence of Independent India.	17.08.22	
15	IIC "Patriotic Song Competition" Atma Nirbhar Bharat & Celebrating 75 years of Independence	17.08.22	
16	IIC-Slogan Competition Atma Nirbhar Bharat & Celebrating 75 years of Independence	17.08.22	

Sl No.	Name of The Event	Date	Evidence
17	<p>"Business Plan Competition" on occasion of "World Entrepreneurs Day"</p> <p>15 Teams Registered</p>	21st & 22nd August 2022	
18	<p>"Colloquium of Development Entrepreneurship"</p> <p>The Buddha Institute, New Delhi along with RCRC joint initiative of BIT, Mesra, under Institute's Innovation council BIT Mesra and coordinated by EDC &amp; Finance Club</p>	24.09.2022	
19	<p>INVESTOR'S HAT</p> <p>The participants have been allocated some virtual money and the teams and some candlestick patterns of random companies will be shown without telling the name of the company. The participating teams have to make judgments on the basis of candlestick patterns and make maximum profit</p>	16.10.22	
20	<p>Sirf Excel 2.0</p> <p>It's a case studies of the financial world event competition.</p> <p>630 participants Registered</p>	17.10.22	



## वार्षिक प्रतिवेदन 2022-2023

SI No.	Name of The Event	Date	Evidence
21	Media Care Event Conquer the world in this Capture the Flag Competition. This event will consist of a series of challenges that vary in their degree of difficulty, and that require participants to exercise different skill sets to solve.	17.10.2022	
22	Journalist Hour Event A journalism-based event with panel discussions, aiming to judge the participant's deduction of the same while upholding clarity and depth in their line of thought.	16.10.22	
23	Asta Di Autos Teams will be bidding for various segments of a car like chassis, brakes, wheels, engines, transmission etc.	17.10.22	
24	BIT NISHAN -22 An innovation Contest	5.11.22	

Sl No.	Name of The Event	Date	Evidence
25	Workshop on "Prime Minister Employment Generation Scheme" To Start your Own Business Through Technological Intervention"	21.01.23	
26	Robotics Exhibition The exhibition aimed to promote an innovative attitude and instill robotics temperament among the visitors and students of the college	26.01.2023	
27	Technical Fest E-Summit ANCIENT ENTREPRENEUR	27.01.2023	
28	One -Week Workshop On Satellites Manufacturing (Design Thinking, Critical thinking and Innovation Design)	13/02/23 to 17/02/2023	



## वार्षिक प्रतिवेदन 2022-2023

SI No.	Name of The Event	Date	Evidence
29	Industrial Visit Pratik Multifilms Private Ltd. Krishna Nagar Booti, Ranchi.	25.02.23	
30	A technical case study competition "ENIGMA"-23	03.03.2023	
31	Workshop on Innovation & Entrepreneurship (Outreach Program School/ Community)	04.03.2023	
32	A Case Study Competition Behind The Stumps	05.03.23	

SI No.	Name of The Event	Date	Evidence
33	One-Day Work Shop on "Struggles to Accomplishments -A Journey of Empowerment"	22.03.2023	
34	One day Experiential Learning Workshop on "Bi2I - Business Ideation to Implementation"	25.03.2023	
35	Internal Hackathon for KAVACH 2023	1-2 April 2023	
36	One-Day Workshop On "Intellectual Property Rights for Young Innovators"	26.04.2023	



## वार्षिक प्रतिवेदन 2022-2023

SI No.	Name of The Event	Date	Evidence
37	Celebrates National Technology Day	11.05.2023	
38	One-Week Outreach Program on Microelectronics & VLSI Design (MVD-2023)	15th –19th May, 2023	
39	Celebrates World's Environment Day	05.06.2023	
40	Innovation Contest Innovation in Manufacturing Practices (IMP-23) To provide a platform for engineering Undergraduate Students, Postgraduate Students and Startups/Ph.D Scholars to showcase their innovations in manufacturing sector and also demonstrate their innovative prototype product. This event Sponsored by INAE, New Delhi	26.06.23	



## INSTITUTE CLUBS

### IET

Number of Events	Achievements
<b>No. of events: 11</b> <ol style="list-style-type: none"> <li>1. Game Development Workshop</li> <li>2. Linux Workshop</li> <li>3. Google It Out</li> <li>4. Code Golf</li> <li>5. Hatch From Scratch</li> <li>6. Blockchain Technology</li> <li>7. Data Science from Choice to Necessity</li> <li>8. Into to AI/ML</li> <li>9. C++ Workshop</li> </ol>	<ul style="list-style-type: none"> <li>● 1st Place in Coderush</li> <li>● 2nd Place in Coderush</li> <li>● Non-CS prize in Coderush</li> <li>● DIVA prize in Coderush</li> <li>● 4th Position in House of Hackers by IIIT Ranchi</li> <li>● 2nd Position in AlgoQuiz winners</li> </ul>

### UNESQUO

Number of Events	Achievements
<b>No. of events: 8</b> <ol style="list-style-type: none"> <li>1. Melas Quiz</li> <li>2. Informal Debate</li> <li>3. Stewie's Challenge</li> <li>4. General Quiz</li> <li>5. Spin A Story</li> <li>6. Spent Quiz</li> <li>7. BITMUN</li> <li>8. Weekender (Set of 4 events : Melas Quiz, Informal Debate, Internet Culture Quiz, Just a Minute)</li> </ol>	<ul style="list-style-type: none"> <li>● Invited to chair [judge] MUN conferences including IIMUN Jharkhand, IIMUN Chhattisgarh</li> <li>● Several members qualified for 2<sup>nd</sup> level of Tata Crucible</li> <li>● Several members qualified for 2<sup>nd</sup> level of Flipkart GRID</li> <li>● Members qualified for 2<sup>nd</sup> round of ABU Robocon</li> <li>● 3<sup>rd</sup> Position in Kavach Internal Hackathon</li> </ul>

### Rotaract Club

Gokulashtami	Achievements
	<p>Organized by: Rotaract Club, BIT Mesra</p> <p>Venue: NCC Ground</p> <p>Date: 19th August, 2022</p> <p>Duration: 3 hours</p> <p>No of participants: 15 teams</p> <p>Footfall: 500+</p> <p>Prizes: upto Rs. 15000/-</p> <p><b>Brief description:</b> Fancying Kanha's Matki and relishing his cherished Maakhan are beautiful memories of most Indian kids. Adding a handful of memories to your campus life, turning the fadable moments of the day into everlasting treasures of tomorrow, the Rotaract club unveils, Gokulashtami, with the radiance of vivid colors, enlivening music, and toothsome delicacies all deputizing in to paint your life dazzling.</p>



## वार्षिक प्रतिवेदन 2022-2023

BIT Roadies	Achievements
	<p>Organized by: Rotaract Club, BIT Mesra</p> <p>Venue: Shorbagh 2</p> <p>Date: 11th February, 2023</p> <p>Duration: 5hours</p> <p>No of participants: 30 teams (2 members each)</p> <p>Footfall: 150+</p> <p><b>Brief description:</b> Have you ever envisaged standing in front of a panel of judges flaunting your extraordinary prowess and getting into MTV Roadies? Here's the time to sate your craving for fame and limelight as BIT MESRA'S CULTURAL FEST, BITOTSAV'23 returns with its exhilarating event, BIT Roadies, packed with unintermitted three rounds for you to unveil your wit, endurance, intrepidity &amp; fortitude. This is indeed an opportunity for all the enthusiasts to bring the best out of them.</p>
	<p>Organized by: Rotaract Club, BIT Mesra</p> <p>Venue: Shorbagh 1</p> <p>Date: 12th February, 2023</p> <p>Duration: 3.5hours</p> <p>No of participants: 20 individuals</p> <p>Footfall: 120+</p> <p>Prizes: upto Rs. 25000/-</p> <p><b>Brief description:</b> This year's most awaited event, Mr. and Ms. Bitotsav, is set to spellbind charm, electrify energy, and show off charisma! Do you have what it takes to steal the spotlight and win over the audience's hearts? Here's your chance to show everyone who you are and become the next Bitotsav prince and princess. An evening that showcases the best of talents, brains, and beauty, Mr. and Ms. Bitotsav promises to be a magical experience you will never forget. As the contestants compete to become the next Mr. and Ms. Bitotsav, enjoy a kaleidoscope of colors, elegance, and grace.</p>



## ROBOLUTION

MAJOR EVENTS

(with no of students)

ROBO FRUIT NINJA OPEN CV WORKSHOP

150 40

60 30

DROID TROOPER ARDUINO WORKSHOP

OUR ACHIEVEMENTS -

- SCORED 96.5/100 IN ROBOCON STAGE 1
- WINNER OF HOUSE OF HACKERS.
- DESIGNED GREETBOT.
- GREETBOT SHOWCASED AT TATA STEEL'S SNTI CAMPUS JAMSHEDPUR DURING 2-6TH MARCH.

Jun '22 - Jun '23

## THE LITERARY SOCIETY

JUNE'22 - JULY'23

Events & Footfall

- Rostra (250+)
- The Talk Show (40+)
- LitNite (200+)
- Kavi Sammelan (100+)
- Symposium (25+)
- Vaak Yudh (25+)
- Mic Drop (100)
- Secret Santa (300)
- Open Mic (400)
- Thespian (40)
- Ballad'OR (50+)
- Kalam-e-Taahir (50+)

Achievements

- Secured 2nd Position in Madhurima at IIT BHU
- Awarded by Lok Sabha Speaker at Zila Yuva Utsav, Bundi, Rajasthan.
- Leading Writer in National Magazines
- Winners of the young poet competition by Sahityodaya, Ranchi.

