## दिल्ली प्रौद्योगिकी विश्वविद्यालय Delhi Technological University





# 10<sup>th</sup> ANNUAL REPORT

(1 August, 2023 - 31 July, 2024)

## 10 वाँ वार्षिक प्रतिवेदन

(1 अगस्त, 2023 - 31 जुलाई, 2024)



20 Dr. A.P.J. Abdul Kalam Hostel

21/22 Boys Hostels

**24** Pragyan Bhawan

25 Virangana Laxmi Bai Hostel

**28** Guest House

**30** Health Centre



## 10 वाँ वार्षिक प्रतिवेदन

(1 अगस्त, 2023 - 31 जुलाई, 2024)



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दिल्ली प्रौद्योगिकी विश्वविद्यालय Delhi Technological University







राज निवास दिल्ली-११००५४ RAJ NIWAS DELHI-110054

Do. RN 2024 453 Dete. 04/12/2024

विनय कुमार सक्सेना उपराज्यपाल Vinai Kumar Saxena Lt. Governor

#### **MESSAGE**

I am happy to know that Delhi Technological University (DTU) is publishing its Annual Report for the Academic Year 2023-2024. The resilience, innovation and achievements demonstrated by DTU for the past 83 years, has been highly commendable.

With a distinguished history in education, technology, innovation and research, DTU has consistently produced skilled graduates who have contributed significantly to societal and national advancement and honored the Institution's legacy while pursuing new avenues of progress.

I extend my congratulations and best wishes to the entire DTU fraternity on this occasion and wish them great success in all their future endeavours.

(Vinai Kumar Saxena)







GOVT. OF NATIONAL CAPITAL TERRITORY OF DELHI DELHI SECRETARIAT, I.P. ESTATE, NEW DELHI-110002 PHONE - 23392020, 23392030



0.0. No.: OSD CMI/68
Date.: 03/12/24

#### **MESSAGE**

I am glad to learn that the Delhi Technological University is publishing its Annual Report for the Academic Year 2023-24.1 extend my best wishes to all stakeholders on this occasion for their magnificent achievements.

Education over time has gone through many innovations, especially in the present era with technological advancements and globalisation. The university has excelled in fostering a vibrant and productive environment for students through diverse and innovative learning methods, significantly contributing to the overall advancement of society. DTU's positive impact on society and national development is indeed laudable and will undoubtedly contribute to a technologically advanced India through global partnerships with renowned institutions worldwide, DTU enhances its global reach and impact, further solidifying its reputation as a centre of excellence.

1 congratulate the Vice-Chancellor and his team involved in the compilation of this Annual Report. I wish success to the faculty members, staff and students of the University.

(Atishi)



## नंदिनी पालीवाल, भा.प्र.से. NANDINI PALIWAL, IAS

सचिव Secretary

G

Tel. No. 011-27322948 Email: pstechedu@nic.in





राष्ट्रीय राजधानी क्षेत्र, दिल्ली सरकार Government of National Capital Territory, Delhi प्रशिक्षण एवं तकनीकी शिक्षा विभाग / उच्च शिक्षा Department of Training & Technical Education/ Higher Education

मुनि माया राम मार्ग, पीतम पुरा, दिल्ली–11<mark>0034</mark> Muni Maya Ram Marg, Pitam Pura, Delhi-110034

D.O. No. : PS | Secy | TTE | 2024-25 / 229

देनांक

Date: 20:01.2025

#### **MESSAGE**

I wish to convey my heartiest congratulations to all stakeholders of Delhi Technological University (DTU) on the release of Annual Report for the Academic Year 2023-2024. This report is a testament to yet another year of remarkable milestones and achievements. The comprehensive record of the University's successes reflects the unwavering dedication, determination and relentless efforts of the students, faculty, administration, management and staff of this haloed institution. The collective contribution of DTU has been instrumental in surpassing new benchmarks.

I am glad to see the remarkable achievements of DTU highlighted in this Annual Report. It is commendable that despite challenges, DTU students have emerged as skilled professionals; ready to make a significant impact in our challenging world. I am confident that DTU will continue to produce exceptional engineers, administrators & leaders who will continue to contribute to nation's and society's progress.

My heartiest congratulations go out to everyone at the University who have played a role in this year's accomplishments. I extend my best wishes for a future marked by continued success and innovation for the University's academic and administrative community. As we look ahead, let us remain inspired by the remarkable achievements of the past and strive towards an even brighter future.

'Jai Hind'

(NANDINI PALIWAL)





#### **VISITOR**

## Her Excellency SMT. DROUPADI MURMU

**President of India** 



#### CHANCELLOR

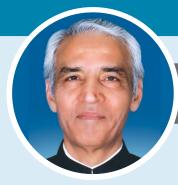
#### Shri Vinai Kumar Saxena Hon'ble Lt. Governor, Govt. of NCT, Delhi



Ms. Atishi
Hon'ble Chief Minister
& Minister for Education,
Higher Education, TTE
Govt. of NCT, Delhi



### **OUR VISIONARY LEADERS**



### HON'BLE CHANCELLORS

SHRI TEJENDRA KHANNA July, 2009 to July, 2013

> SHRI NAJEEB JUNG July, 2013 to Dec. 2016



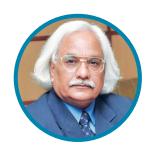


SHRI ANIL BAIJAL Dec. 2016 to May, 2022

SHRI VINAI KUMAR SAXENA May, 2022 to till date



## **VICE CHANCELLORS**



Prof. P. B. Sharma July, 2009 to July, 2014



Prof. Pankaj Jalote March, 2014 to Aug., 2014



Prof. Pradeep Kumar Aug., 2014 to Sept., 2015



Prof. Yogesh Singh Sept., 2015 to Oct., 2021



**Prof. J. P. Saini** Oct., 2021 to Sept., 2023



**Prof. S. Indu** Sept., 2023 to Nov., 2023



Prof. Prateek Sharma Nov., 2023 to Till Date

### **DELHI TECHNOLOGICAL UNIVERSITY**

### **Vision & Mission**



### **VISION**

"To be a world class university through education, innovation, and research for the service of humanity"

## **MISSION**



To establish centres of excellence in emerging areas of science, engineering, technology, management, and allied areas.

To foster an ecosystem for incubation, product development, transfer of technology, and entrepreneurship.

To create environment of collaboration experimentation, imagination and creativity.

To develop human potential with analytical abilities, ethics and integrity.

To provide environment friendly, reasonable and sustainable solutions for local and global needs.





## Core Values & Quality Policy

## CORE VALUES



#### **INTEGRITY**

WE DO WHAT WE SAY THROUGH TRUST, TRANSPARENCY AND HONESTY.

#### **COMPASSION**

WE FOSTER CIVILIZED MINDSET FOR KINDNESS, CONSIDERATION AND BENEVOLENCE.

#### COMMITMENT

WE DEDICATE OURSELVES COMPLETELY TO ALL OUR ENDEAVORS.

#### **CREATIVITY**

WE NURTURE INNOVATION, IMAGINATION AND IDEATION.

#### COLLABORATION

WE PROMOTE TEAM WORK THROUGH TOGETHERNESS, HARMONY AND ACKNOWLEDGMENT.

#### **INCLUSION**

WE EMBRACE DIVERSITY WITH RESPECT,
ACCEPTANCE AND AFFIRMATION.

## **QUALITY POLICY**

The University is committed to achieving global standards of excellence in the field of Science, Technology, Management and allied areas by disseminating knowledge through cutting-edge research, education and innovation. We adopt best practices to maintain high standards in the core and allied functions through continuous evaluation and improvement of our processes.

## ROADMAP FOR ACHIEVING VISION

## PRODUCT DEVELOPMENT & ENTREPRENEURSHIP

Incubation & Innovation Foundation

Product

Development & Entrepreneurship

Track introduced

in UG curriculum



## STRENGTHENING EDUCATION

Flexible Curriculum

Outcome-based education

Focus on research, innovation & Entrepreneurship

Projects and Experiments based learning



## COLLABORATION & CREATIVITY

Research Excellence Award & Grants for researchers

MoUs with leading industries and universities

Research Track introduced in UG & PG Curriculum



FECs on values, ethics and sports

Regular workshop on ethical values, professionalism

Training programs for development of

analytical abilities & critical thinking



#### **SUSTAINABLITIY**

Green Campus

Zero Discharge Campus

Sewerage Treatment Plant

Solar Power Plant

Organic to Waste Energy Plant

## **ACADEMIC PROGRAMS (2023-24)**

| Chemical Engineering   Bioinformatics   Chemical Engineering   BBA  | B. Tech.               | M. Tech.                | Ph.D.                  | Others                                |  |
|---|------------------------|-------------------------|------------------------|---------------------------------------|--|
| Computing   Computing   Chemistry   Chons.  | Chemical Engineering   | Bioinformatics          | Chemical Engineering   | BBA                                   |  |
| Biotechnology   Computer Science & Engineering   Physics   M.A Economics  |                        | Structural Engineering  | Chemistry              |                                       |  |
| Civil Engineering   | Engineering Physics    |                         | Mathematics            | B. Des.                               |  |
| Computer Science & Engineering  Software Engineering  Data Science  Electrical Engineering  Electronics & Communication Engineering  Environmental Engineering  Environmental Engineering  Environmental Engineering  Environmental Engineering  Environmental Engineering  Environmental Engineering  Enchnology  Environmental Engineering  Enchnology  Environmental Engineering  Engineering  Enchnology  Environmental Engineering  MBA - Business Analytics  Engineering  MBA - Business Analytics  Engineering  MBA - Business Administration (USME)  Engineering  MBA - Business Administration (USME)  Engineering  MBA - Executive  | Biotechnology          | •                       | Physics                | M.A Economics                         |  |
| Software Engineering   Data Science   Multidisciplinary Centre for Geoinformatics   Communication Communication Engineering   Information System   Signal Processing & Computer Science of Happiness   M.Des Transportation and Service Design   M.Des Transportation and Service Design   M.Des Transportation and Service Design   M.Des Lifestyle and Accessory Design   M.Des Lifestyle and Accesso  | Civil Engineering      | Artificial Intelligence | Biotechnology          |                                       |  |
| Electrical Engineering  Electronics & Communication Engineering  Electronics & Communication Engineering  Environmental Engineering  Environmental Engineering  Enchanical Engineering  Production & Industrial Engineering  Engineering  Enduction & Industrial Engineering  Engineering  Environmental Engineering  Mechanical Engineering  Engineering  Engineering  Environmental Engineering  Electronics & Computer Science and Engineering  Electrical Engineering  Electronics & Communication Engineering  Electronics & Communication Engineering  Electronics & Communication Engineering  MBA - Innovation, Entrepreneurship and Venture Development  Mechanical Engineering and Management  Environmental Engineering Broduction & Industrial Engineering and Management  Mechanical Engineering Broduction & Industrial Engineering and Management  Mechanical Engineering Broduction & Industrial Engineering and Management  MBA - Business Administration (USME)  Humanities  MBA - Executive  MBA - Executive  MBA - Executive  MISC Biotechnology  Management  M.Sc Chemistry  Management and Entrepreneuzrship Innovation, Entrepreneurship and Venture Development  Economics  | •                      | Software Engineering    | Civil Engineering      | M.Des Product Design                  |  |
| Electrical Engineering  Electronics & Communication Engineering  Environmental Engineering  Environmental Engineering  Control & Instrumentation Engineering  Engineering  Control & Instrumentation Engineering  Power Electronics & Systems  Production & Industrial Engineering  Mechanical Engineering  Production & Industrial Engineering  Mechanical Engineering  Mechanical Engineering  Production & Industrial Engineering and Management  Mechanical Engineering  Production & Industrial Engineering Analysis and Design  Mechanical Engineering  Mechanical Engineering  Mechanical Engineering Analysis and Design  Information Technology  Management  Misc Biotechnology  Misc Physics  Misc Physics  Misc Physics  Misc Physics  Misc Physics  Misc Physics  | Software Engineering   | Data Science            |                        |                                       |  |
| Communication Engineering  Environmental Engineering  Environmental Engineering  VVSI Design & Embedded System  Information Technology  Mechanical Engineering  Production & Industrial Engineering and Management  Mechanical Engineering  Production & Industrial Engineering and Management  Mechanical Engineering  Production & Industrial Engineering and Management  Mechanical Engineering  Master of Business Administration (MBA)  MBA - Innovation, Entrepreneurship and Venture Development  Mechanical Engineering Analytics  Environmental Engineering Analytics  Environmental Engineering Administration (USME)  MBA - Business Analytics  MBA - Business Administration (USME)  Humanities  MBA - Executive  MBA - Executive | Electrical Engineering | Information System      | for the Science of     | · · · · · · · · · · · · · · · · · · · |  |
| Engineering   Embedded System   Electrical Engineering   Administration (MBA)   | Communication          | 9                       |                        | -                                     |  |
| Information Technology  Mechanical Engineering Production & Industrial Engineering and Management  Mechanical Engineering Production & Industrial Engineering and Management  Mechanical Engineering Production & Industrial Engineering and Management  Mechanical Engineering with specialization in Automotive Engineering  Information Technology  Management  MBA - Business Administration (USME)  Humanities  Information Technology Management  MBA - Executive  MINSC Chemistry  Management and Entrepreneuzrship  Innovation, Entrepreneurship and Venture Development  Economics   |                        | _                       | Electrical Engineering |                                       |  |
| Engineering   Systems   Engineering   Analytics   |                        |                         | Communication          | Entrepreneurship and                  |  |
| Engineering and Management Engineering Administration (USME)  Mechanical Engineering with specialization in Automotive Engineering  Information Technology  Management  Management  Management of Engineering  MBA – Executive  Management  M.Sc Biotechnology  Management and Entrepreneuzrship  Innovation, Entrepreneurship and Venture Development  Economics   |                        |                         |                        |                                       |  |
| with specialization in Automotive Engineering  Information Technology  Management  Management  Management and Entrepreneuzrship  Innovation, Entrepreneurship and Venture Development  Economics  MBA – Executive  MSc Biotechnology  M.Sc Chemistry  M.Sc Mathematics  M.Sc Physics  |                        |                         |                        |                                       |  |
| ManagementM.Sc ChemistryManagement and<br>EntrepreneuzrshipM.Sc MathematicsInnovation,<br>Entrepreneurship and<br>Venture DevelopmentM.Sc Physics   | with specialization in | •                       | Humanities             | MBA – Executive                       |  |
| Management and Entrepreneuzrship  Innovation, Entrepreneurship and Venture Development  Economics  M.Sc Mathematics  M.Sc Physics   |                        |                         | Information Technology | M.Sc Biotechnology                    |  |
| Entrepreneuzrship  Innovation, Entrepreneurship and Venture Development  Economics  M.Sc Mathematics  M.Sc Physics  |                        |                         | Management             | M.Sc Chemistry                        |  |
| Entrepreneurship and Venture Development  Economics  M.Sc Physics   |                        |                         |                        | M.Sc Mathematics                      |  |
|   |                        |                         | Entrepreneurship and   | M.Sc Physics                          |  |
| Design  |                        |                         | Economics              |                                       |  |
|   |                        |                         | Design                 |                                       |  |

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## HISTORICAL BACKGROUND

Delhi Technological University (DTU) is a premier institution in Delhi that stands out for its commitment to advancing education and research. Known for its rigorous programs in science, engineering, technology, and management, DTU provides a robust platform for students to engage with the latest advancements and innovations. The university's approach

is holistic, integrating technical and managerial training with essential soft skills development. Students at DTU are encouraged to explore a range of activities, from innovation and design to entrepreneurship and leadership. This focus on both technical expertise and personal growth ensures that graduates are well-rounded, confident, and ready to make significant contributions in their fields. DTU's environment is crafted to inspire creativity and foster a culture of continuous learning and innovation. This makes it not just an academic institution but a dynamic space for comprehensive development, nurturing the next generation of leaders and professionals. It offers students a diverse range of activities that include innovation, design, and entrepre neurship, while also developing their technical skills, soft skills, and leadership abilities. DTU emphasizes creativity and out-of-the-box thinking, providing a dynamic environment for comprehensive personal and academic growth.

Delhi Technological University (DTU) has a distinguished 83-year legacy, beginning as Delhi Polytechnic in 1941, evolving into Delhi College of Engineering in 1965, and becoming DTU in 2009. This evolution reflects its commitment to educational and technological excellence. The establishment of the East Delhi Campus in 2017-2018 marks a new chapter, enhancing DTU's focus on management, entrepreneurship, research, and innovation. This campus underscores the university's dedication to offering diverse educational opportunities and enriching the academic landscape.

DTU is a renowned global institution offering diverse, industry-relevant programs in science, technology, and management. Its strong industry ties, global research collaborations, and esteemed alumni make it a top choice for students and a leading technological university. DTU is a globally esteemed institution renowned for its dedication to academic excellence, cutting-edge research, and innovative advancements. It offers a broad array of interdisciplinary and industry-focused programs at both undergraduate and postgraduate levels, consistently advancing student success. The university excels in fostering industry-academia partnerships and collaborating with top global research institutions, reflecting its forward-thinking approach to education. Its distinguished alumni, who contribute significantly on both national and international stages, underscore DTU's legacy of awards and recognition. By nurturing exceptional talent and maintaining a dynamic technological campus, DTU has established itself as a leading choice for top-ranking students. Its global reputation is a testament to its illustrious history, extensive alumni network, and pivotal role in driving technological progress, solidifying DTU's status as a premier technology university.





#### **Degrees Awarded**

UG: 2865

PG: 790

Ph.D.: 175

## **RANKING**



NIRF RANKING

**2**9

Times Higher Education World University Ranking

601-800

NBA Accredited Programs

UG: 08 PG: 09



#### **EVENTS**

#### **ENGIFEST'24**

15<sup>th</sup> - 17<sup>th</sup> Feb., 2024

#### PARAAKRAM'24

14th - 17th Feb., 2024

#### YUVAAN'24

13th - 14th Feb., 2024

#### **TECHWEEK'23**

4th - 10th Nov., 2023

#### **AARAMBH'23**

20th - 21st Oct., 2023

### DTU AT A GLANCE

UNIVERSITY STATISTICS

A.Y.: 2023-24

#### STUDENT STRENGTH

**16033** Total Students Strength

4334 Total students enrolled in 2023-24

**3163** Undergraduate Students

**970** | Post-graduate Students

**201** Doctoral Students



#### ACADEMIC/NON-ACADEMIC MEMBERS



**Professor** 

119+5

Associate Professor 48

Assistant Professor 124

Others 18

Non-Academic Members 79+93

#### **RESEARCH HIGHLIGHTS**

45 Consultancy Projects

₹11+Cr. Outlay

30 Sponsored Projects

₹18+ Cr. Outlay

18 PATENTS GRANTED

Research Excellence Awards

**416** Commendable

25 Premier

RESEARCH



Delhi Polytechnic (1941)



Delhi College of Engineering (1965)

Delhi Technological University (2009)

Under Graduate Programmes

B.Tech.: 14 B.Des., B.B.A. B.A. (Economics)

## Post Graduate Programmes

| M.Tech.         | 14 |
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| M.B.A           | 04 |
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| M A (Feanamics) |    |

Ph.D 20

#### **ACADEMIC**

**16** Departments

20 Centres and other Units

**12** Central Facilities

## TRAINING AND PLACEMENT STATISTICS

360+ Recruiters 2053 Job Offers ₹85.3 LPA Highest

Package

14.02 LPA Averege Package





Delhi Technological University (DTU), erstwhile Delhi College of Engineering (DCE), is well-known around the world for its superior technical education, research, and training programs. It has a long and storied history spanning 83 years. The institution has accomplished important milestones from its founding as Delhi Polytechnic, to its development as Delhi College of Engineering and eventual elevation to Delhi Technological University. The university's autonomy has been crucial in encouraging research and creativity by relentlessly pursuing academic greatness. The university has a youthful and energetic character with noteworthy development spanning multiple fields.

Throughout its history, the institution has consistently provided technical education with a contemporary and flexible educational infrastructure. DTU is an academic institution that regularly makes major contributions to the domains of science, technology, and management. As an alma mater, DTU boasts an impressive pool of elite engineers and technologists amongst its alumni; including Mr. Ashok K. Baweja (Head, QuEST Global Defense Engineering Services), Mr. Promod Haque (the world's most acclaimed Venture Capitalist and renowned Techno-Entrepreneur based in Houston), Mr. Vinod Dham (the father of the Pentium Chip), Mr. Sanjay Nayar (CEO, Kohlberg Kravis Roberts India Advisors Pvt. Ltd.), Mr. Raj Soin, the US's master of Avionics & a top-ranking Techno Entrepreneur, Mr. Durgadas Agrawal, Dr. D. Yogi Goswami (Director, Clean Energy Research Center at the University of South Florida), to name a few.

Delhi Technological University has established its reputation both Nationally and Internationally by remaining steadfast to quality in research, education, technology, and innovation. In tradition with the DTUs vision, consistent efforts to improve and strengthen undergraduate, postgraduate education and doctoral research are being encouraged. With the launch of new programs and the university's focus on research and development; students are being groomed for future challenges in market and industry assignments. Owing to these attributes, DTU remains a popular choice for undergraduate and postgraduate courses, drawing top candidates from National screening exams like JEE (Mains) and GATE, respectively.

DTU endeavors to realize the dynamic requirements of the students, industry, and community by developing requisite skills in student for transformation as informed, talented, and creative professionals who are committed to serve the country. Our alumni are priceless resources for the country because of the work ethic and technical proficiency that was ingrained in them during their formative years at DTU. The university offers a plethora of programs viz.: Fourteen B.Tech, fourteen M.Tech, four M.Sc., four M.B.A., five M.Design., M.A. (Economics), B.Des., B.B.A., B.A. – Economics (Hons.) and Ph.D. in twenty programmes. This growth reflects the university's dedication to foster an environment that nurtures entrepreneurship, creativity, and innovation while giving students opportunities to succeed in highly competitive world of start-ups and growing technology sectors. By strategically locating its East Delhi Campus in Vivek Vihar, DTU has catered to the growing startup movement providing the requisite eco-system for young innovators and entrepreneurs. A key component of DTU's nation-building strategy is developing young minds into well-rounded, capable adults. This strategic focus demonstrates DTU's dedication to equip the students for making significant contributions to the advancement of the country.

#### **Admissions**

Delhi Technological University accomplishes admissions to its B.Tech. programs through Joint Admission Counselling (JAC), a joint counselling method. Along with DTU, the following academic institutions are involved in JAC: Indira Gandhi Delhi Technical University for Women (IGDTUW), Delhi; Indraprastha Institute of Information Technology (IIIT), Delhi; and Netaji Subhash University of Technology (NSUT), Delhi. In the Academic Year; 2023-24, the university admitted a total of 2513 students through JAC. Additionally, 100 students are admitted through DASA/ICCR/ DTU PORTAL. Further, thirteen students have been admitted under PMSSS and fifty two students were enrolled through lateral entry schemes. Furthermore, 182 students in BBA, 181 in B.A. - Economics (Hons.), and 122 in B.Des. programmes are admitted. Thus, a total of 3163 students have taken admission under different undergraduate programmes. DTU remains a popular choice amongst students for postgraduate programmes as well. Subsequently, 284 students in

M.Tech., 346 in M.B.A., 233 in M.Sc., 59 in M.A. (Economics), and 36 in M.Des. have been admitted. In total, 970 postgraduate students (including twelve international students) were enrolled for 2023–2024. In addition to this, a total of 201 Ph.D. research scholars (including four International researchers) were welcomed into DTU's research community during this time. By offering funding to attend International/National conferences, DTU keeps all undergraduate, postgraduate, and doctoral students engaged in research that provides a chance to collaborate with the research community at the National and International levels.

#### **Training and Placement**

DTU has been unwavering in its objective to channel outstanding talent to the top sectors in the country. DTU has entered the current placement season with great optimism and enthusiasm. To start the process, the university invited companies for pre-placement meetings where they could discuss the job descriptions being offered. These discussions provided a useful platform for students to orient and familiarize with potential employers and job QRs needs. Students with different specializations and branches participated actively in the placement process. A total of 360+ recruiters took part in campus placements during the 2023–2024 academic year, offering 2053 employment opportunities to students enrolled in different programs. The maximum package of ₹ 85.3 LPA was offered. This year, the average package was ₹ 14.02 LPA. Apart from the stellar placement record, DTU also had a record-breaking internship season 2023-24. Several domestic/international recruiters visited the campus for the purpose of on-boarding interns. Total of 210+ Pre-Placement Offers were given by companies based on the internship performance of students with a highest stipend of 2 Lacs. Additionally, several other DTU graduates are currently enrolled in prestigious national and international institutions like the Technical University of Munich, Duke University, Purdue University, Georgia Institute of Technology, and IIMs, to mention a few.

#### **Continuing Education and Outreach Program**

Initiatives like the Faculty Development Program (FDP), Curriculum Development Program (CDP), Quality Improvement Program (QIP), and Continuing Education Program (CEP) have generated great interest from academia, industry, and DTU faculty. CEP courses are especially made for working professionals who wish to augment their skillsets in line with the changing needs of the industry. Another set of FDP programs is very well-liked by instructors and aspiring scholars, which increases the amount of interaction between professionals in the field and educators. These programs demonstrate DTU's dedication to supporting lifelong learning, career advancement, and cooperative interaction between the academic and business sectors.

#### **Faculty Centric Policies**

The Professional Development Fund Grant supports DTU faculty members to attend conferences, workshops, training exposures, and other professional development programs. It begins with an initial grant of ₹ 2 Lacs for facility establishment and continues with successive allocations of ₹ 2 Lacs every three years. Numerous promotions for faculty members have been the outcome of the Career Advancement Scheme's constant implementation. Several academic members have received Research Excellence Awards in recognition of their excellence in teaching. DTU's remarkable growth in research output, as evidenced by its rising h-index and the publication of 2,020 research papers in 2023. To encourage and honor research endeavors, the university gives out research prizes every year in three different categories: Outstanding, Premier, and Commendable. A total of 25 Premier awards and 416 Commendable awards were disbursed. These programs highlight DTU's dedication to support ongoing professional growth and honour exceptional contributions to teaching and research. Subsequently, eighteen patents (granted) and four patents (published) are added in the crown of DTU this year.

#### **DTU Innovation and Incubation Foundation (DTU-IIF)**

DTU has established the DTU Innovation and Incubation Foundation in response to the growing focus of the sectors on creative skill sets and intellectual property. This foundation is dedicated to fostering an atmosphere that supports the growth of new businesses, entrepreneurial endeavors, and the generation of intellectual property. The main objective is to encourage innovation and entrepreneurship among university students to create jobs, add value, and influence positive social change. Currently 30+ Incubating Start-up Companies exists in different domains under DTU IIF. Several students have achieved prestigious awards, including Best Innovation Award, 5G Hackathon, TIDE 2.0 Grant, to name a few.

#### **Outreach and Extension**

To carry out numerous projects oriented around social entrepreneurship, DTU has created two centres; the Centre for Outreach & Extension Activities and the Centre for Human Resource Development. These programs cover a wide range of activities, such as training sessions for survivors of acid attacks, skill development programs for women, blood donation drives, organ donation awareness campaigns, digital literacy, e-waste collection, water filtration unit installation, health camps, blood donation drives, clothing donation initiatives, and campaigns to promote cleanliness. Furthermore, the DTU National Service Scheme (NSS) enables improved student interaction with the community, adding to a larger pool of ideas and insights and creating a significant link between the campus and the community.

#### **Cultural Sports and Technical Festivals**

Apart from its active research and academic pursuits, DTU also promotes a thriving technological and sports culture. The university hosts several activities on a regular basis to encourage students to participate in extracurricular activities, which enhances the vibrant and diverse campus community. Every year, the DTU Entrepreneurship Cell hosts a "E-Summit" that is supported by Havells, Bosch, Paxful, Hell Energy, and other companies. New businesses can use the event to get advice and direction from likeminded people in the business world. The DTU Cultural Council organized "Engifest" from 15 - 17 February, 2024, with the goal of encouraging students to collaborate and engage in a variety of cultural events. Additionally, the Cultural Council hosted a twodays orientation event called "Aarambh" for recently admitted students from 20 - 21 October, 2023, to help them settle into the university and become familiar with campus resources.

In addition, a two-days event "Yuvaan: Literature and Film Festival" was planned for 13 - 14 February, 2024 and four-days event "Invictus" held during 9-12 February, 2024. Furthermore, from 4 - 10 November, 2023, IEEE-DTU hosted the "IEEE DTU Techweek'23", which focused on providing DTU and other university students with practical projectmaking experience as well as a number of technical workshops. Maintaining physical health is critical to the development of the whole person. To motivate students and get them interested in a variety of sports, DTU regularly hosts various sporting events. The sports meet "PARAAKRAM" for faculties, staff, and students of DTU was organized from 14 - 17, February, 2024.

#### **DTU Rankings**

DTU has been consistently ranked among best 10 engineering institutions of India as per the various Independent Surveys on Best Engineering Institutions of the country. DTU has ranked 6th in university category and 8th amongst Government Engineering Colleges by India Today in 2023. The 2023 NIRF rankings placed DTU at the 29th position among the engineering institutions and at 40<sup>th</sup> in the categories of universities. The university has participated in Times Higher Education World University Ranking for the third time and has been placed 601-800 position in university category in 2023 and ranked 7th in India. The university has secured 2<sup>nd</sup> position in the category of "State University and Deemed University (Govt. and Govt. Aided) (Technical)" in Atal Ranking of Institutions on Innovation Achievements (ARIIA) announced by Ministry of Education, Govt. of India.

The NAAC has awarded the university with "A" accreditation. Furthermore, DTU is dedicated to upholding the standard for various programs; as a result, the National Board of Accreditation (NBA) has accredited a total of 8 undergraduate and 9 graduate programs. The university's Internal Quality Assurance Cell (IQAC) has started several initiatives for quality enhancements, including the implementation of ERP and e-governance in the processes, standardizing question papers, conducting regular process audits in accordance with SOPs, collecting and analyzing feedback, conducting a green audit of the campus, and obtaining ISO 9001:2015 certification.

DTU is deeply appreciative of the ongoing financial support provided by GNCTD, MHRD, DST, AICTE, UGC, CSIR, DBT, and DRDO. We especially salute the committed teachers, staff, students, and alumni who helped to make DTU a renowned university. DTU is dedicated to achieving greater success while continuously making contributions to excellent technical education. We are incredibly grateful for the constant support of Honorable Lieutenant Governor, Honorable Chief Minister, Honorable Education Minister, Chief Secretary, Principal Secretaries of Finance and Higher Education, and the Director of DTTE, Delhi for their invaluable assistance. Thank you for your outstanding contributions to the Academic Council, Planning Board, Finance Committee, Board of Management, and other groups.

Thank you to the IQAC editorial team for their dedicated work on this study.

Jai Hind

**Prof. Prateek Sharma** Vice Chancellor, DTU, Delhi

### 1. Organization and Administration

#### **1.1 University Court**

The University Court reviews, from time to time, the broad policies and programmes of the University and suggest measures for the improvement and development of the University. The Court also considers the annual report, annual accounts of the University and the report of its auditors on such accounts.



#### 1.2 Board of Management

The Board of Management is the principal executive body of the University and, have all powers necessary to administer the University subject to the provisions of the Act and the Statutes of the University. It also makes ordinances and regulations for appointments, finances, accounts and investments and is empowered to create posts in the university, determine salary structure and terms & conditions of different cadres of employees.

## Members of Board of Management DTU, Delhi (2023-24)



#### 1.3 Academic Council

The Academic Council is the principal academic body of the University. It regulates the maintenance of standards of instruction, education, research, and examination within the University and exercise such other powers and perform such other duties as may be conferred or imposed upon it by the Act and Statutes. The Academic Council has the right to advise the Board of Management on all academic matters.

#### Members of Academic Council, DTU, Delhi (2023-24)

#### Ms. Kirti Seth

CEO, Sector Skills Council, NASSCOM (Retired) Noida, Uttar Pradesh (Member)

#### Prof. Shashi K. Dhiman

Himachal Pradesh University, Summer Hill, Shimla, H.P. (Member)

#### All HODs, DTU, Delhi

(Members)

#### Prof. P. K. Suri

Delhi School of Management, DTU, Delhi (Member)

#### Prof. Rajeshwari Pandey

Controller of Examinations, DTU, Delhi (Member)

#### Prof. Madhusudan Singh

Registrar, DTU, Delhi (Member Secretary)

#### **Prof. Prateek Sharma**

Vice Chancellor, DTU, Delhi (Chairperson)

#### **Prof. Vasant Matsagar**

Department of Civil Engineering, IIT, Delhi (Member)

#### All Deans, DTU, Delhi

(Members)

#### **Prof. Vishal Verma**

Department of Electrical Engineering, DTU, Delhi (Member)

#### Prof. Devendra Kumar

Department of Applied Chemistry, DTU, Delhi (Member)

#### Dr. Yashna Sharma

Assistant Professor, Department of Electronics & Communication Engineering, DTU, Delhi (Member)

#### 1.4 Planning Board

The Planning Board is the principal planning body of the University. It designs and formulates appropriate plans for development and expansion of the University. It has right to advise the Board of Management and the Academic Council on any matter which it may deem necessary for the fulfillment of the objects of the University.

#### **Members of Planning Board** DTU, Delhi (2023-24)

#### **Prof. Prateek Sharma**

Vice Chancellor, DTU, Delhi (Chairperson)

#### Prof. S. G. Deshmukh

Department of Mechanical Engineering, IIT, Delhi (Member)

#### Prof. B. R. Mehta

Vice Chancellor, Jaypee Institute of Information Technology, Noida (Member)

#### Prof. Rajive Kumar

Member Secretary, AICTE, Delhi (Member)

**Prof. Madhusudan Singh** Registrar, DTU, Delhi (Member Secretary)

#### Prof. Ashok Banerjee

Director, IIM Balicha Campus, Udaipur, Rajasthan (Member)

#### Dr. Pankaj Jalote

Distinguished Professor, IIIT, Delhi (Member)

#### Dr. Anil Wali

CEO, BITS BioCyTiH Foundation, BITS, Goa Campus, Goa (Member)

#### Commodore (Dr.) R. K. Rana (Special Invitee)

Honorary Senior Advisor, Foundation for Innovation and Technology Transfer (FITT), IIT, Delhi (Member)

#### 1.5 Finance Committee

The Finance Committee develop financial policies of the University and to oversees the revenues and expenditures of the University (It recommendations on generating revenue through the activities of University and these recommendations are placed before the Board of Management for a decision). The Finance Committee examines and scrutinizes the annual budget of the University, makes its recommendations on financial matters to the Board of Management. All proposals relating to revision of pay, up-gradation of the pay-scales and those items which are not included in the budget, are examined by the Finance Committee.



#### 1.6 Internal Quality Assurance Cell (IQAC)

Delhi Technological University (DTU) has established the Internal Quality Assurance Cell (IQAC) for maintaining the momentum of quality consciousness as an internal mechanism for sustenance, assurance, and enhancement of the quality culture of education. DTU-IQAC, in fact, is conceived as a mechanism to build and ensure a quality culture at the University level to meet the diverse needs of the stakeholders. The DTU-IQAC is meant for planning, guiding and monitoring Quality Assurance and Quality Enhancement activities of the University. The IQAC channelizes and systematizes the efforts and measures of the University towards academic excellence and is a facilitative and participative organ of the University. It is a driving force for ushering in quality by working out intervention strategies to remove deficiencies and enhance qualities.

#### **CHAIRPERSON**

#### Prof. Prateek Sharma

Vice Chancellor, DTU

#### Members - Teachers to represent all Level

- Prof. Nirendra Dev, Professor, CED
- Prof. Rajeshwari Pandey, Professor, ECE
- · Prof. Rinku Sharma, Professor, Applied **Physics**
- · Prof. Amit Mookerjee, Professor, USME
- · Prof. Poornima Mittal, Professor, ECE
- · Prof. Anil Kumar, Professor, Applied Chemistry
- Dr. Shilpa Pal, Associate Professor, CED

#### **Member - from the Management,** DTU, Delhi

Dean, DTU as nominated in BOM

#### **Members - Few Senior Administrative Officers**

- · Prof. Madhusudan Singh, Registrar, DTU
- Prof. Rajeshwari Pandey, COE, DTU
- Prof. Nirendra Dev, COF, DTU
- Sh. Pradeep Tiotia, Officer-In-Charge S & P, DTU

#### Members - One Nominee each from Local Society, Students and **Alumni**

- Sh. Arun Gupta, Alumnus, DTU
- Mr. Krish Aggarwal, ECE Student
- Sh. Arun Aggarwal, Local Society

#### Members - One nominee each from Employers /Industrialists/ **Stakeholders**

- Sh. Sunil Singh Solanki, Asia Pacific Japan Head-SAP Cloud Platform.
- Sh. Piyush C. Ojha, Vice President, Synergy Systems and Solutions, Noida, U.P.
- Sh. Parmod Kumar Panda, ITS Director, Engineering Telecom Centre, Department of Telecommunication, Ministry Communications & IT and Railways, Govt. of India.

Member Secretary - One of Senior Teachers as Coordinator/ **Director of IQAC** -

· Prof. Neeta Pandey, Director IQAC, DTU

## **IQAC CORE TEAM MEMBERS**



## 1.7 DTU Administration

# **VICE-CHANCELLOR(S)**



Prof. Prateek Sharma (29th Nov., 2023 – Present)



**Prof. S. Indu** (26<sup>th</sup> Sept., 2023 – 28<sup>th</sup> Nov., 2023)



**Prof. J. P. Saini** (8<sup>th</sup> Oct., 2021 – 25<sup>th</sup> Sept., 2023)



**REGISTRAR**Prof. Madhusudan Singh

### **DEANS**



Prof. Rinku Sharma Academics (PG)



Prof. Rajeshwari Pandey
Academics (UG)



Prof. Rajesh Rohilla Alumni Affairs



Prof. Rajiv Choudhary Student Discipline



**Prof. S Indu** Student welfare



Prof. Pravir Kumar International Affairs



**Prof. Pragati Kumar** Industrial Research Development



Prof. Nirendra Dev

**Prof. Amit Kumar Srivastava** Outreach & Extension Activities

## **DIRECTORS**



Prof. R. C. Singh Sports Council



Prof. Neeta Pandey
Internal Quality Assessment Cell

### **RECRUITMENT CELL**



Prof. V. K. Minocha (1st Jan., 2024 - Present)

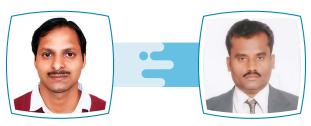


Prof. Yasha Hasija (19<sup>th</sup> Sept. – 31<sup>st</sup> Dec., 2023)



**Prof. Dinesh Kumar** (1st Aug., 2019 – 19th Sep., 2023)

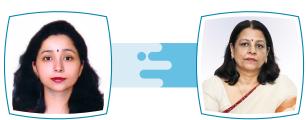
### **HUMAN RESOURCE DEVELOPMENT CENTRE**



**Prof. P. K. Goyal** (1st Jan., 2024 - Present)

**Prof. S. Anbu Kumar** (1st Jan., 2021 – 31st Dec. 2023)

### **EQUAL OPPORTUNITY CELL**



Prof. Anjana Gupta (1st Jan., 2024 - Present)

**Prof. Rachana Garg** (15<sup>th</sup> Nov., 2018 – 31<sup>st</sup> Dec., 2023)

#### **ADMINISTRATION**

### **Head of Department**

# **Applied Chemistry**Prof. Anil Kumar

### **Applied Mathematics**

Prof. Ramesh Srivastava (1st Jan., 2024 - Present) Prof. S. Sivaprasad Kumar (1st Jan., 2021 - 31st Dec., 2023)

#### **Applied Physics** Prof. A.S. Rao

#### **Bio Technology**

Prof. Yasha Hasija (1st Jan., 2024 – Present) Prof. Pravir Kumar (1st Jan., 2021 – 31st Dec., 2023)

### Comp. Science & Engg. Prof. Vinod Kumar

### Civil Engg.

Prof. K.C. Tiwari (1st Jan., 2024 – Present) Prof. V. K. Minocha (1st Jan., 2021 – 31st Dec., 2023)

# **Delhi School of Management**Dr. Saurach Aggarwal (1st Jan., 2024 – Present)

# Dr. Archana Singh (1st Jan., 2021 - 31st Dec., 2023)

Dept. of Design Prof. R. C. Singh (1st Jan., 2024 - Present) Prof. Ranganath. M. Singari (27th Sep., 2018 - 31st Dec., 2023)

### Electronics & Communication Engg. Prof. O. P..Verma

# **Electrical. Engg.** Prof. Rachna Garg

# **Environmental Engg.**Prof. Anil Kumar Haritash

### Dept. of Humanities

Dr. Saroj Bala (1<sup>st</sup> Jan., 2024 – Present) Prof. Nand Kumar (1<sup>st</sup> Jan., 2021 –31<sup>st</sup> Dec., 2023)

# **Information Technology** Prof. Dinesh K.Vishwakarma

#### Mechanical Engg.

Prof. B. B. Arora (23<sup>rd</sup> April, 2024 – Present) Prof. S. K. Garq (10<sup>th</sup> April, 2024 – 19<sup>th</sup> April, 2024)

#### **Software Engg.** Prof. Ruchika Malhotra

#### USME

Prof. Amit Mookerjee

B.Tech. Evening Prof. Ram Bhagat

# Associate Dean & Associate Director

### Associate Dean, UG Prof. Priya Mahajan

### Associate Dean, PG Prof. Raju Sarkar

Associate Dean, P & C Prof. Munendra Kumar

#### Associate Dean, IRD Prof. Roli Purwar

Associate Dean, Alumni Affairs Prof. Yasha Hasija

#### Associate Dean, Student Welfare Prof. Ram Singh

Associate Dean, Student
Discipline
Prof. D. C. Meena

# Associate Dean, Outreach & Extension Prof. Nitin Puri

Associate Director, HRDC Prof. Vinod Singh (12<sup>th</sup> April, 2021 - 31<sup>st</sup> December, 2023)

### Associate Director, IQAC Dr. Shilpa Pal

#### **Others**

# Controller of Examinations Prof. Rajeshwari Pandey (12<sup>th</sup> March, 2024 – Present) Dr. Kamal Pathak (17<sup>th</sup> April, 2017 – 5<sup>th</sup> March, 2024)

### Controller of Finance Prof. Nirendra Dev

### Prof. Nirendra Dev Prof. Rajesh Rohilla

### Chief Operating Officer Ms. Divya Narayan

### Chief Vigilance, Officer Prof. T. Vijaya Kumar

# Deputy Registrar, Establishment Dr. Ravinder Kaushik

### Deputy Registrar, General Administration Dr. Anil Kumar

# **Superintendent Exam** Prof. Rajiv Chaudhary

# **Chief Warden**Prof. Dinesh. K. Vishwakarma

### **Librarian** Mr. R. K. Shukla

### **Deputy Librarian** Dr. M. Jayasimhadri

### Office-In- Charge, Guest house Prof. Rajesh Kumar Yadav

#### Office-In- Charge, Health Centre Prof. Rajesh Birok

### OSD Result Sh. Madhukar Cherukuri

# Assistant Registrar, Store & Purchase Dr. Pradeen Teotia

Dr. Pradeep Teotia

### Assistant Registrar, Legal, Planning, RTI, Vigilance Dr. Lokesh Garg

### Assistant Registrar, USME Dr. Vivek Tripathi

### Knowledge Network Manager Sh. Piyush Vaish

### Security Officer, Transport Officer & OIC NCC Dr. Raghavendra Gautam

# 2. Academic and Non-Academic Staff

## 2.1 Academic Staff

| S.<br>No. | Department   | Professor(s) | Adjunct/<br>Emeritus<br>Professor(s) | Associate<br>Professor(s) | Assistant<br>Professor(s) | Viciting | Programmer/<br>Foreman<br>Instructor | Total |
|-----------|--|--------------|--------------------------------------|---------------------------|---------------------------|----------|--------------------------------------|-------|
| 1.        | Applied Chemistry  | 7            | 1                                    | 3                         | 2                         | -        | -                                    | 13    |
| 2.        | Applied Mathematics                                      | 8            | 1                                    | 2                         | 10                        | -        | -                                    | 20    |
| 3.        | Applied Physics  | 7            | =                                    | 6                         | 8                         | -        | -                                    | 21    |
| 4.        | Biotechnology  | 3            | -                                    | 2                         | -                         | 3        | -                                    | 8     |
| 5         | Civil Engineering  | 16           | -                                    | 4                         | 4                         | -        | -                                    | 24    |
| 6.        | Computer Science and Engineering                         | 7            | 2                                    | -                         | 13                        | 1        | 1                                    | 24    |
| 7.        | Department of Design                                     | 2            | 1                                    | -                         | 5                         | -        | -                                    | 7     |
| 8.        | Delhi School of<br>Management                            | 2            | 1                                    | 4                         | 7                         | -        | -                                    | 13    |
| 9.        | Electronics & Communication Engineering                  | 13           | 1                                    | 3                         | 29                        | -        | -                                    | 45    |
| 10.       | Electrical Engineering                                   | 21           | 2                                    | 4                         | 21                        | 1        | -                                    | 49    |
| 11.       | Environmental<br>Engineering                             | 2            | -                                    | 2                         | 2                         | -        | -                                    | 6     |
| 12.       | Humanities   | 3            | -                                    | 1                         | 1                         | -        | -                                    | 5     |
| 13        | Information<br>Technology                                | 3            | -                                    | 2                         | 5                         | -        | -                                    | 10    |
| 14.       | Mechanical<br>Engineering                                | 23           | -                                    | 12                        | -                         | 4        | 2                                    | 41    |
| 15.       | Department of Software Engineering                       | 1            | -                                    | 2                         | 5                         | 2        | -                                    | 10    |
| 16        | University School<br>of Management &<br>Entrepreneurship | 1            | -                                    | 1                         | 12                        | 4        | -                                    | 18    |
|           | Total  | 119          | 5                                    | 48                        | 124                       | 15       | 3                                    | 314   |

# 2.2 Non-Academic Staff (Regular)

| S.<br>No. | Post                               | Total Filled<br>Post | Present Posting   | Remarks               |         |
|-----------|------------------------------------|----------------------|---|-----------------------|---------|
| 1         | Vice Chancellor                    | 1                    | Office of VC  | Regular               |         |
| 2         | Chief Operating Officer            | 1                    | Computer Centre   | Regular               |         |
| 3         | Donuty Pogistrar                   | 2                    | Establishment Branch  | Regular               |         |
| 3         | Deputy Registrar                   | 2                    | General Administration  | Regular               |         |
| 4         | Deputy Controller of Account (DCA) | 1                    | Account Branch  | Deputation            |         |
| 5         | Sr. Account Officer                | 2                    | Account Branch  | Deputation            |         |
| 6         | EDP Manager                        | 1                    | Result Section  | Regular               |         |
| 7         | KNM                                | 1                    | Computer Centre   | Regular               |         |
| 8         | System Manager                     | 1                    | Computer Centre   | Regular               |         |
|           |                                    |                      | East Campus   | Regular               |         |
| 9         | Assistant Registrar                | 3                    | Legal Branch, Planning Branch, Vigilance<br>Branch, PGMS And RTI Cell | Regular               |         |
|           |                                    |                      | Store & Purchase  | Deputation            |         |
| 10        | AAO                                | 1                    | Account Branch  | Deputation            |         |
| 11        | Assistant Draggerone               | 2                    | Comp. Sci. and Engg 1   | Regular               |         |
| 11        | Assistant Programmer               | 3                    | Computer Centre-2   | Regular               |         |
| 12        | Chief Store Keeper                 | 1                    | Store   | Regular               |         |
| 13        | Programmer                         | 1                    | Comp. Sci. and Engg.  | Regular               |         |
|           |                                    |                      | Establishment Branch - 1  | Regular               |         |
| 14        | Section Officer                    | 4                    | Store & Purchase - 1  | Regular               |         |
| 14        | Section Officer                    | 4                    | Establishment Branch - 1  | Deputation            |         |
|           |                                    |                      | Account Branch - 1  | Deputation            |         |
|           |                                    |                      |   | Legal & Vigilance - 1 | Regular |
| 15        | SOA                                | 3                    | General Administration - 1  | Regular               |         |
|           |                                    |                      | Academic (UG) – 1   | Deputation            |         |
| 16        | Draughtsman                        | 1                    | Mechanical Engg.  | Regular               |         |
|           |                                    |                      | Electrical Engineering - 2  | Regular               |         |
| 17        | Foreman                            | 6                    | Elec. and Comm. Engg 1  | Regular               |         |
|           |                                    |                      | Mechanical Engg 3   | Regular               |         |
|           |                                    |                      | Applied Physics - 2   | Regular               |         |
|           |                                    |                      | Civil Engg. – 1   | Regular               |         |
| 18        | Senior Mechanic                    | 15                   | Electrical Engg 2   | Regular               |         |
|           |                                    |                      | Elec. and Comm. Engg 1  | Regular               |         |
|           |                                    |                      | Mechanical Engg 9   | Regular               |         |

| 19 | Office Assistant       | 1  | Establishment Branch          | Regular |  |
|----|------------------------|----|-------------------------------|---------|--|
|    | lu Office Assistant    | 2  | Pension Cell – 1              | Regular |  |
| 20 | Jr. Office Assistant   | 2  | Accounts Branch - 1           | Regular |  |
| 21 | Junior Engineer (C)    | 1  | Engineering Cell              | Regular |  |
| 22 | Junior Mechanic        | 5  | Mechanical Engg 5             | Regular |  |
|    |                        |    | Elec. and Comm. Engg 1        | Regular |  |
| 23 | Multi Tasking Staff    | 3  | DTTE on Diverted Capacity - 1 | Regular |  |
|    |                        |    | Project Office - 1            | Regular |  |
| 24 | Stenographer Grade-II  | 1  | Dean (Academic - PG)          | Regular |  |
|    |                        |    | Recruitment Branch – 1        | Regular |  |
| 25 | Stenographer Grade-III | 3  | Hostel Office – 1             | Regular |  |
|    |                        |    | VC Office – 1                 | Regular |  |
|    |                        |    | Biotechnology - 1             | Regular |  |
| 26 | Technical Asstt.       | 3  | Elec. and Comm. Engg 1        | Regular |  |
|    |                        |    | Applied Chemistry - 1         | Regular |  |
| 27 | Driver                 | 1  | Personal Branch, VC Office    | Regular |  |
| 28 | Counter Assistant      | 3  | East Campus – 1               | Regular |  |
|    | Counter Assistant      | J  | Central Library - 2           | Regular |  |
| 29 | Chowkidar              | 1  | Accounts Branch               | Regular |  |
| 30 | Daftri                 | 1  | Accounts Branch               | Regular |  |
| 31 | Peon                   | 1  | Central Library               | Regular |  |
| 32 | Library Attendent      | 1  | Central Library               | Regular |  |
|    |                        |    | Applied Chemistry - 1         | Regular |  |
| 33 | Safai Karamchari       | 4  | Hostel Office – 1             | Regular |  |
| 33 | Jaiai Karamenan        | -  | Comp. Sci. and Engg 1         | Regular |  |
|    |                        |    | Mechanical Engg 1             | Regular |  |
|    | Total                  | 79 |                               |         |  |

# 2.3 Non-Academic Staff (Contractual)

| S.<br>No. | Post                 | Total<br>Filled<br>Post | Present Posting             |
|-----------|----------------------|-------------------------|-----------------------------|
| 1         | PS to VC             | 1                       | Dean, OEA                   |
| 2         | Sr. Office Assistant | 2                       | Establishment – 1           |
|           | 3i. Office Assistant |                         | Examination Branch — 1      |
| 3         | Stenographer         | 1                       | Pr. Branch of Registrar     |
| 4         | Office Assistant     | 2                       | Electrical Engineering - 1  |
|           | Office Assistant     |                         | Establishment – 1           |
|           |                      |                         | Exam Branch – 1             |
|           |                      |                         | Mechanical Engg. – 1        |
|           |                      |                         | Environmental Engg. – 1     |
|           |                      |                         | VC Office – 1               |
|           |                      |                         | Hostel Office – 1           |
|           |                      |                         | RTI Cell – 1                |
|           |                      |                         | Result Section – 3          |
|           |                      |                         | Dean SW – 1                 |
|           |                      |                         | Planning Branch – 1         |
|           |                      |                         | Academic PG – 2             |
| 5         | Jr. Office Assistant | 27                      | Establishment – 2           |
|           | Ji. Office Assistant | 21                      | East Delhi Campus – 1       |
|           |                      |                         | General Administration - 1  |
|           |                      |                         | Project Office – 1          |
|           |                      |                         | Accounts Branch – 3         |
|           |                      |                         | Pr. Branch of Registrar - 1 |
|           |                      |                         | Academic UG – 1             |
|           |                      |                         | Dept. of Design – 1         |
|           |                      |                         | Dean UG – 1                 |
|           |                      |                         | Vigilance – 1               |
|           |                      |                         | Software Engg. – 1          |
|           |                      |                         | Computer Centre – 1         |
| 6         | Asst. Librarian      | 1                       | Library                     |
| 7         | Counter Assistant    | 2                       | Library                     |
| 8         | Asst. Store Keeper   | 1                       | Store & Purchase            |
| 9         | Caretaker            | 1                       | Project Office              |
| 10        | Driver               | 2                       | Transport Office            |

|    |                           |    | Result Section – 1         |
|----|---------------------------|----|----------------------------|
| 11 | Asst. Programmer          | 3  | Computer Centre – 1        |
|    |                           |    | Applied Mathematics – 1    |
| 12 | Network Assistant         | 2  | Computer Centre            |
|    |                           |    | Elec. and Comm. Engg. – 1  |
| 12 | To almost and American    | 4  | Information Technology – 1 |
| 13 | Technical Assistant       | 4  | Computer Sci. and Engg 1   |
|    |                           |    | Computer Sci. and Engg 1   |
|    |                           |    | Electrical Engg. – 7       |
| 14 | Jr. Technical Asst.       | 14 | Software Engg. – 2         |
| 14 | Ji. Technical Asst.       | 14 | Engineering Physics – 3    |
|    |                           |    | Mechanical Engg. – 2       |
|    |                           |    | Applied Chemistry – 1      |
| 15 | Sr. Mechanic              | 5  | Mechanical Engg. – 2       |
|    |                           |    | Biotechnology – 2          |
| 16 | Sr. Mechanic Gp-I         | 6  | Electrical Engg. – 1       |
| 10 | 16 31. Mechanic Gp-1      |    | Mechanical Engg. – 5       |
| 17 | Sr. Mechanic Gp-II        | 3  | Mechanical Engg. – 2       |
| 17 | 3i. Mechanic Gp-ii        | ၁  | Elec. and Comm. Engg. – 1  |
| 18 | Sr. Mechanic Gp-III       | 1  | Mechanical Engg.           |
| 19 | Sr. Mechanic Gp-V         | 3  | Mechanical Engg.           |
| 20 | Sr. Mechanic Gp-VI        | 1  | Mechanical Engg.           |
|    |                           |    | Applied Chemistry – 2      |
| 21 | Jr. Mechanic              | 5  | Applied Physics – 1        |
| 21 | 31. Mechanic              | 3  | Biotechnology – 1          |
|    |                           |    | Environmental Engg. – 1    |
| 22 | Jr. Mechanic Gp-I         | 1  | Electrical Engg.           |
| 23 | Technical Instructor      | 1  | Elec. and Comm. Engg.      |
| 24 | Jr. Engineer (Electrical) | 1  | Engineering Cell           |
| 25 | Jr. Engineer (Civil)      | 1  | Engineering Cell           |
| 26 | Electrician               | 1  | Engineering Cell           |
| 27 | Cook                      | 1  | Guest House                |
|    | Total                     |    | 93                         |

# 3. Academic Programmes

# **3.1 UG Programmes**

# Bachelor of Technology (B.Tech.)

| S.<br>No. | Department                              | Programme  | Duration | Sanctioned<br>Intake | Total No.<br>Admitted |
|-----------|---|--|----------|----------------------|-----------------------|
| 1         | Applied Chemistry                       | Chemical Engineering   | 4 Years  | 76                   | 76                    |
| 2         | Applied Mathematics                     | Mathematics and Computing  | 4 Years  | 181                  | 181                   |
| 3         | Applied Physics                         | Engineering Physics  | 4 Years  | 116                  | 116                   |
| 4         | Biotechnology                           | Biotechnology  | 4 Years  | 76                   | 75                    |
| 5         | Civil Engineering                       | Civil Engineering  | 4 Years  | 151                  | 151                   |
| 6         | Computer Science &                      | Computer Science & Engineering                                       | 4 Years  | 481                  | 481                   |
|           | Engineering                             | Software Engineering   | 4 Years  | 181                  | 181                   |
| 7         | Electrical Engineering                  | Electrical Engineering   | 4 Years  | 301                  | 301                   |
| 8         | Electronics & Communication Engineering | Electronics & Communication<br>Engineering                           | 4 Years  | 241                  | 241                   |
| 9         | Environment Engineering                 | Environment Engineering  | 4 Years  | 76                   | 76                    |
| 10        | Information Technology                  | Information Technology   | 4 Years  | 181                  | 181                   |
|           |   | Mechanical Engineering   | 4 Years  | 301                  | 301                   |
| 11        | Mechanical Engineering                  | Production & Industrial<br>Engineering                               | 4 Years  | 76                   | 76                    |
| 11        |   | Mechanical Engineering with specialization in Automotive Engineering | 4 Years  | 76                   | 76                    |
|           |   | B.Tech. Admitted through JAC   |          | 2514                 | 2513                  |
|           | Total                                   | B.Tech. Lateral Entry  | 3 Years  | 57                   | 52                    |
|           |   | PMSSS Candidates   | -        | 15                   | 13                    |
|           | Gr                                      | and Total  |          | 2586                 | 2578                  |

### BBA/B.A./B.Des.

| S.<br>No. | Department                      | Programme            | Duration | Sanctioned<br>Intake | Total No.<br>Admitted |
|-----------|---------------------------------|----------------------|----------|----------------------|-----------------------|
| 1         | University School of Management | BBA                  | 3 Years  | 182                  | 182                   |
| '         | and Entrepreneurship (USME)     | BA-Economics (Hons.) | 3 Years  | 182                  | 181                   |
| 2         | Department of Design            | B.Des.               | 3 Years  | 122                  | 122                   |
|           | Total                           | 486                  | 485      |                      |                       |

# 3.2 PG Programmes

# Master of Technology (M.Tech.)

| S.<br>No. | Department                   | Programme                                | Duration | Sanctioned<br>Intake | Admitted Students |
|-----------|------------------------------|--|----------|----------------------|-------------------|
| 1         | Biotechnology                | Bioinformatics                           | 2 Years  | 25+5                 | 14                |
| 2         | Computer Science &           | Computer Science & Engineering           | 2 Years  | 30+5                 | 34                |
|           | Engineering                  | Artificial Intelligence                  | 2 Years  | 30+5                 | 32                |
| 3         | Civil Engineering            | Structural Engineering                   | 2 Years  | 25+5                 | 32                |
| 3         | Civil Engineering            | Geotechnical Engineering                 | 2 Years  | 25+5                 | 11                |
| 4         | Information Technology       | Information System                       | 2 Years  | 25+5                 | 26                |
|           | Electronics &                | Signal Processing & Digital Design       | 2 Years  | 25+5                 | 15                |
| 5         | Communication<br>Engineering | VLSI Design and Embedded<br>System       | 2 Years  | 25+5                 | 26                |
| 6         | Floatrical Engineering       | Control & Instrumentation                | 2 Years  | 25+5                 | 07                |
| 0         | Electrical Engineering       | Power Electronics & Systems              | 2 Years  | 30+5                 | 13                |
| 7         | Machanical Engineering       | Industrial Engineering and<br>Management | 2 Years  | 30+5                 | 13                |
| ,         | Mechanical Engineering       | Computer Aided Analysis and Design       |          | 30+5                 | 10                |
| 8         | Software Engineering         | Software Engineering                     | 2 Years  | 25+5                 | 23                |
| L°        | Software Engineering         | Data Science                             | 2 Years  | 30+5                 | 28                |
|           |                              | Total                                    |          | 657+125              | 284               |

# Master of Design (M.Des.)

| S.<br>No. | Department | Programme                                 | Duration | Sanctioned<br>Intake | Admitted Students |
|-----------|------------|---|----------|----------------------|-------------------|
|           | Design     | M.Des - Interaction Design                | 2 Years  | 15                   | 13                |
|           |            | M.Des - Product Design                    | 2 Years  | 15                   | 8                 |
| 1         |            | M.Des - Visual Communication              | 2 Years  | 15                   | 11                |
|           |            | M.Des - Transportation and Service Design | 2 Years  | 15                   | 1                 |
|           |            | M.Des - Lifestyle and Accessory Design    | 2 Years  | 15                   | 3                 |
|           |            |   | 75       | 36                   |                   |

# **Management Programmes**

| S.<br>No. | Department | Programme  | Duration | Sanctioned<br>Intake | Admitted<br>Students |
|-----------|------------|--|----------|----------------------|----------------------|
|           | USME       | MBA - Innovation, Entrepreneurship and Venture Development (MBA-IEV) | 2 Years  | 30                   | 11                   |
| 1         |            | MBA - Business Analytics (MBA-BA)                                    | 2 Years  | 40                   | 32                   |
|           |            | Master of Business Administration (MBA)                              | 2 Years  | 120                  | 115                  |
| 2         | DSM        | Master of Business Administration (MBA-<br>Executive)                | 2 Years  | 60                   | 41                   |
|           |            | Master of Business Administration (MBA)                              | 2 Years  | 150                  | 147                  |
|           |            |  | 400      | 346                  |                      |

## M.Sc. Programmes

| S.<br>No. | Department    | Programme | Duration | Sanctioned<br>Intake | Admitted<br>Students |
|-----------|---------------|-----------|----------|----------------------|----------------------|
|           | Chemistry     |           | 2 Years  | 60                   | 51                   |
|           | Mathematics   | M Co      | 2 Years  | 60                   | 61                   |
| '         | Physics       | M. Sc.    | 2 Years  | 60                   | 61                   |
|           | Biotechnology |           | 2 Years  | 60                   | 60                   |
|           |               | 240       | 233      |                      |                      |

# M.A. (Economics) Programme

| S.<br>No. | Department | Programme      | Duration | Sanctioned<br>Intake | Admitted<br>Students |
|-----------|------------|----------------|----------|----------------------|----------------------|
| 1         | USME       | MA (Economics) | 2 Years  | 60                   | 59                   |

# **3.3 Doctoral Programmes**

| S.<br>No. | Department  | Programme  | Admitted Scholars |  |  |
|-----------|---|--|-------------------|--|--|
| 1         | Applied Chemistry   | Chemical Engineering                                 | 11                |  |  |
| ı         | Applied Chemistry   | Chemistry  | 01                |  |  |
| 2         | Applied Mathematics   | Mathematics  | 22                |  |  |
| 3         | Applied Physics   | Physics  | 25                |  |  |
| 4         | Biotechnology (BT)  | Biotechnology  | 07                |  |  |
|           |   | Civil Engineering                                    | 14                |  |  |
| 5         | Civil Engineering (CE)                                      | Multidisciplinary Centre for Geoinformatics          | 04                |  |  |
| 5         | Civil Engineering (CE)                                      | Centre of Excellence for the Science of Happiness    | 03                |  |  |
| 6         | Computer Science and Engineering (CSE)                      | Computer Science and Engineering                     | 11                |  |  |
| 7         | Electrical Engineering (EE)                                 | Electrical Engineering                               | 17                |  |  |
| 8         | Electronics and Communication Engineering (ECE)             | Electronics and Communication Engineering            | 19                |  |  |
| 9         | Mechanical Engineering (ME)                                 | Mechanical Engineering                               | 15                |  |  |
| 10        | Environmental Engineering (ENE)                             | Environmental Engineering                            | 06                |  |  |
| 11        | Humanities (HUM)  | Humanities   | 04                |  |  |
| 12        | Information Technology (IT)                                 | Information Technology                               | 08                |  |  |
| 13        | Delhi School of Management (DSM)                            | Management   | 18                |  |  |
|           |   | Management and Entrepreneurship                      | 03                |  |  |
| 14        | University School of Management and Entrepreneurship (USME) | Innovation, Entrepreneurship and Venture Development | 02                |  |  |
|           |   | Economics  | 04                |  |  |
| 15        | Department of Design  | Design   | 03                |  |  |
|           | Grand Total   |  |                   |  |  |

# 4. Academic Departments

# 4.1 DEPARTMENT OF APPLIED CHEMISTRY



Prof. Anil Kumar, HoD

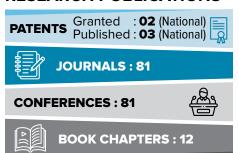
### **ACADEMIC PROGRAMMES**

B.Tech. (Chemical Engineering) Intake: 76 Admitted: 76

> M.Sc. (Chemistry) Intake: 60 Admitted: 51

Ph.D. (Chemical Engineering) Admitted: **01** 

### **RESEARCH PUBLICATIONS**



## **SALIENT FEATURES**

The department aims to provide state-ofart knowledge and practical skills to the undergraduate and postgraduate students in the diverse areas of Applied Chemistry, Chemical Engineering, and Polymer Technology. Facilitating R&D activities at UG and PG levels is our prime concern. Innovations in chemistry, chemical engineering, and polymer sciences are focused to provide green technologies, products to global industries and design of novel separation processes. New molecules for improving human health and medical care, hydrogels for improved agri-products, innovative polyfibrils for clean water, conducting polymers, nano-embedded and green polymers for food-packaging are some of the main areas in which PG and doctoral students are excelling beyond imagination.

The department provides a platform for industrialacademia interaction by organizing workshops, seminars and conferences for exchange of knowledge and ideas. Alumni of the department are well placed in reputed organizations /industries and some are pursuing higher education in Indian and foreign universities.

## **LABORATORIES**

The department has well established laboratories, where all UG, PG students and Research Scholars carry out their research/projects. The names of equipment present in the laboratory are mentioned below:

| Polymer Processing<br>Lab                             | Blow film plant; Hand injection molding machine; Extrusion blow molding; two roll mill; ultrasonic welding of plastic; Box compression strength tester; Pouch packaging machine.  |
|---|---|
| Chemical Technology<br>Lab                            | Digital refractometer; Double pipe heat exchanger; Stefan boltzmann apparatus; Simple steam distillation; Apparatus for Thermal conductivity of metal rod & liquid; Thermal conductivity of insulation slab; Heat transfer in natural & forced convection; Dropwise/filmwise condensation; Emissivity measurement; Vapour liquid equilibrium; Liquid-liquid extraction in packed bed; Adsorption in packed bed; Sieve plate distillation; Absorption in packed bed. |
| Reaction Engineering<br>Lab                           | Flocculation test unit; Kinetics of dissolution of benzoic acid; Annular UV Photo reactor; Polymerization reactor; Adiabatic batch reactor; Emulsion polymerization reactor; RTD Study packed bed reactor; Mixed flow reactor; Plug flow reactor; Isothermal continuous stirred tank reactor; Tubular flow reactor auto titrators.  |
| Instrumentation<br>Lab, Heat and Mass<br>Transfer Lab | FTIR Apparatus; Nanoflash; DMA Apparatus; Vapor Pressure Osmometer; Dilatometer; Oscillating Disc Rheometer; Brookfield Viscometer; Tearing Strength Tester; Hydraulic PELLET Press; Thermo-gravimetric Analyzer.   |
| Fibre Technology Lab                                  | Beaker dyeing machine; Deep freezer; Electrospinning machine; Hot air oven; high temperature and high pressure dyeing machine; lab centrifuge; pH Meter; UV-Vis Spectrophotometer; Ultrasonic cleaner; wet spinning machine; weighing balance.  |
| Computer Aided Design                                 | Computers, Printers; Softwares: ChemOffice, AutoCAD, ProE.  |
| Innovation and<br>Research Labs.                      | Muffle Furnace (50-1100 oC); Ultrasonicator; Electronic Weighing Balance; Vacuumed Furnace and vacuum pump; Potentiostat / Galvanostat Model PG16125-EC; Hydrothermal Vessel; UV-Visible Spectrophotometer; FTIR Spectrometer (Perkin Elmer); Rotary Evaporator; Ozonolyzer; Milli-Q water purification system; Centrifuge machine; Water shaker bath; Autoclave; Oven; Laminar air flow; Potentiostat / Galvanostat Autolab.                                       |











#### **PROFESSORS**

### **HoD: Prof. Anil Kumar**

(M.Sc., Ph.D.)

Research Area: Inorganic Chemistry

### Prof. D. Kumar

(M.Sc., Ph.D.)

Research Area: Chemistry, Polymer S & T

### Prof. S. G. Warkar

(M.Sc., Ph.D.)

Research Area: Inorganic Polymeric Materials

### Prof. Archana Rani

(M.Sc., Ph.D.)

Research Area: Organic Chemistry

### Prof. Rajinder K. Gupta

(M.Sc., Ph.D.)

Research Area: Organic Chemistry

### Prof. Anubha Mandal (Adjunct)

(B.Tech., Ph.D.)

Research Area: Air Pollution

### **Prof. Ram Singh**

(M.Sc., Ph.D.)

Research Area: Organic Chemistry

#### **Prof. Roli Purwar**

(B.Tech., M.Tech., Ph.D.)

Research Area: Fiber Technology

### **ASSOCIATE PROFESSORS**

### Dr. Richa Srivastava

(M.Sc., Ph.D.)

**Research Area:** Organic Chemistry

### Dr. D. Santhiya

(M.Sc., Ph.D.)

Research Area: Nano Bio-technology

### Dr. Raminder Kaur

(B.Tech., M.Tech., Ph.D.)

Research Area: Chemical Engg.

### **ASSISTANT PROFESSORS**

### Dr. Poonam Singh

(M.Sc., Ph.D.)

Research Area: Inorganic Chemistry

### Dr. Manish Jain

(B.Tech., M.Tech., Ph.D.)

Research Area: Chemical Engg.

### **ACHIEVEMENTS OF THE DEPARTMENT:**

The department of Applied Chemistry is one of the oldest departments of the University. It provides state-of-art knowledge and practical skills to the UG and PG students in the diverse subjects of Applied Chemistry, Chemical Engineering and Polymer Technology. The innovations are focused to provide green technologies and products to global industries. The department has fifteen well-managed laboratories to carry out project work and research. In the last one year, the faculties of the department have published about 81 research papers, 12 Book Chapters and attended many national and international conferences and seminars. The department has also contributed towards conference proceedings and book chapters of national and international repute. The students of the department have been placed in well-established industries and some of them have taken admission in foreign universities.

## **Grants for Research Projects Sponsored by Funding Agencies:**

**PI/Co-PI:**Prof. Roli Purwar

**Title:** Design and Development of Electronic Devices using Regenerated Silk Fibroin/ Metal Oxide Nano composites Films and Hydrogels.

**Agency:** Science and Engineering Research Board (SERB)

**Amount (₹):** 29,95,693/-

Sanctioning Date: 28th June, 2023

**Duration:** 3 Years

### **Details of Patent Awarded/Published:**

### Inventor(s):

Roli Purwar and Chandra Mohan Srivastava

**Title:** Silk Fibroin Flexible Films Prepared by Hydrogel Particles and

Process Thereof.

**Status:** Published (Indian) **Patent Number:** 504734

**Date of Patent Published:** 

30<sup>th</sup> January, 2024

### Inventor(s):

Anuja Agrawal, Raminder Kaur, R. S. Walia

**Title:** Bio-Based Rigid Polyurethane Foam Composition and Method

Thereof.

Status: Published

Patent Number: 201911027962

**Date of Patent Published:** 

28<sup>th</sup> February, 2024

# **Events organized by the Department:**

| Name of Event  | Date(s)  | Coordinator/co-coordinator of the Event  |
|--|--|--|
| Expert talk by Prof. S. Subramanian from Department of Materials Engineering, IISc, Bangalore on the topic "Processing of E-waste: Challenges and opportunities".  | 20 <sup>th</sup> October, 2023                               | Dr. Deenan Santhiya  |
| International conference on "Basic<br>Analytical and Allied Sciences at the<br>Interface of Carbohydrates and Biomass<br>Valorization (CARBOXXXVII)".              | 30 <sup>th</sup> November-<br>2 <sup>nd</sup> December, 2023 | Prof. Ram Singh  |
| Birth Anniversary of Netaji Subhash<br>Chandra Bose under Vikshit Bharat<br>Abhiyan.   | 23 <sup>rd</sup> January, 2024                               | Prof. Archna Rani  |
| Workshop on "Intellectual Property Rights (IPRs) and IP Management for Start-up" by Mr. Arunava Maity, Senior IP Attorney.   | 22 <sup>nd</sup> May, 2024                                   | Prof. Roli Purwar  |
| Expert lecture on "Palladium Catalyzed Heck-type Coupling reactions: Applications in Stereo-controlled synthesis of C-Aryl glycosides" by Dr. Jeyakumar Kandasamy. | 4 <sup>th</sup> April, 2024                                  | Dr. Ram Singh  |
| Foundation Day of Indian Institute of Chemical Engineers.  | 24 <sup>th</sup> February, 2024                              | Dr. Manish Jain  |
| Lecture Series: IIChE (NRC).   | 30 <sup>th</sup> March, 2024                                 | Dr. Manish Jain  |
| Integration of Petroleum Refineries with Bio-refineries for enhancement of Sustainable Fuel Production.  | 21 <sup>st</sup> June, 2024                                  | Dr. Roli Purwar<br>(In collaboration with<br>Indian Institute of Chemical<br>Engineers (Northern Regional<br>Centre) & Federation of Indian<br>Petroleum Industry (FIPI)). |











# Collaborative Activities for Research, Faculty Exchange, and Student Exchange:

| Name of Faculty      | Collaboration with  | Type of collaboration | Collaboration commenced from |
|----------------------|---|-----------------------|------------------------------|
| Prof. R. K. Gupta    | Prof. Yogesh Tyagi, Department of<br>Chemistry School of Basic and Applied<br>Sciences, GGSIPU, Delhi.                | Jt. Supervisor        | 2022                         |
| Prof. Archna<br>Rani | Dr. Vidhu Aheri, Pharmacognosy & Phytochemistry, School of Pharmaceutical Education & Research, Jamia Hamdard, Delhi. | M.Sc.<br>Supervision  | 2023                         |
| Prof. Roli Purwar    | Dr. Nandini, Scientist E, DRDO.   | Research              | 2022                         |
| Prof. Ram Singh      | Dr. Yogesh Kumar Tyagi, GGSIPU, Delhi<br>and Prof. Geetanjali, Kirori Mal College,<br>University of Delhi.            | Research              | 2014                         |
| Dr. Raminder<br>Kaur | Prof. Mohd Zulfiqar, Jamia Millia Islamia,<br>Delhi.  | Research              | 2022                         |

## **Faculties Participation in Professional Development Programmes:**

### Dr. Raminder Kaur

**Title:** One-week Online Faculty Development Programme on "Research & Innovation: Proposal Writing Tools, Techniques and Funding".

Organized by: SRM Institute of Science and Technology Delhi-NCR Campus in collaboration with Mahatma Hansraj Malaviya Mission Teacher Training Centre (MH-MMTTC), Hansraj College, University of Delhi.