The Literary Society is not just a group of literary enthusiasts but a comfortable niche for zealots who appreciate literature in all its form, regardless of the language, genre or art form. Throughout the year, the club organizes a plethora of events which provide a rostrum to students to showcase their talent. The club has made its presence felt in National

## EHSAAS DRAMATICS SOCIETY

MAJOR EVENTS AND FOOTFALL

DRAMATITE 50+ PARTICIPANTS

KATSAMARAT 30+ PARTICIPANTS 150+ ATTENDEES

THE FINAL CUT 250+ PARTICIPANTS 50+ AWARD DISTRIBUTION

ABHINAY 250+ ATTENDEES

PUKAAR 200+ ATTENDEES

15TH AUGUST STREET PLAY 200+ ATTENDEES

APOORV DRAZEST 120+ PARTICIPANTS 50+ AWARD DISTRIBUTION 500+ ATTENDEES

PIECE DE THEATRE - WORKSHOP 100+ ATTENDEES

ACHIEVEMENTS

3RD RANK - MOOD INDIGO MINE

STREET PLAY - MOOD INDIGO FINALISTS

STREET PLAY PUKAAR - 2ND RANK

STAGE PLAY ABHINAY - 2ND RANK

1ST & 3RD RANK - THE FINAL CUT

JUNE 2022 - MARCH 2023

## Society for Industrial Management and Engineering

The Society for Industrial Management and Engineering, BIT Mesra is a platform for students with an affinity for industrial science, technology, and management. The objective of the society is to organize various events, training programs, webinars and workshops to nurture industry enthusiasts and encourage innovation within its members through research projects.

ACHIEVEMENTS

- A Project is being developed by one of our Researcher Vibhanshu Saurav on the topic "Designing a Prediction Model for Diabetes" using ML.
- A Project regarding Crypto/Stock prediction algorithms was done by Sanket Patel- Researcher at SIME
- A Project regarding "Decentralised Shop" has been outlined by our researcher Deependu Jha
- A Project is being developed by one of our Researcher Aniket Shandilya, a basic recommendation system using Python and Pandas.
- Our club alongwith Team Srijan brings forth its annual automobile challenge, Asta Di Autos Season 2.

Conducted fun event 'SHERLOCKED' in the major techfest of BITMESRA having 500+ responsive audience.

We conducted 1st edition of the annual technical fest - VERVE '22, in association with IET & IRODC BIT Mesra

## MAJOR EVENTS

AIR CRASH INVESTIGATION

NIGHT SKY OBSERVATION

ACHIEVEMENTS

180 Degrees Consulting of BIT Mesra functions as an extension of its parent organization, 180 Degrees Consulting, which holds the distinction of being the world's foremost university-affiliated consultancy for non-profit and social entities. Our collaboration involves partnering with society-focused organizations and early-stage startups scale their impact. We provide strategic, innovative, practical and sustainable consulting services, that enables our clients to create meaningful impact in their communities.

ACHIEVEMENTS

- 2+ Highly successful National case study competitions
- 2+ Gueststrate workshops
- 10+ Expert Mentorship collaborations from consulting domain
- 6+ Webinars in different domains
- 1 collaboration with BITS Goa for training and mentorship
- 5+ Project collaboration with start-ups and NGOs

PROJECT HIGHLIGHTS

- Spatial** - Developed a business pitch and provided market research for an ed-tech startup.
- IndiTel** - Formulation and development of growth track for the company develop a strategy for its expansion into the retail space
- Earth Tava** - Developing a marketing and outreach strategy across different social media platforms.
- BoxBoy** - Go-to-Market strategy for a Patna based tiffin delivery service banding in Ranchi.
- Pratige Foundation** - CSR Fundraising strategy for a Ranchi based NGO working on child education and women empowerment

## DHWANI - MUSIC CLUB, BIT MESRA

Dhwani-Music Club, BIT Mesra is a society that unites people across the campus with their shared ardor and passion for music. Established in 1984, the club has seen tremendous growth in talent and the number of active members that take part in events dispersed throughout the academic year.

ACHIEVEMENTS 2022-2023

Mood Indigo 2022, IIT Bombay:

- Secured 2nd position in Mreem, Solo rap competition.
- Secured 4th position in Iarynx, beatboxing competition.
- Secured 1st position in Posterella, Digital Art.
- Secured 3rd position in Monstrokes.
- Secured 2nd position in Life in a Minute, Short Film.
- Finalist in Singing of the Indigos, Solo singing competition.
- Semi-Finalist in Indian Classical Singing.
- Secured 2nd position in M's Got Talent.
- 2 bands qualified for the Semi-Finals of Mantra, Battle of Bands.

Kashiyatra 2022 & 2023, IIT BHU:

- Secured 3rd position in Rap Battle (2023).
- Secured 2nd position in RaagSamar, Acoustic unplugged singing competition (2023).
- Secured 1st position in Sanjanyan, Solo instrumental competition (2022).

MAAD - ANNUAL FEST

LIVE JAM

WORKSHOPS

ONLINE EVENTS

## BIOTS ANNUAL REPORT

BIOTECH SUMMIT

Alums of biotech department, provide insightful guidance and direction to make best use of our skills.

WIKI WARS

MITACS WEBINAR

BIOTS organized a major technical event at Pantheon 2022 featuring "FOOTFALL," a computer game testing students' knowledge in science and technology. The event attracted over 500 participants.

MITACS is a global internship based in Canada, a multitude of past BIOTS members have been a part of this prestigious internship, they share valuable their indispensable experience through these webinars (total fall over 300).

PLANTATION DRIVE

BIOTS orchestrated a successful plantation drive, where 28 diverse plant saplings were planted within and around the departmental premises.

HERA PHERI

BIOTS led the 3rd largest event at BITOTSAV 2023, the biggest cultural fest of BIT amassing a staggering footfall of over 1200 students.

TRIP TO SUDHA DAIRY

A combined initiative of BIOTS and the Biotechnology department to familiarize students with industrial procedures (foot fall over 200).



## वार्षिक प्रतिवेदन 2022-2023



### IETE BIT MESRA

#### About us

"The Institution of Electronics and Telecommunication Engineers (IETE) is India's leading recognised professional society devoted to the advancement of Science and Technology of Electronics Telecommunication & IT."



#### MAJOR EVENTS AND FOOTFALL

- 1) HACKTOBER FEST - 120+ PARTICIPANTS
- 2) DETECTIVE DAVID - 120+ PARTICIPANTS
- 3) Git GitHub Workshop - 80 + PARTICIPANTS
- 4) Caliber - 200+ PARTICIPANTS
- 5) DIMENSIONS - 190+ PARTICIPANTS



### FIREBOLT RACING

FIREBOLT RACING is BIT Mesra's official off-road team, driven by 11 years of legacy. Undergrad auto enthusiasts fuel their passion for speed, creating All-Terrain Vehicles for BAJA SAE, the world's largest amateur off-road racing championship. Members span various engineering streams.

#### EVENTS



**Defense EXPO:** We exhibited our innovative all-terrain vehicle from Team Firebolt Racing at Defense Expo 2022 in Gandhinagar's Helipad Exhibition Center. Our participation was successful, featuring a live demonstration of our creation. We had the honor of presenting our ATV to esteemed dignitaries such as Mr. Arjun Munda, the Union Tribal Minister, and Dr. G Satheesh Reddy, the former DRDO Chairperson and current Scientific Advisor to Raksha Mantri.



**BAJA 2023:** We engaged in Baja SAE India, a competition where engineering students manufacture off-road vehicles for diverse challenges. Firebolt Racing, a team of passionate automotive enthusiasts from varied engineering disciplines, fulfills their ATV ambitions.



**NAAC Presentation:** During the NAAC presentation, we exhibited our ATV to the chairman and other NAAC officials. Our ATV was displayed in front of the chairman and other NAAC officers during the presentation.



**AutoCAD workshop:** Team Firebolt Racing had organised its first offline workshops of the season on "Basic Automobile and CAD" which covered a vast diaspora of concept on automobile.

#### ACHIEVEMENTS

##### BAJA SAE INDIA 2023



COST EVENT



SALES PRESENTATION

##### BAJA SAE INDIA 2022



RAFTAAR



SALES PRESENTATION



ACCELERATION

## DEPARTMENT OF PHYSICAL EDUCATION & SPORTS

- The Final match of Inter Hostel Football Tournament played between Hostel No. 12 and 05 on 04.10.2022. Hostel No. 12 won the championship. Chief guest Hon'ble Vice Chancellor Dr. Indranil Manna of BIT Mesra distributed the prizes.



- BIT Mesra Institute Team Participated in Sports Fest UDGOSH at IIT Kanpur from 14th October to 16th October 2022. Team participated in six disciplines.

SI No.	Institute Team Name	Member
1.	Football	14
2.	Basketball	08
3.	Badminton	04
4.	Powerlifting	03
5.	Table Tennis	04
6.	Athletics	01
7.	Coach	01
	Total Member's	35

Mr. Push Goel won Gold Medal in Powerlifting at IIT Kanpur UDGOSH 2022.

- Association of Indian University (AIU) entrusted the responsibility to host East Zone Inter

University Football Tournament 2022 -23 which was held from 11/11/2022 to 19/11/2022 at BIT, Mesra.

**Results of the Tournament are mentioned below:**

SI No.	Name of The Team	Rank
1.	Sambalpur University	1 <sup>st</sup> Position
2.	Adamas University	2 <sup>nd</sup> Position
3.	Utkal University	3 <sup>rd</sup> Position
4.	Ranchi University	4 <sup>th</sup> Position



- BIT Institute Team participated in East Zone Inter Universities Badminton Tournament (AIU) organized by A.P.S. REWA UNIVERSITY (Madhya Pradesh) from 27th Dec. to 31st Dec. 2022 -23. BIT lost the match in third round.