**Date(s):** 11<sup>th</sup> – 16<sup>th</sup> March, 2024

**Title:** Two days International Seminar on "Sustainability: Navigating the Path to a Greener Future".

**Organized by:** Department of Environmental Engineering, in collaboration with STEP-DTU, Delhi.

**Date(s):** 30<sup>th</sup> – 31<sup>st</sup> October, 2023

### Dr. Raminder Kaur and Dr. Poonam Singh

**Title:** One week FDP on "National Education Policy-2020" **Organized by:** Teaching Learning Centre, Ramanujan College,
University of Delhi

Date(s): 28th August – 3rd September, 2023

# Awards and Recognition at State, National, International level from **Recognized Bodies:**



### **Yearly Citation Award**

Prof. Roli Purwar and Prof. D. Kumar)

### **Cumulative Citation Award**

Prof. D. Kumar

### **Highly Cited Paper Award**

Prof. D. Kumar

#### **Commendable Research Awards**

Prof. D. Kumar, Prof. Anil Kumar, Prof. S.G. Warkar, Prof. Ram Singh, Prof. Roli Purwar, Dr. Deenan Santhiya, Dr. Raminder Kaur, Dr. Poonam Singh, Dr. Manish Jain

## Visit of Faculty to other University/Institution for Expert Lectures/ **Academic Work:**

| Name of Faculty     | Title of Event  | Topic of Lecture/Role  | Organized by  | Date(s)  |
|---------------------|---|--|---|--|
| Prof. Ram<br>Singh  | Two days International<br>Symposium on "Emerging<br>Trends in Synthesis and<br>Catalysis (ETSC-2023)"   | Recent Trends in<br>Materials  | Amity Institute of<br>Applied Sciences,<br>Amity University, Noida                                  | 12 <sup>th</sup> - 13 <sup>th</sup><br>April, 2023 |
|                     | International Conference on "Integrative Chemical Science for Health & Environment  | Alzheimer 's disease:<br>Treatment Possibilities                         | Deshbandhu College,<br>University of Delhi  | 7 <sup>th</sup> October,<br>2023                   |
|                     | Department of Chemistry:<br>RASAY NATVA, Chemical<br>Society Webinar  | Green and Sustainable<br>Chemistry                                       | Hansraj College,<br>University of Delhi   | 20 <sup>th</sup> January,<br>2024                  |
| Dr. Poonam<br>Singh | National Workshop on<br>"Intellectual Property<br>Rights, Literature Search<br>and Research Ethics in<br>Pharmaceutical and Allied<br>Sciences" | Intellectual Property<br>Rights in Pharmaceutical<br>and Allied Sciences | Department of<br>Pharmaceutical Sciences<br>and IIC HNB Garhwal<br>University                       | 23 <sup>rd</sup> February,<br>2024                 |
|                     | Faculty Induction<br>Programme (Orientation<br>Programme for 24<br>working days)  | Chemistry in Daily life  | Malaviya Mission Teacher Training Centre, Indira Gandhi National Tribal University, Amarkantak (MP) | 16 <sup>th</sup> February,<br>2024                 |

# Functional MoUs with Universities/Institutions/Industries of National/International Importance:

**Details of MoU:** Signed between DTU, Delhi and Indian Chemical Council, ICC, Mumbai India

**Purpose:** To facilitate Industry - Academia bonding

**Year of MoU Signed: 2023** 

**Duration: 3** Years

**Details of MoU:** Signed between DTU, Delhi and Amicures Research Pvt. Ltd.

**Purpose:** To promote and enhance research in the areas of Pharmaceuticals and health care.

Year of MoU Signed: 2019

**Duration:** 5 Years

**Details of MoU:** Signed between DTU and Mitsui Chemicals Ltd., India

**Purpose:** To facilitate Research & Development cooperation between the two organizations

Year of MoU Signed: 2023

**Duration:** 3 Years

# Collaborative Activities for Research, Faculty Exchange, and Student Exchange:

| Name of Faculty      | Collaboration with   | Type of collaboration | Collaboration commenced from |
|----------------------|--|-----------------------|------------------------------|
| Prof. R. K. Gupta    | Prof. Yogesh Tyagi, Department of<br>Chemistry, School of Basic and Applied<br>Sciences, GGSIPU, Delhi                         | Jt. Supervisor        | 2022                         |
| Prof. Archna<br>Rani | Dr. Vidhu Aheri, Pharmacognosy<br>& Phytochemistry, School of<br>Pharmaaceutical Education &<br>Research, Jamia Hamdard, Delhi | M.Sc.<br>Supervision  | 2023                         |
| Prof. Roli Purwar    | Dr. Nandini, Scientist E, DRDO, Delhi  | Research              | 2022                         |
| Prof. Ram Singh      | Dr. Yogesh Kumar Tyagi, GGSIP<br>University, Delhi<br>Prof. Geetanjali, Kirori Mal College,<br>University of Delhi             | Research              | 2014                         |
| Dr. Raminder<br>Kaur | Prof. Mohd. Zulfiqar, Jamia Millia<br>Islamia, Delhi   | Research              | 2022                         |

# Participation of Faculties in Extension & Outreach Activities organized by university:

Name of Faculty: Dr. Raminder Kaur, Dr. D. Santhiya

**Details of Activity:** Open Day at DTU, Delhi

**Purpose:** To aware school students about Research Activities in DTU, Delhi in October. 2023

Name of Faculty: Prof. Anil Kumar, Prof. Roli Purwar, Prof. Archna Rani, Dr. Richa Srivastava, Dr. Raminder Kaur

**Details of Activity:** Academic Auditor, NBA Internal

**Purpose:** To evaluate performance of departments for external audit in September, 2023

# **Students' Progression to Higher Education:**

| Name of Student   | Programme (DTU) | Programme for Higher Education | University   |  |
|-------------------|-----------------|--------------------------------|--|--|
| Shruti Samantarai | B.Tech.         | Masters                        | Delft University of Technology<br>Education & Student Affairs,<br>Netherland |  |
| Bhavuk Rohilla    | B.Tech.         | Masters                        | Tokyo Institute of Technology  |  |
| Anushka Jantwal   | M.Sc.           | Ph.D.                          | KTH Royal Institute of Technology,<br>Sweden                                 |  |
| Princi Singh      | M.Sc.           | Ph.D.                          | Indiana University, Bloomington  |  |
| Hema Tewatia      | M.Sc.           | Ph.D.                          | University of Nebraska-Lincoln   |  |
| Ekta Yadav        | M.Sc.           | Project Associate              | IISER, Bhopal  |  |

## **Students' Achievements:**

| Name of<br>Student | Programme | Details of Achievement  | Date                              |
|--------------------|-----------|---|-----------------------------------|
| Divyam Yadav       | B.Tech.   | Participated in "Net Zero Challenge Finale at Shell<br>Technology Centre Bangalore"                       | 11 <sup>th</sup> October,<br>2023 |
| Yashika Kanojia    | B.Tech.   | Participated in Petrochemicals in "Today's world in G20 Cultural Programme" organized by Akashvani, Delhi | 23 <sup>rd</sup> August,<br>2023  |
| Shayanee           | B.Tech.   | Participated in Petrochemicals in "Today's world in G20 Cultural Programme" organized by Akashvani, Delhi | 23 <sup>rd</sup> August,<br>2023  |

# 4.2 DEPARTMENT OF APPLIED MATHEMATICS





Prof. Ramesh Srivastava, HoD

(1st Jan., 2024 - Present)

# **Prof. S. Sivaprasad Kumar** HoD

(1st Jan., 2021 - 31st Dec., 2023)

### **ACADEMIC PROGRAMMES**

B.Tech. Mathematics and Computing Intake: 181 Admitted: 181

M.Sc. Mathematics

Intake: **60** Admitted: **61** 

Ph.D. Admitted: 22

### **RESEARCH PUBLICATIONS**

PATENT Published : 01 (National)



**JOURNALS: 44** 

**CONFERENCES: 02** 





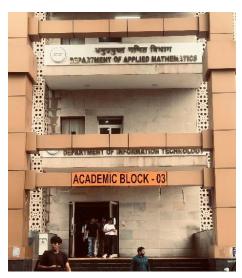
**BOOK CHAPTER: 01** 

### **SALIENT FEATURES**

The Department of Applied Mathematics at DTU is recognized for its excellence and serves as a vital pillar of the university's academic prestige. With a focus on delivering a strong foundation in mathematics, statistics, and computing, the department provides students with both a theoretical understanding and practical skills. The comprehensive curriculum is designed to seamlessly integrate core mathematical concepts with their real-world applications, ensuring that graduates are well-equipped to tackle both; academic pursuits and industry demands.

At the heart of the department's success is its team of highly qualified faculty members, whose expertise spans diverse mathematical fields. These faculty members are deeply committed to both teaching and research, actively engaging in groundbreaking projects that enhance the department's academic profile. Their contributions extend beyond the classroom, as they lead innovative research initiatives and collaborate on interdisciplinary projects, reflecting a dynamic culture of scholarly inquiry and intellectual growth.

This vibrant environment of research and academic excellence is further demonstrated by the department's impressive output of publications and collaborative endeavors. Faculty members are consistently involved in high-impact research, producing work that resonates on both national and international levels. Through their dedication to advancing the frontiers of knowledge, the department continues to uphold its reputation as a leader in applied mathematics, attracting students and scholars who are passionate about making meaningful contributions to the field.





## **LABORATORIES:**

| Name of Laboratory      | Details of Laboratory   |
|-------------------------|---|
| Research Laboratory I   | The "Information security and Cryptography" is a research lab. The purpose of this laboratory is to develop a theoretical framework that may elevate the idea to understand information theory. |
| Research Laboratory III | The purpose of this lab is to provide the students to access various tools and software that are required for research in the field of signal processing.                                       |
| Computational Lab I     | These laboratories provide the understanding of the use of computers  |
| Computational Lab II    | for various mathematical problems. The students learn to use MATLAB,  |
| Computational Lab III   | SPSS and computer languages like C++, Java, python, .Net, MATLAB, MySQL etc.  |
| Computational Lab IV    | inyout cic.   |







### **ACADEMIC STAFF**

#### **PROFESSORS**

### **HoD**: Prof. Ramesh Srivastava

(Ph.D.)

Research Area: Financial Mathematics

### **Prof. Sangita Kansal**

(Ph.D.)

Research Area: Petri net Theory

### **Prof. S. Sivaprasad Kumar**

(Ph.D.)

**Research Area:** Complex Analysis

### **Prof. Naokant Deo**

(Ph.D.)

**Research Area:** Approximation Theory and Real analysis

### **Prof. Anjana Gupta**

(Ph.D.)

**Research Area:** Optimization Techniques, Fuzzy Logic and optimization,

### Prof. L. N. Das

(Ph.D.)

Research Area:

Optimization Techniques

### Prof. C.P. Singh

(M.Sc., Ph.D.)

**Research Area:** Gravitation and Cosmology

#### Prof. Aditya Kaushik

(Ph.D.)

**Research Area:** Differential Equations and Numerical Analysis

#### **ASSOCIATE PROFESSORS**

## Dr. Vivek Kumar Aggarwal (Ph.D.)

**Research Area:** Numerical Simulation

### Dr. Nilam (M.Phil., Ph.D.)

**Research Area:** Mathematical Modeling and Simulation, Epidemiology

#### **ASSISTANT PROFESSORS**

# Dr. Dinesh Udar (Ph.D.)

Research Area: Algebra

Mr. Rohit Kumar [M.Sc., Ph.D. (Pursuing)]
Research Area: Quantum Information, Graph Theory

**Dr. Goonjan Jain** (Ph.D., M.Tech., B.E.) **Research Area:** Natural Language Processing, Game Theory

### Dr. Satyabrata Adhikari (Ph.D.)

Research Area: Quantum Information Processing

# Ms. Trasha Gupta (M.Tech., M. Sc.)

Research Area: Computer Vision

#### Dr. Dhirendra Kumar (Ph.D.)

**Research Area:** Medical Image Segmentation, Signal Processing, Image cryptography

### Dr. Payal (Ph.D.)

Research Area: Petri Net Theory, Graph Theory

# Ms. Sumedha Seniaray (M.Tech., B.Tech.) Research Area: Intrusion Detection,

Network Security, Machine Learning

#### Dr. Anshul Arora (Ph.D.)

Research Area: Cyber Security, Blockchain

### Mr. Jamkhongam Touthang (M.Sc., M.Phil.)

Research Area: Frame Theory, Harmonic Analysis, Functional Analysis

### **ACHIEVEMENTS OF THE DEPARTMENT:**

Published 44 research papers in high impact journals by the faculties of the department.

The Department of Applied Mathematics is Accredited by NBA for three-years.

Department celebrated Mathematics Day.

Organized expert lecture under Viksit Bharat-2047 mission.

The department conducted a hands-on workshop on "Maple" in collaboration with Semantics.

Organized "Joy of Giving Week" where students, faculty and staff were encouraged to donate books, clothes, toys, etc.

# **Grants for Research Projects Sponsored by Funding Agencies:**

**PI/Co-PI:** Prof. Aditya Kaushik **Title:** Higher order Adaptive Difference Schemes for Singularly Perturbed Ordinary and Partial Differential Equations.

**Agency:** Science and Engineering Research Board (SERB)

**Amount (₹) :** 6.6 Lacs

Sanctioning Date: 12th May, 2024

**Duration:** 3 Years | **Status:** Ongoing

### **Details of Patent Awarded/Published in 2023-24:**

Name of Inventor(s):

Dr. Neha Punetha, Dr. Suman Madan, Dr. Praveen Arora, Dr. Goonjan Jain **Title of Patent:** System and method for personalized job recommendations using artificial neural network.

Status: Published

**Patent Number:** 202411052482

**Date:** 26<sup>th</sup> July, 2024

# **Events organized by the Department:**

| Name of Event  | Date(s)  | Department Coordinator/<br>co-coordinator of the Event |
|--|--|--|
| Mathematics Day Celebration                                    | 18 <sup>th</sup> - 20 <sup>th</sup> December, 2023 | Dr. Dhirendra Kumar                                    |
| Invited Lecture by Dr. Pramod Kanwar                           | 8 <sup>th</sup> January, 2024                      | Dr. Dinesh Udar<br>Dr. Satyabrata Adhikari             |
| Invited Talk by Dr. Vikas Chouhan                              | 15 <sup>th</sup> January, 2024                     | Dr. Anshul Arora                                       |
| JOY OF GIVING  | 5 <sup>th</sup> - 9 <sup>th</sup> February, 2024   | Dr. Dhirendra Kumar                                    |
| Invited Lecture by Dr. Debarata Pal                            | 8 <sup>th</sup> February, 2024                     | Dr. Satyabrata Adhikari<br>Dr. Dinesh Udar             |
| One Week training programme on<br>"Maple, SPSS, and Statcraft" | 12 <sup>th</sup> – 16 <sup>th</sup> February, 2024 | Dr. Dinesh Udar<br>Dr. Satyabrata Adhikari             |
| EVOLUTE 24   | 27 <sup>th</sup> - 28 <sup>th</sup> February, 2024 | Dr. Vivek Aggarwal                                     |
| Poster Presentation Competition                                | 28 <sup>th</sup> February, 2024                    | Dr. Dhirendra Kumar                                    |



# Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

| Name of Faculty  | Event Details   | Organized by  | Date(s)  | Amount received by DTU, Delhi (₹) |
|--|---|---|--|-----------------------------------|
| Dr. Goonjan Jain   | Two-weeks "NEP 2020<br>Orientation & Sensitization<br>Programme"  | Malviya Mission Teacher<br>Training Centre, Devi<br>Ahilya Vishwavidyalaya,<br>Indore (M.P) | 16 <sup>th</sup> – 27 <sup>th</sup><br>December,<br>2023 | 1,000                             |
| Dr. Payal,<br>Ms. Sumedha<br>Seniaray,<br>Ms. Trasha Gupta | One week FDP on "Artificial<br>Intelligence-driven Data<br>Analytics for Business<br>Research and Teaching" | Management Studies,   | 24 <sup>th</sup> – 30 <sup>th</sup><br>May, 2024         | 2,000<br>(each)                   |

# Collaborative Activities for Research, Faculty Exchange, and Student Exchange:

Name of Faculty: Dr. Satyabrat Adhikari

Type of collaboration: Bhatt Meet Kamlesh Bhai (2311051),
First year Integrated M.Sc., NISER, Bhubneshwar

Collaboration commenced from: Summer internship

Date of collaboration: 16<sup>th</sup> June, 2024

## **Faculties Participation in Professional Development Programmes:**

| Name of Faculty   | Title of Professional Development<br>Program  | Organized by  | Date(s)  |
|---|---|---|--|
| Prof. C. P. Singh   | International Conference on<br>"Gravitation, Astrophysics and<br>Cosmology (ICGAC-2024)"                                      | CCASS, GLA University,<br>Mathura   | 14 <sup>th</sup> - 16 <sup>th</sup> June,<br>2024        |
| Mr. Rohit Kumar   | Industrial Training on "Data Analytics<br>Using Spreadsheets"   | NIELIT, Gorakhpur   | 1 <sup>st</sup> - 16 <sup>th</sup> July,<br>2024         |
| Mr. Rohit Kumar,<br>Dr. Goonjan Jain,<br>Dr. Dhirendra Kumar,<br>Dr. Payal,<br>Ms. Sumedha Seniaray | One-week Training Programme on<br>"Maple, SPSS and Statcraft"   | Department of Applied<br>Mathematics, DTU   | 12 <sup>th</sup> - 16 <sup>th</sup><br>February,<br>2024 |
| Dr. Goonjan Jain,<br>Dr. Payal,<br>Ms. Sumedha Seniaray   | One–week STP on "Introduction to high Performance Computing (HPC) and its application in Artificial Intelligence (AI)"        | Department of<br>Computer Science &<br>Engineering, DTU                               | 7 <sup>th</sup> - 11 <sup>th</sup><br>August, 2023       |
| Dr. Goonjan Jain,<br>Mr. Jamkhongam<br>Touthang   | Two-weeks "NEP 2020 Orientation & Sensitization Programme"  | Malviya Mission Teacher<br>Training Centre, Devi<br>Ahilya Vishwavidyalaya,<br>Indore | 16 <sup>th</sup> – 27 <sup>th</sup><br>December,<br>2023 |
| Dr. Dhirendra Kumar,<br>Ms. Trasha Gupta  | DST Summer School on "Geospatial Technologies Level 2: Developing geospatial solutions to defense security and intelligence " | DTU in collaboration<br>with NGP, DST   | 27 <sup>th</sup> May - 19 <sup>th</sup><br>June, 2024    |
| Dr. Dhirendra Kumar   | Two- weeks Industrial Training  | CERT-In, Meity, Gol   | 15 <sup>th</sup> – 30 <sup>th</sup> July,<br>2024        |
| Dr. Payal,<br>Ms. Sumedha Seniaray<br>Ms. Trasha Gupta  | One week FDP on "Artificial Intelligence-driven Data Analytics for Business Research and Teaching"                            | Department of<br>Management Studies,<br>ABV-IIITM, Gwalior                            | 24 <sup>th</sup> – 30 <sup>th</sup><br>May, 2024         |
| Dr. Payal,<br>Ms. Sumedha Seniaray  | Webinar on "Case Study and Industrial Applications in Data Science'   | Centre for Development of Advanced Computing  | 25 <sup>th</sup><br>September,<br>2023                   |
| Dr. Payal,<br>Ms. Sumedha Seniaray<br>Ms. Trasha Gupta  | Two- weeks Industrial Training  | Celonis   | 10 <sup>th</sup> – 28 <sup>th</sup><br>June, 2024        |

| Name of Faculty  | Title of Professional Development Program   | Organized by   | Date(s)  |
|--|---|--|--|
| Dr. Payal,<br>Ms. Sumedha Seniaray<br>Ms. Trasha Gupta | FDP on "Disaster Preparedness and Risk reduction"   | NIDM, Delhi in<br>collaboration with Deptt.<br>of Civil Engineering,<br>DTU      | 11 <sup>th</sup> – 15 <sup>th</sup><br>December,<br>2023 |
| Ms. Sumedha Seniaray                                   | Workshop on "Implementation of NEP 2020"  | DTU, Delhi   | 5 <sup>th</sup> October,<br>2023                         |
|  | Workshop on "relevance of Ancient<br>Technology in context of NEP 2020"   | DTU, Delhi   | 5 <sup>th</sup> April, 2024                              |
| Mr. Jamkhongam<br>Touthang                             | One Week online FDP on "Outcome<br>Based Education and Essential Al<br>Tools for Teachers"  | Ramakrishna Mission<br>Vivekananda Centenary<br>College, Rahara, Kolkata,        | 14 <sup>th</sup> - 20 <sup>th</sup><br>December,<br>2023 |
|  | Two-Weeks Interdisciplinary Refresher Course in "Advanced Research College, University o Methodology" Delhi                             |  | 17 <sup>th</sup> - 31 <sup>st</sup><br>December,<br>2023 |
|  | International Symposium on "Advances in Mathematical Sciences (ISAMS)"  | Canadian University<br>Dubai, UAE & NIT,<br>Jalandhar                            | 23 <sup>rd</sup> - 24 <sup>th</sup><br>March, 2024       |
|  | 5-Days FDP on "Mathematics in Engineering and Science-Importance and Applications (MES-2024)"   | VIT-AP University,<br>Andhra Pradesh   | 2 <sup>nd</sup> - 6 <sup>th</sup><br>January, 2024       |
|  | Workshop on "Algebraic Codes and MAGMA Computation"   | IIT, Patna   | 10 <sup>th</sup> - 11 <sup>th</sup><br>November,<br>2023 |
|  | STC on "Mathematics with<br>Computational Learning for<br>Engineering and Technological<br>Applications (MCET)"                         | NIT, Jalandhar   | 20 <sup>th</sup> - 24 <sup>th</sup><br>November,<br>2023 |
|  | International Workshop on "Virtual Element Analysis: Scientific Computation and Applications"   | VIT, Vellore   | 10 <sup>th</sup> - 12 <sup>th</sup><br>January, 2024     |
|  | International Online Workshop on "Containers and OpenShift"   | IPSR Solutions Limited<br>& Valin-UK, USA and<br>Canada                          | 28 <sup>th</sup> February,<br>2024                       |
|  | Presented paper at 4 <sup>th</sup> Conference on "Algebra, Analysis, and Applications (CAAA-2023)"                                      | Dr. B. R. Ambedkar<br>University, Delhi  | 9 <sup>th</sup> December,<br>2023                        |
|  | Presented paper at International Conference on "Mathematics and Applications (ICMA-2024)"   | Mata Sundri College for<br>Women, University of<br>Delhi                         | 10 <sup>th</sup> - 12 <sup>th</sup><br>January, 2024     |
|  | Presented paper at International<br>Conference on "Emerging Trends in<br>Computational Mathematics and Data<br>Science (ICETCMDS-2024)" | Sri Krishna Arts and<br>Science College,<br>Bharathiar University,<br>Tamil Nadu | 10 <sup>th</sup> - 11 <sup>th</sup><br>January, 2024     |
|  | Presented paper at International<br>Conference on "Advances in Applied<br>Mathematics (ICAAM-2024)"                                     | University College<br>of Science, Tumkur<br>University, Karnataka                | 10 <sup>th</sup> - 11 <sup>th</sup><br>January, 2024     |

| Name of Faculty            | Title of Professional Development Program  | Organized by  | Date(s)  |
|----------------------------|--|---|--|
| Mr. Jamkhongam<br>Touthang | Presented paper at International<br>Conference on "Analysis and Its<br>Applications (ICAA-2024)"   | Faculty of Sciences,<br>Jamia Millia Islamia, New<br>Delhi        | 19 <sup>th</sup> - 21 <sup>st</sup><br>January, 2024     |
|                            | Presented paper at International Conference on "Applied Mathematics and Nanoscience (ICAMN-2024)"  | Vidya Academy of<br>Science and Technology,<br>Thrissur           | 23 <sup>rd</sup> - 25 <sup>th</sup><br>January, 2024     |
|                            | Presented paper at International<br>Conference on "Emerging Trends in<br>Mathematical Sciences & Computing<br>(IEMSC-2024)"              | IEM, Kolkata  | 2 <sup>nd</sup> - 4 <sup>th</sup><br>February,<br>2024   |
|                            | Presented paper at International Conference on "Pure and Applied Mathematics (ICPAM-2024)"   | Janki Devi Memorial<br>College, University of<br>Delhi,           | 22 <sup>nd</sup> - 23 <sup>rd</sup><br>February,<br>2024 |
|                            | Presented paper at International<br>Conference on "Advances in Pure and<br>Applied Mathematics (ICAPAM-2024)"                            | Shyam Lal College,<br>University of Delhi                         | 8 <sup>th</sup> - 10 <sup>th</sup><br>February,<br>2024  |
|                            | Presented paper at International<br>Conference on "Mathematical<br>Sciences and Applications (ICMA-<br>2024)"                            | on "Mathematical Tirupattur, Vellore                              |  |
|                            | Presented paper at Conference on<br>"Functional Analysis and Fractals<br>(CFAF-2024)"  | IIIT, Allahabad,  | 16 <sup>th</sup> - 18 <sup>th</sup><br>February,<br>2024 |
|                            | Presented paper at International Conference on "Contemporary Researches in Engineering, Science, Management & Arts (ICCRESMA-2024)"      | NFED, Coimbatore, Tamil<br>Nadu                                   | 22 <sup>nd</sup> - 24 <sup>th</sup><br>February,<br>2024 |
|                            | Presented paper at International<br>Conference on "Research Trends<br>in Mathematics and Data Science<br>(ICRTMDS-2024)"                 | Patrician College of Arts<br>and Science, University<br>of Madras | 1 <sup>st</sup> - 2 <sup>nd</sup> March,<br>2024         |
|                            | Presented paper at International Conference "on Mathematical Challenges and Novel Applications (ICOMACNA-2024)"                          | ANJA College Sivakasi,<br>Tamil Nadu                              | 21 <sup>st</sup> - 22 <sup>nd</sup><br>March, 2024       |
|                            | Presented paper at the National<br>Conference on "Ancient Mathematics<br>and Its Emerging Areas (AMEA-2024)"                             | Teerthankar Mahaveer<br>University, Moradabad                     | 24 <sup>th</sup> April,<br>2024                          |
|                            | Presented paper at International<br>Conference on "Mathematics and<br>Applications in Science, Technology<br>and Society (ICMASTS-2024)" | Assam Don Bosco<br>University, Assam,                             | 9 <sup>th</sup> - 10 <sup>th</sup> May,<br>2024          |
|                            | Presented paper at International<br>Conference on "Applied Mathematics<br>(ICAM-2024)"   | Vidyasagar University,<br>West Bengal                             | 27 <sup>th</sup> - 28 <sup>th</sup><br>June, 2024        |

# Visit of Faculty to other University/Institution for Expert Lectures/ **Academic Work:**

| Name of<br>Faculty         | Details of Event   | Topic of Lecture/Role  | Organized by   | Date(s)  |
|----------------------------|--|--|--|--|
| Dr. Nilam                  | Five-Days National<br>workshop on<br>'Mathematical Modeling<br>and Simulation' | Monte Carlo<br>simulating<br>deterministic<br>and Probabilistic<br>behaviour, Generating<br>random numbers | Sri Guru Nanak Dev<br>Khalsa College,<br>University of Delhi   | 13 <sup>th</sup> - 17 <sup>th</sup><br>February,<br>2024 |
|                            | Three-Days National<br>Seminar on "Recent<br>advancement of<br>Mathematics"    | Importance of Fractional differential equations on infectious diseases                                     | Department of<br>Mathematics,<br>Pondicherry University  | 22 <sup>nd</sup> -24 <sup>th</sup><br>January,<br>2024   |
| Dr. Satyabrata<br>Adhikari | National Workshop on<br>"Quantum Technologies"                                 | Structural physical approximation of realignment operation   | Department of Physics,<br>Institute of Science,<br>Banaras Hindu<br>University, Varanasi   | 1 <sup>st</sup> - 2 <sup>nd</sup><br>March,<br>2024      |
| Dr. Dhirendra<br>Kumar     | Machine Learning using Python  | Medical image<br>segmentation using<br>fuzzy set theoretic<br>approach                                     | NITTTR, Chandigarh   | 16 <sup>th</sup> - 20 <sup>th</sup><br>October,<br>2023  |
|                            | ONLINE WORKSHOP<br>ON "Brain MRI Image<br>Segmentation"                        | Brain MRI Image<br>Segmentation  | DST Centre for<br>Interdisciplinary<br>Mathematical Sciences<br>(CIMS), Institute of<br>Science, Banaras Hindu<br>University, Varanasi | 20 <sup>th</sup><br>January,<br>2024                     |
|                            | Invited talk   | Mathematics in Image<br>Processing   | DST Centre for<br>Interdisciplinary<br>Mathematical Sciences<br>(CIMS), Institute of<br>Science, Banaras Hindu<br>University, Varanasi | 16 <sup>th</sup><br>February,<br>2024                    |
|                            | Invited talk   | Python for image processing  | DST Centre for<br>Interdisciplinary<br>Mathematical Sciences<br>(CIMS), Institute of<br>Science, Banaras Hindu<br>University, Varanasi | 22 <sup>nd</sup><br>September,<br>2024                   |
| Ms. Sumedha<br>Seniaray    | Short Term Certificate<br>Course on Cyber<br>Security                          | Trends and<br>Awareness in<br>Cybersecurity  | Deen Dayal Upadhyaya<br>College, University of<br>Delhi in collaboration<br>with Delhi Public<br>School, RK Puram                      | 17 <sup>th</sup> - 21 <sup>st</sup><br>July, 2024        |

| Name of<br>Faculty              | Details of Event  | Topic of Lecture/Role                                     | Organized by   | Date(s)                               |
|---------------------------------|---|---|--|---------------------------------------|
| Dr. Anshul<br>Arora             | Advanced Executive Programme on Information Security & Digital Forensics                    | Mobile Forensic Tools                                     | Punjab Engineering<br>College, Chandigarh                  | 14 <sup>th</sup><br>October,<br>2024  |
|                                 | Short Term Course on<br>Advanced Optimization<br>Techniques for<br>Engineering Applications | Optimization<br>Techniques for Cyber<br>Security          | National Institute<br>of Technology,<br>Kurukshetra        | 29 <sup>th</sup><br>December,<br>2023 |
| Prof. S.<br>Sivaprasad<br>Kumar | Invited talk  | A lecture series of<br>Mathematics for social<br>sciences | Dept. of Mathematics,<br>Indraprastha college for<br>women | 25 <sup>th</sup> April,<br>2024       |

# Participation of Faculties in Extension & Outreach Activities organized by university:

| Name of Faculty  | Details of Activity  | Purpose of Activity          | Session      |
|------------------|--|------------------------------|--------------|
| Dr. Nilam        | Department Coordinator   | Desh ke mentor               | A.Y. 2023-24 |
| Dr. Goonjan Jain | Course evaluation for MSS 199 (Community Engagement) for 1 <sup>st</sup> year, MC1 batch | Mentoring School<br>Students | A.Y. 2023-24 |
| Dr. Payal        | Course evaluation for MSS 199 (Community Engagement) for 1 <sup>st</sup> year, MC3 batch | Mentoring School<br>Students | A.Y. 2023-24 |
| Ms. Trasha Gupta | Course evaluation for MSS 199 (Community Engagement) for 1st year, MC3 batch             | Mentoring School<br>Students | A.Y. 2023-24 |
| Dr. Dinesh Udar  | Class Coordinator  | Desh ke mentor               | A.Y. 2023-24 |

# Students' Progression to Higher Education:

Programme (DTU): B.Tech. (MC)
Programme for Higher Education:
2-Year Post Graduate Programme in Management

Name of Student: Sanyam Gupta University: Indian Institute of Management (IIM), Ahmedabad

Name of Student: Tuhina Chakma University: Indian Institute of Management (IIM), Kashipur

## **Students' Achievements**

Name of Student: Rahul Gupta

**Program:** Innovations for Defence Excellence PM Awardee

**Details of Achievement:** Received prize of ₹1.5 Cr for Ch no. 60 – Recee

and survey drone to provide a soft strata heat map

**Dates:** 31st May, 2024

# 4.3 **DEPARTMENT OF APPLIED PHYSICS**



Prof. A. Srinivasa Rao, HoD

### **ACADEMIC PROGRAMMES**

B.Tech. Engineering
Physics
Intake: 116
Admitted: 116

M.Sc. Physics Intake: 60 Admitted: 61

Ph.D. Admitted: **25** 

## **SALIENT FEATURES**

The Department of Applied Physics is a major department of Delhi Technological University providing cutting edge research, innovation, and education in the emerging areas of science and technology. The objective of the department is to create future generations of skilled Engineers and Scientists by providing quality education through cutting edge technologies and innovative teaching techniques so as to make them well equipped to face present and future challenges and their overall sustainable future growth.

#### **LABORATORIES**

The department has 27 well equipped Labs: Applied Physics Lab, Digital Electronics Lab, FPGA Design Lab, Mobile & Satellite Communication Lab, EMT, Antenna and Propagation Lab, Alternate Energy Storage & Conversion Devices Lab, Condensed Matter Physics Lab, Communication System Lab, Optics Lab, Microprocessor & Interfacing Lab, Fiber Optics & Optical Communication Lab, Microwave Engineering Lab, Advanced Instrumentation Lab, Innovation Lab and many more.

### **RESEARCH PUBLICATIONS**

PATENTS Granted : 05 (National) Published : 01 (National)



**JOURNALS: 134** 

**CONFERENCES: 34** 





BOOK: 01 (Edited)
BOOK CHAPTERS: 08



### **ACADEMIC STAFF**

#### **PROFESSORS**

HoD: Prof. A. S. Rao (Ph.D.) Research Area: Rare Earth/Transition Metal ions doped Phosphors/ Nanophosphors/glasses for various Photonic Applications in the fields of white LEDs, Bio-Imaging & Targeting delivery, Optoelectronic Devices and Solar Cells.

### Prof. Suresh C. Sharma

(M.Phil.(2<sup>nd</sup> Position in University, Ph.D.) Research Area: Plasma Physics/ Plasma Applications, Nanostructures especially Carbon Nanotubes (CNTs), 2D Graphene, CNTFET/g-FET for Biosensing applications, CNT and Graphene based Solar Cells.

Prof. R. K. Sinha (Ph.D.) Research Area: Fibre optics and optical communication

Prof. Rinku Sharma (Ph.D.) Research Area: Atomic & Molecular Physics, Plasma Physics, THz Radiation Emission, and linear and nonlinear properties of low dimensional structures.

Prof. Vinod Singh (Ph.D.) Research Area: Synthesis and Characterization of Functional **Nanomaterials** 

### Prof. Rishu Chaujar [M.Sc.

(Gold Medalist) Ph.D.1

**Research Area:** Semiconductor Device Modeling & Simulation-Analysis of Novel Device Structures, FinFETs, Nanowire FETs, Tunnel FETs, HEMTs for Biomedical, Wireless & Sensor Applications

Prof. Nitin K. Puri (Ph.D.) Research Area: Sensors, Biosensors. Nanotechnology, Ion-Beam Modification of Materials, Thin Films

#### ASSOCIATE PROFESSORS

### Dr. Mohan Singh

Mehata (Ph.D.)

Research Area: Nanomaterials/ Quantum Dots (QDs) and 2D Materials, QLEDs, OLEDs. Spectroscopy, Fluorescent Electric Field Modulation Spectroscopy, Modeling of Materials (DFT/TD-DFT)

### Dr. Pawan K. Tyagi

(Ph.D.)

Research Area: Carbon Nanotubes: Field Emitters. Graphene Synthesis, Single Crystal Diamond Synthesis.

Dr. Yogita Kalra (Ph.D.) Research Area: Fiber and Integrated Optics, Nano Photonics, Photonic Crystals and Their Device Applications

## Dr. M. Jayasimhadri

(Ph.D.)

Research Area: Optical/ Spectroscopy, Fluorescent Luminescent Materials, Materials science, Nanotechnology

Dr. Ajeet Kumar (Ph.D.) Research Area: Fiber Optics, Integrated Optics, Solar Energy

### Dr. Amrish K. Panwar

(Ph.D.)

Research Area: Energy Storage & Conversion Devices (Li+/Na+ Batteries/ Supercapacitor/ Solar Cells), Surface Modification, Wetting, Adhesion, Coating Bio-Compatible Materials, Materials, Thermoelectric Multiferroic Materials, Nano Hybrids, Nanocomposites

### **ASSISTANT PROFESSORS**

Dr. Renuka Bokolia (Ph.D.) Research Area: Ferroelectric Ceramics. Upconversion Luminescence, Phosphors, Dielectric Materials

Dr. Sarita Baghel (Ph.D.) Research Area: Solar Cells and Solar Energy Materials

Dr. Mukhtiyar Singh (Ph.D.) Research Area: First-principles Calculations, Density Functional Theory, 2D and 3D Thermoelectric Materials, Topological Quantum Phase Transition, Al-assisted Novel Materials Discovery. Anomalous Nernst Effect

**Dr. Deshraj Meena** (Ph.D.) Research Area: Metal Oxides based Resistive Gas Sensors, High Dielectric Composites Materials. Green Hydrogen Generation using

Dr. Richa Sharma (Ph.D.) Research Area: Piezoelectric Energy Harvesting Materials, Ferroelectric and Dielectric Ceramics

**Dr. Bharti Singh** (Ph.D.) Research Area: 2D Materials for Energy Harvesting Applications, Memory Devices

**Dr. Kamal Kishor** (Ph.D.) Research Area: Fibre Optics, Nano Photonics: Devices, Sensors & Components based on Photonic Crystals

## Mr. Yogendra Meena

(M.Sc.)

Research Area: Nanomaterials their Applications, Mathematical Modeling, Quantum dots

### **ACHIEVEMENTS OF THE DEPARTMENT:**

- collaboration with HRDC- DTU has organized various events.
- Developed a skill center to train the first year students of B.Tech. (EP) in "Glass collaboration with Industry". Subsequently, an MoU is signed on 6<sup>th</sup> February 2024.
- Prof. Rishu Chaujar awarded with DST-SERB Power Fellowship.
- Prof. Rishu Chaujar awarded with the SERB-Power Research Grant of ₹38.1 Lacs.
- Dr. Bharti Singh awarded with the SERB-SURE research project Grant of ₹31.6 Lacs.

- Department of Applied Physics in Dr. Mukhtiyar Singh awarded with DST-SERB project of ₹28 Lacs.
  - Prof. Rishu Chaujar, appointed as the Centre Coordinator for setting "Vinod Dham Centre of Excellence for Semiconductors and Microelectronics (VDCoE4SM)" in DTU.
  - DTU signed an MoU with CSIR Laboratory CSIO, Chandigarh on 11th February, 2020 for five years.
  - Many faculties of the department of Applied Physics (Prof. A. S. Rao, Prof. R. K. Sinha, Prof. Rishu Chaujar, Dr. Mohan Singh Mehata & Dr. M. Jaysimhadri) appeared in the top 2% scientists in the world released by Stanford University, USA.

# **Grants for Research Projects Sponsored by Funding Agencies:**

### **Grants for Research Projects**

### Dr. Bharti Singh

Title: Mechanical Energy Harvesting using MXene Functionalized Polymer Composite Nanofibers and Integration it with Energy Storage Devices for IoT and Wearable **Applications** 

Agency: SERB | Amount (₹): 31.6 Lacs

Date: 13th November, 2023

**Duration:** 3 years

## Dr. Mukhtiyar Singh

Title: Machine Learning Assisted First-Principles Study of Anomalous Nernst Effect in Weyl Semimetals

**Agency: SERB** 

Amount (₹): 28 Lacs

Date: 16th February, 2024

**Duration:** 3 years

### Prof. Rishu Chaujar

Title: Numerical Modeling Simulation of Negative Capacitance FinFET for Low Power and Sensing **Applications in Biomedical Diagnostics** and Environmental Monitoring

Agency: SERB | Amount (₹): 38.1 Lacs

Date: 9th November, 2022

**Duration:** 3 years

Title: EDA Tools Access under Chip 2

Startup Programme

Agency: Ministry of Electronics and Information Technology (MeiTY), Govt. of India

Facility Provided: Remote Access of EDA

Tools for 5 years

**Date:** 19<sup>th</sup> January, 2024 | **Duration:** 5 years

### **Details of Patent Awarded/Published in 2023-24:**



**Inventor(s):** Dr. Mohan Singh Mehata, V. Sharma, A. Tandon

**Title of Patent:** Light-emitting metal and dual metal-doped zinc selenide quantum dots and method thereof

Status: Granted
Patent Number: 531913

Date: 5th April, 2024

**Inventor:** Dr. Mohan Singh

Mehata

**Title of Patent:** System and method for detecting trivalent metal ions

Status: Granted

Patent Number: 463021

Date: 27th October, 2023

**Inventor :** Dr. Mohan Singh Mehata

**Title of Patent:** Apparatus and method for detecting electric field modulated absorption and photoluminescence of a sample

Status: Granted
Patent Number: 529469
Date: 21st March, 2024

Inventor(s): Dr. Mohan Singh Mehata, Aneesha

**Title of Patent:** Probe for the detection of ferric ions in aqueous environments and method thereof

Status: Granted
Patent Number: 481999
Date: 13th December, 2023

Inventor(s): Dr. Pawan Kumar Tyagi, Dr. Lucky Krishnia

Title of Patent: Growth of Diamond Film Using Thermal CVD at Atmospheric Pressure Using Sugarcane Bagasse as Carbon Precursor and Process Thereof

Status: Granted

Patent Number: 419036

Date: 24th January, 2023

Inventor(s): Prof. Rishu Chaujar,

Shivam Gupta

**Title of Patent:** A New Design for an All-Back Contact CIGS Solar

Cell

Status: Published

**Patent Number:** 201911027963

Date: 20<sup>th</sup> September, 2023

# **Events organized by the Department:**

| Details of Event   | In Collaboration<br>with (if any)        | Date(s)  | Department<br>Coordinator/<br>co-coordinator                                   |
|--|--|--|--|
| 2 <sup>nd</sup> One Day National Seminar on<br>"Recent Trends in Applied Physics<br>and Engineering (RTAPE-2024)" by<br>Shanti Swarup Bhatnagar Awardees | -  | 12 <sup>th</sup> April,<br>2024                          | Dr. Mukhtiyar Singh<br>(Convener)  |
| An Expert Lecture on "Secure Communication in Quantum World"   | Under the initiatives of "Viksit Bharat" | 18 <sup>th</sup> March,<br>2024                          | Dr. Mukhtiyar Singh<br>(Coordinator)   |
| One Day National Workshop on<br>"Ascertaining A Skill Centre for Glass<br>and Glazing" (Bringing Industry and<br>Academia together)                      | -  | 11 <sup>th</sup> August,<br>2023                         | Prof. Rishu Chaujar<br>(Convenor)  |
| One day National Seminar on<br>"Energy Conservation Day"   | HRDC, DTU                                | 14 <sup>th</sup><br>December,<br>2024                    | Dr. Amrish K. Panwar &<br>Dr. Sarita Baghel<br>(Coordinators)                  |
| International Conference on "Atomic, Molecular, Material, Nano and Optical Physics with Applications (ICAMNOP–2023)"                                     | -  | 20 <sup>th</sup> - 22 <sup>nd</sup><br>December,<br>2023 | Prof. Rinku Sharma<br>(President) &<br>Dr. Mohan Singh Mehata<br>(Co-convener) |













# Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

# **Financial Support provided to Faculties**

**Event:** Oral Presentation

**Organizer:** Division of Plasma Physics of Association of Asia Pacific Physics Societies (AAPPS-DPP 2023), Port Messe, Nagoya, Japan.

Duration: 12<sup>th</sup>- 17<sup>th</sup> November, 2023 Amount received by DTU: ₹1,00,621/- Prof. Suresh C. Sharma

**Event:** Oral Presentation

Organizer: IISC Bangalore, RPGR-2023

Duration: 20<sup>th</sup>- 23<sup>rd</sup> November, 2023

Amount received by DTU: ₹38,000/-

Dr. Bharti Singh

**Event:** 2 Paper Presentations

Organizer: 19<sup>th</sup> IEEE-NEMS 2024 held on May 2-5, 2024, organized by Kyoto University of Advanced Science Kyoto, Japan.

Duration: 2<sup>nd</sup>- 5<sup>th</sup> May, 2024

Amount received by DTU: ₹1,01,335/-

Prof. Rishu Chaujar

**Event:** Oral Presentation

Organizer: Tripura University, Tripura

Duration: 31<sup>st</sup> January – 2<sup>nd</sup> February, 2024

Amount received by DTU: ₹38,928/-

Dr. Deshraj Meena

# Collaborative Activities for Research, Faculty Exchange, and Student Exchange:

| Name of<br>Faculty        | Collaboration with  | Type of collaboration   | Collaboration commenced from | Expected Duration for collaboration |
|---------------------------|---|---|------------------------------|-------------------------------------|
| Dr. Mohan<br>Singh Mehata | Prof. N. Ohta<br>National Chiao Tung<br>University, and Institute<br>of Molecular Science,<br>Hsinchu, Taiwan | Research through joint<br>Ph.D. students Ms.<br>Aneesha &<br>Ms. Neha Bhatt | 2019                         | 7 Years                             |
| Dr. Mohan<br>Singh Mehata | Prof. Victor N.ICP,<br>Russian Academy of<br>Science, Moscow, Russia  | Research collaboration<br>through International joint<br>project            | 2019                         | 11 Years                            |

| Name of<br>Faculty     | Collaboration with  | Type of collaboration   | Collaboration commenced from | Expected Duration for collaboration |
|------------------------|---|---|------------------------------|-------------------------------------|
| Prof. Rishu<br>Chaujar | Prof. M. Jamal Deen,<br>McMaster University,<br>Canada              | Collaborative Research<br>though Joint Ph.D. student<br>Ms. Ayushi Lamba  | 2021                         | 5-6 Years                           |
| Dr. Deshraj<br>Meena   | Inter-University<br>Accelerator Centre,<br>Delhi                    | BTR project   | 2022                         | 3 Years                             |
| Prof. Rinku<br>Sharma  | Dr. Siddhartha Lahon,<br>Kirori Mal College,<br>University of Delhi | Collaborative Research<br>though Joint Ph.D. student<br>Ms. Rashmi Meena  | 2021                         | 5-6 years                           |
| Prof. Rinku<br>Sharma  | Dr. Manoj Kumar, Govt.<br>College for Women,<br>Jind, Haryana       | Collaborative Research<br>though Joint Ph.D. student<br>Ms. Puja soren    | 2023                         | 5-6 years                           |
| Dr. M.<br>Jayasimhadri | Prof. D. Haranath, NIT,<br>Warangal                                 | Joint Supervisor for the Ph.D. student Mr. Vikas                          | 2019                         | 5 years                             |
| Dr. Renuka<br>Bokolia  | Dr. O. P. Thakur  | Collaborative Research<br>though Joint Ph.D. student<br>Mr. Neelesh Chole | 2023                         | 5 years                             |

# Faculties Participation in Professional Development Programmes (PDPs):

# **Faculties Participation in PDPs**

Prof. Rishu Chaujar

**Title:** Artificial Intelligence and its Applications in Communication, Signal Processing, Image Processing and Computing Application

Organizer: Department of ECE, CMR Institute of

Technology, Bengaluru

**Duration:** 06<sup>th</sup> -10<sup>th</sup> November, 2023.

Dr. Deshraj Meena

**Title:** Advanced Teaching Pedagogy and Outcome

based Education in Context of NEP 202

Organizer: HRDC-DTU Delhi in association with

NITTTR, Bhopal

**Duration:** 27<sup>th</sup>-31<sup>st</sup> May, 2024

Dr. M. Jayasimhadri and Dr. Renuka Bokolia

**Title:** Literacy workshop on e-Resources: A Gateway

for Research

**Organizer:** Central Library, DTU **Duration:** 25<sup>th</sup>-29<sup>th</sup> September, 2023

# Awards and Recognition at State, National, International level from **Recognized Bodies:**

| Name of Faculty           | Title of Award  | Awarding Agency/<br>University/<br>Institution | Year      |
|---------------------------|---|--|-----------|
| Dr. Mohan Singh<br>Mehata | Research Excellence Award (Commendable<br>Research, Early Research Impact and<br>Influence Awards-2023)                             | DTU, Delhi                                     | 2023      |
| Meriala                   | Featured in the Top 2% (World Ranking) of Scientists listed by Stanford University.   | Stanford<br>University, USA                    | 2023      |
| Dr. Amrish K.<br>Panwar   | Research Excellence Award (Commendable Research Award-2023)   | DTU, Delhi                                     | 2023      |
|                           | Research Excellence Award (Commendable<br>Research, Cumulative Citation-Silver, Early<br>Research Impact and Influence Awards-2023) | DTU, Delhi                                     | 2023      |
| Prof. Rishu Chaujar       | Featured in the Top 2% (World Ranking) of Scientists listed by Stanford University.   | Stanford<br>University, USA                    | 2023      |
|                           | SERB-POWER Fellowship   | DST, Delhi                                     | 2022-2025 |
| Prof. Rinku Sharma        | Research Excellence Award (Commendable Research Award-2023)   | DTU, Delhi                                     | 2023      |
| Prof. S. C. Sharma        | Research Excellence Award (Commendable Research Award-2023)   | DTU, Delhi                                     | 2023      |
| Dr. Yogita Kalra          | Research Excellence Award (Commendable Research Award-2023)   | DTU, Delhi                                     | 2023      |
| Dr. Pawan Kumar<br>Tyagi  | Research Excellence Award (Early Research Impact and Influence Award-2023)  | DTU, Delhi                                     | 2023      |
| Dr. M. Jayasimhadri       | Research Excellence Award (Commendable<br>Research, Early Research Impact and<br>Influence Awards-2023)                             | DTU, Delhi                                     | 2023      |
|                           | Featured in the Top 2% (World Ranking) of Scientists listed by Stanford University.   | Stanford<br>University, USA                    | 2023      |

# Visit of Faculty to other University/Institution for Expert Lectures/ **Academic Work:**

| Name of Faculty           | Title of Event   | Topic of Lecture | Organized by                                    | Date(s)  |
|---------------------------|--|------------------|---|--|
| Dr. Mohan                 | International Conference "Spectrum of Physics: Particles to Universe"  |                  | Physics, Lajpat Rai                             | 20 <sup>th</sup> - 22 <sup>nd</sup><br>May, 2024         |
| Dr. Mohan<br>Singh Mehata | International Conference<br>on "Atomic, molecular,<br>optical and nano<br>Physics with application<br>(ICAMNOP-2023)." | ,                | Department of<br>Applied Physics,<br>DTU, Delhi | 20 <sup>th</sup> - 22 <sup>nd</sup><br>December,<br>2023 |

| Name of Faculty           | Title of Event  | Topic of Lecture   | Organized by   | Date(s)  |
|---------------------------|---|--|--|--|
| Dr. Mukhtiyar<br>Singh    | International Conference<br>on "Atomic, molecular,<br>optical and nano<br>Physics with application<br>(ICAMNOP-2023."               | A First-Principles Study of the Topological Phase Transition in Rare-Earth Monopnictides.  | Department of<br>Applied Physics,<br>DTU, Delhi  | 20 <sup>th</sup> - 22 <sup>nd</sup><br>December,<br>2023 |
| Siligii                   | International Conference<br>on "60 Years of DFT:<br>Advancements in Theory<br>& Computation."                                       | Emergence of Topological<br>Phase and Non-Trvial<br>Surface States in Rare-Earth<br>Monopnictide Semimetals  | IIT Mandi,<br>Himachal Pradesh   | 21 <sup>st</sup> - 26 <sup>th</sup><br>July, 2024        |
| Prof Suroch               | International Conference<br>on "Renewable Energy<br>and Sustainable<br>Technology (ICREST<br>2024)."                                | Modeling and Simulation<br>of Cylindrical Double Gate<br>Plasma-Assisted Carbon<br>Nanotube Field Effect<br>Transistor for Sensing<br>Applications                                   | Jamia Millia<br>Islamia University,<br>Delhi   | 4 <sup>th</sup> - 6 <sup>th</sup> July,<br>2024          |
| Prof. Suresh<br>C. Sharma | International Conference<br>on "Energy & Advanced<br>Materials"   | Analytical Modelling and<br>Numerical Simulation of<br>Cylindrical Double Gate<br>Junctionless Carbon<br>Nanotube Field Effect<br>Transistor (JL-CNTFET) for<br>Sensing Applications | Jaypee Institute<br>of Information<br>Technology,<br>Noida   | 2 <sup>nd</sup> - 4 <sup>th</sup><br>November,<br>2023   |
| Dr. Bharti<br>Singh       | International Conference<br>on "Recent Progress<br>in Graphene and 2D<br>materials Research, 20-<br>23 <sup>rd</sup> November 2023" | Progress in PVDF and 2D<br>Layered Materials-based<br>Nanocomposites for Energy<br>Harvesting Applications   | IISC, Bangalore  | 20 <sup>th</sup> - 23 <sup>rd</sup><br>November,<br>2023 |
|                           | Institute Lecture   | Ambient Mechanical Energy<br>Harvesting using Piezo/<br>Triboelectric Nanogenerators   | Amity University,<br>Haryana   | 22 <sup>nd</sup><br>September,<br>2023                   |
|                           | National Seminar on<br>"Innovations in the field<br>of Semiconductor and<br>Quantum Physics"  | Filled Effect Transistor: An<br>Effective Biosensor  | Organized by Department of Applied Sciences, Bhagwan Parshuram Institute of Technology, GGSIPU, Delhi, | 6 <sup>th</sup> March,<br>2024.                          |
| Prof. Rishu<br>Chaujar    | 19 <sup>th</sup> IEEE International<br>Conference on "Nano/<br>Micro Engineered and<br>Molecular Systems (IEEE-<br>NEMS 2024)"      | Paper Presentation   | Kyoto University<br>of Advanced<br>Science (KUAS),<br>Kyoto, Japan                                     | 2 <sup>nd</sup> - 5 <sup>th</sup> May,<br>2024           |
|                           | IEEE International Conference on "Information Technology, Electronics and Intelligent Communication Systems (ICITEICS-2024)"        | Paper Presentation   | Vemana Institute<br>of Technology,<br>Bengaluru.   | 28 <sup>th</sup> - 29 <sup>th</sup><br>June, 2024        |

| Name of Faculty         | Title of Event  | Topic of Lecture  | Organized by   | Date(s)  |
|-------------------------|---|---|--|--|
|                         | International Conference<br>on "Atomic, molecular,<br>optical and nano<br>Physics with application<br>(ICAMNOP-2023)."  | Modeling of Specialty Optical<br>Fibers for High Power<br>Applications  | Department of<br>Applied Physics,<br>DTU, Delhi                              | 20 <sup>th</sup> - 22 <sup>nd</sup><br>December,<br>2023 |
| Dr. Ajeet<br>Kumar      | Sixth IEEE International<br>Workshop on "Recent<br>Advances in Photonics<br>(WRAP-2023)."                               | Application Specific Specialty<br>Optical Fibers  | IIIT, Allahabad  | 7 <sup>th</sup> - 9 <sup>th</sup><br>December,<br>2023   |
|                         | Invited Lecture   | Leaky Optical Fibers and Its Applications.  | Dept. of Physics,<br>ARSD college, DU  | 16 <sup>th</sup><br>September,<br>2023                   |
| Dr. M.<br>Jayasimhadri  | 2 <sup>nd</sup> International<br>Conference on<br>"Spectroscopy in<br>Materials Science<br>(ICOSIMS-2024)"              | Colour Tunable Photoluminescent Characteristics in Rare Earth Activated Barium Zinc Phosphate Glasses for W-LED Applications      | University of<br>Aveiro, Portugal  | 5 <sup>th</sup> - 7 <sup>th</sup> June,<br>2024          |
|                         | International Conference<br>on "Nanotechnology<br>Research and Innovation<br>(ICNTRI-2023)"                             | Structural and<br>Photoluminescence Studies<br>Rare Earth Doped Metasilicate<br>Phosphor for Solid State<br>Lighting Applications | University of<br>Aveiro, Portugal  | 20 <sup>th</sup> - 24 <sup>th</sup><br>November,<br>2023 |
| Prof. A. S. Rao         | Thrre-Days workshop<br>for Consortium of Govt<br>Autonomous Colleges<br>on Quality Mandate                              | Innovations, Incubations<br>& Research Funding in<br>Autonomous Colleges  | Commissioner<br>of Collegiate<br>Education,<br>Rajamundry,<br>Andhra Pradesh | 20 <sup>th</sup> July,<br>2024                           |
| Dr. Amrish K.<br>Panwar | 2 <sup>nd</sup> International Meeting<br>on "Energy Storage<br>Devices – Industry<br>Academia Conclave<br>(IMESD-2023)" | Invited Speaker   | organized by<br>department<br>of Physics, IIT,<br>Roorkee                    | 7 <sup>th</sup> – 10 <sup>th</sup><br>December,<br>2023  |

# Functional MoUs with Universities/Institutions/Industries of National/International Importance:

Delhi Technological University signed an MoU with CSIR Laboratory CSIO, Chandigarh on 11<sup>th</sup> February, 2020. An MOU signed on 6<sup>th</sup> February, 2024 with "The All India Glass Manufacturer's Federation, Delhi" and developed a skill center to train the first year students of B.Tech. (EP).

# Participation of Faculties in Extension & Outreach Activities organized by university:

| Name of Faculty        | Details of Activity                   | Purpose of Activity   | Date(s)   |
|------------------------|---------------------------------------|---|---|
|                        | Orientatin cum<br>Induction Programme | Orientation to newly admitted students  | 31 <sup>st</sup> July-4 <sup>th</sup> August,<br>2023 |
| Dr. M.<br>Jayasimhadri | Technical Fest,<br>Invictus'24        | Technical Fest, DTU   | 9 <sup>th</sup> -11 <sup>th</sup> February, 2024      |
|                        | Engifest                              | Annual Cultural Fest, DTU   | 15 <sup>th</sup> - 17 <sup>th</sup> February, 2024    |
|                        | YUVAAN-2024                           | Annual Literature and Film Festival, DTU  | 16 <sup>th</sup> -18 <sup>th</sup> February, 2024     |
| Dr. Deshraj            | Desh Ke Mentor                        | Students were taken to Desh<br>Ke Mentor Conclave organised<br>by DCPCR and DTU at Thyagraj<br>Stadium, Delhi                             | 11 <sup>th</sup> May, 2023                            |
| Meena                  | Desh Ke Mentor                        | Students have done various activities in groups towards society like counseling of school students, classes of the backward students etc. | August, 2023 to April,<br>2024                        |

# **Students' Progression to Higher Education:**

Saksham Chhakar (Engineering Physics) Joined MS at King College, London, UK

Students'
Progression to
Higher
Education

Nitika Sachdeva (M.Sc. Physics)
Joined MS (Particle and Nuclear
Physics) at University of
Edinburgh, UK

# Financial Support provided to Students to attend Conference/Seminar/ Symposia/ Workshop/STC/Training etc. during Current Year:

**Ms. Varnam Sherawat** (Ph.D. (Physics))

**Event:** International Conference "SPIE+ PHOTONICS 2023"

Organizer: San Diago, USA

**Duration:** 20<sup>th</sup> - 24<sup>th</sup> August, 2023

**Amount received by DTU:** ₹1,06,571

## **Students' Achievements:**

**Priyanka** (Applied Physics, Ph.D.)

Achievement: Best Poster, ICAMNOP 2023

Date: 22<sup>nd</sup> December, 2023

# 4.4 DEPARTMENT OF BIOTECHNOLOGY



**Prof. Pravir Kumar,** HoD (01st Jan., 2021 – 31st Dec., 2023)

# **ACADEMIC PROGRAMMES**

B.Tech. (Biotechnology)
Intake: 76
Admitted: 75

M.Tech. (Bioinformatics)
Intake: 25

Admitted: 14

M.Sc. (Biotechnology) Intake: 60 Admitted: 60

> **Ph.D.** Admitted: **07**

#### **RESEARCH PUBLICATIONS**



**JOURNALS: 58** 

**CONFERENCES: 28** 





# **Prof. Yasha Hasija,** HoD (01st Jan., 2024 – Present)

### **SALIENT FEATURES**

The Department of Biotechnology was established in the year 2004 and has maintained an exceptional track record in academics, placement, industrial training and research activities. The Department of Biotechnology is a hub for innovative research and comprehensive education in the field of biotechnology. Our mission is to push the frontiers of biotechnological science through pioneering research and to cultivate highly skilled professionals equipped to tackle the challenges of the future.

The Department offers B.Tech. in Biotechnology, M. Sc. in Biotechnology, M.Tech. in Bioinformatics and Industrial Biotechnology and Ph.D. in Biotechnology. The Department has also started M.Tech. by Research and Integrated B.Sc.-M.Sc. program from academic year 2024-25 onwards. The curriculum of all programs is updated from time to time to include the latest advancements and industry-relevant skills. This ensures that our graduates are well-prepared for the job market and possess the competencies needed for translational research and innovation.

The Department is renowned for its cuttingedge research conducted in state-of-the-art laboratories. Research projects, funded by prestigious organizations such as DST, CSIR, ICMR, DBT, and UGC, address critical issues in healthcare, agriculture, and environmental sustainability. Faculty members, who are leaders in their respective fields, guide these research initiatives, fostering a collaborative and innovative

# **SALIENT FEATURES (Cont.)**

environment. Students in the Department benefit from hands-on learning experiences, gaining practical knowledge and expertise in biotechnological methodologies.

Department of Biotechnology holds a good placement record getting top offers in reputed companies. Additionally, our students consistently achieve high rankings in national-level exams like GATE and CSIR-NET, reflecting the quality of education and support they receive. The Department actively promotes the cultivation of a vibrant startup culture in collaboration with the Institute Innovation Council (IIC-DTU) by regularly conducting seminars and workshops, with an aim to foster entrepreneurship among students, providing them with the necessary resources and support to turn innovative ideas into successful ventures. Department of Biotechnology regularly organizes programs like Entrepreneurship-Academia Mentorship Program, Entrepreneurship workshops, awareness talks with NSS, expert lectures in recent advancements in the field of Biotechnology under the flagship of Viksit Bharat Abhiyan.

The Department of Biotechnology is dedicated to nurturing the next generation of biotechnologists and researchers. Through a combination of rigorous academics, innovative research, and a supportive learning environment, we prepare our students to become leaders in the field of biotechnology.



# **LABORATORIES:**

| Name of Laboratories  | Room<br>Number | Lab-in-Charge           |
|---|----------------|-------------------------|
| Molecular Neuroscience and Functional Genomics Lab.                   | LW6-SF1        | Prof. Pravir Kumar      |
| Plant and Algal Biotechnology Lab                                     | LW6-TF9        | Dr. Navneeta Bharadvaja |
| Environmental and Industrial Biotechnology Lab.                       | LW6-TF8        | Prof. Jai Gopal Sharma  |
| Complex Systems and Genome Informatics lab.                           | LW5-TF9        | Prof. Yasha Hasija      |
| Immunotherapeutics Lab  | LW6-TF3        | Dr. Asmita Das          |
| Industrial and Molecular Biology (Teaching Laboratory)                | LW6-TF1        | Prof. Jai Gopal Sharma  |
| Biochemistry & Immunology Lab (Teaching Laboratory)                   | LW5-TF13       | Dr. Navneeta Bharadvaja |
| Computational Biology and Medical Biotechnology (Teaching Laboratory) | LW6-TF5        | Prof. Yasha Hasija      |
| Seminar cum teaching room   | LW6-TF13       | HoD(BT)                 |
| Department of Biotechnology office                                    | LW6 TF8        | HoD(BT)                 |



#### **ACADEMIC STAFF**

#### **PROFESSORS**

### HoD: Prof. Yasha Hasija

(B.Tech., M.Tech., Ph.D.)

Research Area: Genome
Informatics, Human Disease
Genomics and Interact omics and
Genome Annotation.

#### Prof. Jai Gopal Sharma

(M.Sc., Ph.D., Post-Doc.)

Research Area: Water Quality

Management, Industrial and
Environmental Biotechnology,

Aquaculture and Fish Nutrition.

#### **Prof. Pravir Kumar**

(M.Sc., Ph.D., Post-Doc.) **Research Area:** Neurobiology,
Neuroncology and Molecular
medicine.

#### **ASSOCIATE PROFESSORS**

#### Dr. Navneeta Bharadvaja (M. Sc., Ph.D.)

**Research Area:** Plant Tissue and algal culture-based approaches for the production of industrial and medicinal metabolites.

**Dr. Asmita Das** (B.Sc., M.Sc., Ph.D., Post-Doc.) **Research Area:** Cellular Immunology and Therapeutics,

Modulation of tumor cells for immune evasion, and Development
of combinatorial immune therapeutics for cancer.

#### **ASSISTANT PROFESSORS**

**Dr. Smita Rastogi Verma (Contractual)** (M.Sc., M.Tech., Ph.D.) **Research Area:** Isolation and characterization of microbes of industrial relevance, Lignin degradation and Molecular Biology

**Dr. Kriti Bhandari (Contractual)** (M.Sc., Ph.D.) **Research Area:** Bioprocess Engineering, Enzymology and Biofuels

**Dr. Prakash Chandra (Contractual)** (M.Sc., Ph.D.) **Research Area:** Nanobiotechnology, Tissue Engineering, Toxicology, Biochip, Sensor and Bio microfluidics

#### **ACHIEVEMENTS OF THE DEPARTMENT:**

Sachi Goel 2K22/BT/41 - Participated in "66th National Shooting Championship"

Subham Jha 23/BT/511 - Short Put (3rd Rank)

Shubham Prasad 23/BT/510 - DTU NCC Firing (2<sup>nd</sup> Rank)

Soumya Singh 2K22/BT/54 - Kabaddi (3rd Rank)

**Devanshi Sharma 23/BIO/05 -** Best research paper presenter award in "ICVMWT 2024", MMMUT Gorakhpur, and got a paper accepted in Springer.

**Yogita Bhatt 23/BIO/11-** Selected for ICMR workshop by University of Hyderabad on hands on "CRISPR".

**Nishant Kumar, 2K22/MSCBIO/34 -** Paper accepted in IEEE conference and got Best Paper Award.

Aastha Kaushik 2K22/BIO/01 - Qualified "DBT BET 2024"

# **Grants for Research Projects Sponsored by Funding Agencies:**

PI/Co PI: Prof. Jai Gopal Sharma

Title: Evaluation of Effect of Macrophytes-Based Feed on The Growth, Gut Physiology, Expression of Specific Genes Involved in the Biosynthesis of DHA & EPA and Production of Quality Freshwater Fishes

Agency: Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India Amount (₹): 21,933,60.00

Date: 12<sup>th</sup> November, 2021

**Duration:** 3 Years

Title: Integrated farming of Lates calcarifer and Macrobrachium rosenbergii in Aquaponic System: A Sustainable Water Utilization Approach

Agency: Department of Science and Technology (DST), Ministry of Science and Technology, Government of India

**Amount (₹):** 20,77,229.00 **Date:** 9<sup>th</sup> December, 2020

**Duration:** 3 Years

Project: Investigations on Micro-Nano Plastics (MNPs) Fingerprinting in Cruciferous Truck Crops, In silico Analysis, Probabilistic Health Risk Assessment and Their Interactions in Brassica oleracea spp.

Agency: Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India

# **Events organized by the Department:**

| Details of Event   | Date                               | Coordinator/co-<br>coordinator   |
|--|------------------------------------|--|
| International Symposium on "Current Trends in Biotechnology" Under the vision of <i>Viksit Bharat</i> @2047  | 27 <sup>th</sup> February,<br>2024 | Dr. Asmita Das and<br>Dr. Prakash Chandra                              |
| 2 <sup>nd</sup> International E-Symposium on "Women in Science"  | 11 <sup>th</sup> February,<br>2024 | Dr. Asmita Das   |
| "Entrepreneurship-academia mentorship program" under the vision of <i>Viksit Bharat@2047</i>   | 27 <sup>th</sup> May,<br>2024      | Dr. Asmita Das and<br>Dr. Prakash Chandra                              |
| Symposium on "Biotechnology for Sustainable Development"   | 23 <sup>rd</sup> January,<br>2024  | Dr. Navneeta Bharadvaja<br>and Dr. Prakash Chandra                     |
| Workshop on "Prototype/Process design and Development" & E-Poster presentation on "Innovation in Biotechnology" (Dr. Saket Chattopadhyay, CEO of BioNEST at BHU) | 21 <sup>st</sup> May,<br>2024      | Dr. Navneeta Bharadvaja<br>(in collaboration with IIC<br>DTU & DTUIIF) |
| Expert talk on "Translating Biointerfaces from benchtop to Bedside" (Dr. Hitesh Handa, Associate Professor, University of Georgia)                               | 9 <sup>th</sup> July,<br>2024      | Dr. Navneeta Bharadvaja  |
| Workshop on "Innovation/Prototype validation:<br>Converting Innovation into startups" (Mr. Navin K Gaur,<br>senior manager at DST-iHUB Anubhuti IIIT, Delhi)     | 25 <sup>th</sup> August,<br>2023   | Dr. Navneeta Bharadvaja<br>(in collaboration with IIC<br>DTU & DTUIIF) |



Financial Support provided to Faculties to attend Conference/Seminar/Symposia/ Workshop/STC/FDP/ Training etc.:

### Faculty: Prof. Yasha Hasija

**Event Details:** IEEE-Sponsored International conference on "Computational Modelling, Simulation, and optimization (ICCMSO'24)"

Organized by: IEEE

**Date(s):** 14<sup>th</sup> – 16<sup>th</sup> June, 2024

### Faculty: Prof. Jai Gopal Sharma

**Event Details:** Attended the National Training Programme on "Biogas Production, Power Generation and Compressed Biogas Technology" held at Centre for Rural Development and Technology

**Organized by:** Indian Institute of Technology,

Delhi

**Date(s):** 17<sup>th</sup> – 19<sup>th</sup> January, 2024

# **Faculties Participation in Professional Development Programmes:**

| Name of Faculty            | Details of PDP   | Organized by  | Date(s)  |
|----------------------------|--|---|--|
| Dr. Smita<br>Rastogi Verma | "NEP Orientation and Sensitization" under<br>Malviya Mission Teacher Training Center<br>(UGC-MMTTC) of UGC                         | Centre for Professional<br>Development in Higher Education<br>(CPDHE), University of Delhi. | 20 <sup>th</sup> - 30 <sup>th</sup> May,<br>2024         |
|                            | STC on "Bioprocess Engineering for waste valorization"   | Dr. B.R. Ambedkar NIT,<br>Jalandhar.  | 01 <sup>st</sup> - 05 <sup>th</sup><br>November, 2023    |
| Dr. Navneeta<br>Bharadvaja | One-week FDP on "Research funding,<br>methodologies and IP Awareness:<br>Unravelling interconnections for effective<br>Innovation" | Dolphin Institute of biomedical &<br>Natural Sciences, Dehradun.                            | 01 <sup>st</sup> - 06 <sup>th</sup><br>December, 2023    |
|                            | One-Week FDP on "Advanced Teaching<br>Pedagogy and Outcome-based Education<br>in the context of NEP 2020"                          | HRDC, DTU in association with NITTTR, Bhopal.   | 27 <sup>th</sup> - 31 <sup>st</sup> May,<br>2024         |
|                            | One week FDP on "Disaster preparedness National Institute of Disaster and risk reduction" Management, MHA, Delhi                   |   | 11 <sup>th</sup> - 15 <sup>th</sup><br>December, 2023    |
|                            | "NEP Orientation and sensitization<br>Program"   | UGC-MMTTC Shri Mata Vaishno<br>Devi University, Katra, Jammu                                | 08 <sup>th</sup> - 17 <sup>th</sup><br>January, 2024     |
|                            | One Week FDP on "Disaster Preparedness and Risk Reduction."  | Department of Civil Engineering,<br>DTU, Delhi  | 11 <sup>th</sup> - 15 <sup>th</sup><br>December, 2023    |
| Dr. Asmita Das             | Two Weeks Capacity Building Program for<br>University Technology Business Incubator<br>by PUM Netherlands Senior Experts.          | IIF, DTU, Delhi   | 20 <sup>th</sup> - 30 <sup>th</sup><br>November,<br>2023 |

# Visit of Faculty to other University/Institution for Expert Lectures/ **Academic Work:**

**Prof. Pravir Kumar** 

**Title of Event:** High end workshop (Karyashala)

**Topic of Lecture:** Artificial Intelligence in Education Organized by: Jamia Hamdard, Delhi

Date: 1st March, 2024

Title of Event: SNCI Conference

**Topic of Lecture:** Artificial Intelligence in Education Organized by: Jamia Hamdard

**Date:** 19<sup>th</sup> April, 2024

#### Prof. Jai Gopal Sharma

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Title of Event: Delivered an invited talk at Physica

**Topic of Lecture:** Role of Science & Technology in the Development of Society

Organized by: The Physics Society, at Department of Physics, Deshbandhu College, University of Delhi

Date: 28th February, 2024

Title of Event: Delivered an invited talk at International Conference on Advances in Algal Biotechnology & Taxonomy

**Topic of Lecture:** Development of Sustainable Culture Techniques of Freshwater Macrophytes & Their **Biochemical Composition** 

Organized by: Department of Botany, Chaudhary Charan Singh University, Meerut

**Date:** 28th March, 2023

Title of **Event:** Served distinguished lecture

**Topic of Lecture:** Water quality & feed management in pearl farming

Organized **by:** Mukta Utsav,

Ghaziabad

Date: 25th February, 2023

Title of Event: Served distinguished lecture at STPI, Noida for the theme "E-waste Management & Environment"

**Topic of Lecture:** E-waste management

and Environment

Organized by: STPI, Noida Date: 15<sup>th</sup> February, 2023

# Participation of Faculties in Extension & Outreach **Activities organized by university:**

Name of Faculty: Dr. Navneeta Bharadvaja **Details of Activity: Open House** 

Purpose: To sensitize school students about Engineering program

Date: 3<sup>rd</sup> November, 2023

# **Students' Progression to Higher Education:**

| Name of Student<br>(B.Tech, Biotechnology) | Programme for Higher<br>Education        | Institution/University                           |
|--|--|--|
| Kunal Dugar                                | M.Sc.                                    | Imperial College, London                         |
| Sanyam Jain                                | Ph.D.                                    | Nanyang Technological University,<br>Singapore   |
| Prabal Kishore                             | M.S.                                     | Columbia University, USA                         |
| Sanvidhi Singh                             | M.S.                                     | University at Buffalo, New York                  |
| Rashi Sharma                               | Ph.D.                                    | Texas A & M University                           |
| Aayush Garg                                | PGDM (Big Data Analytics<br>& Marketing) | FORE School of Management, Delhi,                |
| Himanshi Pal                               | M.Tech. Biotechnology                    | IIT, Guwahati                                    |
| Suvani Rohatgi                             | M.Tech. Bioengineering                   | Indian Institute of Science (IISc),<br>Bengaluru |
| Smriti Marjara                             | M.Tech. Biotechnology                    | IIT, Guwahati                                    |
| Anistha                                    | Ph.D.                                    | DTU, Delhi                                       |
| Ananya Chugh                               | Ph.D.                                    | IIT, Roorkee                                     |
| Nllesh Yadav                               | M.Tech. Bioinformatics                   | DTU, Delhi                                       |
| Vanshika                                   | M.Tech. Bioinformatics                   | DTU, Delhi                                       |

# **Students' Achievements:**

| Name of<br>Student | Programme                | Details of Achievement   | Date/Year  |
|--------------------|--------------------------|--|--|
| Sanyam Jain        | B.Tech.<br>Biotechnology | AIR-02 (GATE)  | 2024   |
| Suvani Rohtagi     | B.Tech.<br>Biotechnology | AIR-07 (GATE)  | 2024   |
| Dhanvin Richie     | B.Tech.<br>Biotechnology | Published a Review Paper on "Stem Cells: Current applications and future aspects".                           | 16 <sup>th</sup> November,<br>2023                                   |
| Anagh Aditya       | B.Tech.<br>Biotechnology | Research Intern, Max Hospital on the topic of "studying and overcoming Imatinib resistance in CML patients". | 19 <sup>th</sup> May - 16 <sup>th</sup><br>June, 2024                |
| Anushka<br>Goswami | B.Tech.<br>Biotechnology | Biotechnology Researcher, Vitalth Forgers<br>Pvt. Ltd, on all-in-one diagnostic device.                      | 1 <sup>st</sup> September,<br>2023 - 31 <sup>st</sup> March,<br>2024 |
| Anushka<br>Goswami | B.Tech.<br>Biotechnology | Research Intern, Ray Lab, IIITD, Phylogenetic studies of CRISPR cas9 orthologs.                              | 1 <sup>st</sup> May – 31 <sup>st</sup> July,<br>2024                 |
| Himika             | B.Tech.<br>Biotechnology | Research Intern, Metabolic Engineering<br>Lab, IIT Delhi.  | 15 <sup>th</sup> July, 2024  |

| Name of<br>Student      | Programme                | Details of Achievement   | Date/Year  |
|-------------------------|--------------------------|--|--|
| Ketan Rajora            | B.Tech.<br>Biotechnology | Research Intern, DRDO, CFEES on the topic microbial techniques for pollutant treatment.  | 27 <sup>th</sup> May - 29 <sup>th</sup><br>July, 2024                |
| Kushagra<br>Shrivastava | B.Tech.<br>Biotechnology | Research Intern, Vitalth Forgers Pvt Ltd, a medtech startup incubated by DTU IIF.  | 1 <sup>st</sup> March, 2024  |
| Piyush<br>Harchandani   | B.Tech.<br>Biotechnology | Summer Intern in Environmental Epigenetics (SIPEEE), Division of Environmental Biotechnology.  | 12 <sup>th</sup> June - 28 <sup>th</sup><br>June, 2024               |
| Rahul Prajapati         | B.Tech.<br>Biotechnology | Project Intern, Biocon Limited working in cell banking mad strain development lab.   | 3 <sup>rd</sup> June - 31 <sup>st</sup><br>July, 2024                |
| Soham<br>Sheemar        | B.Tech.<br>Biotechnology | Research Intern, NMC Genetic India Pvt.<br>Ltd. on the topic, "Machine Learning<br>aspects of Pharmacogenomics and<br>post whole exome processing of human<br>genome data".  | 1 <sup>st</sup> May - 31 <sup>st</sup> July,<br>2024                 |
| Soumya Singh            | B.Tech.<br>Biotechnology | Research Intern, Sun Pharmaceuticals in Clinical Pharmacology & Pharmacokinetics.  | 2 <sup>nd</sup> July - 31 <sup>st</sup> July,<br>2024                |
| Shyam Sunder            | B.Tech.<br>Biotechnology | Research Intern, DTU in the domain of Bioinformatics on the topic of "Al in healthcare".   | 1 <sup>st</sup> June - 31 <sup>st</sup> July,<br>2024                |
| Tarush Arya             | B.Tech.<br>Biotechnology | Research Intern, DTU in the domain of Bioinformatics on the topic of "Al in healthcare".   | 1 <sup>st</sup> June - 31 <sup>st</sup> July,<br>2024                |
| Suvani Rohatgi          | B.Tech.<br>Biotechnology | Secured AIR 07 in GATE Biotechnology 2024, Qualified JGEEBILS 2024, Qualified DBT JRF (Category 1), Qualified GATE BT 2023 and GATE XL 2023 INSA-IASc-NASI Summer Research Fellow 2023, IITK SURGE intern 2023, General Secretary at BioSoc-DTU, DTU, Delhi. | 2020 - 2024  |
| Priya Harshita<br>Singh | B.Tech.<br>Biotechnology | Research Intern at DRDO working towards<br>Antibacterial resistance of substances.   | 9 <sup>th</sup> December,<br>2023 - 9 <sup>th</sup><br>January, 2024 |
| Samihan                 | B.Tech.<br>Biotechnology | Research Intern at Brain behavior research foundation of India; Published a research paper on 4D brain analysis.   | 16 <sup>th</sup> May - 15 <sup>th</sup><br>July ,2024                |
| Samihan<br>Sharma       | B.Tech.<br>Biotechnology | Content Writing Intern at HEIV; Published blogs on Parkinson disease.  | 19 <sup>th</sup> June, 2024  |
| Prajakta Tiwari         | B.Tech.<br>Biotechnology | Three months funded internship at<br>Queen's University, Canada under MITACS<br>Globalink Research Internship. Secured<br>AIR 306 in GATE BT 2024.   | March - July,<br>2024  |

| Name of<br>Student      | Programme                 | Details of Achievement   | Date/Year                         |
|-------------------------|---------------------------|--|-----------------------------------|
| Kanishka Sapra          | B.Tech.<br>Biotechnology  | Placed on campus for an internship at<br>Schlumberger (SLB). Serving as Joint<br>Cultural Secretary at DTU Cultural Council.   | May - July, 2024                  |
| Sanskar<br>Srivastava   | B.Tech.<br>Biotechnology  | Review paper published in "Applied<br>Biochemistry and Microbiology Journal",<br>published by Springer Nature.   | March, 2024                       |
| Sanskar<br>Srivastava   | B.Tech.<br>Biotechnology  | Secured top 10 position in Amdocs Talent<br>Tank Business Competition, winning an<br>INR 50000 cash prize.   | December, 2023                    |
| Katyayani<br>Agarwal    | B.Tech.<br>Biotechnology  | MITACS GRI Scholar at the University of British Columbia, Vancouver, Canada.   | May - August,<br>2024             |
| Shreesh Kumar<br>Shukla | B.Tech.<br>Biotechnology  | Research Intern at Special Centre for Molecular Medicine, JNU, Delhi.  | June - August,<br>2024            |
| Shreesh Kumar<br>Shukla | B.Tech.<br>Biotechnology  | Secured AIR 252 in GATE BT-2024 and AIR 3698 in GATE XL-2024.  | March, 2024                       |
| Devanshi<br>Shamra      | M.Tech.<br>Bioinformatics | Research Intern at National Institute of Immunology (NII) working on RNA seq analysis of Plasmodium falciparum (Malaria disease), currently enrolled with a project of MHC protein modeling. | May – July, 2024<br>(onsite)      |
| Khushi Bhatia           | M.Tech.<br>Bioinformatics | Intern at Institute of Bioinformatics, Bangalore (Natural Language Processing).  | July – December,<br>2024 (remote) |
| Yogita Bhatt            | M.Tech.<br>Bioinformatics | Got placed for 11 months internship in Stryker.  | July 2024- May<br>2025 (onsite)   |
| Ananya Chugh            | M.Sc.<br>Biotechnology    | DBT JRF (Category -1) GATE BT AIR 524 Qualified JGEEBILS 2024 Review paper accepted in research Journal of Biotechnology   | 2024                              |
| Suprati Singh           | M.Sc.                     | Academic content writer at Learn with life.  | August 2023                       |
|                         | Biotechnology             | Attended 3 <sup>rd</sup> International Conference on "Antimicrobial Resistance Novel Drug Discovery and Vaccine Development: Challenges and Opportunity", SRM University, Sonipat.           | 2024                              |
|                         |                           | STUTI Workshop on "Translational<br>Neuroscience: Bridging the Gap between<br>Bench to Beside" Jamia Hamdard, Delhi.   | 2024                              |
|                         |                           | Attended SNCI Conference on "Recent Advancements in Neurochemistry and Neurosciences" Jamia Hamdard, Delhi.  | 2024                              |

| Name of<br>Student | Programme              | Details of Achievement   | Date/Year                        |
|--------------------|------------------------|--|----------------------------------|
| Smriti Raina       | MSc.<br>Biotechnology  | M.Sc. Dissertation student at National Institute of Immunology.  | 2024                             |
|                    |                        | DST SERB training on "Basic Techniques in<br>Stem Cell Research" Stem Cell Laboratory,<br>Department of Veterinary Biotechnology<br>ICAR-IVRI.                           | 2024                             |
|                    |                        | Training on "Genome Editing: The Next Frontier in Agricultural Innovation", Technique and Applications of CRISPR-Cas in generation of transgene –free plants. ICAR-IARI. | 2023                             |
| Ishita Sehgal      | MSc.<br>Biotechnology  | Bioinformatics Copilot Internship: Under<br>the supervision of Dr. Pritam Kumar<br>Panda (German Cancer Research Center,<br>Heidelberg, Germany).                        | 2024                             |
| Nishant Kumar      | M.Sc.<br>Biotechnology | STUTI Workshop on "Translational<br>Neuroscience: Bridging the Gap between<br>Bench to Beside", Jamia Hamdard, Delhi.  | 2024                             |
|                    |                        | Attended SNCI Conference on "Recent Advancements in Neurochemistry and Neurosciences" Jamia Hamdard, Delhi.  | 2024                             |
|                    |                        | On Campus Placement - Placed as Biology<br>Class teacher at Vedantu  | 2024                             |
| Sanya Arora        | M.Sc.<br>Biotechnology | Internship: Subject Matter Expert at<br>Learnmint On Campus Placement: Zoology<br>Faculty at Physics Wallah.   | September, 2023<br>– April, 2024 |
| Anjali Sharma      | M.Sc.<br>Biotechnology | Research Intern, DRDO, Delhi on Photolithography (Nanotechnology lab).   | 2024                             |
|                    |                        | Conference Paper accepted in JNU, Delhi<br>Cleared UPSC CDS exam.  | 2024                             |
|                    |                        | 3 <sup>rd</sup> position in basketball competition at IIT,<br>Kanpur.  | 2024<br>2023                     |

# 4.5 **DEPARTMENT OF CIVIL ENGINEERING**





Prof. K. C. Tiwari, HoD (1st Jan., 2024 – Present)

# **Prof. V. K. Minocha** HoD (1st Jan., 2021 – 31st Dec., 2023)

## **ACADEMIC PROGRAMMES**

B.Tech. (Civil Engineering) Intake: 151 Admitted: 151

M.Tech. (Geotechnical Engineering) Intake: 25 Admitted: 11

M.Tech. (Structural Engineering) Intake: 25+5 Admitted: 32

> Ph.D. Admitted: 14

#### **RESEARCH PUBLICATIONS**



**JOURNALS:70** 

**CONFERENCES: 25** 



## **SALIENT FEATURES**

Civil Engineering has contributed significantly to enhancing community life over the years by merging the planet's natural resources. The field of Civil engineering focuses on planning, constructing, and maintaining the built and naturally occurring environment, including public works like roads, bridges, canals, dams, airports, sewage systems, pipelines, building structural components, and railways. There are several distinct sub-disciplines within the broad field of civil engineering. Its background is connected to the understanding of structures, materials science, geography, geology, soils, hydraulics, irrigation engineering, environmental science, mechanics, earthquake technology, project management, etc.



# **LABORATORIES:**

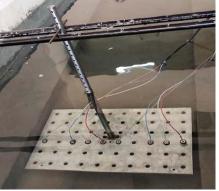
| Name of Laboratory                | Details of Laboratory  |
|-----------------------------------|--|
| ITS & Soil Dynamics<br>Lab        | The ITS and Soil Dynamics laboratory is research cum UG and PG curriculum-based laboratory. The laboratory is well equipped with the instruments to find the acceleration, velocity, displacement, damping characteristics, DCPI index, cone resistance, stiffness characteristics, particle size using a Brinell microscope, compressional wave velocity, constrained modulus, and strain in confined geomaterials using electrodynamic vibration analyser, dynamic cone penetration, static cone penetration, Brinell microscope, piezo sensors, and oscilloscope. |
| Hydraulics Lab                    | The Hydraulic and Water Resources Engineering Group, operating within the Civil deptt., is renowned for its long-standing expertise in both surface and sub-surface flow hydraulics. Equipped with cutting-edge technology like ADV, bed profiler, digital velocity meter, current meter, ultrasonic depth profiler, pitot tube, digital manometer, and more, the Hydraulics laboratory is a testament to the group's commitment to staying at the forefront of innovation.  |
| Fluid Mechanics Lab               | The Fluid Mechanics laboratory is purpose-built to facilitate the study of fluid properties and perform experiments on both incompressible and compressible flow. The laboratory features advanced equipment for investigating the fundamentals of fluid statics, as well as the kinematics and kinetics of fluid flow, to provide our students with an immersive and hands-on learning experience.  |
| Soil Mechanics Lab                | This laboratory is equipped with all the necessary equipment for undergraduate and postgraduate teaching and research in soil mechanics. Research, consultancy, and regular soil testing works are conducted in this laboratory under the supervision of faculty members.  |
| Earthquake<br>Technology Lab      | Basic issues related to vibration behavior, such as, damping, dynamic response magnification, resonance, structural vibration under support motions, normal modes, vibration isolation, vibration absorption, dynamics with soft and/or weak first/intermediate stories, role of structural ductility in resisting dynamic loads, liquefaction of soils under dynamic loads, and rocking and up throw of rigid objects under dynamic base motions.   |
| CADD Lab                          | About 20 desktop computers are available in the laboratory.  |
| Transportation<br>Engineering Lab | The Transportation Engineering lab has the equipment required to conduct all standardized tests to assess the quality of highway materials, pavement evaluation and traffic engineering studies. Experiments are conducted in the pre-, during- and post-construction phases of highways. This lab does quality assurance and quality control tests for the Roads, Traffic engineering surveys and spot speed studies, volume counts, and conflict studies for preparing road improvement plans to enhance road safety.  |

| Name of Laboratory         | Details of Laboratory  |
|----------------------------|--|
| Structure Lab              | The primary activities include experimental studies on the model/prototype of structural elements and assemblies under various static and dynamic loading conditions. the laboratory represents a unique facility for large-and full-scale investigation of the load- deformation behavior of structures including their post-peak strength and deformability up to the failure. |
| Surveying Lab              | The laboratory of Surveying is well equipped with all the required instruments and tools that are helpful in the overall understanding and practical knowledge of a student. Students learn techniques for gathering field data with both traditional and modern instruments.  |
| Mechanics of Solid<br>Lab  | In this laboratory, students will have the opportunity to apply loads to various materials under different equilibrium conditions. The student will perform tests on materials in tension, compression, torsion, bending, and impact.  |
| Disaster<br>Management Lab | The Disaster Management Lab is dedicated to enhancing preparedness and response strategies for various types of disasters. It focuses on research and training in areas such as risk assessment, emergency response planning, and recovery strategies.   |













#### **ACADEMIC STAFF**

#### **PROFESSORS**

## HoD: Prof. K. C. Tiwari

(M.E., Ph.D.)

Research Area: Geoinformatics and its applications, Disaster Management, Hyperspectral and SAR data processing, Camouflaged Target detection, Super resolution mapping, Satellite Image Processing Artificial intelligence.

#### Prof. Vijay K. Minocha

(B.E., M. Tech., Ph.D.)

Research Area: Stochastic/Al/ Statistical Modelling of Water, Environmental and Transportation systems.

#### **Prof. Ashutosh Trivedi**

(B.Sc. (Engg.), M. Tech., Ph.D.)

Research Area: Civil Engineering,
Geotechnical Engineering, Rock
Mechanics, and Soil Dynamics.

#### Prof. Anil Kumar Sahu

(B.E., M.E., Ph.D.)

Research Area: Geotechnical Engineering

#### **Prof. Ashok Kumar Gupta**

(B.Tech., M.S., Ph.D.)

Research Area: Geotechnical Engineering.

#### **Prof. Nirendra Dev**

(B.Tech., M.Sc. (Engg.), Ph.D.)

Research Area: Structural Engineering,
Structural Dynamics, Finite Element
Method, Disaster Management, High
Strength Nanocomposites, and Concrete
Technology

#### Prof. Awadhesh Kumar

(M.E., Ph.D.)

Research Area: Cementitious Products, Tall Buildings, and Non-Linear Analysis using Finite Element Method

#### **Prof. Amit Kumar Srivastava**

(B.E., M.E., Ph.D.)

Research Area: Geotechnical Engineering, Rock Mechanics, Pile Foundation, and Geo-Environmental Engineering

#### **Prof. Alok Verma**

(M.Tech., Ph.D.)

Research Area: Earthquake Technology, Fuzzy Logic and Neural Networking in Durability Studies

#### Prof. Naresh Kumar

(M.Tech., Ph.D.)

**Research Area:** Deep Foundations, Experimental testing on load carrying capacity of Innovative Piles, IPR Laws

#### Prof. S. Anbu Kumar

(B.E., M. Tech., Ph.D.)

Research Area: Fluid Mechanics, and Hydraulics and Water Resource Engineering.

#### Prof. Raju Sarkar

(B.E., M.E., Ph.D.)

Research Area: Soil Mechanics, Geotechnics for Natural Disaster Mitigation, Soil-Structure Interaction, Environmental Geotechnology, Pavement Geotechnology, Ground Improvement technique, and Numerical Modeling.

#### Prof. Munendra Kumar

(M.E., Ph.D.)

Research Area: Fluid Mechanics and Hydraulics.

#### Prof. T. Vijaya Kumar

(B.E., M.E., Ph.D.)

Research Area: Environmental Engineering, Fluid Mechanics, and Hydraulics.

Prof. Shilpa Pal (B.E., M.E., Ph.D.)
Research Area: Seismic analysis of
dams and shape stability studies,
Disaster risk reduction studies,
Bio fortified con-crete and green
material in construction.

#### **Prof. Pradeep Kumar Goyal**

(B.E., M.E., Ph.D.)

Research Area: Cyclone Disaster Mitigation, Micro zonation, Hazard Analysis and Risk Assessment, Reliability Analysis, Soft Computing Techniques, Materials, and Rural Housing.

#### **ASSOCIATE PROFESSORS**

#### Mr. Susheel Kumar

(B.Tech., M.Tech.)

**Research Area:** Traffic and Transportation Engineering.

#### Mr. Narad Muni Prasad

(M.Sc.)

Research Area: Pavement Engineering

### Mr. G. P. Awadhiya

(M.Tech.)

Research Area: Structural Engineering

#### Mr. A. R. Kongan

(B.E., M.E.)

Research Area: Structural Engineering, Transportation Engineering, Prestressed Concrete, High Rise Buildings, Collaps-ible and Expansible soils.

#### **ASSISTANT PROFESSORS**

#### Dr. Bharat Jhamnani

(B.E., M.E., Ph.D.)

Research Area: Environmental Engineering, Hydraulics, Computational Fluid Dynamics.

#### Dr. Ritu Rai

(B.Tech., M.Tech., Ph.D.)

Research Area: Structural
Engineering and Wind
Engineering.

#### Mr. Hrishikesh Dubey

(B.E., M. Tech.)

Research Area: Structural Engineering and Earthquake Engineering.

#### Mr. B. R. G. Robert (B.E.)

Research Area: Geology, Surveying, Building Materials & Construction etc.

# **Revenue Generated from Consultancy:**

| Name of Faculty                 | Title  | Amount (₹)  |
|---------------------------------|--|-------------|
|                                 | TPQA for work of strengthening of Vandemataram Marg<br>from Dhaula Kuan to Dayal Chowk and Shankar Road from<br>Pusa Chowk to Shankar Chowk under PWD Division South<br>West Road-1, Sub Division-IV, New Delhi.   | 2,68,818/-  |
| Dr. Ritu Raj                    | Construction of Mega Boys Hostel G+3 including and external Civil, electrical and mechanical services, development works and all ancillary buildings on EPC Basis at NIT, Srinagar, Jammu &Kashmir.  | 22,00,000/- |
|                                 | <ol> <li>Cube Sample Testing</li> <li>Construction of A-1 type school building i/c boundary wall etc. and internal electrical installation, fans, fire alarm and firefighting system, solar photo voltaic power generation</li> <li>C/o office cum studios building with single basement, ground floor +5 storey</li> <li>Design mix/job mix formula</li> <li>Digital survey building of lady reading health school, Delhi,</li> </ol> | 6,49,000/-  |
| Prof. Amit Kumar<br>Shrivastava | Design mix for granular sub base and wet mix (WMM) and concrete mix design.  | 7,50,000/-  |
| Prof. A. Trivedi                | Design mix of ready-mix concrete of grade M25 and M15.   | 1,00,000/-  |
| Prof. Munendra<br>Kumar         | <ol> <li>Proof checking of construction of SPS (4 Story) for<br/>additional classroom at Karampura campus of Dr. B. R.<br/>Ambedkar University, Delhi.</li> <li>Self-compacting concrete mix design for the concrete of<br/>grade M30 &amp; M40.</li> </ol>  | 4,00,000/-  |
| Prof. T. Vijay<br>Kumar         | Regarding third party quality assurance for the work under CPWD, Gwalior central division, Gwalior.  | 14,59,501/- |
| Prof. A. K. Gupta               | Regarding third party quality assurance for the work "Strengthening of various roads under PWD Division North West Road-1 under sub division NWR-12".  | 1           |
| Prof. Munendra<br>Kumar         | Vetting of structural design and drawings of expansion of Dwarka campus under phase-II, Delhi.     Structural designing and preparation of structural drawings in respect of c/o phase B works at JNV Papumpare, Arunachal Pradesh.  |             |
| Prof. Nirendra Dev              | Third Party Quality Assurance Eastern Division 3BHK Pocket 3, Narela Division, Delhi.  |             |
| Dr. Ritu Raj                    | Structural audit of Tihar Jail residential quarters at Tihar jail complex, Delhi. 40,00,00   |             |
| Prof. Raju Sarkar               | Testing of materials for PWD, Delhi.   | 4,49,492/-  |
| Dr. Ritu Raj                    | Third party quality assurance for civil division, Irrigation and flood control department, Delhi.  | 27,11,384/- |

| Name of Faculty                 | Title  | Amount (₹)    |
|---------------------------------|--|---------------|
| Dr. Ritu Raj                    | Third party quality assurance of various development works under various heads like DRDB, DUDA, MLA, LAD, MP LAD, unauthorized colonies, Urban villages, SC/ST Panchayat and plan works etc. under I&FC all division.                                    | 2,00,00,000/- |
|                                 | Structural design and preparation of structural drawings for<br>new boys' hostel at NIT Nagaland, material testing of AIIMS<br>Jammu, structural design for district park, Paschim Vihar,<br>construction of west wing at Daulat Ram College, DU, Delhi. | 13,25,718/-   |
| Prof. S. Anbu Kumar             | TPQA in respect of 02 and 06 nos. Civil works.   | 2,18,858/-    |
| Prof. Amit Kumar<br>Shrivastava | TPQA Services for the work of Construction of computer centre at North campus, Delhi University, Delhi Horticulture works on EPC basis.  | 30,32,411/-   |
| Sirrivastava                    | TPQA services for the work of construction and installation of fully automatic multilevel car parking system at Africa Avenue defence complex, horticulture works on EPC basis.  | 21,41,742/-   |
| Prof. Raju Sarkar               | Regarding material testing/mix design. 50,00   |               |

# **Events organized by the Department:**

Details of
Event: National
Technology Day
Date: 11th May, 2024
Coordinator:
Prof. A. K. Sahu

**Details of Event:** FDP on "Disaster Preparedness and Risk Reduction"

In Collaboration with: Geo-Meteorological Risk Management Division through Indian universities and NIDM (Ministry of Home Affairs, Govt. of India, Delhi) & Department of Civil Engineering, DTU, Delhi

Dates: 11<sup>th</sup> – 15<sup>th</sup> December, 2023

**Coordinator/co-coordinator:** Prof. Shilpa Pal, Prof. Raju Sarkar and Prof. Munendra Kumar

# Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

Prof. Shilpa Pal

**Event:** 11<sup>th</sup> International Conference on "Microelectronics, Circuits & Systems MICRO 2024"

**Organized by:** Vinod Dham Centre of Excellence for Semiconductors and Microelectronics, DTU, Delhi and Applied Computer Technology, Kolkata

Dates: 16th - 17th May, 2024

**Event Details:** 22<sup>nd</sup> ISME - International Conference on "Recent Advances in Mechanical Engineering for Sustainable Development (ISME 2024)"

**Organized by:** Department of Mechanical Engineering, DTU, Delhi

Dates: 11th - 13th July, 2024

# **Faculties Participation in Professional Development Programmes:**

**Title:** SWAYAM Online Course Certification on "Quality Assurance through NAAC Accreditation

Process"

Organized by: NITTTR, Chennai

**Duration:** July - December, 2023

**Title:** 12 weeks Faculty

**Development Programme** 

Organized by: NPTEL - AICTE

Duration: January – April, 2024

**Prof. Shilpa Pal** 

**Title:** NBA Accreditation and Teaching-Learning in Engineering

(NATE)

Organized by: IISc, Bangalore

**Duration:** January – April, 2024

Title: Swayam Online

Certification Course on NEP and

Institutional Building

Organized by: NITTTR, Chennai

Dates: January – June, 2024

# Awards and Recognition at State, National, International level from Recognized Bodies:

| Name of Faculty  | Title of Award             | Awarding University | Year |
|------------------|----------------------------|---------------------|------|
| Prof. A. K. Sahu | Commendable Research Award | DTU, Delhi          | 2024 |
| Prof. Shilpa Pal | Commendable Research Award | DTU, Delhi          | 2024 |

# Visit of Faculty to other University/Institution for Expert Lectures/ Academic Work:

Prof. Shilpa Pal

**Title of Event:** Damage Detection in Concrete Using Structural Health Monitoring - Science behind Safety of structure

Organized by: CY Cergy Paris

University, Cergy, France. **Date:** 20<sup>th</sup> June. 2024

**Title of Event:** Damage Detection using SHM in the online mode in Health and Retrofitting of Structures

Organized by: CY Cergy Paris

University, Cergy, Paris **Date:** 15<sup>th</sup> September, 2023

# 4.6 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



Prof. Vinod Kumar HoD

### **ACADEMIC PROGRAMMES**

B.Tech. (CSE) Intake: 481 Admitted: 481





M.Tech. (CSE)
Intake: 30+5
Admitted: 34

M.Tech. (Artificial Intelligence)
Intake: 30+5
Admitted: 32





Ph.D. Admitted: 11

### **RESEARCH PUBLICATIONS**

Granted: 02 (National)
PATENTS Published: 04
(03: National, 01: International)



**JOURNALS: 64** 

**CONFERENCES: 40** 





BOOK: 01 (Edited)
BOOK CHAPTERS: 27

## **SALIENT FEATURES**

The department of Computer Science and Engineering endeavors to provide the thrill of a corporate R & D environment with a planned focus on industrially relevant projects technology incubation. The curriculum defined, lays greater emphasis on design principles and development of system software for operating systems, Database management systems, data mining, computer graphics and networks. Currently the department offers Doctorate, Post - graduate & under- graduate courses in fields of Computer Engineering. The department also has active student chapter of Computer Society of India (CSI) and Society of Software Engineering which contribute significantly in professional activities undertaken by IEEE and IET student's chapters.



# **LABORATORIES:**

| Name of<br>Laboratory                             | Details of Laboratory   |
|---|---|
| Computer<br>Architecture Lab                      | This lab focuses on the study and design of computer systems, exploring the principles of computer architecture, processor design, memory hierarchy, and performance optimization. Students engage in hands-on experiments to understand how computer hardware and software interact to execute programs efficiently. |
| IPM Lab   | The Information Processing and Management (IPM) Lab is dedicated to research and development in the field of information processing, including data storage, retrieval, and management. The lab also focuses on optimizing information systems to handle large volumes of data effectively.                           |
| Data Mining Lab                                   | This lab specializes in extracting valuable insights and patterns from large datasets using various data mining techniques. Students and researchers work on projects involving machine learning, pattern recognition, and predictive modeling to address real-world problems.  |
| DBMS Lab  | The Database Management Systems (DBMS) Lab is designed to provide students with practical experience in designing, implementing, and managing databases. It covers topics such as SQL programming, relational database design, normalization, and transaction management.   |
| Big Data Analytics<br>and Web<br>Intelligence Lab | This lab is focused on the analysis of large-scale datasets and the development of intelligent web applications. Students learn to use tools and techniques for big data processing, including Hadoop, Spark, and various machine learning algorithms.  |
| LANS Lab  | The Local Area Network Simulation (LANS) Lab provides students with hands-on experience in designing, configuring, and managing local area networks. The lab emphasizes network protocols, security measures, and performance optimization in LAN environments.   |
| Computational Lab                                 | The Computational Lab is dedicated to solving complex scientific and engineering problems using computational methods. It supports research in areas such as numerical analysis, simulations, and high-performance computing.   |
| IOT Lab   | The Internet of Things (IoT) Lab focuses on the development and testing of IoT devices and applications. Students work on projects related to smart homes, healthcare, industrial automation, and other IoT-based solutions, exploring the integration of sensors, communication protocols, and cloud computing.      |
| Programming Lab                                   | The Programming Lab provides an environment for students to learn and practice various programming languages and paradigms. The lab covers a wide range of programming topics, from basic coding skills to advanced software development techniques.  |
| Machine Learning<br>Lab                           | This lab is dedicated to the study and application of machine learning algorithms. Students and researchers work on projects involving supervised, unsupervised, and reinforcement learning to develop intelligent systems that can learn and adapt from data.  |

| Name of<br>Laboratory                                   | Details of Laboratory   |
|---|---|
| Artificial<br>Intelligence Lab                          | The Artificial Intelligence (AI) Lab focuses on the development of intelligent agents and systems. Research areas include natural language processing, computer vision, robotics, and knowledge representation, with an emphasis on creating AI-driven solutions for complex problems.                                      |
| Information<br>Security and CI<br>Lab                   | The Information Security and Cyber Intelligence (CI) Lab is centered on the study of cyber security measures, threat detection, and information assurance. Students learn to design secure systems, protect data integrity, and respond to cyber threats.   |
| Samsung<br>Research Lab                                 | This lab, in collaboration with Samsung, focuses on cutting-edge research in areas such as mobile technology, smart devices, and advanced software development. Students and researchers work on innovative projects that align with Samsung's technological vision.  |
| Blockchain<br>Technology<br>Research Lab                | The Block chain Technology Research Lab explores the potential of block chain technology in various domains, including finance, supply chain, and healthcare. The lab focuses on the development of secure, decentralized applications and smart contracts.   |
| Quantum<br>Information<br>and Computing<br>Research Lab | This lab is dedicated to the study of quantum computing and its applications. Research areas include quantum algorithms, quantum cryptography, and the development of quantum processors, with the goal of advancing the field of quantum information science.  |
| Network Science<br>Research Lab                         | This Research Lab focuses on the development of autonomous robotic systems that can work together to achieve complex tasks. Research includes swarm intelligence, multi-agent systems, and distributed robotics.  |
| Augmented and<br>Virtual Reality<br>Research Lab        | This lab explores the development of augmented reality (AR) and virtual reality (VR) technologies. Students and researchers work on creating immersive experiences for various applications, including gaming, education, and medical training. The lab emphasizes both the hardware and software aspects of AR/VR systems. |



#### **ACADEMIC STAFF**

#### **PROFESSORS**

#### **ASSISTANT PROFESSORS**

#### **HoD: Prof. Vinod Kumar**

(B.E., M.Tech., Ph.D.) **Research Area:** Computer Network

### Prof. Rajni Jindal

(M.C.A., M.E., Ph.D.)

Research Area: Database Systems,
Data Mining and Operating Systems.

# Prof. Daya Gupta (Adjunct)

(M.Sc., Post M.Sc. Diploma (CS.), Ph.D.)

Research Area: Software

Engineering, Artificial Intelligence,
Data Mining and Security

#### Prof. Manoj Kumar

(B.Tech., M. Tech., Ph.D.)

Research Area: Information Security

#### **Prof. Shailender Kumar**

(B.E., M.Tech., Ph.D.)

Research Area: Database Systems,
Datamining, Big Data Analytics,
Machine Learning, Information
Security, Computer Network.

### **Prof. Anil Singh Parihar**

(B.Tech., M.Ē., Ph.D.)

Research Area: Pattern Recognition,
computer Vision, Soft Computing,
Image Processing, Evolutionary
Computing and Biometric.

#### Prof. Rahul Katarya

(B.Tech., M.Tech., Ph.D.)

Research Area: Big Data Analytics,
Social Networks Analysis, Human
Behavior, Multimedia Systems,
Internet Technologies, Web Mining.

# Prof. Manoj Saxena (Adjunct)

(B.Tech., M.Tech., Ph.D.)

Research Area: Al and ML

#### **Prof. Aruna Bhat**

(B.Tech., M.Tech., Ph.D.)

Research Area: Machine Learning and Pattern Recognition, Campus Incubators.

#### Dr. Rajesh Kumar Yadav

(B.E., M.Tech., Ph.D.)

Research Area: Mobile Computing, Wireless Sensor Network, Computer Networks, Theory of Computation, PCA

# Dr. Prashant Giridhar Shambharkar

(B.E., M.Tech., Ph.D.)

**Research Area:** Data Mining, Real time Systems, Programming Fundamentals, Mobile Health Monitoring.

#### Dr. Rohit Beniwal

(B.Tech., M.Tech., Ph.D.)

Research Area: Social Web, Semantic Web, Software Engineering, Machine Learing.

#### Dr. Sanjay Kumar

(B.Tech., M.Tech., Ph.D.)

Research Area: Social Network

Analysis, Database Systems, Data

Science, Information Security and

Algorithms.

#### Dr. Rajeev Kumar

(B.Tech., M.Tech., Ph.D., Post-Doc) **Research Area:** Stenography, Reversible data hiding, Wireless Sensor Networks, Deep Fakes, Al/ML: Privacy & Security

#### Dr. Pawan Singh Mehra

(B.E., M.Tech. (Hons), Ph.D.)

Research Area: Internet of Things,
Wireless Networks, Cryptography
Security and Quantum Computing,
Blockchain, Artificial Intelligence,
Cyber Security

#### Dr. Minni Jain

(B.Tech., M.Tech., Ph.D.) **Research Area:** Natural Language

Processing, Sentiment Analysis,

Information Security

#### Mr. Nipun Bansal

(B.Tech., M.Tech., Ph.D. (P)) **Research Area:** Information Security,
Biometric Security, Network Security

#### **Dr. Anurag Goel**

(B.Tech., M.Tech. (Gold Medalist), Ph.D.) **Research Area:** Deep Learning, Image Processing, Al for Social Good, Graph Networks, Computational Creativity

#### Dr. Kavinder Singh

(B.Tech., M.Tech., Ph.D.)

Research Area: Digital Image
Processing, Computer Vision,
Pattern Recognition, Deep
Learning, Machine Learning

#### Ms. Anukriti Kaushal

(B.Tech., M.Tech., Ph.D. (P))

Research Area: Data Structures
and Algorithms, Network and
Information Security, Machine
Learning, Deep Learning,
Recommender System

#### Ms. Gull Kaur

(B.Tech., M.Tech., Ph.D. (P)) **Research Area:** Artificial Intelligence, Machine Learning and Deep Learning

#### Ms. Garima Chhikara

(B.Tech., M.Tech., Ph.D. (P))

Research Area: Algorithms,

Computer Vision, Deep Learning

# Dr. Indu Singh (Contractual)

(B.Tech., M.Tech., Ph.D.)

Research Area: Database,
Data Warehouse & Mining,
Information Security, Machine
Learning

#### **PROGRAMMER**

**Dr. Manoj Sethi** (M.E., LMCSI, Ph.D.) **Research Area:** M.E., LMCSI, Ph.D.

#### **ACHIEVEMENTS OF THE DEPARTMENT:**

- Aaryan Arora (B.Tech, CS, DTU-2024) declared as the Grand Prize Winner of the Stibo Systems India Hackathon 2024. The event comprised of over 1,000 registrations from 145 colleges across 70+ cities.
- Vaibhav Anand and Shoaib Shama (B.Tech, CS, DTU-2024) secured All India Rank - 1 in the "EY Open Science Data Challenge 2024 Phase-1". The event witnessed more than 11000 registrants from 119 countries.
- Team DTU\_CHAMPS (Shoaib Shama, Anubhav Sangal & Vaibhav Anand, B.Tech, CS/SE, DTU-2024) secured All India Rank 5 in the "IMC Prosperity 2 Trading Challenge 2024", organized by IMC Trading. Overall, 13,500 (global) and 2,300 (Indian) teams were participated, wherein, Team DTU\_CHAMPS secured a position among Top 1% globally in multiple programming challenges spanning over 17 days.
- Two teams from DTU, "Rizz-o-nance" and "SOS – Saviors of Society" (students also from Computer Engg.) have been declared National Winners of the Smart India Hackathon 2023

- in the Transportation & Logistics [Student Innovation] and Miscellaneous [Sentiment analysis of Social Media presence] categories respectively. Both the teams were awarded with the prestigious award trophy & cash prize of Rs 1 Lac each.
- Dr. Rahul Katarya and Dr. Sanjay Kumar are featured in the 2023 World Ranking of Top 2% Most Influential Scientists created by Stanford University.
- Three Patents were granted for Dr. Rajeev Kumar, Prof. Shailender Kumar and Prof. Rahul Katarya.
- Mr. Navneet Gupta (DCE Alumnus, B.E. 1999, Computer Engg.), Co-Founder and Chief Technology Officer (CTO) of Verita Software LLC, has been honored by Business Mint Nationwide Awards with the award for Most Prominent CTO of the Year- 2023, New York.
- Mr. Shashwat Sharma (DCE Alumnus, B.E. 2003, Computer Engg.) is appointed as the Chief Operating Officer (COO) of Bharti Airtel Services. He was previously serving as the Director of consumer business and CEO of DTH.

# **Grants for Research Projects Sponsored by Funding Agencies:**

**PI/Co PI:** Ki-Hyun Jung, Rajeev Kumar Title: TagExDF- Explained Tagging System
Amount (₹): 55 million KRW
Sanctioning Date: November, 2021

**Duration:** 3.5 Years

**PI/Co PI:** Rishi Ranjan Singh, Sanjay Kumar **Title:** Deep Learning Frameworks for Link Prediction to Optimally Change Centrality Scores of Nodes in Social and Complex Networks

Amount (₹): 18 Lacs
Sanctioning Date: January, 2024

**Duration:** 3 Years

PI/Co PI:
Dr. Amita Jain
NSUT, East Campus,
Dr. Minni Jain, DTU

**Title of Project:** Generation of Hindi-English Code-Mixed Computational Lexicon and Chatbot Counseling Application for Depression Disorder

Amount (₹): 23,99,100/Sanctioning Date: April, 2023
Duration: 3 Years

### **Details of Patent Awarded/Published in 2023-24:**

| Name of Inventor(s)                | Title of Patent  | Status    | Patent Number | Date                               |
|------------------------------------|--|-----------|---------------|------------------------------------|
|                                    | Method and system for<br>filtering out recipients for<br>Broadcast messages based<br>on their emotional state and<br>message contents    | Granted   | 444018        | 9 <sup>th</sup> August,<br>2023    |
| Dr. Rajeev Kumar<br>et al.         | Method and System for<br>Automatically Determining<br>Reward or Penalty Points<br>to Calculate Insurance<br>Premium                      | Published | 202411000844  | 2 <sup>nd</sup> February,<br>2024  |
|                                    | System and Method for<br>Adaptation of Video or<br>Playlist Thumbnails based<br>on User Preferences                                      | Published | 202311072158  | 22 <sup>nd</sup> December,<br>2023 |
| Prof. Rahul<br>Katarya et al.      | Precision Agriculture Rover for Plant Disease Detection and Control  | Granted   | 202211032321  | 21 <sup>st</sup> March,<br>2024    |
| Prof. Anil Singh<br>Parihar et al. | Extraction of high-value sequential patterns using reinforcement learning techniques   | Published | 20240005146   | 4 <sup>th</sup> January,<br>2024   |
| Dr. Pawan Singh<br>Mehra et al.    | Quantum Cryptography<br>based Authentication<br>System and method for<br>secure transmission of<br>healthcare data through<br>GHZ states | Published | 202311064981  | 1 <sup>st</sup> December,<br>2023  |

# **Events organized by the Department:**

**Event:** World Quantum Day Celebration

**In Collaboration with:** Institute's Innovation Council, DTU, Delhi

**Date: 15th May, 2024** 

Coordinators: Dr. Pawan Singh

Mehra and Dr. Anurag Goel

**Event:** FDP on "Introduction to High-Performance Computing and its Application in Artificial Intelligence" **In Collaboration with:** CDAC, Pune

**Dates:** 7<sup>th</sup> – 11<sup>th</sup> August, 2024

**Coordinators:** Prof. Rahul Katarya , Dr. Sanjay Kumar and Dr. Kavinder

Singh

**Event:** FDP on "Artificial Intelligence, Internet of Things, Big Data Analytics and E-Governance"

In Collaboration with: Directorate of Training (Union Territories Civil Services), Govt. of NCT of Delhi and Human Resource Development Centre (HRDC), DTU, Delhi

**Dates:** 11<sup>th</sup> - 29<sup>th</sup> September, 2023 **Coordinator:** Prof. Rahul Katarya

**Event: Summer School on Al:** Deep

Dive into Deep Learning

**Dates:** 10<sup>th</sup> June – 19<sup>th</sup> July, 2024

Coordinator: Prof. Anil Singh Parihar

and Dr. Kavinder Singh



# Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

#### Prof. Rajni Jindal

**Event Details:** Staff Training Program

Organized by: IITM, Gwalior

Year: 2024

Amount received by DTU (₹): 20,000/-

#### Dr. Anurag Goel

**Event Details:** IEEE Annual Membership and IEEE Signal Processing Society (SPS) Membership

- 2024

Amount received by DTU (₹): 9686/-

# **Faculties Participation in Professional Development Programmes:**

| Name(s) of Faculty   | Title of PDP  | Organized by  | Date(s)  |
|--|---|---|--|
| Prof. Rajni Jindal,<br>Dr. Rajeev Kumar,<br>Dr. Pawan Singh Mehra,<br>Dr. Anurag Goel,<br>Dr. Kavinder Singh,<br>Ms. Garima Chhikara | Advanced Teaching Pedagogy<br>and Outcome-based<br>Education  | DTU, Delhi  | 27 <sup>th</sup> – 31 <sup>st</sup> May,<br>2024         |
| Prof. Rajni Jindal   | Hands on Machine Learning for Audio Signal Processing   | IIITM, Gwalior  | 01 <sup>st</sup> – 07 <sup>th</sup> July,<br>2024        |
| Dr. Prashant Giridhar<br>Shambharkar   | Introduction to High Performance Computing (HPC) and IITS Application in Artificial Intelligence (AI) | DTU, Delhi  | 20 <sup>th</sup> - 30 <sup>th</sup> May,<br>2024         |
|  | Quantitative and Qualitative<br>Research Methods  | BIT Mesra, Noida<br>Campus  | 12 <sup>th</sup> – 16 <sup>th</sup><br>December,<br>2023 |
| Dr. Sanjay Kumar   | Next Generation Wireless<br>Networks  | DTU, Delhi  | 27 <sup>th</sup> — 31 <sup>st</sup> May,<br>2024         |
| Ms. Gull Kaur  | Advanced Teaching Pedagogy<br>and Outcome-based<br>Education  | DTU, Delhi  | 27 <sup>th</sup> – 31 <sup>st</sup> May,<br>2024         |
|  | Introduction to High Performance Computing (HPC) and its Applications in Artificial Intelligence      | DTU, Delhi  | 20 <sup>th</sup> – 30 <sup>th</sup> May,<br>2024         |
| Dr. Rohit Beniwal  | Quantitative and Qualitative<br>Research Methods  | Birla Institute of Technology, Mesra, Ranchi (Noida Campus) and JIMS Engineering Management Technical Campus, Greater Noida | 27 <sup>th</sup> – 31 <sup>st</sup> May,<br>2024         |
| Ms. Anukriti Kaushal   | Advanced Teaching Pedagogy<br>and Outcome-based<br>Education  | DTU, Delhi  | 7 <sup>th</sup> – 11 <sup>th</sup> August,<br>2023       |
| Dr. Rajesh K. Yadav  | Introduction to High Performance Computing (HPC) and its Applications in Artificial Intelligence      | DTU, Delhi  | 27 <sup>th</sup> – 31 <sup>st</sup> May,<br>2024         |

# Awards and Recognition at State, National, and International level from Recognized Bodies:

#### Dr. Anurag Goel

**Title of Award:** Best Research Paper Award in IEEE 3<sup>rd</sup> International conference on "Smart Technologies and Systems for Next Generation Computing" ICSTSN 2024

Awarding Institution: IFET College of Engineering, Tamil Nadu, India

**Dates:** 18<sup>th</sup> – 19<sup>th</sup> July, 2024

# Visit of Faculty to other University/Institution for Expert Lectures/ Academic Work:

| Name of Faculty                         | Title of<br>Event           | Topic of Lecture/Role   | Organized by   | Date(s)   |
|---|-----------------------------|---|--|---|
| Dr. Pawan<br>Singh Mehra                | International<br>Conference | The New Era of Quantum Computing  | Samarkand University,<br>Uzbekistan                            | 02 <sup>nd</sup> November,<br>2013                      |
|   | Seminar                     | Quantum Computing<br>Demystified  | University of Tlecemen,<br>Algeria                             | 29 <sup>th</sup> February,<br>2024                      |
|   | Seminar                     | Quantum Computing Unveiled: Decrypting the language of Qubits                                   | ABES, Ghaziabad  | 09 <sup>th</sup> March,<br>2024                         |
|   | Workshop                    | Shielding the Cyber<br>Frontier; Governance and<br>Risk Management                              | CERT-In, Delhi   | 21 <sup>st</sup> March,<br>2024                         |
| Dr. Sanjay<br>Kumar                     | Workshop                    | Deep Learning Revolution:<br>Unveiling the Real-Life<br>Impact of Artificial Neural<br>Networks | IGDTUW, Delhi  | 24 <sup>th</sup> August,<br>2023                        |
|   | Workshop                    | Supervised Learning and it's real-life Application  | Ajay Kumar Garg<br>Engineering College,<br>Ghaziabad           | 11 <sup>th</sup> January,<br>2024                       |
| Dr. Prashant<br>Giridhar<br>Shambharkar | FDP                         | Recent Trends in Machine<br>Learning  | Mangalmay Institute of Engineering & Technology, Greater Noida | 2 <sup>nd</sup> — 4 <sup>th</sup><br>January, 2024      |
|   | FDP                         | Recent and Emerging trends in Artificial Intelligence   | Mangalmay Institute of Engineering & Technology, Greater Noida | 9 <sup>th</sup> - 11 <sup>th</sup><br>October, 2023     |
|   | Invited Talk                | Operating Systems   | NFSU, Delhi  | 28 <sup>th</sup> June,<br>2024                          |
| Prof. Rahul<br>Katarya                  | Conference                  | An enhanced hybrid model paradigm for transforming breast cancer prediction                     | Bangkok, Thailand  | 8 <sup>th</sup> – 10 <sup>th</sup><br>November,<br>2023 |

| Name of<br>Faculty | Title of<br>Event            | Topic of Lecture/Role   | Organized by   | Date(s)   |
|--------------------|------------------------------|---|--|---|
|                    | Workshop                     | Artificial Intelligence: Future<br>Applications & Research<br>Opportunities                                   | Raja Balwant Singh<br>Management Technical<br>Campus, Agra                               | 22 <sup>nd</sup><br>December,<br>2023                           |
|                    | FDP                          | Recent trends and future of Big Data Analytics  | National Institute of<br>Technology Rourkela, India                                      | 11 <sup>th</sup> December,<br>2023                              |
|                    | Workshop                     | Industrial Applications of<br>Unmanned Ground Rovers  | Vellore Institute of Technology, Vellore   | 3 <sup>rd</sup> December,<br>2023                               |
|                    | Workshop                     | Approaches to Write and<br>Publish Good Research<br>Papers and application of<br>Intellectual Property Rights | University of Lucknow,<br>India  | 25 <sup>th</sup> November,<br>2023                              |
|                    | Skill<br>Training<br>Program | Future of AI for Environment<br>Product Development   | CSIR-National<br>Environmental Engineering<br>Research Institute (CSIR-<br>NEERI), Delhi | 5 <sup>th</sup> September,<br>2023                              |
|                    | Workshop                     | Recent trends in Artificial<br>Intelligence   | Hindustan Engineering<br>College of Science &<br>Technology, Farah, Mathura              | 26 <sup>th</sup><br>September,<br>2023                          |
| Prof. Rahul        | FDP                          | Mastering Tech World with<br>Advanced Techniques  | Shoolini University,<br>Himachal Pradesh   | 30 <sup>th</sup> January<br>– 4 <sup>th</sup> February,<br>2024 |
| Katarya            | Conference                   | Exploring Discourses and<br>Beyond in Humanities and<br>Social Sciences                                       | BITS, Pilani   | 23 <sup>rd</sup> – 24 <sup>th</sup><br>February, 2024           |
|                    | Symposium                    | Artificial Intelligence: 'Seize the Opportunities, Avoid the Hazards'   | De Montfort University,<br>Leicester, United Kingdom                                     | 26 <sup>th</sup> February<br>– 4 <sup>th</sup> March,<br>2024   |
|                    | Workshop                     | Capacity Building<br>Programme for KRPs in<br>Single Major Subject Pattern<br>in Computer Applications        | UGC-MMTTC, JNU, Delhi  | 14 <sup>th</sup> March,<br>2024                                 |
|                    | Conference                   | AI & ML   | JNU, Delhi   | 8 <sup>th</sup> April, 2024                                     |
|                    | Workshop                     | Efficient Food Processing for Environment and Climate changing Trends   | K R Mangalam University  | 15 <sup>th</sup> – 16 <sup>th</sup> May,<br>2024                |
|                    | Conference                   | Harnessing Artificial Intelligence to Combat Alzheimer: Innovations and Insights                              | Technical University of<br>Sofia, Bulgaria   | 6 <sup>th</sup> – 13 <sup>th</sup> June,<br>2024                |
|                    | Conference                   | AI & ML   | Shoolini University, Solan,<br>India   | 2 <sup>nd</sup> – 4 <sup>th</sup> July,<br>2024                 |
|                    | FDP                          | AI & ML   | KIET Group of Institution,<br>Ghaziabad  | 8 <sup>th</sup> – 12 <sup>th</sup> July,<br>2024                |

# Functional MoUs with Universities/Institutions/Industries of National/International Importance:

**MoU signed between:** Adobe and DTU, Delhi **Purpose:** Research

**Date of MoU Signed:** 20<sup>th</sup> September, 2022

**MoU signed between:** CDAC and DTU, Delhi

**Purpose:** National Supercomputing Mission

Date of MoU Signed: 31st July, 2024

**Duration:** Three Years

### **Students' Achievements:**

| Name of Student   | Programme  | Details of Achievement  |
|---|--|---|
| Aaryan Arora  | B.Tech. Computer<br>Engineering, 2020-2024   | Grand Prize Winner of the Stibo Systems India<br>Hackathon 2024. The event saw over 1,000<br>registrations from 145 colleges across 70+<br>cities.  |
| Vaibhav Anand and<br>Shoaib Shama   | B.Tech. Computer<br>Engineering, 2020-2024   | All India Rank 1 in the EY Open Science Data<br>Challenge 2024 Phase-1. The event witnessed<br>more than 11000 registrants from 119 countries.  |
| Shoaib Shama,<br>Anubhav Sangal<br>and Vaibhav Anand  | B.Tech. Computer<br>Engineering, 2020-2024<br>(Anubhav Sangal B.Tech.<br>Software Engineering,<br>2020-2024) | All India Rank 5 in the IMC Prosperity 2 Trading Challenge 2024 (organized by IMC Trading). The event saw participation of over 13,500 teams globally and 2,300 Indian teams wherein Team DTU_CHAMPS secured a position among Top 1% globally in multiple programming challenges spanning over 17 days. |
| Team Rizz-o-nance<br>Rithwick Sethi, Sahaj<br>Garg, Garvit Singh,<br>Shashvat Singhal,<br>Utkarsh Diwakar,<br>and Bhumika Bhati               | B.Tech, DTU, Delhi   | National Winners of the Smart India Hackathon<br>2023 in the Transportation & Logistics [Student<br>Innovation] category  |
| Team SOS — Saviors<br>of Society<br>Bhavya Goel, Kshitij<br>Agrawal, Mouleek<br>Kapoor, Ishan<br>Chugh, Hemant<br>Verma and Anmol<br>Bhardwaj | B.Tech, DTU, Delhi   | National Winners of the Smart India Hackathon<br>2023 in the Miscellaneous [Sentiment analysis<br>of Social Media presence] category  |

# 4.7 DEPARTMENT OF DESIGN



Prof. Ranganath. M. Singari, HoD (27th Sep., 2018 - 31st Dec., 2023)

#### **ACADEMIC PROGRAMMES**

B. Des. Intake: 122 Admitted: 122

> M. Des. Intake: 75 Admitted: 36

**Ph.D** Admitted: **03** 

#### **RESEARCH PUBLICATIONS**



**JOURNALS: 10** 

**CONFERENCES: 05** 



BOOK: 01 (Edited)
BOOK CHAPTERS: 03

**Prof. R. C. Singh**, HoD (1st January, 2024 - Present)

### **SALIENT FEATURES**

The strategic role of design through innovation in enhancing national and industrial competitiveness is universally recognized and underpins the national policy of Govt. of India. The strategy to achieve this vision seeks a spotlight on strengthening quality design education and design usages in different sectors. In furtherance of this national design vision, Delhi Technology University had decided to provide facilities for excellent design education, research and training to suit the needs of society.

The Department of Design is envisioned to pursue excellence in design thinking, design scholarship and design practice for the betterment of society in a holistic manner. Design is viewed as a driver of innovation and a key differentiator for providing a competitive edge to products and services. It involves an integrated humanistic approach to design products, services and systems. It seeks to delve deeper into understanding of technological, Commercial and societal context in connection. Development and delivery of innovative products and services as well as tools, techniques and methods required in the practice of design suitable to the environment.



#### **LABORATORIES:**

| Name of the<br>Laboratory | Details   |
|---------------------------|---|
| Design<br>Workshop        | The design workshop is a prototyping facility at the Department of Design, equipped with handheld tools, power tools, and machines that are used for product prototyping and development. |
| Computer lab              | The department's common computer lab is equipped with the latest computers, where students work on tasks like graphic design, 3D modeling, and animation etc.                             |
| CIDE Lab                  | The CIDE lab has Mac computers that are used for high-end simulation and rendering. The lab also includes rapid prototyping equipment like 3D printers.                                   |





#### **ACADEMIC STAFF**

#### **PROFESSORS**

### HoD: Prof. R. C. Singh (BE, ME, Ph.D.)

Research Area: **Production Engineering** 

## Prof. Ranganath. M. Singari

(BE, ME, Ph.D.)

Research Area: Product Design, Cognitive Design, and Visual Design

#### **ASSISTANT PROFESSORS**

## Dr. Ravindra Singh

B.Tech., M.Des., Ph.D.

Research Area: Universal Design, Human Centric Design, Industrial Design

#### Mr. Neeraj Rathee

(BFA, MFA)

Research Area: Visual Communication, Graphic Design, **Animation Design** 

#### Mr. Partha Pratim Das

(B.Tech., M.Tech., M.Des.)

Research Area: Interaction Design, UX-UI Design

#### Mr. Varun Singh

B.Arch., M.Arch.

Research Area: Architectural Design, Visual Design, Art, Design Research, History Theory and Criticism

#### Ms. Taruna Singh

B.Des., M.Des.

Research Area: Sustainable Packaging

#### **ACHIEVEMENTS OF THE DEPARTMENT:**

- Stanford Longevity Design Challenge -2<sup>nd</sup> Place.
- 2. Yuj UXPlorers'23 Gold Winner.
- 3. World Skills India Finalist, Medallion Winner and Finalist & in cc.
- 4. 1st Position India Skills Industrial Design Technology, Participation World Skills 2024 competition.
- 5. Student Service Design Challenge IKEA 2024.
- 6. **Selected in Super 25** at startup conclave by "Udhmodya Foundation".

- 7. Special mention of iyoung design challenge 4.
- 8. Johns Hopkins Healthcare Design Challenge **Finalist** Digital Track.
- 9. **Silver Winner** Student Service Design Challenge 2023.
- Stanford Center on Longevity Design Challenge - 2024 Finalist.
- 11. **Winners** Student Service Design Challenge 2024.
- 12. Charpak Lab **Scholarship** 2024.

### **Facilities in the Department:**

- · Product Design Studio
- Interaction Design Studio
- · Fashion Design Studio
- Photography and Videography Studio
- Computer Graphics Studio
- Visual Communication Studio
- Center for Industrial Design and Ergonomics
- Multiple Activity Hall
- Conference Hall

- · Design Workshop
- Open Air Theater
- Knowledge Resource Center
- BOS Meeting Hall
- VIP Room
- Medical Facility Room
- Kitchen with Tea and Coffee facility
- Store Room
- Maintained Clean rooms and Drinking Water Facilities

## **Events organized by the Department:**

| Name of the Event        | In collaboration with | Dates  | Coordinator/<br>Coordinator            |
|--------------------------|-----------------------|--|--|
| Student Design Challenge | Sponsor Wacom         | 7 <sup>th</sup> March, 2024                        | Dr. Ravindra Singh<br>Ms. Taruna Singh |
| Design Degree Show 2024  | Sponsor Wacom         | 29 <sup>th</sup> April – 3 <sup>rd</sup> May, 2024 | Mr. Neeraj Rathee                      |

## Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

Name of the Faculty: Ms. Taruna Singh

**Event Details:** Conference on 4<sup>th</sup> Asian Conference on

Ergonomics and Design (ACED-2023)

Organized by: IIM, Mumbai | Dates: 14th-16th December, 2023

Amount received by (₹): 36,000/-

## **Faculties Participation in Professional Development Programmes:**

Ms. Taruna Singh

**Title of PDP:** Conference on "Intervening Sustainability with Mission Life; Fashion Entrepreneurship and Cultural Integration in Harmony"

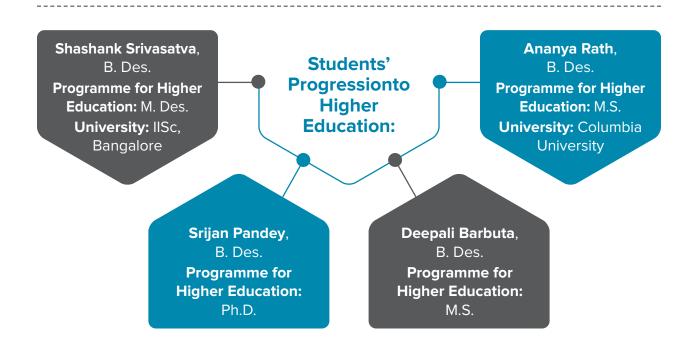
Organized by: NiFT, Gandhinagar | Date: 15th March, 2024

## Awards and Recognition at State, National, and International level from Recognized Bodies:

Name of Faculties: Ms. Taruna Singh, Dr. Ravindra Singh



Award: Jury Member in National Competition
Awarding Agency/university:
NSDC, Delhi in May, 2024



#### **Students' Achievements:**

| Name of Student                      | Programme | Details of Achievement  | Duration               |
|--------------------------------------|-----------|---|------------------------|
| Yashika Kumar<br>2K19/PHDDES/04      | Ph.D.     | Published paper in SCIE journal   | Academic year<br>23-24 |
| Prince A. M. Ramteke<br>2K22/MDPD/06 | M. Des.   | Published a research paper on the topic "An Ergonomic Investigation of Musculoskeletal Strain in Laundry Ironers" | Academic year<br>23-24 |
| Sameer Gautam<br>2K23/MDID/10        | M. Des.   | Student Service Design Challenge IKEA 2024  | Academic year<br>23-24 |

| Name of Student                    | Programme | Details of Achievement  | Duration               |
|------------------------------------|-----------|---|------------------------|
| Pratik Kumar<br>2K22/MDPD/05       | M. Des.   | Selected in Super 25 at startup conclave by udhmodya foundation   | Academic year<br>23-24 |
| Mohammad Zaki<br>2K22MDPD03        | M. Des.   | Research Paper (An Ergonomic<br>Investigation of Musculoskeletal Strain<br>in Laundry Ironers, Ergonomic) in<br>International Journal, Volume 7 | Academic year<br>23-24 |
| Pratik Kumar                       | M. Des    | Special mention of young design challenge 4   | Academic year<br>23-24 |
| 2K22/MDPD/05                       | M. Des.   | Published an article in "Design for All<br>Institute of India"  | Academic year<br>23-24 |
| Aiswarya Murali<br>23MDID01        | M. Des.   | SSDC 2024   | Academic year<br>23-24 |
| Anurag Jatin Darolia<br>23/MDPD/02 | M. Des.   | Winner - Student Service Design<br>Challenge 2024   | Academic year<br>23-24 |
| Pratik Kumar<br>2K22/MDPD/05       | M. Des.   | Best performer for DDS 2024 DTU,<br>Delhi   | Academic year<br>23-24 |
| Arya Bhushan<br>2K21/BD/028;       | B. Des.   | Stanford Longevity Design Challenge - 2 <sup>nd</sup> Place   | Academic year<br>23-24 |
| Sara Sanwal<br>2K21/BD/085         | B. Des.   | Yuj UXPlorers'23 - Gold Winner  | Academic year<br>23-24 |
| 2K22/BD/118                        | B. Des.   | WorldSkills India Finalist and Medallion<br>Winner, Finalist in cc  | Academic year<br>23-24 |
| Abhin Mittal<br>2K20/BD/2          | B. Des.   | 1 <sup>st</sup> Position in "India Skills Industrial<br>Design Technology, Participation World<br>Skills 2024 competition"                      | Academic year<br>23-24 |
|                                    | B. Des.   | 1 <sup>st</sup> Position in "India Skills 2024 (National),<br>Industrial Design Technology"   | Academic year<br>23-24 |
| Ritwik Raj                         | B. Des.   | Johns Hopkins Healthcare Design<br>Challenge Finalist - Digital Track   | Academic year<br>23-24 |
| 2k21/BD/074                        | B. Des.   | Silver Winner - Student Service Design<br>Challenge 2023  | Academic year<br>23-24 |
| 2K21/BD/103                        | B. Des.   | Stanford Center on Longevity Design<br>Challenge 2024 Finalist  | Academic year<br>23-24 |
| 2K21/BD/106                        | B. Des.   | Stanford Center on Longevity Design<br>Challenge 2024 Finalist  | Academic year<br>23-24 |
| Khushi Agarwal,<br>2K21/BD/050     | B. Des.   | Research paper published in Journal of Strategic Planning, Atlas Skill tech University  | Academic year<br>23-24 |
| Arohi Aggarwal                     | B. Des.   | Charpak Lab Scholarship 2024 Academic ye 23-24  |                        |

# 4.8 DELHI SCHOOL OF MANAGEMENT (DSM)





**Dr. Archana Singh,** HoD (1st Jan., 2021 - 31st Dec., 2023)

#### **ACADEMIC PROGRAMMES**

MBA
Intake: 150
Admitted: 147

MBA (Executive)
Intake: 60
Admitted: 41

Ph.D.
Admitted: 18

#### **RESEARCH PUBLICATIONS**



**JOURNALS: 43** 

**CONFERENCES: 05** 



## **SALIENT FEATURES**

Delhi School of Management (DSM) was established in 2009, with Delhi College of Engineering (DCE) acquiring University status, being officially renamed as Delhi Technological University (DTU) through a legislature passed by the Delhi State Assembly. DSM envisages at developing distinctive future managers, keeping up with the tradition of DCE (and now DTU) by providing excellent world-class education. DSM was established with the vision of inculcating a penchant for innovation, research, and experimentation in aspiring managers. DSM aims to extend the seven-decade-long legacy of DCE by incubating and developing technomanagers who are adept at identifying pertinent and critical business problems and applying their technical skills and competencies in solving those issues. In order to train its students to face the challenges of an information and knowledgedriven work environment, DSM provides them with the Triple E: Education, Experience, and Exposure. DSM strives to inculcate its students' managerial competence through specialized knowledge and skills while simultaneously empowering their minds through quality teaching, consultancy, and other professional services in order to fulfill its role of a vibrant and model institution capable of imparting quality education in the area of Management Studies. DSM envisions developing a knowledge society by providing equitable access to the masses and broadening the span of their participation in the areas of higher education.

#### **LABORATORY**

Name of Laboratory: Data Analysis

**Details:** It is a Data Analytic lab consisting of 30 computers where students learn about advanced Excel, SPSS, R, and Python.



#### **ACADEMIC STAFF**

#### **PROFESSORS**

#### Prof. Pradeep Kumar Suri

(M.Tech., Ph.D.) **:h Area:** E-Goverr

Research Area: E-Governance, Project Management, Quantitative Methods

#### Prof. Rajan Yadav (MBA, Ph.D.)

Research Area: Services
Marketing, Sales and
Distribution Management, Rural
Marketing, Social Marketing,
Retail Management

### ASSOCIATE PROFESSOR

#### HoD

Dr. Saurabh Agrawal Research Area: (B.E. (UOR,

Roorkee), M.Tech. (IIT, Delhi), MBA (OSU, USA), Ph.D. (DTU, Delhi), Ph.D.) Supply Chain Management, Reverse Logistics, Industrial Engineering, Data Analytics

#### Dr. Archana Singh

(MBA (Finance), Ph.D.)

Research Area: Corporate
Finance, Financial
Accounting, Security
Analysis

#### Dr. Shikha N Khera

(MBA, NET, Ph.D.) **Research Area:** 

Organizational Behavior, Organizational Development

#### Dr. Vikas Gupta

(MBA, NET, Ph.D.)

Research Area: Knowledge Management, Innovation Management, Business Process Re-engineering, Corporate Social Responsibility

#### **ASSISTANT PROFESSORS**

#### **Dr. Abhinav Chaudhary**

(B.E., MBA, NET (UGC), Ph.D.)

Research Area: International

Marketing Management, Marketing
of Services, Consumer Behaviour,

Customer Relationship Management,

Knowledge Management

#### Dr. Deepali Malhotra

(M.Com., M. Phil, NET-JRF, Ph.D.) **Research Area:** Strategy Management,
International Business, Finance

#### Dr. Deep Shree

(B.A. (Hons.) – Economics, MBA, NET-JRF, Ph.D.)

**Research Area:** Marketing, Not for Profit Marketing, Brand Management, Qualitative Research

#### Dr. Chandan Sharma

(B. Tech., PGDM, Ph.D.)
Research Area: Finance, Strategy

#### **Dr. Mohit Beniwal**

(B. E., MS in Information Systems, MBA, Ph.D.)

**Research Area:** Information Systems, Finance

## Mr. Yashdeep Singh (B.E., MBA)

Research Area: Marketing Management, Information Technology Management

Mr. Dhiraj Kumar Pal (B.E., PGDM) Research Area: Marketing, Operations & SCM, Strategy

#### **ACHIEVEMENTS OF THE DEPARTMENT:**

- NBA Accreditation of MBA from 2022-25
- Dr. Saurabh received the Yearly Citation Award from DTU
- Dr. Saurabh and Dr. Vikas Received Research Excellence Award
- Prof. Rajan Yadav got a project from ICSSR, Delhi
- Dr. Shikha got a consultancy project named Training Policy Document
- Dr. Sikha contributed to the Swayam module named "Principles of Management"
- DSM successfully organized Orientation, Home Coming, E-Talk and Management Fest

## **Grants for Research Projects Sponsored by Funding Agencies:**

PI/Co-PI: Prof. Rajan Yadav **Title:** Issues and Challenges in Collaborative Linkages among Government Organizations, Private Sector, and Citizens towards Creating, Storing and Using Digital Repository with Special Reference to Digi Locker.

Agency: The Indian Council of Social Science Research (ICSSR)

Amount (₹): 13 Lakhs | Sanctioned Date: 14th February, 2024

**Duration:** 2 Year

PI/Co-PI: Dr. Shikha N Khera **Title:** Training policy Document

Funding Agency: Colour Design India

Amount (₹): 1.1 Lakhs | Year of Commencement: 2024

## **Events organized by the Department:**

| Name of Event  | Date(s)   | Coordinator/co-coordinator                  |  |
|--|---|---|--|
| Workshop on "Lean Startup and Minimum Viable Business"                         | 22 <sup>nd</sup> August, 2023                   | Dr. Chandan Sharma/ Dr. Mohit<br>Beniwal    |  |
| Workshop on "Business Model<br>Canvas"   | 18 <sup>th</sup> - 19 <sup>th</sup> April, 2024 | Dr. Chandan Sharma/ Dr. Deepali<br>Melhotra |  |
| E-Talks 2024 - Leadership,<br>Innovation and Growth                            | 9 <sup>th</sup> April, 2024                     | Dr. Chandan Sharma                          |  |
| Industrial Visit - Yakult Danone<br>India Private Limited                      | 2 <sup>nd</sup> November, 2023                  | Dr. Chandan Sharma                          |  |
| Orientation 2023   | 1 <sup>st</sup> - 4 <sup>th</sup> August, 2023  | Dr. Deepshree                               |  |
| Workshop on "Business Model<br>Canvas"   | 18 <sup>th</sup> - 19 <sup>th</sup> April, 2024 | Dr. Chandan Sharma/ Dr. Deepali<br>Melhotra |  |
| Workshop on "Entrepreneurship<br>Skill, Attitude and Behaviour<br>Development" | 23 <sup>rd</sup> February, 2024                 | Dr. Deepali Malhotra/ Dr. Deep Shree        |  |









## Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

#### Dr. Mohit Beniwal

**Event Details:** "Two Weeks Online FDP on Quantitative and Qualitative Research Methods"

**Organized by:** Birla Institute of Technology, Mesra

**Date(s):** 20<sup>th</sup> - 31<sup>st</sup> May, 2024

Amount received by DTU, Delhi (₹): 1500/-

#### Dr. Deep Shree

**Event Details:** Experimental research design

Organized by: MICA, Ahmedabad

**Date(s):** 30<sup>th</sup> November - 2<sup>nd</sup> December, 2023

Amount received by DTU, Delhi (₹):

8000/-

## **Faculties Participation in Professional Development Programmes:**

| Name of Faculty         | Title of Professional  Development Program  | Organized by   | Date(s)   |
|-------------------------|---|--|---|
| Dr. Deepali<br>Malhotra | FDP on "Advanced teaching pedagogy and outcomebased education in context of NEP 2020" | HRDC, DTU, Delhi   | 27 <sup>th</sup> - 31 <sup>st</sup><br>May, 2024  |
| Dr. Archana Singh       | National Level E faculty<br>Development Program on<br>"Financial Modelling"           |  | 22 <sup>nd</sup> - 26 <sup>th</sup><br>July, 2024 |
| Dr. Archana Singh       | NEP 2020 Orientation & Sensitization Programme in online mode                         | Malaviya Mission Teacher<br>Training Programme (MMTTP),<br>SRCC, University of Delhi | 2 <sup>nd</sup> - 12 <sup>th</sup> April<br>2024  |

| Name of Faculty       | Title of Professional Development Program                                     | Organized by  | Date(s)   |
|-----------------------|---|---|---|
| Dr. Archana Singh     | Online FDP on "Application of Al in Academic Research"                        | Institute of management & Information Science, Bhubaneshwar | 25 <sup>th</sup> - 29 <sup>th</sup><br>June, 2024 |
| Dr. Chandan<br>Sharma | NEP 2020 Orientation & Sensitization Programme in online mode                 | Iswar Saran PG College,<br>Prayagaraj                       | 10 <sup>th</sup> - 18 <sup>th</sup><br>July, 2024 |
| Dr. Mohit Beniwal     | Two Weeks Online FDP on<br>"Quantitative and Qualitative<br>Research Methods" | Birla Institute of Technology,<br>Mesra                     | 20 <sup>th</sup> - 31 <sup>st</sup><br>May, 2024  |

## Awards and Recognition at State, National, and International level from Recognized Bodies:



## Visit of Faculty to other University/Institution for Expert Lectures/ Academic Work:

| Name of Faculty  | Role              | Details of Event  | Organized by  | Date(s)   |
|------------------|-------------------|---|---|---|
|                  | Panelist          | Panelist in the workshop on<br>"Data for Good Governance"   | Ministry of Electronics<br>and Information<br>Technology, Delhi | 28 <sup>th</sup> March,<br>2024                       |
|                  | Reviewer          | Institute of Management   |   | 15 <sup>th</sup> March,<br>2024                       |
| Prof. P. K. Suri | MBA<br>Admission  | Member, MBA Admission<br>Committee  | Department of<br>Management Studies,<br>IIT, Delhi              | 11 <sup>th</sup> - 13 <sup>th</sup><br>March,<br>2024 |
|                  | Guest of<br>Honor | Inaugural Session of the<br>National Conference on<br>"New India: Vision for 2047"                  | Tecnia Institute of<br>Advanced Studies, Delhi                  | 18 <sup>th</sup> May,<br>2024                         |
|                  | Expert<br>Lecture | Delivered lectures on (i)<br>E-governance Planning and<br>Implementation (ii) Project<br>Management | •   | 20 <sup>th</sup> May,<br>2024                         |

| Name of Faculty         | Role              | Details of Event  | Organized by                      | Date(s)  |
|-------------------------|-------------------|---|-----------------------------------|--|
| Dr. Deepali<br>Malhotra | External          | "Final Research Project"  | Lal Bahadur Shastri               | 10 <sup>th</sup> March,<br>2023                          |
| Wallotta                | Examiner          | (FRP) presentations in LBSIM  | Institute of Management,<br>Delhi | 8 <sup>th</sup> February,<br>2024                        |
| Dr. Archana<br>Singh    | Session<br>Chair  | International Conference<br>on "Diversity, Equity and<br>Inclusion: Cultures, Practices<br>Policies in Management,<br>Entrepreneurship, and<br>Economics" | USME, DTU, Delhi                  | 15 <sup>th</sup> -16 <sup>th</sup><br>September,<br>2023 |
| Dr. Shikha N<br>Khera   | Expert<br>lecture | Expert lecture, "Teaching<br>Learning and Assessment"<br>MMTTP  | SRCC, University of<br>Delhi      | 5 <sup>th</sup> July,<br>2024                            |

## Participation of Faculties in Extension & Outreach Activities organized by University:

| Name of Faculty         | Details of Activity   | Purpose of Activity                    | Date(s)  |
|-------------------------|---|--|--|
| Dr. Deepali<br>Malhotra | E-waste awareness and collection drive                      | E-waste awareness and collection drive | 21st - 24th February, 2024                       |
| Dr. Shikha N<br>Khera   | Netritva, The HR club of Delhi<br>School of management, DTU | A donation drive                       | 8 <sup>th</sup> - 9 <sup>th</sup> February, 2024 |

## Financial Support provided to Students to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ Training etc. during Current Year:

Name of Student: Kumar Manaswi **Event:** 20<sup>th</sup> International Conference on "Sustainable

**Energy Technologies**"

Organised by: University of Nottingham, UK

**Date(s):** 15<sup>th</sup> - 17<sup>th</sup> August, 2023

Amount received by DTU, Delhi ((₹)): 44,376/-

## **Students' Achievements:**



Mr. Kumar Manaswi

Program: Ph.D.

**Details of Achievement:** Paper selected in the University of Nottingham Conference

**Dates:** 15<sup>th</sup> - 17<sup>th</sup> August, 2023



# 4.9 DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING



Prof. O. P. Verma, HoD

#### **ACADEMIC PROGRAMMES**

B.Tech. (ECE) Intake: 241 Admitted: 241

M.Tech. (VLSI Design and Embedded Systems) Intake: 25+5 Admitted: 25+1

M.Tech. (Signal Processing and Digital Design) Intake: 25 Admitted: 15

> Ph.D. Admitted: 19

#### **RESEARCH PUBLICATIONS**

PATENTS Granted : 11 (National)



**JOURNALS: 122** 

**CONFERENCES: 29** 



BOOK: 01 (Edited)
BOOK CHAPTERS: 11

## **SALIENT FEATURES**

Since its inception in 1976, the Department of Electronics and Communication Engineering (ECE) has grown substantially. The department is committed to driving innovation in electronic desian. fabrication. and communication technologies, addressing the challenges of tomorrow. The department offers B. Tech, M.Tech. (VLSI Design & Embedded Systems), M.Tech. (Signal Processing & Digital Design), M.Tech. (Microwave and Optical Communication), and Ph.D., to cater to the diverse range of educational needs. The academic program is structured to cultivate a strong understanding of foundational concepts and the latest advancements in the field. Our postgraduate offerings focus on mastering core principles and staying up-to-date with modern developments.

Additionally, the department places a strong emphasis on advancing high-quality research. Ph.D. scholarships are available in Electronics and Communication, covering diverse specialized areas such as VLSI, Embedded Systems, Digital Signal Processing (DSP), Image Processing, Microstrip Antenna Design, RF & Microwave Engineering, Sensor Networks, Machine Learning (ML), Deep Learning (DL) & Artificial Intelligence (AI), Computer Vision, Robotics, Wireless Communication, Optical Communication, Nanoelectronics, Speech Processing, and Analog and Digital System Design.

Faculty members of the department have consistently contributed to prestigious international and national journals from renowned publishers such as IEEE Transactions, IET, Wiley,

## **SALIENT FEATURES (Cont.)**

Springer, and Elsevier. The department is also actively engaged in professional activities through IEEE Delhi chapters. Several faculty members have authored well-regarded technical books and chapters, and some have applied for patents based on their research discoveries. To keep up with industry trends, the department regularly hosts seminars, workshops, and training programs.



- PCB Lab
- Telecommunication Lab
- Robotics & Machine Learning Lab
- Optical Communication Lab
- Microwave CAD Lab
- Microwave Lab
- Linear Integrated Circuits Lab
- Digital Electronics Lab
- VLSI CAD Lab
- Microprocessor Lab

- Advanced Digital Signal Processing Lab
- UAS Lab
- Freescale Lab
- Computer Vision Lab
- Electronic Devices & Circuit I Lab
- Electronic Devices & Circuit II Lab
- Circuit Fabrication Lab
- Industrial Sponsored Design Lab











#### **ACADEMIC STAFF**

#### **PROFESSORS**

#### HoD: Prof. O. P. Verma

(B.E., M.Tech., Ph.D.)

Research Area: Machine

Learning Applications, Image

Processing

#### Prof. Asok De

(Ph.D.)

#### Research Area:

Communication and Microwave.

## Prof. Rajiv Kapoor

(Ph.D.)

**Research Area:** Computer Vision, Digital Image Processing, Signal Processing

## Prof. S. Indu

(Ph.D.)

**Research Area:** Computer Vision, Sensor Networks, and Image Processing

## Prof. Rajeshwari Pandey

(Ph.D.)

#### Research Area:

Microelectronics, Analog Circuits and Devices, and Analog IC Design

## Prof. Neeta Pandey

(Ph.D.)

Research Area: Analog & Digital VLSI Design, Current mode ADC Design

## Prof. Dinesh Kumar

(Ph.D.)

Research Area: Image Processing, Soft Computing, Biometrics, Medical Imaging, and Image Captioning

#### Prof. Jeebananda Panda

(Ph.D.)

Research Area: Image Processing, Watermarking and Cryptography, Embedded system Design, Data Compression, Object Detection and Tracking

## Prof. Rajesh Rohilla

(Ph.D.)

Research Area: Computer Vision, Machine Learning, Embedded Systems, Robotics, and Digital Design

## Prof. M. S. Choudhary

(Ph.D.)

Research Area: Signal Processing, Image Processing, Bio-Medical Signal & Image Processing

#### **Prof. Poornima Mittal**

(B.Tech., M.Tech., Ph.D.)

Research Area: Low-power

VLSI, SRAM Memory Cell,
and Flexible Electronics

#### Prof. Priyanka Jain

(B.Tech., M.Tech. & Ph.D.)

Research Area: Digital Signal

Processing, Microwave

#### **Prof. Alok Kumar Singh**

(B.Tech., M.Tech. & Ph.D.)

Research Area: Analog
Integrated Circuits and Signal
Processing

#### **ASSOCIATE PROFESSORS**

#### Dr. Rajesh Birok

(B.Tech., M.Tech. & Ph.D.)

Research Area:

Communication Systems & Biomedical Electronics

#### Dr. Sudipta Majumdar

(B.Tech., M.Tech., Ph.D.)

Research Area: Signal

Processing, Nonlinear system modeling, Estimation theory

#### Dr. Deva Nand

(B.Tech., M.Tech. & Ph.D.)

Research Area: Analog and

Digital Integrated Circuits and Signal Processing

#### **ASSISTANT PROFESSORS**

#### Dr. Avinash Ratre

(B.Tech., M.Tech. & Ph.D.)

Research Area: Computer

Vision, Machine Learning,

Signal Processing, Digital

Communication

#### Dr. Ajai Kumar Gautam

(B.Tech., M.Tech. & Ph.D.) **Research Area:** Digital System

Design, ., Embedded System

Design, Image Processing,

#### Dr. N. Jayanthi

(B.E., M.Tech., Ph.D.)

Research Area: Image processing, Machine learning, Communication system

Dr. Malti Bansal (Ph.D.)
Research Area: RF Electronics,
IoT, Machine Learning,

IoT, Machine Learning, Nanoelectronics, and VLSI

#### **ASSISTANT PROFESSORS**

#### Dr. Yashna Sharma

(B.Tech., M.Tech., Ph.D.)

Research Area: Optical

Communication,

Nanophotonics, Plasmonics

#### Mr. Piyush Tewari

(B.Tech., M.Tech., Ph.D.(p))

Research Area: Machine
Learning, Deep Learning,
Al, Signal Processing, and
Wireless Communication

#### Mr. Anurag Chauhan

(B.Tech., M.Tech., Ph.D. (p))

Research Area: Low-power

VLSI, nanoelectronics,

Optoelectronics

#### Dr. Kriti Suneja

(B.Tech., M.Tech, Ph.D.) **Research Area:** Digital Design,

Non-linear Dynamic Systems

#### Mr. Sumit Kumar Khandelwal

(M.Tech., Ph.D. (p))

Research Area: Implantable
Biomedical Antennas, RF and
Microwave

**Dr. Pankaj Dahiya** (Ph.D.) **Research Area:** Control Systems, Control of Cyber-Physical System

#### **Dr. Rohit Kumar**

(B.Tech., M.Tech., Ph.D., Post Doc)
Research Area: Reinforcement
learning algorithms for cognitive
radio and IoT Networks, MultiArmed Bandits, Reconfigurable
Intelligent Surfaces, Visible
Light Communication

#### Mr. Sachin Dhariwal

(M.Tech., Ph.D. (p))

Research Area: Advanced
Semiconductor Electronics,
Microelectronics, VLSI Design,
Nanoscale Devices

#### Mr. Akshay Mann

(B.Tech., M.Tech., Ph.D.(p))

Research Area:

Microelectronics, VLSI Design,

Mixed Signal Design

#### Mr. Lokesh Gautam

(B.Tech., M.Tech., Ph.D.(p))

Research Area: Low Power

VLSI, Near Threshold Voltage

#### Mr. Rahul Thakur

(B.Tech., M.Tech., Ph.D.(p))

Research Area: Image

Processing, Deep Learning

application

#### Mr. Kaustubh Ranjan Singh

(B.Tech., M.Tech., Ph.D.(p))

Research Area: Wireless

& Mobile Communication,
Information Theory Coding

**Dr. Sachin Taran** (Ph.D.) **Research Area:** Signal processing and Machine Learning

#### **Dr. Sumit Kale**

(B.Tech., M.Tech. & Ph.D.) Research Area:

Microelectronics, VLSI, Nanoscale Devices

#### **Dr. Sonal Singh**

(B.Tech., M.Tech. & Ph.D.)

Research Area: VLSI,

Nanoelectronics

#### **Dr. Anukul Pandey**

(B.Tech., M.Tech. & Ph.D.)

Research Area: Signal processing

#### Ms. Lavi Tanwar

(B.Tech., M.Tech., Ph.D.(p))

Research Area: Signal

Processing, Image Processing,

Digital Watermarking

#### Dr. Chhavi Dhiman (Ph.D.)

Research Area: Computer vision, Deep learning, NLP, Machine learning, pattern recognition

**Dr. Sonam Rewari** (Ph.D.) **Research Area:** Semiconductor Device Modelling

**Dr. Manjeet Kumar** (Ph.D.) **Research Area:** Signal Processing, Biomedical Signal

**Dr. Deepika Sipal** (Ph.D.)

Processing, Fractional Systems

Research Area: RF and
Microwave Engineering

#### Mr. M. Ganesh

(B.Tech., M.Tech., Ph.D.(p))

Research Area: RF and

Microwave Engineering

**Dr. Harikesh** (Ph.D.) **Research Area:** RF and Microwave Engineering

#### Mr. Varun Sangwan

(B.Tech., M.Tech., Ph.D.(p))

Research Area: Image Processing,

Deep Learning application

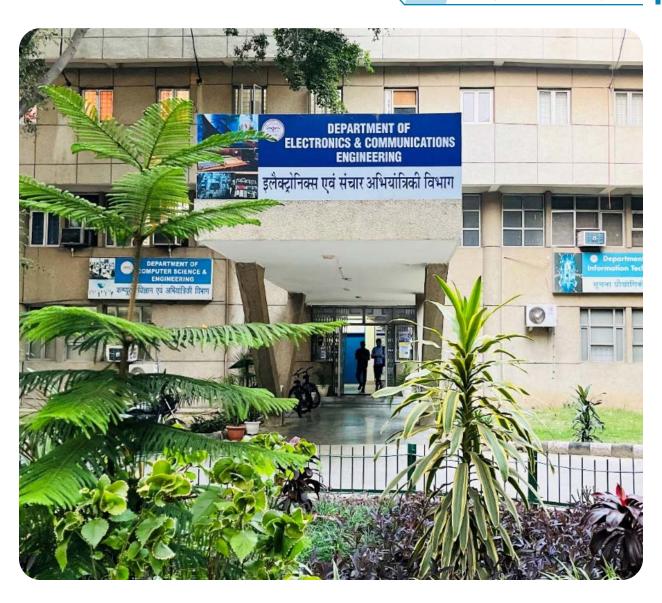
#### Mr. Vinay Kumar

(B.Tech., M.Tech., Ph.D.(p))

Research Area:

Microelectronics, VLSI,

Microelectronics, VLSI, Neuromorphic Engineering



#### **ACHIEVEMENTS OF THE DEPARTMENT:**

#### **Placement & Internship:**

| Programme     | Maximum CTC | Avg. CTC   | Students Placed | Total Offers |
|---------------|-------------|------------|-----------------|--------------|
| B.Tech. (ECE) | 85.3 Lacs   | 16.07 Lacs | 131             | 142          |
| M. Tech.      | 28.9 Lacs   | 15.80 Lacs | 19              | 19           |

- Prof. Neeta Pandey and Dr. Manjeet Kumar are Featured in the Top 2% (World Ranking) of Scientists listed by Stanford University.
- Research Excellence & Innovation Awards 2024: 13 faculty members of ECE Department received Research Excellence/Citation/Commendable
- Research/Premier Research Awards in 2024.
- 31 Students of the ECE department received the Commendable Research/ Premier Research Awards in 2024.
- 11 patents are granted with inventors from the ECE department in AY 2023-24.