**List of Players who participated at APS Rewa University.**

SI. No	Name	Roll No.	Mobile No.
1.	Ved Prakash Gope	MCA/10025/21	8789612478
2.	Arman Acharya	MT/EE/10007/21	8839968895



## वार्षिक प्रतिवेदन 2022-2023

Sl. No	Name	Roll No.	Mobile No.
3.	Raghava Bhukiya	BTECH/10667/22	8019773039
4.	Prantesh Sinha	BTECH/10396/21	9587990979
5.	Harshvardhan Suman	BTECH/10324/22	6260681729

- The Final match of Inter Hostel Basketball Tournament played between Hostel No. 08 and Hostel No. 09 on 13.01.2023. Hostel No. 09 winner and Hostel No. 08 Runner's – up. Chief guest Mrs. Manna distributed the prizes.
- The Final Match of Inter Hostel Basketball Tournament played between Hostel No. 10 and Inner Hostel No. 01,02,03 & 04 on 13.01.2023. Hostel No. 01,02,03 & 04 winner, and Hostel No. 10 Runner's – up. Chief guest Mrs. Manna distributed the prizes.
- 30th Chetan Devraj Memorial East Zone Inter Technical Institutions Cricket Tournament 2022-23 organised from 18/01/2023 to 22/01/2023. Six teams took part in the tournament. NIFFT Ranchi, BIT Lalpur, BIT Mesra, NIT Jamshedpur, BIT Patna, RTCIT Ranchi.  
 Winner-up – BIT Mesra, Ranchi  
 Runner-up – NIT Jamshedpur  
 Man of the Match – Vivek  
 Man of the Series– Harshit  
 Chief Guest – Manohar Topno (Hockey Players)  
 Guest of Honour – Sh. Narender Singh Saini (Dronacharya Awardee)  
 Dr. Indranil Manna, Vice Chancellor distributed the prizes  
 Dr. Mahendra Kumar was organizing secretary.

- Cross Country Race organized on 29/01/2023.

### Boy's

Sl No	Name	Roll No.	place
1.	Santosh Oraon	BTECH/10125/2021	First
2.	Abhay Kr. Choudhary	BTECH/10731/2021	Second
3.	Prem Kumar	MPH/10025/2021	Third

### Girls

Sl No	Name	Roll No.	Place
1.	Anupama Murmu	BTECH/10578/2021	First

- 35th Annual Athletic Meet held from 03rd February to 05th February 2023.  
 Shreyaa 2k22 Batch (ICH/10001/22) declared Individual Champion amongst Girls and overall champion in Girls Section 2k22 batch.  
 Individual Champion amongst Boys Santosh Oraon Hostel No. 13 (BTECH/10125/21) and Overall, Champion Hostel No.13 was declared. Chief Guest Priyanka Kerketta, International Athlete and Hon able Vice Chancellor Prof. Indarnil Manna distributed the prizes to the winners. On behalf Institute VC presented a memento to chief guest Priyanka Kerketta
- The Final Match of Inter Hostel Volleyball Tournament played between Hostel No. 11 and Hostel No. 05 on 03.04.2023. Hostel No. 11 winner and Hostel No. 05 Runner's – up. Chief guest Dr. Bhaskar Karn, (Dean of Student Affairs) distributed the prizes.

### Faculty Achievements

- Dr. Mahendra Kumar nominated as Technical Expert by IRCLASS to audit at TATA Steel Sports Division, TFA, TAA, THA & other Sports facilities from 22.3.2023 to 23.3.2023.

## Value Education Cell

A Value Education Cell conducts activities with the following aims:

- Holistic Development of the Students
- Nurturing Students to Reach Full Human Potential
- Integrating Universal Human Values in Teaching Learning Process
- Preparing a Pool of Faculty Members to Propagate Value Based Quality Education
- Implementing teaching of Universal Human Value Courses Proposed By AICTE
- Conducting Three Weeks Students Induction Program.

### Student Induction Programme

Value Education Cell conducted Student Induction Programme during 21 Nov to 09 Dec 2022 in which around 800 newly admitted students actively participated. During Student Induction Programme students were introduced to the Ethos and Culture of the Institute and were imparted information on Academic Program & Academic Activities, **Infrastructure Facilities**, Examination & Assessment Procedure, Internship & Placement, Entrepreneurship, **Career Development** & Prospects, Library & Online Resources, Security in Campus, Health & Daily Routine and Various Student Activities.



The students were also exposed to various aspects of personal well-being such as Importance of yoga in mental health and happiness, aspects of uncertainties in life and coping mechanism through self-management, socio-environment sensitiveness, and Importance of extracurricular activities in self-management.

### Exhibition on Indian Knowledge System

Value Education Cell with the office of the Dean of Student affairs organized An Exhibition on Indian Knowledge System (IKS) named "Udbodhan" during 13th to 15th April 2023 in collaboration with G-20 & IKS Cell under Ministry of Education, at AICTE, New Delhi.

The exhibition aimed to make the young minds aware of the scientific rigor and heritage of ancient India, which may excite them to boost their level of contribution in research and development, innovation, entrepreneurship, and assimilation and creation of new knowledge, which may greatly contribute to nation building.

Thematic areas of the exhibition included: Ancient Treaties, Wisdom Through the Ages, Science, Engineering & Technology in IKS, Various Art Forms Linguistics, Astronomy, Architecture & Town Planning, Health Wellness & Psychology, Governance & Public Admin, various Interactive Sessions and Art and Culture of Jharkhand





## वार्षिक प्रतिवेदन 2022-2023

### Brainstorming Sessions

Value Education Cell conducted a series of Brainstorming sessions from 04th to 16th 2023 to impact the Quality of Teaching-Learning process and the Quality of Teacher-Student interaction. The Brainstorming sessions aimed to help teachers in soul searching and realizing their own roles and responsibilities in the current scenario. A total of 122 faculty members (91: BIT Mesra, 25: Lalpur Extension Centre and 6 University Polytechnic) participated and contributed towards the aim of the workshop.



### Teaching Understanding Harmony

Value Education Cell implements teaching of Universal Human Value courses proposed by AICTE. The Board of Studies has approved "MT131: Understanding Harmony" in line with Universal Human Value course to be taught in 3rd or 4th Semester.

In MO 2022 Understanding Harmony was taught in the departments of Bioengineering and Biotechnology, Chemical Engineering, Civil and Environmental Engineering, Electrical and Electronics Engineering, Hotel Management and Catering Technology and Production and Industrial Engineering. In SP2023 it was taught in departments of Computer Science and Engineering, Electronics and Communication Engineering and Mechanical Engineering.

Some of the very illuminating classes were conducted very early in the morning in front of Institute building in Upper Lawn.



### Weekly Meetings

Vivekanand Study Circle has been setup on 12 Jan 2023 in the institute. Value Education Cell in collaboration with Vivekanand Study Circle conducts weekly meetings with the following aims:

- Propagate the ideals of Swami Vivekanand to help imbibe strength of mind, knowledge, character and spiritual values in daily living. This will help create awakened citizens.
- Arouse the infinite vigor of our students to make worthwhile contributions in national development by deeply pursuing Study, Research, Innovation and Entrepreneurship.
- Help students achieve work life balance to lead a happy life and create a happy society.



### International Yoga Day Celebration

In association with National Service Scheme (NSS) and National Cadet Corps (NCC) of the Institute, the Value education Cell celebrated International Yoga Day on 21st June 2023 in the sports complex of the Institute.

Photos to be inserted.

## राजभाषा प्रकोष्ठ



वर्ष 2022 में राजभाषा प्रकोष्ठ द्वारा हिंदी दिवस के अवसर पर बिरला प्रौद्योगिकी संस्थान, मेसरा में लिटरेरी सोसाइटी के साथ संयुक्त रूप से हिंदी पखवाड़ा का आयोजन किया गया।

बिरला प्रौद्योगिकी संस्थान के अन्य ऑफ कैपस लालपुर, जयपुर, पटना, देवघर, नोएडा में भी हिन्दी दिवस पर विभिन्न आयोजन किए गए। इस अवसर पर प्रतियोगिता में कविता, व्याख्यान, हिन्दी प्रयोग, नारा लेखन आदि प्रतियोगिताओं में विजयी विद्यार्थियों को पुरस्कार वितरण भी किया गया।

मुख्य संस्थान के कैट हाल में हिंदी पखवाड़ा 10 सितंबर से 14 सितंबर 2022 तक पूरे एक सप्ताह मनाया गया, जो किसी भी तकनीकी संस्थान में राजभाषा के प्रति समर्पण दिखाता है। भारत सरकार की नव शिक्षा नीति के सिद्धांतों के प्रतिपादन हेतु विभिन्न संकायों में हिन्दी के अलग अलग प्रयास किया गए, जिससे विद्यार्थियों में इसके प्रति जागरूकता पैदा हुई।

**हिंदी पखवाड़ा पर हुए कार्यक्रमों की विस्तृत रूपरेखा इस प्रकार है।**

10.09.22 : कार्यक्रम के पहले दिन "बुलबुल बाग में" कार्यक्रम, रांची शहर की अग्रणी हिंदी कवियत्रियों श्रीमती रजनी मिश्रा जी, श्रीमती अनीता अनुश्री जी, श्रीमती रेणु त्रिवेदी मिश्रा जी, श्रीमती सुरिंदर कौर नीलम जी एवं आकाशवाणी की उद्घोषिका श्रीमती सीमा चंद्रिका तिवारी जी की उपस्थिति में मनाया गया। कार्यक्रम की शुरुआत दीप प्रज्वलन समारोह के साथ हुई, जिसके बाद डॉ. ए. के. तिवारी ने श्रोताओं को संबोधित करते हुए कार्यक्रम की रूपरेखा प्रस्तुत की।

छात्र मामलों के डीन डॉ भास्कर कर्ण ने अपने संबोधन में हिंदी के महत्व और राजभाषा प्रकोष्ठ की भूमिका पर प्रकाश डाला।

कार्यक्रम का संचालन के 20 बैच के स्पर्श आनंद व के 21 बैच की सृष्टि चौधरी कार्यक्रम ने बखूबी किया।