## **Grants for Research Projects Sponsored by Funding Agencies:**

### PI/Co PI: Prof S. Indu | Dr. N. Jayanthi

#### Title of Project:

Digitizing manuscripts at the Indira Gandhi National Centre for the Arts and facilitating online access to digitized documents

> Agency Name: iHub Drishti Foundation, IIT, Jodhpur Amount (₹): 20 Lacs

Sanctioned Date: 27th March, 2024

**Duration:** 1 Year

PI: Dr. Sumit Kale

#### **Title of Project:**

Design and Development of Reconfigurable Silicon Nanowire Schottky Barrier Transistors for Biosensor Applications

Agency Name: SERB
Amount (₹): 29.65 Lacs

Sanctioned Date: 10th March, 2022

**Duration:** 3 Years

#### PI: Dr. Rohit Kumar

#### **Title of Project:**

Performance Optimization of Reconfigurable Intelligent Surfaces (RIS) Assisted Communication Networks Using Reinforcement Learning Algorithms for Smart Villages

> Agency Name: SERB Amount (₹): 31.40 Lacs

Sanctioned Date: 1st November, 2022

**Duration:** 1 Year

### PI/Co PI: Prof. Rajiv Kapoor Dr. Rajesh Birok

#### **Title of Project:**

Real-Time Video Anomaly Detection for Tactical Surveillance Using Deep Learning

> Agency Name: DRDO Amount (₹): 29.77 Lacs

**Sanctioned Date:** 16<sup>th</sup> November,

2022

**Duration:** 3 Years

#### **Details of Patents Granted in 2023-24:**

| Name of Inventor(s)  | Title of Patent   | Patent<br>Number | Date                               |
|--|---|------------------|------------------------------------|
| Om Prakash Verma,<br>Nirmal Pandey,<br>Sunil Rathor, Amioy Kumar | Power optimization in battery operated devices                              | 473178           | 25 <sup>th</sup> November,<br>2023 |
| Om Prakash Verma,<br>Nirmal Pandey,<br>Nitesh Goyal, Amioy Kumar | Method and system for managing access to applications in a computing device | 456166           | 2 <sup>nd</sup> October,<br>2023   |
| Om Prakash Verma   | Method for power management in an electronic device thereof                 | 532075           | 8 <sup>th</sup> April, 2024        |
| Om Prakash Verma, Amitabh<br>Thapliya                            | Methods and system of authenticating a user in electronic device            | 544944           | 15 <sup>th</sup> July, 2024        |

| Name of Inventor(s)   | Title of Patent   |        | Date                               |
|---|---|--------|------------------------------------|
| Mini Sreejeth, S. Indu, Piyush<br>Gupta, R. K. Upadhyay,<br>Madhusudan Singh                    | Motor controller for light mobility vehicles of india   | 544481 | 9 <sup>th</sup> July, 2024         |
| N. S. Raghava,<br>Akhilesh Kumar  | Lantenna using multiple slots for 5 (7)   |        | 2 <sup>nd</sup> April, 2024        |
| Bhawna Rawat,Reconfigurable static random accessPoornima Mittalmemory (SRAM) and method thereof |   |        | 13 <sup>th</sup> March,<br>2024    |
| Ishu Tomar, S. Indu,<br>Neeta Pandey  | PLC based system for emergency vehicle management and intelligent traffic control at road intersections | 485248 | 19 <sup>th</sup> December,<br>2023 |
| Garima Singh, Gurjit Kaur   | A multicore fiber cable and its manufacturing process thereof   | 486395 | 20 <sup>th</sup> December,<br>2023 |
| Rajiv Kapoor,<br>Hemani Kapoor  | Land Vibrator for root canaling process L   |        | 5 <sup>th</sup> March,<br>2024     |
| Rajiv Kapoor, Surender Singh Bisht, Gaurav Joshi, Hemani Kapoor  An automatic garbage collect   |   | 494706 | 4 <sup>th</sup> January,<br>2024   |

## **Events organized by the Department:**

| Details of Event  | Date(s)   | Coordinator/Co-<br>coordinator                              |
|---|---|---|
| One-day seminar on "Understanding Intelligence and Artificial intelligence"   | 20 <sup>th</sup> March, 2024                          | Prof. S. Indu, Dr. N. Jayanthi                              |
| Seminar on "Emerging Transportation solutions driven by Industry 4.0 in collaboration with IEEE-ITSS Delhi Chapter Transformation"  | 11 <sup>th</sup> December,<br>2023                    | Prof. S. Indu, Prof. J. Panda,<br>Dr. N. Jayanthi           |
| One-day Workshop on "Blockchain Technologies: Introduction to Web 3.0 and Development on Decentralized Blockchain Networks" in collaboration with IEEE -ITSS Delhi Chapter and IEEE student Branch DTU, Delhi | 12 <sup>th</sup> October,<br>2023                     | Prof. J. Panda,<br>Dr. N. Jayanthi                          |
| Next Generation Wireless Networks   | 12 <sup>th</sup> - 16 <sup>th</sup><br>December, 2023 | Dr. Rohit Kumar   |
| One Week FDP on "Advancement and Challenges in VLSI Design and Nanoscale Devices"   | 27 <sup>th</sup> - 31 <sup>st</sup> May,<br>2024      | Dr. Sumit Kale,<br>Dr. Sonam Rewari,<br>Mr. Sachin Dhariwal |
| One-Day Workshop on "Digital System Design using EDA Tools"   | 10 <sup>th</sup> – 14 <sup>th</sup> June,<br>2024     | Dr. Deva Nand,<br>Dr. Kriti Suneja                          |
| Expert lecture on "Clocking a Semiconductor Chip: Timing Perspective" under the initiative of Viksit Bharat   | 21 <sup>st</sup> March, 2024                          | Prof. Neeta Pandey,<br>Dr. Deva Nand                        |









## Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

Mr. Rahul Thakur

**Event Details:** Fifteenth International Conference on "Computing, Communication and Networking Technologies (ICCCNT)"

Organized by: IIT-Mandi, in association with IEEE Electronics
Packaging Society

**Date(s):** 24<sup>th</sup>-28<sup>th</sup> June, 2024

Amount received by DTU, Delhi (₹): 8,900/-

Dr. Kriti Suneja & Mr. Anurag

**Event Details:** FDP: "Advancement and Challenges in VLSI Design and Nano Scale Devices"

Organized by: Dept. of ECE, DTU, Delhi

Date(s): 27th -31st May, 2024

Amount received by DTU, Delhi (₹): 1,000/-

Dr. Deepika Sipal

Event Details: IEEE conference "MAPCON-2023"

Organized by: IEEE AP/MTTE Ahmedabad Chapter

**Date(s):** 10<sup>th</sup> -14<sup>th</sup> December, 2023

Amount received by DTU, Delhi (₹): 23,610/-

## **Faculties' Collaboration for Research:**

| Name of Faculty  | Collaboration with  | Collaboration commenced from | Expected Duration for Collaboration |
|--|---|------------------------------|-------------------------------------|
| Prof. S. Indu<br>Dr. N. Jayanthi   | Prof. Anand Misra, IIT Jodhpur<br>Prof. Anil Kumar Tiwari, IIT Jodhpur<br>Prof. Ramesh Gaur, IGNCA    | March, 2024                  | 3 Years                             |
| Prof. Dinesh Kumar   | Dr. Vijay Kumar, NIT Jalandhar  | August, 2019                 | 4 Years                             |
| Dr. Deepika Sipal  | Dr. Ravi Kumar Arya, University of Science<br>and Technology, China<br>Dr. Sudeep Baudha, BITS-Pilani | August, 2021                 | 4 Years                             |
| Prof. Rajeshwari<br>Pandey<br>Prof. Neeta Pandey   | Prof. Kirti Gupta, Bharati Vidyapeeth's<br>College of Engineering, Delhi                              | August, 2019                 | 4 Years                             |
| Prof. Neeta Pandey   | Prof. Neeta Pandey Prof. R. S. Gupta, MAIT, Delhi Prof. Maneesha Gupta, NSUT, Delhi                   |                              | 4 Years                             |
| Prof. Jeebanand<br>Panda   | II)r Rashmi Gunta NSIII Delhi   |                              | 4 Years                             |
| Prof. Rajesh Rohilla<br>Prof. M. S.<br>Choudhary<br>Prof. S. Indu                              | Dr. Gurjit Singh Walia, Senior Scientist<br>DRDO, Delhi   | August, 2019                 | 5 Years                             |
| Prof. Poornima<br>Mittal   | Dr. Sudhanshu Choudhary, University of<br>North Dakota, USA<br>Dr. Pravin Kumar, KIET, Ghaziabad      | August, 2019                 | 5 Years                             |
| Dr. Rohit Kumar  | Dr. Sumit J. Darak, IIIT Delhi<br>Prof. Shankar Prakriya, IIT Delhi                                   | August, 2020                 | 4 Years                             |
| Dr. Sudipta<br>Majumdar  | Dr. Ashish Agarwal, Scientist, NPL, Delhi   | August, 2020                 | 4 Years                             |
| Dr. Yashana Sharma   | Dr. T. Sabapathy, Centre of Excellence,<br>University Malaysia  | August, 2020                 | 4 Years                             |
| Prof. M. S.<br>Choudhary   | Dr. Varun Saxena, JNU, Delhi<br>Dr. Laxman Singh, KIET, Ghaziabad                                     | August, 2021                 | 4 Years                             |
| Prof. S. Indu Prof. Nidhi Goel, IGDTUW Delhi   |   | August, 2021                 | 4 Years                             |
| Dr. Pankaj Dahiya  | <b>Dr. Pankaj Dahiya</b> Dr. Yogendra Arya, YMCA, Faridabad   |                              | 4 Years                             |
| Dr. Yashna Sharma Dr. Jai Prakash, Deputy Director General, National Institute of Solar Energy |   | August, 2022                 | 4 Years                             |
| Dr. Sachin Taran   | Dr. Lokendra Chouhan, IIIT, Andhra<br>Pradesh   | August, 2022                 | 4 Years                             |
| Prof. Neeta Pandey   | Dr. Shireesh Rai, TIET, Patiala   | August, 2023                 | 4 Years                             |

## **Faculties Participation in Professional Development Programmes:**

| Name of Faculty   | Details of PDP   | Organized by   | Date(s)   |
|---|--|--|---|
|   | Quality Assurance through NAAC<br>Accreditation Process – Swayam   | NITTR, Chennai   | July - December,<br>2023                              |
| Prof. Neeta Pandey  | NBA Accreditation and Teaching and learning in Engineering (NATE)-NPTEL  | IISc., Bangalore   | January - April,<br>2024                              |
|   | VLSI Physical Design with Timing<br>Analysis – NPTEL   | IIT, Roorkee   | January - April,<br>2024                              |
| Dr. N. Jayanti<br>Mr. M. Ganesh   | Advanced Teaching Pedagogy<br>and Outcome-based Education in<br>Context of NEP-2020  | HRDC-DTU, Delhi<br>in association with<br>NITTTR, Bhopal                   | 27 <sup>th</sup> - 31 <sup>st</sup> May,<br>2024      |
| Mr. Rahul Thakur  | FDP on "Building Advanced Data<br>Analytics Applications with Cloud"<br>under Next Gen Employability<br>Program                              | AICTE and Edunet<br>Foundation   | 18 <sup>th</sup> - 22 <sup>nd</sup><br>December, 2023 |
|   | Fifteenth International Conference on "Computing, Communication and Networking Technologies (ICCCNT)"  | IIT-Mandi, in<br>association with<br>IEEE Electronics<br>Packaging Society | 24 <sup>th</sup> - 28 <sup>th</sup> June,<br>2024     |
| Dr. Avinash Ratre   | STC on "Recent Advances in<br>Optimization Techniques for<br>Engineering Applications"   | NIT, Kurukshetra   | 2 <sup>nd</sup> - 6 <sup>th</sup> March,<br>2024      |
|   | Two weeks Interdisciplinary<br>Refresher Course on "Advanced<br>Research methodology"  | Ramanujan College,<br>DU, Delhi  | 27 <sup>th</sup> May - 9 <sup>th</sup><br>June, 2024  |
| Dr. Yashna Sharma<br>Mr. Rahul Thakur<br>Dr. Deva Nand  | Short Term Training Program (STTP) on "Introduction to High Performance Computing (HPC) and its Application in Artificial Intelligence (AI)" | ECE, DTU, Delhi  | 7 <sup>th</sup> - 11 <sup>th</sup> August,<br>2023    |
| Dr. Deva Nand   | Or. Deva Nand  "NEP 2020 Orientation & Sensitization Programme"  |  | 8 <sup>th</sup> - 17 <sup>th</sup> January,<br>2024   |
| Prof. Poornima Mittal<br>Dr. Kriti Suneja<br>Dr. Deva Nand<br>Mr. Piyush Tiwari   | One week FDP on "Advancement<br>and Challenges in VLSI Design and<br>Nanoscale Devices"  | ECE, DTU, Delhi  | 27 <sup>th</sup> - 31 <sup>st</sup> May,<br>2024      |
| Dr. Anukul Pandey<br>Mr. Anurag Chauhan<br>Dr. Kriti Suneja<br>Dr. Deva Nand<br>M. Ganesh<br>Mr. Piyush Tiwari<br>Dr. Avinash Ratre | One week FDP on "Next<br>Generation Wireless Networks"   | ECE, DTU, Delhi  | 12 <sup>th</sup> - 16 <sup>th</sup><br>December, 2023 |

## Awards and Recognition at State, National, and International level from Recognized Bodies:

| Name of Faculty                              | Title of Award   | Awarding Agency/<br>University/Institution |
|--|--|--|
| Prof. Neeta Pandey<br>Dr. Manjeet Kumar      | Featured in the Top 2% (World Ranking) of<br>Scientists listed by Stanford University.<br>Yearly Citation Award: Early Research Impact<br>and Influence Award, | USA  |
| Prof. O. P. Verma<br>Prof. Rajeshwari Pandey | Yearly Citation Award: Early Research Impact and Influence Award   | DTU, Delhi                                 |
| Prof. Poornima Mittal                        | Premier Research Award and Commendable<br>Research Award   | DTU, Delhi                                 |

#### Commendable Research Award, DTU, Delhi

| Prof. Rajiv Kapoor | Prof. Neeta Pandey | Dr. Yashna Sharma |
|--------------------|--------------------|-------------------|
| Dr. Anukul Pandey  | Dr. Anurag Chauhan | Dr. Manjeet Kumar |
| Prof. S. Indu      | Dr. Sachin Taran   |                   |
| Dr. Chhavi Dhiman  | Dr. Sonal Singh    |                   |

## **Research Excellence Awards to the Students' of department:**

Commendable Research Award, DTU, Delhi

Akanksha Srivastava, Asbah Masih,
Ashish Raturi, Ayush, Ayush Dahiya, Amarendra Kumar
Mishra, Bhawna Rawat, Kamakshi Rautela, Kavita Bhatt,
Lokesh Soni, Mohit Tyagi, Neha Garg, Navnit Kumar,
Neetika Yadav, Neetu Sharma, Damyanti Singh,
Dhruv Sharma, Ishu Tomar, Nikhil Singh, Jyoti,
Palak Handa, Paritosh Chamola, Snehlata Yadav, Shivani
Yadav, Shikha, Sugandha Yadav, Sourabh Rana, Shikha
Singhal, Sumedha Gupta, Tanvika Garg,
Vansh Singhal

## Visit of Faculty to other University/Institution for Expert Lectures/ Academic Work:

| Name of<br>Faculty       | Title of Event  | Topic of Lecture/<br>Role   | Organized by   | Date(s)   |
|--------------------------|---|---|--|---|
|                          | ATAL FDP on "Semiconductor<br>Fusion Nexus: Integrating<br>Academic Insights and<br>Industry Innovations"   | Invited Talk:  "SRAM cell Design Challenges in Deep Submicron Technology nodes" | VIPS, Delhi  | 2023-24   |
|                          | Short-Term Course on<br>"Modern VLSI Design and<br>EDA Tools Hands-on"  | Invited Talk:<br>"Nanometer SRAM<br>Design"                                     | NIT, Delhi   | 6 <sup>th</sup><br>November,<br>2023                |
| Prof. Neeta              | Invited Talk  | Invited Talk:<br>"Outcome Based<br>Education"                                   | SMVDU, Jammu   | 18 <sup>th</sup> August,<br>2023                    |
| Pandey                   | DRC, ECE Deptt, DESU, Delhi   | DRC Meeting   | Online Meeting   | 6 <sup>th</sup> January,<br>2024                    |
|                          | RAC of Deptt. of ECE, NSUT,<br>Delhi  | RAC Meeting   | NSUT, Delhi  | 24 <sup>th</sup> April,<br>2024                     |
|                          | External Expert at ECE NEP<br>Syllabus  | Syllabus revision   | IGDTUW, Delhi  | February,<br>2024                                   |
|                          | 'Emerging Transportation<br>Solutions Driven by Industry<br>4.0 Transformation; 7 <sup>th</sup><br>Conference of Transportation<br>Research Group of India, | Organizer for<br>Conference   | NIT, Surat   | 2023-24   |
|                          | 11 <sup>th</sup> International Conference<br>on "Microelectronics, Circuits<br>and Systems", West Bengal  | Convenor<br>MICRO2024   | Organized by<br>VDCoE4SM, DTU,<br>in Collaboration<br>with Applied<br>Computer<br>Technology,<br>Kolkata | 16 <sup>th</sup> - 17 <sup>th</sup> May,<br>2024    |
|                          | First Int. Conf. on "Electronics,<br>Communication and Signal<br>Processing (ICECSP 2024)"  | Session Chair   | NIT, Delhi   | 8 <sup>th</sup> -10 <sup>th</sup><br>August 2024    |
| Prof. Poornima<br>Mittal | IEEE- Int. Conf. on "Power<br>Electronics, Intelligent Control<br>& Energy Systems (ICPEICES<br>2024)"  | Session Chair   | Electrical Engg,<br>DTU, Delhi   | 28 <sup>th</sup> April,<br>2024                     |
|                          | Evaluation of R&D proposals   | Expert  | Council of<br>Science and<br>Technology,<br>Govt. of U.P.  | April 2024  |
|                          | Interview   | Board Member  | National Testing<br>Agency, Delhi  | 22 <sup>nd</sup> - 24 <sup>th</sup><br>April, 2024. |

| Name of<br>Faculty  | Title of Event  | Topic of Lecture/<br>Role | Organized by                                       | Date(s)  |
|---|---|---------------------------|--|--|
|   | Board of Studies  | External Member           | MMMUT,<br>Gorakhpur                                | April, 2024                                      |
| Prof. S. Indu   | Second International Conference on "Recent Innovations in Science Technology and Humanities"  Keynote Speaker College Ghaziabad, U.P. |                           | 23 <sup>rd</sup> June,<br>2024                     |  |
|   | RAC of Deptt. of ECE, NSUT,<br>Delhi  | RAC Meeting               | NSUT, Delhi  | 27 <sup>th</sup> July,<br>2024                   |
|   | Expert member for CAS   | CAS Interview             | Mata Vaishnavi<br>Devi University,<br>Katra, Jammu | 28 <sup>th</sup><br>September,<br>2023           |
| Dr. Deva Nand  First International Conference on "Electronics, Communication and Signal Processing (ICECSP 2024)" |   | Session Chair             | NIT, Delhi   | 8 <sup>th</sup> -10 <sup>th</sup><br>August 2024 |

## Functional MoUs with Universities/Institutions/Industries of National/International Importance:

**Details of MoU:** MoU between DTU, Delhi and Telecommunications Consultants India Limited

**Purpose:** To build competencies and engagement in 5G technologies for students and startup communities

Date: 28th February, 2024

**Duration:** 5 Years

**Details of MoU:** MoU between iHub Drishti Foundation (Promoted by IIT Jodhpur) and DTU, Delhi

**Purpose:** To explore opportunities for CPS for CV and ARVR, related innovation and partnerships between Hub and Spoke.

Date: 22<sup>nd</sup> February, 2023

**Duration:** 3 Years

**Details of MoU:** MoU between Indian Navy and DTU, Delhi

**Purpose:** Encourage defense manufacturing, innovation in futuristic combat technologies.

**Date:** 26<sup>th</sup> July, 2021 **Duration:** 3 Years

**Details of MoU:** MoU between DTU, Delhi and Adani Defence Systems and Tech. Ltd. and FLAIRE Unmanned Systems Pvt. Ltd.

**Purpose:** To identify potential areas of R&D in the field of Unmanned Systems including aerial, naval, and ground systems, to execute research on identified projects

Date: 13<sup>th</sup> September, 2019

**Duration: 10 Years** 

Participation of Faculties in Extension & Outreach Activities organized by university:

Name of Faculty: Dr. Kriti Suneja

#### Name of Faculties:

Mr. Anurag Chauhan and

Mr. Piyush Tewari

Details of Activity:

International Yoga Day **Date:** 21<sup>st</sup> June, 2024

Purpose: Teaching students "The basics of computer" in

Delhi Govt. schools through Lab on Wheels.

Date: 9th October, 2023

International Fellowship
Awarded to Faculty for
Advanced Studies/Research:

Name of Faculty: Dr. Harikesh
Name of Fellowship: SERB-SIRE

**Details of Activity:** Member of the Selection Committee of

USIP interns for DTU- Outreach Extension Activity (OEA)

**Duration:** 6<sup>th</sup> October, 2023 - 14<sup>th</sup> March, 2024

## Financial Support provided to Students to attend Conference/Seminar/ Symposia/Workshop/STC/Training etc. during Current Year:

| Name of<br>Student | Event Details   | Organized by   | Date(s)   | Amount received by DTU, Delhi (₹) |
|--------------------|---|--|---|-----------------------------------|
| Aakash             | Int. Conf. on "Emerging<br>Technologies in Engineering<br>and Science (ICETES- 2023)" | MIC College of<br>Technology, Karnataka                                      | 11 <sup>th</sup> - 12 <sup>th</sup><br>August, 2023     | 11,500/-                          |
| Palak<br>Handa     | "KSGE Days 2023<br>Conference"  | Korean Society of<br>Gastrointestinal Endoscopy,<br>Seoul Dragon City, Korea | 8 <sup>th</sup> - 9 <sup>th</sup><br>September,<br>2023 | 30,970/-                          |
| Anil<br>Kumar      | 8 <sup>th</sup> IEEE Electron<br>Devices Technology and<br>Manufacturing (EDTM)       | IEEE EDS   | 3 <sup>rd</sup> - 6 <sup>th</sup><br>March, 2024        | 19,660/-                          |
| Yashika<br>Chauhan | IEEE Conf. on "Microwaves,<br>Antenna & Propagation<br>(MAPCON-2023)"                 | IEEE AP/MTTE,<br>Ahmedabad Chapter   | 11 <sup>th</sup> - 15 <sup>th</sup><br>December<br>2023 | 11,872/-                          |
| Tanwika<br>Garg    | 9 <sup>th</sup> International Conference<br>for "Convergence in<br>Technology (I2CT)" | Siddhant College of Engineering, Pune  | 5 <sup>th</sup> - 7 <sup>th</sup> April,<br>2024        | 9,500/-                           |

### Students' Achievements -

### Rithwick Sethi (B. Tech.)

Winner (Team Leader Rizz-o-nance), Smart India Hackathon 2023, Rungta College of Engineering and Technology, Bhilai, Chhattisgarh

Dates: 19th - 20th December, 2023

Sachin Mishra (B.Tech.)

Semi-Finalist Adjudicator, Antaragini, IIT Kanpur

**Dates:** 19<sup>th</sup> - 22<sup>nd</sup> October, 2023

# 4.10 DEPARTMENT OF ELECTRICAL ENGINEERING



Prof. Rachna Garg, HoD

#### **ACADEMIC PROGRAMMES**

B.Tech.
(Electrical Engineering)
Intake: 301
Admitted: 301

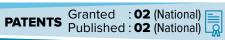
B.Tech.
(Electrical Engineering)
(Continue Education)
Intake: 60
Admitted: 50

M.Tech. (Control & Instrumentation) Intake: 25 Admitted: 07

M.Tech.
(Power Electronics & Systems)
Intake: 30
Admitted: 13

**Ph.D.** Admitted: **17** 

#### **RESEARCH PUBLICATIONS**





**JOURNALS: 64** 

**CONFERENCES: 102** 

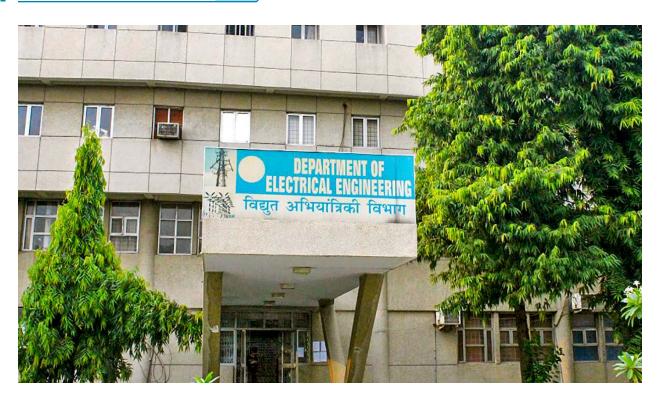


#### **SALIENT FEATURES**

The Department of Electrical Engineering of Delhi Technological University is one among the first major departments stablished in 1941. The year 2024 marks the 83<sup>rd</sup> year of Excellence for both the University and the department in academics, research and innovation. The overall goal of the department is to provide quality education at undergraduate and postgraduate levels and undertake cutting-edge research in several new areas of Electrical Engineering. The Department is NBA accredited.

Faculty members of the department have been regularly contributing towards International and National Journals of repute like IEEE Transactions, IEEE Proceedings, IET, Journals in Electrical Engineering from Elsevier, etc. along with Proceedings of National and International Conferences.

The department has the distinction of organizing eight MHRD sponsored GIAN courses with international faculty members and experts from Virginia Tech, USA; University of Victoria, Canada; Texas A & M University, Texas, USA; Technical University of Crete, Greece; BC Hydro Canada; College of Engineering, Michigan State University, USA. The students are motivated for technical and creative activities besides classroom teaching and laboratory exercise through technical fest like INVICTUS organized under the IEEE student chapter and IET student chapter.



### **LABORATORIES:**

| S.<br>No. | Lab Name   | Location | Officer In charge                                   | Associate Officer<br>In charge                | Technical<br>Assistant                        |
|-----------|--|----------|---|---|---|
| 1         | Power Electronics<br>& Drives Lab                    | LW1-GF4  | In charge:<br>Prof. Dheeraj Joshi,<br>Dr. R.L Meena | Mr. Saurabh<br>Mishra                         | Ms. Vandana and<br>Ms. Renu Rani              |
| 2         | Sr. Machine Lab                                      | LW1-GF1  | Prof. Suman<br>Bhowmick                             | Dr. Shatakshi                                 | Mr. Vickey and<br>Kr. Prasad                  |
| 3         | UEE Lab  | LW1-GF1  | Prof. M. Rizwan                                     | Dr. Ankita Arora                              | Mr. Vickey and<br>Kr. Prasad                  |
| 4         | Power System<br>& Switch Gear<br>Protection Lab      | LW2-GF1  | Prof. S.T Nagarajan/<br>Prof. J.N Rai               | Sh. Kuldeep Singh<br>Sh. Sikandar Ali<br>Khan | Dr. Ajendra Singh<br>and<br>Ms. Shalini Gupta |
| 5         | Electrical<br>Workshop                               | LW2-GF5  | Dr. Prem Prakash                                    | Mr. Gaurav<br>Kaushik                         | Sh. Upander<br>Kumar                          |
| 6         | Process Control lab                                  | LW1-FF6  | Prof. Mini Sreejeth                                 | Mr. Rohan Pillai                              | Mr. Anil Butola                               |
| 7         | Control System                                       | LW1-FF5  | Prof. Bharat Bhushan                                | Dr. Bhavnesh Jaint                            | Sh. Karan Singh<br>and Mr. Anil Butola        |
| 8         | Instrumentation/<br>Linear Integrated<br>Circuit Lab | LW1-FF2  | Prof. Ram Bhagat                                    | Dr. Garima                                    | Mr. Jagvir Singh                              |
| 9         | Principle of<br>Electrical<br>Engineering Lab        | LW1-FF1  | Dr. DC Meena  | Mr. Krishna Dutt                              | Sh. Vijay Kumar/Mr.<br>Mukesh Gupta           |

| S.<br>No. | Lab Name  | Location       | Officer In charge                                    | Associate Officer<br>In charge | Technical<br>Assistant  |
|-----------|---|----------------|--|--------------------------------|---|
| 10        | Senior<br>Measurement Lab   | LW1-SF2        | Sh. A.B.K.<br>Bhattacharya/ Dr.<br>Anup Kr. Mandpura | Mr. Shreyansh<br>Upadhyaya     | Ms. Pooja Dahiya/<br>Mr. Gaurav Kumar                         |
| 11        | Electric Machine and Drives   | LW2-GF2        | Prof. Mukhtiar Singh                                 | Mr. Himanshu<br>Singh          | Dr. Ajendra Singh,<br>Ms. Renu Rani, and<br>Ms. Shalini Gupta |
| 12        | Power Electronics<br>Converter and<br>Control Lab                       | LW1-TF4        | Prof. S.K Valluru                                    | Dr. V. R. Vanjari              | Ms. Renu Rani and<br>Mr. Gaurav Kumar                         |
| 13        | Advanced Power<br>System Lab  | LW1-TF5        | Prof. Alka Singh                                     | Dr. Prakash<br>Chittora        | Ms. Komal   |
| 14        | Advanced<br>Instrumentation<br>and Control Lab                          | FW2-SF2        | Prof. Ram Bhagat<br>Prof. Bharat Bhushan             | Mr. Abhishek<br>Chaudhary      | Mr. Jagvir Singh  |
| 15        | Microprocessor,<br>Microcontroller,<br>Digital Circuit &<br>Systems Lab | LW1-TF4<br>(A) | Dr. Anup Mandpura                                    | Ms. Anupama                    | Mr. Karan Singh   |
| 16        | Artificial Intelligence,<br>Machine Learning<br>Lab                     | LW1-TF7        | Prof. Vinod Kumar<br>Yadav                           | Dr. Chaudhry Indra<br>Kumar    | Ms. Komal   |
| 17        | Basic Electrical<br>Engineering Lab                                     | LW1-TF1        | Prof. Uma Nangia                                     | Dr. Mayank Kumar               | Mr. Vijay and<br>Mr. Mukesh Gupta                             |



#### CENTER OF EXCELLENCE IN THE DEPARTMENT:

The CoE for EVRT serves to the necessities of researchers within the Institute as well as outside; both academic and industrial experts may utilize the benefits of the sophisticated facilities present here. Such a facility represents a key commitment for preserving and raising the efficiency of research to the national and international standards. A number of tools are present in the CoE for EVRT at DTU (north-west) campus. The Centre augments state-of-theart equipment that is already functional and there is much equipment in the pipeline.

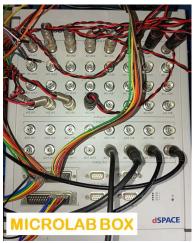
The Centre aims to impart training & research in thrust area of Electric Vehicles and Related Technologies. The Centre

helps in developing an eco-system for transformation from a traditional to eco-friendly transportation system. State-of-art facility for training of EVs is created to carry out interdisciplinary research in Electric Vehicle and associated areas. The Centre is continuously evolving and endeavoring to better the system for the researchers through design, development, and analysis of electric vehicle motors and drives.

- Charging infrastructure, Charge controllers.
- Retrofitting, Communication between the power grid and EVs.
- Battery management systems and charging stations, etc.

#### **Centre of Excellence:**

#### **Facilities Available:**













#### **ACADEMIC STAFF**

#### **PROFESSORS**

#### HoD: Prof. Rachna Garg

(B.Tech., M.Tech., Ph.D.)

Research Area: Power
system operation and
control, renewable energy
systems, artificial intelligent
techniques, smart grid

#### Prof. Narendra Kumar (I)

(B.Sc., M.Sc., Ph.D.) **Research Area:** Power Systems and Drives

#### Prof. Madhusudan Singh

(B.Sc., M.E.(Hons), Ph.D.)

Research Area: Control &

Instrumentation

#### **Prof. Uma Nangia**

(B.E., M.E., Ph.D.)

Research Area: Power Systems

## Prof. Narendra Kumar

(II) (Lien) (B.E., M.E., Ph.D.)
Research Area:

Instrumentation Control & Power Electronics Applications

## Prof. Pragati Kumar

(Lien) (M.Tech., Ph.D.) Research Area: Control & Instrumentation

#### **Prof. Vishal Verma**

(M.Tech., Ph.D.)

Research Area: Power

Electronics

#### **Prof. Bharat Bhushan**

(B.E., M.E., Ph.D.)

Research Area: Control &
Instrumentation

#### Prof. Priya Mahajan

(M.E., Ph.D.)

Research Area: Railway Electric Traction System, Power System, Electrical Machines

#### **Prof. Alka Singh**

(B.E., M.Tech., Ph.D.)

Research Area: Power Systems

### Prof. Dheeraj Joshi

(B.E., M.E., Ph.D.)

Research Area: Power
Electronics, Electric Drives,
Renewable Energy Systems

#### Prof. Mukhtiar Singh

(B.Tech., M.Tech., Ph.D.)

Research Area: Power

Electronics and Drives

#### **Prof. Suman Bhowmick**

(B.E.E. (Hons.), M.E.E., Ph.D.) **Research Area:** Power Systems, FACTS, VSC-HVDC

## **Prof. S. T. Nagarajan** (B.E., M.E., Ph.D.)

Research Area: High Voltage Engineering & Power System

#### Prof. M. M. Tripathi

(Lien) (B.Tech., M.Tech., Ph.D.)
Research Area: Restructuring
power systems, Artificial
Intelligence (AI) application
to load & price forecasting,
Integration of renewable
energy sources in electricity
markets, Cyber Security of
Smart Grid, Embedded Systems

#### Prof. J. N. Rai

(M.Tech., Ph.D.) **Research Area:** Power Systems

## Prof. R. S. Saha (Visiting Faculty)

(B.E, M.E, Ph.D.)

Research Area: HVDC &
Power System

#### Prof. Sudarshan K Valluru

(B.Tech., M.Tech., Ph.D.)

Research Area: Artificial
Intelligence, Bio-Inspired
Algorithms, Control of
Dynamical systems, Bifurcation
Analysis, Electrical Machines

#### **Prof. Mini Sreejeth**

(B.Tech., M.Tech., Ph.D.) **Research Area:** Electrical Drives,
Power Electronics Application.

#### **Prof. Ram Bhagat**

(B.Tech., M.E, Ph.D.)

Research Area: Control &
Instrumentation, Analog
Signal Processing

#### Prof. M. Rizwan

(B.Tech., M.Tech., Ph.D.) **Research Area:** Power System

#### **Prof. Vinod Kumar Yadav**

(B.Tech., M.Tech., Ph.D.) **Research Area:** Power Systems

#### Prof. N. K. Jain

(Emeritus Professor) (B.Sc., M.Sc., Ph.D.) **Research Area:** Power Systems

## Prof. D. R. Bhaskar

(Emeritus Professor) (B.Tech., M.Tech., Ph.D.) **Research Area:** Bipolar and MOS Analog Integrated Circuits

#### **ASSOCIATE PROFESSORS**

#### Sh. N. K. Bhagat

(B.Sc., M.Tech.)

Research Area: Control Systems

#### Dr. D. C. Meena

(B.Tech., M.Tech., Ph.D.) **Research Area:** Power Systems

#### Dr. R. L. Meena

(B.E., M.Tech.) Power Quality

#### Dr. Garima

(B.Tech., M.E., Ph.D.) **Research Area:** Analog Signal Processing and Generation Circuits, VLSI

#### Ms. Anupama

(B.E., M.Tech.)

**Research Area:** VLSI, Analog Electronics, Digital Electronics

#### Mr. Krishna Dutt

(B.Tech., M.Tech.)

Research Area: Power Electronics, Advance Power Electronics, Power Converters, Control of Power Electronics Converters, Custom Power Devices, FACTs, Machine

#### Mr. Rohan Pillai

(B.Tech, M.Tech.)

Research Area: Microelectronics

#### Dr. Vanjari Venkata Ramana

(B.Tech., M.Tech., Ph.D.)
Research Area: Power
Electronics

#### **ASSISTANT PROFESSORS**

#### Sh. A. B. Bhattacharya

(M.Tech.)

Research Area: Power Systems

#### Dr. Prem Prakash

(B.E., M.Tech., Ph.D.)

Research Area: Engg Systems

#### Dr. Bhavnesh Jaint

(B.E., M.E., Ph. D.)

**Research Area:** Control System, Wireless sensor network

#### Dr. A. R. Kulkarni

(B.E., M.E., Ph.D.)

Research Area: Control System Intelligent Transportation Systems, Microcontrollers & Embedded Systems, Robotics

#### Sh. Sikandar Ali Khan

(B.Tech., M. Tech.) **Research Area:** Electrical

Machines, Electrical Drives,

Power System

#### Sh. Kuldeep Singh

(B.Tech., M.Tech.)

Research Area: Power Systems

#### Dr. Ankita Arora

(B.Tech., M.Tech., Ph.D.)

Research Area: Renewable
Energy Sources, Power
Electronics, Electrical
Machines, Artificial Intelligence
Techniques, Control Systems

#### Dr. Anup Kumar Mandpura

(B.Tech., M. Tech., Ph.D.)

Research Area: Cooperative
Communication Systems

#### Mr. Gaurav Kaushik

(B.Tech., M.Tech.) **Research Area:** Power

Electronics, Control systems

#### Sh. Himanshu Singh

(B.E., M.Tech.)

Research Area: Power Electronics, Electrical Machines, Electrical Drives, Control System

#### Sh. Saurabh Mishra

(B.E., M.Tech.)

Research Area: Electrical Drives

#### Dr. Shatakshi

(B.E., M.Tech, Ph.D.)

**Research Area:** Renewable Energy Systems, Power systems

#### Dr. Prakash Chittora

(B. Tech., M. Tech., Ph.D.) **Research Area:** Power System,

Power Quality, Power Electronics

#### Mr. Shreyansh Upadhyaya

(B.Tech., M.Tech.)

**Research Area:** Power Electronics, Control systems

#### Mr. Abhishek Chaudhary

(B.E., M.Tech.)

Research Area: Control System Engineering

#### Dr. Mayank Kumar

(B.Tech., M.Tech., Ph.D.)

Research Area: PWM of

Power Converters, Modeling
and Control of Power

Electronics Converters, Solar

Power Conversion

#### Dr. Chaudhry Indra Kumar

(B.E., M.Tech, Ph.D.)

Research Area: Digital VLSI Circuit Design, Radiation Hardened IC Design, Energy Efficient Circuit Design and Radiation Hardened Layout Design Techniques

#### **ACHIEVEMENTS OF THE DEPARTMENT:**

Highly placed alumni in various reputed organizations and institutions across the world.

Mr. Vinod Dham, "Father of Pentium Chip" is one of the distinguished alumni of the Department.

National Board of Accreditation (NBA) accredits the Department.

The Department has been identified as a Quality Improvement Program Research Centre.

The department is involved in carrying out several sponsored R & D projects funded by national agencies like AICTE, DST, SERB, NPIU and MeitY. Currently, sponsored projects from the DST and the AICTE amounting to more than ₹14.65 Cr. are underway in the department. The department is also engaged in consultancies in various fields of Electrical Engineering.

Established a Center of Excellence for Electric Vehicles and Related Technology (CoE for EVRT) with the sanctioned fund of ₹19.57 Cr from GNCTD and DTU, Delhi.

Thirteen existing Research Area Laboratories and Seventeen UG/PG Laboratories.

## **Grants for Research Projects Sponsored by Funding Agencies:**

| Name of PI/Co PI          | Title of Project  | Agency<br>Name   | Amount (₹)    | Sanctioned<br>Year | Date of Completion |
|---------------------------|---|--|---------------|--------------------|--------------------|
| Prof. M. Rizwan           | Design and Development of<br>Novel and Energy Efficient<br>Technology to Mitigate Dust<br>Accumulation Effects on Solar<br>PV Modules | SERB, Delhi  | 60.36<br>Lacs | 2023               | Ongoing            |
| Prof.Madhusudan<br>Singh  | FIST Program 2022   | DST,<br>Delhi  | 82 Lacs       | 2022               | Ongoing            |
| Dr. Mayank<br>Kumar       | Development of Fault Tolerant<br>Power Converters for Solar PV<br>fed Hybrid Electric Vehicles<br>(PVHEVs)                            | SERB, Delhi  | 31.48<br>Lacs | 2021               | Ongoing            |
| Prof. Madhusudan<br>Singh | Center of Excellence of<br>Electric Vehicle and Related<br>Technologies (CoE for EVRT)  | Delhi<br>Knowledge<br>Development<br>Foundation<br>(DKDF), Delhi | 9.57 Cr.      | 2021               | Ongoing            |

| Name of PI/Co PI  | Title of Project   | Agency<br>Name                             | Amount (₹)                      | Sanctioned<br>Year | Date of Completion |
|---|--|--|---------------------------------|--------------------|--------------------|
| Dr. Amritesh<br>Kumar, NIT,<br>Silchar and P<br>rof. Vishal Verma     | Feasible Coordinated Controlled<br>Grid-connected Photovoltaic<br>Sourced DC based Fast Charging<br>Infrastructure for Electric Vehicle:<br>Design, Development and<br>Experimental Validation | SERB, Delhi                                | 1.89 Cr.<br>for NIT,<br>Silchar | 2019               | Ongoing            |
| Prof. Priya<br>Mahajan<br>Prof. Rachna Garg                           | Research Study on "Effects of<br>Environment factors on soiling<br>losses and optimal cleaning<br>schedule for SPV panel" in Delhi   | Department<br>of Power,<br>GNCTD,<br>Delhi | 5.6 Lacs                        | 2019               | Ongoing            |
| Dr. Hitesh Dutt<br>Mathur (BITS<br>Pilani) and Prof.<br>Dheeraj Joshi | IOT Based Energy Management<br>System of a Micro-Grid with<br>vehicle to grid (V2G) feature  | DST, Delhi                                 | 16.83<br>Lacs                   | 2019               | Ongoing            |
| Prof. Mini<br>Sreejeth  | "Development & Deployment<br>of Motor Controller for Low<br>to Medium Power Electric<br>Vehicles"  | Gol, MeitY                                 | 39.84<br>Lacs                   | 2019               | Ongoing            |

#### **Details of Patents Awarded/Published:**

Details of Patents

Inventor: Prof. Mini Sreejeth

Title: Motor Controller for Light

Mobility Vehicles in India **Status:** Granted

Patent Number: 544481

Year: 2024

**Inventors:** Dr. Mayank Kumar, Prof. Madhusudan Singh, Mr. Abhishek Kumar Gupta

Title: A High gain fault tolerant multi-

port DC-DC converter

Status: Published

Patent Number: 202411024561

**Year:** 2024

**Inventors:** 

Prof. Sudarshan Kumar Babu Valluru, Dr Vanjari Venkata Ramana

**Title:** Reconfigurable Photovoltaic Module with Power Conditioning Unit

Status: Published

Patent Number: 202311066969

**Year:** 2023

Inventor:

Mr. Saurabh Mishra

**Title:** System for Enhancing Driving Range of a Light Electric Vehicle based on Synchronous Reluctance Motor

Status: Granted

**Patent Number: 20211130491** 

**Year:** 2024

## **Revenue Generated from Consultancy:**

| Name of Faculty   | Title  | Funding<br>Agency                 | Amount (₹)     | Date of Commencement         |
|---|--|-----------------------------------|----------------|------------------------------|
| Prof. Madhusudan<br>Singh and<br>Mr. A. B. Bhattacharya                 | Construction of 7000 additional classrooms in various existing school. Under education zone (M), New Delhi                                       | PWD Govt. of<br>NCT, Delhi        | 195 Lacs       | 2019 – onwards               |
| Prof. Madhusudan<br>Singh and<br>Mr. A. B. Bhattacharya                 | Third-Party Quality Audit works installation of CCTV cameras in Delhi  | PWD Govt. of<br>NCT, Delhi        | 15.4<br>Lacs   | 2019 – onwards               |
| Prof. Uma Nangia and<br>Mr. A. B. Bhattacharya                          | Quality Audit of construction<br>(Electrical) work in AIIMS<br>JAJJHAR and various<br>departments at AIIMS, New<br>Delhi Campus                  | AllMS, New<br>Delhi               | 12 Lacs        | 2017 – onwards               |
| Prof. Narendra<br>Kumar-I   | Quality Checking of<br>Development Work at IA-<br>Masuri Gulawti Road & EPIP,<br>Kasna   | UPSIDA                            | 2.65<br>Lacs   | 2018 - onwards               |
| Prof. S. Anbukumar,<br>Dr. Ashish Kulkarni<br>and<br>Dr. Bhavnesh Jaint | C/O 420 Two BHK, 225<br>Three BHK houses & 250<br>EWS ( Design & Build Model)<br>earmarked in Pocket-6, sector<br>A1 to A4, Narela, Delhi.       | Delhi<br>Development<br>Authority | 146.32<br>Lacs | 8 <sup>th</sup> August, 2018 |
| Prof. S. Anbukumar,<br>Dr. Ashish Kulkarni<br>and<br>Dr. Bhavnesh Jaint | C/O 1675 EWS Multi-storied<br>dwelling units at Jailorwala<br>Bagh, Ashok Vihar, Delhi   | Delhi<br>Development<br>Authority | 82.95<br>Lacs  | 8 <sup>th</sup> August, 2018 |
| Prof. S. Anbukumar,<br>Dr. Ashish Kulkarni<br>and<br>Dr. Bhavnesh Jaint | C/O 750 Two BHK, 325<br>Three BHK houses & 412<br>EWS (Design & Build Model)<br>earmarked in Pocket-13,<br>sector A1 to A4, Narela, New<br>Delhi | Delhi<br>Development<br>Authority | 238.75<br>Lacs | 26 <sup>th</sup> May, 2019   |
| Prof. Narendra<br>Kumar-I   | Quality Checking and inspection of DG set 625kVA for 6MLD CETP at Ghaziabad  | UPSIDA                            | 0.8 Lac        | 2021                         |
| Prof. M. M. Tripathi  | Taking over of Transmission Lines of UPPTCL  | UPPTCL                            | 5 Lacs         | 2021                         |

## **Events organized by the Department:**

| Name of Event  | Date(s)  | Coordinator                                       |
|--|--|---|
| 3 <sup>rd</sup> IEEE-ICPEICES 2024 Conference  | 26 <sup>th</sup> - 28 <sup>th</sup> April,<br>2024 | Prof. Vinod Yadav<br>(in collaboration with IEEE) |
| Mentoring Event  | 18 <sup>th</sup> - 19 <sup>th</sup> April,<br>2024 | Dr. Garima<br>(in collaboration with IIC, DTU)    |
| National Entrepreneurship Day  | 9 <sup>th</sup> November,<br>2023                  | Dr. Garima<br>(in collaboration with IIC, DTU)    |
| Workshop on "Power converter technologies in electrical vehicle applications"  | 26 <sup>th</sup> December,<br>2023                 | Dr. Mayank<br>(in collaboration with DST, Delhi)  |
| Expert lecture on "Architectural "Exploration and High-Level Synthesis in Automotive VLSI Systems" by Dr. Prateek Sikka Sr. Group Manager ST Microelectronics Pvt Ltd. Greater Noida | 27 <sup>th</sup> February,<br>2024                 | Head, EED   |
| Value of electrification and power electronics systems in the climate smart farming by Dr. Brij N Singh, John Deere Technical Fellow, USA  | 8 <sup>th</sup> January,<br>2024                   | Head, EED   |
| Technical Lecture by Prof. D.P Kothari, former Director, IIT, Delhi  | 18 <sup>th</sup> April, 2024                       | Head, EED   |
| Technical Lecture by Prof. Sudip K. Mazumdar University of Illinois, Chicago, USA  | 22 <sup>nd</sup> December,<br>2023                 | Head, EED   |

## Photographs of Events organized by the Department:









## Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

Dr. Garima, Sh. Sikandar Ali Khan, Sh. Kuldeep Singh, Dr. Anup Kumar Mandpura, Sh. Himanshu Singh, Sh. Saurabh Mishra, Mr. Shreyansh Upadhyaya, Dr. Mayank Kumar, Dr. Mayank Kumar, Mr. Krishna Dutt and Dr. Vanjari Venkata Ramana **Event:** Industrial Training on "Electrical Vehicle and charging stations"

Organized by: NSIC Ltd. Technical Services, Centre, Okhla, Delhi

Dates: 16<sup>th</sup> -30<sup>th</sup> December, 2023

**Amount (₹):** 14,160/- (each faculty)

Collaborative Activities for Research, Faculty Exchange, and Student Exchange:

Collaborative Activities Name of Faculty: Prof. M. Rizwan

Collaboration with: Ming Chi University, Taiwan

Type of collaboration: Research

Collaboration commenced from: July, 2024 (for one Year)

## **Faculties Participation in Professional Development Programmes:**

| Name of Faculty               | Title of PDP   | Organized by       | Date(s)  |
|-------------------------------|--|--------------------|--|
| Dr. Garima                    | FDP on "Advancement and Challenges in VLSI Design and Nanoscale Devices" | ECE, DTU,<br>Delhi | 27 <sup>th</sup> - 31 <sup>st</sup> May,<br>2024 |
| Dr. Bhavnesh Jaint            | FDP on "Advancement and Challenges in VLSI Design and Nanoscale Devices" | ECE, DTU,<br>Delhi | 27 <sup>th</sup> - 31 <sup>st</sup><br>May, 2024 |
| Dr. Vanjari<br>Venkata Ramana | FDP on "Control Techniques for Renewable Energy Systems"                 | NSUT, Delhi        | 8 <sup>th</sup> - 12 <sup>th</sup> July,<br>2024 |

### Visit of Faculty to other University/Institution for Expert Lectures/ Academic Work:



**Title of Event:** Emerging Horizons in Electrical & Electronics Engineering: Advancements & Challenges

**Topic of Lecture:** WSN Security: Attacks and their detection Techniques.

**Organized by:** Department of Electrical & Electronics Engineering, Galgotias College of Engineering & Technology

Dates: 7<sup>th</sup> - 11<sup>th</sup> August, 2023

## Functional MoUs with Universities/Institutions/Industries of National/International Importance:

| Details of MoU                      | Purpose   | Date                               | Duration |
|-------------------------------------|---|------------------------------------|----------|
| DTU and DMRC                        | Projects/Joint Research and Development Internship for students   | 19 <sup>th</sup> March, 2013       | Continue |
| EED, DTU and HBSS                   | ITS and EV low-cost Electric vehicle design and development   | 19 <sup>th</sup> November,<br>2022 | 3 years  |
| DTU and Lithion<br>Power            | Exchange of students Joint Development Technology Use of Laboratories facilities                            | 14 <sup>th</sup> February, 2022    | 5 years  |
| M/s Onnyx<br>Electronisys Pvt. Ltd. | ITS & Research Purpose  | 21 <sup>st</sup> April, 2018       | Continue |
| DTU and University of Florida       | Education, Training, Research and Development etc.  | 4 <sup>th</sup> March, 2015        | Continue |
| EED, DTU and TUC                    | ITS and Control Systems   | 10 <sup>th</sup> January, 2019     | Continue |
| PayTm Jan 2024                      | In the area of Green Transportation and E-Mobility, PayTm has donated ₹1 Crore for development of this lab. | 28 <sup>th</sup> October, 2023     | Continue |

## Participation of Faculties in Extension & Outreach Activities organized by university:

Prof. Ram Bhagat Prof. Vinod Kr Yadav Dr. Prem Prakash

**Dr. Ankita Arora** 

**Activity:** Six days program "Exploring Engineering"

**Purpose:** Training program for Class 10<sup>th</sup>, 11<sup>th</sup> & 12<sup>th</sup> students

**Dates:** 01st - 06th July, 2024

Activity: Three months internship on "Electrical and

Renewable Designs at Pantech e Learning Pvt Ltd"

Purpose: Internship | Dates: 16th January - 15th April, 2024

**Activity:** One week FDP on "Advanced Teaching Pedagogy and outcome-based education in context of NEP-2020"

**Purpose:** FDP | **Dates:** 27<sup>th</sup> - 31<sup>st</sup> May, 2024

**Activity:** Faculty Coordinator

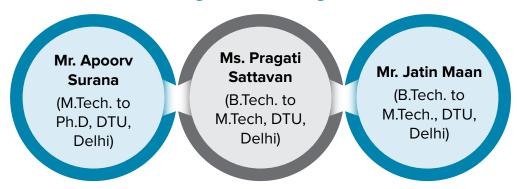
Purpose: Desh Ka Mentor | Date: 1st June, 2024

Prof. Ram Bhagat Dr. D. C. Meena **Activity:** DELTECH MUN Conference

**Purpose:** To aware students about international issues

**Dates:** 21st -22nd April, 2024

## **Students' Progression to Higher Education:**



## Financial Support provided to Students to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ Training etc. during Current Year:

| Name of<br>Student | Attended Event Details  | Organized by  | Date(s)  | Amount received by DTU, Delhi (₹) |
|--------------------|---|---|--|-----------------------------------|
| Shristi Singh      | 3 <sup>rd</sup> International Conference<br>on "Sustainable Energy<br>and Future Electric<br>Transportation"            | Bhubaneshwar,<br>Odisha, India  | 9 <sup>th</sup> -12 <sup>th</sup><br>August, 2023      | 12,000/-                          |
| Zainab<br>Alnassar | IEEE 3 <sup>rd</sup> international conference on "power electronics, intelligent control and energy systems"            | DTU, Delhi, India   | 28 <sup>th</sup> April,<br>2024                        | 4,130/-                           |
| Rishab Bansal      | 3 <sup>rd</sup> International Conference<br>on "Sustainable Energy<br>and Future Electric<br>Transportation"            | Bhubaneshwar,<br>Odisha, India  | 9 <sup>th</sup> -12 <sup>th</sup><br>August, 2023      | 12,000/-                          |
| Abhik Kumar        | 5 <sup>th</sup> international conference<br>of "recent developments<br>in control, automation and<br>power engineering" | Amity University,<br>Noida, Uttar Pradesh,<br>India   | 12 <sup>th</sup> -13 <sup>th</sup><br>October,<br>2023 | 5,310/-                           |
| Mohd Adib          | 3 <sup>rd</sup> International Conference<br>on "Sustainable Energy<br>and Future Electric<br>Transportation"            | Bhubaneshwar,<br>Odisha, India  | 9 <sup>th</sup> -12 <sup>th</sup><br>August, 2023      | 14,160/-                          |
| Praveen<br>Bansal  | 3 <sup>rd</sup> International Conference<br>on "Sustainable Energy<br>and Future Electric<br>Transportation"            | Department of Electrical Engineering, ITER, Siksha 'O' Anusandhan (deemed to be university), Bhubaneswar, Odisha, India | 9 <sup>th</sup> -12 <sup>th</sup><br>August, 2023      | 14,160/-                          |

#### **Students' Achievements:**

Programme: AAHVAAN' 24

Date: 5<sup>th</sup> – 7<sup>th</sup> April, 2024

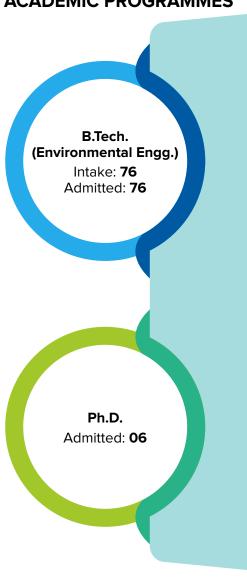
Joy Bhatnagar, Semifinal in Cricket
Bimal Kumar, Semifinal in Cricket
Mayank, Participated in Football
Bill Elliott, Semifinal in Football
Dhairya Goyat, Participated in Badminton
Pragati Sattavan, Participated in Basket Ball
Gaurav Kumar, 2<sup>nd</sup> Position in 800 mtr.
Athletics and 3<sup>rd</sup> Position in 400 mtr. Athletics
Himnish, Participated in Athletics
Aditya Kumar, Winner in Chess Mixed

## 4.11 DEPARTMENT OF ENVIRONMENTAL ENGINEERING



Prof. A. K. Haritash, HoD

#### **ACADEMIC PROGRAMMES**



#### **RESEARCH PUBLICATIONS**



#### **SALIENT FEATURES**

The Department of Environmental Engineering offers B.Tech., M.Tech., and Ph.D. programs in Environmental Engineering. A major in Environmental Engineering and three minors Environmental Engineering, Sustainability, and Environmental Remediation are offered for the B.Tech. program. The Department also provides an opportunity to working engineers for academic upgradation by offering part-time postgraduate courses. The department envisions producing technologically relevant Environmental Engineering graduates, post-graduates, and researchers through innovative applications of engineering, science & technology with a globally acceptable curriculum and teachinglearning environment; and creating leaders in engineering who can work in multi-disciplinary groups to anticipate and address evolving challenges sustainably for the betterment of human society. The department also hosts international students in various programmes admitted through DASA, ICCR, and exchange from Asian, African, and European countries. The department Environmental Engineering is actively involved in Research, Consultancy, Training, and Capacity Building activities. It has well-established laboratories in Environmental Engineering, Water Pollution, Air & Noise Pollution Control, Solid Waste Management, Environmental Microbiology and Remediation, and GIS and Remote Sensing. It also provides technical support to national agencies such as NGT, CPCB, NMCG, DPCC, CPWD, and more.



#### **ACADEMIC STAFF**

#### **PROFESSORS**

#### HoD: Prof. A. K. Haritash (M. Tech., Ph.D.)

**Research Area:** Water Quality Assessment, Environmental Microbiology, Bioremediation, Constructed Wetlands, AOPs

## Prof. S. K. Singh

(B.E. M. Tech., Ph.D.)

Research Area: Wastewater
Treatment Designs, Water
Treatment Designs, Water
Quality Modelling, Solar
Detoxification, EIA & Auditing

## ASSOCIATE PROFESSORS

#### Dr. Geeta Singh

(B. Tech., M. Tech., Ph.D.)

Research Area: Water and
Wastewater Engineering,
Hydrology, Water Resources,
Groundwater Engg.

### Dr. Rajeev Kumar Mishra

(M.Sc., M. Tech., Ph.D.)

Research Area: Acoustics
& Barrier Design, Urban Air
Pollution Analysis & Modelling,
Traffic Noise Pollution
Modelling

### **ASSISTANT PROFESSORS**

#### Dr. Lovleen Gupta

(B.E., M.S., Ph.D.)

Research Area: Human

Health Risk Assessment,

GHG Emission Calculations,

Environmental Impact

Assessment, Environmental

Site Assessment

### Mr. Gour Anunay Ashokkumar

(B.E., M.E., Ph.D.(P))

Research Area: Industrial

Waste Management,

Instrumentation and

Measurement, System

Simulation & Modelling

## **Achievements of the Department**

- The department is actively engaged in providing technical support to the Central Pollution Control Board, Delhi for monitoring of industries, NMCG for evaluation of DPRs, CPWD, DJB, and many other institutions.
- The department has carried out consultancy projects for Delhi Jal Board, IFFCO, Uttar Pradesh Pollution Control Board, NMCG, and other private sector units as well.
- The department also provides technical support to various institutions, such as The Institution of Engineers (India), the International Development Centre Foundation (IDC Foundation), and the Green Institute for Research and Development (GIRD).
- Organized Two-days International Seminar on "Sustainability: Navigating the Path to A Greener Future" on 30<sup>th</sup> – 31<sup>st</sup> October, 2023 in collaboration with Centre for Science of Happiness, DTU, Delhi.

- Organized One Day National Seminar on "Environment, Climate, Health, and Occupational Safety" (ECHOS) on 23<sup>rd</sup> February, 2024 on Challenges and Ideas towards Viksit Bharat@2047 - Focus on Local Environmental Challenges.
- Organized One-day Seminar on "National Pollution Control Day" on 5<sup>th</sup> December, 2023.
- Organized 21-Days Eco-Challenge Campaign from 3<sup>rd</sup> - 23<sup>rd</sup> March, 2024 on the theme of Earth Day 2024.
- Organized Yamuna Biodiversity Park Field Visit for Wetland Awareness on 21st March. 2024.
- Organized International Day of Happiness Celebration on 20<sup>th</sup> March, 2024 in collaboration with STEP, Centre for Science of Happiness, DTU, Delhi.
- Organized Photography Competition and Round Table Group Discussion on 23<sup>rd</sup>, January, 2024 on the theme of Challenges and Ideas towards ViksitBharat@2047 - Focus on Local Environmental Challenges.

## **Participation in Professional Development Programmes by Faculties**

#### Dr. Rajeev Kumar Mishra

**Title:** One Week FDP on "Disaster Preparedness and Risk Reduction"

**Organized by:** Geo-Meteorological Risk Management Division through India Universities and Institutions Network for Disaster Risk Reduction of National Institute of Disaster Management, Ministry of Home Affairs, Govt. of India in collaboration with Department of Civil Engineering, DTU, Delhi

Dates: 11th - 15th December, 2023

### Mr. Gour Anunay

**Title:** Two weeks Capacity Building Program for University Technology Business Incubator

Organized by:

DTU-IIF, DTU, Delhi

**Dates:** 

20<sup>th</sup> – 30<sup>th</sup> November, 2023

**Title:** Webinar on "Strategic approach to improve innovation"

Organized by: Clarivate

Date:

10<sup>th</sup> July, 2024

**Title:** UHV-Combined Monthly Meeting

Organized by: NCCIP, AICTE

Date:

01st January, 2024

## Faculty visit to other institutions to deliver Experts Lectures and other academic works:

- Dr. Rajeev Kumar Mishra delivered an invited talk on "Vehicle Induced Exhaust Emission: A Policy Perspective" in an International Conference on MultidisciplinaryApproachinEngineering, Technology and Management for Sustainable Development: A Roadmap for Viksit Bharat @ 2047 (ICMAETM-24), organized by Sankalchand Patel University, Visnagar, Ahmadabad, on 24th – 25th May, 2024.
- Dr. Rajeev Kumar Mishra delivered an invited talk on "Tailpipe Emission from Passenger Cars: A Policy Outlook" in an International Conference on Waste Recycling & Environmental Technology-WRET-2024, organized by the Department of Environmental Science, Baba Saheb Bhimrao Ambedkar (A Central) University, Lucknow on 9th February, 2024.

## Functional MoUs with Institutions of National, International Importance, Other Universities, etc.

MOU with Environmental Defense Fund (EDF) New York, USA (International)

MoU with Central Pulp and Paper Research Institute, Saharanpur, Uttar Pradesh (National) MOU with Environmental
Defense Fund (EDF) New York,
USA (International)

MoU with Central Road Research Institute (CRRI), Delhi

## **Detail of Student Progression to Higher Education:**

ANAND PRIY

Ph.D., IIT, Roorkee MILDRED
CHILESE
HySET Fellowship

**SOHOM CHATTERJEE** JRF, IIT, Bhubaneshwar

**DEEPAK PAL**MBA

#### **Detail of Student Placement:**

- UTKARSH GARG Landmark Group, CTC: 26 LPA
- ANOUSHKA GUPTA BlackRock, CTC: 18 LPA
- PREHA MADAN American Express PPO, CTC: 17.73 LPA
- SUMEDHA SHARMA American Express PPO, CTC: 17.73 LPA
- ASTHA VERMA Master Card PPO, CTC: 17.73 LPA
- LAKSHAY AGGARWAL Axxela, CTC: 14.1 LPA
- ESHA Sprinklr, CTC: 13.64 LPA
- LIPI SINGH Sprinklr, CTC: 13.64 LPA
- MANVI NILAYA Sprinklr, CTC: 13.64 LPA
- SANKALP PURWAR Sprinklr, CTC: 13.64 LPA
- CHETAN SHARMA InternsElite, CTC: 13 LPA
- VIKAS KUMAR InternsElite, CTC: 13 LPA

## Revenue Generated from Consultancy during the current year: ₹ 84.89 Lacs

- Adequacy Report for IFFCO-Aonla and IFFCO-Phulpur Plant, Uttar Pradesh (2023) at a cost of ₹ 1,41,600/-.
- Process vetting for upgradation of Delhi
  Jal Board Sewage Treatment Plants
  from ASP-based technology to IFASTechnology at a cost of ₹ 8,49,600/-.

## Number of Linkages with Institutions/Industries for Internships, on-the-job Training, Project Work, Sharing of Research Facilities etc.

- Linkage with World Resources Institute (WRI), Washington, USA
- Linkage with Environmental Defence Fund (EDF), New York, USA
- Linkage for Student Internship was established with Central Pollution Control Board (CPCB) from 2019 - to date for B.Tech. and M.Tech. Students.
- Linkage for Student Internship was established with Delhi Pollution Control Committee (DPCC) in 2019 for B.Tech. and M.Tech. Students.
- Linkage for joint activities with the School of Planning and Architecture (SPA), New Delhi, for environmental awareness and training activities.
- Joined supervision of doctoral research on Electrokinetic Remediation of Heavy Metal contaminated Soils with Canakkale Onsekiz Mart University, Canakkale, Turkey.

## 4.12 DEPARTMENT OF HUMANITIES





**Dr. Saroj Bala,** HoD (01st Jan., 2024 – Present)

**Prof. Nand Kumar,** HoD (01st Jan., 2021 – 31st Dec., 2023)

### **ACADEMIC PROGRAMMES**

Ph.D.
in Humanities
Admitted: 04

### **SALIENT FEATURES**

The Department of Humanities is one of the oldest departments in the university. It offers courses in Communication Skills, English Literature, Economics and Ethics for engineering students to train them with Employability Skills for the global market. In the last two years, the department's minor courses have seen exceptional encouragement from students, as students are interested in completing minors in Economics and English. In Economics there are about 100 students who have completed a Minor degree in the previous year. In the last 5 years, there has been a substantial rise in the number of publications in Web of Science Journals. The department's Language Lab is a dynamic learning space to enable the students with linguistic and phonetic proficiency in the English language required for their social and professional lives. A New Postgraduate Program in English and an Integrated UG and PG program in Economics to be opened in the future will provide new opportunities for the overall growth and development of the department. The department aims to achieve Academic and Professional Excellence through knowledge creation and its dissemination by preparing students for the 21stcentury multicultural world in general and Viksit Bharat-2047 in particular.

#### **RESEARCH PUBLICATIONS**



**JOURNALS: 27** 

**CONFERENCE: 01** 



BOOK: 01 (Text)
BOOK CHAPTERS: 02

#### **LABORATORIES**

Language Laboratory: The Language laboratory prepares the students for communication at the workplace and various dynamic interactional needs in modern times. The students can practice listening, speaking, and reading to enhance their communication skills.



#### **ACHIEVEMENTS OF THE DEPARTMENT**

Three Ph.D. degrees awarded in English and Economics

Research Excellence Award won by Prof. Nand Kumar in 2023-24 for two research papers.

## **Events organized by the Department**

Department Coordinator/ co-coordinator:

Dr. Saroj Bala

Prof. Nand Kumar

Prof. Rajiv Ranjan Dwivedi

Ms. Parinita Sinha

**Event Details:** Three-days workshop on "Reflections on the Indian Knowledge System in Texts of Bharat" under the aegis of Viksit Bharat Abhiyan 2047

Date(s): 23th - 25th April, 2024

#### **Resource Persons:**

- 1. Mr. Sanatan Kumar, Deputy Director, Rajya Sabha, and Parliament of India.
- 2. Dr. Naresh Kr. Vats, senior faculty, University School of Humanities and Social Sciences, GGSIP University, Delhi.
- 3. Prof. Shikha Saxena from Maharaja Agrasen Institute of Technology, DU, Delhi.

**Event Details:** Music: A Tool for Healing and Communication

Date: 27th February, 2024

#### **Resource Person:**

Dr. Umesh Pathak HoD, Journalism and Mass Communication, Maharaja Agrasen Institute of Management Studies, GGSIPU, Delhi



## **Faculties Participation in Professional Development Programmes:**

| Name of Faculty       | Title of PDP   | Organized by  | Date(s)  |
|-----------------------|--|---|--|
| Dr. Saroj Bala        | One-week FDP on "Advanced<br>Teaching Pedagogy and Outcome<br>Based Education in Context of NEP<br>2020"                             | HRDC, DTU, Delhi<br>in association with<br>NITTTR, Bhopal | 27 <sup>th</sup> - 31 <sup>th</sup> May,<br>2024                                       |
|                       | One-week online National level<br>FDP on "Cultural Studies: Indian<br>Perspective in Literary and Social<br>Contexts"                | Gokul Global<br>University, Siddhpur,<br>Gujarat          | 19 <sup>th</sup> - 25 <sup>th</sup><br>February, 2024                                  |
|                       | Exploring the Nuances of Environmentalism and Ecocriticism in Literature.  | Gokul Global<br>University, Siddhpur,<br>Gujarat          | 18 <sup>th</sup> - 25 <sup>th</sup> March,<br>2024                                     |
|                       | Six Days International FDP (Hybrid mode) on "Work-life balance in the BANI (Brittle, anxious, Non-Linear and Incomprehensible) Era." | Department of<br>Management, IEM,<br>Kolkota              | 25 <sup>th</sup> - 28 <sup>th</sup><br>November &<br>2 <sup>nd</sup> December,<br>2023 |
| Ms. Parinita<br>Sinha | One-week FDP on "Advanced<br>Teaching Pedagogy and Outcome<br>Based Education in Context of NEP<br>2020"                             | HRDC, DTU, Delhi<br>in association with<br>NITTTR, Bhopal | 27 <sup>th</sup> - 31 <sup>th</sup> May,<br>2024                                       |

## Awards and Recognition at State, National, International level from Recognized Bodies:

**Prof. Seema Singh** 

**Title of Award:** IEOM Distinguished Leadership Award **Awarding Agency:** IEOM Society in November, 2023

Dr. Saroj Bala

**Title of Award:** Bharat Vibhushan Award-2024 **Awarding Agency:** AOAG Samiti, Delhi in 2024

## Visit of Faculty to other Universities/Institutions for Expert Lectures/ Academic Work:

Dr. Saroj Bala

Event Details: Ph.D. Thesis Evaluation and Final Defence

**Role:** Thesis External Examiner

University: Manav Rachna University, Faridabad

**Date:** 25<sup>th</sup> June, 2024

**Event Details:** CAS screening

**Role:** Subject expert for CAS screening committee **Organized by:** Rajasthan Technical University, Kota

Dates: 06th - 07th December, 2023

Prof. Seema Singh

Event Details: Ph.D. Thesis Evaluation and Final Defence

**Role:** Thesis External Examiner(s)

University: The Maharaja Sayajirao University of Baroda,

Vadodara, and Central University of Gujarat

Event Details: M.Phil Thesis Evaluation and Final Defence

**Role:** Thesis External Examiner **University:** University of Mauritius

## 4.13 DEPARTMENT OF INFORMATION TECHNOLOGY

Prof. Dinesh K. Vishwakarma, HoD



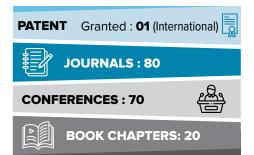
#### **ACADEMIC PROGRAMMES**

**B.Tech.** Intake: **181** Admitted: **181** 

M.Tech. Intake: 25+05 Admitted: 26

**Ph.D.** Admitted: **08** 

#### **RESEARCH PUBLICATIONS**



## **SALIENT FEATURES**

The Department of Information Technology endeavors to provide the thrill of a corporate R&D environment with a planned focus on industrially relevant subjects, projects and technology incubation. The curriculum defined, lays greater emphasis on design principles and development of system software for Operating Systems, Malware Analysis, Artificial Intelligence, Data Mining, Computer Vision and Networks. Department has developed the state-of-the-art laboratories in the various fields of Information Technology namely, Computer Networks Lab, Web Engineering Lab, Programming Lab, Information and Security Lab, Malware Analysis lab and Biometric Research Lab. Currently, the Department offers Doctorate in various emerging technologies, post- graduate in Information Systems & under- graduate in IT. The department also has an active student chapter of Computer Society of India (CSI) and contributes significantly in professional activities undertaken by IEEE and IET student chapters.



## **LABORATORIES:**

| Name of Laboratory                                 | Room<br>No. | Details of Laboratory                                    |
|--|-------------|--|
| Data Structures and Algorithms<br>Laboratory       | B05         | Data structures & algorithms programs for UG students.   |
| Programming Laboratory                             | B07         | Programming fundamentals for UG students.                |
| Networks and IoT Laboratory                        | B15         | Network & iot programming for UG/PG students.            |
| Operating Systems Laboratory                       | B17         | OS programming for UG/PG students.                       |
| Data Science and Analytics Laboratory              | 006         | Data Science programming for UG/PG students.             |
| Machine Learning Laboratory                        | 015         | ML programming for UG/PG students.                       |
| Information Security Laboratory                    | 017         | Information Security programming for UG/PG students.     |
| Cyber Forensics and Malware<br>Analysis Laboratory | 212         | Cyber forensics and Malware analysis for UG/PG students. |
| Multi-Model Data Analytics Research<br>Laboratory  | 012         | Multimodal data analytics for UG/PG students.            |
| Object Oriented Programming<br>Laboratory          | 806         | OOPS programming for UG/PG students.                     |







#### **ACADEMIC STAFF**

#### **ACADEMIC STAFF**

#### **PROFESSORS**

## HoD: Prof. Dinesh Vishwakarma

(Ph.D.)

Research Area: Machine/ Deep Learning, Computer Vision, Human Action and Activity Recognition and Sentiment Analysis

## Prof. Kapil Sharma

(Ph.D.)

**Research Area:** Artificial Intelligence, Optimization, Evolutionary Computation, and Software Engineering

## Prof. Seba Susan

(Ph.D.)

Research Area: Pattern
Recognition, Machine
Learning, Computer
Vision, Natural Language
Processing and Data Mining,

#### **ASSOCIATE PROFESSORS**

**Dr. Virender Ranga** (Ph.D.) **Research Area:** Wireless

Ad-hoc & Sensor Network,

Evolutionary Computations

in Computer Networks,

Machine Learning techniques

in networking, and Security

issues in Cloud Computing

**Dr. Ritu Agarwal** (Ph.D.) **Research Area:** Information

Security, Digital Forensics,

Data Structures, Analysis and
design of Algorithms and

Pattern Mining

**Dr. Varsha Sisaudia** (Ph.D.) **Research**Processing,

Algorithms,

Soft

Computing

and Machine Learning

#### **ASSISTANT PROFESSORS**

### Ms. Anamika Chauhan

(M.Tech.)

**Research Area:** Sensor Networks, Mobile and Vehicular Ad-hoc Networks and Internet of Things

**Dr. Priyanka Meel** (Ph.D.) **Research Area:** Artificial Intelligence, Optimization Algorithms, Data Analytics and Fake news and rumor detection

Mr. Rahul Gupta (M.Tech.)
Research Area: Mobile Security,
Artificial Intelligence and Machine
Learning Social Media Mining

**Dr. Bindu Verma** (Ph.D.) **Research Area:** Image Processing,
Computer Vision, Hand Gesture,
Affective Computing, Emotion
Recognition and Machine Learning

#### **ACHIEVEMENTS OF THE DEPARTMENT:**

An amalgam of Computers and Telecommunications, Information Technology has changed the lives of people locally as well as globally with the applications apparent in every walk of life. Popular areas that encompass the scope for IT and have grown in the recent years are medicine, E-Governance, entertainment and multimedia, scientific research, business intelligence solutions and knowledge discovery in databases.

The Department of Information Technology offers an undergraduate B.Tech. UG in Information Technology with an intake of 180 students every year. The course is

designed in a such a way to provide the students with fundamental concepts and tools related to related fields, the B.Tech. (Information Technology) programme emphasizes on all basic subjects such as operating systems, computer architecture and design, malware analysis, software development, computer networks, wireless sensor networks, Big Data, artificial intelligence, natural language processing, Internet of Things, cloud computing, machine learning, deep learning, etc.

Also, the Department offers PG degree in Information Technology with an annual intake of 25 students. Specialized

knowledge on analysis and design of Information system, information security, mobile communication, soft computing, artificial intelligence, big data, cloud computing, deep learning, computer vision and expert systems, web engineering is also imparted, along with various electives upcoming I.T. fields. A large related to number of B.Tech. (IT) students have obtained admissions in foreign and reputed national universities for M.S/M. Tech. and M.B.A. programs. Further, many publications in international conferences/ Journals published by the undergraduate

and post graduate students are the outcome of the research culture developed in the Department. The Department has a student society called the "Society for IT Engineers" (S.I.T.E.). Students regularly participate in national and international events like hackathons and other technical and nontechnical competitions. The department aims to encouraging the students to be a part of active working teams in practical industrial projects and technical work, enabling them to expand intellectually so that they can make their contributions in the challenging IT industry.

#### **Details of Patent Awarded/Published in 2023-24**

Inventor: Prof. Kapil Sharma

**Title of Patent:** Apparatus and Method for Transmitting a Signal in

a Wireless Power

Status: Granted | Patent Number: US11831180 B2

Date: 28th November, 2023

## **Events organized by the Department:**

**Department Coordinator**Dr. Ritu Agarwal

#### Name of Event:

Entrepreneurship and Innovation as Career Opportunity

In Collaboration with: Innovation Council, DTU

Date: 13th November, 2023

Name of Event: Hybrid
Career Opportunities
and Insights for
Budding Engineers
In Collaboration with:
Innovation Council, DTU

Date: 25<sup>th</sup> August, 2023

Name of Event: Startup idea competition to celebrate 3<sup>rd</sup> National Startup Day

In Collaboration with: Innovation Council, DTU

Date: 16th January, 2024

Department Coordinator/ co-coordinator:

Dr. Ritu Agarwal and Mr. Rahul Gupta Name of Event: Recent Advances and Innovations Related to Security Cyber- Physical Systems under Viksit Bharat Programme

**Date:** 24<sup>th</sup> May, 2024



## Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

| Name of Faculty    | Event Details  | Organized by  | Date(s)   | Amount received by DTU, Delhi (₹) |
|--------------------|--|---|---|-----------------------------------|
| Dr. Virender Ranga | FDP "Quantum<br>Computing:<br>Algorithms and<br>Applications"                | Centre for Training<br>and Learning by NIT,<br>Warangal, Telangana                                      | 15 <sup>th</sup> - 19 <sup>th</sup><br>July, 2024 | 1,000/-                           |
| Dr. Priyanka Meel  | Two Weeks online<br>FDP  | BITS, Noida in<br>association with<br>JIMS Engineering<br>Management Technical<br>Campus, Greater Noida | 20 <sup>th</sup> - 31 <sup>st</sup><br>May, 2024  | 15,000/-                          |
|                    | Two Weeks FDP Programme on "Product Design and Development with 3d Printing" | Department of Design,<br>DTU, Delhi   | 10 <sup>th</sup> - 21 <sup>st</sup><br>June, 2024 | 10,000/-                          |

| Name of Faculty        | Event Details  | Organized by   | Date(s)  | Amount received by DTU, Delhi (₹) |
|------------------------|--|--|--|-----------------------------------|
| Dr. Priyanka Meel      | Two Weeks Online<br>Industrial Training<br>Programme | Eduxlabs in association with Mechanical IIT, Madras    | 18 <sup>th</sup> - 29 <sup>th</sup><br>December,<br>2023 | 2,999/-                           |
| Ms. Anamika<br>Chauhan | Two Weeks Industrial<br>Training Programme           | Advanced level<br>Telecomm. Centre,<br>BSNL, Ghaziabad | 6 <sup>th</sup> - 22 <sup>nd</sup><br>July, 2023         | 11,800/-                          |
| Prof. Seba Susan       |  | -  | -  | 9,029/-                           |
| Prof. Kapil Sharma     | Prof. Kapil Sharma                                   |  | -  | 9,029/-                           |
| Dr. Bindu Verma        | IEEE Annual  | -  | -  | 9,104/-                           |
| Dr. Varsha<br>Sisaudia | Membership   | -  | -  | 8,741/-                           |

## Collaborative Activities for Research, Faculty Exchange, and Student Exchange:

Dr. Virender Ranga —

**Collaboration with:** NIT, Kurukshetra

Type of collaboration: Ph.D. students' guidance **Duration:** 2018 - 2026 Collaboration with: Deenbandhu Chhotu Ram University of Science and Technology, Sonipat

**Type of collaboration:** Ph.D. students' guidance

**Duration: 2019 - 2024** 

## Awards and Recognition at State, National, International level from Recognized Bodies:

#### AWARDS AND RECOGNITION

### Prof. Dinesh Kumar Vishwakarma

Title of Award: Featured in the top 2% scientist of the world (Rank: 690, Area: Artificial Intelligence and Image Processing,

Awarded by: STANFORD

& ELSEVIER **Year:** 2023

### **Dr. Virender Ranga**

**Title of Award:** Featured in the top 2% scientist of the world, in the area of Artificial Intelligence and Image Processing,

Awarded by: STANFORD & ELSEVIER

**Year:** 2023

**Title of Award:** Featured in the top 0.5%

scientist of the world

Awarded by: Scholar GPS with Rank 7

Year: 2023

## Visit of Faculty to other University/Institution for Expert Lectures/ Academic Work:

#### **Prof. Dinesh Kumar Vishwakarma**

| Title of Event  | Topic of Expert Lecture   | Organized by   | Date(s)   |
|---|---|--|---|
| Five Days SERB sponsored FDP/ Workshop on "Development and Deployment of AloT based solution for Industrial Applications"         | "Integration of Computer<br>Vision with Internet of<br>Things for Smart Farming"                  | Department of CSE,<br>NSUT, Delhi  | 17 <sup>th</sup> – 21 <sup>st</sup><br>June, 2024         |
| FDP on "Emerging Trends in Computational Intelligence"  | "Understanding Al<br>Ethics and Adversarial<br>Challenges"  | Department of Computer<br>Science and Engineering,<br>Guru Jambheshwar<br>University of Science and<br>Technology, Hisar | 15 <sup>th</sup> – 20 <sup>th</sup><br>June, 2024         |
| STC on "Artificial Intelligence<br>and its Application to Smart<br>Systems"   | "Ethical Navigation in AI:<br>Balancing Responsibility<br>Amidst Adversarial<br>Challenges"       | Department of Computer<br>Science and Engineering,<br>NIT, Delhi   | 20 <sup>th</sup> – 24 <sup>th</sup><br>Dec., 2023         |
| An International Conference<br>on "Machine Learning, Image<br>Processing, Network Security<br>and Data Sciences"                  | "Responsible Al Practices:<br>Navigating Ethical<br>Considerations and<br>Adversarial Challenges" | NIT, Hamirpur  | 21 <sup>st</sup><br>December.,<br>2023                    |
| Three Weeks Training<br>program for 02 years of<br>foundation Training of<br>the 59 <sup>th</sup> Batch of DANICS<br>Probationers | "Al-Powered agriculture:<br>revolutionizing smart<br>farming"                                     | DTU, Delhi   | 11 <sup>th</sup> - 29 <sup>th</sup><br>September,<br>2023 |
| One Week FDP on "Al for building Speech and Vision Applications using Python"   | "Decoding Emotions:<br>Visual Sentiment Analysis<br>in Images and Videos "                        | CSE, Galgotia College<br>of Engineering and<br>Technology, Greater<br>Noida  | 21 <sup>st</sup> - 25 <sup>th</sup><br>August, 2023       |

## Participation of Faculties in Extension & Outreach Activities organized by university

#### **Participation of Faculties in Extension & Outreach Activities**

Dr. Virender Ranga,
Dr. Anamika Chauhan
Dr. Bindu Verma
Dr. Priyanka Meel

**Purpose:** To motivate young buddies (11<sup>th</sup> & 12<sup>th</sup> Class) for exploring engineering in DTU, Delhi and Exposure of school students to the engineering environment and possible future guidance.

Date(s): 1st - 6th July, 2024

## **Students' Progression to Higher Education:**

| Name of Student | Programme (DTU) | Programme for Higher Education | University Full Name, City, Country       |
|-----------------|-----------------|--------------------------------|---|
| Harsh           |                 | MBA Programme                  | Oxford University and Tsinghua University |
| Anukriti Kumar  | B.Tech. (IT)    | Ph.D.                          | University of Washington                  |
| Peya Mowar      |                 | MS, Robotics                   | Carnegie Mellon University, Pittsburgh    |
| Mini Jain       |                 | MS, CSE                        | Georgia Tech., Atlanta, USA               |

## Financial Support provided to Students to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ Training etc. during Current Year:

| Name of<br>Student             | Attended Event Details  | Organized by   | Date(s)   | Amount received by DTU, Delhi (₹) |
|--------------------------------|---|--|---|-----------------------------------|
| Ms. Lakshita<br>Agarwal        | 20 <sup>th</sup> India Council International<br>Conference on Artificial<br>Intelligence (INDICON-2023)         | NIT, Hanamkonda,<br>Telangana                              | 14 <sup>th</sup> - 17 <sup>th</sup><br>December, 2024 | 23,391/-                          |
| Ms. Reena<br>Tripathi          | 20 <sup>th</sup> India Council International<br>Conference on Artificial<br>Intelligence (INDICON-2023)         | NIT, Hanamkonda,<br>Telangana                              | 14 <sup>th</sup> - 17 <sup>th</sup><br>December, 2024 | 23,391/-                          |
| Ms.<br>Meenakshi<br>Srivastava | 10 <sup>th</sup> International Conference<br>on Soft Computing & Machine<br>Intelligence (ISCMI2023)            | Virtual Mode,<br>Mexico city                               | 25 <sup>th</sup> - 26 <sup>th</sup><br>December, 2024 | 23,294/-                          |
| Ms.<br>Debashree<br>Debalaxmi  | IEEE ICWIT 2024, International<br>Conference for Women in<br>Innovation, Technology,<br>Entrepreneurship        | Vemana institute<br>of Technology,<br>Karnataka            | 16 <sup>th</sup> -17 <sup>th</sup><br>February, 2024  | 1,23,38.43/-                      |
| Mr. Abhishek<br>Verma          | 20 <sup>th</sup> India Council International<br>Conference on "Artificial<br>Intelligence (INDICON-2023)"       | NIT, Hanamkona,<br>Telangana                               | 14 <sup>th</sup> - 17 <sup>th</sup><br>December, 2024 | 22,500/-                          |
| Ms. Nidhi                      | "Empirical Insights: Unraveling<br>the Impact Various Attention<br>Mechanisms on Facial Emotion<br>Recognition" | Online mode<br>(London,<br>Metropolitan<br>university, UK) | 14 <sup>th</sup> - 15 <sup>th</sup> June,<br>2024     | 15,250/-                          |
| Mr. Monish<br>Kumar Sahu       | 4 <sup>th</sup> International Conference<br>on "Machine Learning and Big<br>Data Analytics (ICMLBDA)"           | NIT, Kurukshetra,<br>Haryana                               | 9 <sup>th</sup> - 11 <sup>th</sup> May,<br>2024       | 8,000/-                           |
| Mr. Abhishek                   | 4 <sup>th</sup> International Conference<br>on "Machine Learning and Big<br>Data Analytics (ICMLBDA)"           | NIT, Kurukshetra,<br>Haryana                               | 9 <sup>th</sup> - 11 <sup>th</sup> May,<br>2024       | 8,000/-                           |
| Mr. Tanmoy<br>Das              | International Conference  | K.L.E Institute<br>of Technology,<br>Karnataka             | 21 <sup>st</sup> - 23 <sup>rd</sup> June,<br>2024     | 8,700/-                           |

#### **Students' Achievements:**

Nilutpol Bora, Saloni Agarwal, Anshul Agarwal,



Programme: 10<sup>th</sup> convocation, DTU Delhi

**Achievement:** Vice-Chancellor Gold Medal Recipient

**Date:** 16<sup>th</sup> November, 2023

## 4.14 DEPARTMENT OF MECHANICAL ENGINEERING





#### **ACADEMIC PROGRAMMES**

B.Tech. (M.E.) Intake: 301 Admitted: 301

B.Tech. (Production & Industrial Engg.)
Intake: 76
Admitted: 76

B.Tech. (Automotive Engg.)

Intake: **76** Admitted: **76** 

M.Tech. (IEM)
Intake: 30
Admitted: 13

M.Tech. (CAAD)
Intake: 30
Admitted: 10

**Ph.D** Admitted: **15** 

#### RESEARCH PUBLICATIONS



**JOURNALS: 37** 

**CONFERENCES: 10** 





#### **SALIENT FEATURES**

The department of Mechanical Engineering considerable growth since its has inception in 1941. The department of Mechanical Engineering also offers Post Graduate courses specialization in Thermal Engineering, Production Engineering, Computer Analysis and Design (CAAD), Energy Systems and Management (ESM) and Industrial Engineering and Management (IEM). Ph.D. Program in all fields of Mechanical Engineering is also offered. In addition, the department also offers four years B.Tech. Programme for working Diploma Engineers. The department has developed ecofriendly technology using alternate refrigerants in the RAC lab for re-directing global warming and Ozone depletion.



Dr. Krovvidi Srinivas - Journals: 06, Conferences: 03
Dr. M. Zunaid - Journals: 06, Conference: 01
Dr. Naushad Ahmad Ansari - Journals: 03, Conference: 01
Dr. Sushila Rani - Journals: 05, Conferences: 02
Dr. Paras Kumar - Journals: 11, Conference: 01
Dr. Pravin Kumar - Journals: 06, Conferences: 02

#### **LABORATORIES:**

The department of Mechanical Engineering has essential facilities for experimentation, research, and development within the field of mechanical engineering. Common areas of focus include fluid dynamics, thermodynamics, material science, robotics, and control systems. Equipped with advanced machinery and state-of-the-

art tools, these labs allow for precise testing and measurement, critical for innovation in engineering design. Additionally, mechanical engineering labs support hands-on learning and skills development, preparing students for practical challenges in their careers.

#### **LABORATORIES**

Centre of Advance Studies and Research in Automotive Engineering (CASRAE)

Design Centre Research Lab

Automobile Lab

Fluid Mechanics Lab Fluid Machinery Lab

IC Engines Lab

Strength of Materials
Lab Heat Transfer
Lab

DOM/KOM/Tribology lab

Turbo-Machinery Lab
Instrumentation/ESA
Lab

Power Plant Engineering Lab

Metal Forming Lab

Engineering Lab

Sand Testing Lab

Metal Cutting Lab

Metrology Lab

Metallurgy Lab
Welding Lab

CIM Lab

Precision engineering Lab

CNC Shop

CAD Lab

Applied Mechanics Lab

Refrigeration and Air Conditioning Lab

Foundry Shop
Smithy Shop

Welding Shop Fitting Shop

Sheet Metal Shop

Machine Shop

Advanced Metal Joining Lab

Production Management Lab

Micro and Nano

Scale Thermofluidic

Automation, Mechatronics and Smart Manufacturing Lab













#### **ACADEMIC STAFF**

## HoD: Prof. B. B. Arora

(Ph.D.)

Research Area: Fluid Mechanics

**Prof. Vipin** (Ph.D.) **Research Area:** Production Engg.

**Prof. S. Maji** (Ph.D.) **Research Area:** Thermal Engg.

Prof. S. K. Garg (Ph.D.)
Research Area: Manufacturing
Process & Automation,
Technology Management,
Decision Science,
Operations and Supply Chain
Management, Materials
Management, Operations
Research, Strategic Management,
Production Planning and Control

Prof. R. S. Mishra (Ph.D.) Research Area: Alternate Energy Sources, Green Technology (FSW & FSP), RAC, Heat & Mass Transfer, Thermal Engg., Power plant Engineering

#### **Prof. Naveen Kumar**

(B.Sc. Engg., M.Tech., Ph.D.)

Research Area: Alternative fuels
with particular emphasis on
biofuels, decentralized energy
systems, renewable energy,
climate change, waste recycling,
and sustainable development

Prof. D. S. Nagesh (Ph.D.)
Research Area: Robotics,
CAD/CAM, Production
Automation, Engg. Drawing,
Engg. Mechanics, Welding
Application of Artificial Neural
Networks, Genetic Algorithm
and Design of Experiments

#### **PROFESSORS**

Prof. Reeta Wattal (Ph.D.) Research Area: Production Engineering, Welding, Metal Cutting, Metal Forming

**Prof. Samsher** (Ph.D.) **Research Area:** Power plant engineering

**Prof. A. K. Madan** (Ph.D.) **Research Area:** Industrial Engg.

## Prof. Raj Kumar Singh

(Ph.D.)

Research Area: Fluid Mechanics

**Prof. Amit Pal** (Ph.D.) **Research Area:** Biofuels, IC Engines, Renewable Energy

Prof. R. C. Singh (Ph.D.)
Research Area: Engine
Tribology, Production
Engineering

Prof. Rajesh Kumar (Ph.D.)
Research Area: Refrigeration
& Air- conditioning, Fluid
Mechanics, Thermodynamics,
Heat transfer, solar energy,
hydrogen energy, Micro and
Nano scale heat transfer,
computational fluid dynamics

Prof. Qasim Murtaza (Ph.D.) Research Area: Manufacturing, Thermal spray coatings, Materials, Industrial Engg.

**Prof. Rajiv Chaudhry** (Ph.D.) **Research Area:** Production Engg.

**Prof. A. K. Agarwal** (Ph.D.) **Research Area:** Solid Mechanics, Fracture Mechanics, Vibrations, Computational Methods

Prof. Vijay Gautam (Ph.D.) Research Area: Plasticity and Metal Forming, Forming simulations, Production Engineering, Machine Design, Crash Analysis

#### Prof. Akhilesh Arora

(AMIE, M.Tech, Ph.D.)

Research Area: Refrigeration

& Air-conditioning systems and
alternative refrigerants, Novel
Cycles, Exergy Analysis

Prof. Girish Kumar (Ph.D.)
Research Area: Reliability
Engineering, Maintenance
management, Stochastic
modelling, Optimization,
Quality Engineering

**Prof. Anil Kumar** (Ph.D.) **Research Area:** Clean Energy and Energy Transition

#### **Prof. Pravin Kumar**

(B.Tech., M.Tech., Ph.D.)

Research Area: Operations
Management, Industrial
Engineering & Management,
Quality Management,
Supply Chain Management,
Quantitative Techniques

## Prof. M. S. Niranjan

(B.Tech, M.Tech, Ph.D.)

Research Area: Advanced

Machining Processes, Smart

Materials, Computer aided

manufacturing (CAM), Flexible

Manufacturing systems (FMS),

Welding.

#### **ACADEMIC STAFF**

#### **ASSOCIATE PROFESSORS**

#### Sh. V. Kamal

(M.Tech.) Design

#### Sh. P. V. Ram Kumar

(M.Tech.)

Research Area: THERMAL ENGG / POWER PLANTS / HEAT TRANSFER / RAC

## Dr. Pushpendra Singh

(Ph.D.)

Research Area: Solar, Wind & other Renewable Energy Resources, Refrigeration & Air Conditioning

#### Dr. Roop Lal (Ph.D.)

Research Area: Automobile, Internal Combustion Engines, Aviation and Tribology

#### **Dr. Paras Kumar**

(B.Tech., M.Tech., Ph.D.)

Research Area: Machine

Design, Tribology, Vibration,

Acoustic, Condition

Monitoring

## Dr. Raghvendra Gautam (Ph.D.)

**Research Area:** Power Plant Engineering, Alternative Fuels

#### Dr. Sushila Rani

(B.Tech., M.Tech., Ph.D.)

Research Area: Failure
investigations in failed
Mechanical components,
Composite materials,
Designing, modelling and
analysis of Unmanned aerial
vehicle UAV, s (Drones)

#### Dr. K. Srinivas

(M.Tech., MBA, Ph.D.)

Research Area: Composite
material manufacturing and
characterisation, Magnetic
abrasive finishing

#### Dr. M. Zunaid

(B.E., M.Tech., Ph.D.)

#### Research Area:

Computational Fluid Dynamics (CFD), Computational Heat Transfer and Fluid Flow, Microfluidics, Fluid Flow in Microchannels, Phase Change Materials for Thermal Energy Storage, Fluid Mechanics, Fluid Dynamics, Refrigeration and Air Conditioning, Power Plant Engineering, Thermal Engineering.

#### Dr. N. A. Ansari

(B.Tech., M.Tech., Ph.D.)

Research Area: Refrigeration
& Air-conditioning systems
and alternative refrigerants,
Alternative fuels with
emphasis on biofuels,
renewable energy, waste
to energy and sustainable
energy systems.

**Dr. Manjunath. K** (Ph.D.) **Research Area:** Thermal Engg.

#### **Dr. Sanjay Kumar** (Ph.D.) **Research Area:** Machine Design, Finite Element Method, Fracture Mechanics, Dynamic Fracture

#### **ASSISTANT PROFESSORS**

### **Sh. Ajay Solanki** (M.Tech.) Assit. Prof. (Cont.)

Research Area: Design

#### Dr. Rakesh Kumar (Ph.D.)

Assit. Prof. (Cont.)

Research Area: Industrial
Engg

### Dr. M. Shuaib (Ph.D.)

Assit. Prof. (Cont.)

Research Area: Industrial Engq

#### Sh. Mukesh D. Shamrao

(M.Tech.) Assit. Prof. (Cont.) **Research Area:** Thermal Engg.

#### **FOREMAN INSTRUCTOR**

**Dr. N. Yuvaraj** (Ph.D.) Foreman Instructor **Research Area:** Surface composites, Welding (FSW,

CMT), Casting & Metal cutting

Sh. P. K. Jain (M.Tech.)
Foreman Instructor
Research Area: Thermal
Engg.

## **Revenue Generated from Consultancy:**



Name of Faculty: Dr. Paras Kumar Funding Agency: DJB, Delhi Amount (₹): 3,30,400/-

Month, Year of Commencement: January, 2024



## **Events organized by the Department:**

**Event Details:** 22<sup>nd</sup> ISME International Conference on "Recent Advances in Mechanical engineering for Sustainable Development" (ISME-2024)

In Collaboration with: Indian Society of Mechanical Engineers

**Date(s):** 11<sup>th</sup> – 13<sup>th</sup> July, 2024

Coordinator/co-coordinator: Prof. Amit Pal and Prof. Vijay Gautam









Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

**Event Details:** Participated online and presented research paper in the third International Conference on "Mechanical and Energy Technologies (ICMET-2023)"

Dr. M. Zunaid

**Organized by:** Galgotias College of Engineering and Technology, Greater Noida, U.P.

Date(s): 7th - 8th December, 2023

Amount received by DTU, Delhi (₹): 8000/-

## **Faculties Participation in Professional Development Programmes:**

| Name of Faculty             | Title of PDP  | Organized by      | Date(s)   |
|-----------------------------|---|-------------------|---|
| Dr. Naushad Ahmad<br>Ansari |   |                   | 6 <sup>th</sup> - 15 <sup>th</sup> May,<br>2024       |
|                             | Disaster Preparedness and Risk<br>Reduction                                 | NIDM & DTU, Delhi | 11 <sup>th</sup> - 15 <sup>th</sup><br>December, 2023 |
| Dr. Sushila Rani            | One week FDP- "3D Curiosity<br>Autodesk,<br>One week FDP on "Advanced       | AUTODESK, Delhi   | 17 <sup>th</sup> - 21 <sup>st</sup> July,<br>2023     |
|                             | teaching pedagogy and Outcome<br>based education in context of<br>NEP-2020" | DTU, Delhi        | 27 <sup>th</sup> - 31 <sup>st</sup> May,<br>2024      |

Awards and Recognition at State, National, and international level from Recognized Bodies: Name of Faculty: Dr. Pravin Kumar
Title of Event: Expert Lecture in FDP
Topic of Lecture: DEA and Its applications
Organized by: NIT, Surat
Date: 17th June, 2024

Visit of Faculty to other University/Institution for Expert Lectures/Academic Work:

Name of Faculty: Dr. Pravin Kumar
Title of Award: Most Cited Paper Award
Awarding Agency: Elsevier in April, 2024

## Participation of Faculties in Extension & Dutreach Activities organized by university:

| Name of Faculty             | Details of Activity                                      | Purpose of Activity  | Date(s)                        |
|-----------------------------|--|--|--------------------------------|
| Dr. Naushad<br>Ahmad Ansari | Organizing committee<br>member of National<br>conference | Social responsibilities of<br>Educational Institutions in context<br>of NEP 2020 | 12 <sup>th</sup> January, 2024 |
|                             | Faculty Coordinator                                      | Community Engagement Course (MS-199)   | Academic session 2023-2024     |
| Dr. Sushila Rani            | Faculty Coordinator                                      | Community Engagement Course (MS-199)   | Academic session 2023-2024     |
| Dr. Paras Kumar             | Faculty Coordinator                                      | Community Engagement Course (MS-199)   | Academic session 2023-2024     |
| Prof. Pravin<br>Kumar       | Faculty Coordinator                                      | Organized International Day of<br>Yoga 2023, 2024                                | Year 2023 & 2024               |
| Prof. M. S.<br>Niranjan     | Faculty Coordinator                                      | Community Engagement Course (MS-199)   | Academic session 2023-2024     |
| Dr. M. Zunaid               | Member   | Community Engagement Course (MS-199)   | Academic session 2023-2024     |

## 4.15 **DEPARTMENT OF SOFTWARE ENGINEERING**



Prof. Ruchika Malhotra, HoD

#### **ACADEMIC PROGRAMMES**

B.Tech. (Software Engineering) Intake: 181 Admitted: 181

M.Tech. (Software Engineering) Intake: 25 Admitted: 23

M.Tech. (Data Science)
Intake: 30
Admitted: 28

## **SALIENT FEATURES**

The Department of Software Engineering is dedicated to produce high quality graduates and skilled software engineers/professionals who can develop high quality and cost-effective software systems. This department was introduced in March, 2021. All the software engineering programs are well designed keeping in view of the industry demands. The programs are designed to build the analytical and practical capabilities of students in the design and development of the software and lays emphasis on well-defined and systematic approach for meeting the growing demands and requirements of the software industry. The curriculum is regularly updated in accordance with the latest trends, research and best practices in the software industry and academia.



#### **RESEARCH PUBLICATIONS**



**JOURNALS: 32** 

**CONFERENCES: 22** 



<u>₿</u>

**BOOK CHAPTERS: 04** 

## **LABORATORIES:**

| Name of Laboratory  | Details   |
|---|---|
| Advanced Software<br>Engineering Lab                        | This lab helps to understand theories, methods and technologies applied for professional software development. Moreover, the students understand the process to be followed in the software development life cycle.   |
| Database<br>Management and<br>System Lab                    | This lab enables the students to practice the concepts learnt in the subject DBMS by developing a database. The students are expected to practice the designing, developing and querying a database through "Mysql/Oracle" database.  |
| Data Warehousing<br>& Data Mining Lab                       | This is a research lab. The main objective of this lab is to impart the knowledge on how to implement classical models and algorithms in data warehousing and data mining and to characterize the kinds of patterns that can be discovered by association rule mining, classification, and clustering.  |
| Software Testing &<br>Research Lab                          | This lab is a practical ground for training students with the know-how of efficient software testing skills along with a research space for software engineering related research projects. The overall objective is to provide resources and training to UG and PG students for competent software system analysis so that maximum errors are exposed as early as possible in a software life cycle. |
| Computer<br>Networks Lab                                    | The objective of this lab course is to get practical knowledge of working principles of various communication protocols. Analyze structure and formats of TCP/IP layer protocols using network tools such as Wireshark and network simulators. Implementing various network algorithms such as error control, error detection, routing, and security related algorithms.                              |
| Software<br>Engineering Lab                                 | This Lab focuses on the various aspects related to software engineering, object oriented software programming, Web engineering, and intelligent systems. It has got various software and tools installed which are beneficial for the development of the technical skills as well as for the research purposes.   |
| Artificial<br>Intelligence and &<br>Machine Learning<br>Lab | The AI and ML laboratory was established to explore the theories and technologies in the AI-related areas, with a focus on the research and applications of cutting-edge technologies such as machine learning, natural language processing, computer vision, robotics, intelligent manufacturing and so on.  |
| Computer System<br>Lab                                      | Computer system lab involves the study of the theory, experimentation and engineering that form the basis for the design and use of computers. Computer system Lab co-ordinates the acquisition, maintenance and operation of the computing equipment and network services.   |
| Mobile Computing<br>and Distributed<br>Systems Lab          | This lab provides a high level coverage of mobile and distributed computing. It focuses on the underlying concepts and standards of mobile computing and current technologies for mobile and distributed systems.   |
| Internet of Things<br>Lab                                   | The main objective of this lab is to explore the many applications of sensors and "smart" objects. IoT labs have many sensors to explore a variety of applications. It is equipped with Arduino, Raspberry Pi in addition to wi-fi, shields and other connectivity modules.   |









### ACADEMIC STAFF

#### **PROFESSOR**

#### HoD: Prof. Ruchika Malhotra

(Ph.D., Post- Doc)

Research Area: Machine Learning and Predictive Modeling, Software Testing and Quality, Empirical Software Engineering, Searchbased Software Engineering.

#### **ASSOCIATE PROFESSORS**

#### Dr. Divyashikha Sethia

(B.Tech., M.Tech., Ph.D.)

Research Area: Distributed
Systems, Computer
Networks, Algorithms,
Mobile Computing, Health,
Cryptography

#### Dr. Abhilasha Sharma

(B.Tech., M.Tech., Ph.D.)

Research Area: Software
Engineering, Software
Testing, DBMS, Web
Technology, Web Security.

#### Ms. Shweta Meena

(B.Tech., M.Tech., Ph.D(p))

Research Area: Software
Engineering, Software
Testing, Software Quality,
and Metrics, Empirical
Software Engineering.

#### Mr. Ram Murti Rawat

(M. Tech., Pursuing Ph.D.) (Contractual)

Research Area: Analog and Digital VLSI Design, Digital systems, fault tolerance design, Computer architecture, Modelling and simulation, Computer Networks, web technology and Fundamentals of computer.

#### **ASSISTANT PROFESSORS**

### Dr. Sanjay Patidar

(B.E., M.E., Ph.D.)

Research Area: Security, Stream Data mining, Machine Learning, IOT Smart Application, Data Science, and Theory of Computation.

#### Dr. Rahul

(B.Tech., M.Tech., Ph.D.)

**Research Area:** Deep Learning, Machine Learning, Sentiment Analysis, Data Science.

#### Ms. Priya Singh

(B.Tech., M.Tech., Ph.D(p))

Research Area: Deep Learning, Machine Learning, Predictive Modelling, Software Engineering, Algorithms and Programming, Cloud Native, 5G Core Network.

#### Dr. Geetanjali Garg

(B.Tech., M.E., Ph.D.) (Contractual)

Research Area: Social media Mining, Context aware computing, Affective computing, Web Technology, Deep learning.

#### Dr. Sonika Dahiya

(B.E., M.Tech., Ph.D.)

**Research Area:** Algorithms and Data Mining, Databases, Data Structures, Theory of Computation, Data Science, Deep Learning.

#### **ACHIEVEMENTS OF THE DEPARTMENT:**

Efkon India Private Limited signed an MoU in 2020 for four years to set up an "Intelligent Transportation System Facility at DTU", Delhi for Research and Innovation.

## **Grants for Research Projects Sponsored by Funding Agencies:**

PI- Mr. Sanjay Patidar Co PI - Dr. Neetesh Kumar

Title of Project: Smart autonomous weed detection and removal Institution: TIH-IIT, Kharagpur Amount (₹): 50,00,000/- (approx.)

Date: 29<sup>th</sup> December, 2023

**Duration:** 2 Years

**PI-** Prof. Ashutosh. Trivedi **Co-PI-** Prof. Ruchika Malhotra Kumar

Title of Project: Intelligent Transportation
System Facility at DTU, Delhi
Agency: Efkon India Private Limited
Amount (₹): 22,00,000/- (approx.)

**Date:** 2020 **Duration:** 4 Years

## **Events organized by the Department:**

| Name of Event   | Date                           | Dept. Coordinator      |
|---|--------------------------------|------------------------|
| Silver-Golden-Diamond Homecoming Meet                                     | 2 <sup>nd</sup> February, 2024 | Prof. Ruchika Malhotra |
| Workshop on "Problem Solving & Ideation:"                                 | 26 <sup>th</sup> October, 2023 | Dr. Sanjay Patidar     |
| B.Tech. Farewell  | 26 <sup>th</sup> April, 2024   | Ms. Priya Singh        |
| B.Tech. Orientation   | 31 <sup>st</sup> July, 2024    | Dr. Sonika Dahiya      |
| Workshop on "Data Processing using Structural Equation Modeling Analysis" | 29 <sup>th</sup> August, 2023  | Ms. Shweta Meena       |
| One Day "Skill Enhancement Computer Workshop"                             | 9 <sup>th</sup> October, 2023  | Ms. Priya Singh        |



## Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

| Name of<br>Faculty        | Event Details   | Organized by  | Date(s)   | Amount received by DTU, Delhi (₹) |
|---------------------------|---|---|---|-----------------------------------|
| Prof. Ruchika<br>Malhotra | 5 <sup>th</sup> International<br>Conference on "Data<br>Analytics and Management<br>(ICDAM-2024)" | London Metropolitan<br>University, England                    | 9 <sup>th</sup> - 17 <sup>th</sup><br>June, 2024  | 75,000/-                          |
| Ms. Shweta<br>Meena       | Industrial Training   | National Small<br>Industries Corporation<br>(NSIC), New Delhi | 1 <sup>st</sup> - 12 <sup>th</sup> July,<br>2024  | 7,080/-                           |
| Ms. Priya Singh           | 5 <sup>th</sup> International<br>Conference on "Data<br>Science and Applications"                 | Malaviya National<br>Institute of<br>Technology, Jaipur       | 17 <sup>th</sup> - 19 <sup>th</sup><br>July, 2024 | 10,600/-                          |

## Collaborative Activities for Research, Faculty Exchange, and Student Exchange:



Name of Faculty: Prof. Ruchika Malhotra

**Collaboration with:** Dr. Marouane Kessentini, Grand Valley State University, Grand Rapids, Michigan, United States

Type of collaboration: Research & Faculty Exchange

Collaboration commenced from: 2<sup>nd</sup> August, 2021 (till 2025)

## **Faculties Participation in Professional Development Programmes:**

| Name of Faculty           | Title of PDP  | Organized by   | Date(s)  |
|---------------------------|---|--|--|
| Prof. Ruchika<br>Malhotra | 3 <sup>rd</sup> International Conference<br>on "Computing Networks<br>(ICCCNet-2023)" | Manchester Metropolitan<br>University, UK                                    | 15 <sup>th</sup> - 25 <sup>th</sup><br>November,<br>2023 |
| Ms. Shweta Meena          | FDP on "NEP Orientation & Sensitization Programme"                                    | Centre for Professional<br>Development in Higher<br>Education (CPDHE), Delhi | 20 <sup>th</sup> - 30 <sup>th</sup> May,<br>2024         |
| Dr. Rahul                 | Industrial Training   | White Sepal Services Pvt<br>Ltd., Ghaziabad                                  | 5 <sup>th</sup> - 20 <sup>th</sup> July,<br>2024         |
| Dr. Sanjay Patidar        | Industrial Training   | White Sepal Services<br>Private Limited, Ghaziabad                           | 10 <sup>th</sup> - 27 <sup>th</sup> July,<br>2024        |
| Dr. Rahul                 | Quantitative and Qualitative<br>Research Methods                                      | BIT, Mesra, Ranchi   | 20 <sup>th</sup> – 31 <sup>st</sup> May,<br>2024         |
| Dr. Sonika Dahiya         | Quantitative and Qualitative<br>Research Methods                                      | BIT, Mesra, Ranchi   | 20 <sup>th</sup> – 31 <sup>st</sup> May,<br>2024         |

| Name of Faculty   | Title of PDP  | Organized by  | Date(s)  |
|---|---|---|--|
| Dr. Sanjay Patidar  | Two weeks capacity development program university technology business incubator | IIF, DTU, Delhi   | 20 <sup>th</sup> – 31 <sup>st</sup> May,<br>2024 |
| Ms. Shweta Meena FDP on "NEP Orientation & Sensitization Programme" |   | Centre for Professional<br>Development in Higher<br>Education (CPDHE),<br>University of Delhi | 20 <sup>th</sup> – 30 <sup>th</sup><br>May, 2024 |

## Visit of Faculty to other University/Institution for Expert Lectures/Academic Work

#### Prof. Ruchika Malhotra

#### **Title of Event:**

International Conference on "Computing and Communication Networks"

Role: Research Paper Presenter

#### Organized by:

Manchester Metropolitan
University, Manchester,
United Kingdom

Date(s): 17<sup>th</sup> - 18<sup>th</sup> November, 2023 **Title of Event:** International Conference on "Data Analytics & Management (ICDAM-2024)"

Role: Research Paper Presenter

Organized by: London Metropolitan University, London, UK (Venue Partner)

in association with WSG University, Bydgoszcz, Poland, Europe & Portiere Polytechnic University, Portugal, Europe & SGGW Management Institute & BPIT, GGSIPU, Delhi

Date(s): 14th - 15th June, 2024

### **Title of Event:**

International Conference (ICRTETBM 2024)

#### Role:

Session Chair

#### Organized by:

Amity University, Noida

Date(s): 21st - 23rd February, 2024

Functional MoUs with Universities/Institutions/Industries of National/
International Importance:

#### **Details of MoU:**

Agreement for funding of translation research project

Purpose: Translation Research
Project Funding

**Date:** 31<sup>st</sup> October, 2023 **Duration:** 2 Years

#### **Details of MoU:**

Efkon India Private Limited

**Purpose:** Intelligent Transportation System Facility at DTU, Delhi

> Year: 2020 Duration: 4 Years

## Participation of Faculties in Extension & Outreach Activities organized by university:

Dr. Rahul Dr. Sonika Dahiya Dr. Sanjay Patidar Ms. Priya Singh

Details of Activity: DESH KE MENTOR

Purpose: Community Engagement Course

Date: 12<sup>th</sup> June, 2024

## **Students' Progression to Higher Education:**

**Battu Sujith** B.Tech. (SE)

**Programme for Higher Education:** M.S.

University: University of Colorado Boulder, Boulder, USA

Nabiyu Samuel B.Tech. (SE) Programme for Higher Education: M.Tech.

**University:** University of Debrecen, Debrecen, Hungary

## **Students' (B.Tech., Software Engineering) Achievements:**

| Name of Student  | Details of Achievement   | Date                             |
|------------------|--|----------------------------------|
| Battu Sujith     | Pursuing MS from University of Colorado, Boulder                   | 14 <sup>th</sup> February, 2024  |
| Nabiyu Samuel    | Pursuing M.Tech. from University of Debrecen                       | 30 <sup>th</sup> March, 2024     |
| Sahil Duhan      | Lieutenant - Indian Army   | 23 <sup>rd</sup> February, 2024  |
| Arya Pandey      | Achieved offer of 43.8 LPA in Salesforce                           | 4 <sup>th</sup> October, 2023    |
| Vaibhavi Sakhuja | Achieved offer of 43.8 LPA in Uber                                 | 26 <sup>th</sup> March, 2024     |
| Harshit Raj      | Achieved offer of 43.8 LPA in Samsung Research Institute Bangalore | 18 <sup>th</sup> September, 2023 |
| Chirayu Aggarwal | Achieved offer of 32 LPA in Visa                                   | 14 <sup>th</sup> December, 2023  |
| Harleen Kaur     | Achieved offer of 52 LPA in Google                                 | 4 <sup>th</sup> July, 2024       |
| Lakshay          | Achieved offer of 30 LPA in Morgan Stanley                         | 13 <sup>th</sup> December, 2023  |
| Sanchit Jain     | Achieved offer of 45 LPA in Intuit                                 | 3 <sup>rd</sup> August, 2023     |
| Ananya Garg      | Achieved offer of 51 LPA in Microsoft                              | 3 <sup>rd</sup> April, 2024      |
| Akshat Jain      | Achieved offer of 44.9 LPA in Intuit                               | 3 <sup>rd</sup> August, 2023     |
| Shubham Aggarwal | Achieved offer of 52 LPA in Zomato                                 | 16 <sup>th</sup> June, 2024      |
| Shashwat Jain    | Achieved offer of 52 LPA in Zomato                                 | 3 <sup>rd</sup> August, 2023     |
| Rudransh Tyagi   | Achieved offer of 30 LPA in Sprinklr                               | 7 <sup>th</sup> August, 2024     |
| Vipul Chauhan    | Achieved offer of 30 LPA in Urban Company                          | 3 <sup>rd</sup> August, 2023     |
| Harsh Sharma     | Achieved offer of 51 LPA in Microsoft Inc.                         | 18 <sup>th</sup> September, 2023 |
| Ekansh           | Achieved offer of 52 LPA in Microsoft                              | 8 <sup>th</sup> February, 2024   |
| Atmika Mishra    | Achieved offer of 43.8 LPA in Salesforce                           | 4 <sup>th</sup> October, 2023    |
| Hardik Arora     | Achieved offer of 30 LPA in Myntra                                 | 14 <sup>th</sup> June, 2024      |

# 4.16 UNIVERSITY SCHOOL OF MANAGEMENT AND ENTREPRENEURSHIP (USME)



Prof. Amit Mookerjee, HoD

#### **ACADEMIC PROGRAMMES**

#### **MBA**

Intake: **120** Admitted: **115** 

#### **MBA-Business Analyst**

Intake: **40** Admitted: **32** 

#### **MBA-IEV**

Intake: **30** Admitted: **11** 

#### **MA-Economics**

Intake: **60** Admitted: **59** 

#### **BA-Economics**

Intake: **182** Admitted: **181** 

#### **BBA**

Intake: **182** Admitted: **182** 

#### Ph.D.

Management & Entrepreneurship: **03**Economics: **04**IEVD: **02** 

#### RESEARCH PUBLICATIONS



**JOURNALS: 22** 

#### **SALIENT FEATURES**

The East Delhi Campus of the DTU (Vivek Vihar-Phase II, Delhi) was inaugurated in August 2017, by the Hon'ble Chief Minister of Delhi, Shri Arvind Kejriwal, and the Hon'ble Deputy Chief Minister of Delhi, Shri Manish Sisodia, in the August presence of Hon'ble Vice Chancellor - DTU, Prof. Yogesh Singh, PVC, Prof. Anu Singh Lather and Prof. S. K. Garg, along with esteemed members of the Government of Delhi, academics and others. In alignment with the vision and mission of the DTU, this campus endeavors to provide quality education, research, and innovation in emerging areas of management that are relevant to industry and society. It is focused to create a multidisciplinary approach towards entrepreneurship embedded in a management school, which would be able to leverage the rich and esteemed heritage of the DTU. It aims to harness and leverage technoentrepreneurship and knowledge enterprise development through Entrepreneurship and Organizational Development centers.

From the 2017-18 academic years, it has offered Programs in Bachelor of Business Administration (B.B.A.), Bachelor of Arts (Hons.) in Economics (BAE) and Master of Business Administration (M.B.A.). The second PG program, M.B.A. Business Analytics, was launched in 2018-19. M.B.A-Innovation, Entrepreneurship and Venture Development (IEV), was launched in the academic year 2019-20. This was in line with the mission of the USME to offer cutting-edge programs in emerging and critical emerging areas of industry and societal needs for talent. The department also

## **SALIENT FEATURES (Cont.)**

offers Ph.D. programs in Management, Economics, and IEV. Also, MA Economics program is commenced from 2022-23 academic year.

Students and faculty have been actively involved in various professional activities and student events. The department has 18 student clubs built around professional, cultural, social, and sports-related interests. Guest lectures, events, visits to industries, and trade fairs have all led to an all-around exposure of students at USME to the rapidly changing economic and industrial scenario. Executive MBA in Data Science and Analytics was launched for working professionals with a minimum of three years of industry experience.



#### **LABORATORIES:**

The department have two Computer Labs, equipped with Latest versions of different software platforms and systems. Students and faculty have actively involved in the various professional activities and student events.





#### CENTER OF EXCELLENCE IN THE DEPARTMENT:

The USME has established itself as a Center of Excellence in Innovation and Youth Empowerment. Through a series of impactful initiatives, including the Viksit Bharat@2047 Ideathon Competition, the department has consistently demonstrated its commitment to fostering innovation, entrepreneurship, and leadership among students.

The Center of Excellence in Innovation and Youth Empowerment at USME, DTU, plays a crucial role in shaping the future leaders of India. The center fosters a culture of creativity and entrepreneurial spirit by providing students with opportunities to innovate, compete, and learn from industry leaders. These initiatives contribute to students' personal and professional growth

and align with the broader vision of Viksit Bharat by 2047.





#### **ACADEMIC STAFF:**

#### **PROFESSORS**

#### **HoD: Prof. Amit Mookerjee**

(MBA, Ph.D.)

Research Area: Customer Experience Management, Customer Value, Developing Market Opportunities, Consumer Insights

#### Prof. Manoj Kumar Sharma

(Visiting)
(B.E., M.E., MBA, Ph.D.)
Research Area: Strategic
Management, Technology
Management, Innovation,
Entrepreneurship and Venture
Development

#### Prof. Rakesh Shankar Jha

(Visiting)
(B.E., PGDBM, Ph.D.)

Research Area: Strategy,
Marketing, Distribution
Channels, Leadership,
Entrepreneurship

#### **Prof. Sanjay Bhattacharya**

(Visiting)
(B. Arch., M. Tech., MBA, Ph.D.)
Research Area: Strategic
Management, Project
Management, Design Thinking,
Creative Problem Solving

#### **ACADEMIC STAFF**

#### **ASSOCIATE PROFESSORS**

#### Dr. Nidhi Maheshwari

(MBA, LLB, Ph.D.)

Research Area: Spirituality,
Emotional Intelligence

#### Mr. S. M. Rounaque Mustafa

(Visiting)

(B.A. (Hons), PGDCA, MBA) **Research Area:** 

Entrepreneurship, Venture Development, Innovation, Venture Financing, Corporate Governance, Corporate Venturing, Startup Incubation

#### **Dr. Puneet Kumar Arora**

(B.A. (Hons.), M.A., Ph.D.)

Research Area: International

Trade; Development Economics

#### Dr. Rajesh Sharma

(B.Sc., M.A., Ph.D.)

Research Area: Public

Health, Health Economics,

Epidemiology

#### **Dr. Ratnam Mishra**

(B.A., M.A., M.Phil., Ph.D.)

Research Area: Economics
of Education, International
Migration, Vocational

Education, Skill Development &
Entrepreneurship.

#### Dr. Varsha Sehgal

(B.Tech., MBA, Ph.D.)

Research Area: Strategic

Management, Business Policy

& Competitive Intelligence,

Managerial Economics

#### **ASSISTANT PROFESSORS**

#### Dr. Aakanksha Kaushik

(B.A. (Hons.), M.A., M.Phil., Ph.D.)

Research Area: Public

Economics, Microeconomics

#### Dr. Deepti Aggrawal (Ph.D.)

Research Area: Innovation
Diffusion in Marketing,
Decision Sciences

#### Dr. Harleen Kaur

(B.Tech. (IT), PGDM, Ph.D.) **Research Area:** Marketing, Brand
Strategy, Consumer Behavior

#### Dr. Kusum Lata

(B.Tech, M.E., Ph.D.)

Research Area: Machine
Learning, Data Mining

**Dr. Naval Garg** (Ph.D.) **Research Area:** Workplace Spirituality, Gratitude, and Indian Knowledge System

#### Ms. Pallavi Sethi

(B.Com. (Hons.), M.Com., M.Phil.)

Research Area: Financial and

Management Accounting,

Financial Statement Analysis

#### Ms. Priya Malhotra

(B.Com. (Hons), MBA)

Research Area: Financial

Management, Investment

Management, Financial Markets

#### **Dr. Virender Kumar**

(B.A. (Hons.), M.A. M.Phil., Ph.D.O)

Research Area: Macroeconomics,
Time Series Econometrics,
Monetary Economics, Panel Data
Econometrics

### **ACHIEVEMENTS OF THE DEPARTMENT:**

- Department has Successfully organized two international conferences on:
  - "Diversity, Equity and Inclusion: Cultures, Practices and Policies" during 15<sup>th</sup> – 16<sup>th</sup> September, 2023.
  - 2. "International Conference & Startup Expo 24 (ICSE24)" during 21st 22nd February, 2024.
- Celebrated Entrepreneurship Day on 16<sup>th</sup> January, 2024 with active participation from students and faculty, fostering an entrepreneurial spirit across the campus. Ideathon, organized by the E-Cell's flagship competition, saw participation from 350 students, with 100 presenting new business ideas from colleges like DSE, Daulat Ram, SRCC, FMS, Kirorimal, and Symbiosis, Noida.
- Achieved Inter-University Best Student Sports Achievement among all departments, showcasing our students' excellence in sports.
- Organized Viksit Bharat "My Bharat

   Viksit Bharat@2047: By the Youth,
   For the Youth", an event that brought together over 50 participants to explore India's future, marked by inspiration, dialogue, and celebration, contributing to the vision of a developed India by 2047.
- Panel Discussion on "Angel Investment/ VC Funding Opportunities for Startups" on 4<sup>th</sup> September, 2022, organized by Mr. Rounaque Mustafa under the aegis of IIC, DTU, Delhi.

## **Grants for Research Projects Sponsored by Funding Agencies:**

PI: Dr. Naval Garg

**Title:** Gender diversity on boards **Sanctioned by:** University of Delhi

Amount (₹): 4 Lacs

Sanctioned Date: 31st August, 2023 | Duration: 1 Year

Title: Analyzing Various Marketing Phenomena based

on Innovation Adoption Modelling **Sanctioned by:** University of Delhi

Amount (₹): 4 Lacs

Sanctioned Date: 31st August, 2023 | Duration: 1 Year

PI: Dr. Deepti Aggrawal

## **Events organized by the Department:**

| Details of Event   | Date(s)  | Coordinator/<br>Co-coordinator                  |
|--|--|---|
| One-day workshop on "India's Key Achievements during its G20 Presidency"       | 8 <sup>th</sup> April, 2024                                  | Dr. Aakanksha Kaushik<br>and Dr. Virender Kumar |
| "Vigilance Awareness Week": was conducted along with Poster Making Competition | 30 <sup>th</sup> October - 5 <sup>th</sup><br>November, 2023 | Dr. Virender Kumar                              |

| Details of Event  | Date(s)   | Coordinator/<br>Co-coordinator  |  |  |
|---|---|---|--|--|
| Viksit Bharat @2047 Youth Day Celebration: With over 50 registrations and 100+ audience. The participants shared snippets of their speeches on the theme; "My Bharat- Viksit Bharat @2047": By The Youth, For The Youth | 11 <sup>th</sup> January, 2024                        | (in collaboration with Nehru Yuva Kedra,  |  |  |
| Youth Parliament Event: Participants from different colleges were invited to take part in debates   | 28 <sup>th</sup> February,<br>2024                    | North East Delhi)   |  |  |
| Arthik Khayal 2023: Participants from all around<br>the country participated in an inter college debate<br>competition on "India's Refugee Policy". The event<br>was held in online mode                                | 5 <sup>th</sup> November<br>2023                      |   |  |  |
| Ecolibrium 2024: Annual Economics Fest organised by EcoTech with 5 events such as Youth Economist Conclave, Vaad Vivaad and Kaun Banega Economist.  Dr. Virender Kuma   |   |   |  |  |
| Start Up Expo and Entrepreneurship Conclave   | 21 <sup>st</sup> - 22 <sup>nd</sup><br>February, 2024 | Mr. Raunaque Mustafa,<br>Dr. Kusum Lata,<br>Dr. Ratnam Mishra,<br>Dr. Anurag Chaturvedi |  |  |
| Ideathon'2024<br>Stage 1 – as part of IIC event<br>Stage 2 - Celebration of National Start-Up Day, and<br>Grand Finale of Ideathon  | November, 2024<br>16 <sup>th</sup> January, 2024      | Mr. Raunaque Mustafa,<br>Dr. Ratnam Mishra,<br>Dr. Kusum Lata,<br>Dr. Anurag            |  |  |











## Awards and Recognition at State, National, International level from **Recognized Bodies:**



Title of Award: 2<sup>nd</sup> Best Paper Award in the MERC 2024 Conference

Institution: IIM, Kashipur | Date: 2<sup>nd</sup> June, 2024



## Financial Support provided to Faculties to attend Conference/ Seminar/ Symposia/ Workshop/ STC/ FDP/ Training etc.:

#### **Financial Support provided to Faculties**

#### **Dr. Naval Garg**

**Event:** National conference on "Indian Knowledge System"

Organised by: IIT, Bombay

**Duration:** 4th - 6th July, 2024

Amount received by **DTU (₹):** 17,000/-

#### Dr. Virender Kumar

**Event:** Management Education and Research Colloquium (MERC) 2024

> Organised by: IIM, Kashipur

**Duration:** 31st May - 2nd June. 2024

**Amount received by DTU** 

(₹): 17,500/-

#### **Dr. Ratnam Mishra**

**Event:** International Conference: "International political economy on labour migration (IPE-LM)2024"

Organised by: Duisburg, Germany

**Duration:** 18th - 20th July, 2024

**Amount received by DTU (₹):** 1,60,000/-

### Visit of Faculty to other Universities/Institutions for Expert Lectures/ **Academic Work:**

| Name of Faculty        | Title of Event   | Topic of Lecture/<br>Role                                 | Organized by  | Date(s)   |
|------------------------|--|---|---|---|
| Dr. Naval Garg         | Expert lecture in Refresher<br>Course in "Indian<br>Knowledge Systems" | Kritagayata: The<br>Essence of Indian<br>Knowledge System | University of Mumbai,<br>Centre of Hindu<br>Studies, Mumbai | 29 <sup>th</sup> July,<br>2024                  |
|                        | National Conference on<br>"Indian Knowledge System"                    | Technical Session<br>Chair                                | IIT, Mumbai   | 4 <sup>th</sup> - 6 <sup>th</sup> July,<br>2024 |
|                        | Expert Lecture   | How to write a good quality paper?                        | Graphic Era Hill<br>University, Haldwani                    | 25 <sup>th</sup> April,<br>2024                 |
|                        | Expert Lecture   | Being grateful in life                                    | Graphic Era Hill<br>University, Bhimtal                     | 26 <sup>th</sup> April,<br>2024                 |
|                        | Two-Days ICSSR-<br>sponsored National<br>Conference IMSB 2024          | Technical Session<br>Chair                                | Punjab Engineering<br>College, Chandigarh                   | 15 <sup>th</sup> March,<br>2024                 |
| Dr. Puneet K.<br>Arora | Technical Session  | Technical Session in quantitative techniques              | IISc, Bengaluru   | 2023-24   |

# Participation of Faculties in Extension & Outreach Activities organized by University:

| Name of Faculty                             | Details of Activity   | Purpose of Activity   | Date(s)                                |
|---|---|---|--|
| NSS<br>Coordinator:                         | Project Paathshala: Volunteers visit NGOs to teach the underprivileged  | To provide education to underprivileged students  | On every<br>weekend                    |
| Dr. Virender<br>Kumar                       | Care and Share Drive:   | To feed the hungry animals near our college campus  | Weekly event                           |
|   | Blood Donation Drive: organised<br>at Unity Mall, Janakpuri in<br>collaboration with Red Cross<br>Society                           | To collect blood units to donate it to those in need  | 7 <sup>th</sup> April,<br>2024         |
|   | Project Shakti: Sanitary Pad Distribution Drive where 600+ sanitary pads were distributed to girls and a Nukkad Natak was performed | To aware the girls about menstrual cycle  | 19 <sup>th</sup> April,<br>2024        |
|   | Event Parwah: Visit to Muskaan<br>NGO   | To empower the intellectually challenged individuals  | 9 <sup>th</sup> August,<br>2023        |
|   | Project Happiness: Visit to Assist in the form of interaction and fun games   |   | 13 <sup>th</sup> August,<br>2023       |
|   | Project Astitva: Self-Defense<br>Camps for Girls  | To empower the young girls and make them independent regarding their safety   | 20 <sup>th</sup> August,<br>2023       |
|   | Interview of Acid Attack Victims  | To shed light on the experience of survivors and raise awareness about such issues  | January,<br>2024                       |
|   | Project Prithvi: Cleanliness and<br>Plantation Drive  | To increase awareness about the protection of nature  | 21 <sup>st</sup> April,<br>2024        |
| IT Society<br>(Technnobuzz)<br>Coordinator: | Webinar on "E-Waste<br>Management: Building a<br>Sustainable Future"  | To shed light on the critical issue of e-waste and how responsible management can contribute to a sustainable future.         | 16 <sup>th</sup><br>September,<br>2023 |
| Dr. Kusum Lata                              | Workshop on "Power BI:<br>Unleashing the Magic of Data<br>Visualization"  | To introduce students to the world of data analytics and visualization using Microsoft Power BI.                              | 15 <sup>th</sup><br>December,<br>2023  |
|   | Webinar on "Roadmap to<br>Become a Data Analyst"  | The webinar aims to equip participants with apt knowledge that is highly relevant to those willing a career in data analysis. | 4 <sup>th</sup> March,<br>2024         |
|   | Technoquiz 2.0  | This online quiz competition tested participants' with, problem-solving skills  | 21 <sup>st</sup> January,<br>2024      |

### **Students' Progression to Higher Education:**

### Vedika Singh (BAE)

Progression to: MBA, Symbiosis institute of business management, Nagpur

## Lubhani Kapoor (BAE)

Progression to:
M.A. Eco (Financial
Economics), The
University of Sydney,
Australia

Students' Progression to Higher Education:

## Tanisha Sharma (BAE)

**Devesh Lal** 

(BAE)

Progression to:

MBA, Narsee

Monjee Institute of

**Management Studies** 

(NMIMS), Mumbai

Progression to: M.A. in General Economics, Madras School of Economics, Chennai

### Charu Singh (BAE)

Progression to:
M.A. Economics,
Vivekananda Institute
of Professional
Studies, GGSIU,
Delhi

### Gaurika Nagpal (BAE)

Progression to: M.Sc. Finance, Alliance Manchester Business School, University of Manchester, UK

#### **Students' Achievements:**

| Name of Student | Programme | Details of Achievement | Positions                            | Date                               |
|-----------------|-----------|------------------------|--------------------------------------|------------------------------------|
| Pratyush        | BAE       | Mood Indigo MI'NEM     | 1 <sup>st</sup> Prize for Rap Battle | 20 <sup>th</sup> December,<br>2023 |
| Singh           | BAE       | EngiFest24 Spitfire    | 3 <sup>rd</sup> Prize for Rap Battle | 16 <sup>th</sup> February,<br>2024 |

| Name of Student    | Programme | Details of Achievement                              | Positions   | Date                               |
|--------------------|-----------|---|---|------------------------------------|
| Tanvi Mittal       | BAE       | Arena 2023-24                                       | Silver Medal for<br>Athletics   | 22 <sup>nd</sup> October,<br>2023  |
| Shubh<br>Sharma    | BAE       | Zenith sports event                                 | Gold medal in kabaddi,<br>silver in tow                               | 8 <sup>th</sup> February,<br>2024  |
| Aarushi<br>Dadhich | BAE       | Arena 2023-24                                       | Silver Medal for<br>Basketball  | 21 <sup>st</sup> October,<br>2023  |
| Armaan             | BA ECO    | Arena 2023-24                                       | Silver medal for powerlifting   | 22 <sup>nd</sup> October,<br>2023  |
| Haque              | BA ECO    | Ernst & Young                                       | Worked on ODOP UP<br>govt. scheme and Japan<br>govt. diplomat project | 16 <sup>th</sup> July, 2023        |
| Kashish<br>Gupta   | вва       | FINSPIRE Fellowship, D.E.<br>SHAW                   | Selected for the "Coveted Finance Fellowship" amongs t 10k+ students, | August, 2023                       |
| Krish Goyal        | BBA       | Environmental Case<br>Competition at SSCBS, DU      | 1 <sup>st</sup> Position for the case<br>presentation                 | April, 2024                        |
| I BAL I            |           | Queen's Commonwealth<br>Essay Competition 2023      | secured the Bronze<br>Medal   | October, 2023                      |
|                    | BBA       | Environment Case<br>Competition at SSCBS, DU        | 1 <sup>st</sup> Position  | April, 2024                        |
| Manya<br>Kapoor    | BBA       | SRCC C2P Social<br>Entrepreneurship Summit          | Among Top 8   | 16 <sup>th</sup> February,<br>2024 |
|                    | BBA       | Viksit Bharat@2047<br>Ideathon, USME, DTU           | 2 <sup>nd</sup> Position  | January, 2024                      |
|                    | BBA       | Environment Case<br>Competition at SSCBS, DU        | 1 <sup>st</sup> Position  | April, 2024                        |
| Apoorva            | BBA       | SRCC C2P Social<br>Entrepreneurship Summit          | Among Top 8   | 16 <sup>th</sup> February,<br>2024 |
|                    | BBA       | Viksit Bharat@2047<br>Ideathon , USME DTU           | 2 <sup>nd</sup> Position  | January, 2024                      |
| Rupesh<br>Sharma   | BBA       | E-Sports Competitions of<br>BGMI at IITs and IIMs   | 1 <sup>st</sup> position  | 31 <sup>st</sup> January,<br>2024  |
| Ravish             | BBA       | Zenith Sports Event                                 | Bronze in Badminton   | 8 <sup>th</sup> February,<br>2024  |
| Gitika<br>Agrawal  | BBA       | Viksit Bharat@2047<br>Ideathon , USME DTU           | 1 <sup>st</sup> Position  | January, 2024                      |
| Shubh<br>Sharma    | BBA       | FINOMENA Case<br>Competition, Aryabhatta<br>College | 1 <sup>st</sup> Position  | 28 <sup>th</sup> February,<br>2024 |
| Sildillid          | ВВА       | SRCC Bid-o-mania<br>Strategy based<br>competition   | 1 <sup>st</sup> Position  | 21 <sup>st</sup> February,<br>2024 |

## 5. Centres and Other Units

## 5.1 DTU Innovation and Incubation Foundation (DTU-IIF)

DTU Innovation and Incubation Foundation, a company incorporated under the Companies Act, 2013, and having its registered office at 8<sup>th</sup> Floor, Administration Block 4, DTU, Delhi. It was established as per the policy guidelines of Govt. of NCT of Delhi on recommendations for setting Incubators in Higher Education Institutions in Delhi by a working group established by the Govt. of NCT of Delhi, under order No.F.75(73)/2015-16/ Incubation/ ADPL/321-330 dated 5<sup>th</sup> June, 2015 to pursue the following:

#### **OBJECTIVES**

To create a culture of entrepreneurship, Start-ups, and Intellectual Property Creation that can create value, jobs and employment and do social and economic good. To facilitate creation of incubation centres that offer incubation infrastructure space, computing resources, connectivity, common tools; and environment for coworking, collaboration and innovation.

#### **MISSION**

To nurture innovation, stimulate growth, and support entrepreneurship through incubation programs.

#### **VISION**

To empower aspiring entrepreneurs by providing the necessary resources and support to transform their pioneering ideas into thriving businesses. By fostering a culture of creativity and collaboration, we strive to lead in shaping a future of new-age India where technological innovation drives economic growth, societal progress, and global impact.

### **Our Programmes**



## **Organization Structure:**

| GOVERNANCE AND ADVISORY MEMBERS   |                        |  |  |
|---|------------------------|--|--|
| Prof. Prateek Sharma<br>Hon'ble Vice Chancellor, DTU, Delhi                         | Chairperson & Director |  |  |
| Prof. S. Indu Dean - Student Welfare, DTU, Delhi                                    | Director               |  |  |
| Prof. J. P. Saini<br>Hon'ble Vice Chancellor, MMMUT, Gorakhpur                      | Director               |  |  |
| Prof. Anu Singh Lather Hon'ble Vice Chancellor, Dr. B.R. Ambedkar University, Delhi | Director               |  |  |
| Prof. M. N. Doja Director, IIIT, Sonipat, Haryana                                   | Director               |  |  |
| Prof. Ashutosh Trivedi Department of Civil Engineering, DTU, Delhi                  | Director               |  |  |
| Prof. Samsher<br>Hon'ble Vice Chancellor, HBTU, Kanpur                              | Director               |  |  |
| Prof. S. K. Garg Director USME, DTU, Delhi  | Director               |  |  |
| Prof. Madhusudan Singh<br>Registrar, DTU, Delhi                                     | Director               |  |  |
| Prof. Amit Mookerjee<br>HoD, USME, DTU, Delhi                                       | Director               |  |  |
| Dr. R. K. Shukla<br>Head Librarian, DTU, Delhi                                      | Director               |  |  |
| Prof. Girish Kumar Department of Mechanical Engg., DTU, Delhi                       | CEO/Director           |  |  |

| OPERATIONS TEAM                    |                               |  |  |
|------------------------------------|-------------------------------|--|--|
| Sh. Amit Singh Rathod              | COO, iTBI DTU-IIF             |  |  |
| Dr. Ritu Agrawal                   | Coordinator, DTU-IIF          |  |  |
| Dr. Sachin Taran                   | Coordinator, DTU-IIF          |  |  |
| Sh. Sanjay Patidar                 | Coordinator, DTU-IIF          |  |  |
| Sh. Vivek Tyagi                    | Incubation Operations Manager |  |  |
| Sh. Ravinder Singh                 | Incubation Manager            |  |  |
| Ms. Abha Shukla Incubation Manager |                               |  |  |
| Ms. Swati Mathwal                  | Incubation Associate          |  |  |
| Ms. Anita                          | Office Assistant              |  |  |

| MENTORS MENTORS   |                    |  |
|---|--------------------|--|
| Ms. Bindu Dey Former Secretary, Technology Development Board, DST, Delhi        |                    |  |
| Dr. Pushpendra Singh  | Health Tech Expert |  |
| Sh. Manoj Saxena Innovator, Mentor, and Exponent of Al / ML, IoT, and Analytics |                    |  |

| Sh. Mani Raman Subra  | Peachtree Management Advisor  |  |
|-----------------------|---|--|
| Sh. Ashish Banerjee   | Open-Source Telecommunications, Financial Supply Chain Integration, Mobile Payment Gateways |  |
| Sh. Naveen Kumar Gaur | Senior Manager, iHUb Anubhuti, IIIT, Delhi  |  |
| Sh. Saurabh Jain      | Founder, Fun2Do Labs (EdTech Startup), Ex-Vice President@Paytm, Startup Guru                |  |
| Sh. Ashish Jain       | Founder and CEO of the Startup Board  |  |
| Dr. V. K. Arora       | Chief Executive Officer, IGDTUW, Anveshan Foundation, Delhi                                 |  |

## **Details of Currently Incubating Start-up Companies at DTU IIF**

#### **Manish Mega Mart Pvt. Ltd.** – U52609DL2021PTC391368

MMMart is a newly stabilised demand driven B2B2C digital platform that bridges the gap between consumers and farmers to gain access to farm fresh produce (fruits and vegetables) at the lowest possible price. MMMart is working on expanding its product portfolio to fruits, vegetables, groceries, bakery and dairy products along with a steady expansion across Delhi & NCR markets. It aims to develop machinery powered with technology and harvest on predicted demand to reduce wastage, increase profitability and create more jobs.

#### Eythor Pvt. Ltd. - U72200HR2021PTC099893

Eythor is a Product-as-a-Service (PaaS) inventing advanced optimized Robots for domestic and industrial use with Solar Cleaning Robot. Collaborating with Eythor, we wish to develop Made-In-India Robots ranging in different domains and thus reducing energy losses and aiming for a cost-cutting mechanism for Industrial & Domestic use. The aim is to focus on R&D and deploy Customer-Driven products in the National & International market.

#### Monkhood Living Solutions Pvt. Ltd. – U74999DL2019PTC354036

The company's vision is to make a complete living solution for Students and young professionals.

#### Hash Brown Ventures Pvt. Ltd. - U15134DL2022PTC399251

Refoveo is a food and beverage venture focused on targeting health enthusiasts, and the young population by offering them healthy food and beverages specially curated by dieticians and nutritionists.

#### Innovation Scripts Pvt. Ltd. – U72900DL2020PTC367743

Works in the Area of Blockchain Technology and Building Cryptographic Document Verification Portal based on the blockchain technology.

#### Freelance Mantra Pvt. Ltd. - U72900DL2022PTC407665

Offers services related to software development, IT consulting and other computerrelated services.

#### **Echiofy Private Limited** – U72900DL2022PTC395579

Echiofy is basically an Advanced and Al inclined influencer marketing company that deals for both influencers and companies. It bridges the gap between talent and companies by solving monetization/content problems for influencers and time/ resource consuming influencer marketing problem for companies. It is a sophisticated and automated influencer marketing platform that serves as a one-stop, all-inclusive solution for influencer and business needs.

#### **Selectricgoev Solution Pvt. Ltd.** – U72200DL2022PTC395976

Selectricgo is a one stop solution for all EV owners, where all services related to an EV charging station are provided on a single platform.

#### **Cattleguru Pvt. Ltd.** – U01100HR2022PTC103327

Cattle GURU is a tech-enabled platform for more than 90 million dairy farmers in India, which provides the best quality cattle feed right at the doorstep of dairy farmers. It helps dairy farmers to earn more money from dairy farming, making their dairy business more efficient, profitable, and convenient.

#### Offset Global Technologies Pvt. Ltd. - U74999DL2021PTC386794

Offset-Go aims to create a sustainable ecosystem for India's transition to a Net-zero country without compromising on other development aspirations of the country.

#### **Polowings Health tech Private Limited** – U72900JH2021PTC017101

Walnut is building a platform that uses the technology of a social media, but reshapes and carves out the good part of it and prompts users to engage on their daily health updates. It builds communities that is led by health professionals and influencers that leads to better health and wellbeing. The app currently has a personal feed where users connect with their close circle friends and family members and share daily health updates to keep people engaged and updated.

#### Myekigai Profound Pvt. Ltd. – U60300DL2022PTC405793

It is an integrating MCB (Mobility, Charging & Battery-as-a-Service) and developing the holistic EV framework under one umbrella. Asset Management System (AMS) is a comprehensive system consisting of three components:

Vehicle Management System (VMS), Charging Management System (CMS) and Battery Management System (BSMS). Each component is an IoT device that enables automated quidance and real-time data transmission to the cloud.

#### Mechphy AWE Robotics Pvt. Ltd. – U72200DL2022OPC404981

It provides innovative solutions with wide ranging applications in Civilian and Defence sector.

Ongoing projects - Infantry Combat Simulator System - an on-force combat training simulation for military training. Unmanned Amphibious Vehicle - Remotely Operates Unmanned Ground Vehicle with ability to operate on ground and on water bodies.

#### Quickreel Pvt. Ltd. – U92490UP2022PTC174547U72200DL2022OPC404981

It is an easy-to-use, Al powered platform to repurpose long form content into formats suitable for TikTok, Reels and YouTube Shorts that too with the feature of automatically editing with Al.

#### **Ezinore Pvt. Ltd.** – U31100DL2022PTC403922

Ezinore is a clean tech startup dedicated to revolutionizing energy management for both residential and commercial users. Its flagship product; "Sparko", is an Al-driven energy control system that optimizes energy distribution and monitoring through realtime data analysis, renewable energy integration, and efficient storage. With a focus on sustainability, cost savings, and empowering users, it aims to provide a holistic solution for a greener and more energy-efficient future.

#### Vitalth Forgers Pvt. Ltd. – U31900DL2022PTC397833

Its diagnostic device stands exclusively for household-based diagnosis i.e gripping system of the device is exclusively designed with anthropometry data study. It makes the device ergonomically fit for the target user base and placing of elements make the device intuitive for the user. This device is meant to measure Spo2, Body Temperature, Pulse rate, ECG, Blood Pressure, and Respiratory rate. This ecosystem will certainly contribute to the Digital Health ecosystem of India. Its app is supported by UHI (Unified Health Interface) and National Health Authority of India (NHA).

#### Krayadotshop Pvt. Ltd. – U62099BR2023PTC06421

Kraya is a social video shopping platform that lets to shop in video and purchase in just a few seconds. This app makes it easy for social sellers to create and manage their online.

#### Dronearch Systems and Technologies Pvt. Ltd. – U30303DL2023PTC412860

House Technologies is a pioneering startup dedicated to reshaping the drone industry through cutting-edge innovation. Its focus lies in the development of miniaturized nano drones, which represent a groundbreaking leap in aerial technology. These compact drones are equipped with advanced sensors and communication tools, enabling precise and versatile applications across various sectors, from agriculture to urban surveillance and disaster response.

#### Mazout Electric Pvt. Ltd. - U34300DL2022PTC401754

It is indigenizing drive train electronics for EVs in India, with a focus on all two-wheeler form factors, iCommuteX1 integrates drivetrain electronics with a common software stack and a secure operating system, enabling the development of applications on top of it.

#### **Deziwebapp Systems Pvt. Ltd.** – U72900DL2022PTC407759

It provides Consultancy and Services in Website/App using new and emerging technologies to other companies through research and development.

### Mathsloyal Pvt. Ltd. - U80904DL2023PTC409802

It is an online doubt-solving and instant tutoring platform, that connect students to the tutors of their respective competitive exams and subjects through video call sessions.

#### **Zoid Technologies Pvt. Ltd.** – U72900DL2022PTC394635

It is a high-tech R&D startup devoted towards developing cutting-edge technologies in the defence sector. It has full-fledged technical departments in the field of AI, Signal Processing and Software, headed by professors of IIT Delhi and DTU, Delhi.

#### Transition Mobility Pvt. Ltd. – U45102UP2023PTC184055

It aims to build a combination of a Photobioreactor and an air purifier which not only reduces the air pollutants (such as PM2.5, PM10, Sulphur Dioxide, etc) but also improves the oxygen level in the room by using algae that performs photosynthesis to change atmospheric CO2 into oxygen.

#### Horsemouth Technologies Pvt. Ltd. – U62011RJ2023PTC090290

It is an online P2P marketplace for international applicants to book 1-on-1 calls with students and alumni from foreign universities.

#### Bramer Pvt. Ltd. - U26515DL2023PTC424079

Bramer Pvt. Ltd. builds drones and software to make aerial technology more accessible. It aims to develop currently a system for the Border Road Organization (BRO) that uses drones and software to analyze terrain and predict landslides in high altitude areas. It is in the direction to develop a new drone control system that may significantly simplifies drone operation with opening up aerial solutions to a whole new range of users and applications.

#### Garg Defence Aero Space Pvt. Ltd. – U26515DL2023PTC417258

It is a dynamic startup, proudly recognized as indigenous manufacturers, poised to make a significant impact in the defence and aerospace industries. It is rapidly emerging as specialists in the design and production of kamikaze drones, loitering munitions, anti-tank drone, surveillance drones, agriculture drone, logistics drones, and a range of other specialized unmanned aerial vehicles (UAVs) uniquely tailored for the Defence forces.

#### Skillzia Education Technology Pvt. Ltd. – U83301DL2024PTC431339

At Distance Connect, It is transforming the landscape of career development by providing students with direct access to personalized mentorship from industry experts at top companies like Google, Microsoft, Amazon, etc with Al-based Interview Preparation, resume generation, career counselling and many other features for students.

#### Sakillion Innovations Pvt. Ltd. - U62099UP2024PTC204698

It builds a networking platform dedicated for entrepreneurs and provides funds opportunities like grants/investments. It also hires the right skillset through their Al recruitment software.

#### Areduvag Solution Pvt. Ltd. - U62013BR2023PTC062515

It is a startup company that provides innovative solutions to the education sector in India. This platform provides a range of services to schools, teachers, and parents to improve the quality of education and facilitate better communication.

#### Grotesk Fintech Pvt. Ltd. - U72900KA2023PTC170558

It is a Fintech company that builds digital products to make people financially literate in the most practical way possible. Its MVP; "the FaekBank app", is a budgeting app that rewards gen z college students to create and stick to their budget.

#### Mathsloyal Pvt. Ltd. - U80904DL2023PTC409802

It is an online doubt-solving and tutoring platform, which caters to the doubts of the students preparing for IITJEE, CBSE, NDA, CUET, NIMCET, etc.

#### Finquotient India Pvt. Ltd. - U63999DL2024PTC425618

It is a FinTech SaaS company building next-gen products for financial intelligence and investment research. Its mission is to democratise access to financial and economic information, thereby enabling everyone to make informed decisions.

#### Contriver Autonomous System Pvt. Ltd. – U26301DL2023PTC421487

It is a group of Engineers, Researchers and Designers working with a mindset to develop systems that are ethically autonomous. It Develops the entire system that works with minimum human intervention, such as, Cyber Physical System, Long Range Autonomous Communication System, Unmanned Autonomous Vehicles (Drones) etc.

### Parklify Pvt. Ltd. - U35914DL2022PTC402893

In the ever-evolving realm of content creation, filmmakers and creators demand powerful yet cost-effective drone technology. Drone zone Private Limited finds a solution to this challenge by delivering a revolutionary solution: "high-performance drones", designed and manufactured in-house at competitive prices. It empowers the creators with superior quality and minimize reliance on foreign components.

## **DTU-IIF Startups Achievements:**

#### **SAKSHAM**

**Startup :** Mechphy AWE Robotics.

**Achievement :** Best Innovation Award for the 'Combat Simulator for Infantry Training' at the Yukti Innovation Challenge.



#### **AJAY BIRLA**

**Startup :** Myekigai Profound Pvt Ltd.

**Achievement**: 3<sup>rd</sup> Place at the prestigious HP Udgam Startup Tech Challenge.



#### **SHIVAM GUPTA**

**Startup:** House Technologies.

Achievement: Success at Vimarsh 2023 5G Hackathon, securing the prize of ₹1.5 Lacs for their groundbreaking drone technology.



## ROUNAK ASH GULATI

Startup: Horse's Mouth.

**Achievement:** Awarded the prestigious TIDE 2.0 Grant from Venture Lab, Thapar University, Patiala.



#### MR. RAHUL GUPTA

Startup: Bramer Pvt. Ltd.

Achievement: Secured the first position at PS60 Under DISC X - Border Road Organization (BRO).



#### **AYUSH SHARMA**

Startup: Quickreel.

**Achievement :** Second runnerup position at the EO GSEA Finals 2023 in New Delhi.



## **EVENTS** organized by DTU IIF

#### **WORKSHOP**

Venue: DTU, Delhi.

US based DCE/DTU Alumni; Sh. Sunil Wadhwa, engaged a session on financial management for budding entrepreneurs.



#### **INCUBATION FACILITY VISIT**

Venue: IIT, Delhi

DTU students visited to the Research Park at FITT, IIT, Delhi.



#### **HACKATHON**

**Venue:** Rajdhani College,

University of Delhi

Under the Nidhi iTBI-DST project, this hackathon

brings together talented women entrepreneurs to develop innovative solutions.



## LAUNCH OF INCUBATION PROGRAM UNDER NIDHI i-TBI-DST

**Venue :** DTU, Delhi. Launched the "Women in Tech" Preincubation program



at DTU-IIF, supported by DST and DST-NIDHI.

#### WORKSHOP

Venue: DTU-IIF.

Hosted an insightful session by DCE Alumni, Sh. Sanjay Prakash, on entrepreneurship and product development!.



As an esteemed member of our alumni community, Sh. Sanjay and fellow alumni established DCE82 LLC in the US, dedicated to nurturing startups with mentorship and support.

#### **MOU SIGNING**

**Venue :** DTU, Delhi The signing of a MoU with Rajdhani College on 23<sup>rd</sup> February,



2024. Looking forward to leveraging this partnership for mutual growth and innovation.

#### **WORKSHOP**

**Venue :** Ambedkar University, Karampura Campus, Delhi.

The recent workshop



on opportunity mapping, ideation, and idea validation was a game-changer.

## INVESTOR MEET UNDER SIDBI CLUSTER INTERVENTION PROGRAM

Venue: DTU, Delhi.

hosted 15+ Investors and 30+ CEO & incubator managers along with 40 start-ups from the Delhi



NCR incubator cluster under the SIDBI cluster intervention program at the DTU campus.

#### **WORKSHOP**

**Venue :** NIET, Greater Noida.

Organised an exciting workshop on startups



& funding just for women entrepreneurs Hosted by DTU IIF as part of the NIDHI ITBI DST project at NIET, Greater Noida.

#### **DTU-IIF PITCH-A-THON**

**Venue :** Viksit Bharat Ideation Club, DTU.

The DTU-IIF organized a Pitch-a-Thon on 3<sup>rd</sup> February, 2024. Showcased outstanding business



plans, setting the stage for innovation and success.

#### **WORKSHOP**

**Venue :** Ambedkar University, Delhi.

DTU IIF proudly organized a workshop under the



Nidhi ITBI-DST project at Dr. B. R. Ambedkar University Delhi on 23<sup>rd</sup> January, 2024.

#### **WORKSHOP ON PRODUCT DEVELOPMENT**

Venue: DTU, Delhi.

Workshop on Human-Centered Design: The Art of Usability Heuristics for Startups, entrepreneurs,



and app developers on 7<sup>th</sup> December, 2023, led by US-based Varnika Kundu, a highly skilled multi-sensory designer.

#### **CAPACITY BUILDING WORKSHOP**

Venue: DTU, Delhi.

Immersive two-weeks capacity-building program featuring the distinguished PUM expert,



Mr. Hans Van Halteren, from Netherlands.

#### **INVESTOR MEET**

Venue: DTU-IIF.

Investor Meet on 16<sup>th</sup> November graced by visionary investors like Mr. Rajesh Ramchandani from the USA.



**HACKATHON** 

Venue: DTU, Delhi.

"Character on Road" Hackathon, a collaborative effort among eminent



institutions such as DTU, USME, Maharaja Agrasen Institute, IILM Greater Noida, SRM, IGDTUW, Mann School - Rohini, and Bal Bharti Public School.

#### **WORKSHOP**

**Venue:** Rajdhani College, University of Delhi.

DTU IIF and Nidhi I-TBI teams organized a transformative one-day



workshop at Rajdhani College, University of Delhi.