सुरिंदर कौर नीलम की अध्यक्षता में आयोजित कविता सत्र में अतिथियों ने विद्यार्थियों और उपस्थित लोगों को अपनी कविताएँ, गजलें व नज़्म सुनाए जिसे खोओ वाहवाही मिली। मैकेनिकल इंजीनियरिंग विभाग की डॉ ऋचा पांडे द्वारा विशिष्ट अतिथियों को इस अवसर पर पधारने और अपनी प्रस्तुति/ अनुभव सुनाने के लिए धन्यवाद ज्ञापन दिया गया।

11.09.22 : कार्यक्रम के दूसरे दिन कवि सम्मेलन में छात्रों और संकाय सदस्यों ने अपनी स्वरचित साहित्यिक कृतियां प्रस्तुत कीं।

डॉ प्रवीण श्रीवास्तव, डॉ पीयूष तिवारी, डॉ अमित कुमार तिवारी, डॉ नीरज कुमार सिंह, डॉ ऋचा पांडे, नीता शर्मा, अपर्णा शांभवी, भानु प्रताप सिंह और पीयूष कुमार समेत अनेक साहित्य प्रेमियों ने अपनी प्रस्तुति दी। सभी ने खूब उत्साह से पाठ किया।

12.09.22 : तीसरे दिन, एक ऑनलाइन प्रतियोगिता, "अधूरे अशआर" का आयोजन किया गया। इसमें प्रतिभागियों को एक वाक्य दिया गया था और इसके आधार पर उन्हें एक कविता लिखनी थी। आयोजन के अंतिम दिन प्रतियोगिता के विजेताओं की घोषणा की गई और उन्हें पुरस्कृत किया गया।

13.09.22 : चौथे दिन किस्सागोई कार्यक्रम का आयोजन किया



गया था, जिसमें हर्षोउल्लास का भरपूर मिश्रण दिखाई दिया।

शशांक राज और सुमीत कुमार ने श्री रामधारी सिंह दिनकर जी की रश्मिस्थी के सप्तम सर्ग का पाठ किया।

के 18 की अपर्णा शाम्भवी और के 20 और हर्ष राज द्वारा प्रस्तुत "सिद्धार्थ और यशोधरा" खूब सुन गया। कार्यक्रम के एंकर 21 बैच के आयुष दत्त मेहता थे।

14.09.22 : पाँच दिवसीय कार्यक्रम का समापन 14 सितंबर 2022 को हुआ। इस दिन 'हिंदी भाषा : दशा और दिशा' विषय पर चर्चा हुई, जिसमें हिंदी के भाग्य और स्थिति और इसके प्रचार के तरीकों पर अतिथियों ने अपने विचार उद्धृत किए।

अतिथियों के रूप में राज्यसभा संसद डॉ महुआ माजी, रांची विश्वविद्यालय के पूर्व प्राध्यापक डॉ अशोक प्रियदर्शी, संत जेवियर्स कॉलेज रांची के हिंदी विभाग के प्राध्यापक डॉ कमल कुमार बोस एवं कवि व स्तंभकार डॉ सुनील सिंह बादल को आमंत्रित किया गया था। इस अवसर पर कुलसचिव ने कहा कि हमारी राजभाषा हमारी धरोहर है भाषा ने समय के साथ चलते चलते बहुत योगदान दिया है। राज्यसभा सांसद महुआ माजी, ने कहा कि हिंदी देश को एकसूत्र में पिरोए रखती है विदेशों में रहने वाले हिंदी भाषा पर काफी ध्यान दे रहे हैं। समकालीन दुनिया में हिंदी भाषा की स्थिति पर गणमान्य अतिथियों ने बारी-बारी से अपने विचार व्यक्त किए। उन्होंने भाषा को बढ़ावा देने व उसके प्रचार की आवश्यकता पर बल दिया।

राजभाषा प्रकोष्ठ समय समय पर हिंदी के प्रचार प्रसार के लिए अन्य प्रयास भी करता रहता है, जिसके क्रम में केंद्रीय हिंदी संस्थान, अंतरराष्ट्रीय सहयोग परिषद तथा विश्व हिंदी सचिवालय के तत्वावधान में वैश्विक हिंदी परिवार की ओर से रविवार 27 अगस्त, 2023 को "हिंदी सीखने-सिखाने की नई पद्धतियाँ, नई सोच की जरूरत" प्रो. सुरेन्द्र गंभीर, सेवा-निवृत्त प्राचार्य, यूनिवर्सिटी ऑफ पेन्सिल्वेनिया, अमरीका का अनुभव प्रसारित किया गया। नित नित बदलती प्रौद्योगिकी का प्रभाव हिंदी प्रयोग पर भी पड़ रहा है। नवीन चौटजीपीटी का प्रयोग हिंदी के कम्प्यूटर प्रयोक्ताओं के लिए भी लाभ दायक होगा। इसे देखते हुए त्रिपुरा विश्वविद्यालय ने दिनांक 27.06.2023 को हिंदी चौट जीपीटी विषय पर ऑनलाइन कार्यशाला का आयोजन किया जिसे राजभाषा प्रकोष्ठ द्वारा समर्थित और प्रसारित किया गया। इसमें भारत के प्रख्यात हिंदी तकनीकीविद श्री ओमप्रकाश अग्रवाल ने चौटजीपीटी के विषय में विस्तार से जानकारी दी। वैश्विक हिंदी परिवार की ओर से रविवार 13 नवंबर, 2022 को वेब संगोष्ठी ग्रामीण पत्रकारिता-विविध संदर्भ का भी प्रसारण किया गया। 16 अक्तूबर, 2022 को वेब संगोष्ठी में भाषा विमर्श की संगोष्ठी का विषय था – उच्च न्यायालयों में भारतीय भाषाएं।

हिन्दी अधिकारी : डॉ पीयूष तिवारी

सह हिन्दी अधिकारी : डॉ अमित कुमार तिवारी

ईमेल : inc-hindicell@bitmesra-ac-in



## Training and Placement

The Campus Recruitment Programme of BIT has been strengthening and nurturing value-added relationships with recruiters across a wide spectrum of industries over the years. Every year new milestones are achieved which speak for the strength of the BIT student community as well as the diversity in academic programmes. One of the key factors which bring BIT into limelight, as an institution of high repute, is its campus recruitment.

In the Campus Recruitment Programme of 2022-23, around 193 recruiters from different sectors visited for full time recruitment and internship, achieving an overall target of 729 job offers.

The Mesra campus boasts an average package of INR 14.70 lakhs per annum and the highest national salary of INR 51.00 lakhs per annum for BE Programme.

### List of Company and Number of Offers (Full Time)

Table below shows the Student placed in various Departments of BIT Mesra

Recruiters	B.Tech.	M.Tech.	M.B.A.	M.C.A.	I.M.Sc.	M.Sc.	M.Pharm.	B.Pharm.	B.Arch.
Aakash Byju's	1					1			
Accenture	5								
Adani	2								
Aditya Birla Group	10								
Adobe	1								
Adrosonic	2				5				
Alight Solutions			1						
Amadeus	3								
Amdocs	26			2					
American Express					2				
Atlassian	5								
Axis Bank	8								
Bain & Company	1								
Bandhan Bank			7						
Berger Paints	1								
BGSW		7							
Bira91			2						
BlumeGlobal	8				5				
Box8	1								
Broadridge Financial Solutions	6								
Career launcher					1	1			
Cipla								16	
Cognizant Elevate		1		1					



## वार्षिक प्रतिवेदन 2022-2023

Recruiters	B.Tech.	M.Tech.	M.B.A.	M.C.A.	I.M.Sc.	M.Sc.	M.Pharm.	B.Pharm.	B.Arch.
Cognizant Gen C	9	1		5					
Cogoport	7								
Collegedunia			2						
Couture	1								
CRED	1								
Cubastion Consulting Pvt	1								
Dalmia Bharat Group	1								
Dell Technologies		3							
Deloitte	8			4	4				
Digite Infotech Pvt Ltd	1								
DMart				1					
E&Y			9						
EatClub	1								
Ericsson	2								
EXL PPO					2				
EXL Services	18			2					
Fairmine Carbons Limited			1						
Fastenal	23			1	2				
Fastenal PPO	2								
Federal Bank			4						
Ganit	1				1				
GAP	1								
Genpact	5								
GEP	9								
Global Logic	4								
Godrej & Boyce			1						
Goldman Sachs	5				1				
Google	1								
GSK	2								
HCL Technologies	7	6							
Hyundai Motor		1							
IBM					2				
ICICI Bank			9						



Recruiters	B.Tech.	M.Tech.	M.B.A.	M.C.A.	I.M.Sc.	M.Sc.	M.Pharm.	B.Pharm.	B.Arch.
ICICI Securities			2						
IDBI Bank			4						
Increff	7								
India Shelter		1							
Infineon	1								
Intellipaat			2						
Interra System	1								
ITC Limited	1								
Jindal steel and power limited	16								
Jio Platforms Ltd (5G R&D Division)	2								
Jubliant Food	8								
Jubliant Food (Supply Chain)	2								
Kantar	6								
Kotak Life			2						
KPMG	8								
L&T	9	1							1
Lava			1						
MAQ				2					
Maruti Suzuki	7								
Mecleods							2		
Media.Net	1				1				
Media.Net (SRE)					1				
Merilytics Inc	1								
Microsoft	22				1				
Miebach	5								
MMT	6								
Nation with Namu	1								
Natwest	3								
NBC	1								
Nestle			2						
Netcracker	2								
Niyo Solutions	4								
NPCI	3								