## **5.2 Human Resource Development Centre (HRDC)**

In accordance with the National Policy on Education (NPE), 1986, and under Section 7(13) of the Delhi Technological University Act, 2009, DTU established the Human Resource Development Centre (HRDC), effective from 1<sup>st</sup> January, 2018, under the guidance of the University Grants Commission.

HRDC-DTU is dedicated to improve the quality of education through continuous knowledge enhancement, capacity building, and professional development of educators. It focuses on empowering teachers to address the challenges posed by new research, technological

advancements, and evolving trends in science and technology. By fostering an environment of innovation and breaking traditional disciplinary barriers, HRDC-DTU aims to develop educators capable of delivering transformative education and shaping the future of higher education.

## **Organization Structure:**

- Director, HRDC, Prof. Pradeep K. Goyal
- Coordinator, Anunay Gour
- Coordinator, Dr. Anurag Goel
- Coordinator, Dr. Anup Mandpura
- Co-Coordinator, Dr. Deepali Malhotra
- Co Coordinator, Ms. Trasha Gupta

## **Types of Programs:**



#### **Orientation Programs:**

Every new faculty member in higher education is required to undergo a four-week Orientation/First level Program, focused on some broad area of knowledge spanning a few allied disciplines with minimum of 24 working days (excluding Sundays) and 144 contact hours (six hours a day).

#### Workshops:

These are organized for shorter duration of one week (6 working days, 36 contact hours) and cover mainly for capacity building of academics, administrators, and other stakeholders.

#### **Refresher Courses:**

These are mainly focused for those faculty members who have already undergone through the Orientation/First Level Program in an identified broad area with minimum of 18 working days (excluding Sundays) and 108 contact hours (six hours a day).

#### **Short-Term Course:**

3-6 days duration especially on research methodology and specialized themes of interest.

## **Trainings/Programmes Organized:**

| S.<br>No. | Date   | Event Details  | No. of Participants |
|-----------|--|--|---------------------|
| 1.        | 21 <sup>st</sup> August,<br>2023                                   | "World Entrepreneurs Day Celebration" organized by HRDC in association with Institutions Innovation Council (IIC)-DTU  | 106                 |
| 2.        | 11 <sup>th</sup> - 29 <sup>th</sup><br>September,<br>2023          | Administrative approval for the three-weeks "Technical<br>Training Programme attachment for DANICS probationers<br>(59 <sup>th</sup> Batch) with DTU", as a component of two years of<br>residential foundation training | 30                  |
| 3.        | 26 <sup>th</sup> February,<br>2024                                 | Workshop on "Technical Education in Bhartiya Language in the context of NEP-2020: Application of Anuvadini"  | 117                 |
| 4.        | 20 <sup>th</sup> March,<br>2024                                    | "Hands-on-Training on Tools for Document Writing in MS<br>Word" for administrative staff of DTU  | 92                  |
| 5.        | 4 <sup>th</sup> April, 2024  | Seminar on "Stress Management with Ancient Bharatiya Wisdom"   | 85                  |
| 6.        | 5 <sup>th</sup> April, 2024  | Workshop on "Relevance of Ancient Technology in Modern Times in context of NEP 2020"   | 93                  |
| 7.        | 27 <sup>th</sup> - 31 <sup>st</sup> May,<br>2024                   | FDP on "Teaching Pedagogy and Outcome-Based Education in the context of NEP 2020" at DTU   | 52                  |
| 8.        | 29 <sup>th</sup> July,<br>2024                                     | Quiz to celebrate the 4 <sup>th</sup> anniversary of the "National Education Policy (NEP) 2020"  | 106                 |
| 9.        | 13 <sup>th</sup> August,<br>2024                                   | Workshop on "Skill Development through Atmanirbhar Bharat" at DTU  | 169                 |
| 10.       | 20 <sup>th</sup><br>August - 6 <sup>th</sup><br>September,<br>2024 | Three-weeks Technical Training Program for DANICS probationers (59 <sup>th</sup> , 60 <sup>th</sup> , 61 <sup>st</sup> Batches)  | 22                  |

## **Brief Report of activities organized by HRDC-DTU:**

1. Workshop on "Technical Education in Bhartiya Languages in context of National Education Policy 2020: Application of Anuvadini"

**Resource Person-** Dr. Buddha Chandrashekhar, Chief Coordinating Officer, AICTE, Delhi

The HRDC, DTU successfully organized a workshop on "Technical Education in Bhartiya Languages in the Context of NEP 2020: Application of Anuvadini" on 26<sup>th</sup> February 2024. Prof. Prateek Sharma, Vice

Chancellor of DTU, welcomed Dr. Buddha Chandrashekhar, Chief Coordinating Officer, AICTE, Delhi. Addresses by Hon'ble Vice Chancellor; Prof. Sharma, Registrar; Prof. Madhusudan Singh, and HRDC Director; Dr. P. K. Goyal highlighted the importance of Bhartiya languages in technical education. Dr. Chandrashekhar's presentation on Anuvadini, a tool for enhancing technical education in Indian languages, was the focal point, followed by a lively discussion and Q&A.



2. Hands-on-Training on "Tools for Document Writing in MS Word" for administrative staff of DTU, Delhi

**Resource Person:** Mr. Yogesh Kumar, Education Media Generalist (Retd.), K. L. Wig Centre of Medical Education and Technology, AIIMS, Delhi

A hands-on training session on "MS Word Tools for Document Writing" was held for DTU administrative staff on 21st March, 2024. Dr. Pradeep Goyal, HRDC Director, participants, welcomed emphasizina the session's importance, followed by insights from Prof. Madhusudan Singh, DTU Registrar. Mr. Yogesh Kumar, a retired media specialist from AIIMS, Delhi led interactive session, demonstrating various MS Word tools, shortcuts, and functionalities. Participants engaged in exercises to enhance their skills. The event concluded with a vote of thanks to the trainer, participants, and organizers.



## 3. "Stress Management through Ancient Bharatiya Wisdom"

**Resource Person:** Prof. Debi Prasad Mishra, Professor, Aerospace Engineering, IIT, Kanpur and NITTTR, Kolkata

The HRDC at DTU organized a Seminar on "Stress Management through Ancient Bharatiya Wisdom" on 4th April 2024, focusing on traditional Indian practices for managing modern-day stress. Prof. Madhusudan Singh, DTU welcomed the keynote speaker, Prof. Debi Prasad Mishra from IIT, Kanpur and NITTTR, Kolkata. Prof. Mishra drew on his expertise in Indian knowledge systems, particularly the Bhagavad Gita, offering practical strategies for stress management and inner peace. His insightful address resonated with the 85 attendees, including faculty, staff, scholars, and students, reflecting strong interest in the topic.

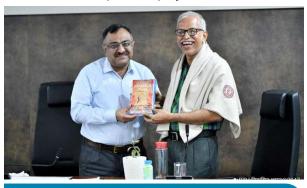




4. The Relevance of Ancient Technology in Modern Times in context of the National Education Policy (NEP) 2020

**Resource Person**: Prof. Debi Prasad Mishra, Professor Aerospace Engineering, IIT, Kanpur and NITTTR, Kolkata

The HRDC at DTU organized a Workshop on "The Relevance of Ancient Technology in Modern Times" on 5th April 2024, focusing on integrating traditional Indian knowledge with modern education under NEP 2020. Dr. Pradeep Goyal, HRDC Director, and Prof. Madhusudan Singh, DTU Registrar, emphasized the role of ancient technology and Bharativa wisdom in innovation and education. Hon'ble Vice-Chancellor Prof. Prateek Sharma highlighted the importance of interdisciplinary approaches to address contemporary challenges. Keynote speaker Prof. Mishra discussed NEP 2020's holistic focus on spiritual, cognitive, physical, and emotional development, resonating with ancient Indian philosophy.



5. One-Week FDP on "Advanced Teaching Pedagogy and Outcome-Based Education in the context of the NEP-2020"

**Resource Person**: Resource Person: Prof. B. L. Gupta, Dept. of Management Ed., Prof. R. K. Dixit, Dean, Admin., and Prof. S. S. Kedar, Head, Dept. of Media Research and Development Education, NITTTR, Bhopal

HRDC organized a One-Week Faculty Development Program on "Advanced Teaching Pedagogy and Outcome-Based Education in the Context of NEP-2020" from 27th - 31st May, 2024, at DTU. Dr. Pradeep K. Goyal, HRDC Director, emphasized continuous professional development, while Prof. B. L. Gupta from NITTTR, Bhopal, discussed the need for outcome-based education aligned with NEP-2020. Hon'ble Vice-Chancellor, DTU; Prof. Prateek Sharma highlighted the importance of modern pedagogical tools for enhancing student engagement and critical thinking. The program covered topics like implementing NEP 2020, developing outcome-based curricula, and assessing learning, along with hands-on tasks such as creating course outcomes and rubrics.





# 6. Workshop on "Skill Development and Atmanirbhar Bharat in the Context of NEP-2020"

Resource Person-: Col. Santosh Kumar, Director, National Council for Vocational Education and Training (NCVET), Ministry of Skill Development, Delhi; Sh. Om Prakash Sharma, Chairman, Sharda Group of Institutions, Jhabua, M.P.; Sh. Ramesh Parmar and Smt. Shanti Parmar, Padma Shri Awardee, Jhabua, M.P. and Mr. Tilak Raj Seth, Ex-CEO Mobility and Executive Vice President-Siemens India (DCE Alumni)

The workshop on "Skill Development and Atmanirbhar Bharat in the Context of NEP-2020," organized by HRDC at DTU on 13<sup>th</sup> August 2024, focused on integrating traditional skills with modern education to promote vocational training, cultural appreciation, and innovation. Col. Santosh Kumar, Director of NCVET, delivered the keynote on vocational education's role in empowering youth and enhancing employability. Sh. Om Prakash Sharma emphasized blending modern education with traditional values, while Padma Shri awardees Sh. Ramesh Parmar and Smt. Shanti Parmar showcased Adivasi dollmaking, inspiring cultural preservation. Mr. Tilak Raj Seth highlighted leadership, innovation, and giving back to society for nation-building.



7. Three-Weeks Technical Training Programme: Attachment of DANICS Probationers (59th, 60th and 61st Batches) from 20thAugust - 06th September, 2024

DTU hosted a three-weeks Technical Training Program for DANICS probationers from the 59<sup>th</sup>, 60<sup>th</sup>, and 61<sup>st</sup> batches, aimed at enhancing their technical and administrative skills. The program, which began on 20th August, 2024 included 34 sessions led by experts from institutions like IIIT, Delhi, HCL Tech, JNU, and MNNIT, Allahabad, covering topics such as Al, Quantum Computing, IoT, Cybersecurity, and their applications in governance. Chief Guest Shri Ashish Kundra, Principal Secretary to the Lt. Governor of Delhi, emphasized the role of technology in modern governance. The program featured interactive discussions, field visits to NIELIT and DRDO, and handson training, providing practical insights into cutting-edge technologies. The training concluded on 6th September, 2024, with probationers sharing key takeaways and receiving certificates for their participation.







## **5.3 Solar Energy Centre**

Office-In-charge: Mr. Pradeep Yadav, (JE, Electrical Engineering)

DTU currently operates a 432 kW Solar Photovoltaic (SPV) rooftop plant under the RESCO model, a 40 kW SPV plant under the CAPEX model, and a 480-kW solar power system located at Academic Blocks 3 and 4, alongside three 200 kW electronic meters. The 432 kW SPV rooftop plant was installed by M/S Hero Future Energies on the rooftops of various departments, while the 40 kW SPV plant was installed by M/S Photon Energy Systems Ltd. on the rooftop of the administrative building. In total, DTU has 472 kW of functional SPV capacity. Both installations are performing satisfactorily.

The solar panels, totaling 472 kW, have been installed in the following locations: the Science Block (108 kWp with 1 electronic meter), the Mechanical Block (150 kWp with 2 electronic meters), and the Electronics Block (174 kWp with 3 electronic meters). In April 2023, the maximum solar electricity output from all 432 kW of solar panels across the nine electronic meters was recorded at 355,157 kWh, averaging 3.81 kWh per day per kW of panel.

Additionally, a 40-kW system commissioned in June, 2015 is functioning properly. This system consists of two 20 kW inverters connected to the main setup. A control room is built on the ground floor at the back of the building. The DC power generated by the SPV plant is converted into AC power by the SSE model inverters and fed into the three-phase DTU grid.

All three solar systems are grid-connected to the TATA power Delhi Distribution Limited. (TPDDL). M/S Hero Future Energies has provided the solar meter readings for the past year from August 2023 to July 2024, as detailed in the table below.

| Month  | Reading<br>kWH (units) | Units<br>Charges in | Bill Amount in ₹ |
|--------|------------------------|---------------------|------------------|
| Aug-23 | 52212                  | 5.8                 | 3,02,829.6       |
| Sep-23 | 43092                  | 5.8                 | 2,49,933.6       |
| Oct-23 | 48123                  | 5.8                 | 2,79,113.4       |
| Nov-23 | 32534                  | 5.8                 | 1,88,697.2       |
| Dec-23 | 33148                  | 5.8                 | 1,92,258.4       |
| Jan-24 | 32548                  | 5.8                 | 1,88,778.4       |
| Feb-24 | 22057                  | 5.8                 | 1,27,930.6       |
| Mar-24 | 75426                  | 5.8                 | 4,37,470.8       |
| Apr-24 | 114361.5               | 5.8                 | 6,63,296.7       |
| May-24 | 114361.5               | 5.8                 | 6,63,296.7       |
| Jun-24 | 104325                 | 5.8                 | 6,05,085         |
| Jul-24 | 38985                  | 5.8                 | 2,26,113         |
|        | Total                  |                     | 41,24,803        |



#### 5.4 Kitchen Waste Plant

Office-In-Charge: **Prof. J. P. Kesri,** (Deptt. of Mechanical Engineering)

Delhi Technological University (DTU), in collaboration with the Bhabha Atomic Research Centre (BARC), has established a 500 kg per day kitchen waste biogas plant located behind the main canteen on the DTU campus. This innovative technology, developed by Dr. Sharad Kale from BARC, Mumbai, is based on the Nisargruna technology, and is designed to be environmentally friendly, producing two valuable outputs: methane and organic manure. Food waste from the canteen is first ground in a mixture grinder installed on the inlet platform, mixed with an equal amount of water, and then fed into the biogas plant. The plant was installed and commissioned in April 2014. While the system has operated effectively under moderate temperatures during the summer, its performance has been observed to decline in the winter months. The methane generated from this plant is utilized for cooking in the main canteen.

This technology has significant potential for replication in areas such as Azadpur and Okhla sabzi mandis, as well as within other municipal corporations to manage vegetable waste, where much of the biodegradable waste can serve as raw material for bio-methanization. The organic manure produced is a valuable resource for horticulture and agriculture, and the entire system creates numerous opportunities across various sectors. Recently, an additional biogas plant has been established on the DTU campus near the library, aimed at generating electricity. Addressing waste segregation at the source remains a crucial issue that requires attention. The biogas production process is expedited through a combination of aerobic and anaerobic digestion technologies, with electricity generation being a significant potential benefit.

This technological advancement contributes substantially to environmental sustainability by reducing greenhouse gas emissions and offering health and social benefits, alongside financial returns. Research is ongoing to convert methane into hydrogen through high-temperature reactions with steam, with many undergraduate students engaged in this project as part of their minor and major assignments during their 7th and 8th semesters, as well as innovative projects in earlier semesters.

Looking ahead, there are opportunities for additional benefits such as subsidies and carbon credits, which could yield a high return on investment. Entrepreneurs can thrive by offering services and products related to this technology. DTU is actively collaborating with various organizations to provide consultancy in this field, and students have already contributed to research publications. Several students are currently pursuing B.Tech., M.Tech., and Ph.D. projects related to this initiative, with some participating in summer internships focused on these projects.



# 5.5 Centre for Advanced Studies and Research in Automotive Engineering

Officer-In-Charge: **Prof. Naveen Kumar** (Dept. of Mechanical Engg.)



The Centre for Advanced Studies and Research in Automotive Engineering (CASRAE) was established in 2003. Over the past two decades, CASRAE has emerged as a leading research hub, both nationally and internationally. The Centre is dedicated to the development of renewable transportation fuels and the advancement of engine technologies at reducing dependence imported crude oil and minimizing harmful exhaust emissions, thereby contributing to a cleaner environment. Its faculties and students have published papers in renowned international journals and presented their research at prestigious conferences and symposia organized by professional bodies, such as, the American Society of Mechanical Engineers (ASME) and the Society of Automotive Engineers (SAE). Their work is regularly featured in publications by Elsevier, Wiley, Springer, Taylor & Francis, SAE, IMechE, and ASME.



#### The focus areas of research at the Centre include

- Development of renewable fuels for transportation and off-road applications
- Enhancements in Compression Ignition (CI) and Spark Ignition (SI) engine designs
- Development of micro-turbojet engine
- Tribological studies and research on the aerodynamic characteristics of aircraft and airfoil designs
- Advancement of hybrid vehicle technology
- In-depth studies on spray injection systems
- Innovations aimed at climate change mitigation
- Exploration of next-generation fuels, including renewable diesel, jet fuel, LNG, and hydrogen

Additionally, under the guidance of the Chief Secretary of Delhi, the Students' Research Group has been working on converting agricultural residue (Parali) into value-added products and fuel. CASRAE continues to push the boundaries of automotive engineering research, maintaining its position as a frontrunner in innovation and sustainability.

## **Research Contribution During 2023-24:**

Research Papers in Peer-Reviewed Journals

- Kumar, N., Yadav, K. & Chaudhary, R (Int. J. Environ. Sci. Technol. 20, 12581–12596, 2023).
- Sonthalia, A., Kumar, N., Tomar, M. et al. (Clean Techn Environ Policy 25, 551–575, 2023).

10<sup>th</sup> International Symposium - (4<sup>th</sup> - 10<sup>th</sup> January, 2024)  16 students of CASRAE presented their research papers (offline/online mode) on the "Fusion of Science & Technologies" (ISFT2024)" held at J. C. Bose University of Science & Technology.

Research Excellence Award, DTU, 2023 (Commendable Research Award)

- · Khushbu Yadav (1 SCI)
- Ankit Sonthalia (1 SCI)

Ph.D. Award

- Khushbu Yadav
- · Dushyant Mishra

The winners of a one-day workshop on "Navigating India's Energy Landscape: Challenges, Potential, and Solutions in 2050" - (25th April, 2024)

- Manish Kumar, NSUT
- · Pranav Chaudhary, KIET
- Md. Israr Khan, GITAM

## **Activities organized during August 2023 - July 2024:**

One-day workshop on "Frugal Engineering & Innovation: A Roadmap for Engineering Students" - (22<sup>nd</sup> August, 2023)

Frugal engineering and innovation in engineering and innovation are key drivers of industrial and socio-economic growth in India. The Government of India emphasizes on these areas, which students across the nation actively pursue. Frugal engineering focus on creating practical affordable

solutions with limited resources, particularly in fields like healthcare, energy, information technology, and agriculture.

Aligned with the National Education Policy-2022, which encourages hands-on, cost-effective innovation, the DTU IMechE Chapter organized a One-day workshop titled "Frugal Engineering & Innovation: A Roadmap for Engineering Students" on 22<sup>nd</sup> August, 2023. The event, held at Pragyan Hall in collaboration with other

institutions, and industries, aimed to foster academia-industry collaboration in these areas. Notable speakers included Prof. Amit Prakash Singh, GGSIP University; Dr. Sunil Dhingra, Director, Bio Trend Energy; Former Fellow, TERI; Mr. Himanshu Mishra, Founder, GrooveNexus and a bright alumnus of DCE/DTU, Mr. Piyush Khanna, KIET Ghaziabad, and Spanda's founders Mr. Harshit Thakral and Mr. Aditya Maheshwari.

The workshop featured an interactive Q&A session where experts addressed relevant questions from faculty and students about applying frugal engineering in everyday life. It successfully achieved its goals by equipping students with the knowledge and skills to embrace frugal innovation. Positive participant feedback highlights the workshop's impact in preparing a new generation of engineers to solve complex challenges with simple, sustainable solutions.







Blood Donation Camp - (9<sup>th</sup> August, 2023):

A Blood Donation Camp was organized by the students of DTU working at CASRAE and IMechE DTU Chapter, in collaboration with the Indian Red Cross Society on 9th August, 2023. The event saw strong participation from students, faculty, and staff, raising awareness about the importance of regular blood donations. It fostered a culture of compassion and social responsibility, addressing blood shortages and motivating continued support for similar initiatives in the future. The camp highlighted the lifesaving benefits of donations and united the DTU community in this noble cause.





World Biofuel Day - (10th August, 2023):

The CASRAE-DTU & IMechE, DTU Chapter organized a General Awareness and Interactive Session on 10<sup>th</sup> August, 2023 to commemorate "World Biofuel Day". The event highlighted the significance and potential of biofuels as renewable, nonfossil-based fuels for achieving net-zero emissions under the theme "Biofuels: Fuels for a Sustainable Future." It celebrates Sir Rudolf Diesel's 1893 milestone of running the first Diesel Engine on groundnut oil inspiring continued biofuel research.



Activities, included student discussions on the latest advancements in biofuel technology, the economic and environmental benefits of biofuels, and their role in reducing carbon emissions and promoting energy security. The event raised awareness and reinforced DTU's commitment to sustainable energy.

## SOFE - (Speak Out For Engineering) - (15<sup>th</sup> September, 2023):

The IMechE DTU Chapter, in collaboration with the Centre for Advanced Studies & Research in Automotive Engineering (CASRAE), hosted the SOFE-2023 Local Heats on 15<sup>th</sup> September, 2023. This event aimed to enhance participants' presentation skills through the Speak Out for Engineering competition, which focuses on verbal and visual communication of technical topics in Mechanical Engineering.



Participants from the DTU chapter displayed remarkable enthusiasm and presented a wide range of engineering subjects, honing their public speaking skills, and learning to communicate complex concepts effectively. The experience boosted their confidence and contributed to their professional growth.



The competition fostered a collaborative atmosphere, allowing participants to learn from each other and share ideas. It showcased creativity and innovation within the engineering community, promoting knowledge sharing and continuous learning.

### Quiz on "Net Zero Emission"-(5<sup>th</sup> September, 2023):

An Online Quiz on "Net Zero Emission: Challenges & Potential for India" was organized by the Centre for Advanced Studies & Research in Automotive Engineering, IMechE DTU Chapter, and other renowned Institutions on 5<sup>th</sup> September, 2023, in online mode to commemorate the Teachers' Day.

The competition, which had two parts: an MCQ-based quiz and a short answer-based Innovative solution to climate change, witnessed a stupendous response from the World over. Cash prizes of ₹2,000/, 1,500/-, and 1,000/- each were given to above prize winners. Additionally, students from across India were invited to propose innovative solution to address the current challenges of climate change.

## Industrial Visit to Batra Customs India - (24th July, 2024):

On 24<sup>th</sup> July, 2024, a group of students from DTU, Delhi, participated in an industrial visit to Batra Customs in Delhi, a company specializing in vehicle modifications tailored to specific customer requirements. This visit was organized by the Centre for Advanced Studies and Research in Automotive Engineering in collaboration with the IMechE DTU Students' Chapter.





The primary objective of the visit was to provide DTU students with practical exposure to automotive operations, technologies, and innovations in vehicle remodification. Industrial visits like this are instrumental in bridging the gap between theoretical education and real-world application. They offer students valuable insights into industry practices, cuttingedge technologies, and the challenges

encountered in the field of automotive engineering. The visit to Batra Customs aimed to inspire and motivate students by showcasing the latest advancements in automotive engineering and highlighting potential career opportunities within the industry.

## Blood Donation Camp - (30th January, 2024):

A Blood Donation Camp was organized by the students of DTU, Delhi in association with the Indian Red Cross Society on 30<sup>th</sup> January, 2024, on the DTU Campus. The camp aimed to encourage students, faculty, and staff to actively participate in donating blood for a noble cause.

The camp focused on raising awareness about the critical need for regular blood donations and their potential to save lives. The initiative saw enthusiastic participation from students, faculty, and staff, highlighting the importance of cultivating a culture of





compassion and social responsibility within the university.

By addressing the ongoing blood shortage, the camp made an immediate impact and motivated the DTU community to continue supporting similar initiatives in the future. It is a matter of great happiness and pride that DTU is amongst Delhi's largest blood donor institution.





One-day workshop on "Navigating India's Energy Landscape: Challenges, Potential, and Solutions in 2050" - (25th April, 2024):

India's rapidly growing population and expanding economy position it as a key player in the global energy sector. However, this growth brings challenges such as rising energy demands, environmental degradation, and climate change. Addressing these issues requires comprehensive strategies for a sustainable energy future.

To tackle these challenges, the DTU IMechE Chapter organized a one-day workshop titled "Navigating India's Energy Landscape: Challenges, Potential, and Solutions in 2050" on 25<sup>th</sup> April 2024 at Pragyan Hall, DTU. Held in collaboration with various IMechE chapters, academic institutions, and industry partners, the event was patronized by Dr. Prateek Sharma, Vice-Chancellor of DTU. The workshop emphasized the urgency of renewable energy adoption and outlined a strategic roadmap for achieving energy independence and carbon neutrality in India.

Notable speakers included Dr. Pradeep Chandra Pant, Former Advisor/Scientist G, MNRE, Shri Sunil Dhingra, Former Senior Fellow and Associate Director, TERI, Dr. Naqui Anwer, Professor and Head, Sustainable Engineering Department, TERI School of Advanced Studies, and Dr. Harveer Singh Pali, NIT Srinagar, J&K.

The workshop was essential for a country like India, which has committed to achieve Net Zero Emission by 2070. The key points discussed are as follows:

## **Energy Security**

As India's energy demands continue to rise, diversifying the energy mix is crucial to ensuring security and reducing dependence on fossil fuels. By exploring renewable energy options, India can strengthen its energy security and minimize its exposure to global energy markets.

## **Environmentl Sustainabiliy**

The impacts of climate change are becoming increasingly evident, posing significant risks to India's ecosystems, agriculture, and public health. Transitioning to renewable energy sources is essential for mitigating these impacts and creating a cleaner, healthier environment for future generations.

## Economic Opportunitis

The adoption of renewable energy technologies presents significant economic potential for India, including job creation, technological innovation, and increased competitiveness in the global market. By investing in sustainable energy solutions, India can stimulate economic growth while reducing carbon emissions.

### Policy Implications

Achieving India's climate goals and fulfilling international commitments, such as those outlined in the Paris Agreement, requires effective policy interventions and regulatory frameworks. This workshop will facilitate discussions on policy measures and regulatory mechanisms to accelerate the transition to renewable energy.

The workshop featured keynote presentations, panel discussions, and interactive sessions. It brought together experts, policymakers, industry leaders, and academia to deliberate on the following themes:

- Current Energy Landscape in India: Trends, Challenges, and Opportunities
- 2. Renewable Energy Technologies: Innovations and Advancements
- Policy Frameworks and Regulatory Mechanisms for Promoting Renewable Energy
- 4. Case Studies and Best Practices in Sustainable Energy Deployment
- 5. Financing and Investment Strategies for Renewable Energy Projects
- 6. Community Engagement and Stakeholder Participation in Energy Transitions

The "Navigating India's Energy Landscape" workshop was more than just an academic event. It served as an excellent platform for collaboration, knowledge sharing, and driving action towards a sustainable energy future for India. By leveraging the collective expertise and insights of diverse stakeholders, this workshop resulted to pave the way for a cleaner, greener, and more sustainable India by 2050 and beyond.



Webinar on "Logistics & Supply Chain in Developing Economies-Challenges & Opportunities" - (2<sup>nd</sup> July, 2024):

A webinar on "Logistics & Supply Chain in Developing Economies - Challenges & Opportunities" was presented by Dr. Vipul Garg, who holds an MS in Data Science and a Ph.D. in Supply Chain & Logistics from the University of North Texas. A former Data Scientist at Tetra Pak, he will join Texas A&M University, San Antonio, as an Assistant Professor in fall 2024.

The informative webinar addressed key aspects of logistics and supply chain management in developing economies, highlighting challenges unique opportunities for growth. Dr. Gara emphasized the importance of strategic investments, technological adoption, and capacity building to enhance logistics and supply chain efficiency, ultimately competitiveness improving in countries and contributing to global supply chain effectiveness.

#### **INNOVATIVE PROJECTS**

## 1. Hydrogen Utilization in Internal Combustion Engine

The Government of India sees hydrogen as essential for achieving energy security and transitioning to a low-carbon economy. Through the National Hydrogen Mission, India aims to become a global hub for green hydrogen production by utilizing renewable energy sources like solar and wind. The goal is to widely adopt hydrogen as a clean fuel in industries, transportation, and power generation to reduce fossil fuel dependence. By promoting innovation, infrastructure development, international collaboration, and aims to lead in hydrogen technologies and contribute to global climate change efforts. Meanwhile, B.Tech. Mechanical Engineering students Sachin (2K22/ME/226), Sahil Mayank (2K22/ME/228), and Sanjeev (2K22/ME/231) are working on an innovative project titled "Variable Hydrogen Injection Timing & its Impact on Engine Performance" at CASRAE.



## 2. Hydrogen: A Bridge for Sustainable Development of India

The Government of India recognizes hydrogen as a key component in advancing development and facilitating the transition to a greener economy. The country aims to produce green hydrogen for wide range of applications in transportation, industry, and power generation by harnessing renewable resources like solar and wind. This initiative not only seeks to meet domestic energy needs but also aspires to position India as a global leader in the hydrogen sector, contributing significantly to global efforts against climate change.

In this context, students Gautam Prakash (2K21/ME/113) and Akash Mishra (2K21/ME/31) are undertaking an innovative project titled "Hydrogen: A Bridge for Development in India." Their research explores hydrogen's role in promoting environmentally friendly practices and its potential impact on the nation's future Energy landscape.

### 3. Development of Additives for Improving the Diesel Fuel and Engine Characteristics

Desulfurization in India is essential for reducing harmful sulphur emissions,

improving air quality, and protecting public health while ensuring compliance with stricter environmental regulations. However, it results in lower lubricity and reduced energy density in diesel fuels. To address these challenges, additives are crucial for enhancing lubricity and energy density, compensating for the drawbacks of desulfurized fuels. This research focuses on developing and testing hybrid additive formulations to evaluate their effectiveness in maintaining engine efficiency and reducing wear, optimizing diesel fuel performance while adhering to stringent regulations.

Vipul Saxena (2K18/PHD/ME/35) has been carrying out very inventive work, "Some Studies on Enhancement of Diesel Engine Characteristics & Fuel Properties by Using Fuel Additives".

## 4. Hydrotreated Vegetable Oils (HVO) as Renewable Diesel Fuel

The global drive to reduce greenhouse gas emissions and reliance on fossil fuels has accelerated the development of alternative fuels for internal combustion engines. Hydrotreated vegetable oils (HVO), are renewable diesel, derived from vegetable oils, and fats are promising biofuels. Blending HVO with higher alcohols like ethanol or butanol in compression ignition engines offers a renewable, cleaner energy source that reduces environmental impact while maintaining or improving engine performance.

Ashish Kumar Singh (2k18/PhDME/529) is conducting pioneering research on "Using Higher Alcohols and Hydrotreated Oils in CI Engines", contributing to developing sustainable and efficient fuel options.

### 5. Utilization of CNG in Homogeneous Charge Compression Ignition (HCCI) Engines

The Government of India is dedicated to reducing its carbon footprint and enhancing energy security by promoting alternative fuels, with Compressed Natural Gas (CNG) as a key component. This research examines how CNG can lower emissions while maintaining optimal engine performance, supporting the government's transition to sustainable energy sources. The findings have been presented at major conferences, recognized as a significant contribution to India's low-carbon economy. This work reinforces the government's vision and paves the way for future innovations in clean energy technology.

In alignment with these priorities, extensive research has been conducted by research scholar; Pawan Kishore Jha (2k17/PhD/ME/045) at CASRAE, focusing on the potential of CNG to advance Homogeneous Charge Compression Ignition (HCCI) Engine Technology.

## 6. **Development of Supercritical Technology for Biodiesel Production**

Supercritical transesterification is crucial in biodiesel production as it eliminates the need for a catalyst, allowing the use of diverse feedstocks, including those with high free fatty acid or water content. This process accelerates reaction rates and improves biodiesel yield under extreme temperature and pressure, producing high-purity biodiesel without the complexities of catalyst removal. However, its high energy requirements pose challenges for large-scale implementation.

Chandra Shekhar Singh (2K18/PHD/ME/36) is engaged in pioneering research on the "Development of a Supercritical Reactor for Biodiesel Synthesis and Evaluation of Its Performance, Emission, and Combustion Characteristics." His work focuses on optimizing the biodiesel production process, with an emphasis on enhancing the key characteristics of the final product.

## 7. Utilization of Green Hydrogen in a Compression Ignition (CI) Engine

Hydrogen is a clean fuel available with two main pathways: fuel cells and combustion in internal combustion engines (ICEs). The latter is advantageous for India, where replacing conventional engines is costly. However, using hydrogen in ICEs presents challenges, including lower efficiency, high NOx emissions, and abnormal combustion. These issues can be addressed through engine design modifications.

Shiv Prakash Singh (23/PHDME/03), a Ph.D. scholar in the Mechanical Engineering Department, is researching the "Utilization of Green Hydrogen in a CI Engine" at the Centre for Advanced Studies & Research in Automotive Engineering (CASRAE).

His research focuses on assessing the feasibility of using green hydrogen as a fuel analyzing combustion characteristics, like ignition delay and flame speed, and exploring potential engine modifications to address the challenges associated with hydrogen combustion.

This research involves experimental tests and simulations to study key factors such as pressure, temperature, and flame speed for integrating green hydrogen into ICEs.

# 5.6 Vinod Dham Centre of Excellence for Semiconductors and Microelectronics (VDCoE4SM)

Delhi Technological University (DTU) has recently established the Vinod Dham Centre of Excellence for Semiconductors and Microelectronics (VDCoE4SM) in May 2023 with a focus on imparting training & research in thrust areas of Semiconductor Technology and IC Manufacturing; and to provide a platform to boost productivity, address emerging skill gaps and align training & research with industry needs. Thus, to support the Government's India

# Organization Structure CENTRE HEAD

**Prof. Rishu Chaujar**Professor, Applied Physics

#### **MEMBERS**

#### **Prof. Neeta Pandey**

Professor, Electronics & Comm. Engg.

#### Dr. Mohan Singh Mehata

Associate Professor, Applied Physics

#### Dr. Deva Nand

Associate Professor, Electronics & Comm. Engg.

#### Dr. Mukhtiyar Singh

Assistant Professor, Applied Physics

#### Dr. Bharti Singh

Assistant Professor, Applied Physics

#### **Dr. Sumit Kale**

Assistant Professor, Electronics & Comm. Engg.

#### Mr. Akshay Maan

Assistant Professor, Electronics & Comm. Engg.

Semiconductor Mission and create a skilled manpower for Semiconductor Chips and manufacturing industry, the Centre has been established with a vision to stimulate and create a robust R & D ecosystem that drives innovation, IP and start-ups in Semiconductor Technology and Microelectronics to cater to the Nation's scientific demands; and serve as a Centre of National and Strategic importance.

## VISION



To stimulate and create a robust R & D ecosystem that drives innovation, IP and start-ups in Semiconductor Technology and Microelectronics to cater to the Nation's scientific demands; and serve as a Centre of National and Strategic importance.

## MISSION

- To be a trusted technology and capacity provider of the global Semiconductor and Microelectronics industry with a sustainable impact through innovative semiconductor technologies and solutions.
- To create environment of research, collaboration, innovation and skill development bridging the gap between academia and industry.
- 3. To provide ethics and value-based education by promoting activities addressing the societal needs.
- 4. To enable students develop skills to solve complex technological problems of current times and create world class professionals competent enough in the area of Semiconductors and Microelectronics.

## **Objectives:**

- To establish a centralized state of the art infrastructure facility for next generation device design/materials research/ fabrication and sustain educational resources for cutting edge Research and Development in Semiconductor and Microelectronics.
- Capacity building in terms of skilled manpower at different levels such as technicians, supervisors and engineers in the area of Semiconductor Technology, IC Manufacturing and Microelectronics.
- Design the curriculum with desired skill sets in research, design, fabrication, equipment manufacturing, packaging, and other related fields for development of Indian semiconductor and display ecosystem.
- To offer internship opportunities to the students of degree, diploma and certificate level institutions at state and national levels under Govt of NCT of Delhi.
- 5. To offer M.Tech. and Ph.D. programmes in the area of Semiconductors, IC Manufacturing and Microelectronics.
- 6. Collaboration between Delhi Technological University and Semiconductors/Microelectronics Industry in order to align training & research as per industry needs.

# ACADEMIC PROGRAMMES (2023-24):

Minor Specialization in Semiconductors and Microelectronics for B.Tech. students

Ph.D. Programme in Semiconductors and Microelectronics

#### **RESEARCH PUBLICATIONS:**

Patents (Awarded/Published): 05

Journals: 24

Conferences: 14

Books: 01 (as Editor)

**Book Chapters:** 02

#### **Achievements of the Center:**

- Many faculties of the centre have received the DTU Research Excellence Award.
- Prof. Rishu Chaujar awarded with DST-SERB Power Fellowship.
- Prof. Rishu Chaujar awarded with the SERB-Power Research Grant of Rs.38.1 Lacs.
- Prof. Rishu Chaujar and her Ph.D. Scholar received the **Best Paper Award** in 2<sup>nd</sup> International Conference on "Emerging Trends in Information Technology and Engineering" (ICETITE-2024) at VIT Vellore, 22<sup>nd</sup> to 23<sup>rd</sup> February, 2024.
- DTU has been selected for extending the support of EDA Tools from Cadence, Synopsys, Mentor, Ansys for the next 4-5 years under the Chip to Startup Programme, Ministry of Electronics and Information Technology (MeitY), Govt. of India: Chief Investigator: Prof. Rishu Chaujar and Co-Chief Investigator: Dr. Sumit Kale.
- DTU signed an MoU with Semiconductor Laboratory (SCL), Chandigarh on 8<sup>th</sup> November, 2023.
- An International MoU from National Chi Nan University, Taiwan has also been received for finalization.
- Collaborations with ESSCI, IESA, SSPL, Applied Materials and VLSI Society of India are already in process.

- The Centre is also in process of having a consortium of eminent institutes, such as; IIT Delhi, IIT Mandi, IIT Ropar etc. so as to have an exchange of expertise between the universities for future research and skill upgradation. This would maximize the utilization of high-end resources available at these places.
- Semicon Society has been introduced under the Centre and its main agenda is organizing events, workshops, seminars, conferences etc. centered on semiconductors and microelectronics, to build awareness of semiconductor career paths, sessions related to the chip industry and including the buzzword of semiconductors.
- Many faculties of the centre (Prof. Rishu Chaujar, Prof. Neeta Pandey, Dr. Mohan Singh Mehata) appeared in the top 2% scientists in the world released by Stanford University, USA.
- Dr. Bharti Singh has been granted with SERB-SURE research project worth of Rs.31.6 Lacs.
- Dr. Sumit Kale has been awarded SERB sponsored research grant of ₹29.65 Lacs.
- Dr. Sumit Kale and his Ph.D. scholar received the Best Paper Award in 8<sup>th</sup> IEEE EDTM conference held from 3<sup>rd</sup> - 6<sup>th</sup> March, 2024.

### **Grants received for Research Project:**

Prof. Rishu Chaujar (PI) | Dr. Sumit Kale (Co-PI)

Title: EDA Tools Access under Chip 2 Startup Programme

Agency: Ministry of Electronics and Information Technology (MeiTY),

Govt. of India

**Grant:** Sanctioned in the form of remote access of EDA Tools for 5 years

**Date:** 19<sup>th</sup> January, 2024 | **Duration:** 5 Years

### **Events organized by VDCoE4SM during 2023-24:**

| Details of Event   | Date(s)  | Coordinator/co-coordinator   |
|--|--|--|
| International Conference on<br>"Microelectronics, Circuits & Systems<br>(Micro2024)" in collaboration with Applied<br>Computer Technology, Kolkata | 16 <sup>th</sup> - 17 <sup>th</sup><br>May, 2024 | General Chair: Prof. Rishu Chaujar<br>Convenors: Dr. Deva Nand and<br>Dr. Mohan Singh Mehata |
| One-day Workshop on "Atomistic Modeling using Synopsys Quantum ATK for Nanomaterials/Nano Devices"   | 11 <sup>th</sup> January,<br>2024                | Chairperson: Prof. Rishu Chaujar<br>Convenosr: Dr. Deva Nand,<br>Dr. Mohan Singh Mehata      |
| One-day Academic Interaction with Dr. Satya Gupta (President, VLSI Society of India) on 'Semiconductors'   | 18 <sup>th</sup><br>January,<br>2024             | Chairperson: Prof. Rishu Chaujar<br>Convenor: Mr. Akshay Mann                                |
| Industrial Interaction with Mr. M. G. Hwang (VP & GM, Silvaco, Asia) and Mr. Zhao Qingda (MD, SIlvaco, Singapore)                                  | 23 <sup>rd</sup><br>January<br>2024              | Chairperson: Prof. Rishu Chaujar   |





O Conference Hall, First Floor, Science Block, DTU























11th International Conference

MICROELECTRONICS, CIRCUITS AND SYSTEMS (MICRO 2024)

TOPICS OF INTERPEDIT

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Photocological System

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### 5.7 Centre for Industrial Design & Ergonomics (CIDE)

The Centre for Industrial Design & Ergonomics (CIDE) at DTU, established on 22<sup>nd</sup> March, 2021, is recognized for organizing expert lectures, workshops, and fostering collaborations between industry and academia. It offers internship opportunities for B.Des., M.Des., M.Tech, and MBA students during summer and winter breaks. CIDE continues to expand with a team of experienced faculty and aspiring designers, frequently conducting industry-academia interactions. Many of its students have gone on to make significant contributions in both the industrial and academic sectors.

### **Organization Structure:**

#### **CHAIRPERSON**

Prof. Ranganath M. Singari

#### **ADVISORY MEMBERS**

Prof. Lalit Kumar Das

Prof. G. V. Sreekumar

Prof. R. C. Singh

Prof. Roli Purwar

#### **FACULTY COORDINATORS**

Dr. Ravindra Singh
Mr. Neeraj Rathee
Mr. Varun Singh

Mr. Partha Pratim Das

#### **COORDINATORS (RESEARCH)**

Mr. Mohd Tayyab Ms. Awani

Ms. Anuradha Raizada Mr. Utkarsh Chaudhari Mr. Shahid Ahmad Mr. Meraj Alam Idrisi

Ms. Monica Singh Ms. Simran Vats

Ms. Shradha

#### **STUDENT COORDINATORS**

Ms. Rani Medhashree (2021-22)

Ms. Hrutuja Meshram (2022-23)

Ms. Ananya Rath (2023-24)

Mr. Dhruv Goel (2023-24)

#### VISION

The Centre aims to gain global recognition for its dedication to serving humanity, industry, and society by becoming a leader in the field of Design. Its vision includes enhancing human well-being, nurturing a sense of responsibility towards society and the environment, shaping future design professionals, driving innovation, and fostering a compassionate ecosystem focused on societal well-being.

#### **MISSION**

Educational Leadership: Equip the next generation of design professionals to enhance the human experience across diverse environments by striving for design excellence.

Innovative Platform: Establish a vibrant hub where ideas and expertise in frugal and sustainable design, converge, promoting creative collaboration.

Research Advancement: Promote research in innovative production techniques, to support ongoing development of cutting-edge design practices.

4. Empathetic Ecosystem: Create and maintain an compassionate environment that addresses diverse needs and aspirations, thereby improving overall societal well-being.

Cultural Transformation: Nurture a culture that promotes excellence, values open-mindedness, and fosters disruptive thinking to drive innovative and impactful solutions.

### **Events Organised:**

The Centre organised the International Conference on "Design and Materials (ICDM)", first held in January 2022 in collaboration with Materials Today Proceedings and Elsevier publications. This was followed by the second conference, ICDM-2023, at NIT Delhi in July 2023. The third International Conference is scheduled for February 2025.

### **Internship Programs:**

| Title  | Session |
|--|---------|
| 4-weeks Internship Program, on "Visual Story<br>Telling, Animation and Film Making" Chairperson,<br>Prof. Ranganath M. Singari Coordinator,<br>Ms. Monica Singh.             | 2023-24 |
| 4-weeks Internship Program, on "Product Design<br>and 3D Printing" Chairperson, Prof. Ranganath<br>M. Singari, Coordinator Mr. Mohd Tayyab.                                  | 2023-24 |
| 4-weeks Internship Program, on "Visual Story<br>Telling" Chairperson, Prof. Ranganath M.<br>Singari Cochair, Prof. K. N. Chatterjee, NSUT,<br>Coordinator, Ms. Monica Singh. | 2023-24 |

#### **Industrial Visits:**

CIDE DTU organizes industry visits and training programs to foster a design culture among students and faculties.



Several local visits were organized to introduce students to the historical monuments and cultural heritage of Delhi and nearby areas.



### 5.8 Intellectual Property Right (IPR) Cell

Intellectual Property Right Cell was established on 22<sup>nd</sup> June, 2017 and  $15^{\text{th}}$ subsequently reconstructed on February, 2018 under the Industrial Research and Development (IRD) cell. Currently, it has three Co-ordinators and three Co-coordinators, as detailed below:

students, focusing on practical strategies to turn ideas into impactful outcomes, inspiring them to consider market readiness in their research pursuits.

### **Organization Structure:**



Prof. Anil Kumar Sahu

(Dean, IRD)

**Prof. Roli Purwar** 

(Associate Dean & Coordinator IPR Cell)

Dr. Rajeev Kumar

(Co-Coordinator, IPR Cell)

Ms. Nisha Panchal (J.O.)

Mr. Saurabh (MTS)

## Summary of Events conducted in year 2023-24:

Innovation Ignites: Exploring Patents, Innovation, Technology Transfer and Commercialization (20th February, 2024)

This event, led by Dr. Shweta Sharma, a patent agent and Ph.D. holder, provided an in-depth exploration of transforming lab research into marketable solutions. Dr. Sharma introduced Technology Readiness Levels (TRLs) and guided participants through innovation development, technology transfer, and commercialization. The interactive session engaged faculty and

Workshop: Intellectual Property Rights (IPRs) and IP Management for Start-ups

22<sup>nd</sup> May, 2024)

Led by IP attorney Mr. Arunava Maity, this workshop introduced IPRs, highlighting their importance for start-ups and researchers. Key topics included patenting, copyright, PCT applications, and IP management. Mr. Maity emphasized IPRs' role in protecting innovations and securing competitive advantages, offering practical strategies for building strong IP portfolios. The session engaged participants, addressing start-up challenges, and empowering them to safeguard and commercialize their intellectual property.





### **Details of Published Patents in year 2023-24:**

**Inventor:** Prof. Dheeraj Joshi

**Title:** A Converter and Method thereof for Topology Selection

of Z-Source DC-DC Single Input Dual Output (SIDO).

**Patent Number: 202311053700** 

Date: 10th August, 2023

**Inventor:** Prof. Dheeraj Joshi

**Title:** System based on Phase-Short and Phase-Open DFIM-DC Topology for Simplified Control with Reduced Converter.

**Patent Number:** 202311063017

Date: 20<sup>th</sup> September, 2023

**Inventor:**Dr. Pawan Singh Mehra

**Title:** Quantum Cryptography-based Authentication System and Method for Secure Transmission of Healthcare Data

through GHz States.

Patent Number: 202311064981 Date: 27<sup>th</sup> September, 2023

**Inventor:** Dr. Mayank Kumar

**Title:** A High Gain Fault- Tolerant Multiport DC-DC Converter.

**Patent Number: 202411024561** 

**Date:** 27<sup>th</sup> March, 2024

## **List of Granted Patent in year 2023-24:**

| S.<br>No. | Inventor/s Name                                    | Patent No./Title of the Patent   | Applicant/s Name  | Patent<br>Granted<br>(DD/MM/<br>YYYY) |
|-----------|--|--|---|---------------------------------------|
| 1         | Prof. Kapil Sharma,<br>Mr. Sachin Kumar<br>Agrawal | 458808/Proximity-Based<br>Access Control in a 5G Wireless<br>Communication Network         | <ol> <li>Samsung         Electronics Co., Ltd.</li> <li>DTU, Delhi</li> </ol> | 20 <sup>th</sup> October,<br>2023     |
| 2         | Dr. Mohan Singh<br>Mehata                          | 463021/System and Method for Detecting Trivalent Metal Ions                                | DTU, Delhi  | 03 <sup>rd</sup><br>November,<br>2023 |
| 3         | Dr. Mohan Singh<br>Mehata                          | 481999 / Probe for the Detection of Ferric Iron in Aqueous Environments and Method Thereof | l '   | 15 <sup>th</sup><br>December,<br>2023 |

| S.<br>No. | Inventor/s Name   | Patent No./Title of the Patent   | Applicant/s Name                               | Patent<br>Granted<br>(DD/MM/<br>YYYY) |
|-----------|---|--|--|---------------------------------------|
| 4         | Prof. Kapil Sharma,<br>Mr. Sachin Kumar<br>Agrawal                                      | 484701 / Optimizing Power<br>Transfer in a Wireless Power<br>Transmitter   | 1. Samsung Electronics Co., Ltd. 2. DTU, Delhi | 22 <sup>nd</sup><br>December,<br>2023 |
| 5         | Prof. Gurjit Kaur,<br>Ms. Garima Singh  | 486395 / A Multicore Fiber Cable<br>and its Manufacturing Process<br>Thereof   | DTU, Delhi                                     | 22 <sup>nd</sup><br>December,<br>2023 |
| 6         | Prof. Roli Purwar,<br>Mr. Chandra<br>Mohan Srivastava                                   | 504734 / Silk Fibroin Flexible Films<br>Prepared by Hydrogel Particles<br>and Process Thereof                              | DTU, Delhi                                     | 2 <sup>nd</sup> February,<br>2024     |
| 7         | Dr. Manoj Kumar,<br>Mr. Rahul Agarwal   | 505524 / Systems and Methods<br>for Tagging and Rendering<br>Content Having Sensitive Portion                              | 1. Samsung Electronics Co., Ltd. 2. DTU, Delhi | 2 <sup>nd</sup> February,<br>2024     |
| 8         | Dr. Raminder Kaur,<br>Dr. Ravinderjit<br>Singh Walia,<br>Ms. Anuja Agrawal              | 516877 / Bio-Based Rigid<br>Polyurethane Foam Composition<br>and Method Thereof  |  | 1 <sup>st</sup> March,<br>2024        |
| 9         | Prof. Poornima<br>Mittal,<br>Ms. Bhawna Rawat   | 524265/ Reconfigurable Static<br>Random-Access Memory (SRAM)<br>and Method Thereof   | DTU, Delhi                                     | 15 <sup>th</sup> March,<br>2024       |
| 10        | Dr. Rahul Katarya   | 529534 / Precision Agriculture<br>Rover for Plant Disease Detection<br>and Control   | DTU, Delhi                                     | 29 <sup>th</sup> March,<br>2024       |
| 11        | Dr. Mohan Singh<br>Mehata   | 529469 / Apparatus and Method<br>for Detecting Electric Field<br>Modulated Absorption and<br>Photoluminescence of a Sample | DTU, Delhi                                     | 29 <sup>th</sup> March,<br>2024       |
| 12        | Prof. R. S. Walia,<br>Prof. Qasim<br>Murtaza,<br>Prof. Ranganath M.,<br>Mr. Parvesh Ali | 531306 / Thermal Additive<br>Centrifugal Abrasive Flow<br>Machining and Method Thereof                                     | DTU, Delhi                                     | 5 <sup>th</sup> April,<br>2024        |
| 13        | Prof. Nallanthighal<br>Srinivasa Raghava,<br>Mr. Akhilesh Verma                         | 531439 / Multi & Wide Band<br>Millimeter Wave PIFA Antenna<br>using Multiple Slots for 5G<br>Applications                  | DTU, Delhi                                     | 5 <sup>th</sup> April,<br>2024        |
| 14        | Dr. Mohan Singh<br>Mehata,<br>Mr. Vineet Sharma,<br>Mr. Abhinav Tandon                  | 531913 / Light Emitting Metal and<br>Dual Metal- Doped Zinc Selenide<br>Quantum Dots and Method<br>Thereof                 | DTU, Delhi                                     | 12 <sup>th</sup> April,<br>2024       |

| S.<br>No. | Inventor/s Name   | Patent No./Title of the Patent  | Applicant/s Name  | Patent<br>Granted<br>(DD/MM/<br>YYYY) |
|-----------|---|---|---|---------------------------------------|
| 15        | Prof. Om Prakash<br>Verma,<br>Mr. Nirmal Pandey,<br>Mr. Amioy Kumar,<br>Mr. Sachin Papneja,<br>Mr. Braj Raj Singh,<br>Mr. Ravindra Jain,<br>Mr. Dalbir Singh<br>Dhillon,<br>Mr. Manish Jindal,<br>Mr. Nirav Patel | 532075 / Method for Power<br>Management in an Electronic<br>Device & Electronic Device<br>Thereof | 1. Samsung<br>Electronics Co., Ltd.<br>2. DTU, Delhi                          | 12 <sup>th</sup> April,<br>2024       |
| 16        | Prof. Nallanthighal<br>Srinivasa Raghava  | 535801 / A Compact Hyper Band<br>Pass Power Provider  | DTU, Delhi  | 3 <sup>rd</sup> May,<br>2024          |
| 17        | Prof. Mini Sreejeth   | 544481 / Motor Controller for Light<br>Mobility Vehicles in India                                 | DTU, Delhi  | 9 <sup>th</sup> July,<br>2024         |
| 18        | Prof. Kapil Sharma,<br>Mr. Sachin Kumar<br>Agrawal  | 494431 / Method and System<br>for Intelligent 3D Aerial Wireless<br>Transmission                  | <ol> <li>Samsung         Electronics Co., Ltd.</li> <li>DTU, Delhi</li> </ol> | 1 <sup>st</sup> December,<br>2024     |

### 5.9 Multidisciplinary Centre for Geoinformatics (MCG)

Coordinator; Prof. K. C. Tiwari (Deptt. of Civil Engg.)

Geoinformatics is defined as the scientific and technological discipline concerned with the structure, characteristics, and management of spatial information. This encompasses the acquisition, classification, storage, processing, visualisation, and dissemination of such information, along with the infrastructure required to ensure its optimal utilization. The MCG, DTU is committed to establishing itself as a world-class Multidisciplinary Centre in the field of Geospatial and Geoinformatics education, research, and consultancy. In pursuit of this vision, the Centre has organised the following events this year.

Workshop on "Leveraging the Role of Computer Vision in Agricultural Applications"

MCG, in collaboration with the International Rice Research Institute (IRRI), CGIAR, organised a one-day workshop that aimed to equip scholars and engineering students with insight into digital agriculture. A total of 36 participants engaged in research and applications in the field, attended the workshop.

Keynote speakers included experts from prominent institutions such as IARI and IRRI. Eminent speakers were Dr. Jawoo Koo, Dr. Sheetal Sharma, Dr. Suvrat Kaushik, Dr. Bulbul Ahmed, Dr. Jaspreet Singh, and Dr. Rabi N Sahoo. The sessions focused on emergence and advancements of Al/ML in agriculture, precision agriculture, agricultural innovation, and the role of computer vision in agriculture.





## National Technology Day Celebration

MCG, celebrated the National Technology Day on 13<sup>th</sup> May, 2024, to commemorate the successful nuclear tests conducted in Pokhran on 11<sup>th</sup> May, 1998. The celebration was graced by chief guests Maj. Gen. R. C. Padhi, Dr. Himanshu Ojha, scientist at Institute of Nuclear Medicine and Allied Sciences, and Prof. Manoj Kumar Patairiya, an adjunct Professor in Science Communications at the National Institute of Advance Studies.







21-days DST sponsored Level-2 summer school on Developing Geospatial Solutions for Defence, Security, and Intelligence

MCG organized and conducted a 21-days summer school on Geospatial Science and Technology, with the theme "Developing Geospatial Solutions for Defence, Security, and Intelligence." The program attracted participants from diverse sectors, including the Indian Military, Intelligence, Academia, and Industry. Over the course of three weeks, the summer school offered both theoretical knowledge and hands-on practical sessions covering remote sensing, image processing, and image analysis, with a focus on defence and security applications. The lectures were delivered by experienced professionals from various academic and research institutions. The valedictory session was honored by Sh. Srikant Shastri, a notable entrepreneur and orator.









## Agreement with FOSSEE, IIT Mumbai

FOSSEE (Free/Libre and Open-Source Software for Education), IIT, Mumbai has identified MCG as its Northern India Coordinator and has also allocated two internships' positions specifically for DTU students. The MoU between the two institutes was signed in December 2023.

## Admission of new Ph.D. Scholars at MCG

Until July 2023, MCG was part of the Civil Engineering Department, and the M.Tech. and Ph.D. students associated with the Centre were awarded degrees in Civil Engineering. As of August 2023, DTU has approved the establishment of this center as an independent entity, allowing the centre to offer M.Tech. and Ph.D. Degree specifically in Geoinformatics. Four new Ph.D. students have enrolled at MCG for the academic year 2023-24.

### 5.10 Entrepreneurship Development Center (EDC)

The Entrepreneurship Development Center (EDC) aims to create a strong institutional framework that promotes entrepreneurial thinking within the DTU community and beyond. By nurturing an entrepreneurial mindset, the Centre provides guidance and mentorship to aspiring start-up founders, encouraging them to explore entrepreneurship as a rewarding and sustainable career option. Through its efforts, the EDC plays a key role in driving innovation and supporting the development of future business leaders.

### **Organization Structure:**

#### Head

Prof. Amit Mookerjee

#### **Members**

Mr. Raunaque Mustafa

Dr. Priya Malhotra

Dr. Varsha Sehgal

Dr. Puneet Kumar Arora

The Centre provides mentorship to aspiring start-up founders at USME, particularly MBA-IEV students, as well as students from other programs, to help them pursue entrepreneurship as a career. In its early stages, the centre organized an experiential workshop on entrepreneurship under the government's Technical Education Programme Quality **Improvement** (TEQIP), and hosted a start-up business plan competition during the annual fest 'Traction,' which attracted participants from prestigious institutions such as IIM Lucknow, IIM Shillong, IIM Rohtak, and many others from across India, with over a hundred management students taking part. The Centre has also collaborated with the 'Enactus' programs, engaging in social ventures aimed at improving the quality of life for those in need.

In the past, a distinguished group of entrepreneur-mentors, including Dr. Pushpendra Singh (Serial Entrepreneur & Consultant EDC), Mr. Aval Sethi (Former COO of Bechtel and Director of EFS International), Mr. Sudhir Kant (CEO of AUD IIF), Mr. Manu Pranav (Director of Stellar Dynamics), Ms. Divya Rajput (Founder & CEO of Keshiha Services), and Ms. Yasmin Rizwan (Founder and Finance Expert), among others, have been directly involved in mentoring student start-ups. During the academic year 2023-24, the Centre organized a variety of activities to promote entrepreneurship and innovation campus. Several ventures initiated by MBA-IEV students continued to flourish during this period.

### **Startups:**

#### "Innovative Scripts Private Limited"

Innovative script is a dyanamic SAAS startup focus on pioneering advancements in technology. Specializing in cutting-edge areas like Blockchain, Artificial Intelligence (AI), 5G, and post quantum encryptions, the company is at the forefront of innovation. In 2022, it was recognized as one of the top 75 emerging start-ups in India, highlighting its significant potential and impact within the start-up ecosystem. The company has also received funding from the Ministry of Education's Innovation Cell and All India Council for Technical Education (AICTE), further fuelling its growth and development. Additionally, it is recognised by the Start-up India

#### "Refoveo"

It is all about serving clean, fresh and healthy food and beverages; The venture was first established at DTU main campus and serving fresh juice and vegetable salad to the students of DTU. The second outlet was opened at the East Campus during 2022-23, and succeeded commercially leading the company to invest further new infrastructure. They plan their additional outlets in other institutions in Delhi and expand their staff.

#### "Ishan-M"

It is a start-up which offers a complete solution of all the digital marketing needs at one place, and already has over six leading business houses as clients. It continued apace during the 2022-23, 2023-24 period and expanded their revenues, eventually shifting operations out of the Campus during this period, with increased commercial success.

#### "Nikiez Clothing"

It is an Indian wear Online Shopping platform. It offers exclusive Indian wear that features the latest trends and collection. It launches products on its online shopping portal every month and offers Lehengas, Sharara Suits, Garara Suits, dresses.

## "Professional Range A+ Enhancing your natural beauty"

This start-up aims to provide 'One destination for Beauty & Salon Industry' with Essential Oils & Nano-Technology as the base. The long-term objective is to create an export house where skin care products would be distributed business to business. The founder (Ms. Vanshika) expanded distribution in Delhi, Gujarat through the exhibition stall route. She was also interviewed on DD Urdu, as part of the MSME focussed show.

#### "Tiffinshala"

Aaradhya launched the home cooked tiffin service-based aggregator model business starting with Noida, and plans of expanding to Ghaziabad and West Delhi in future. The firm was established in 2022-23 period and the website and back end was developed with the help of a team of DTU interns from B.Tech, BBA and other programs. The pilot was launched successfully, and he was also incubated like the other start-ups mentioned above at DTU-IIF.





Apart from these start-ups with significant growth trajectories, the following start-ups were operating out of the EDC at the East Delhi Campus during the 2023-24 period:

## STARTUPS AT DTU-IIF (INCUBATION)

| Name of Student   | Company                            | Funds (Rs.)                                |
|---|------------------------------------|--|
| Akshita Malhotra<br>(IMBA/2k19/02)<br>Utkarsh Singh<br>(IMBA/2k19/16) | Refoveo                            | 50,000 (IIF)                               |
| Shubham Prajapati<br>(2k19/IMBA/15)                                   | Innovative<br>Scripts Pvt.<br>Ltd. | 50,000 (IIF)<br>& 10,00,000<br>(AICTE MoE) |
| Shikhar Mishra<br>(2k19/IMBA/14)                                      | Angetha<br>Agro Pvt.<br>Ltd.       | 50,000 (IIF)                               |
| Saransh Jain<br>(2k20/UMBA/34)  | Freelance<br>Mantra                | 2,50,000<br>(IIF)                          |
| Nikhila Joshi<br>(2k20/IMBA/01)                                       | Nikiez                             | 50,000 (IIF)                               |

## STARTUPS AT DTU-IIF (PRE-INCUBATION)

| Name of Student                                       | Company<br>Name     | Funds (Rs.)        |
|---|---------------------|--------------------|
| Vanshika Kakkar<br>(2k20/IMBA/08)                     | A+<br>International | ₹50,000/-<br>(IIF) |
| Ira<br>(2k21/BAE/63)                                  | Ayra                | ₹50,000/-<br>(IIF) |
| Aradhya Saxena<br>(2k21/IMBA/02)                      | Tiffinshala         | ₹50,000/-<br>(IIF) |
| Ravi Singh<br>(2k19/IMBA/13)                          | Floramart           | -                  |
| Isha Anand<br>(2k21/IMBA/15)                          | Pawsibble           | -                  |
| Rahul<br>(2k21/IMBA/12)<br>Abhigyan<br>(2k21/IMBA/01) | Vermiup             |                    |

Apart from the start-up activities, several events were organized to spark startup ideas, encourage the initial stages of ideation, and familiarize students and faculty with various aspects of the entrepreneurial journey. Some of these events were held in collaboration with the IIC-DTU and the student-led E-Cell at East Campus, coordinated by the EDC.

## Ideathon Contest: 16<sup>th</sup> January, 2024



The Entrepreneurship Cell of USME and the IIF, DTU hosted the finale of "Ideathon'24" on 16th January, 2024, in celebration of National Startup Day. This inter-college business idea competition offered budding entrepreneurs the opportunity to showcase their innovative ideas, compete on a national level, learn from experts, and win prizes totaling Rs 40,000/- along with exciting vouchers from collaborating sponsors.

#### Winners of Ideathon Contest:

Team Airboard, led by Mr. Kush Garg from DTU, was declared the winner of Ideathon'24. Airboard has created an innovative solution utilizing computer vision technology for touchless writing on a screen by capturing finger movements via a camera. The team was awarded prizes worth ₹20,000/-.

Team PICA POOL, led by Mr. Srijan from IIT Hyderabad, was achieved the first runner-up position. PICA POOL is a web app that connects individuals in the same vicinity to pool their purchases of products or services, enabling them to enjoy discounts, offers, and schemes. The startup has already launched its services and is gaining early traction and revenue. Mr. Srijan received prizes worth ₹15,000/-

Team Ezinore, led by Mr. Nirmal from DTU, was declared the second runnerup. Ezinore has created a smart energy storage device using lithium phosphate technology integrated with IoT, serving as an alternative to traditional liquid batteries. The startup has completed a proof of concept and begun paid pilot projects. Mr. Nirmal received prizes worth ₹12,500/-.



## International Conference & Startup EXPO – 24

The International Conference and Startup Expo-24 took place during 21<sup>st</sup> - 22<sup>nd</sup> February, 2024, under the theme

"Innovation and Entrepreneurship." This two-days event provided a pivotal platform for learning, discovery, and research, aimed at empowering family-owned businesses in today's dynamic market. The conference gathered a diverse group of participants, including startups, SMEs, family business owners, ecosystem enablers, investors, corporate executives. academicians. and researchers. Esteemed speakers discussed opportunities in the digital era and set a forward-thinking agenda for entrepreneurship. Participants engaged in discussions addressing entrepreneurial challenges and exploring transformative opportunities to enhance the ecosystem and societal impact.

The event began with a Grand Opening Ceremony, followed by activities like Roundtable Congress, Startup Pitch Sessions, Track Presentations, and an Exhibition, attracting over 2,000 attendees, including 80+ researchers, 15+ startups, 10 venture capitalists, and 30 speakers. Distinguished guests included Mr. Praveen Sinha, Mr. Kushal Banerjee, Prof. (Dr.) Rihan Khan Suri, and Mr. Rohit Gupta. The ceremony was presided over by Prof. Prateek Sharma, with welcoming remarks from Prof. Amit Mookerjee and an overview by Dr. Ratnam Mishra, while Prof. Rounag Mustafa delivered the vote of thanks.







### MyBharat-Viksit Bharat @2047 Declamation Report

The USME in collaboration with Nehru Yuva Kendra, North-East Delhi, organized a district-level Declamation Competition on 9<sup>th</sup> January, 2024, at Manthan Hall. The theme "MyBharat - Viksit Bharat@2047: By the Youth, For the Youth," emphasized the youth's role in shaping India's future. This competition was a great success that attracted over 50 participants who shared their ideas for a developed India by 2047. The event fostered a sense of purpose as students explored and debated the nation's future.

## The event was graced by the following distinguished chief guests:

- Mr. S. K. Babbar Deputy Director, Nehru Yuva Kendra
- 2. Mr. Rajesh Kumar Jadon Deputy Director, NYKS
- 3. Mr. leesh Malik Journalist
- Prof. Amit Mookerjee Professor & Head, USME, DTU
- 5. Dr. Nidhi Maheshwari Associate Professor & Co-Head, USME, DTU

#### The judges for the event were:

- Dr. Harleen Kaur Assistant Professor, USME, DTU
- 7. Dr. Gaganmeet Kaur Awal Assistant Professor, USME, DTU
- 8. Mr. Anurag Chaturvedi Assistant Professor, USME, DTU





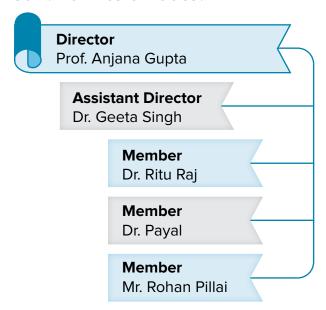
### 5.11 Equal Opportunity Cell

The Equal opportunity cell of DTU was setup in the year 2018 with the aim to assist and counsel the students belonging to deprived sections including the scheduled castes, scheduled tribes, women, persons with disabilities, etc. pursuing various programs of studies at the University.

## Organization Structure till Dec. 2023:



## Organization Structure from 1<sup>st</sup> Jan. 2024 to till date:



### **Objectives:**

- To work out suitable programs/schemes, including Remedial Courses, for improving the academic performance of students from SC, ST, OBC, women, and persons with disabilities (whether at undergraduate, postgraduate, Ph.D. or other levels) and/ or to monitor the implementation of such programs/ schemes.
- To coordinate with government and other funding agencies (including Public Sector Undertakings/ Public Sector Banks) with a view to mobilize financial and other resources required for educational empowerment of the students from marginalized sections.
- To disseminate the information and act as a counselling-cum-guidance center for students belonging to the marginalized sections, especially with regard to academic, financial and social matters.
- 4. To help and develop a cordial interpersonal relationship among students and between teachers and the students from marginalized sections for academic interaction and extracurricular activities by sensitizing the teaching and other staff.
- To create a mentally and emotionally healthy environment that raises awareness of sexual harassment and gender-based discrimination against women.
- To organize or conduct seminars/ symposia/ workshops/ conferences/ exhibitions/training program, etc. from time-to-time on issues of contemporary significance for empowering, educationally and culturally, students belonging to the marginalized sections.

## Important Events organized:

Event: Awareness program on

'Anti Ragging'

Date: 18th August, 2023

**Number of Participate: 105** 

The awareness program on 'Anti Ragging' was organized on 18th August, 2023 with the aim of raising awareness against all forms of ragging whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness a fresher or any other student, or indulging in rowdy or undisciplined activities which causes annoyance, hardship or psychological harm or raises fear. The event also highlights to all students on ways to prevent the occurrence of ragging and report any and all acts that are deemed prohibited under the DTU regulations.

**Event:** Awareness program on 'Code of conduct for students'

**Date:** 3<sup>rd</sup> November, 2023 **Number of Participate:** 101

An awareness program on "Code of Conduct for Students" was successfully organized by Equal Opportunity Cell jointly with IQAC, Department of Electrical Engineering & Department of Environment Engineering on 3<sup>rd</sup> November, 2023. The event was graced by the auspicious presence of Prof. Vijander Singh (Dean, Student Welfare, NSUT). Prof. Rachna Garg was the convener and Dr. Geeta Singh was co-convener of the program. The event aimed to make students aware of the importance of adhering to a code of conduct, sensitize them about the significance of ethical behavior and prevent violations of the established guidelines. A diverse group of students attending the

event, representing various departments and years, all exhibited a strong interest in upholding and promoting the code of conduct within our campus.

**Event:** Celebrating 'International

Women's Day'

**Date:** 14<sup>th</sup> March, 2024 **Number of Participate:** 58

An event on "International Women's Day" was successfully organized by Equal Opportunity Cell jointly with the Institutions Innovation Council (IIC-DTU), Internal Complaint Committee (ICCDTU), Department of Applied Mathematics, Department of Environment Engineering and Department of Electrical Engineering on 14th March 2024. The event was graced by the auspicious presence of Prof. Prerna Gaur (Director, NSUT West Campus), Dr. Prerna Lakhwani (Gynecologist and Oncologist, Fortis Hospital, Delhi), Prof. Uma Nangia (Chairperson, ICC, DTU and Professor, Prof. Rachna Garg (Head, Electrical Engineering Department, DTU), Prof. Anjana Gupta (Director, EOC, DTU), Prof. Mini, Dr. Shilpa Pal, Dr. Bhavnesh Jaint, Dr. Geeta Singh (Assistant Director, EOC, DTU and Assistant Professor, Department of Environment Engineering) and Dr. Payal. Dr. Prerna Lakhwani, a distinguished gynecologist and oncologist, delivered powerful message on the critical importance of health and cancer awareness while underscoring the significance of early detection, prevention, and comprehensive healthcare in combating various forms of cancer that affect women. Dr. Geeta Singh concluded the event with her closing remarks, expressing gratitude to the esteemed dignitaries for their significant contributions and participation.

### **Objectives of International Women's Day**

Providing a platform for women to discuss their roles in shaping the future of "Viksit Bharat @2047" aimed to empower them and highlight their significance in national development.

Celebrate women's accomplishments while recognizing the challenges they encounter in society, and educate attendees about the importance of health and cancer awareness.

To encourage
an open
dialogue among
participants,
encouraging
discussions on
important issues
related to gender
equality, women's
health, and societal
progress.

Fostering a campus culture that values respect, inclusivity and well-being aimed to promote a harmonious and productive academic community.

#### **Benefits**

Inspiring leadership and innovation in women to harness their skills and capabilities to drive positive change in society and contribute to the development of the nation as a whole.

Spreading awareness among women and equipping them with the knowledge and tools necessary for early detection, prevention, and management of various women's health issues including cancer.

Inspiring attendees to become advocates for gender parity and to actively work towards creating a more equitable and inclusive society for all individuals, regardless of gender.

By bringing together participants from various departments and age groups, the event fostered a sense of inclusivity and unity, breaking down barriers and promoting collaboration among individuals from diverse backgrounds.



## 5.12 Centre of Excellence for Electric Vehicle and Related Technologies (CoE for EVRT)

The University has established the Centre of Excellence for Electric Vehicles and Related Technologies (CoE for EVRT) to impart training and training in the focus field of related technologies and electric vehicles. The Centre develops an infrastructure for transformation from traditional internal combustion to an ecofriendly transportation system.

The Centre is jointly funded by Delhi Knowledge Development Foundation, Govt. of NCT of Delhi and Delhi Technological University (DTU). CoE for EVRT has focused research areas including, but not limited to design, development, and analysis of electric vehicle motors and drives, charging infrastructure, charge controllers, retrofitting communication between the power grid and EVs, battery management systems, charging stations, etc. Many faculty members of the Department of Electrical Engineering, DTU, are already working in different areas related to electric vehicle technologies through various sponsored projects. The creation and continued developement of the CoE for EVRT is benefiting from the experience of the faculty members working in these varied areas of research. In a very short span, the CoE of EVRT has established a strong industry-academia collaboration to achieve the objectives of the Centre.





### **Organisation Structure**

Coordinator **Prof. Madhusudan Singh**Registrar & Professor (EE)

Co-coordinator **Prof. Uma Nangia** Professor (EE)

## The main focus of the Centre include:

Design, development and analysis of EV motors and drives.

Design, development, and analysis of cost-effective and sustainable EV prototype.

Design and development of battery packs and BMS for different types of EV.

Design and retro-fitment of existing ICE vehicles to EVs.

Design and development of EV charging infrastructure and grid management.

To offer M.Tech. and Ph.D. Programs in the area of EV technology.

To offer internship opportunities to students of degree, diploma and certificate level institutions under Government of NCT of Delhi.

Capacity building in terms of trained manpower at different levels such as technicians, supervisors, and engineers in the area of EV technology.

### **Key Achievements:**

The ongoing research projects at the Centre include;

Retrofitting
work in IC
engine-based
vehicles
(Development
of Electric
Kits)

Development of Motor Drives and Controllers for EVs Development of Battery Management System (BMS)

Development of EV Chargers and Converters

#### **Patents:**

**Title:** Development of e-rickshaw BLDC motor

controller

Status: Granted

**Title:** A high gain Fault Tolerant Multiport DC-DC converter

Status: Granted

Title: A Bidirectional Multiport

DC-DC Converter **Status:** Published

**Title:** Development of Intelligent BMS

Status: Under filing stage

Title: Development of Cost-

effective BMS

**Status:** Under filing stage

**Journal Publications: 10** 

**Industry Collaboration:** 

Paytm Pvt Ltd.

**Grant Received:** ₹1.01 Cr.

### **Capacity Building Activities:**

This Centre not only provides interdisciplinary research and development ecosystems but also offers internships, skills development courses, entrepreneurship programs, and facilitating industrial training for undergraduate students and research scholars.

#### **Summer Internship:**

 The department organized a six-week summer internship on "Electric Vehicles Technology" starting from 1<sup>st</sup> July to 10<sup>th</sup> August, 2024 for students of Diploma and Engineering institutions of Govt. of NCT of Delhi. Eleven students in 2022 and Twelve students in 2023 completed their Eight-Week internship in the Centre.

#### Workshop

 The Centre has also organized a One-Day Workshop on "Power Converter Technologies in Electric Vehicle Applications" on 26<sup>th</sup> December, 2023.

## Minor Degree for UG in Electric Vehicle Technology

 The Centre has introduced Electric Vehicles Technologies for undergraduate (UG) students from January 2024 as a Minor in Electric Vehicle Technology. The academic council in its 36<sup>th</sup> meeting has approved the minor in Electric vehicle Technology for B.Tech. students under CoE for EVRT. In addition, following Ph.D. scholars and M.Tech/B.Tech. students are working on different research areas in the Centre.

Md. Modassir Masoom (Ph.D.)

Ms. Priyanka (Ph.D.)

Mr. Brijendra (Ph.D.)

Mr. Chetan (Ph.D.)

Mr. Deepak Kumar (Ph.D.)

Mr. Arun Kumar Verma (Ph.D.)

Ms. Shilpa Ranjan (Ph.D.)

Mr. Suyash Pandey (M.Tech.)

Mr. Chayank Goyal (B.Tech.)

Mr. Rishabh (B.Tech.)

Mr. Rushiv (B.Tech.)

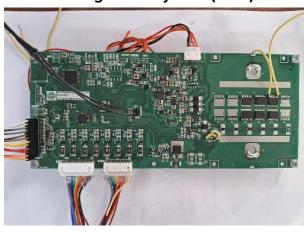
Mr. Vaibhav (B.Tech.)

Mr. Rahul Pachori (B.Tech.)

Mr. Rajdeep Singh (B.Tech.)

Mr. Yash (B.Tech.)

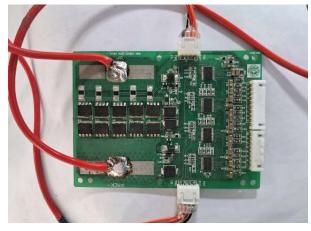
## Development of Intelligent Battery Management System (BMS)



Design and Development of Four-Seater Prototype Car Model



#### Development of industry sponsored Laboratory



Development of Cost-effective Battery
Management System (BMS)





### **Collaboration with Industries/Start-ups:**

Many start-ups have been associated with the CoE for EVRT since the beginning, providing modern solutions for the EV related technologies.

#### **Mazout Electric Pvt Ltd**

To include numerous technologies tied to the concept of connected, autonomous, shared, and electric (CASE) mobility, Mazout has chosen to adopt the software-defined vehicle (SDV) development approach. With the SDV approach, OEMs can extend features and function that they can update throughout the vehicle life cycle, which provides opportunities for recurring and sustainable revenue.

#### **MYeKIGAI Pvt Ltd**

MYeKIGAI is at the forefront of the Electric Vehicle Revolution, dedicated for developing a PaaS (Platform-as-a-service)

which will integrate the MCB (Mobility, Charging & Battery Swapping) with the help of an AMS (Asset Management System) to build a sustainable and eco-friendly transportation system which facilitates EV Rental services with Real-time information of holistic EV Infrastructure. (https://www.myekigai.com).

#### SelectricGo EV Solutions Pvt. Ltd

SelectricGo is a one-stop solution for all Electric vehicle owners. It will help them in locating the nearest EV charging stations, real-time traffic on them, and will also provide an option of slot booking to them.