## वार्षिक प्रतिवेदन 2022-2023

Recruiters	B.Tech.	M.Tech.	M.B.A.	M.C.A.	I.M.Sc.	M.Sc.	M.Pharm.	B.Pharm.	B.Arch.
NXP	1								
Optum	4								
Oracle	10								
Orient Electric	3								
Planet Spark									
Pradhan		1				2			
Publicis Sapient	3								
PWC	53								
PWC MT		2							
Realization Technologies	3								
Reliance General Inc			5						
Salesforce	3								
Samsung	10								
Samsung Noida	3								
Schneider	2	1							
Siemens	4								
Sigmoid	6								
SLNKO Energy Pvt Ltd.	1		3						
SocGen	15								
Sprinkler	1								
Steradian Semiconductors Pvt Ltd	1								
Sunking	1				2	1			
Taazaa Inc	1								
Tata AIG			4						
Tata AutoComp	4								
Tata Bluescope	2								
Tata IQ	2								
Tata Motors GET	6								
Tata Motors PGET		7							
Tata Play			2						
Tata Steel	12								
Tata Steel Downstream	1								
Tech Mahindra					1				



Recruiters	B.Tech.	M.Tech.	M.B.A.	M.C.A.	I.M.Sc.	M.Sc.	M.Pharm.	B.Pharm.	B.Arch.
Tech Mahindra (MBA)			2						
Techture structures Pvt Ltd	1								
Tolaram	3	1							
Torrent							10		
Tresvista	6								
Trumind	2				1				
UIDAI	2								
Unilever	2								
Utkarsh Bank			3						
Vedanta	12								
Verzeo	6		2						
Visa	2				2				
Visa Steel	1								
Walmart	5								
Wellsfargo	21								
ZS Associate	13				2				
Zscaler	1								

#### List of Company and Number of Offers (Internship)

Recruiter Name	2 months	6 months	11 months
Adrosonic		12	
Amadeus		1	
Arcesium	3		
Atlassian	6	4	
Axis Bank	5		
Bain & Company		10	
BGSW			12
Box8 SDE		1	
Britannia		4	
Broadridge Financial Solutions		6	
Cognizant Elevate		23	
Cognizant Gen C		70	
Cogoport		5	

Recruiter Name	2 months	6 months	11 months
Couture		1	
CRED	4		
Dastur	2		
Dell Technologies		3	
Digital Marveled	7		
Dr. Reddys Laboratories		2	
EatClub BA		5	
Fastenal	2	28	
Flipkart Neev		11	
Futures First		5	
Ganit		2	
Genpact		5	
GEP	5	9	



## वार्षिक प्रतिवेदन 2022-2023

Recruiter Name	2 months	6 months	11 months
Google	1		
Growth Arrow	1		
IBM	1		
Infineon		1	
Insplore	2		
Interra System		1	
ISWPL	2		
ITC Limited	2		
Jiyonwall	6		
KPMG		8	
MAQ		2	
Media.Net (SRE)		1	
Merilytics Inc		1	
Microsoft	6		
Miebach		9	
Navi		3	
Niyo Solutions		7	
Niyo Solutions	6		
NPCI	5		
NRI Fintech		3	
NXP		7	
Open Wings Foundation	8		
Oracle		10	
Outlook	5		
Publicis Sapient	13	3	
PWC		53	
PWC (MT)		2	
Qnance		2	
Salesforce	2	2	

Recruiter Name	2 months	6 months	11 months
Samsung Data System		13	
Samsung Noida		7	
Schneider		3	
Shriram Life Insurance	6		
Siemens		1	
Sky Root			1
SocGen		15	
Sprinkler	6		
ST Microelectronics			1
Taazaa Inc		1	
Tata Digital			1
Tata IQ			
Tata Motors GET			7
Tata Motors PGET		7	
Tata Steel (SIP)	6		
Tech Mahindra		3	
Tenhard	8		
Texas Instruments	9		
The Leading Solutions	2		
Trumind		3	
Trumind	1		
Unilever		2	
Verzeo		6	
Visa Grab	2		
Walmart	10		
Wellsfargo	5		
Wellsfargo PPO		10	
Zscaler		1	
TATA UISL	2		



## Central Instrumentation Facility

Central Instrumentation Facility, at BIT Mesra, has been created with an objective of providing a central facility of latest and advanced analytical techniques for research in various areas of science and technology. It houses several highly sophisticated and modern analytical equipments offering its users, a wide range of analytical methods/techniques for chemical/material analysis/testing/characterization enabling them to keep pace with developments taking place globally, publish their research findings in peer reviewed high impact factor journals and through their concerted efforts contribute to the upliftment of the society at large. This facility is extensively used by undergraduate and post graduate students, doctoral research scholars and faculty members. The facility is also extended to external organizations (Industry, academic Institutions and R & D Labs) on chargeable basis. Presently Research Scholars from Departments of Chemistry, Physics, Civil and Environmental Engineering, Pharmaceutical Science and Technology, Bioengineering, Chemical Engineering and Technology, Mechanical Engineering, Production Engineering, Space Engineering and Rocketry, Hotel Management and Catering Technology, Electrical and Electronics Engineering, Electronics and Communication Engineering and Remote Sensing are extensively using this facility. This facility is also used for organizing short term courses/ workshops on the use and application of various instruments and analytical techniques.

### Services provided by the CIF

#### A. Analytical Services:

- i. **Sample Preparation:** CIF provides facilities and assistance in sample preparation to the users.
- ii. **Sample Analysis:** CIF carries out analysis of samples received from researchers and provides spectra/results of analysis on routine basis.
- iii. **Testing facility:** CIF carries out testing of quality of raw materials and end products for industries.
- iv. **Water Quality Testing:** CIF carries out water quality testing as per the BIS norms.

#### B. Short Term Courses/ Training Programmes: The CIF organizes the following types of short term courses/Training Programmes/ Workshops

on application and use of various instruments and analytical techniques for UG /PG students, research scholars, faculty members, teachers and personnel from other academic institutions, R&D Labs and industries. Repair/maintenance and operation of sophisticated instruments for technicians.

**C. Consultancy on analytical problems: The CIF offers consultancy on solution to analytical problems** including development of analytical methods for specific needs, sampling problems, spectrum analysis and interpretation of results etc. as well as on R&D problems/issues.

**D. Repair and maintenance of high end instruments: The CIF personnel make a concerted effort** to develop expertise to repair and maintain the high end instruments available in CIF.

### Instruments available at CIF:

#### A. Spectroscopy:

1. Inductively coupled plasma optical emission spectroscope, (OPTIMA 2100DV ICP-OES), Perkin Elmer, USA.
2. Ultraviolet-Visible Spectroscope, (Lambda25), Perkin Elmer, USA.
3. FTIR Spectrophotometer, Mid IR Range (IR-PRESTIGE 21), Shimadzu, Japan.
- iv. FTIR Spectrometer, Far & Mid IR Range (L1280044), Perkin Elmer, USA
5. FTIR Spectrometer, Far & Mid IR Range (L1280026, Frontier NIR), Perkin Elmer, USA
6. Color Measurement System, (Colorflex), Hunter Lab, USA.
7. Spectro Fluoro photometer, (RF-5301 PC), Shimadzu, Japan.
8. Nuclear magnetic Resonance Spectroscopy (JNM ECZ400S/LI), Jeol, Japan
9. Dynamic Light Scattering, (NANO ZS), Malvern Instruments, UK.

#### B. X Ray Diffraction:

10. X-Ray Diffractometer (Smart Lab 9KW), Rigaku, Japan
11. Single Crystal X Ray Diffraction, Rigaku, Japan



## C. Microscopy:

12. Scanning Electron Microscope (SEM), (JSM-6390 LV), JEOL, Japan.
13. Field Emission Scanning Electron Microscope, (Sigma300) CarlZeiss, Germany
14. Atomic Force Microscope, (Solver Pro-47), NT-MDT, Russia.

## D. Thermal Analysis:

15. Thermo Gravimetric Analyzer, (DTG-60), Shimadzu, Japan.
16. Simultaneous TGA-DTA-DSC, (Discovery SDT 650)Waters, USA
17. Differential Scanning Calorimeter, (Q-10), TA Instruments, USA.
18. Modulated Differential Scanning Calorimeter(Discovery DSC 25), Watrs, USA
19. Thermal Conductivity Analyzer(LFA 467), Netzsch, Germany

## E. Chromatography :

20. Gel Permeation Chromatograph, Waters, USA.
21. Ion Chromatography (ICS 5000), Thermo Fisher, USA
22. Analytical HPLC (Vanquish), Thermo Fisher, USA
23. Flash Chromatography(Cheetah, MP 200), Bonna Agela, USA
24. Analytical Cum Semi Preparative HPLC (Ultimate 3000), Thermo Fisher, USA
25. High Precision Thin Layer Chromatography, Camag, Switzerland
26. Liquid Chromatography Mass Spectrometry (Ultimate3000, LTQXL), Thermo Fisher, USA

## F. Water and Soil Analysis:

27. Ion Analyzer(VERSA STAR), Thermo Orion, USA
28. Anodic Stripping Voltammeter, Metrohm, Switzerland
29. Microwave Digestion System, (Multiwave 3000), Anton Paar, Austria.
30. Flame Photometer(CL 378), Elico, India
31. pH Meter (2 Star), Thermo Orion, USA
32. Turbidity Meter (AQ 3010), Thermo Orion, USA
33. Conductivity Meter ( 4 Star), Thermo Orion, USA
34. Colorimeter (), HACH, Usa
35. COD Reactor (DRB 200), HACH, USA

36. Magnetic Stirrer( MCO2), Tarson, India
37. Shaking Incubator, Lab Tech
38. Hot Air Oven
39. Muffle Furnace
40. Centrifuge Machine

## G. Other Facilities :

41. Electrochemical analyzer, (680B), CH Instruments,USA.
42. CHNSO Analyzer (Vario EL III), Elementar, Germany.
43. Pulse Analyzer, (OR 38/ ORS), Oros SA, France.
44. Mercury Porosity meter, (PASCAL 440), Thermoelectron, Italy
45. Universal Testing Machine , (8801), Instron, UK.
46. Impedance Analyser, (Alfa ATB), Novocontrol Tech, Germany.
47. Optical Contact Angle (OCA), (OCAH 230), Dataphysics, Germany.
48. Dynamic Contact Angle, (DCAT-21), Dataphysics, Germany.
49. Printed Circuit Board (PCB), (LPKF PCB), Germany.
50. Ellipsometer (Se MG-VIS) Nano View Inc., Korea
51. Machine Fault Simulator (MFS2010), Spectraquest Inc., USA
52. BET Surface Area Analyser, Quantachrome Instruments, USA
53. Rheometer(MCR320), Anton Paar, Austria
54. Tribometer(TR 705), Ducom Instruments, Bangalore

## New Facilities added or major equipment procured:

1. Inductively coupled plasma mass spectroscopy, (iCAP RQ(C2),Thermo Scientific, USA
2. Microwave Digester (Multiwave 5000), Austria
3. 3D Printer(FDM; F170 System), Stratasys, USA
4. Ultra Pure Water Purification Systyem, (Elga Purlab Chorus 2), Elga, UK

## Hands on Training Programs and Sessions conducted:

1. Hands on Training Programme on different Analytical Instruments to the participants of

SERB funded Workshop on Nanostructured Devices from Date 09.-12 December.2022.

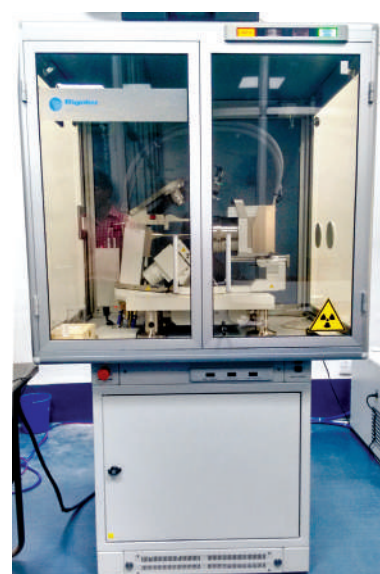
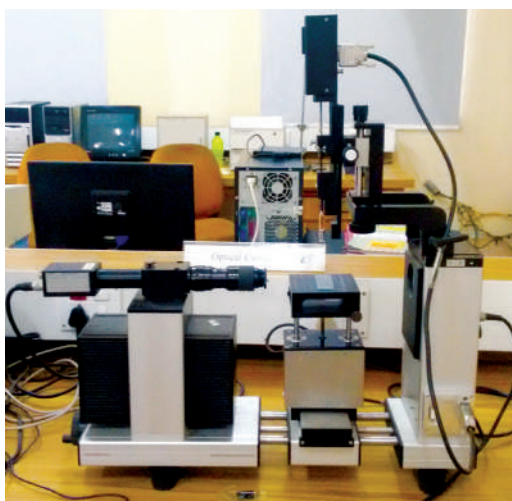
2. Hands on Training Programme on different Analytical Instruments to the participants of DST-STUTI Programme Workshop on "Advanced Analytical and Simulation Techniques in Chemical Engineering Application" from Date 21-27 November 2022.
3. Hands on Training Programme on different Analytical Instruments to the participants of DST-STUTI Programme Workshop on

"Preparation and Characterization of oral solid dosages form" from Date 10-16 Jun 2022.

4. Hands on Training Programme on different Analytical Instruments to the participants of DST-STUTI Programme Workshop on "AITCMS 22" from Date 09-15 May 2022.

#### Revenue Generated:

Total revenue of Rs1,01,59,232.00 (Internal; Rs 91,53, 100.00, Outsider: Rs 10,06,223.00) was generated in the FY 2022-23.





## Central Library

### Introduction

The Central Library strives to evolve into a model and leading technical university library. The library contributes and supports BIT in building an internationally top-ranked academic & research-driven institution by establishing a knowledge hub. The library has been fully automated with RFID technology using Koha software. The collection comprises of print and electronic documents in the field of Science, Engineering, Pharmacy, Management, Architecture & Planning and Hotel Management. Online journals like IEEE, Science Direct, Springer, ABIC, Statista and others subscribed through the Institute fund & e-Shodh Sindhu Consortium. The E-Library section consists of a number of networked terminals to access e-journals, e-books and other e-reference resources to the library users under the Intranet and Internet environment.

### Print Books

Total Volumes	:	1,52,149
Total Titles	:	49,400
Online Books	:	10,21,405

### Online Journals, Conference

Proceedings, Standards	:	38,683
Print Journals/Magazine	:	154
CD/ DVD	:	4,461

### Bound Volumes

: 18,902

### Library home page

: <http://bitmesra.ac.in/library/default.asp>

### Library Services

: Bibliographic Services  
Document Lending Services  
E Document Delivery Services  
Inter Library Loan  
Language Laboratory  
Literature Search  
New Arrivals  
News Clippings  
Off-Campus Service  
ON/Offline Database Search  
Reference  
Referral  
Reprographic

### Library Membership

: 7,506



The library serves more than 7500 members, including students, research scholars, faculty, project engineers, and staff.

Description	No. of Books	Period of Loan
Teaching Faculty	08	One Month
Non-Teaching Staff	04	One Month
All Undergraduate and Post Graduate students	05	15 Days
All Undergraduate and Post Graduate SC/ST students	10	One Semester
All Undergraduate and Post Graduate OBC student	5	One Semester
Research Scholars	05	One Month
Books from Textbook Section for All Categories	1	1 Day

### Library Consortium/Membership

Central Library enrolled its membership for the following consortium

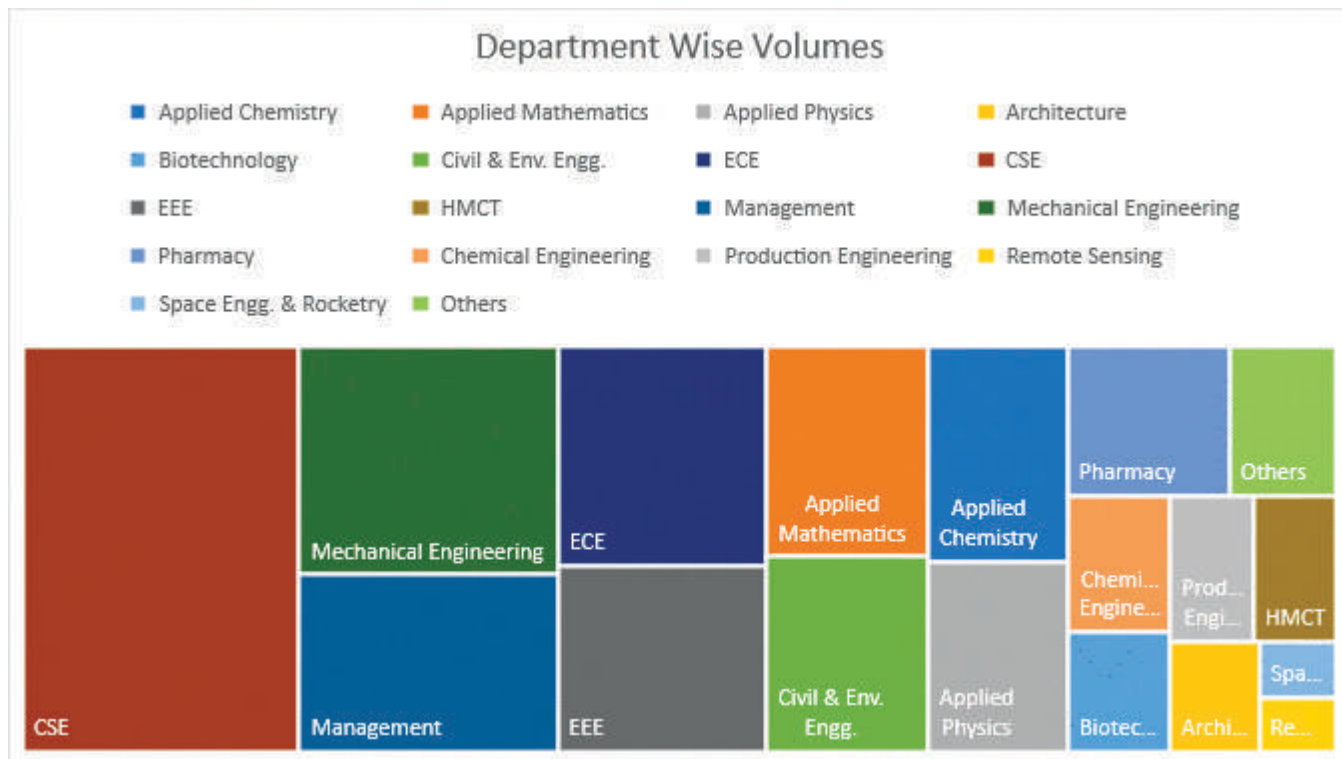
- ❖ e-Shodh Sindhu Consortium
- ❖ Shodh Ganga
- ❖ NDL India





## Library Statistics

Total Books Added	:	Title - 118 & Volumes – 157
Total Journals Procured	:	Print - 154 & Online – 38,683
Total Online Books Procured	:	2,13,000
Total Number of Membership Enrolled	:	2,184
Total Number of Books Issued	:	17,401
Total Number of Books Returned	:	17,104



## Details of Online Journals/books/thesis & dissertations

S.No.	Publishers	Web Link
1.	ABI/Inform (Management Collection)	<a href="http://search.proquest.com">http://search.proquest.com</a>
2.	American Chemical Society	<a href="http://pubs.acs.org">http://pubs.acs.org</a>
3.	American Institute of Physics	<a href="http://www.aip.org">http://www.aip.org</a>
4.	American Physical Society	<a href="http://www.aps.org">http://www.aps.org</a>
5.	Annual Reviews	<a href="http://www.annualreviews.org">http://www.annualreviews.org</a>
6.	EBSCO (e-book Academic Subscription)	<a href="http://web.ebscohost.com">http://web.ebscohost.com</a>
7.	Economic & Political Weekly	<a href="http://www.epw.in">http://www.epw.in</a>
8.	Elsevier's Science Direct	<a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a>
	● Chemical Engineering	<a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a>
	● Chemistry	<a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a>
	● Engineering	<a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a>