#### MoU

#### **Industry Name:** HBSS Pvt. Ltd.

#### **Objectives:**

- To develop Intra Campus Transportation System
- To develop a prototype in EV with latest technology
- To share EVs manufactured by HBSS Pvt. Ltd. to promote green mobility
- To develop solar energy based charging station in DTU
- To provide in-curriculum internships to young and qualified students
- To provide research opportunities on Batteries, Battery Management System
- To provide hands-on training on latest EV technologies

### 5.13 Centre of Excellence for the Science of Happiness

This center was established with the vision "To promote the science and art of happiness scientifically through education, research activities, and collaborating with

industry and stakeholders". The center has made MoU with the "Rekhi Foundation and Heartfulness Institute" for collaborative activities.

#### ORGANIZATION STRUCTURE

(Coordinator / HOD) Prof. T. Vijaya Kumar

(DRC Chairperson)
Prof. S. Indu

(Co-Coordinator)
Dr. P. K. Goyal

(Co-Coordinator (East Campus)) Dr. Naval Garg USME

(Adjunct Faculty)
Dr. S. S. Rekhi

(Visiting Faculty)
Dr. Pooja Sahni

(Guest Faculty)
Prof. Manas K Mandal

## Activities organized during 2023-2024

#### Ph.D. Admissions 2023

The center has started Ph.D. admissions from session; 2023-24, and three research scholars have enrolled in the Doctoral Program.

## Workshop on "Neuro Research" (5<sup>th</sup> October, 2023)

A workshop titled "Neuro Research" was organized on 5<sup>th</sup> October, 2023 in collaboration with AEROBE, which focused on Neurophysiology, EEG, Eye tracking, and FNIRS. Virtual presentations were given by Dr. Rohit Tyagi (Head Scientific Support, Aerobe MBBS, IIT, Kharagpur) and Dr. Alvin Goh (Regional Manager Aerobe).

#### "Meditation"- Expert Lecture (12th March, 2024)

Mr. Jim Rose (Retired Executive, at Johnson and Johnson) delivered an expert lecture for the faculty and staff of DTU on 12<sup>th</sup> March, 2024. The lecture focused on how meditation can bring healing power to benefit all aspects of our lives with practical wisdom and techniques based on the speaker's personal experiences.

## Students Visit at AIIMS, Delhi (12th January, 2024)

The students of DTU visited AIIMS, Delhi on 12<sup>th</sup> January, 2024, for the "National Youth Day" celebration on the birth anniversary of Swami Vivekananda.

### Retreat Camp at Himalayan Ashram in Satkol (19<sup>th</sup> - 21<sup>st</sup> April, 2024)

In April 2024, 100 students participated in a retreat camp at the Himalayan retreat ashram in Satkol, Uttarakhand. Students immersed themselves in the serene environment of the Himalayas, engaging in various activities promoting mental well-being and personal growth.

## Mou between the Art of Living and DTU, Delhi (14<sup>th</sup> April, 2024)

An MoU was signed between the Art of Living and DTU on 14<sup>th</sup> April, 2024, with the vision of empowering youth and providing skill development programs for students and faculty development program for teaching and non-teaching staff of DTU.

## Expert Lectures on "Yoga" (August, 2023)

The center has been actively involved in organizing expert lectures and invited talks on Stress Management, Holistic Health, Yoga, Meditation, etc. for the orientation program of newly admitted students in August 2023. Eminent speakers; Prof. Manas Mandal (IIT Kharagpur), Dr. Rahul Mehrotra (Director and Head of Fotis, Faridabad), and Mr. Sanjay Upreti (IRAS:1990) graced the event.

## International Happiness Day (20<sup>th</sup> March, 2024)

The center celebrated "International Happiness Day" on 20<sup>th</sup> March, 2024 in collaboration with STEP, DTU to promote student well-being and to encourage a positive environment through engaging education session about the science of happiness through interactive activities.



## **6. Alumni Contribution**

The connection between DTU and its alumni is profound and well established. DTU endeavors to create new opportunities for its students while fostering relationship between alumni and their alma mater. Our DCE-DTU alumni association is robust and plays a vital role in organizing Homecoming Meet for our distinguished alumni.

### **Organization Structure:**

Dean, Prof. Rajesh Rohilla

Associate Dean, Prof. Yasha Hasija

## Scholarship instituted by our distinguished Alumni:

| Name of the Scholarship                              | Amount        |
|--|---------------|
| Wing Commander Adarsh Bal<br>Scholarship             | ₹ 3,00,000/-  |
| NC Kukreja and Santosh<br>Kukreja & Nand Lal Kukreja | ₹ 10,00,000/- |

#### **Events:**

1. "Entrepreneurship is a Way of Life", with Sh. R.P Singh (Alumnus of 1978):



An event "Entrepreneurship is a way of life" with Sh. Ravinder Paul Singh (Alumnus of 1978 batch, Electrical Engineering) was held on 22<sup>nd</sup> August, 2023 for students of Electrical Engineering.



2. Interaction program
"Entrepreneurship" with.
Sh. Vikram Manuja:



An interaction program "Entrepreneurship" with Shri. Vikram Manuja, alumnus of 1973, Electrical Engineering was held on 11<sup>th</sup> October, 2023.

3. Interaction program "Maruti Suzuki 3.0 - The Big Indian Automobile Revolution" with Sh. R. S. Kalsi:

An Interaction program "Maruti Suzuki 3.0-The Big Indian Automobile Revolution" with Shri. R.S. Kalsi (Executive Board Member) & Alumnus of 1981, was held on 12<sup>th</sup> October, 2023, for students of all batches.



4. DCE-DTU Alumni Association Meeting at DTU:



Members of DCE-DTU Alumni Association visited DTU on 15<sup>th</sup> January, 2024 to explore the potential Alumni initiatives at DTU.

The meeting was presided by:

- Prof. Madhusudan Singh, Registrar, DTU.
- Dr. Pawan Kumar Sharma, President, DCE-DTU Alumni Association, (Alumnus 1994, Mechanical Engineering).
- Shri. Arun Gupta, Joint Secretary, DCE-DTU Alumni Association, (Alumnus 2005, Mechanical Engineering).
- Prof. Sagar Maji, Member, DCE-DTU Alumni Association, (Alumnus 1981, Mechanical).
- Prof. Rajesh Rohilla, Dean Alumni Affairs, DTU.
- Prof. Yasha Hasija, Associate Dean-Alumni Affairs, DTU.



5. Homecoming Meet 2024:



The Diamond, Golden & Silver Jubilee Homecoming Meet-2022 for DCE graduates (Classes of 1963, 1964, 1973, 1974, 1998 & 1999) was organised to honor the alumni for their achievements and contributions to society. The event showcased various alumni-related activities and was held at DTU on 2<sup>nd</sup> February, 2024.

The function was presided by:

 Prof. Prateek Sharma, Hon'ble Vice Chancellor, DTU.

- Prof. Madhusudan Singh, Registrar, DTU.
- Dr. Pawan Kumar Sharma, President, DCE-DTU Alumni Association, (Alumnus 1994, Mechanical Engineering) Guest of Honour.
- Shri. Karnal Singh, Former Enforcement Directorate, Special Guest.
- Prof. Rajesh Rohilla, Dean Alumni Affairs, DTU.
- Prof. Yasha Hasija, Associate Dean Alumni Affairs, DTU.

## 6. Alumni Meet 2024 by Alumni Association (at Subrato Prak):

DCE-DTU Alumni Association organised an Alumni meet for the Classes of 1963, 1964, 1973, 1974, 1998 & 1999. Distinguished alumni of the batches were honored by the Chief Guest, Shri. Rajiv Chandrasekhar (Minister of State for Skill Development & Entrepreneurship, Electronics & Information Technology & Jal Shakti, Government of India).

The function was presided by:

- Prof. Prateek Sharma, Hon'ble Vice Chancellor, DTU.
- Prof. Madhusudan Singh, Registrar, DTU.
- Prof. Rajesh Rohilla, Dean Alumni Affairs, DTU.
- Prof. Yasha Hasija, Associate Dean Alumni Affairs, DTU.
- Members of DCE-DTU Alumni Association.

## 7. Event on "How to Make a career in Data Science":

An interaction event on "How to Make a career in Data Science" with Shri. Pranav Mehta, Director of Data Science at American Express alumnus of 2011, on 28th February,

2024 at DTU. The event is for the students of all branches.

The event was presided by:

- Prof. Rajesh Rohilla, Dean Alumni Affairs, DTU.
- Prof. Anil Singh Parihar, Associate Head, T&P.





## 7. Outreach and Extension Activities

The Board of Management, in its 27th meeting on 23<sup>rd</sup> February, 2018 has approved the establishment of the Center for Extension and Field Outreach at DTU. The center's role is to extend knowledge and other institutional resources to the community and to gain insights from contact between knowledge resources and socio-cultural realities to reflect these in the entire curricular system of higher education, including teaching and research. It will be a two-way process between the experts and the people, an intellectual intervention in the community's living problems that need to be overcome through an educational process. It was that education helps students' life and its challenges and created an ambiance for a learning society.

### **Organizational Structure**

Dean

Prof. A. K. Srivastava, (Civil Engg.)

**Coordinator** Prof. P. K. Goyal, (Civil Engg.)

#### **AIM**

To promote a meaningful and sustained rapport between the University and community.

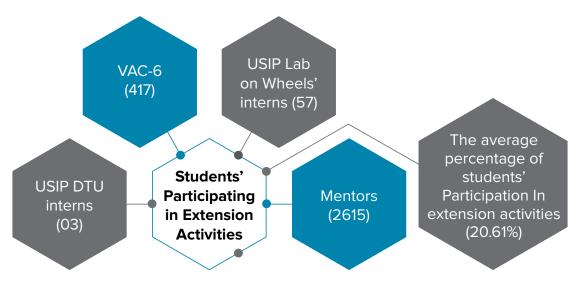
### **Objectives**

 To extend knowledge and other institutional resources to the community and vice-versa.

- To gain insight from contact between educational realities to reflect these in the entire curriculum system of higher education, including teaching and research.
- 3. To provide a two-way process between the experts and the people.
- 4. To provide an intellectual intervention in the community's life problems.
- 5. To promote the philosophy of extension and outreach as a part of the total education program.
- 6. To reach out to a larger community section, especially deprived groups, through extension.
- 7. To enrich the learning process for faculty and students, mainly through extension activities.
- 8. The interest of the students should be considered for academic credit (1 or 2) in addition or as part of their regular course of studies.

## Broad categories of the Program:

- 1. Services to Schools and Colleges
- 2. Services to the Community
- 3. Services in the University Campus



The average percentage of students participating in extension activities with government organizations, non-government organizations, and Programs such as Swatch Bharat, Aids Awareness, Gender issues, etc.

### **Activities conducted during 2023-24**

| Details of Activities |   |  |  |  |
|-----------------------|---|--|--|--|
| S.<br>No.             | Name of the activity  | Dates  | No of Participants   |  |
| 1                     | Under Open House Visit of students, "Titiksha Public School", Rohini, Delhi.  | 29 <sup>th</sup> August,<br>2023                 | 55   |  |
| 2                     | Visit of students of, "Eshan College of Engineering",<br>Mathura Distt, UP.   | 18 <sup>th</sup> September,<br>2023              | 41   |  |
| 3                     | Under Open House Visit program students of schools as NCC cadets visited DTU. The students were from J&K and Leh & Ladakh region. | 10 <sup>th</sup> September,<br>2023              | 300  |  |
| 4                     | Exploring Engineering – 2024  | 1 <sup>st</sup> – 6 <sup>th</sup> July,<br>2024  | Certificates were given to 248 students and around 300 students participated |  |
| 5                     | Expert lecture by Dr. Sanjay Shah on topic "Health Awareness and Motivation."   | 09 <sup>th</sup> October,<br>2023                | 55   |  |
| 6                     | Conductance of National conference on topic "Social Responsibility of Educational Institutions in context of NEP-2020."           | 12 <sup>th</sup> January,<br>2024                | 300  |  |
| 7                     | Training module on use of Smart Phone in Barwala Village, Delhi.  | 19 <sup>th</sup> April, 24                       | 18   |  |
| 8                     | Training module on use of Smart Phone in Jyonti Village, Delhi.   | 15 <sup>th</sup> May, 2024                       | 24   |  |
| 9                     | Training module on use of Smart Phone in Shahbad<br>Daulatpur Village, Delhi.   | 11 <sup>th</sup> - 18 <sup>th</sup> May,<br>2024 | 15   |  |

## 8. International Affairs

#### Dean: Prof. Pravir Kumar (Biotechnology)

During the academic year 2023-24, the office of International Affairs, DTU has enrolled a total of 116 Students through various admission channels, including DASA, ICCR and DTU portal.

## Admitted Students through DASA, ICCR & DTU PORTAL

UG-100

PG-12

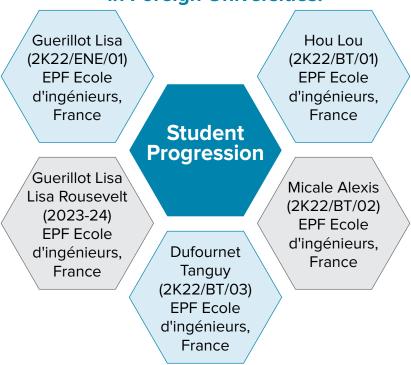
Ph.D-04

25 International students participated in the 35<sup>th</sup> annual International Yoga Festival at Rishikesh during 8<sup>th</sup> - 14<sup>th</sup> March, 2023.

## Visits of International Universities to DTU:



## DTU student progression for semester-away programs in Foreign Universities:



# Number of functional MoUs with institutions of national, and international importance, other universities, industries, corporate houses:

|           | MoUs DURING THE LAST FIVE YEARS  |                    |   |                                       |  |  |
|-----------|--|--------------------|---|---------------------------------------|--|--|
| S.<br>No. | University/Organization  | Year of<br>Signing | Purpose   | Duration                              |  |  |
| 1         | "n+i" Network of Engineering Institutes called "n+i."  | 2017               | Students exchange programme                                 | 4 years<br>(automatically<br>renewed) |  |  |
| 2         | Tashkent University of Information<br>Technologies named after Muhammad<br>Al-Khwarizmi, Uzbekistan. | 2018               | Students exchange programme                                 | 5 years<br>(automatically<br>renewed) |  |  |
| 3         | EPF, ÈCOLE D INGÈNIEUR<br>– E – S, France.   | 2019               | Internship, Semester<br>Away Programme &<br>Invert Mobility | 5 years<br>(automatically<br>renewed) |  |  |
| 4         | Balitar Islamic University, East Java,<br>Indonesia.   | 2019               | Student & Faculty Exchange                                  | 5 years<br>(automatically<br>renewed) |  |  |
| 5         | Dr. Soetomo University, Surabaya, Indonesia.   | 2019               | Student & Faculty Exchange                                  | 5 years                               |  |  |
| 6         | Mandala College of Economics, East<br>Java, Indonesia.   | 2019               | Student & Faculty Exchange                                  | 5 years                               |  |  |
| 7         | PGRI Adi Buana, East Java, Indonesia.  | 2019               | Student & Faculty<br>Exchange                               | 5 years                               |  |  |
| 8         | STIE Wilwatikta, East Java, Indonesia.   | 2019               | Student & Faculty Exchange                                  | 5 years                               |  |  |
| 9         | STIKI Malang, East Java, Indonesia.  | 2019               | Student & Faculty Exchange                                  | 5 years                               |  |  |
| 10        | STTM, East Java, Indonesia.  | 2019               | Student & Faculty Exchange                                  | 5 years                               |  |  |
| 11        | Universitas Wisnuwardhana Malang,<br>East Java, Indonesia.   | 2019               | Student & Faculty Exchange                                  | 5 years                               |  |  |
| 12        | University of Kanjurahan, East Java, Indonesia.  | 2019               | Student & Faculty Exchange                                  | 5 years                               |  |  |
| 13        | University of Pesantren Tinggi<br>Darul'Ulum, Jombang Indonesia.                                     | 2019               | Student & Faculty<br>Exchange                               | 5 years                               |  |  |
| 14        | Widya Kartika University, Surabaya,<br>Indonesia.  | 2019               | Student & Faculty<br>Exchange                               | 5 years                               |  |  |
| 15        | PGRI, Madiun.  | 2019               | Student & Faculty Exchange                                  | 5 years                               |  |  |
| 16        | STT Atlas Nusantara, Malang.   | 2019               | Student & Faculty<br>Exchange                               | 5 years                               |  |  |

|           | MoUs DURING THE LAST FIVE YEARS                               |                 |                                     |                                       |  |
|-----------|---|-----------------|-------------------------------------|---------------------------------------|--|
| S.<br>No. | University/Organization                                       | Year of Signing | Purpose                             | Duration                              |  |
| 17        | Nanjing University of Aeronautics & Astronautics, China.      | 2019            | Student & Faculty Exchange          | 5 years                               |  |
| 18        | Mapua University, Philippines.                                | 2019            | Student & Faculty<br>Exchange       | 5 Years                               |  |
| 19        | La Trobe University, Victoria,<br>Australia.                  | 2019            | Student Mobility                    | 5 Years                               |  |
| 20        | Technical University of Crete, Chania,<br>Crete, Greece.      | 2019            | Knowledge Sharing & Online Lectures | 5 Years<br>(automatically<br>renewed) |  |
| 21        | University of Transport Technology,<br>Vietnam.               | 2019            | Knowledge Sharing & Online Lectures | 5 years<br>(automatically<br>renewed) |  |
| 22        | National Formosa University, Taiwan.                          | 2020            | Semester Away<br>Programme          | 5 Years<br>(automatically<br>renewed) |  |
| 23        | Universities Mercu Buana, Jakarta,<br>Indonesia.              | 2020            | Knowledge Sharing & Online Lectures | 5 Years                               |  |
| 24        | Riga Technical University, Latvia.                            | 2020            | Semester Away<br>Programme          | 5 Years                               |  |
| 25        | Shahrood University of Technology, Iran.                      | 2022            | Knowledge Sharing & Online Lectures | -                                     |  |
| 26        | Rovuma University, Nampula,<br>Mozambique.                    | 2022            | Knowledge Sharing & Online Lectures | -                                     |  |
| 27        | Eurecat Centre Technologic de<br>Catalunya, Catalonia, Spain. | 2022            | Knowledge Sharing & Online Lectures | -                                     |  |
| 28        | Indian Council for Cultural Relations (ICCR).                 | 2022            | Knowledge Sharing & Online Lectures | -                                     |  |
| 29        | ESTP Paris, France.   | 2022            | Knowledge Sharing & Online Lectures | -                                     |  |
| 30        | Klaipeda University, Lithuania.                               | 2023            | Knowledge Sharing & Online Lectures | -                                     |  |
| 31        | University of Bordeaux, France.                               | 2023            | Knowledge Sharing & Online Lectures | -                                     |  |
| 32        | Nan Chi Nan University, Taiwan.                               | 2023            | Knowledge Sharing & Online Lectures | -                                     |  |

## 9. Planning & Consultancy (P&C)

The department was first established in 2022 and became the core structure for research and development activities of the University. It controls the conduct of project and consultancy in order to achieve the required conditions. The sponsored projects are an important component in strengthening the academia-industry bond which enables faculty and student development. The overall work of the P&C center around the Act, Statues, Ordinances

as well as Rules & Regulations put forth by the governing body of DTU.

### **Organization Structure**

Dean

Prof. Nirendra Dev

**Associate Dean**Prof. Munendra Kumar

### **Sponsored Projects:**

| S.<br>No. | Name of the<br>Principal<br>Investigator(s)/<br>Co Principal<br>Investigator(s) | Title of Project  | Name of the<br>Sponsoring<br>Agency         | Funds<br>provided<br>(in ₹) |
|-----------|---|---|---|-----------------------------|
| 1.        | Prof. Roli Purwar   | Design and Development of Electronic<br>Devices using Regenerated Silk Fibroin/<br>Metal Oxide Nanocomposites and<br>Hydrogels.   | SERB-DST                                    | 29,95,696/-                 |
| 2.        | Dr. Sanjay Patidar  | Smart Autonomous weed Detector and Removal.   | AI4ICPS-I-<br>HUB                           | 31,89,516/-                 |
| 3.        | Dr. Bharti Singh  | Mechanical Energy Harvesting using Mxene Functionalised Polymer Composites Nanofibers and Integrating it with Energy Storage Devices for IOT and Wearable applications.                               | SERB-SURE                                   | 31,79,840/-                 |
| 4.        | Prof. Rajan Yadav   | Issue and Challenges in Collaborative kinkages among government organizations private sector and citizens towards creating storing and using digital repository with special reference to Digilocker. | ICSSR                                       | 13,00,000/-                 |
| 5.        | Dr. Mukhtiar<br>Singh   | Machine Learning Assisted First-Principles<br>Study of Anomalous Nernst Effect in Weyl<br>Semimetals.   | SERb-DST                                    | 28,08,104/-                 |
| 6.        | Prof. K.C. Tiwari   | Study of NAVIC and Opti Flow Based Drone Systems in GPS Denied Environment.   | IHUB-<br>NTIHAC                             | 19,83,560/-                 |
| 7.        | Prof. S. Indu   | Digitizing Manuscripts at the Indira Gandhi<br>National Centre for the Arts and Facilitating<br>Online Access to Digitized Documents.   | IHUB Drishti<br>Foundation,<br>IIT, Jodhpur | 60,00,000/-                 |

## **Consultancy Projects:**

| S.<br>No | Name of the<br>Consultant        | Name of the Consultancy Project  | Contracted amount (in ₹) |
|----------|----------------------------------|--|--------------------------|
| 1.       | Dr. Rajeev Kumar<br>Mishra       | Expert technical consultation in pollution mitigation system for controlling particulate matter (PM 2.5 and 10).   | 4,50,000/-               |
| 2.       | Sh. Gour Anunay<br>Ashokkumar    | Design mix of RMC, Structural audit work of income tax colony, water testing of Punjab national bank, vetting of design and structural drawing, material testing for construction of super speciality hospital, multilevel car parking.  | 43,54,000/-              |
| 3.       | Dr. Ritu Raj                     | Third party quality assurance for civil division, Irrigation and flood control department, New Delhi.  | 27,11,384/-              |
| 4.       | Prof. S.Anbu Kumar               | TPQA in respect of 02 and 06 nos. Civil works.   | 2,18,858/-               |
| 5.       | Dr. Lovleen Gupta                | Testing of Anti-Smog tower installed at Shri Badribhakt<br>Jhandewalan Mandir at Rani Jhansi Road, New Delhi.  | 2,11,864/-               |
| 6.       | Dr. Ritu Raj                     | Third party quality assurance of various development works under various heads like DRDB, DUDA, MLA, LAD, MP LAD, unauthorized colonies, Urban villages, SC/ST Panchayat and plan works etc under I&FC all division.   | 2,00,00,000/-            |
| 7.       | Dr. Lovleen Gupta                | Structural drawing vetting of sewage treatment plants under Delhi Jal Board.   | 3,00,000/-               |
| 8.       | Dr. Ritu Raj                     | Structural design and preparation of structural drawings for<br>new Boys hostel at NIT Nagaland, material testing of AIIMS<br>Jammu, structural design for district park, Paschim Vihar,<br>construction of west wing at Daulat Ram College.   | 13,25,718/-              |
| 9.       | Prof. A.K.Haritash               | Quantification and characterization of Municipal Solid waste, Sector-8, Manesar, Haryana.  | 1,25,000/-               |
| 10.      | Prof. A.K.Sahu                   | Vetting of soil investigation report.  | 50,000/-                 |
| 11.      | Dr. Ritu Raj                     | Construction of old age home at sarita vihar, design mix of concrete grade M10 & M30, Ministry of external affairs housing complex, Gole market, R.K. Ashram.  Vetting of structural design and drawings for existing commercial building for M/s AIMS Max Gardenia Developers Ltd.  Vetting of design and drawings of academic amenities block and classroom.  Design mix of concrete for the work of major upgradation/redevelopment of Faridabad railway station.  Structural health assessment of existing building as per earthquake resistant structural provision.  Material testing work for construction of indoor volleyball hall. | 7,36,000/-               |
| 12.      | Prof. S. Anbu Kumar              | TPQA in respect of 11 and 08 Nos. Civil Works.   | 12,24,045/-              |
| 13.      | Mr. Ashish<br>Rajeshwar Kulkarni | Permission to provide quotation and carry out vetting of pump design for DDA consultancy work.   | 52,039/-                 |
| 14.      | Prof. Amit Kumar<br>Shrivastava  | TPQA Services for the work of Construction of computer centre at North campus, Delhi University, Delhi Horticulture works on EPC basis.  | 30,32,411/-              |

| S.<br>No | Name of the<br>Consultant       | Name of the Consultancy Project  | Contracted amount (in ₹) |
|----------|---------------------------------|--|--------------------------|
| 15.      | Prof. Amit Kumar<br>Shrivastava | TPQA services for the work of construction and installation of fully automatic multilevel car parking system at Africa Avenue defence complex, horticulture works on EPC basis.  | 21,41,742/-              |
| 16.      | Prof. A.K.Sahu                  | Consultancy regarding design mix of M30.   | 50,000/-                 |
| 17.      | Prof. Raju Sarkar               | Regarding material testing/mix design.   | 4,93,814/-               |
| 18.      | Dr. Ritu Raj                    | Vetting of structural (Noida) Proof checking (Bawana) External Development on church (New Delhi) Construction of Old Age home Resurfacing of Satguru, PWD, New Delhi C/O of phase B at JNV Internal electrical Third party proof checking of Meerut Corridor Vetting of Design of towers Vetting of structural, Noida Construction of Dause Rajasthan Vetting of design, CIRA HQ Vetting of structure, scope complex   | 42,45,512/-              |
| 19.      | Dr. Lovleen Gupta               | Structural drawing vetting of sewage treatment plants under Delhi Jal Board.   | 1,50,000/-               |
| 20.      | Prof. Munendra<br>Kumar         | Structural audit report for Godrej Nest, SC 02 H & I, Sector-150, Noida.   | 25,60,349/-              |
| 21.      | Dr. Paras Kumar                 | Blower upgradation of DJB, Sewage treatment plant from ASP based technology to IFAS Technology.  | 2,80,000/-               |
| 22.      | Dr. Lovleen Gupta               | Structural drawing vetting of sewage treatment plants under Delhi Jal Board.   | 90,000/-                 |
| 23.      | Dr. Ritu Raj                    | Proof checking/vetting of structural design and drawings for SPS School.  Design mix of M20, M25, M30.  Vetting of structural design and drawings of PEB Warehouse for Maruti Suzuki India Ltd.  Design mix for Kamdhenu cement Itd M10 & M30.  Preparation of design mix for M10, 15, 25 and 30 Grade ready mix concrete.  Preparation of design mix of concrete grade M-10, M30 for construction of 150 bedded critical care hospital block building at AlIMS.  Material testing of concrete: core cutting test (NDT).  Horizontal extension of social centre school building of Delhi University at Maurice Nagar, Design mix of M30 and M30 SCC. | 13,00,000/-              |
| 24.      | Prof. A.K. Haritash             | Regarding appraisal of DPR for rejuvenation and development of Murar River, Gwalior, Phase II, MP.   | 1,50,000/-               |
| 25.      | Prof. Raju Sarkar               | Regarding TPQA and material testing.   | 30,86,855/-              |
| 26.      | Prof. Amit Kumar<br>Shrivastava | Structural audit for Tata Eureka Park, SC-02, A-1 Sector-150, Noida.   | 68,18,000/-              |

| S.<br>No | Name of the<br>Consultant | Name of the Consultancy Project  | Contracted amount (in ₹) |
|----------|---------------------------|--|--------------------------|
| 27.      | Dr. Ritu Raj              | Design mix of M30. Proof checking of various projects, Bus Depot. Proof checking of structural drawings for Global city project (Phase-1) Gurugram. Vetting of structure design and foundation for roof/ground-based MW poles/towers. Concrete mix design for grade M-30. Concrete Mix Design for the work providing and laying unfiltered water pipe line from BB Tank to Budha Jayanti Park, New Delhi. Proof checking and design mix work EOR to Nehru Homeopathic Medical College and Hospital Block, Defence Colony, New Delhi. Material testing for the work of construction of four/six lane greenfield Ludhiana Rupnagar National highway. Vetting of structural design and drawings for TCS, AL Softweb and Gulshan education foundation etc. Vetting of structural design and drawings of existing institutional building on plot 175 and 176, Sector-136, Noida. Vetting of structural design and drawings for institutional buildings on plot 15, Sector-127 and sector-154, Noida.              | 33,71,610/-              |
| 28.      | Dr. Ritu Raj              | Structure audit of our project Tower A at the Jewel of Noida plot No.14, Sector-75, Noida. Structural Audit of newly constructed office building for M/S Tradewell holdings ltd. At plot no. A-105, Sector-136, Noida U.P.   | 16,25,000/-              |
| 29.      | Prof. M. Rizwan           | Conducting fire audit for ESIC Hospital, Rohini, Sector-15.  | 4,01,800/-               |
| 30.      | Sh. Himanshu<br>Singh     | Vetting service of MEP Services for C/o management institute Bihta, Patna, Bihar.  | 10,00,000/-              |
| 31.      | Dr. Ritu Raj              | Construction of flyover at nand nagri and gagan cinema junction of mangal pandey marg.  Design, construction, testing and commissioning of office building with data centre for Punjab national bank at plot-84, sector-18, Gurugram.  Vetting of structural design and drawing buildings for maruti suzuki india ltd situated at plot no.1&2, Karnataka.  Proof checking of structural design and drawings of proposed building at plot no.A-6/1/2 at meerut road Ghaziabad U.P.  Construction of boundary wall on north block side behind vice president enclave and restoration of damaged boundary wall of Rashtra pati bhawan near gate no.38.  Construction of four/six lane greenfield ludhiana rupnagar national highway no.NH-205K from junction with NE-5.  Construction of various office buildings and residential quarters for NACP, Gujrat.  Construction of new building for integrated facilities of office training complex for ISTM and office accommodation at old JNU Campus, new Delhi. | 15,30,500/-              |

| S.<br>No | Name of the<br>Consultant        | Name of the Consultancy Project  | Contracted amount (in ₹) |
|----------|----------------------------------|--|--------------------------|
|          |                                  | Vetting of the structural drawings of proposed building under centre of excellence at institute of human behaviour and allied science, IBHAS, Shahdra, Delhi.  Vetting of drawings for construction of creche behind Karkardooma district court, Delhi.  Vetting of drawings for covering of parking area at karkardooma court complex, new Delhi.  Dr. Ritu Raj, P.I, Department of civil engineering.  |                          |
| 32.      | Dr. Shilpa Pal                   | Third Party quality assurance for construction of Common Central Secretariat Building-13 (CCS-13) on plot 138, Man Singh Road, New Delhi.  | 1,71,17,250/-            |
| 33.      | Mr. Ashish<br>Rajeshwar Kulkarni | Permission to provide quotation and carry out vetting of design and drawing of electronics traffic lights (consultancy works).   | 70,000/-                 |
| 34.      | Prof. A. K. Haritash             | Appraisal of 03 DPRs under PBIGs for electric crematorium at Chakdha, Santipura and Garulia Muncipalities in West Bengal.  | 4,50,000/-               |
| 35.      | Prof. A. K. Haritash             | Testing of treated sewage from STPs (7.0 MLD and 9.5 MLD) TD-2, New Delhi.   | 80,000/-                 |
| 36.      | Dr. Ritu Raj                     | Repair & Maintenance of RO Water treatment plant of capacity 10000 LPH. Repairing and resurfacing of internal road with bituminous concrete and providing side drainage system at DTU Campus Construction of VREC-68 Gokalpur (B+G+4 storeys), construction of FOB at Monastery, Majnu ka tila and construction of RCC Tank at CIFE.  Design mix of grade M-25 Concrete, construction of boundary wall for ESIC.  Regarding Vetting of NDT Test results AVS orchard at plot no.GH03C Sector-79, Noida.  Renovation of existing toilet at Ganga, Jhelum, Satluj, Kaveri. Testing of materials (1.2 mm HDPE Membrane to 1.5 mm thick waterproofing membrane).  Construction of Amity University, Sector-125 Noida.  Construction of mix design-reg redevelopment of external areas in parliament complex.  Construction of Diaphragm wall for the project Purvanchal Shyline Vista, plot Sector-94, Noida.  Construction of various office buildings and residential quarters for NACP, Okhla, Gujrat.  Regarding structrual audit of various buildings MMS Naraina, AMPC Building.  Request for structure audit certificate sector-136, Noida.  Structure vetting and audit for A98, Sector-136, Plot 02 Sec 143A, Plot GH-16E, Sec 1, Plot C 35-36 Sec, Noida.  Construction of 36 nos. semi-permanent structure at Kendirya Vidyalaya, sector-8, RK Puram (civil and electrical).  Construction of 3 doctor dispensary at Rai, Sonipat, Haryana (civil & electrical) regarding quotation of structural drawings, mix design.  Construction of 3 doctor dispensary at Barhi, Sonipat, Haryana, regarding quotation of structural drawings, mix design. | 46,31,125/-              |

| S.<br>No | Name of the<br>Consultant     | Name of the Consultancy Project   | Contracted amount (in ₹) |
|----------|-------------------------------|---|--------------------------|
| 37.      | Sh. Gour Anunay<br>Ashokkumar | Testing of water samples for drinking water from various locations in additional building complex for Supreme Court of India, Mathura Road, Delhi.  | 11,40,000/-              |
| 38.      | Dr. Ritu Raj                  | Augmentation/upgradation of various existing STPs at Rohini Sector-25. Repair/Renovation and waterproofing work at ANM Hostel RHTC Najafgarh. Repair/Renovation and waterproofing work at ANM Hostel RHTC Najafgarh. Construction of new building for integrated facilities of office training complex for ISTM and office accommodation. Preparing design mix M25, M30 and M40 Grade concrete for RCC work, construction of integrated campus of GB Pant Construction of office cum residential complex at Munsiysri under SIB Dehradun. Upgradation of works in GPRA Qtrs at Moti Bagh. EOR to district court, sector-10, Dwarka, New Delhi. Regarding structural audit of various constructed institutional projects. Regarding Fees/proposal for audit of plot no. FC 17b and 17C Providing false ceiling to hide the sanitary lines. Construction of 2 no's warehouse 3000 sqm and 6000 sqm Water testing for construction purpose and design mix for RCC M-30 and M-40.   | 29,08,000/-              |
| 39.      | Dr. Shilpa Pal                | Small collaborative project on a code companion and design evaluation.  | 4,72,000/-               |
| 40.      | Dr. Ritu Raj                  | Renovation of toilet at UGC Building, head quarter, New Delhi. Reconstruction of SMQ Block no.14 & 19 (SPS Type) in NWC, AFC station (civil and electrical work). Special repair and rehabilitation work for T-I and T-II Quarters Request for vetting of structural drawing. Testing of various building materials in accordance to relevant BIS code. Testing for building material of GBSS at Mustafabad, Delhi. Request for quotation for concrete mix design for the concrete of grade M25 & M30. Construction of 76 Nos equivalent rooms type SPS. Proof checking of structure design and drawings of various projects. Construction of Basketball and badminton court at sports complex, Kirori mal college, University of Delhi. Design vetting of KGBV school and hostel in Jharkhand. Testing of TMT Bars, extension of electrical lines from 33KV Substation. C/o rural self-employment training institute at Badaun, U.P Request for technical audit by a team of engineering as per quality norms for office building of central board of indirect taxes and customs at Plot no.1, Nangal Raya, Janakpuri. Testing of electric material at the c/o 52 nos. equivalent SPS Class rooms. | 39,58,000/-              |

## 1st August 2023 - 31st July 2024

| S.<br>No | Name of the<br>Consultant  | Name of the Consultancy Project   | Contracted amount (in ₹) |
|----------|----------------------------|---|--------------------------|
| 41.      | Dr. Rajeev Kumar<br>Mishra | Performance of Air purifier installed in AIIMS campus.  | 3,62,000/-               |
| 42.      | Dr. Ritu Raj               | TPQA for construction of additional court at new plot at Karkardooma in front of existing Karkardooma court complex, New Delhi.   | 40,00,000/-              |
| 43.      | Dr. Ritu Raj               | Third Party Quality assurance for C/o District court complex at Shastri Park, Near Usmanpur, Police Station, Delhi.   | 40,00,000/-              |
| 44.      | Dr. Ritu Raj               | Vetting of structural design & drawing. Request letter regarding the structure audit through DTU for IT Tower. Quality of unfiltered water for the purpose of fisheries. Request to share your fee proposal for structure audit report for existing institutional building at plot no.145, sector-136, Noida. Structural vetting for roof extension of school building, New Delhi. Regarding fees/proposal for structure vetting and audit for A-149, A-75, A-162, Noida. | 1,03,52,500/-            |
| 45.      | Prof. A. K. Haritash       | Quantification and characterization of Municipal Solid waste at Naurangpur MRF Centre, Manesar Pahadi, Sector-8 and Sector-6, Gurugram.   | 3,85,000/-               |

# 10. Industrial Research and Development (IRD)

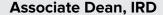
The IRD cell, DTU, Delhi, is the backbone of the research and development activities of the university and is responsible for policy formulation and monitoring of student's research at Bachelor's, Master's and Doctoral level. The department strives to promote Research & Development, creation of intellectual property, filing of patents maintaining the data base of the research publication by the faculty member and students. The Research Excellence awards given annually to the researchers of the University is coordinated by the IRD department.

The past year has witnessed significant advancements in research and development at DTU, underscored by the implementation of seven key policies and the celebration of the Research Excellence Awards. These initiatives aim to enhance academic collaboration, foster innovation, and recognize outstanding contributions to research. This report outlines these policies and highlights the achievements acknowledged during the Research Excellence Awards ceremony.

## **Organization Structure**

#### Dean, IRD

Prof. Anil Kumar Sahu (Professor, Civil Engineering)



Prof. Roli Purwar (Professor, Applied Chemistry)

Ms. Nisha Panchal (J.O.) Mr. Saurabh (MTS)

## **Key Policies and Initiatives:**

#### 1. Policy for Chair Professorship at DTU

To promote research and innovation in emerging fields that benefit society, DTU has initiated the establishment of prestigious Professorships. Supported Chair financial and technical contributions from industry partners, alumni, and various sponsors, these positions aim to attract distinguished academics and industry experts worldwide. The initiative not only strengthens faculty recruitment but also recognizes the excellence and honor of the appointees. Procedural guidelines have been developed to ensure the initiative's sustainability and effectiveness.

# 2. Research & Development Schemes for Faculty

The Research & Development schemes designed for faculty aim to enhance the academic environment at DTU by promoting innovation and interdisciplinary collaboration. These funding schemes play a critical role in securing external grants from sponsoring agencies, bridging the gap between researchers and funding bodies. This support ensures that promising ideas can materialize into impactful research outcomes, thereby enriching the university's intellectual landscape.

# 3. Policy for Corporate Social Responsibility (CSR) at DTU

Aligned with the Companies Act 2013, DTU has implemented a CSR policy requiring companies to allocate a minimum of 2% of their net profits toward social responsibility initiatives. This policy is applicable to both domestic and foreign companies operating in India, ensuring that substantial resources are directed toward community benefit.

The university's engagement with CSR initiatives enhances its role as a responsible academic institution contributing to societal advancement.

#### 4. Roles and Responsibilities of the R&D Office

The Research and Development Office at DTU plays a crucial role in fostering a vibrant research culture. It facilitates multidisciplinary and translational research, ensuring faculty alignment with various research initiatives. The office acts as a liaison with external funding agencies, promoting collaboration and for innovative projects. By streamlining administrative processes and providing necessary resources, the R&D office enhances the overall productivity of research activities at the university.

#### 5. Corporate Relationship Office Structure

To bridge the gap between academia and industry, DTU has established a Corporate Relationship Office. This office fosters corporate engagement, helping faculty collaborate with industry partners on research projects, CSR initiatives, and technology transfer. It also supports administrative processes related intellectual property management and corporate training, ensuring that industry collaborations are productive and mutually beneficial.

#### 6. Amendment in Research Publication Criteria

In alignment with academic excellence, an amendment was made regarding publication requirements for candidates in the discipline of Design and related fields. Candidates are now required to publish a minimum of two research papers in recognized indexed journals, reinforcing the university's commitment to maintaining

high standards in research output.

#### 7. Workshop on Implementation of NEP 2020

A significant workshop on the National Education Policy (NEP) 2020 was held on October 5, 2023, featuring Dr. Pankaj Mittal, Secretary General of the Association of Indian Universities. The NEP aims to transform India's education system by 2030, promoting universal access to quality education and positioning India as a global knowledge superpower. This initiative reflects DTU's commitment to educational reform and excellence.

#### **Research Excellence Awards:**





DTU hosted the "Research and Innovation Excellence Awards - 2024", recognizing the exceptional contributions of its faculties and research scholars. With a total prize pool of ₹1.72 Cr., the event honored 441 research papers, of which 25 received the "Premier Research Excellence Award" and 416 were acknowledged with the "Commendable Research Excellence Award". These awards spanned multiple disciplines, including science, technology, engineering, management, and design.

Additionally, 04 "Innovation Awards" were presented to inventors whose patents had been granted, underscoring DTU's commitment to fostering innovation and research excellence.

## **Award Categories: Achievements:**

## **Premier Research Excellence Award**

#### Commendable Research Excellence Award

#### **Innovation Awards**

#### **Citation Awards:**

- Platinum Cumulative Citation **Award**
- Gold Cumulative Citation Award
- Silver Cumulative Citation Award
- Highly Cited Paper Award
- Yearly Citation Award

The event showcased DTU's remarkable growth in research output, as evidenced by its rising h-index and the publication of 2.020 research papers in 2023.

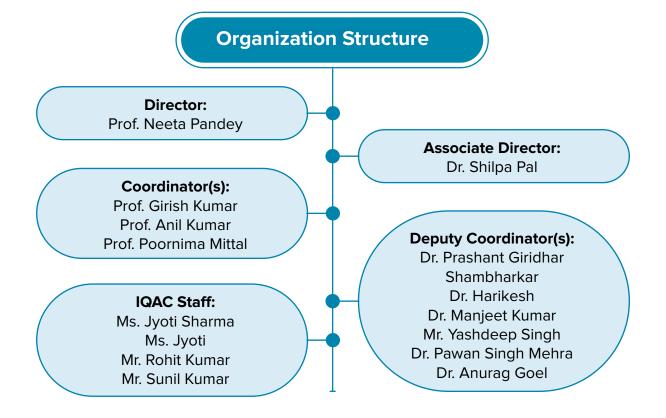
| Premier Research Awards                      |                  |  |  |
|--|------------------|--|--|
| Department                                   | No. of<br>Papers |  |  |
| Electrical Engineering                       | 4                |  |  |
| Electronics and Communication<br>Engineering | 4                |  |  |
| Applied Mathematics                          | 2                |  |  |
| Computer Science and Engineering             | 5                |  |  |
| Civil Engineering                            | 2                |  |  |
| Information Technology                       | 3                |  |  |
| Mechanical Engineering                       | 3                |  |  |
| Applied Chemistry                            | 1                |  |  |
| Applied Physics                              | 1                |  |  |
| Total  | 25               |  |  |

| Commendable Research Awards                  |                  |  |  |
|--|------------------|--|--|
| Department                                   | No. of<br>Papers |  |  |
| Applied Physics                              | 78               |  |  |
| Mechanical Engineering                       | 61               |  |  |
| Electronics and Communication<br>Engineering | 63               |  |  |
| Computer Science Engineering                 | 40               |  |  |
| Biotechnology                                | 35               |  |  |
| Civil Engineering                            | 11               |  |  |
| Electrical Engineering                       | 26               |  |  |
| Applied Chemistry                            | 26               |  |  |
| Applied Mathematics                          | 24               |  |  |
| Information Technology                       | 19               |  |  |
| Environmental Engineering                    | 18               |  |  |
| Software Engineering                         | 07               |  |  |
| USME   | 04               |  |  |
| DSM  | 03               |  |  |
| Humanities                                   | 01               |  |  |
| Total  | 416              |  |  |

# 11. Internal Quality Assurance Cell (IQAC)

The Delhi Technological University (DTU), Delhi has emerged as one the premier Technological institutions of our great country with state of-the-art facilities, world class education, training, research, and consultancy in the arena of engineering and technology, applied science and management and has become fully networked with industries on one hand and the academic and scientific community in the world on the other. As an internal mechanism for sustenance, assurance, and enhancement of the quality culture of education; DTU has established the Internal Quality Assurance Cell (IQAC) for maintaining the momentum of quality consciousness.

DTU-IQAC, in fact, is conceived as a mechanism to build and ensure a quality culture at the University level to meet the diverse needs of the stakeholders. The DTU-IQAC is meant for planning, guiding, and monitoring Quality Assurance and Quality Enhancement activities of the University. The IQAC channelizes and systematizes the efforts and measures of the University towards academic excellence and is facilitative and participative organ of the University. The DTU-IQAC is a driving force for ushering in quality by working out intervention strategies to remove deficiencies and enhance qualities.



## **Activities under IQAC:**

Major Works of Internal Quality Assurance Cell (IQAC) can be summarized as:

- Development and application of quality benchmarks/parameters for the various academic and administrative activities of the University.
- Facilitating the creation of a learnercentric environment conducive for quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process.
- Arrangement for feedback responses from students, parents, and other stakeholders on quality-related institutional processes.
- Dissemination of information on the various quality parameters of higher education.
- Organization of inter and intra institutional workshops, seminars on quality related themes and promotion of quality circles.
- Documentation of the various Programmes/activities of the College.
- Acting as a nodal agency of college for coordinating quality related activities, including adoption and dissemination of good practices.
- Development and maintenance of institutional database through MIS for the purpose of maintaining /enhancing the institutional quality.
- Development of the Annual Quality Assurance Report (AQAR) of the College based on the quality parameters/ assessment criteria developed by the relevant quality assurance body (like NAAC, NBA, AB) in the prescribed format.

- Bi-annual development of Quality Radars (QRs) and Ranking of Integral Unites of Colleges based on the AQAR.
- Interaction with SQACs in the pre and post accreditation quality assessment, sustenance, and enhancement endeavors.

# Responsibilities and Authorization of IQAC:

- Preparation and control of quality system documents.
- Organizing training in quality system, ensuring that the employees understand the quality policy, objectives and working of the installed quality system.
- Planning and implementation of internal quality audits.
- Maintaining the quality system and reporting on its functioning: implementation of all corrective and preventive actions.
- Liaison with the external agencies/ bodies on matters related to quality system.
- · Arranging for Management Reviews.
- Maintenance of Records of the operative Quality System and its constituent documents.
- Coordinate all Quality initiatives such as NAAC, NBA, QS ranking etc. on behalf of the University.
- Feedback collection from students and other stakeholders and its analysis.

#### **IQAC** is Committed to:

Ensure Internalization of the Quality Culture.

Ensure Enhancement and Co-ordination among various activities of the institution and institutionalize all the good practices.

Act as a dynamic system for quality changes in HEI.

Ensure clarity and focus in Institutional functioning towards Quality Enhancement.

Provide a sound basis for decision- making to improve institutional functioning.

## **Activities conducted during current academic year:**

6<sup>th</sup> IQAC External meeting on 7<sup>th</sup> February, 2024.

7<sup>th</sup> IQAC External meeting on 27<sup>th</sup> July, 2024.

The AQAR for the academic year 2022- 23 submitted on the NAAC portal during 2023-24.`

Preparation and publication of Annual Report for the academic year; 2022-23.

3<sup>rd</sup> Management Review meeting ISO dated 20<sup>th</sup> September, 2023.

Internal Academic and ISO Audit dated 10th – 11th October, 2023.

Workshop for CO's, PO's, and PSOs dated 13th – 14th February, 2024.

Workshop for Setting Good quality question papers p dated 13<sup>th</sup> – 14<sup>th</sup> February, 2024.

4<sup>th</sup> Management Review meeting ISO dated 30<sup>th</sup> July, 2024.











## 12. Student Welfare, Societies and Extracurricular Activities

The Dean of Student Welfare (DSW) oversees all aspects of student life at Delhi Technological University, where extracurricular activities play a vital role in the student experience. The university offers various extracurricular activities, allowing students to join interest groups that match their hobbies. The DSW Office supports students in pursuing these activities, all regulated by the university's Act, Statutes, Ordinances, and Rules established by the Government of NCT of Delhi under Act 6<sup>th</sup> of 2009.

## **Organization Structure:**



**Dean (Student Welfare):** Prof. S. Indu





Associate Dean (Student Welfare): Prof. Ram Singh



#### **DTU Mitra:**

The DTU Mitra helpdesk is an information dissemination centre under the DSW office. The students submit their queries in the office and helpdesk forwards the these to the respective branch.

## Name of Societies/Councils/Students Chapters/Clubs:

| S. No. | Name of Society            | S. No. | Name of Society                  |
|--------|----------------------------|--------|----------------------------------|
| 1      | ACS-STUDENT CHAPTER        | 26     | QUIZ CLUB                        |
| 2      | BHANGRA                    | 27     | YES + HAPPINESS                  |
| 3      | TATVA                      | 28     | INNOVA DTU                       |
| 4      | DTU – NSS                  | 29     | IOSD                             |
| 5      | SAHITYA                    | 30     | PARCHHAYI                        |
| 6      | VIBE                       | 31     | SITE                             |
| 7      | YUVAAN                     | 32     | CSI-DTU                          |
| 8      | SCEE                       | 33     | SSE-DTU                          |
| 9      | D_CODER                    | 34     | CURIE RESEARCH PROMOTION SOCIETY |
| 10     | ASSETS                     | 35     | MADHURIMA - THE MUSIC SOCIETY    |
| 11     | IEEE                       | 36     | ENACTUS                          |
| 12     | E – CELL                   | 37     | GYI                              |
| 13     | NRITYANGANA                | 38     | ELIXIR                           |
| 14     | IGTS- DTU                  | 39     | DEBATING SOCIETY                 |
| 15     | PANACHE                    | 40     | COSMOLOGY CLUB                   |
| 16     | ROUND TABLE                | 41     | JIJNASA                          |
| 17     | PRATIBIMB                  | 42     | DTU CONSULTING GROUP             |
| 18     | KALAKRITI                  | 43     | NCC                              |
| 19     | DTU - SUPER MILEAGE        | 44     | LET' TALK                        |
| 20     | TEAM RAFTAAR               | 45     | QUAD -DTU                        |
| 21     | CODECHEF DTU               | 46     | FILM CLUB                        |
| 22     | SR DTU                     | 47     | DELTECH MUN                      |
| 23     | 180 DEGREES CONSULTING DTU | 48     | IASTRUCTE DTU STUDENT CHAPTER    |
| 24     | SAE-DTU                    | 49     | CULTURAL COUNCIL                 |
| 25     | REFLECT DTU                | 50     | DTU SPORTS                       |

# Major Students' Events conducted by different Societies during 2023-24

#### **AARAMBH 2023**

Aarambh, a 2- days orientation event organized by the Cultural Council during  $20^{th} - 21^{st}$  October, 2023, was designed to help new students to transit smoothly into university life. The orientation allowed students to connect with their peers, learn about campus resources, and explore the various Cultural Societies through individual presentations. The event featured Ethnic Day on the first day and Western Formals Day on the second.





#### **ENGIFEST 2024**

Engifest '24, the annual cultural fest of DTU conducted during 15<sup>th</sup> - 17<sup>th</sup> February, 2024, witnessed more than one lakh students' in the campus. The renowned artist 'Shreya Ghoshal' performed on Day 1, along with singer 'Talwinder' on Day 2, followed by DJ Brooks & Ravator on Day 3 of the Engifest.



#### **VoA Wildlife Sanctuary Visit**

NSS DTU organized a visit to the "Asola Bhatti Wildlife Sanctuary" to promote environmental awareness and foster a deeper understanding of biodiversity among the volunteers. This immersive experience underscores the importance of nurturing a harmonious relationship between humans and nature, reinforcing the NSS DTU's commitment to creating a sustainable and ecologically balanced future.

#### India 2050

On 2<sup>nd</sup> February, 2024 NSS DTU organized an engaging event featuring a documentary screening titled "India 2050," highlighting the repercussions of rapid climate change in Delhi. The objective was to emphasize the importance of addressing climate change by providing insight into the potential future scenarios for Delhi in 2050.

# Cancer Awareness & Palliative Care Sensitization

On 24<sup>th</sup> January, 2024; NSS-DTU and DTU's Biotechnology Department, with DNip Care, hosted a Cancer Awareness and Palliative Care Sensitization event to emphasize their importance.

#### Samriddhi'24

On 19th January, 2024; NSS DTU organized a panel discussion on "Empowering Women and Child Development". Esteemed panelists; Prof. Charru from IIPA, illuminated the path toward women and child development. She passionately advocated for integrating technology in empowering women, underscoring the pivotal role of awareness and nutrition literacy. Dr. Nidhi, a distinguished gynecologist, contributed as another panelist for the event.

#### Karuna: Uniting for AIDS Awareness, Environmental Cleanliness, and Drug Abuse

On 26<sup>th</sup> October, 2023, NSS DTU hosted 'Karuna,' an event addressing AIDS

Awareness, Drug Abuse Prevention, and Environmental Cleanliness. It was a transformative session featuring Dr. Anoop Kumar Puri, HG Pandava, Dr. Usha Bhatnagar, and Mr. Shankar Singh. Dr. Puri discussed AIDS Awareness, dispelling myths for a compassionate society and drug abuse risks.

#### Cleanliness Drive'23

On 1st October, 2023, NSS DTU, in solidarity with GOI's "Call to Action", entreated the entire community to devote at least 1 hour from 10 am on 1st October, 2023 ("Ek Tareekh-Ek Ghanta") towards cleaning garbage at vulnerable sites all over the university. A Cleanliness drive was organised as a part of the 'Swachhta Hi Seva' campaign wherein, everyone transformed the community into a shining example of environmental responsibility.

#### Feeding Drive'23

Voice of Animals (VoA) successfully hosted the "Mega Feeding Drive" on 12th April at the Mini Open-Air Theater (Mini OAT), uniting animal enthusiasts in a collective effort to provide nourishment and care for animals.







#### **ASSETS DTU**

ASSETS-DTU, the Finance and Investment Society of DTU, was founded to promote financial literacy and investment culture among students. The society, comprising over 150 active members, focuses on teaching financial management and staying updated with market trends

#### Personal Finance with Pranjal Kamra (27th **August, 2023)**

ASSETS DTU hosted a webinar on personal finance with YouTuber Pranjal Kamra, covering budgeting, investment strategies, debt management. **Participants** and engaged in a Q&A session for personalized financial advice.

#### Kharche Pe Charcha with IGDTUW (13th January, 2023)

In collaboration with IGDTUW, this webinar covered personal finance, tax savings, and mutual funds, featuring alumni excelling in finance. An interactive Q&A session allowed students to discuss money management, loans, and freelancing.



# World Through the Eyes of a Harvard Dropout (27th October, 2023)

Sandeep Gupta, a GMAT expert and Harvard dropout, led a webinar on GMAT preparation strategies, including quantitative and verbal skills, and testtaking techniques.

#### **Equity Edge Competition**

A mock stock competition simulating real-world trading scenarios, Equity Edge allowed students to apply investment strategies and learn about stock market dynamics in a risk-free environment.

#### **Regular Investment Sessions**

Led by investment heads, these sessions cover options trading, technical analysis, fundamental analysis, and forex trading, providing hands-on experience and indepth knowledge of financial markets.

#### **Band Night**

The shark tank conference was followed by an extravagant, energizing and heart capturing performance by the renowned The Antriksh Band led by Varun Rajput. There was an exuberant crowd of more than 5,000 students during the performance which lasted for 90 minutes. There were various food stalls.

#### **Cosmology Club**

#### Chandrayaan-3

On 23<sup>rd</sup> August, 2023, the Cosmology Club of DTU hosted an eagerly awaited event – the live screening of Chandrayaan-3 monumental lunar landing. The event attracted a diverse audience of astronomy enthusiasts, students, and scientific community members.

# IAPS School Day (A Day of Exploration and Learning)

The IAPS (International Association of Physics Students) recently hosted an educational event, IAPS School Day, on 8<sup>th</sup> November, 2023, which saw enthusiastic participation from over 50 students from St. Frobel School. The event was further enriched by the support of more than 10 volunteers from IAPS and 25 volunteers from DTU.

# Space Talk Event (ISRO and Quantum Communication)

On 10<sup>th</sup> June, 2024, the Cosmology Club organized a captivating Space Talk titled "ISRO and Quantum Communication: A Big Leap Forward," featuring esteemed speaker Manish Purohit. Mr. Purohit, a former Space Scientist at ISRO, founder of NIMBUS Education with over 166,000 YouTube subscribers, and an accomplished educationist, space entrepreneur, enthusiast. and quantum computing expert, delivered a thought-provoking presentation.

# Exoplanet Exploration (Journey to the Unknown Realms of the Universe)

On 20<sup>th</sup> July, 2024, the Cosmology Club of DTU hosted an event titled "Exoplanet Exploration: Journey to the Unknown Realms of the Universe". Conducted online, it featured Kaushik Bhattacharjee, founder of Antariksh TV, who captivated the audience with his extensive knowledge on exoplanets.

#### **CB Devgun Memorial**

29<sup>th</sup> 23<sup>th</sup> August, 2024 From September, 2024, the Cosmology Club actively participated in the International Astronomical Search Collaboration (IASC) CB Devgun Campaign. This global initiative, named in honor of CB Devgun, aims to engage individuals in the discovery and monitoring of asteroids and trans-Neptunian objects (TNOs). The campaign provided an excellent opportunity for participants to contribute to the field of planetary science and enhance their astronomical knowledge.

#### **Strategic Partnerships and Collaborations**

In the academic year 2023-2024, the Cosmology Club at DTU has taken significant strides in expanding its collaborative efforts by entering into key partnerships that enhance our educational

and research capabilities. A highlight of these efforts is the recent signing of a Memorandum of Understanding (MoU) with Optica (Cosmology society of IGDTUW). This strategic alliance is poised to bring new opportunities for our members and significantly elevate our club's impact in the field of cosmology.

#### **Partnership With IAPS**

Cosmology Club DTU is in constant conversation with IAPS with regards to partnerships and to establish a National Nodal Centre in the university and to establish DTU as the mailing point for the Indian Chapter. This club also aims to collaborate with other clubs from IIT-Delhi, NSUT, Delhi etc.

#### The God Particle

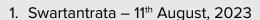
On 28<sup>th</sup> August, 2024, the Cosmology Club of DTU hosted an event titled "The God Particle". The event was mainly organized to interact with newly admitted first years in B.Tech. The event was flagged off with an interactive introduction with the participants.

#### **Multiverse of Madness**

On the 27<sup>th</sup> August, 2024, this club conducted an online session about "Astronomy and Space Science Concepts". It was an interactive session, where the attendees were asked to pitch their ideas and discuss. The Cosmology Club's introductory meeting served as the launch event for a broader campaign aimed at cultivating student interest in astronomy and cosmology.

#### Madhurima - The Music Society

Madhurima, the Music Society of DTU is also known as the Institute of Eccentric Musicians, for the crazy bunch of musicians it has! started about 12 years ago. Madhurima has certainly come a long way, taking the University Music Circuit by a storm. Every year this society meet the new freshers showcasing amazing talent, exceeding their expectations. Madhurima society actively participates in all the major events. Some events are mentioned as follows:



- 2. Republic Day Celebration
- 3. DoReMiPa (Engifest 2024)
- 4. Cadence
- 5. Flashmob
- Performance at the CSOI (Civil Services Officers Institute) for the foundation day celebration on 2<sup>nd</sup> June, 2024
- 7. Performance at the Youth Conclave G20, organized by 'Aakash Vani Delhi' in celebration of India's presidency of the G20.
- 8. Performance at cultural programmes such as Fresher's night, Diwali Rotaract Mela and Cultural Night.

#### **IEEE DTU**

Embarking on a journey guided by the timeless wisdom of 'Toil to attain thy heights,' IEEE DTU stands ready for a transformative leap forward. With dedication fueling their endeavors, mindfulness shaping the decisions, and a steadfast grounding in reality, this society embarks on a path illuminated by the promise of progress and innovation.

#### **Bootstrap:**

On 4<sup>th</sup> August, 2023, the annual orientation event by IEEE DTU, marked the beginning of the educational journey for the 2K27

batch of aspiring engineers. Hosted on university grounds, the event aimed to inspire first-year students.

#### **IEEE Day Celebration**

The Tinker Case event on 9th October, 2023 organized by IEEE DTU's PES IAS Chapter, showcased hardware models judged on design, technical proficiency, and teamwork, with Cyber Shilpkars, Techgeeks, and WellCare Warriors winning top honors. The Blockchain Workshop on 12th October, 2023 by IEEE DTU and Crewsphere ICP India Hub, introduced Web3 and blockchain through keynotes and hands-on sessions, aiming to inspire future engineers and highlight career opportunities.

#### **IEEE XTREME 17.0**

IEEE Xtreme is a global 24-hour competition where IEEE Student members, guided by an IEEE member, solve programming challenges. This year, over 150 participants took part in IEEEXTREME 17.0 on 28<sup>th</sup> October, 2023 more than doubling last year's registrations.

#### **TechWeek**

IEEE DTU organized TECHWEEK'23 from 4<sup>th</sup> - 10<sup>th</sup> November, 2023. The event aimed to introduce students to emerging technologies through workshops and hands-on learning. It featured nine free workshops, both offline and online, attracting participants from various universities.

#### Invictus'24

INVICTUS 2024, held from 9<sup>th</sup> - 12<sup>th</sup> February, 2024 featured a variety of IEEE-organized events that showcased innovation and creativity. The fest included Guessapalooza, Creative Canvas, Designathon, Tech Cosplay, Sketch-IT, Bulls and Bears, Pitchfork, Casequest, BITS,

TECHLOOP, CAT-Quiz, ADOBE DEVCRAFT, CodeCrunch ML, CodeKaze, Aerodynamic Designing, CypherCrack, TurboFX, and ElectriCidi.

#### Vihaan007

IEEE DTU held Vihaan 007, a 24-hour hackathon, on 12th-13th April, 2024, at Raj Soin Hall. The event focused on innovation in fields like sustainability, healthcare, fintech, and Al, aligning with the "Viksit Bharat 2047" theme. It attracted around 500 teams from across India, promoting teamwork and creativity. The hackathon had three rounds, starting with 4500 registrations, narrowing to 492 teams for a 24-hour coding marathon, and concluding with 15 teams presenting to industry expert.



## Yuvaan- DTU (13th-14th February, 2024)

#### **Event-1 (Inauguration)**



**Event -2 (Debate)** 



**Event-3 (Story Telling)** 



#### **Event-4 (Nukkad Natak)**



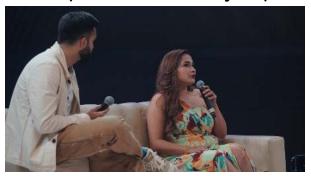
**Event-5 (Standup Comedy)** 



**Event-6 (Stand-up Comedy with Badal Sharma)** 



**Event-7 (Talk Show with Yuvraj Dua)** 



**Event-8 (Artist Performance)** 



**Event-9 (Cinewalk)** 



**Event-10 (Slam Poetry) (English)** 



#### **Event-11 Mimicry**



**Event-12 (Fashion show)** 



**Event-13 (Film Promotion) Arjun Rampal** 



Amy Jackson



Vidyut Jammwal



Event-14 (Stand-up comedy by Aaditya Kulshreshth)



#### **Event-15 (Azhar Igbal and Group)**



**Event-16 Sufinama Band** 



Kalakriti – The Creative

Arts Society
of DTU
Sketch
walk

Oil
Painting
Workshop

#### Other Events Organized

- Rap Battle
- Kalamkar
- Farzi Mushaira
- Fashion Show by Panache, DTU



Radiating with anticipation and a vibrant atmosphere, the orientation ceremony of Kala Kriti, the creative Arts Society of DTU, kicked off on a high note with the esteemed presence of world-renowned sand artist, Mr. Rajat Kumar. Amidst palpable excitement and eager anticipation, students eagerly gathered to bask in the creative brilliance and profound insights promised by Mr. Kumar's speech and sand art performance. As the event unfolded, it promised not only a spectacle of artistic mastery but also a beacon of inspiration, igniting the flames of creativity and setting the stage for an enriching journey.

#### **Strokes**

We conducted the art competition "Strokes" to foster innovation and creativity among participants. The event aimed to provide a platform for artists to showcase their innovative ideas and artistic skills in an engaging and inspiring environment.

#### **Spectrang**

On 17<sup>th</sup> - 19<sup>th</sup> February, 2024 our society in collaboration with Engifest DTU conducted an inter-college T-shirt painting, Sketch



Walk and Face Painting competitions, in which 200+ students from colleges from DU circuit and Universities across the Delhi NCR participated. The participants got the opportunity to showcase their talent and creativity to the artistic enthusiasts out there.

#### **Abhivyakti**

Kalakriti, the Creative Arts Society of Delhi Technological University, ignited a vibrant celebration of art and culture with Abhivyakti a two-days Desi Pop extravaganza held on 19th - 20th April, 2023.

#### **Round Table**

A Skill Development Society of DTU organized a number of events during the period. Some of the representative events are given below:

#### **Event Details: Web3 Conference**

The one-day event started with the registration, followed by the opening keynote. The keynote address set the tone for the day and got everyone excited about the upcoming talks.

#### **Event Details: Cryptic Hunt**

"The Cryptic Hunt" was a 24-hour mindbending challenge hosted by round table DTU. The event aimed to engage participants in a relentless puzzle-solving marathon, testing their problem-solving



skills and pushing their mental boundaries. Teams competed to crack codes and win fantastic prizes. "The Cryptic Hunt" was held on the 27th-28th of May at the Raj Soin Hall, DTU.











#### **E-Cell DTU**

E-Cell DTU North India's ignited entrepreneurial spirit, а beacon of innovation and a testament to the region's burgeoning startup scene, for the past 16th years. This year, E-Cell DTU witnessed us scaling unprecedented heights, hosting events such as the Orientation, the E-Summit'24 and the Startup Weekend and others. The procession started with the Orientation program on 14th September, 2023 at the BR Auditorium.

Distinguished guests such as Alakh Pandey (PhysicsWallah), Priyaranjan Kumar (Former CEO, Springwel Mattress, and Bella Vita Luxury), Amit Bhadhana, Barkha Singh, Vijender Chauhan, Vivek Raina (Founder, Excitel), Manasa Garemella (Co-Founder, Kindlife), Mrs. Shweta Jain (Vice President, HSBC), Bipin Kaul (CBO Paytm) were graced the occasion, giving valuable insights to the audience and serving as inspiration for others. E-Summit'24, our annual flagship event surged onto the Delhi-NCR scene, attracting a remarkable 40,000 attendees, students and like-minded individuals from all across the country.

#### The Indian Game Theory Society - DTU

The Indian Game Theory Society (IGTS), DTU Chapter, has achieved significant milestones since its formation in 2016. The team, composed of undergraduate students from various disciplines, is guided by Dr. Nand Kumar, Head of the Department of Humanities at DTU. Dr. Nand Kumar's guidance has been pivotal in the society's success, inspiring students to achieve excellence. IGTS-DTU continues to strive towards its goal of making significant contributions to the field of game theory, embodying the spirit of innovation and collaboration.

#### **KNC**

The Indian Game Theory Society-DTU organized various events in Economic Fest of Kamla Nehru College in March 2024. The events that were conducted were Diners, Weighted Wars and TGA. The event was quite enthusiastic and a huge success.



#### **IIT Bombay**

The Indian Game Theory organized its flagship event "Stratazenith" at the IIT-Bombay Tech Fest'23.

There was participation of around 150 students and the event came out to be a great success.



#### **EVENTS ORGANISED**

#### 1. Stratezenith



#### 2. Codelocks



the Grand **Nashify** With ethos of "Igniting Moments, Enriching Experiences," Emcee DTU embraced this past year with commitment and enthusiasm. Reflecting on the journey, the participants remain focused on making every event unforgettable.



With the ethos of "Igniting Moments, Experiences," Emcee Enriching embraced this past year with commitment and enthusiasm. Reflecting on the journey, the participants remain focused on making every event unforgettable.

#### **EMCEE-DTU**

#### INDEPENDENCE DAY



#### **FOOD FEST**



**AARAMBH** 



**DIWALI MELA** 



**REPUBLIC DAY** 



245

#### **INVICTUS**



#### **ENGIFEST**



#### **YUVAAN**



#### **DYNAMIC**



FRATERNITY FOUNDATION DAY & FAREWELL



#### **E-Cell DTU**

The Sahitya Literary and Debating Society had an exceptional year, marked by numerous events and remarkable achievements at national and international levels. Syaahi 2024 as part of Engifest, organized Conventional Debates, Story Writing, Hindi/English Slam Poetry, Blackout Poetry, and a unique Book Auction preceded by a quiz competition. Additionally, Yuvaan 2024 hosted various literary and debating contests, fostering creativity and idea exchange.

The Debating Wing organized prestigious events such as the **DTU Parliamentary Debate 2023**, attracting **200+ participants** from **IITs**, **NITs**, and **NLUs**. The Intra DTU Parliamentary Debate helped first-year students develop their debating skills, while the **IDPD: Pro-Am** event paired senior debaters with juniors for mentorship. Workshops on debate adjudication and argument-building and guesstimate workshops with T.I.M.E provided additional learning opportunities.

The achievements included outstanding performances in international tournaments. At the Asian British Parliamentary Debate 2023, V. Sayiram and Angad Singh Chawla were Pre-Quarter Finalists, the highestranked Indian team. Angad was also an ESL Runner-Up at the Australasian Debating Championships 2023. At the United Asian Debating Championship 2023, DTU became the first Indian institution to reach the institutional break cap, with Angad ranked as the 5th Best Speaker in Asia. At the World United Debating Championships 2024 in Vietnam, Angad and Sayiram reached the ESL Quarter Finals, a major achievement in one of the world's most competitive debates.

The debaters won 20+ national tournaments, including at IIT Bombay, IIT Delhi, Christ University, and NLU Delhi,



solidifying DTU's reputation as a formidable force in debating. The Sahitya Literary Society had a productive year, marked by growth, enriching discussions, and notable achievements. The **Poetry Wing** hosted **monthly challenges** and **bi-weekly meets**, encouraging poets to explore diverse themes like mythology and music through slam poetry and spontaneous creativity.







# Pratibimb the Dramatics & Filmmaking Society of DTU

Pratibimb, meaning 'reflection', embodies its mission to mirror the world as it is and what it could become. United by the shared passion for theatre, it strives to cultivate budding theatre enthusiasts, fueling their passion and empowering them to reflect on society and its complexities. Its goal is to facilitate self-actualization and instill a sense of responsibility for societal betterment.

#### **Pratibimb – Films Productions**

#### 1. Maghrib

Directed by - Vivaann Pahwa, Tejasv Kaushik.
Written by - Harshit Panda, Shubra Atereja
Edited by - Priyanshu, Harshit Panda
Cinematography - Vivaann Pahwa
Music and Sound - Shayan, Ekkam
Cast - Ankush, Aniruddha, Divit, Nishchay



# 2. Diye Tale Andhera Directed by - Shrija, Sana, Satyam, Somesh Written by - Shrija, Sana Edited by - Akshit, Devesh, Shivam Cinematography - Vivaann Pahwa Music and Sound - Shayan, Ekkam Cast - Ankush, Aniruddha, Divit, Nishchay



# 3. BhookhDirected by - Shubhra, MeenuEdited by - Priyanshu, ShivamCinematography - Shubhra, Meenu

Music and Sound - Anubhav, Ekkam Cast - Anubhav, Divit



# 4. End Goal End Directed by - Kabeer, Shrija Edited by - Harshit, Shivam Cinematography - Meenu, Sana Music and Sound - Anubhav, Ekkam Cast - Kabeer, Shrija



5. Bejaan Dil Ka Zinda Ishq Directed by - Sana, Harshit Written by - Sana, Harshit, Shubhra Edited by - Akshit Music and Sound - Shayan, Ekkam Cast - Shayan, Ekkam, Akshit, Shrija



6. Jaadu Ki Jhappi Directed by - Shrija, Shubhra, Meenu Cinematography- Shubhra, Shrija, Meenu Cast - Shrija



7. Qismat
Directed by - Sana
Edited by - Shivam
Music and Sound - Ekkam
Cast - Meenu, Shrija, Sana, Ankush



#### **Events Organized-Nayan Engifest 2024**

During Engifest 2024 at DTU, Pratibimb DTU organized NAYAN, an inter-college filmmaking contest. Over 50 entries were participated nationwide. Selected films were screened on the first day of Engifest at DTU campus.

# PRATIBIMB – STREET (Annual Production - "핍 -VIEW")

Our annual production, "च -VIEW", tackled the theme of media illiteracy and the normalization of content consumption. It explored issues like misinformation, extreme content, and religious intolerance, while touching on the impact of upbringing and parenting. The play also delved into

the role of algorithms and psychological mechanisms in social media addiction. Despite its heavy themes, it ended optimistically, highlighting the importance of digital literacy.

#### **Quarterly Production**

In collaboration with the Ministry of Road Transport and Highways, the studentsstaged a Nukkad Natak at Red Fort during Viksit Bharat Jan Mahotsava to raise awareness about road safety. The performance addressed issues like rash driving, over speeding, fake licenses, drink-driving, and underage driving. Using sarcasm and irony, the play entertained the audience while delivering important messages on responsible driving and the need to follow traffic regulations.









**Panache** 

Panache Daily experienced a remarkable surge in accomplishments. The publication actively engaged in numerous events, securing victories across various competitions while also adeptly hosting several successful events.

#### NIT-Kurukshetra- Confluence

Panache achieved the esteemed title of second runner-up at the annual fest of NIT Kurukshetra, known as Confluence (October, 2023). In the fashion event, named "Libaas," participants were tasked with showcasing their attire and poise on the runway. Judged on elements such



as costume selection, walk execution, confidence, and choreography, Panache demonstrated excellence in each aspect.







#### **IIT-KANPUR (Antaragni)**

Panache clinched the prestigious second position at the annual fest of IIT Kanpur, Antaragni, specifically in the fashion event "Diseñador". With the opportunity to feature a male and female model, contestants were assessed on their walk, choreography, outfit selection, and confidence. Panache showcased exceptional skill in each criterion, demonstrating a harmonious blend of style and stage presence.



#### Mood-indigo (IIT-B)

Panache achieved the prestigious 'first position' at IIT Bombay in a Trashion event, a competition centered on fashion created from waste materials, highlighting

creativity in unconventional mediums. Trashion, known for its innovative approach to repurposing trash into fashion pieces, showcased Panache's ingenuity and commitment to sustainability.

#### MNIT-JAIPUR (Blitschlag)

Panache emerged triumphant, clinching the coveted 'first position' at MNIT Jaipur's annual fest, Blitzschlag. The victory was achieved through a collaborative effort, with a team comprising 12-20 individuals. Judged on various aspects including walk, outfits, props, confidence, and choreography, Panache excelled across the board.

#### **Events organized by Panache**

In the dynamic landscape of 2023-2024, Panache orchestrated a diverse array of events, initiating with the resounding success of auditions for the batch of 2027, drawing significant crowds and participation. Following this triumph, Panache curated a "Posing and Etiquette Workshop" led by Preeti Vashishth Joshi, the esteemed founder of Gleam Diva, enriching attendees with invaluable skills and insights.

Panache took center stage at the annual cultural fest of DTU-Engifest, orchestrating three captivating events. 'Day One' commenced with the spirited "Mr. and Mrs. Exquisite" competition, where individuals vied for the prestigious title by showcasing their unique talents. 'Day Two' witnessed the vibrant "Paridhan" event, attracting enthusiastic teams from diverse colleges to partake in spirited competition.

#### Open-House 2023

Following a smooth recruitment process and successful orientation, the participants prepared an exhibit for open house 2023, where school children could see firsthand the technical projects that showcased the skills of aspiring engineers. SMV put both of their vehicles on exhibit (proto and urban class).

#### **Internal Team Development**

Throughout everything, the team continued to develop. Every new hire received constant instruction in a variety of subjects, ranging from fundamentals like developing and modelling the chassis of the vehicle to advanced skills like analyzing its efficiency, working out the electronics, and simulating real-life conditions.

#### **SMV DTU**

#### **Invictus 2024**

The team's work was expertly displayed in the Invictus 2024. They drove their vehicle from the lab to the OAT, where the two vehicles were to be showcased. Students from different universities as well as those from DTU praised the vehicles.

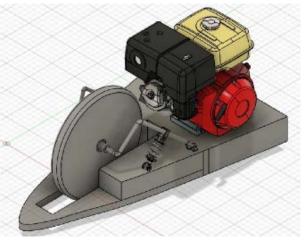
#### **Vehicle Development**

After these events, the crew got to work on how to make the prototype class car better. To achieve the highest mileage possible, the team worked on electronics, designed the model using Styrofoam, developed the design, and calibrated the engine. From the first to the third years, every member of the team has painstakingly researched and is continuously working to develop our automobiles.





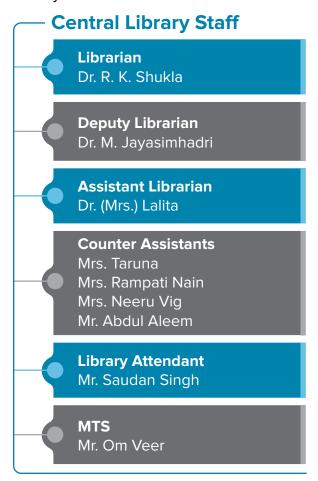




# 13. Central Facilities

## 13.1 Library

Delhi Technological University Library is a beacon of knowledge, innovation, and intellectual growth at this historic institution. Established in 1941, the DTU Library has evolved to meet the changing needs of students, faculty, and researchers, blending tradition with modern advancements in technology. It is an ISO 9001 certified Library



# **Expansive Collection, Dedicated Spaces, and Advanced Facilities**

Spanning 5,000 square meters, DTU Library offers over 230,000 books that span engineering, technology, design, management, economics, literature, and

sciences. Library resources support both academic and professional growth, with materials available in both Hindi and English to serve our diverse academic community.

Thelibrary provides seating for 500 students, ensuring comfort and accessibility, with campus-wide Wi-Fi connectivity enabling uninterrupted digital access. The library is fully computerized, with all collections barcoded for efficient management. Online Public Access Catalog (OPAC) is accessible over the internet, allowing users to search for books, make suggestions for new acquisitions, and even reissue borrowed books from anywhere, making it easier than ever to engage with library resources remotely.

Additionally, Library **Conference Room** with a capacity of 100 serves as a versatile space for workshops, seminars, and presentations. Equipped with advanced audio-visual technology, it is regularly used for faculty development sessions, guest lectures, and research symposia, enhancing the library's role as a collaborative and engaging learning environment.

# **Inclusive Membership and Family Engagement**

DTU Library extends its resources beyond students and faculty, offering membership to the family members of faculty and staff to foster a culture of continuous learning.