S.No.	Publishers	Web Link
	● Materials Science	<a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a>
	● Pharmacology, Toxicology and Pharmaceutics	<a href="http://www.sciencedirect.com">http://www.sciencedirect.com</a>
9.	Grammarly (Online Grammar & Spell checker)	<a href="http://www.grammarly.com/edu">http://www.grammarly.com/edu</a>
10.	IEEE/IEL Online	<a href="http://ieeexplore.ieee.org/Xplore">http://ieeexplore.ieee.org/Xplore</a>
11.	American Mathematics Society	<a href="https://mathscinet.ams.org/mathscinet/publications-search">https://mathscinet.ams.org/mathscinet/publications-search</a>
12.	Project Muse	<a href="http://muse.jhu.edu/browse">http://muse.jhu.edu/browse</a>
13.	Springer Link	<a href="http://www.springerlink.com">http://www.springerlink.com</a>
14.	Statista.	<a href="https://www.statista.com/">https://www.statista.com/</a>
15.	iThenticate ( <b>Anti Plagiarism Tool</b> )	<a href="https://www.ithenticate.com/">https://www.ithenticate.com/</a>
16.	Shodh Shuddhi Resource URKUND ( <b>Anti Plagiarism Tool</b> )	<a href="https://pds.inflibnet.ac.in">https://pds.inflibnet.ac.in</a>
17.	Web of Science (Bibliographic Database)	<a href="http://apps.webofknowledge.com">http://apps.webofknowledge.com</a>
18.	RemoteXs	<a href="https://bitmesra.remotexs.in">https://bitmesra.remotexs.in</a>



## Annexure-I : List of Deans and Associate Deans

### DEANS

Sr. No.	Name and Address	Designation
1	Dr. (Mrs.) Vibha Rani Gupta Professor Department of Electronics and Communication BIT-Mesra, Ranchi	Dean of Undergraduate Studies
2	Dr. (Mrs.) Nisha Gupta Professor Department of Electronics and Communication BIT-Mesra, Ranchi	Dean of Postgraduate Studies
3	Dr. Kunal Mukhopadhyay Professor Department of Bioengineering and Biotechnology BIT-Mesra, Ranchi	Dean of Faculty Affairs
4	Dr. Bhaskar Karn Associate Professor Department of Computer Science and Engineering BIT-Mesra, Ranchi	Dean of Student Affairs
5	Dr. C. Jeganathan Professor Department of Remote Sensing BIT-Mesra, Ranchi	Dean of Research, Innovation, Entrepreneurship
6	Dr. (Mrs.) Manjari Chakraborty Professor Department of Architecture BIT-Mesra, Ranchi	Dean of Infrastructure and Planning
7	Dr. Sudip Das Professor Department of Space Engineering and Rocketry BIT-Mesra, Ranchi	Dean of Admission, Accreditation and Coordination and Director (Internal Quality Assurance Committee)
8	Dr. Ritesh Kumar Singh Associate Professor Department of Production and Industrial Engineering BIT- Mesra, Ranchi	Dean of Alumni and International Relations

### ASSOCIATE DEANS

Sr. No.	Name and Address	Designation
1	Dr. Praveen Srivastava Assistant Professor Department of Hotel Management and Catering Technology, BIT-Mesra, Ranchi	Associate Dean (Student Affairs)



Sr. No.	Name and Address	Designation
2	Dr. Yogender Aggarwal Assistant Professor Department of Bioengineering and Biotechnology BIT-Mesra, Ranchi	Associate Dean (Student Affairs)
4	Dr. Kirti Avishek Associate Professor Department of Civil and Environmental Engineering BIT-Mesra, Ranchi	Associate Dean (Faculty Affairs)
5	Mr. Vishal H. Shah Assistant Professor Department of Electronics and Communication Engineering BIT-Mesra, Ranchi	Associate Dean (Alumni and International Relations)
6	Dr. Sukalyan Chakraborty Associate Professor Department of Civil and Environmental Engineering BIT-Mesra, Ranchi	Associate Dean (Undergraduate Studies)
7	Dr. Laxmi Narayan Pattnaik Associate Professor Department of Production and Industrial Engineering BIT-Mesra, Ranchi	Associate Dean (Postgraduate Studies)
8	Dr. Anand Prasad Sinha Assistant Professor Department of Management BIT-Mesra, Ranchi	Associate Dean (Research, Innovation, Entrepreneurship)
9	Dr. Abhisek Jana Assistant Professor Department of Hotel Management and Catering Technology, BIT-Mesra, Ranchi	Associate Dean (Admission, Accreditation and Coordination)



## Annexure II : Board of Governors

Sr. No.	Name	Official Designation	In the Capacity Of
1	Shri C.K. Birla	Chairman CK Birla Group	Chairman
2	Joint Secretary (CU)	Dept. of Higher Edu. MoE, New Delhi	Member (Nominee of MoE)
3	Addl. Secretary – II	University Grants Commission (UGC) New Delhi	Member (Nominee of UGC)
4	Professor. K.K. Pant	Director, IIIT-Roorkee	Member (Nominee of AICTE)
5	Shri Rahul Purwar, IAS	Secretary Dept. of HTE- GOJ	Member (Ex-Officio)
6	Shri Nitin Madan Kulkarni, IAS	Pr. Secretary to Hon'ble Governor	Member (Nominee of the Chancellor)
7	Shri Praveen Kr. Toppo, IAS	Commissioner South Chhotanagpur, GOJ	Member (Ex-Officio)
8	Shri Rohit Saboo	M/s. National Engineering Industries Limited	Member (Nominee of the HCT)
9	Shri Rajiv Kaul	CEO, VC & WT Director M/s CMS Info Systems,	Member (Nominee of the HCT)
10	Prof. Indranil Manna	Vice Chancellor	Member (Ex-Officio)
11	Prof. Nisha Gupta	Professor Dept. of ECE, BIT Mesra	Member (Institute Faculty)
12	Dr. Abhijit Mustafi	Associate Professor Dept. of CSE, BIT Mesra	Member (Institute Faculty)
13	Dr. P. Ghosh	Executive Director BISR	Member (Nominee of GC)
14	Dr. Arup Roy Choudhury	Pr. Advisor to West Bengal Govt.	Member (Nominee of GC)
15	Shri Y. Goenka	Treasurer Honorary Birla Tower, New Delhi	Special Invitee
16	Prof. Sandip Dutta	Registrar (Officiating)	Secretary (Ex-Officio)



### Annexure III : Academic Council

Sl.	NAME	DESIGNATION	DEPARTMENT	As
1	Dr. Indranil Manna	Vice Chancellor	BIT	Chairman
2	Dr. (Mrs.) Nisha Gupta	Dean	Post Graduate Studies	Member
3	Dr. (Mrs.) Vibha Rani Gupta	Dean	Under Graduate Studies	Member
4	Dr. Sudip Das	Dean	Admission, Accreditation and Academic Coordination & Director (IQAC)	Member
5	Dr. Ritesh Kumar Singh	Dean	Alumni and International Relations	Member
6	Dr. Kunal Mukhopadhyay	Dean	Faculty Affairs	Member
7	Dr. C. Jeganathan	Dean	Research, Innovation and Entrepreneurship	Member
8	Dr. Bhaskar Karn	Dean	Student Affairs	Member
9	Dr. (Mrs.) Manjari Chakraborty	Dean	Infrastructure and Planning	Member
10	Dr. Sanjay K. Jha	Controller of Examinations	Examination	Member
11	Dr. (Mrs.) Smriti Mishra	Associate Professor and Head of Department	Architecture & Planning	Member
12	Dr. Rakesh Kumar Sinha	Professor and Head of Department	Bioengineering and Biotechnology	Member
13	Dr. Akhil Kr. Sen	Professor and Head of Department	Chemical Engineering	Member
14	Dr. Ashoke Sharon	Professor and Head of Department	Chemistry	Member
15	Dr. (Mrs.) Bindhu Lal	Professor and Head of Department	Civil and Environmental Engineering	Member
16	Prof. Supratim Biswas	Professor and Head of Department	Computer Science and Engineering	Member
17	Dr. S.S. Solanki	Professor and Head of Department	Electronics And Communication Engineering	Member
18	Dr. T. Ghosh	Professor and Head of Department	Electrical And Electronics Engineering	Member
19	Dr. Abhinav Kr. Shandilya	Asso. Professor and Head of Department	Hotel Management and Catering Technology	Member
20	Dr. Shradha Shivani	Professor and Head of Department	Management	Member



## वार्षिक प्रतिवेदन 2022-2023

SI.	NAME	DESIGNATION	DEPARTMENT	As
21	Dr. S.K. Jain	Professor and Head of Department	Mathematics	Member
22	Dr. Dipti P. Mishra	Professor and Head of Department	Mechanical Engineering	Member
23	Dr. Swastika Ganguly	Professor and Head of Department	Pharmaceutical Sciences and Technology	Member
24	Dr. S.K. Sinha	Professor and Head of Department	Physics	Member
25	Dr. Priyank Kumar	Professor In-charge	Space Engineering and Rocketry	Member
26	Dr. Kunal Mukhopadhyay	Professor In-charge	Centre for Quantitative Economics and Data Science	Member
27	Dr. V.S. Rathore	Asso. Professor and Head of Department	Remote Sensing	Member
28	Dr. Joyjeet Ghose	Associate Professor and Head of Department	Production and Industrial Engineering	Member
29	Dr. Vinay Sharma	Professor	Production and Industrial Engineering	Member
30	Dr. Satyaki Sarkar	Professor	Architecture & Planning	Member
31	Mrs. (Dr.) P. Padmanabhan	Professor	Bioengineering and Biotechnology	Member
32	Dr. Ramesh Chandra	Professor	Bioengineering and Biotechnology	Member
33	Dr. Vinod Kumar Nigam	Professor	Bioengineering and Biotechnology	Member
34	Dr. (Mrs.) Sudipta Goswami	Professor	Chemical Engineering	Member
35	Dr. Gautam Sarkhel	Professor	Chemical Engineering	Member
36	Dr. P.K. Srivastava	Professor	Chemistry	Member
37	Dr. J.P. Pandey	Professor	Chemistry	Member
38	Dr. Birendra Kr. Singh	Professor	Civil and Environmental Engineering	Member
39	Dr. Sudeshna Chakravarty	Professor	Civil and Environmental Engineering	Member
40	Dr. Rajeev R. Sahay	Professor	Civil and Environmental Engineering	Member
41	Mrs. (Dr.) Vandana Bhattacharjee	Director In-charge	BIT Lalpur	Member
42	Dr. Srikanta Pal	Professor	Electronics and Communication Engineering	Member
43	Dr. S.K. Ghorai	Professor	Electronics and Communication Engineering	Member
44	Dr. (Ms.) Vijaya Laxmi	Professor	Electrical and Electronics Engineering	Member
45	Dr. R.C. Jha	Professor	Electrical and Electronics Engineering	Member



Sl.	NAME	DESIGNATION	DEPARTMENT	As
46	Dr. Soubhik Chakraborty	Professor	Mathematics	Member
47	Dr. S. Padhi	Professor	Mathematics	Member
48	Dr. (Mrs.) Manju Bhagat	Professor	Management	Member
49	Dr. R.N. Bhagat	Professor	Management	Member
50	Dr. A.N. Jha	Professor	Management	Member
51	Dr. R.P. Sharma	Professor	Mechanical Engineering	Member
52	Dr. Shiveshwar Jha	Professor	Pharmaceutical Sciences and Technology	Member
53	Dr. K. Jayaram Kumar	Professor	Pharmaceutical Sciences and Technology	Member
54	Dr. B.N. Sinha	Professor	Pharmaceutical Sciences and Technology	Member
55	Dr. (Mrs.) Papiya Mitra Mazumder	Professor	Pharmaceutical Sciences and Technology	Member
56	Dr. Venkateshan J. Prakash	Professor	Pharmaceutical Sciences and Technology	Member
57	Dr. (Mrs.) Sunita Keshri	Professor	Physics	Member
58	Dr. Sanjeeb Kr. Rout	Professor	Physics	Member
59	Dr. A.P. Krishna	Professor	Remote Sensing	Member
60	Dr. Nilanchal Patel	Professor	Remote Sensing	Member
61	Dr. Vinay Sharma	Director	University Polytechnic	Member
62	Dr. Sandip Dutta	Registrar (Officiating)	BIT	Secretary
63	Dr. (Mrs.) Aruna Jain	Director	Off-campus, Deoghar	Member
64	Dr. Arbind Kumar	Professor	Off-campus, Deoghar	Member
65	Dr. S.L. Gupta	Director	Off-campus, Noida	Member
66	Mrs. (Dr.) Asha Prasad	Professor	Off-campus, Noida	Member
67	Dr. Arbind Kumar	Acting Director	Off-campus, Patna	Member
68	Dr. Shree Prakash Lal	Professor	Off-campus, Patna	Member
69	Dr. Peeyush Tewari	Director (Acting)	Off-campus, Jaipur	Member
70	Dr. Ganesh Prasad Mishra	Professor	BIT - Lalpur	Member
71	Dr. Roopali Sharma	Professor	Off-campus, Jaipur	Member
72	Dr. M. Krishna Mohan	Professor	Off-campus, Jaipur	Member



## Annexure IV : Finance Committee

Sr. No.	Name and Address	Designation
1	Shri C.K. Birla Group Chairman CK Birla Group of Companies	Chairman (Ex-Officio)
2	Professor Indranil Manna Vice Chancellor BIT-Mesra	Member (Ex-Officio)
3	Professor Jose Varghese Professor of Eminence Christ University (Deemed University)	Member (Nominee of UGC)
4	Shri Muklesh Chandra Narain Officer on Special Duty (Judicial) to the Hon'ble Governor	Member (Nominee of the Chancellor)
5	Shri P.C. Agarwala GMMCO Ltd Kolkata	Member (Nominee of the General Council)
6	Shri Rohit Saboo M/s National Engineering Industries Ltd.	Member (Nominee of Board of Governors)
7	Shri Y. Goenka Hon. Treasurer	Member

## Annexure V : Building Works Committee

8Sr. No.	Name and Address	Designation
1	Vice Chancellor	Chairman
2	Honorary Treasurer	Member
3	Registrar	Member
4	Dr. Manjari Chakraborty Professor (Deptt. of Architecture and Planning)	Member
5	Deputy Finance Officer	Member
6	In-Charge (Construction)	Member
7	Asst. Registrar (Works)	Member Secretary



## Annexure VI : List of Heads / In-charges of Departments

Sr	Name	Department	Designation
1	Dr. (Mrs.) Smriti Mishra	Architecture & Planning	Associate Professor and Head of Department
2	Dr. Rakesh Kumar Sinha	Bioengineering and Biotechnology	Professor and Head of Department
3	Dr. Akhil Kr. Sen	Chemical Engineering	Professor and Head of Department
4	Dr. Ashoke Sharon	Chemistry	Professor and Head of Department
5	Dr. (Mrs.) Bindhu Lal	Civil and Environmental Engineering	Professor and Head of Department
6	Prof. Supratim Biswas	Computer Science and Engineering	Professor and Head of Department
7	Dr. S.S. Solanki	Electronics And Communication Engineering	Professor and Head of Department
8	Dr. T. Ghosh	Electrical And Electronics Engineering	Professor and Head of Department
9	Dr. Abhinav Kr. Shandilya	Hotel Management and Catering Technology	Asso. Professor and Head of Department
10	Dr. Shradha Shivani	Management	Professor and Head of Department
11	Dr. S.K. Jain	Mathematics	Professor and Head of Department
12	Dr. Dipti P. Mishra	Mechanical Engineering	Professor and Head of Department
13	Dr. Swastika Ganguly	Pharmaceutical Sciences and Technology	Professor and Head of Department
14	Dr. S.K. Sinha	Physics	Professor and Head of Department
15	Dr. Priyank Kumar	Space Engineering and Rocketry	Professor In-charge
16	Dr. Kunal Mukhopadhyay	Centre for Quantitative Economics and Data Science	Professor In-charge
17	Dr. V.S. Rathore	Remote Sensing	Asso. Professor and Head of Department
18	Dr. Joyjeet Ghose	Production and Industrial Engineering	Associate Professor and Head of Department
19	Dr. Gautam Sarkhel	Central Instrumentation Facility	In-charge
20	Dr. Mahendra Kumar	Physical Education & Sports	In-charge



## Annexure VII : Addresses of Other Campuses of BIT Mesra

### Deoghar

BIT Mesra, Deoghar Campus  
P.O. Ratanpur, Jasidih  
Deoghar – 815142 (Jharkhand)  
Phone – 9334654856/9308139037  
Telefax: 06432-292565  
Email: [bitdeoghar@bitmesra.ac.in](mailto:bitdeoghar@bitmesra.ac.in)

### Jaipur

BIT Mesra, Jaipur Campus  
27, Malviya Industrial Area,  
Jaipur – 302017 (Rajasthan)  
Phone – 0141-4019798/4019819  
Fax: 2751601  
Email: [bitjaipur@bitmesra.ac.in](mailto:bitjaipur@bitmesra.ac.in)

### Ranchi

BIT Mesra, Lalpur (Ranchi City) Campus  
P.O. and P.S. – Lalpur,  
Ranchi – 834001 (Jharkhand)  
Phone – 0651-2531817/2531676  
Fax: 0651-2531686  
Email: [bitlalpur@bitmesra.ac.in](mailto:bitlalpur@bitmesra.ac.in)

### Noida

BIT Mesra, Noida Campus  
A-7 Sector – 1,  
Noida – 201301 (Uttar Pradesh)  
Phone – 91-0120-2553661  
Fax: 91-0120-2554146/5323095  
Email: [bitnoida@bitmesra.ac.in](mailto:bitnoida@bitmesra.ac.in)

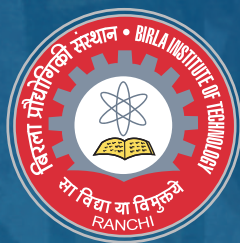
### Patna

BIT Mesra, Patna Campus  
Near Patna Airport,  
P.O. – Bihar Veterinary College,  
Patna – 800014 (Bihar)  
Phone: 0612-2223538, 2223545  
Fax: 0612-2227050  
Email: [bitpatna@bitmesra.ac.in](mailto:bitpatna@bitmesra.ac.in)

## Annexure VIII : Internal Complaint Committee

Sr. No.	Name	Designation
1	Dr. (Mrs.) Papiya Mitra Mazumdar Professor, Dept. of Pharmaceutical Sciences and Technology	Chairperson
2	Dr. Venkatesan J Professor, Dept. of Pharmaceutical Sciences and Technology	Member
3	Dr. (Mrs.) Itu Snigdha Asst. Professor, Dept. of Computer Science and Engineering	Member
4	Mr. Awadhesh Kumar Singh Dy. Comptroller	Member
5	Mrs. Kaushiki Sengupta	Member
6	Student Nominees (03) to be co-opted if matter involves students	Member
7	Mrs. Nidhi Jaiswal Asst. Registrar (Legal) General Office	Member Secretary





# **BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI**

## **बिरला प्रौद्योगिकी संस्थान, मेसरा, राँची**