# **Embracing Digital Transformation**

Committed to digital accessibility, DTU Library actively participates in the National Digital Library of India (NDLI). Through the

Million Books Project, we have digitized 400 rare books, making these valuable resources accessible to the nation. Our digital collection also includes a collection of selected manuscripts in digital form and multimedia resources. The library provides access to 24 academic databases, numerous e-books, and a remote access facility that enables students and faculty to access resources anytime, anywhere.

To support academic excellence, we provide tools for plagiarism detection, grammar improvement, and access to industry standards from BIS, ASTM, and IEEE, as well as case studies from Harvard Business Publishing. Digital services not only ensure high-quality resources but also uphold integrity in research and academic writing.

# **Information Literacy Programs: Empowering Knowledge**

**Information Literacy Programs** aim to equip students, faculty, and staff with essential skills to navigate, evaluate, and apply information in their studies and research. Key programs include:

- Library Orientation: Introduces new students to library resources, including OPAC, and online search functionalities.
- 2. **Database and E-Resource Training:** Workshops on how to effectively search databases, use the OPAC, and access e-resources remotely.
- 3. Academic Integrity and Plagiarism Awareness: Training sessions on ethical research practices, citation, and using plagiarism detection software.
- 4. **Research Skills Development:** Advanced workshops for postgraduate

- and PhD students on literature review, academic writing, and data analysis.
- 5. **Digital Literacy & Faculty Training:**Sessions for faculty on digital tools, remote access to resources, and customized support for research and teaching needs.

**Information Literacy Week** is a highlight event that introduces new themes each year, focusing on crucial topics in research, publishing, and digital scholarship.

# **Digital Archive and Research Support**

Digital archive preserves DTU's academic contributions, including PhD theses, master's dissertations, and faculty publications. Current awareness bulletins keep the DTU community informed of recent publications by students and faculty, as well as new library acquisitions, fostering a collaborative and informed academic environment.

# Interlibrary Collaboration and Networked Resources

As a member of INFLIBNET and DELNET networks, DTU Library enhances resource-sharing capabilities, offering students and faculty access to a broader network of materials across institutions and promoting interlibrary collaboration.

At DTU Library, each book, digital resource, and program opens a world of opportunity. Dedicated to supporting the academic and professional journeys of our students, faculty, and alumni,

DTU Library is a place where every corner holds the promise of discovery and excellence.

## **E-Journals/ Databases**

| S.<br>No. | E – Journals Databases        | No of<br>Journals | Usages |
|-----------|-------------------------------|-------------------|--------|
| 1         | ACM                           | 13                | 5107   |
| 2         | American Institute of Physics | 19                | 2315   |
| 3         | American Physical Society     | 15                | 1134   |
| 4         | EBSCO Ultimate                | 47776             | 8963   |
| 5         | IEEE/IEL                      | 386               | 130255 |
| 6         | Institute of Physics          | 115               | 3745   |
| 7         | J-Gate                        | 29640             | 1951   |
| 8         | Nature                        | 1                 | 2238   |
| 9         | Oxford University Press       | 262               | 489    |
| 10        | Science Direct                | 1217              | 155275 |
| 11        | Springer Link                 | 1724              | 80500  |
| 12        | Taylor & Francis Journal      | 1078              | 7244   |
| 13        | Wiley eSS Journals collection | 1259              | New    |
|           | Total                         | 83505             |        |

## **Electronic Databases**

| S.<br>No. | E – Databases       | Usages |
|-----------|---------------------|--------|
| 1         | DELNET              | 41     |
| 2         | Engineering Village | 18208  |
| 3         | EPWRF               | 1088   |
| 4         | HBR                 | 1902   |
| 5         | Prowess             | 3185   |
| 6         | RemoteXs            | 12168  |
| 7         | SCOPUS              | 476914 |
| 8         | Turnitin            | 57535  |
| 9         | Web of Science      | 449962 |

## **E-Books**

| S. No | Publisher  | Numbers |
|-------|--|---------|
| 1     | Elgar (Management)   | 21      |
| 2     | CBS (Envt-20, Biotech-5, Civil-24, Elec-9, ECE-10)   | 68      |
| 3     | Elsevier (Biotech-20, Chem-40, Civil-17, CSE-26, Electrical-37, ECE-26, IT-22, Envt-36, Mechanical-71 & Physics-35) 10 depts | 330     |
| 4     | Pearson (Mech-363 & Management-27)   | 390     |
| 5     | T&F (Elec-38, Envt-25 & IT-26)   | 89      |
| 6     | Videeya (General)  | 338     |
| 7     | KopyKitab (General)  | 20      |
| 8     | Wiley (Mix)  | 71      |
| 9     | University Press/ Orient Black Swan (Civil-3, Envt-6)  | 09      |
|       | Total  | 1336    |

## Details of annual expenditure for purchase of books and journals during the last years (INR in Lacs)

| Year of expenditure | Expenditure on the purchase of journals in (INR) | Expenditure<br>on purchase of<br>books in (INR) | Expenditure on subscription to e-journals and other e-resources in (INR) |
|---------------------|--|---|--|
| 2023-24             | 2,53,598.00                                      | 46,207.00                                       | 2,95,86,077.00   |















## 13.2 Computer Centre

DTU has a well-equipped centralized computer center to cater to the needs of high-profile students and faculty in the University. It is housed in a magnificent state-of-the-art building with specialized laboratories to provide a variety of platforms and computing environments for UG, PG, and Research students. The center possesses standalone servers, Dell R630 & R720 rack servers, and about 235 desktop computers of configuration (Intel Core i5 processor) these work on Windows 10 professional edition, server 2012, 2016, and Linux platforms.

## **Organization Structure**

#### **Head of the Computer Center**

Ms. Divya Narayan head.cc@dce.ac.in

#### **Knowledge Network Manager**

Sh. Piyush Vaish piyushvaish@dtu.ac.in

#### **System Manager**

Sh. Vikas system.manager@dtu.ac.in

#### **Technical Staff:**

#### **Assistant Programmer**

Sh. Manish Kumar

Sh. Mukesh Kumar

Sh. Nilesh Kumar

#### **Network Assistant**

Sh. Sudhir Kumar

Sh. Vinod Saini

## **DTU Campus-wide Network:**

The center is networked through highend intelligent Dax/Avaya/Aruba/D-Link/Brocade/Juniper manageable switch and possesses the-clock two leased lines of 10Gbps link of NKN (primary line) and 1Gbps link of RailTel (secondary line) in different

pipes for the Wi-Fi connectivity in the Library, Academic, Departments, Administrative, Faculty residence and Hostel blocks of the campus, with internet

Facilities on all the nodes. Access to the internet is given to the end user after secure authentication. Network traffic is being monitored & controlled by the full version of Palo-Alto 5220 (Firewall & UTM). Presently all the 200 computers are connected through LAN on two floors of the computer center providing internet access. It provides programming facilities to all the departments of the university. The departments/academic/library/ administrative blocks, faculty residence, and all the hostels of DTU are interconnected using 48-core & 6-core optical fiber cable (OFC) and Wi-Fi with 250 access points.

The present network setup satisfies the needs of the University's rudimentary Internet connectivity and maximum resource sharing for the connected departments.

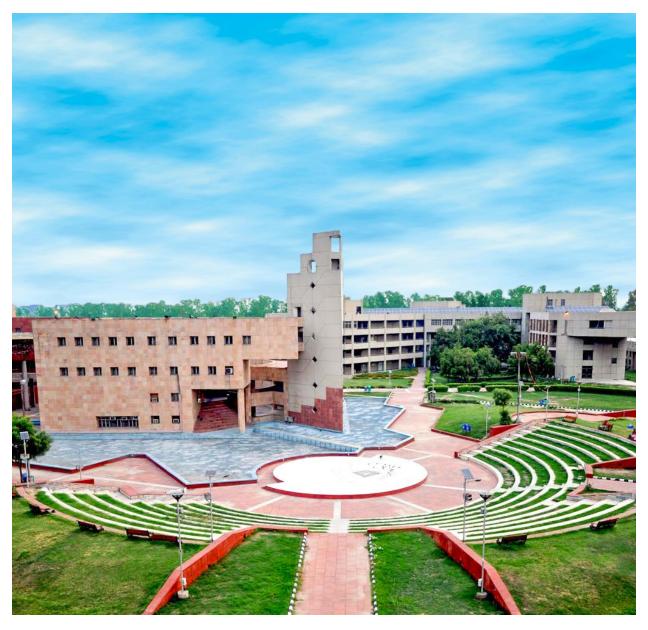
#### **DTU Website:**

Computer Centre maintains DTU websites (www.dtu.ac.in), alumni portal, training & placement department, academic departments portal, library portal, IQAC portal, faculty portal, hostel portal, student portal, and other related intranet/internet web services. This center updates the DTU website daily. The information on the website is displayed after the approval of the concerned department, faculty, or administrative offices.

Computer Centre provides mail services to the university teaching communities and administrative officers. Mail service is integrated with Google G-Suite education edition to all its faculty and students for day-to-day academic work.

## **DTU ERP:**

Computer Centre also manages University ERP system ( <a href="https://dtu.samarth.ac.in/">https://dtu.samarth.ac.in/</a> )



# 13.3 Department of Training and Placement

The Department of Training and Placement (T & P), DTU is the premier department for organizing the training and placement efforts of the university. It is responsible for honing the skills of talented DTU students and training them for placements and internships at reputed multinational firms.

The placement process begins by sending invitations to companies to visit the University for Pre-Placement Talks and provide their job announcements. The talks provide an avenue for interaction and familiarization of students with the recruiting organizations and their work profile. Students from Bachelor of Technology (B.Tech), Master of Technology (M.Tech), Master of Business Administration (MBA) programs in various fields of engineering and technology, participate in the placement process.

# **Organization Structure:**

### Head

Prof. Rajesh Rohilla (Electronics and Communication Engg.)

### **Associate Head**

Prof. Anil Singh Parihar (Computer Science & Engg.)

### **AOL**

Indrajeet Bhardwaj

### **Placements Overview:**

Organizations from a multitude of backgrounds participate in the recruitment session every year, offering a wide variety of profiles which can be broadly classified into:



### **Core Engineering & Technology**

The students of DTU continue to demonstrate a strong commitment to

their core educational background in the choice of employment. A large number of students opt for science, engineering and technology-oriented jobs, with the recruiting companies operating in various sectors of the economy. Some of the core companies are Maruti Suzuki, L&T, Hyundai, Samsung Engineering and R&D, Texas Instrument, Qualcomm, Western Digital, BASF, NXP Semiconductor, ST Microelectronics, JK Tyres, Havells, JCB to name a few. There were 512 job offers from 109 organizations in in Core Engineering domain.



### **Software & IT Enabled services**



142 leading IT firms, including several global leaders, visited DTU for campus placements during 2023-24. These organizations work with large corporations across the world and help them resolve complex business Management problems. Consulting companies especially carry a reputation of being very selective in their choice of campuses and of having extremely high standards in their recruitment process. 823 offers were made in software firms like Google, Amazon, Microsoft, Atlassian, Sprinklr, DeShaw, Flipkart, Adobe, Paytm, Goldman Sachs, Citibank, Uber, Airtel, HCL to name a few.



### **Analytics and Consulting**



The well-deserved reputation of superior analytical and reasoning skills of DTU graduates continues to draw recruiters from the rapidly growing field of data analytics. There were 408 job offers from 91 organizations in 2023-24 making it one of the biggest sectors after information technology profile. Some companies that visit DTU are JPMC, Mckinsey & Co, Optum, Barclays, Deloitte, ZS Associates, EXL Services, KPMG, Bain, BCG, Willis Towers Watson, PWC, Landmark, Thorogood and many more.

### Teaching



### **PSU/Government**



DTU has continued to provide faculty to several educational institutions and universities through campus recruitments over the past several years. Many post-graduate students have been offered jobs with public and private educational institutions through campus placement. Some of the educational institutes visiting DTU are DIT University, Byju's, KIET, Bansal Classes, Physics Wallah.

Various PSUs and Government organisations hire from DTU, the institutions include PSUs like GAIL, BEL, C-Dot, EdCIL to name a few. This year UIDAI also hired multiple students from DTU.

85.3 LPA Highest CTC

2053 Total Offers

14.02 LPA Average CTC

360+Recruiters

### TOP RECRUITERS



# Infrastructure

In order to conduct presentations, online tests, group discussions and interviews the department has following infrastructure:

| No. of Interview rooms | No. of group discussion (GD) rooms | Online Test facility (No. of computers in CC) | Presentation<br>Hall |
|------------------------|------------------------------------|---|----------------------|
| 27                     | 05                                 | 250   | 01                   |

# **Placement Highlights:**

| Name of<br>Course | Name Of Department                    | No. of<br>Offers<br>Made | No. of<br>Student<br>Placed | No. of<br>Internships<br>and Field<br>Training Offers | Highest<br>Package<br>Offered<br>(in LPA) |
|-------------------|---------------------------------------|--------------------------|-----------------------------|---|---|
| B.Tech.           | Automotive Engineering                | 37                       | 34                          | ***   | 13  |
|                   | Bio Technology                        | 37                       | 35                          | ***   | 16.5                                      |
|                   | Civil Engineering                     | 69                       | 58                          | 1   | 19.2                                      |
|                   | Computer Engineering                  | 389                      | 346                         | 103   | 85.3                                      |
|                   | Electrical Engineering                | 199                      | 177                         | 10  | 51  |
|                   | Electronics and Communication Engg.   | 157                      | 139                         | 6   | 85.3                                      |
|                   | Engineering Physics                   | 67                       | 57                          | 0   | 26  |
|                   | Environment Engineering               | 44                       | 38                          | 1   | 26  |
|                   | Information Technology                | 119                      | 108                         | 34  | 51  |
|                   | Mathematics and Computing             | 126                      | 113                         | 15  | 85.3                                      |
|                   | Mechanical Engineering                | 215                      | 184                         | 12  | 26  |
|                   | Chemical Technology                   | 49                       | 45                          | ***   | 16.5                                      |
|                   | Production and Industrial Engineering | 34                       | 33                          | ***   | 17.73                                     |
|                   | Software Engineering                  | 114                      | 98                          | 18  | 64  |
|                   | Total                                 | 1668                     | 1472                        | 200   | 85.3                                      |
| M.Tech.           | Civil Engineering                     | 9                        | 9                           | ***   | 5.7                                       |
|                   | Geo-informatics                       | ***                      | ***                         | ***   | ***                                       |
|                   | Electrical Engineering                | 14                       | 14                          | ***   | 22  |
|                   | Mechanical Engineering                | 4                        | 4                           | ***   | 15  |
|                   | Computer Science Engineering          | 41                       | 41                          | ***   | 29  |
|                   | Software Engineering                  | 38                       | 32                          | ***   | 18.98                                     |
|                   | Electronics And Communication Engg.   | 20                       | 20                          | ***   | 28.9                                      |
|                   | Environment Engineering               | ***                      | ***                         | ***   | ***                                       |
|                   | Bio Technology                        | 1                        | 1                           | ***   | ***                                       |
|                   | Information Technology                | 16                       | 15                          | ***   | 18.98                                     |
|                   | Total                                 | 142                      | 135                         | ***   | 29  |

| Name of<br>Course | Name Of Department             | No. of<br>Offers<br>Made | No. of<br>Student<br>Placed | No. of<br>Internships<br>and Field<br>Training Offers | Highest<br>Package<br>Offered<br>(in LPA) |
|-------------------|--------------------------------|--------------------------|-----------------------------|---|---|
| MBA               | MBA (All Specializations)      | 102                      | 100                         | 8   | 14.13                                     |
| B.Tech. (CE)      | B.Tech. (Continuing Education) | 10                       | 10                          | ***   | 21  |
| BBA/BAE           |                                | 87                       | 72                          | ***   | 13  |
| M.Sc.             | M.Sc. (Phy, Math, Bio)         | 30                       | 30                          | 1   | 10.5                                      |
| B.Des/<br>M.Des   |                                | 5                        | 5                           | 1   | 13.68                                     |
| MAE               |                                | 9                        | 9                           | ***   | 14.13                                     |
| PhD               |                                | 0                        | 0                           | ***   | ***                                       |
|                   | Total                          | 2053                     | 1833                        | 210   | 85.3                                      |

# **Our Top Recruiters:**

The CTC offered by companies to DTU students has also seen a steady increase in the past 5 years. In the year 2023-24, the number of offers above 20 LPA rose to 330 and those between 10 LPA and 20 LPA rose to 734. The average CTC offered is also 14.02 LPA. This is a proof of the rising demand for talented graduates of DTU. The demand for DTU students is evident from the fact that companies are not only

# Number of offers with CTC >=20 LPA

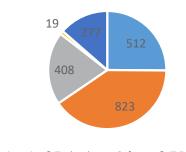


# Number of offers with 10<=CTC<20 LPA



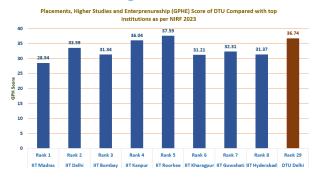
offering high packages but are hiring in big numbers.

2023-24 No. of Offers





# **NIRF Ranking**



# **Internship Opportunities**

Apart from the stellar placement record DTU also had a record breaking internship season 2023-24. A number of domestic/

international recruiters visited the campus for the purpose of on-boarding interns. Many students were also given Pre-Placement Offers by companies based on their internship performance. The stipends went as high as 2 lakhs.

| 210+ Offers                  |    |
|------------------------------|----|
| 2 Lacs Highest Stipend       |    |
| 58 Offers: above 1 Lac       |    |
| 51 Offers: 1 Lac < 50 thousa | nd |

# **Top Internship Recruiters**

| Company    | Stipend | Company  | Stipend |
|------------|---------|----------|---------|
| Sprinklr   | 200000  | Google   | 114000  |
| Uber       | 177000  | Amazon   | 110000  |
| De Shaw    | 150000  | Intuit   | 100000  |
| Attlassian | 130000  | Adobe    | 100000  |
| Microsoft  | 125000  | Flipkart | 100000  |
| Winzo      | 125000  | Cisco    | 98000   |
| Arcesium   | 125000  | Visa     | 90000   |

# **Training Programs**

Department of Training and Placement provide industry relevant and skill enhancing trainings to make the students competent for the different roles. A comprehensive training program is designed for the overall development of the students in the following broad categories:

| S.<br>No. | Category  | Programs   |
|-----------|---|--|
| 1         | Career Counselling                                | Mentorship sessions which enable students to gain knowledge about the various career and higher study options after graduation.  |
| 2         | Skill enhancement<br>Program                      | Talks/expert lectures on skill enhancement by alumni working in diverse sectors to prepare for requirement of industry.  Workshops to enhance communications skills, interview skills and group dynamics.  |
| 3         | Industry relevant<br>training programs            | Workshops on various domains like electronics, mechanical, robotics, software, analytics and consulting.  Training programs organized in collaboration with many prestigious organizations on current trends in Technology.  |
| 4         | Interview preparatory sessions                    | To acquaint the students with the processes of different companies, mock interview sessions, specifically designed and customized as per the past process of each company are conducted.   |
| 5         | Sessions for Civil<br>Service & Higher<br>studies | Sessions focused on higher education are conducted involving experts/Alumnus from different universities around India and abroad to guide the DTU students about the application process. The sessions have been effective in augmenting the career related knowledge of students. |

# 13.4 Sports and Physical Education

Sports and Physical Education play a crucial role in fulfilling the goals of education. At DTU, students are provided with excellent facilities and encouraged to participate in tournaments inside and outside DTU. The university boasts a 400-meter track, grounds for football, hockey, and cricket, two volleyball courts, two basketball courts,

three tennis courts, and five badminton courts. Additionally, rooms for table tennis, chess, carrom, and gyms are available in each hostel. The sports calendar also includes Inter-Hostel Tournaments across various sports such as badminton, basketball, carrom, chess, cricket, football, table tennis, volleyball, and tennis.

# **Organization Structure:**

**Dean Student Welfare** Prof. S. Indu

**Chairman Sports Council** Prof. R. C. Singh

| Name of Faculty   | Designation                   | Qualification  |  |
|-------------------|-------------------------------|--|--|
| Sh. Navneet Gulia | Sports Coordinator            | Diploma in Sports Coaching-Football NSEC<br>Kolkata), D-License (Coach)                    |  |
| Ms. Prakriti      | Co-Coordinator                | B.A, B.P.ED. , M.P.ED, Diploma in Sports Coaching in Kabaddi Sai NSSC                      |  |
| Sh. Ajay          | Athletics Coach               | B.PE, B.Ed., M.Ped., NIS   |  |
| Sh. Harish Dagar  | Cricket Coach                 | B.PEd , M.Ped (NSNIS) , BCCI Level 1 Coach   |  |
| Sh. Naresh Hooda  | Basketball Coach              | B.A, B.P.ED. NIS Qualified   |  |
| Sh. Ankit Yadav   | Boxing And Gym<br>Coordinator | B.A, B.P.ED. , M.P.ED,   |  |
| Sh. Sunil Kumar   | East Campus<br>Coach          | DU Graduate, Diploma in Fitness, Training and diet planning, certified fitness coach (BFY) |  |
| Mr. Deepak        | Ground Men                    | Graduate   |  |
| Mr. Jaidev        | Ground Men                    | Graduate   |  |

# **Sports Facilities:**

DTU offers top-notch sports facilities, including well-maintained playing fields, a modern gym with state of-the-art equipment, and a 400m track. The university provides various sports options like football, hockey,

cricket, volleyball, basketball, tennis, and badminton. Indoor facilities include badminton courts, table tennis, pool tables, and a gym.















# Value Addition courses (VACs):

- VAC 20-SPORTS I
- VAC 21-SPORTS II

Physical education has evolved significantly over time, becoming a multidisciplinary subject that encompasses much more than just physical fitness and an understanding of the rules of various games and sports. Today, physical education integrates knowledge from diverse fields such as

science, biology, genetics, psychology, and sociology. This multidisciplinary approach offers students a deeper and more holistic understanding of the role that sports and physical activity play in their lives. By studying various aspects of physical education, students can gain insights into how sports impact both their physical well-being and mental health, and how this

knowledge can contribute to their overall development. The university recognizes the essential role sports play in promoting physical fitness, mental resilience, and academic excellence. Beyond promoting physical fitness, sports at Through the Value Addition Courses VAC 20 - SPORTS I and VAC 21 - SPORTS II, students can explore the wide-reaching benefits of physical education, gaining knowledge and skills that will serve them well throughout their lives.

# **Events organized by Sports** Council:

## AZADI KA AMRIT MAHOTSAV (15<sup>th</sup> AUGUST 2023)

he sports council, DTU organised the Azadi Ka Amrit Mahotsav Freedom Run on 15th August, 2023, to commemorate India's 76<sup>th</sup> Independence Day. This event was a part of the nationwide celebration called Azadi Ka Amrit Mahotsav, which marks 75 years of India's freedom since gaining independence from British colonial rule. The run aimed to celebrate the spirit of freedom, unity, and healthy living among the students, faculty, and staff of DTU and the wider community. DTU through its vision has always gauged to be a world class university through education innovation and extra-curricular activities. The university has always supported and encourage sports activities since it not serves a purpose of something other than academics but also



teaches importance life lessons which are important for one to adapt in his lifestyle for better growth and development.



# NATIONAL SPORTS DAY (29<sup>th</sup> AUGUST 2023)

National Sports Day is a momentous occasion in India, dedicated to celebrating the birthday of the legendary Indian hockey player, Major Dhyan Chand. It serves as a platform to recognize his remarkable contributions to Indian sports and promote the significance of sports and physical activities across the nation. Major Dhyan Chand, born on 29th August, 1905, is fondly known as the "Wizard of Hockey" for his extraordinary skills and mastery on the field. His pivotal role in India's dominance in field hockey during the 1920s and 1930s made him a national hero. The National Sports Day is an annual tribute to his legacy. Hon'ble Vice Chancellor, DTU; Prof. Jai Prakash Saini was the Chief Patron of the event. with esteemed Registrar DTU; Prof. Madhusudan Singh as patron and Prof. R. C. Singh, Chairman - Sports Council, DTU. The FIT India Run and Sports Activities, at the DTU Sports Complex were a resounding success, drawing participants and sports enthusiasts from all walks of life. The event not only paid homage to Major Dhyan Chand but also reinforced the importance of a healthy and active lifestyle today.





## NATIONAL YOUTH DAY RUN (12th JANUARY 2024)

The National Youth Day Run was organized by the sports council, DTU on 12<sup>th</sup> January, 2024 to commemorate the birth anniversary of influential spiritual leader **Swami Vivekananda**. Established in 1984, the day honors Vivekananda's teachings and emphasizes the importance of youth in nation- building. Hon'ble Vice Chancellor, DTU; Prof Prateek Sharma was the Chief Patron of the event. The other honorable dignitaries were Prof. Rajeev Chaudary, Dean (Student Discipline) and Prof. R. C. Singh, Chairman, Sports Council, DTU.





REPUBLIC DAY CELEBRATION (26<sup>th</sup> JANUARY 2024)

On the Republic Day, DTU Sports Council organized an eventful day filled with sports activities to celebrate the spirit of the nation. The event commenced with a Republic Day Run and an exciting cricket match between the faculty team and the students. The Republic Day celebrations witnessed the presence of esteemed dignitaries including Hon'ble Vice-Chancellor, DTU; Prof. Prateek Sharma, Registrar; Prof. Madhusudan Singh and Chairman, Sports Council; Prof. R. C. Singh at the DTU Sports Complex. The run was open to both students and faculty members, and it experienced enthusiastic participation from the DTU community. Participants from different age groups and



fitness levels came together to celebrate the essence of youth and sportsmanship. The inclusive nature of the event fostered a sense of community among the participants.

### PARAAKRAM (14<sup>th</sup> - 17<sup>th</sup> FEBRUARY 2024)

"PARAAKRAM" the sports meet for faculties, staff, and students of DTU was organized from 14th to 17th, February, 2024. It was one of the best-executed events that the sports council has partaken this year. The Closing ceremony was also conducted on High Note. Trophies, medals, and tokens of appreciation were given to respected participants, organizers, honorable dignitaries, etc. Everyone came together and celebrated the unique blend of camaraderie and sportsmanship among everyone taking out time from routine work.



## AAHVAAN (5<sup>th</sup> – 7<sup>th</sup> APRIL 2024)

AAHVAAN'24 annual national level event organised by Sports Council, DTU during 5<sup>th</sup> - 7<sup>th</sup> April, 2024 with 3<sup>rd</sup> & 4<sup>th</sup> April 2024 as Day zero. This grand event is meticulously organized by the dedicated student

committee, reflecting the enthusiasm and commitment of DTU's dynamic community. Celebrated as one of the premier sports festivals nationwide, AAHVAAN'24 enjoys a prestigious reputation, drawing participants and spectators from all corners of the country. At its essence, it embodies a comprehensive vision that goes beyond a mere sports event. it is a vibrant platform designed to offer Universities students an exceptional opportunity to display their athletic skills. Furthermore, it acts as a beacon for rising talents, nurturing environment conductive to an development and success. The mission of AAHVAAN'24 is multifaceted, emphasizing not only the celebration of athleticism but also the promotion of a spirited culture of healthy competition. It is a convergence point for the brightest young minds, showcasing their abilities while fostering an atmosphere of camaraderie, sportsmanship, and excellence. The opening ceremony, gracing DTU's Sports Complex on 5<sup>th</sup> April, 2024, witnessed Hon'ble Vice Chancellor, DTU; Prof. Prateek Sharma inspiring young sportsman.



### **Achievers of Excellence:**

### BADMINTON -SHASHWAT DALAL

Shashwat Dalal, a student of Computer Engineering at DTU, graduating in 2024, is an international badminton player, currently ranked 310th in the BWF World Rankings. He recently represented India at KOREA OPEN 2023 among the likes of P. V. Sindhu and other top Indians which is the 3<sup>rd</sup> biggest tournament in world badminton. He also represented India in Northern Marianas International Challenge held in the USA where he defeated top players from the world and bagged important points for the world ranking. It has been a matter of pride for the Institute and the country by representing India at India Open & Syed Modi International Challenge and various other prestigious International championships. He will be representing India next at the very prestigious Indonesia Open 2023 which is scheduled in the latter half of August.



### ROPE SKIPPING -AMIT PAL

Amit Pal, an alumnus of Automation Engineering at DTU from 2023 batch, is a rope- skipping athlete who has created many records and achieved milestones of unparalleled mercenary. he is a 3 Times Guinness World Records Holder, 5 Time Limca Book of Records Holder, All India Rope Skipping Championships (AIU) - Silver Medal, 5 Times National level Gold Medallist in Rope Skipping, 5 Times State level Gold Medalist, 2 Times Gold Medalist in Delhi Olympic Games.



# **Other Achiever of Excellence:**

| Name of Student Branch                   | Details of Achievement   |  |
|--|--|--|
| Ankita Yadav                             | Athletics Captain  |  |
| M.Sc. (Biotechnology)                    | <ul> <li>Aagaz 24- 100m- Silver, 200m- silver, 4 ×100m- Gold,</li> <li>Volleyball -Gold</li> </ul> |  |
|  | Rope Skipping Captain  |  |
|  | IIT Kanpur (Udghosh)- 4x100m relay bronze  |  |
|  | IIT BHU (Spardha)-Silver (handball)  |  |
|  | Aahvaan 23 - bronze rope Skipping  |  |
|  | • Aahvaan 24- 1500m - Gold, 800m- silver, Discuss throw-<br>bronze, 4 ×100m - silver               |  |
|  | ARENA 23 - 800m Gold   |  |
|  | National Sports Day 23- 100m - Gold, 200m- Gold, 400m-<br>Gold                                     |  |
| Dhanvi Nautiyal                          | IIT Kanpur (Udghosh)- 4×100m relay bronze  |  |
| Mathematics & Computing                  | IIT BHU- 2 <sup>nd</sup> Shot Put, 3 <sup>rd</sup> Discus, 2 <sup>nd</sup> Handball                |  |
|  | IIT ROORKEE- 2 <sup>nd</sup> Shot put  |  |
|  | Aahvaan- 2 <sup>nd</sup> Discus, 3 <sup>rd</sup> Shot Put, 2 <sup>nd</sup> <b>4×100m Relay</b>     |  |
| Piyush Yadav                             | 1 gold and 1 silver at IIT, BHU  |  |
| Mechanical Engineering                   | 1 bronze at IIT, Delhi   |  |
|  | silver in IIT, Roorkee   |  |
|  | bronze in DTU Aavahan  |  |
|  | gold 1 silver in Aagaz   |  |
|  | gold in Arena  |  |
| Akanksha Tyagi                           | 3 bronze relay at IIT, Kanpur  |  |
| Environmental Engineering                | • 3 <sup>rd</sup> in 4×100 mixed relay at IIT, Mumbai  |  |
|  | 2 <sup>nd</sup> in handball at IIT, BHU  |  |
| Rishi<br>Mashanical Engineering          | 3 <sup>rd</sup> in table tennis at IIT, BHU  |  |
| Mechanical Engineering                   | Ord in table tennic at IIT DUIL  |  |
| Kartik<br>Mechanical Engineering         | 3 <sup>rd</sup> in table tennis at IIT, BHU  |  |
| Gaurav<br>Computer Engineering           | 3 <sup>rd</sup> in table tennis at IIT, BHU  |  |
| Phetso Jack<br>Environmental Engineering | 3 <sup>rd</sup> in table tennis at IIT, BHU  |  |

### 13.5 Health Centre

Officer-In-Charge: - Dr. Rajesh Birok (Electronics and Communication Engineering)

The Delhi Technological University has a modest Health Centre manned by wellexperienced Doctors and other paramedical staff. The services of two general medicine practitioners are available to the students and all other stakeholders throughout the day. The specialized medical practitioners Dental care, Orthopedic, for Eye, Gynecology, Psychiatry, Physiotherapy, etc. visit the health center for expert advice and treatment. The university also

had tied up with nearby leading hospitals for emergency medical assistance for students. Many hospitals near the University are on the panel, such as Saroj Hospital, Mahavir Hospital, Jaipur Golden Hospital, Max Hospital, etc. Moreover, a state of art sports medicine-cum-physiotherapy center provides the necessary expert advice. The following doctors are engaged in the University Health Center.



### **Paramedical Staff**

| S. No | Nursing staff                             | Attendants           |
|-------|---|----------------------|
| 1     | Ms. Milan Gupta                           | Sh. Govind Singh     |
| 2     | Ms. Anmol Jain                            | Sh. Govind Choudhary |
| 3     | Ms. Priya Sharma                          | Sh. Mukul Mandal     |
| 4     | Ms. Sonali Rana                           | Ms. Savita           |
| 5     | Sh. Karan                                 | Sh. Tridev Sah       |
| 6     | Sh. Ashok Rohilla-Physiotherapy Assistant |                      |

## Several initiatives are taken to augment the quality and services of the Health Centre:

- Pradhan Mantri Jan Aushadhi Kendra was inaugurated to provide medicines to all stakeholders.
- The appointment of a new clinical psychologist is under process.
- New doctors to be engaged very soon in the departments of
  - Ayurveda
  - Homeopathy
- Two new General Physicians will be engaged to provide services from 7 pm to 10 pm from Monday to Saturday.
- The salary of doctors hiked up to another 15%.
- TI tripled from existing ₹50,000/- to ₹1,50,000/- to meet out the medicine and other consumables procurement expenditure.
- Generic medicines inventory improved and expanded with new medicines, including rabies vaccines.
- New non-consumable items added, such as-
  - New Air Conditioners installed in all the departments,
  - New furniture such as tables, chairs, stools, benches & reception desk
  - New 100 liters RO Water purifier system.

- Three new separate doctor chambers have been constructed and are at the final completion stage.
- Fencing of the Health Centre has been completed to provide extra security cover to the Health Centre.
- Renovation related to civil and electrical works carried out from time to time in nearly all health center departments.
- Purchase of new medical diagnostic and testing equipment is also under process.
- Sign/flex boards put at all the prominent places to display vital information related to emergency services details, depression, stress symptoms and management.
- First aid boxes procured through Pradhan Mantri Jan Aushadhi Kendra for the distribution in the departments and central utilities of the university.
- To monitor the systematic working of UHC and to check the intrusion of miscreants, installation of CCTV Cameras is under progress.
- Additional services of Physio therapist to be started soon.











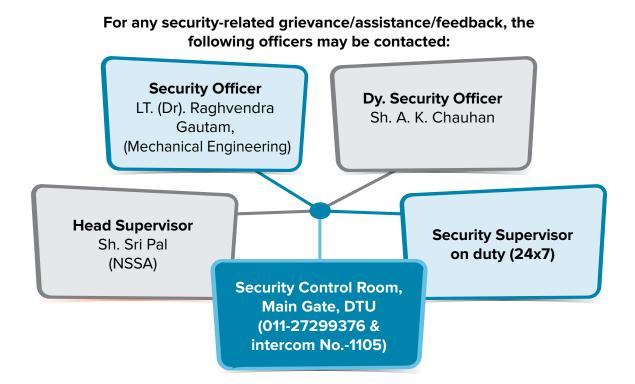




# 13.6 Security and Transport Branch

### **SECURITY BRANCH:**

The Security Branch of DTU functions as the university's immune system, committed to ensuring the safety of people and property within the campus. It comprises a highly efficient team of dedicated security personnel, led by a decisive and principled Security Officer and Deputy Security Officer. Their tireless vigilance ensures the protection of students, VIPs, faculties, staff, guests, and visitors, while also safeguarding the university's buildings, equipment, and infrastructure. In the event of any security breaches or violations, strict action is taken against those involved.



All the stakeholders of the University are hereby informed that in case of any requirement of University Ambulance the following persons may be contacted:

Sh. Mukesh Kumar,
Driver

Security Supervisor
on duty (24x7)

Control Room (Security),
Main Gate, DTU (011-27299376 &
Intercom No. 1105)

All the Stakeholders of the University are requested to promptly report any found valuable items such as (Laptop, Mobile, Camera, Purse etc.) to the "Lost & Found" section located at the Security Control Room, Main Gate or the Security Office, Room No. 109, Admin. Block, DTU.

### **TRANSPORT BRANCH:**

The university has established a transport office equipped with the following vehicles which are available in the University for official duties as needed.

| S.<br>No. | Type of<br>Vehicle        | Registration No. | Attached with              | Name of Drivers                                |
|-----------|---------------------------|------------------|----------------------------|--|
| 1.        | Maruti Ciaz               | DL-11CB-2685     | Hon'ble VC, DTU            | Sh. Mukesh Kumar (Permanent)                   |
| 2.        | Honda City                | DL-10CA-2100     | General Pool               | Sh. Updesh Saini (Contractual)                 |
| 3.        | Ambassador                | DL-<br>8CNA-3902 | General Pool               | Sh. Rishi Pal (Out Source)                     |
| 4.        | Omni Van                  | DL-5CD-9975      | General Pool               | Sh. Rishi Pal (Out Source) (Addl. Charge)      |
| 5.        | Ambulance                 | DL-1A-2507       | Emergency &<br>Trauma      | Sh. Mukesh Kumar (Permanent) (Addl.<br>Charge) |
| 6.        | S/M Bus (Lab<br>of Wheel) | DL-1MA-6407      | Dean, Outreach & Extension | Sh. Davendra Kumar (Out Source)                |

### "LAB ON WHEEL"

It is a customized vehicle used for laboratories purposes and assigned to the Dean of Outreach and Extension Activities (OEA).

The University also operates a 35-seater CNG bus (S/Mazda, DL-1PC-3419, driven by Mr. Ravinder Kumar (with Mr. Kishan Rana as Helper) for transporting students between the nearest metro stations (Samaypur Badli and Rithala) and the campus six times a day. The bus is also made available for educational and industrial tours to nearby areas for students.



### 13.7 Auditoriums

### 1. Dr. B. R. Ambedkar Auditorium:-

The Dr. B. R. Ambedkar Auditorium was inaugurated by Prof. D. Goldar, Principal of Delhi College of Engineering, on 30<sup>th</sup> December, 2007. This fully air-conditioned auditorium features state-of-the-art audio-visual infrastructure, including webcasting capabilities, and has a seating capacity of 650 persons. It is used for a variety of functions and events, such as convocations, the Golden Pride Function, Engifest, Yuvaan, Tech Fest, and various departmental programs and seminars.



### Events held in Dr. B. R. Ambedkar Auditorium

### **Altronix**

On 5<sup>th</sup> September, 2023, SR-DTU's speaker cum orientation event concluded with resounding а **INNOVATION** message: and RESEARCH are the keys to a brighter future. The event brought together industrial giants like Intel, STMicroelectronics, Vistaar Finance, DRDO, CionLabs, and more with our Department Faculties, who shared their invaluable insights with our students. Their words were a beacon of motivation, urging our young minds to reach for the stars.



# IEEE-International Conference on Power Electronics, Intelligent Control and Energy Systems 2024

Department of Electrical Engineering, DTU in collaboration with IEEE PELS-IES Delhi Chapter, IEEE PES-IAS Delhi Chapter, and IEEE Delhi Section organised the "3rd IEEE-International Conference on Power Electronics, Intelligent Control and Energy Systems 2024" in April 2024. Prof. Anil Pahwa, Kansas State University and Prof.



Saifur Rahman, Virginia Tech Advanced Research Institute were the keynote speakers at the event. Prof. Prateek Sharma, Hon'ble Vice Chancellor, DTU graced the event as the chief patron along with patrons Prof. Madhusudan Singh, Registrar, DTU, and Prof. Bhim Singh, IIT Delhi. Prof. Rachana Garg, Head, Dept. of Electrical Engineering and Prof. Vinod Kumar Yadav, DTU chaired the conference while Dr. Ankita Arora, DTU, and Dr. Chaudhry Indra Kumar, DTU served as the co-chairs.

### **SAAMANT - 2024**

DTU-NCC organized a two-days annual function "SAAMANT-2024" on 12<sup>th</sup> - 13<sup>th</sup> April, 2024 on the theme "Future with Progress" at Delhi Technological University. The event was inaugrated by Hon'ble Vice Chancellor of DTU, Prof. Prateek Sharma in Dr. BR Auditorium.





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### **TAPOVAN**

DTU - NCC organized a special lecture on the topic "Tapovan: Regenerating Forests for Meditation - The Miyawaki Way" on 3rd May, 2024 at Dr. B.R. Auditorium, DTU. The Chief Guest; Major General G. D. Bakshi, Chief Patron; Hon'ble Vice Chancellor, DTU; Professor Prateek Sharma, Patron; Prof. Madhusudan Singh, Registrar, DTU, renowned defense analyst, Dr. Vivek Kaul and Shri Nitin Kumar from NGO SayTrees graced the event.

# 2. Raj Soin Hall:-

The foundation stone of Raj Soin Hall was laid by Dr. Raj Soin, an alumnus of the 1969 batch of DCE, on 8<sup>th</sup> February, 2019. The hall was inaugurated by Prof. Yogesh Singh, Hon'ble Vice Chancellor, University of Delhi, on 28<sup>th</sup> October, 2022. Partially funded by Dr. Raj Soin, CEO of Soin LLC and a 1969 alumnus, the Raj Soin Hall has a seating capacity of 3,300 persons. The facility includes four cafeterias in the lobby area and a sports arena with four badminton courts and four table tennis tables. Various events and programs, such as Orientation and Vihaan007, are held in the hall.



# **Events held in Raj Soin Hall**

### Vihaan007

The inaugural day of Vihaan007, North India's largest student-run hackathon, organised by IEEE DTU, was an astounding success. The event, with its focus on the theme "Viksit Bharat," received a tremendous response from students across the country, with over 1,300 participants stepping up to the challenge. The opening ceremony was graced by the esteemed presence of Dr. Tanu Jain, who shared her invaluable insights and inspiring words with the attendees. The occasion was honoured by the presence of Prof. Rachana Garg, IEEE Chairperson - Delhi Section and Prof. S. Indu, Dean Student Welfare, DTU, Delhi



### 13.8 Store and Purchase

### Officer-In Charge: Dr. Pradeep Kumar Teotia

The Stores section maintains quality system of Inventory management system that includes up-to-date records of all stores and equipment received and issued to user departments, as well as conducting Annual Stock Verification and disposing of obsolete or unserviceable stores/equipment.

# **Organization Structure:**

### **Assistant Registrar**

Dr. Pradeep Kumar Teotia

### **Section Officer**

Mr. Madhuresh Kumar Jha

### **Chief Store Keeper**

Mr. Ashok Kumar Pandey

### **Assistant Store Keeper (Contract)**

Ms. Anuradha

### **Junior Office Assistant (Outsource)**

Mr. Sunil

### **Junior Office Assistant (Outsource)**

Mr. Md. Shamsher

### **Junior Office Assistant (Outsource)**

Mr. Balbir Singh

The Purchase section adheres to a quality procurement policy, with key consideration for the purchase of Goods and services, including:



Efforts are being made to ensure placement of contract and purchase order are placed within the original validity of the bids. The specified quality and reliability of the supplier must be considered alongside cost-effectiveness. The purchasing procedures followed at this University are based on the guidelines enumerated in the General Financial Rules 2017 and Manual of Procurement of Goods 2017.

The university has established various committees comprising faculty and officers to oversee the purchasing process:

### **Central Purchase Committee (CPC)**

The committee comprising senior faculty members has been formed to scrutinize and evaluate all purchase proposals from university departments with an estimated cost of exceeding ₹50 Lacs. The committee submits its recommendation to the Vice-Chancellor of DTU for final approval.

### **University Technical Evaluation Committee**

The University Technical Evaluation Committee (TEC) has been established to review, and approve purchase proposals for Computers, Computer Peripherals and Software from various departments of the university.

### **Departmental Purchase Committee**

The committee has been constituted at the department level, chaired by respective Head of Department (HOD), to securitize and evaluate the technical and financial bids for all the purchase proposals related to their department. This will submit its recommendation to the Competent Authority.

In addition to the committees, there are some specific committees, including:

Stationery & Printing Committee Chemical & Glassware Purchase Committee

# 13.9 Engineering Cell & Estate Office

Officer-in -Charge: **Prof. Amit Srivastava** (Chief Project Officer)

The Campus of Delhi Technological University, DTU Erstwhile Delhi College of Engineering, DCE has functioned from its historic Kashmere Gate Campus for almost 55 years and has shifted in 1996 to its lush green sprawling campus of 164 Acres at Bawana Road, adjoining Sector-17, Rohini, Delhi-42. Its shifting to new added the campus has dimension of research and



caused innovations in plenty, which has received high national and international acclaim. The total campus plot area is 163.87 acres (663154.03sqm). The Campus was shifted from Kashmere Gate Campus to Bawana Road after the construction of 1st phase targeting the infrastructure for 3000 students. Presently, catering the need of about 15000 students. The breakup of land use is given below:-

| Description                | DTU- Main Campus (In Acres) | DTU-East Delhi Campus (In Acres) |
|----------------------------|-----------------------------|----------------------------------|
| Total land Available       | 163.87                      | 2.06                             |
| Area For Road Widening     | 1.13                        | -                                |
| Net Area                   | 162.74                      | 2.06                             |
| Academic Area              | 74.86 (46%)                 | 0.58                             |
| Residential & Hostels Area | 42.31 (26%)                 | N/A                              |
| Green/Open Area            | 21.15 (13%)                 | 1.23                             |
| Sports and Cultural Area   | 24.42 (15 %)                | 0.25                             |

### **Administrative and Academic Blocks**

The details of administrative and academic blocks of DTU along with its corresponding approximate ground coverage and covered area details are as given below:

| S.<br>No. | Description                  | Total Gr.<br>Coverage (Sq.M) | Total Covered Area on all Floors (Sq.M) |
|-----------|------------------------------|------------------------------|---|
| 1.        | Administrative Block         | 1879.40                      | 4063.66                                 |
| 2.        | Electrical Block             | 9628.64                      | 23684.49                                |
| 3.        | Electronics                  | 9628.64                      | 23684.49                                |
| 4.        | Civil Engineering Block      | 9628.64                      | 23684.49                                |
| 5.        | Mechanical Engineering Block | 4208.83                      | 14291.10                                |

| S.<br>No. | Description                                       | Total Gr.<br>Coverage (Sq.M) | Total Covered Area on all Floors (Sq.M) |
|-----------|---|------------------------------|---|
| 6.        | Workshop Block                                    | 3416.20                      | 3416.20                                 |
| 7.        | Faculty Block (Electrical Engineering Department) | -                            | 1100                                    |
| 8.        | Faculty Block (Civil Engineering)                 | -                            | 1118                                    |
| 9.        | Science Block                                     | 2817.43                      | 8667.78                                 |
| 10        | Academic Block-3 (AB-3)                           | 1809                         | 17032                                   |
| 11        | Academic Block-4 (AB-4)                           | 2285                         | 22773                                   |

### **Central Administrative and Academic Facilities**

The details of various central administrative and academic facilities at DTU is given below:-

| Branch of SBI             | Health Center                     |
|---------------------------|-----------------------------------|
| Post Office               | Guest House                       |
| Canteen, Kiosks and Shops | DTU studio                        |
| Sport Complex             | Kids day care                     |
| Open Air Theater (OAT)    | Raj Soin Hall (Multipurpose Hall) |
| Gymnasium                 | Record Room                       |
| B. R. Ambedkar Auditorium | Jan-Audhadhi Kendra               |
| Computer Center           | Kendriya Bhandar                  |
| Training & Placement Cell | Mother Dairy                      |
| Library                   | Cafeteria near Pragya Bhawan      |

# **Accommodation Facilities: Boys & Girls hostel**

The details of boys & girls hostel accommodation for boys and girl students including capacity of each hostel are given below:

### **Details of Boys hostel**

| S.<br>No. | Name of Hostel                  | Capacity (Nos.) |
|-----------|---------------------------------|-----------------|
| 1.        | Bhaskaracharya Hostel           | 176             |
| 2.        | Sir C. V. Raman Hostel          | 177             |
| 3.        | Sir J.C. Bose Hostel            | 177             |
| 4.        | Varahmihir Hostel               | 174             |
| 5.        | Sir Vishveshwarya Hostel        | 178             |
| 6.        | Homi Jehangir Bhabha Hostel     | 164             |
| 7.        | Aryabhatt Hostel                | 171             |
| 8.        | Ramanujan Hostel                | 42              |
| 9.        | Dr. APJ Abdul Kalam Hostel (AC) | 315             |
| 10.       | Type – II Hostel                | 159             |

### **Details of Girls hostel**

| S.<br>No. | Name of Hostel                      | Capacity<br>(Nos.) |
|-----------|-------------------------------------|--------------------|
| 1.        | Kalpana Chawla Hostel (KCH)         | 42                 |
| 2.        | Sister Nivedita Hostel (SNH)        | 74                 |
| 3.        | Virangana Lakshmibai Hostel<br>(AC) | 666                |

## **Accommodation Facilities: For Faculties & Staffs**

The details of residential accommodation for faculties and staff members including numbers of different type of houses/flats with its corresponding approximate ground coverage and covered area details are given below:

| S.<br>No | Type of residence   | Nos | Total Gr. Coverage<br>(Sq.M) | Total Covered area on all floors (Sq.M) |
|----------|---------------------|-----|------------------------------|---|
| 1.       | Type VI Residence   | 1   | 200.00                       | 250.00                                  |
| 2.       | Type V Residence    | 56  | 2984.68                      | 11938.72                                |
| 3.       | Type IV Residence   | 60  | 1565.56                      | 6262.24                                 |
| 4.       | Type III Residences | 45  | 878.28                       | 3513.12                                 |
| 5.       | Type II Residence   | 105 | 1679.37                      | 6717.48                                 |
| 6.       | Type I Residence    | 60  | 803.12                       | 3212.48                                 |
|          | Total               | 327 | 8111.01                      | 31894.04                                |

### Other Green Infrastructure at a Glance

The University is equipped with other green infrastructure as per the govt. Norms. The details are given below:

| S. No. | Description   | Capacity   |  |
|--------|---|--|--|
| 1.     | Solar power generation 880 (Kwh)  |  |  |
| 2.     | Solar Water heating   | 28000 LPD  |  |
| 3.     | PNG Gen Set   | 125 KVA at East Campus   |  |
| 4.     | Sewage Treatment Plant (STP)  | 1.0 MLD  |  |
| 5.     | Waste to Energy Plant (WTP)   | 1.0 TPD  |  |
| 6.     | Organic Composting dry leaves pit   | it 864 Cumt.   |  |
| 7.     | Rain water Harvesting System  |  |  |
|        | 7.1 Main campus 6 nos. pits of total 162 capacity catering to 330 Cum/year rainfall at Main Campus; |  |  |
|        | 7.2 East Campus   | 1 no. pit size of 6 Cum handling about 122 Cum/<br>year rainfall in East Campus. |  |

# **Ongoing Projects: Civil & Electrical works**

The University has Committed to Build the World class Infrastructure facilities for fulfilling the futuristic demand of the students, faculties & staffs. The various works are ongoing in the university. The details are given below:

### **Details of various Civil Works:**

| S. No. | Description of Work  |  |
|--------|--|--|
| 1.     | Construction of Four Storied Mess Building for the Girls Hostel.                 |  |
| 2.     | Construction of Parking for students near temple area                            |  |
| 3.     | Renovation and upgradation of washrooms at Academic Area                         |  |
| 4.     | Repair and renovation of University Health canter and Guest House                |  |
| 5.     | Repair and renovation of transit hostel  |  |
| 6.     | Special repair and renovation of residential flats                               |  |
| 7.     | Opening of Mother Dairy, Jan Aushadhi Kendra and Kendriya Bhandar in DTU Campus. |  |

| S. No. | Description of Work  |  |
|--------|--|--|
| 8.     | Construction of lifts in old academic and Type-IV & V residential blocks.          |  |
| 9.     | Construction of Pragya Bhawan Cafeteria  |  |
| 10.    | Development of Pond area.  |  |
| 11.    | Construction of Wind Tunnel in Civil Engg. Department.                             |  |
| 12.    | Development of park near Dr. APJ Hostel & Pond Area, Electrical & Civil Dept. Main |  |
|        | Entrances, Type-IV, Admin. Block   |  |
| 13.    | Medicinal Herb Garden near Dr. Raj Soin MP Hall.                                   |  |
| 14.    | Construction of an Alternative Entry/Exit of DTU Campus near canall.               |  |
| 15.    | Health center bedding facility enhanced from 10 bed to 16 bed.                     |  |

# **Details of various Electrical Works:**

| S. No. | Description of Work   |
|--------|---|
| 1.     | Providing and fixing high-mast flood lights for illumination of Cricket and Football Ground.  |
| 2.     | Augmentation of Existing Firefighting and Fire detection System of Delhi Technological University Delhi.                                  |
| 3.     | RMO 3×100 TR Screw Chilling Machine installed for library computer center and Auditorium building.  |
| 4.     | SITC of Professional Audio System with surround cinema system for Raj Soin Hall and auditorium.   |
| 5.     | AMC of VRF Type Air Conditioning System Faculty Block and Design Centre, DTU, Delhi.  |
| 6.     | AMC water cooler with RO system or aqua-guard installed at different location in DTU, Bawana Road, Delhi                                  |
| 7.     | Servicing & routine maintenance of air conditions of SAC, WAC, Cassette type and Tower type AC, DTU Campus of different makes, DTU, Delhi |

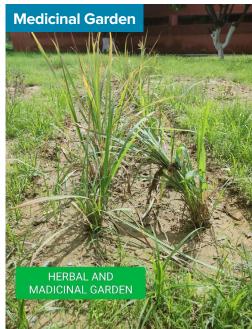
# **Significant Achievements**

The University has completed various works and achieved significant milestones which has directly benefited the stakeholders and University's population at a large. The details of significant achievements are given below:

















# 14. Other Facilities

### 14.1 DTU Studio

Office-in-charge: Prof. S. Indu (Deptt. of Electronics and Communication)

The Television Studio at Delhi Technological University (DTU) stands as a prime example of innovation and industry-academia collaboration. This state-of-the-art studio is fully equipped to handle the entire spectrum of media production, including pre-production, production, and post-production activities. It serves as a versatile platform for interviews, panel discussions, short plays, lectures, and more.

The DTU Studio features a multi-camera setup with lighting grids, teleprompters, and a production control room equipped with advanced control panels to manage multiple video and audio sources in both live and recorded formats. The studio is also equipped with graphics and special effects generators, and video editing suites that utilize cutting-edge software, including I-Mac systems with Final Cut Pro X (FCP-10), Photoshop for graphic design, and Motion and Live-Type for animation.

Our experienced and competent team of professionals renders these services by making use of ultra-modern technology with quality standards in tandem with exact requirements and necessities as required. The offered services are highly demanded for their unique characteristics such as reliable solution, flexible approach, hassle-free management, promptness, and professional approach.

Students at Delhi Technological University are actively involved in both In-house and Outdoor production activities. These activities are recognised for their timely execution, promptness, and seamless operation. The studio's strength lies in its

ability to execute projects with precision and professionalism, ensuring the best possible outcomes for all productions.

### Infrastructure:

- The DTU Studio at Delhi Technological University features two fully equipped production studios, offering capabilities for both Indoor and Outdoor media One of production. the studios includes advanced facilities such as a teleprompter, chroma keying with virtual studio sets, and all the essential equipment for high-quality video production. Additionally, the studio is equipped with two ENG (Electronic News Gathering) camera setups, ideal for capturing outdoor events, festivals, seminars, and live performances held at DTU.
- The studio is outfitted with high-ended broadcast-quality equipment ensuring professional-grade production. includes: Three Sony studio camera, Two Camcorder. Two Still camera. One Non-Linear Editing machine Mac Pro with Final Cut Pro Video Editing software, One Dell Precision T 7500 Workstation, One 7 Dell Precision tower 7810 dual Intel Xeon Workstation, VT-5 Live switcher, Sony D-800 Live switcher, Newtek live audio and video switcher, Two Yamma O1V96 digital Audio Consol, Two lite-Puter CV12. These sophisticated allow for comprehensive production, catering to a wide range of media needs, from live broadcasting to professional video editing.

ISO 9001:2015 Certified

### **UTILIZATION**

DTU STUDIO covers a wide range of university Events, including International Conferences, Departmental workshops, lab experiments, Student Fests, and Alumni Meets. Additionally, the studio supports the recording of key academic initiatives such as the Global Initiative of Academic Networks (GIAN) and TEQUP programs in higher education. These programs feature renowned faculty, guest lectures from both national and international experts, ensuring valuable academic content is captured and preserved for future use.

### DTU STUDIO YouTube Channel

- Currently, over 600 videos have been uploaded to the DTU Studio YouTube channel, which has garnered more than 14,000 subscribers and several million views to date.
- Apart from this, live broadcasts of nearly all major events at Delhi Technological University, event photography, audiovideo recordings, and other digital content, including event highlight videos, are continuously being uploaded to the DTU Studio YouTube channel.

# **Services Being Offered:**

Leveraging our in-house capabilities, offer comprehensive we preproduction, production, and postproduction services for a variety of programs, including interviews, panel discussions, short plays, and lectures. These activities are conducted in the university's spacious television studio, located on the first floor of the Civil/ Environmental Engineering department. Our video library currently houses over 2,000 lectures on diverse topics.

- To deliver these services, we employ highly skilled and innovative professionals with extensive experience in their respective fields.
   Our offerings are renowned for their flexibility, reliability, and timely execution.
- Additionally, we provide top-notch outdoor photography and video production services tailored to meet specific requirements. These services are customizable and widely appreciated for their promptness, seamless operations, and on-time delivery.

| S.<br>No. | Video Title  | Link                         |
|-----------|--|------------------------------|
| 1         | ORIENTATION CUM INDUCTION PROGRAMME-2023 Part -1   Welcome Address by Prof. Rajeshwari Pandey          | https://youtu.be/Yrv7U9o7j1s |
| 2         | ORIENTATION CUM INDUCTION PROGRAMME-2023 Part-2   Address by Prof. Madhusudan Singh, Registrar, DTU    | https://youtu.be/Yrv7U9o7j1s |
| 3         | ORIENTATION CUM INDUCTION PROGRAMME-2023 Part-3 Distinguished Alumnus Sh. Karnal Singh Ex. IPS Officer | https://youtu.be/ZO2hMhTO4jw |
| 4         | ORIENTATION CUM INDUCTION PROGRAMME-2023<br>Part-4 Address by Prof. J.P. Saini, Vice Chancellor, DTU   | https://youtu.be/ZO2hMhTO4jw |
| 5         | DTU Celebrating 77 <sup>th</sup> Independence Day   Azadi Ka Amrit<br>Mahotsav-2023 Highlight          | https://youtu.be/-xFTGILLIWU |
| 6         | The Students Podcast Series   DTU ISS UNITE Podcast Series Teaser                                      | https://youtu.be/8iexw96Q94w |

| S.<br>No. | Video Title   | Link                             |
|-----------|---|----------------------------------|
| 7         | The Students Podcast Episode-1   DTU ISS UNITE Podcast Series Episod-1                            | https://youtu.be/8iexw96Q94w     |
| 8         | Cyber Security Law Ethics & Human Values for DTU Students   | https://youtu.<br>be/2b65UxW2be0 |
| 9         | Introduction to High Performance Computing & its Application in Al Inauguration Session           | https://youtu.be/ykTEWpU9cw4     |
| 10        | दिल्ली प्रद्योगिकी विश्वविद्यालय &आकाशवाणी दिल्ली का यूथ<br>कॉन्क्लेव (G -20 समिट-2023) Highlight | https://youtu.be/uhXuf8Cu46U     |
| 11        | The Students Podcast Episode-2   DTU ISS UNITE Podcast Series Episod-2                            | https://youtu.be/FAIOomQQh7c     |
| 12        | DTU Anti Ragging Week Highlight   दल्ली प्रद्योगिकी विश्वविद्यालय ने मनाया एंटी रैगगि सप्ताह      | https://youtu.be/ykTEWpU9cw4     |
| 13        | The Students Podcast Episode-3   DTU ISS UNITE Podcast Series Episod-3                            | https://youtu.be/j0TlgG0_bok     |
| 14        | The Student's Podcast Episode-4   DTU ISS UNITE Podcast Series Episod-4                           | https://youtu.be/Z5fXQpmlYHY     |
| 15        | Event HIGHLIGHT of Farewell Function of Prof.JP Saini, Hon'ble Vice Chancellor DTU                | https://youtu.be/x548aQ0xFp0     |
| 16        | Three Weeks Technical Training Programme   Event Highlight  | https://youtu.be/8cbgJUQ52_0     |
| 17        | Guest Speaker Lecture Dr. Subodh Morji  | https://youtu.be/YJgBKWUkKFI     |
| 18        | Guest Speaker Lecture Rahul Pandey ji   | https://youtu.be/yK5yXkgk-ek     |
| 19        | Prof Ruchika Malhotra ji Lecture  | https://youtu.be/9Vf8q3JJJOk     |
| 20        | Skill Enhancement Computer Workshop PART -1   | https://youtu.be/bvRfJZ7clK4     |
| 21        | Skill Enhancement Computer Workshop PART-2  | https://youtu.be/YWGz9TlaesY     |
| 22        | DTU Golden Pride Function-2023 EVENT Highlight  | https://youtu.be/mkt-4m14h_l     |
| 23        | DTU Golden Pride Function-2023   Distribution of Certificate & Medals                             | https://youtu.be/OP2IoSTKznl     |
| 24        | Award of 100 5g Use Case Labs to Academic Institutions  <br>India Mobile Congress 2023            | https://youtu.be/HO6JstH0I1I     |
| 25        | DTU Gold Medalist-2023   Experiences Sharing by DTU Gold Medalist-2023   DTU Convocation-2023     | https://youtu.be/SoZn4xbzpK4     |
| 26        | DTU Gold Medalist-2023   Experiences Sharing by DTU Gold Medalist-2023   DTU Convocation-2023     | https://youtu.be/bd3XZJI-6Fg     |
| 27        | DTU Gold Medalist-2023   Experiences Sharing by DTU Gold Medalist-2023   DTU Convocation-2023     | https://youtu.be/c2rWoBBp0tk     |
| 28        | Two New Academic Blocks in DTU inaugurated by Honourable LG Sir & Technical Education Minister    | https://youtu.be/DXFncN90tEE     |
| 29        | DTU's new Vice Chancellor Professor Prateek Sharma took charge of DTU                             | https://youtu.be/1lgFIPWDnFM     |

| S.<br>No. | Video Title   | Link                                     |
|-----------|---|--|
| 30        | DTU 10 <sup>th</sup> Convocation 2023 Highlight   डीटीयू के दसवें दीक्षांत<br>समारोह-2023 की हाईलाइट                | https://youtu.be/sTU3QRvHsow             |
| 31        | National Mathematics Day-2023   A Jubilant Fete in Honor of Srinivasa Ramanujan                                     | https://youtu.be/-bSuwBYhWBg             |
| 32        | Event Highlight of $1^{\text{st}}$ National Conference on National Youth Day-2024                                   | https://youtu.be/58tQC_VXOr8             |
| 33        | $75^{\text{th}}$ Republic Day -2024 Celebration Part-1   DTU Family Celebrating $75^{\text{th}}$ Republic Day -2024 | https://youtu.be/rxKXvdbiAlw             |
| 34        | $75^{\text{th}}$ Republic Day 2024 Celebration Part 2   DTU Family Celebrating $75^{\text{th}}$ Republic Day 2024   | https://youtu.be/g11u4NBfE5w             |
| 35        | Beautiful Memories of OUR ALUMNI (Documentary)   DTU Homecoming Meet-2024   | https://youtu.be/Sa8Z-KjEMCU             |
| 36        | DTU INVICTUS-2024 EVENT HIGHLIGHT   INVICTUS is The Annual Technical Fest of DTU #dtufest                           | https://youtu.be/cBuaNnmILUA             |
| 37        | DTU PARAAKRAM - 2024 EVENT HIGHLIGHT   SPORTS MEET FOR FACULTY & STAFF #dtufest #collegelife                        | https://youtu.be/tz4CCBtoyQo             |
| 38        | DTU PARAAKRAM 2024 Valedictory Ceremony Highlight   Who is Winner of PARAAKRAM-2024 #dtufest                        | https://youtu.be/q02y6nOr22Y             |
| 39        | About Department of Biotechnology DTU   Documentary of Biotechnology Department DTU #dtu                            | https://youtu.be/QXzBh9fZu6I             |
| 40        | About Examination Department DTU $\mid$ A Successful Story of Examination Department DTU                            | https://youtu.be/07A4acw2EbA             |
| 41        | DTU Celebrate International Yoga Day 2024   डी टी यू में शुरू<br>होगा योग और वैलनेस पाठ्यक्रम HIGHLIGHT             | https://youtu.be/<br>DyHzQZ4NDsw         |
| 42        | Unlock Your Future with Dtu's Latest Course Offerings   Navigate the Admission Process Now!                         | https://youtu.be/h1tD051oRmc             |
| 43        | Live Orientation Cum Induction Programme 2023   | https://youtube.com/live/<br>g88iWTWEg9U |
| 44        | G-20 SUMMIT-2023    live  | https://youtube.com/<br>live/8PTnZkB5-4Q |
| 45        | DTU Golden Pride Function-2023 LIVE   | https://youtube.com/live/<br>kZ1UoOupe_g |
| 46        | DTU 10 <sup>th</sup> Convocation-2023 LIVE  | https://youtube.com/live/<br>LGcANMVRUKU |
| 47        | DTU Orientation cum Induction Programme-2024 LIVE   Welcome Newly Admitted Students & Their Parents                 | https://youtube.com/live/<br>OaO1rFiY8rA |
| 48        | DTU HOMECOMING MEET-2024 (Diamond, Golden & Silver Jubilee for DCE Graduates) LIVE                                  | https://youtube.com/live/<br>wyt2V5DmbCE |
| 49        | DTU Chapter Presents a RAJASTHANI FOLK LIVE BY ANWAR KHAN LANGA JI & GROUP  | https://youtube.com/live/<br>wfNl1azMmoQ |

## 14.2 Guest House

Officer-in-charge: Dr. R. K. Yadav, (Deptt. of Computer Sc. & Engineering)

The University has a guest house on campus, primarily designated for official guests of DTU, as well as participants attending seminars, workshops, conferences, and training programs organized by the

University, its centers, or departments. The guest house offers eight double-bedded rooms, equipped with all modern amenities for a comfortable stay.



# **15. University Accounts**

Shahi

Govt. of NCT of Delhi

Delhi Technological University

(Formerly Delhi College of Engineering)

ShahbadDaulatpur; Bawana Road, Delhi-110042.

**GFR 12-C [SEE RULE 239]** 

# AUDITED UTILIZATION CERTIFICATE OF GRANT- IN- AID FOR THE FY 2023-24 (PERIOD FROM 01.04.2023 TO 31.03.2024)

| SN | DETAILS  | AMOUNT (IN RS.) |  |
|----|--|-----------------|--|
| 01 | Un-spent amount of the FY 2022-23 (Opening balance for | NIL             |  |
|    | FY 2023-24)  |                 |  |
| 02 | GIA 1 <sup>st</sup> instalment released                | 14,00,00,000    |  |
| 03 | GIA 2 <sup>nd</sup> instalment released <b>20,50,0</b> |                 |  |
| 04 | GIA 3 <sup>rd</sup> instalment released                | 10,25,00,000    |  |
|    | Total  | 44,75,00,000    |  |
| 05 | Expenditure during the period 01.04.2023 to 31.03.2024 | 44,75,00,000    |  |
|    | SALARY- 30,00,00,000                                   | 44,75,00,000    |  |
|    | GENERAL- 11,00,00,000                                  |                 |  |
|    | CAPITAL-3,75,00,000                                    |                 |  |
|    | Un-spent amount of the FY 2023-24                      | NIL             |  |

Certified that out of Rs.44,75,00,000/- (GIA) of total fund i.e. un-spent balance of previous year (2022-23), GIA during the FY 2023-24 the DTU has utilized a sum of Rs.44,75,00,000/- 01.04.2023 to 31.03.2024 and NIL is remained unutilized as on

Certified that I have satisfied that the condition on which the GIA was sanctioned have been duly fulfilled/are being fulfilled and that I have exercised the following checks to see that the money was actually utilizing for the purpose for which it was sanctioned.

Kind of checks exercised:

- 1. As per Delegation of Financial Powers, DTU
- 2. As per GFR-2017 provisions
- 3. As per existing R&P Rules

Ajay Kumar Gupta Chartered Accountant

(DCA)

(Controller of Accounts)

(Registrar DTI)

# DELIII TECHNOLOGICAL UNIVERSITY BALANCE SHEET AS AT 31ST MARCH 2024

| BALANCE SHEET AS AT 31   | ST MARCH, 202     | 4  |   |
|--|-------------------|--|---|
|  | Schedule          | As at 31-03-2024<br>(Rs)   | As at 31-03-2023<br>(Rs)  |
| SOURCES OF FUNDS   |                   |  |   |
| CAPITAL FUND CORPUS FUND DESIGNATED/EARMARKED/ENDOWMENT FUNDS CURRENT LIABILITIES AND PROVISIONS | 1<br>1A<br>2<br>3 | 6,047,040,692.79<br>519,726,856.00<br>4,723,100,471.87<br>102,270,905.00 | 5,418,387,821.09<br>485,226,572.00<br>3,550,072,979.21<br>90,340,505.38 |
| TOTAL  |                   | 11,392,138,925.66  | 9,544,027,877.68  |
| APPLICATION OF FUNDS   |                   |  |   |
| FIXED ASSETS Tangible Assets Intangible Assets Capital Work In Progress                          | 4                 | 3,640,722,354.34<br>32,204,209.39<br>111,531,994.00                      | 3,700,043,373.34<br>39,196,744.34<br>97,222,865.00                      |
| INVESTMENTS  | 5                 |  |   |
| Long Term (Earmarked Funds)  |                   | 3,863,020,903.00   | 2,952,941,325.00  |
| INVESTMENTS - OTHERS   | 6                 | 2,190,496,789.00   | 1,210,626,925.00  |
| CURRENT ASSETS   | 7                 | 1,168,425,181.65   | 1,274,674,913.41  |
| LOANS, ADVANCES AND DEPOSITS   | 8                 | 385,737,494.28   | 269,321,731.59  |
| TOTAL  |                   | 11,392,138,925.66  | 9,544,027,877.68  |
| SIGNIFICANT ACCOUNTING POLICIES & NOTES TO ACCOUNTS  | 23                |  |   |

For M.A.M & Associates Chartered Accountants

Ajay Kumar Gupta (Partner) M.No. 095390 NEW DELHI

For Delhi Technological University

(Sr. AO / DDO)

Nine

(DCA)

(Controller of Finance)

(Registrar)

(Vice Chancellor)

Place: New Delhi Dated: 5th September, 2024

# DELHI TECHNOLOGICAL UNIVERSITY INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2024

| INCOME.   | Schedule | 2023-2024<br>(Rs) | 2022-2023<br>(Rs)                     |
|---|----------|-------------------|---------------------------------------|
| Academic Receipts                                       |          |                   | 1,836,103,018.83                      |
| Grant in Aid  | 9        | 1,984,853,131.86  | 410,000,000.00                        |
| Income From Investments                                 | 10       | 410,000,000.00    | 33,836,944.00                         |
| Interest Earned   | 11       | 86,102,050.00     | 33,830,944.00                         |
| Other Incomes   | 12       | -                 | 208,114,852.88                        |
| Prior Period Income                                     | 13       | 163,674,026.17    | 208,114,652.66                        |
|   | 14       | 800,429.00        |                                       |
| TOTAL (A)   |          | 2,645,429,637.03  | 2,488,054,815.71                      |
| EXPENDITURE   |          |                   |                                       |
| Staff Payments & Benefits (Establishment Expenses)      |          |                   |                                       |
| Academic Expenses                                       | 15       | 1,077,203,860.00  | 1,061,343,661.00                      |
| Administrative and General Expenses                     | 16       | 151,771,280.00    | 140,746,866.00                        |
| Transportation Expenses                                 | 17       | 404,052,323.00    | 351,287,020.28                        |
| Repair and Maintenance                                  | 18       | 314,787.00        | 157,361.00                            |
| Finance Costs   | 19       | 225,674,037.02    | 143,411,749.00                        |
| Depreciation  | 20       | 44,588.55         | 167,496.02                            |
| Other Expenses  | 4        | 228,471,230.13    | 222,282,255.09                        |
| Prior Period Expenses                                   | 21       | -                 | · · · · · · · · · · · · · · · · · · · |
|   | 22       | -                 | 24,610,559.00                         |
| TOTAL (B)   | -        | 2,087,532,105.70  | 1,944,006,967,39                      |
| Dalamata ta Barana                                      | =        |                   | 1,11,000,707,37                       |
| Balance being Excess of Income over Expenditure         |          | 557,897,531.33    | 544,047,848.32                        |
| Transfer To Retirement Benefits Fund                    |          | 20,000,000.00     | 20,000,000.00                         |
| Building Fund   |          | -                 | 20,000,000.00                         |
| Balance Being Surplus/(Deficit) Carried To Capital Fund | _        | 537,897,531.33    | 524,047,848.32                        |
|   | _        |                   | 7                                     |

SIGNIFICANT ACCOUNTING POLICIES & NOTES TO ACCOUNTS

For M.A.M & Associates Chartered Accountants

Ajay Kumar Gupta (Partner) M.No. 095390 NEW DELHI

For Delhi Technological University

(Sr. 40 / DIO)

(NSVAO)

(DCA)

(Contoller of Finance)

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(Vice Chancellor)

Place: New Delhi Dated: 5th September, 2024

|   | RECEIPTS AN      | AD PAYMENT ACCO                         | DELHI TECHNOLOGICAL UNIVERSITE<br>RECEPTS AND PAYMENT ACCOUNT FOR THE YEAR ENDED 31ST MARCH, 2024                             |                                | Amount in Rupees                                 |
|---|------------------|---|---|--------------------------------|--|
|   |                  |   |   | 2023-2024                      | 2022-2023  |
| RECEIPTS  | 2023-2024        | 2022-2023                               | PAYMENTS  | 00000                          | 00 1343 561 00                                   |
| I. Opening Balance                                  |                  |   | 1. Payments   | 1,077,203,860.00               | 140 746 866.00                                   |
| a) Cash Balance                                     | ř                | •                                       | b) Academic Expenses  | 151,77,260.00                  | 344,782,033.28                                   |
| o) bank balance                                     | 20 255 257 000   | 10 1170 1170 1                          | c) Administrative Expenses  | 00 787 A15                     | 157,361.00                                       |
| ii In Denocit accounts                              | 105 435 919 00   | 950 350 143 00                          | d) Transportation Expenses  | 22 674.037.02                  | 143,411,749.00                                   |
| iii. Saving accounts                                | 281,622,257.45   | 193,071,618.58                          | e) Repair and Maintenence   | 44,588.55                      | 167,496.02                                       |
|   |                  |   | f) Finance Costs o) Prior Period Expenses   | •                              | 24,610,559.00                                    |
|   |                  |   | (9  | 790 532,920.21                 | 366,311,482.21                                   |
| II. Grant Received                                  |                  |   | II. Payments against Earmarked /  |                                |  |
| a) From Government of India                         |                  | •                                       | Endowment Fund  |                                |  |
| b) From State Government                            | 00 000 001 11    | 00 000 000                              |   |                                |  |
| (i) For Capital Expenditure                         | 37,500,000.00    | 410,000,000,00                          |   |                                |  |
| c) From Other sources (details)                     |                  | -                                       |   |                                |  |
| (Grants for capital & revenue exp / to be           |                  |   |   |                                |  |
| shown separately if available)                      |                  |   |   |                                |  |
| III. Academic Receipts                              | 1,984,853,131.86 |   | 1,836,103,018.83 III. Payment against Sponsored   | •                              |  |
|   |                  |   | Projects/ Schemes   |                                |  |
| IV. Receipts against Earmarked /<br>Endowment Funds | 1,242,384,030.24 | 1,158,972,792.45                        | 1,158,972,792,45 IV. Expenditure Out of Corpus Fund   |                                |  |
|   |                  |   |   |                                |  |
| V. Receipts against Corpus Fund                     |                  |   | V. Investment and Deposits made   |                                | 200  |
|   |                  |   | a) Out of Earmarked /Endowment Funds b) Out of own funds (Investments-Others)   | 3,840,460,591.00               | 1,751,756,512.00                                 |
| VI. Receipts against Sponsored                      |                  |   | VI. Term Deposits with Scheduled Banks  |                                |  |
| Fellowships and Scholarships                        |                  |   |   |                                |  |
| VII. Interest on Investments from                   |                  |   | VII. Expenditure on Fixed Assets and Capital  |                                |  |
| a) Earmarked / Endowment funds                      | 184,164,361.00   | 80,210,236.00                           | Works - in - Progress   | 81 995 055 58                  | 187 051 175 54                                   |
| b) Omer investments                                 | 2000             | 000000000000000000000000000000000000000 |   | 01.004.                        |  |
| c) Corpus Fund                                      | 28,168,272.00    | 23,204,992.00                           | b) Capital Works - in -Progress out of Grant/ UGF<br>a) Fixed Assets out of NGF<br>b) Capital Works - in -Progress out of NGF | 33,164,922.00<br>47,372,123.00 | 31,546,865.00<br>132,274,059.00<br>19,098,923.00 |
| Will Interest Descripted on                         |                  |   | VIII Other Payments including Statutory   | CT CAL 124 CES                 | 117 (23) 637 618                                 |
| a) Bank Deposits                                    | 3,029,580.00     | * 1                                     | payments  | 7/705155756                    |  |
| c) Saving Bank Accounts                             | 7,102,426.00     | 6,808,808.00                            |   |                                |  |
|   |                  |   |   |                                |  |





| IX. Term Deposits with Scheduled Banks<br>encashed  |                                      |                                    | IX. Refund of Grants   |                                  | 59,860,175.00                                     |
|---|--------------------------------------|------------------------------------|--|----------------------------------|---|
| X. Investments encashed<br>a) Out of Earmarked /Endowment Funds<br>b) Out of own funds (Investments-Others) | 2,930,381,013.00<br>2,738,615,931.00 | 1,302,509,348,00<br>386,415,725,00 | X. Deposits and Advances   | 61,331,159,00                    | \$9,800,175.00                                    |
| XI. Other Income (including Prior Period<br>Income)   |                                      |                                    | XI. Other Payments   |                                  | and the second second second second               |
| XII. Deposits and Advances  | 49,478,486.50                        | 40,316,318,00                      | XII. Closing Balance a) (2sh in hand a) Bank Balance In Current accounts In Expand accounts In Saving accounts | 881,064,754,36<br>287,360,427,29 | 887,616,736.90<br>105,435,919.00<br>281,622,257.4 |
| XIII. Miscellaneous Receipts including<br>Statutory Receipts.   | 478,547,830.32                       | 649,706,983.97                     |  |                                  |   |
| (IV. Any other Receipts   |                                      |                                    |  |                                  |   |
| Total   | 11,425,872,554,11                    | \$ 060 051 516 \$*                 | Total  | 11,425,872,554,33                | 8,060,053,530.8                                   |

For M.A.M & Associates Chartered Accountants

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Ajay Kumar Gupis (Partner) M.No. 095390

For Delhi Technological University

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No.

NEW DELH

(DCA)

(Cantallar of Canan

(Registra)

Place: New Delhi Dated: 5th September, 2024



# **EDITORIAL MEMBERS**



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दिल्ली प्रोद्योगिकी विश्वविद्यालय Delhi Technological University